******PUBLIC NOTICE******

PLANNING & ZONING COMMISSION
SPECIAL SESSION AND REGULAR SESSION MEETING

Monday, June 28, 2021 Special Session at 6:00 PM and Regular Session at 6:30 PM

City Hall | 3300 Corinth Parkway

Pursuant to section 551.127, Texas Government Code, one or more Planning and Zoning Commissioners or employees may attend this meeting remotely using videoconferencing technology. The videoconferencing technology can be accessed at www.cityofcorinth.com/remotesession. The video and audio feed of the videoconferencing equipment can be viewed and heard by the public at the address posted above as the location of the meeting. If you will not be in attendance, you may submit any public hearing questions to Miguel.Inclan@cityofcorinth.com.

AGENDA

A. CALL A SPECIAL SESSION TO ORDER AT 6:00 P.M., ROLL CALL, AND ANNOUNCE A QUORUM PRESENT

B. PLEDGE OF ALLEGIANCE

C. CLOSED SESSION

The Planning & Zoning Commission will recess into executive or closed session to consider the following matters pursuant to Chapter 551 of the Texas Government Code.

Section 551.071. (1) Private consultation with its attorney to seek advice about pending or contemplated litigation; and/or settlement offer; and/or (2) a matter in which the duty of the attorney to the government body under the Texas Disciplinary Rules of Professional Conduct of the State of Texas clearly conflict with Chapter 551.

1. Regular Session Agenda Item I.4

D. RECONVENE INTO REGULAR SESSION, CALL REGULAR SESSION TO ORDER AT 6:30 P.M. AND ANNOUNCE A QUORUM PRESENT

E. ESTABLISH VOTING MEMBERS AND DESIGNATE ALTERNATES TO SERVE

F. CITIZENS COMMENTS

In accordance with the Open Meetings Act, the Commission is prohibited from acting on or discussing (other than factual responses to specific questions) any items brought before them at this time. Citizen's comments will be limited to three (3) minutes. Comments about any of the published agenda items are appreciated by the Commission and may be taken into consideration at this time or during that agenda item. All remarks and questions addressed to the Commission shall be addressed to the Commission as a whole and not to any individual members thereof. Section 30.041B Code of Ordinances of the City of Corinth.

G. DIRECTOR'S REPORT

2. Director's Report on City Council meeting items from the preceding City Council meetings and other relevant information.

H. CONSENT AGENDA

All matters listed under the Consent Agenda are considered to be routine and will be enacted in one motion. Should the Chair, a Commission Member, or any citizen desire discussion of any item, that item will be removed from the Consent Agenda and will be considered separately.

3. Consider and act upon approval of minutes from the Planning & Zoning Commission Meeting held on April 26, 2021.

I. BUSINESS AGENDA

4. Conduct a Public Hearing to consider testimony and make a recommendation to City Council on a rezoning request to amend the zoning classification from PD-6 Planned Development District, Ordinance No. 87-12-17-24, for Two Family Garden Homes and PD 24 Planned Development District, Ordinance No. 99-12-16-45 for Two Family Garden Homes, Townhomes, and Neighborhood Shopping to PD Planned Development District with a base zoning district of MF-1 Multi-Family Residential, on approximately 24.595 acres of land within the A.H. Serren Survey, Abstract No. 1198 and the B. Merchant Survey, Abstract No. 800, City of Corinth, Denton County, Texas. The property is generally located at the northwest corner of Lake Sharon Drive and Oakmont Drive and east of FM 2499. (Avilla Fairways PD ZAPD20-0004)

J. ADJOURNMENT

As a majority of the Council Members of the City of Corinth may attend the above described meeting, this notice is given in accordance with Chapter 551 of the Texas Government Code. No official action will be taken by the City Council at this meeting.

I, the undersigned authority, do hereby certify that the meeting notice was posted on the bulletin board at City Hall of the City of Corinth, Texas, a place convenient and readily accessible to the general public at all times and said Notice was posted on the following date and time: **Friday, June 25, 2021 at 12:00 PM.**

Helen-Eve Beadle, AICP
Director of Planning and Development Services
City of Corinth, Texas

Friday, June 25, 2021.

Date of Notice

The Planning & Zoning Commission reserves the right to recess into executive or closed session to seek the legal advice of the City's attorney pursuant to Chapter 551 of the Texas Government Code on any matter posted on the agenda. After discussion of any matters in closed session, any final action or vote taken will be public by the Commission.

Corinth City Hall is wheelchair accessible. Person with disabilities who plan to attend this meeting and who may need auxiliary aids or services such as interpreters for persons who are deaf, or hearing impaired, or readers of large print, are requested to contact the City Secretary's Office at 940-498-3200, or fax 940-498-7576 at least two (2) working days prior to the meeting so that appropriate arrangements can be made.

BRAILLE IS NOT AVAILABLE

CORINTH
PLANNING & DEVELOPMENT

Planning & Development Services
City of Corinth, Texas

Memorandum

To:	**The Corinth Planning and Zoning Commission**
From:	Helen-Eve Beadle, AICP, Planning and Development Director
Meeting Date:	June 28, 2021
Re:	Planning & Development Director's Report

THE FOLLOWING ITEMS WERE CONSIDERED AT THE May 20th CITY COUNCIL MEETING:

Lindsey Baker, Vice-Chair resigned her position due to accepting a employment position out of state and the City Council appointed Wade May as a full voting member for Place 4 and the Vice-Chair for the Commission.

THE FOLLOWING ITEMS ARE GENERAL ANNOUNCEMENTS:

1. The **Annual Board and Commissioner Banquet** has been scheduled for Thursday, August 26th.

2. **Board & Commission applications** are due to the City Secretary and interviews will be scheduled for September 8th and 9th.
   Online applications can be located through the following link:
   https://www.cityofcorinth.com/bc/webform/board-committee-application

******MINUTES******

PLANNING & ZONING COMMISSION

Monday, April 26, 2021 at 6:30 PM

Corinth Public Safety Complex - Conference Room | 3501 FM 2181, Corinth, Texas 76210

Pursuant to section 551.127, Texas Government Code, one or more Planning and Zoning Commissioners or employees may attend this meeting remotely using videoconferencing technology. The videoconferencing technology can be accessed at www.cityofcorinth.com/remotesession. The video and audio feed of the videoconferencing equipment can be viewed and heard by the public at the address posted above as the location of the meeting. If you will not be in attendance, you may submit any public hearing questions to Miguel.Inclan@cityofcorinth.com.

MINUTES

A. CALL TO ORDER, ROLL CALL, AND ANNOUNCE A QUORUM PRESENT

1. Establish Voting Members and Designate Alternates

Chair Brian Rush called the meeting to order at 6:30 P.M.

Commissioners Present: Chair Brian Rush, Vice Chair Lindsey Baker, Jennifer Olive, Billy Roussel, Wade May

Commissioners Absent: Rodney Thornton, Cody Gober

The Planning & Zoning Commission established the members present as the Voting Members.

B. PLEDGE OF ALLEGIANCE

C. CONSENT AGENDA

All matters listed under the Consent Agenda are considered to be routine and will be enacted in one motion. Should the Chair or Commission Member desire discussion of any item, that item will be removed from the Consent Agenda and will be considered separately.

Motion by Vice Chair Lindsey Baker, seconded by Commissioner Olive to approve the Minutes of the February 22, 2021 and March 22, 2021 Planning & Zoning Commission meetings.

Motion carried unanimously 5-yes;0-no.

2. Consider and act upon approval of minutes from the Planning and Zoning Commission Meeting held on February 22, 2021.

3. Consider and act upon approval of minutes from the Planning and Zoning Commission Meeting held on March 22, 2021.

D. PRESENTATIONS

4. Director's Report on City Council meeting items from the preceding City Council meetings and other relevant information.

Director Beadle presented her report to the Commission. She stated that she had nothing to report on City Council actions sent by the Commission. She informed the Commission that there would be a Special Called Meeting sometime in May before their regularly scheduled meeting. She stated that the special called meeting would cover education and training, and may include training on the iPads.

E. BUSINESS AGENDA

5. Conduct a Public Hearing to consider testimony and act upon a Replat for Lots 1R and 2, Block A of the Metroplex Cabinets Addition Subdivision, being ±9.719 acres, situated in the J.P. Walton Survey, Abstract Number 1389, within the City of Corinth, Denton County, Texas. The property is generally located north of Walton Drive, south of Black Jack Lane, Sand Jack Drive and Danbury Cove/Circle, east of North Corinth Street, and west of Shady Rest Lane. (RP21-0002 Metroplex Cabinets Addition Replat)

   Miguel Inclan, Planner, presented the item to the Commission. He stated that the replat is for a vacant property partially located within the boundaries of the Walton Ridge Subdivision, which was granted PD zoning by the City Council in December of 2020.

   Mr. Inclan stated that the purpose of the Replat is for conveyance purposes, and to avoid creating a landlocked parcel, a 24' access easement is being required for Lot 2 via Lot 1R. He also stated that there were other staff comments and conditions noted in the Staff Report and the Replat document. He indicated that the Replat calls for the release of several existing easements which will require the provision of Release of Easement Letters to abandon such as part of the replat.

   Mr. Inclan informed the Commission that this application falls under the 30-day deadline mandated by the State, and that Staff recommends approval with the conditions noted in the Staff Report and Replat document.

   Chair Rush opened the Public Hearing.

   No public comments were received.

   Chair Rush closed the Public Hearing.

   Motion by Vice Chair Lindsey Baker, seconded by Commissioner Olive, to approve the Replat subject to the Applicant addressing the Staff comments.

   Motion carried unanimously 5-yes;0-no.

6. Consider and act upon a Replat for Lots 1R-1, 2, and 3, Block A of the North Central Texas College Addition No. 2 Subdivision, being ±34.325 acres, situated in the J.P. Walton Survey, Abstract Number 1389, within the City of Corinth, Denton County, Texas. The property is generally located north of Walton Drive, south of Danbury Cove/Circle, east of North Corinth Street, and west of Shady Rest Lane. (RP21-0003 North Central Texas College Addition No. 2 Replat)

   Miguel Inclan, Planner, presented the item to the Commission. He stated that the replat is for the NCTC property, a portion of which is partially located within the boundaries of the proposed Walton Ridge Subdivision, which was granted PD zoning by the City Council in December of 2020.

   Mr. Inclan stated that the purpose of the Replat is for conveyance purposes, and that it ties in with the previous Replat and upcoming Preliminary Plat to be discussed later in the meeting. He stated that the Replat would subdivide the 1 lot NCTC property into 3 lots.

Motion by Commissioner May, seconded by Commissioner Roussel, to approve the Replat subject to the Applicant addressing Staff comments.

Motion carried unanimously 5-yes;0-no.

7. Consider and act upon a Preliminary Plat for 164 Residential Lots and 10 Open Space Lots, being ±36.220 acres, being a portion of Lot 1, Block A, Metroplex Cabinets Addition Subdivision, a portion of Lot 1R, Block A, North Central Texas College Addition No. 2 Subdivision, and Tracts 1, 3, and 4 out of the J.P. Walton Survey, Abstract No. 1389, within the City of Corinth, Denton County, Texas. The property is generally located north of Walton Drive, south of Black Jack Lane, Sand Jack Drive and Danbury Cove/Circle, east of North Corinth Street, and west of Shady Rest Lane. (PP19-0001 Walton Ridge Preliminary Plat)

Miguel Inclan, Planner, presented the item to the Commission, and explained that this is the overall vision for the Walton Ridge Subdivision which incorporates portions of the Replats previously discussed. He stated that this plat is for 164 residential lots and 10 open space lots and serves as a continuation of a 2019 application.

He stated that the Civil Plans for this subdivision are under preliminary review, and there are potential changes that may be required in the northern portion of the subdivision for detention and could impact lot configuration in Block A. He stated that any changes would not exempt the applicant from meeting the minimum lot size requirements per PD-51.

Mr. Inclan also informed the Commission that the Application for Alternative Compliance for Tree Preservation is under review. He also informed the Commission as to the next steps in terms of infrastructure design and construction plan review, with the Final Plat being submitted for approval by the Planning & Zoning Commission at a later time.

Mr. Inclan stated that the application does not fall under the state-mandated deadline due to it being a 2019 application.

Chair Rush asked for clarification regarding the potential detention changes and asked if either the developer's engineer or the City's Engineer were waiting on each other.

Planning Manager Michelle Mixell provided a brief overview of the situation, stating that the Engineering teams are working on the preliminary design and that a design change may be required in the area contemplated as open space and detention. The entire parcel may need to be used for detention only and that an increase in the detention lot size may result in a slight reconfiguration.

Mr. Inclan clarified that this plat conforms to the requirements of their PD zoning and that any substantial changes would require a new Preliminary Plat application which would be submitted to the Commission for review.

Ms. Mixell stated that a new application was not foreseen by staff to be required.

Mr. Inclan pointed the area in question to the Commission and explained that the worst case scenario for the developer would be the potential loss of one lot to add the necessary detention.

Mr. Inclan also clarified a question by Commissioner May regarding public notification for this plat, stating that public notification and public hearings for plats are required in unusual circumstances such as the easement situation in the Metroplex Cabinets Replat. He stated that zoning public notification regulations are more stringent.

Motion by Vice Chair Baker, seconded by Commissioner Roussel, to approve the Preliminary Plat subject to the Applicant addressing Staff comments.

Motion carried unanimously 5-yes;0-no.

F. ADJOURNMENT

There being no further business before the Commission, the meeting was adjourned at 7:02 PM.

MINUTES APPROVED THIS _____ DAY OF _____, 2021.

_____

Brian Rush, Planning and Zoning Commission Chairman

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Helen-Eve Beadle, Director of Planning and Development

CITY OF CORINTH
Staff Report

Meeting Date:	6/28/2021 **Title:** Avilla Fairways PD Request – ZAPD20-0004
Strategic Goals:	☒ Citizen Engagement ☐ Proactive Government ☐ Organizational Development
Governance Focus:	*Sub-Ends:* ☒ Growing Community ☐ Conveniently located ☐ Delivers Outstanding Service ☐ High-Quality Retail ☐ High-Quality Restaurants ☐ High-Quality Entertainment *Focus*: ☒ Owner ☒ Customer ☒ Stakeholder *Decision:* ☒ Governance Policy ☐ Ministerial Function

Item/Caption

Conduct a Public Hearing to consider testimony and make a recommendation to City Council on a rezoning request to amend the zoning classification from PD-6 Planned Development District, Ordinance No. 87-12-17-24, for Two Family Garden Homes and PD 24 Planned Development District, Ordinance No. 99-12-16-45 for Two Family Garden Homes, Townhomes, and Neighborhood Shopping to PD Planned Development District with a base zoning district of MF-1 Multi-Family Residential, on approximately 24.595 acres of land within the A.H. Serren Survey, Abstract No. 1198 and the B. Merchant Survey, Abstract No. 800, City of Corinth, Denton County, Texas. The property is generally located at the northwest corner of Lake Sharon Drive and Oakmont Drive and east of FM 2499. (Avilla Fairways PD ZAPD20-0004)

Item Summary/Background/Prior Action

I. Item Summary:

Avilla Fairways project (*a 215 unit residential cottage community*) was first reviewed publicly at the February 22, 2021, Planning and Zoning Commission Meeting. The item was not recommended for City Council approval by the Commission. Rezoning applications are forwarded to City Council to hold the public hearing as published and act on the item. The applicant requested the rezoning application be returned to the Planning & Zoning Commission for consideration with revisions and new supporting information/studies in response to the speakers' concerns during the public hearing and written comments. On March 18, 2021 the City Council unanimously voted to remand the zoning request to the P&Z Commission and for Staff to work with the applicant on outstanding issues. There were subsequent meetings with the neighbors and City Staff to review the existing and proposed zoning and an additional neighborhood meeting held with the developer and residents.

Approximately 40 residents provided input both via Zoom and in person at the February 22, 2021, Planning and Zoning Commission meeting. The comments centered on the following key topics of concern:

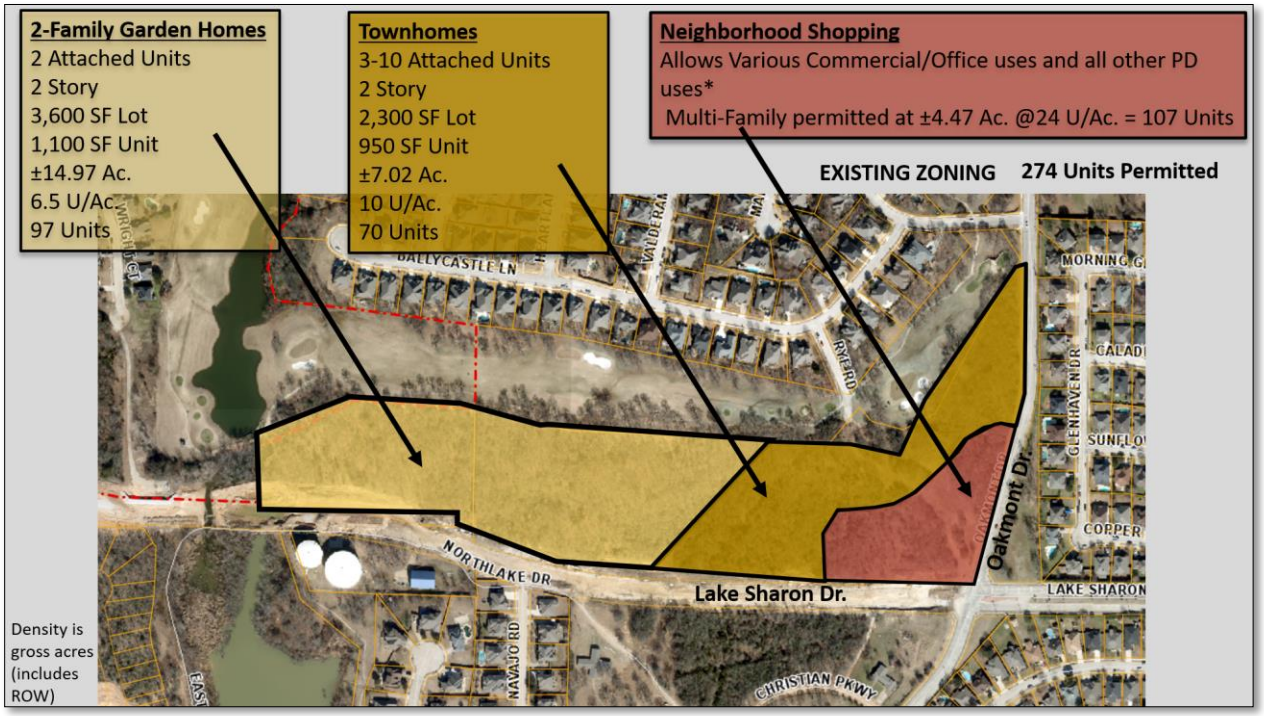
- Multi-Family (rental) use and density at the proposed location
- Transportation, street connectivity, and pedestrian safety
- Drainage Management (Stormwater/Floodplain/Wetlands)
- School attendance
- Location of Dog Park (*near to Oakmont Golf Course*)
- Heavily Treed Site (*Tree Preservation*)

To address these concerns, Staff has the following to report:

A. <u>Multi-Family use at the proposed location:</u>

The existing zoning for the Oakmont Planned Development District was established in 1987 on approximately 566.9 acres. In 1999 another ±5.709 acres immediately west of the subject tract was zoned for Two Family Garden Homes.

The tracts within the overall subject parcel were assigned the following subdistricts:
1. Neighborhood Shopping
2. Townhomes
3. Two Family Garden Homes



The Oakmont PD provides for "cumulative zoning" in subdistricts. This means that uses permitted in a subdistrict are allowed in other subdistricts. For example:

- Neighborhood Shopping also permits all the Garden Office uses
- Garden Office also permits all uses in the Apartment/Condominiums areas
- Apartment/Condominiums also permits Multi-Family units and all uses in the Villas areas
- Villas also permits Multi-Family units and all uses in the Townhomes areas
- Townhomes also permit Single Family Attached units and all uses permitted in the Two Family Garden Homes areas
- Two Family Garden Homes also permit Single Family Attached units and all uses permitted in the Patio Home areas
- Patio Homes also permit single family detached units and all uses permitted in the Cluster Home areas
- Cluster Homes also permit Single Family dwellings and all uses permitted in Single Family areas, etc.

This is also true for the nonresidential subdistricts where higher intensity subdistricts permit uses in lesser intensity subdistricts. For example: Neighborhood Shopping permits such uses as convenience stores (with gas service), retail stores, day cares, banks, etc. The Neighborhood Shopping subdistrict permits all uses in the Garden Office subdistrict that includes offices, labs, restaurants, etc.

Therefore, Multi-Family is permitted in the Neighborhood Shopping tract subdistrict at a density of 24 units per acres (±4.47 acres x 24 units/acre equals ±107 Multi-Family units). Townhomes are permitted on ±7.02 acres at 10 units/acre totaling ±70 units. Two Family Garden Homes (Duplex) are permitted on ±14.97 acres at 6.5 units/acre totaling ±97 units. The existing zoning can permit up to 274 units.

The Comprehensive Plan, adopted in July of 2020 (*Envision Corinth 2040 Comprehensive Plan linked here*) identified the subject property as Land Use Place Type - "Mixed Residential." Mixed Residential provides for a range of residential uses including single family, patio homes, townhomes, and multi-family at an allowable density of six to ten units per acre.

The NexMetro product is categorized as a multi-family use due to multiple units on a lot and the proposed 9/units per acre density is comparable to a townhouse community rather than a multi-family development density.

The existing zoning could be built with more dwelling units than proposed or more intensive nonresidential uses (convenience store with gas pumps, restaurants, etc.). The proposed density of 9/units per acre fits within the Mixed Residential Place Type density of six to ten units per acre.

Additionally, the proposed dwellings are one-story rather than two-story.

Further, it is important to note that "rental options" are a need in any community and the single family for rent product can fill the gap for affordable and attainable housing in the market. A recent Wall Street Journal article dated June 11, 2021, discusses the "economic forces and generational preferences leading to a new kind of housing . . ." such as the single-family for rent product.

Transportation, street connectivity, and pedestrian safety:

To address traffic impact concerns identified by the community, the City of Corinth commissioned a Traffic Impact Analysis (TIA) by Lee Engineering, dated June 11, 2021 (*see Appendix B*). A TIA is not required by the UDC at the time of zoning and one may be required at the time of platting (subdivision of land). Staff made the decision to order a TIA for this zoning change due to the residents' concerns. Key conclusions of the Traffic Impact Analysis include the following:

1. The proposed PD Concept Plan provides the best access to the development and existing neighborhoods. Additionally, it provides the least travel delays at all intersections when compared to restrictive access options offered by residents. Resident ideas included:
   a. restricting the proposed development to sole access via Lake Sharon Drive and not have a driveway off Oakmont Drive, and
   b. Restricting traffic to and from Rye Road as either closed off (emergency access only) or only allow for southbound traffic from the northern neighborhood.

2. The existing roadway cross sections are sufficient to handle the proposed development. Lake Sharon Drive and Oakmont Drive were constructed per the City's Master Thoroughfare Plan. The Master Plan was developed based on future land use, anticipated development, and traffic flows. The proposed development does not create concern for traffic along either of these two streets.

3. The existing intersection at Oakmont Drive at Lake Sharon Drive will increase in delays in the next few years bringing a Level of Service E if no intersection improvements are made. This level of service condition is with or without the proposed development.

4. The proposed development will not require any right turn deceleration lanes off westbound Lake Sharon Drive or southbound Oakmont Drive.

5. The eastbound direction will require left turn bays to both Rye Road and the western driveway. Median modifications are anticipated and are at the developer's expense.

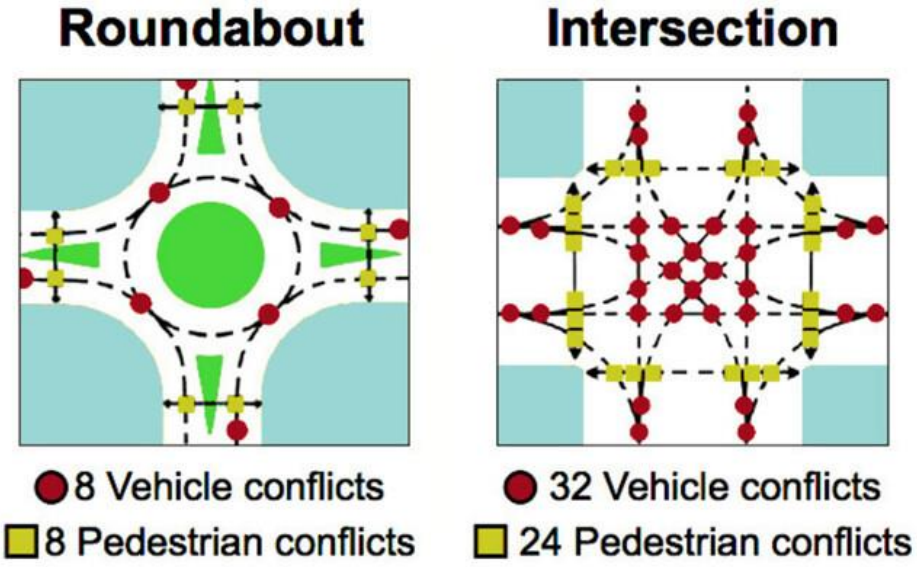
6. Because Oakmont Drive is a wide 36' curb-to-curb paving section with a centerline stripe, there is sufficient space for the queuing from the school drop-off and pickup to stage on the sides of the road and the through traffic is able to pass by without major issues or delay.

7. When analyzing the nearby intersections, it should be noted that the only intersection that is of major concern as to additional delays would be Lake Sharon Drive at Oakmont Drive.
   a. Currently the intersection is configured as a single northbound lane– east/west/north, eastbound and westbound three lanes – through/right through and left, and southbound is two lanes - through/right and left.
   b. Traffic volumes today (2021): Appendix B, Figure 7,
   c. Traffic volumes buildout (2023): Appendix B, Figure 8
   d. Traffic volumes proposed site: Appendix B, Figure 13
   e. Traffic volumes buildout + proposed site: Appendix B, Figure 18
      i. Buildout was estimated at a 4% increase over 2 years based on historical traffic growth.
   f. Level of Service (LOS): Appendix B, Table 10 indicates there is a 28.5 second delay (LOC D) at Oakmont Drive & Lake Sharon Drive in the NB direction for today conditions. When you add in buildout that delay increases to 40 seconds (LOS E) and when include the proposed site development that delay increases to 44.7 seconds (LOS E).
      i. If we were to consider limiting or restricting the access for the proposed development as proposed by others, this delay would increase due to more traffic focusing on this intersection.

g. Mitigation measures that would improve this additional delay due to buildout would be to add turn lanes or inclusion of a roundabout. Considering there is sufficient land available to the east of the intersection, a roundabout makes the most sense. A roundabout would shift all directions of the intersection to a LOS A under 10 seconds of delay.

8. The recommendation of a roundabout at Lake Sharon Drive and Oakmont Drive is consistent with the City's Master Throughfare plan. In fact, a roundabout was added to the Throughfare Plan back in 2020 prior to the proposed project application. Roundabouts for Lake Sharon Drive at Parkridge Drive as well as Quail Run Drive at Corinth Parkway/Dobbs Road are already in the design phase. While there are many personal opinions on roundabouts and their efficacy, staff must focus on facts and traffic engineers have proved time and time again that roundabouts are able to flow more traffic through an intersection than many other types of intersection control.

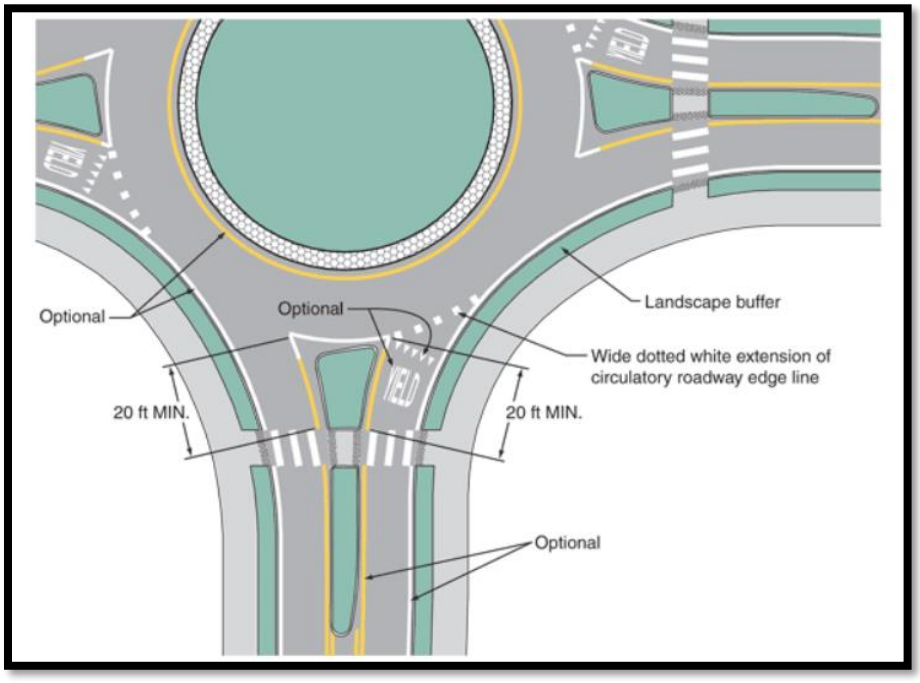
   a. Roundabouts reduce vehicle speeds, minimize vehicle weaving, automatically establish right of way, reduce conflict points from 32 to 8 according to the FHWA Roundabout Guide. The circulatory vehicle movements at roundabouts eliminate or drastically reduce the critical conflicts resulting from red light running, left turns against opposing traffic, right angle conflicts at corners and rea end collisions. As a result, roundabouts significantly reduce vehicular crashes.
      i. Based on studies, roundabouts reduce vehicular crashes by 39% and injury crashes by about 90%



   b. Pedestrian safety at roundabouts:
      i. Speed Reduction – entry speeds are reduced due to anticipating curves. Slower speeds at or below 20-mph are safer and enable pedestrians to find gaps in traffic to safely cross and encourage vehicles to yield to them as they step up to the crosswalk.
      ii. Central Island – a raised central island prevents drivers from seeing all the way through to the other side of the roundabout and encourages drivers to slow down to negotiate the turns. Bringing the driver's focus back to the near side of the crosswalk.
      iii. Splitter Islands – Provide pedestrian refuge islands. Therefore, only having to gain clearance from one direction at a time.

iv. By including a truck apron in the center of the circular space, a roundabout can accommodate emergency vehicles and large busses and trucks.

Example of a modern roundabout approach



Example of Marking for Approach and Circulatory Roadways at a Roundabout

9. Concern for pedestrian safety as children walk to school.
Residents have raised concern for pedestrian safety and if there should be a crossing guard at the intersection of Oakmont Drive at Lake Sharon Drive. Traditionally, a detailed pedestrian count is performed to verify the volume of pedestrians walking during the peak times on their way to and

from school. Due to Covid 19, the pedestrian volumes would be much less than historical. Staff can work with the Police Department and Denton ISD to determine if thresholds are met to warrant addition of crossing guards. Due to the nature of the intersection staff anticipates two crossings if the merit study demonstrated the need (one for east/west and one for North/South).

Access Options:

In terms of access, Item 1) above references suggestions made by residents to:

1. Limit access to southbound trips only for Rye Road;
2. Limit access to Rye Road for emergency use only, provide gates/knox lock, provide pedestrian connection; and
3. Limit access onto Oakmont Drive for emergency use only.

Staff is unable to support any of the options as they conflict with our Unified Development Code, Subdivision Regulations, and Comprehensive Plan. Additionally, the Traffic Impact Analysis prepared for this application clearly identifies additional stress on street capacity when access options are eliminated.

Also, engineering and planning best practices include the vehicular and pedestrian connectivity in a community. Closing off access or prohibiting connections creates separation, contradicts the goals of the Comprehensive Plan, and opposes the policy of a connected and walkable community.

The following are regulations and general requirements guiding access decision-making in Corinth:

- Streets must be designed in relation to the Comprehensive Plan/Transportation Plan, existing and proposed streets, the terrain, streams, and other physical conditions.

- The arrangement of streets must provide for the continuation of streets between adjacent properties when the continuation is necessary for the safe and efficient movement of traffic and for utility efficiency.

- The arrangement, character, extent, pavement width, Right-of-Way width, grade and location of each street shall be considered in its relationship to the Comprehensive Plan, to existing and planned streets, topographical conditions, public safety and convenience, and its relationship to the proposed uses of land to be served by such street.

- All streets shall be designed to coordinate with existing streets in adjoining Subdivisions.

- Where adjoining areas are not subdivided, the arrangement of streets in the Subdivision shall make provision for the proper projection of streets into such unsubdivided area.

- To ensure adequate access to each Subdivision, there should be at least two (2) planned points of ingress and egress, except that cul-de-sacs shall be permitted in conformity with Section 3.05.13.F Cul-de-Sacs and Dead-End Streets (linked here),

- Dead-end streets are prohibited unless the street design meets the requirements of 3.05.13.F (cul-de-sacs) or unless the street is intended to be extended in the future and the dead-end design is only temporary in nature.

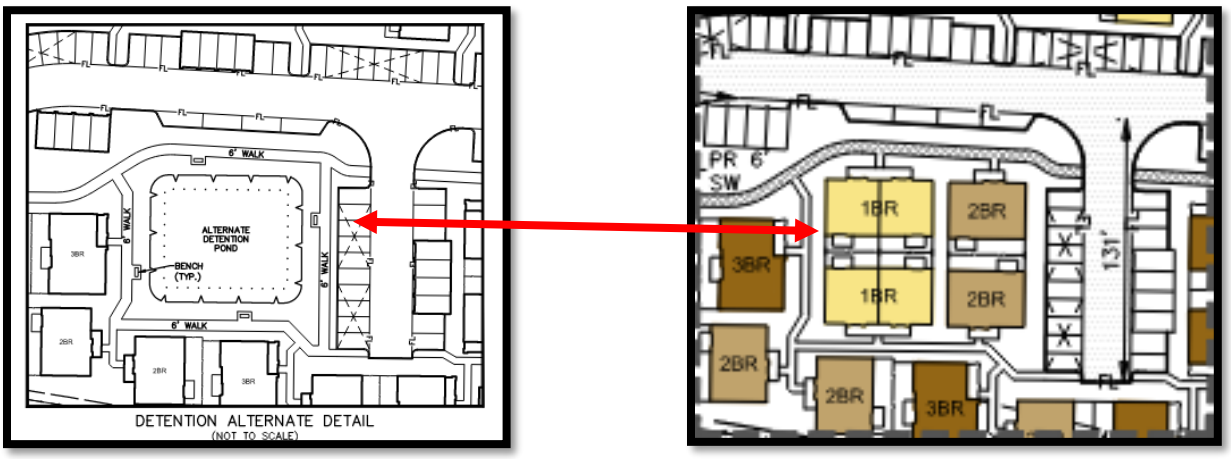
- Local streets shall be extended through the tract to the tract boundary to provide future connection with adjoining unplatted lands at intervals necessary to facilitate internal vehicular circulation with adjoining unplatted lands.

Stormwater, Floodplain, and Wetland Management:

The Avilla Fairways development will be required to provide a detailed engineering design of the drainage system prior to release for construction. The Applicant is now showing on the PD Concept Plan an option to detain on site however, if they can prove no negative impact then no detention will be necessary.

The developer and their engineer will be required to provide a drainage assessment to prove that they have no negative impact upstream, adjacent, and downstream of their development. This assessment will identify the possibility of an increased flowrate, increased water surface elevation, and erosive water velocity. This is where the City will require measures to mitigate impact.

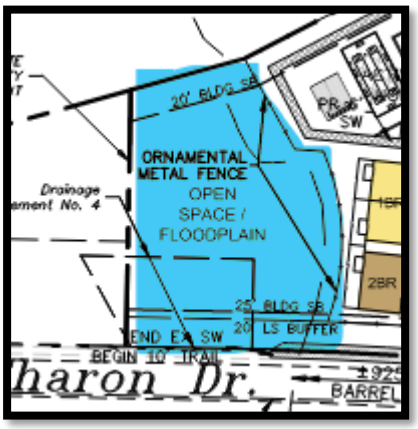
Development drainage issues are usually handled in the form of a detention basin whereby the release of water is limited to pre-existing flowrates. For example, if the site is 10 acres and pre-existing flow is around 27 cubic feet per second (cfs) and the proposed developed rate is 81 cfs then the engineer will need to design a detention basin that would only release 27 cfs and detain the difference during a calculated duration. Thus, limiting the discharge rate to the preexisting flowrate of 27 cfs. Occasionally, this form of detention will possibly be worse than just allowing the site to discharge directly without detention. That will need to be evaluated during detailed engineering design.



Excerpts from PD Concept Plan, 6/22/21 – Location of proposed detention basin (left) in place of four buildings if determined necessary (right)

The latest PD Concept Plan dated 6/22/21 shows the location of a detention basin option (*above left*) if it is determined that on-site detention is required. Should a detention basin be required (*based on detailed design and associated calculations as required at a later stage in the process*), the four buildings shown (*right*) will be eliminated to accommodate the improvement.

The site does have existing floodplain on it. This floodplain has been modified due to the recent construction of Lake Sharon Drive and the final paperwork with FEMA is still in the process. The



proposed development appears to be outside of the floodplain limits (*Appendix D-FEMA Floodplain Map*). During detailed engineering design, the developers engineer will determine if any modifications are necessary to the area of land in the floodplain. If so, the City will require a detailed flood study and improvements that would create no negative impact to the adjacent landowners. Specifically, the City has a process and procedure for developing in a floodplain and those standards are used on all developments.

The City through the Federal Emergency Management Agency (FEMA) has specific regulations that restrict and allow under specific circumstances development within the floodplain. These regulations are detailed in the City's Code of Ordinances, Section 152 Floodplain Damage Prevention. The City is the delegated responsibility to adopt and enforce regulations designed to minimize flood losses.

The developer and their engineer have laid out the site to limit the disturbances within the floodplain. Based on the preliminary information provided, the City does not anticipate the development having any physical impact on the floodplain and therefore not require a Floodplain Development Permit. The concept plan clearly shows the floodplain limits and also indicates the proposed development, including fences, which are outside those limits.

Where there is a waterbody there is usually wetlands and/or waters of the US (WOTUS). The City is not the regulatory authority for development/construction within wetlands or WOTUS. However, when development is anticipated near such an area, the City requires the design team to confirm and provide proof that there are not any wetlands or WOTUS via an environmental study. The study will be required to be prepared by a professional that uses industry standards for providing a site assessment that meets the federal guidelines. The City is aware of this sensitive area due to the recent construction of Lake Sharon Drive. During that project wetlands or WOTUS were identified and a permit for development was obtained through the US Army Corps of Engineers (USACE). Should this development have any impact on wetlands or WOTUS, the City will require necessary proof through USACE that they have meet federal regulations. Wetlands are usually identified at or below the normal high water mark. Because this development does not show any impact to the floodplain, we do not anticipate any wetland impact as the floodplain elevation is always above the normal high water mark.

As a recap, prior to detailed design approval, the engineering team will require the developer and their engineer to confirm/prove that they are in conformance with all of the codes listed in the Unified Development Code Section 3.05.03.A., as follows (*and linked here for reference*).

- The Transportation Plan;
- The Drainage Design Manual of the department of public works;
- The Standard Construction Details of the department of public works;
- The Texas Uniform Traffic Control Device Manual;
- North Central Texas Council of Governments Standard Specifications for Construction of Public Works;
- American Association of State Highway Transportation Officials Design Manual;
- Texas Health Code;
- City of Corinth Engineering Standards Manual (ESM);

- Texas Water Code;
- Master Drainage Plans;
- Floodplain Ordinance;
- Erosion Control Ordinance;
- Stormwater Management Plan; and
- All other codes and ordinances of the City.

B. School Attendance

As previously stated, the property has been zoned for high density housing and non-residential development since 1987. School districts regularly contract with demographers to estimate and plan for future growth and attendance within their districts. Denton Independent School District was notified of the zoning change by US Mail in February and again in early June of the upcoming public hearings.

C. Location of Dog Park (*near to Oakmont Golf Course*)

At the request of residents in Larkspur subdivision, the developer has moved the proposed dog park south of the east/west access drive to provide more separation (APPENDIX A, Concept Plan).

D. Heavily Treed Site

The site is subject to a prior settlement agreement (*Endeavor Agreement 2017*) that specifically controls the Tree Preservation regulations as applied to any development of the ±24.595-acre project site. Specifically, the agreement notes that the site is considered "heavily wooded lot" allowing a 50% reduction in the amount of replacement trees required by Section 2.09.02.B3 of UDC in areas other than building pads plus 5' from edge of building pad (includes gas well pad site), street-right-of-way, utility easement, or driveway and are considered exempted from Protected Tree regulations.

II. Background:

A. **Project Overview.** The Applicant is requesting approval of a PD, Planned Development rezoning for the future development of ±24.59 acres located on the northwest corner of Lake Sharon Drive and Oakmont Drive. The proposal is to construct a 215-unit multi-family residential cottage community that consists of the following unit types (also *see Attachment 1 – PD Concept Plan*):

- 209 individual one-story cottage buildings and 23 detached garages
- Internal pedestrian sidewalk/path network
- Private recreation amenities including event lawns, a pool and spa, and dog park

B. **Existing Site Conditions.** The existing site is currently undeveloped, wooded, and contains a small area of floodplain along Bryant Branch on its western boundary with the City of Denton.

- The site is bounded by Lake Sharon Drive to the south, Oakmont Drive to the east, and the Oakmont golf course to the north and west.

Source: Corinth GIS:

- A recorded utility easement (Denton Municipal Electric) traverses the site in a general north south direction permitting the area to be used for drainage, streets, walks, gardens, parking, and other similar uses.

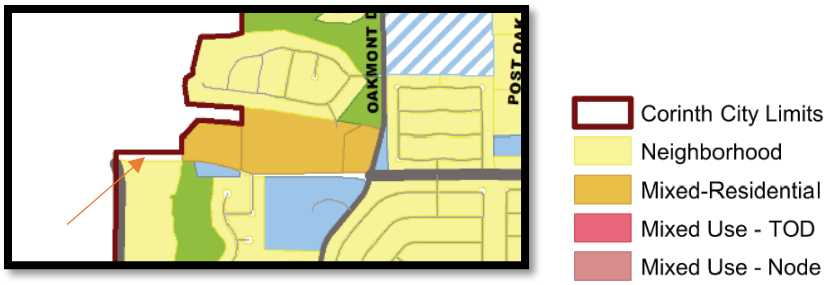
- The site is subject to a prior settlement agreement (*Endeavor Agreement 2017*) that specifically controls the Tree Preservation regulations as applied to any development of the ±24.595-acre project site. Specifically, the agreement notes that the site is considered "heavily wooded lot" allowing a 50% reduction in the amount of replacement trees required by Section 2.09.02.B3 of UDC in areas other than building pads plus 5' from edge of building pad (includes gas well pad site), street-right-of-way, utility easement, or driveway and a gas well site pad which are considered under the agreement exempted from Protected Tree regulations.

C. **Existing Site Zoning.** The project site is currently controlled by two zoning designations: PD-24 (±5.7 acres located on the western end of the site (*approved 12-16-1999*)) and PD-6 (± 18.895 acres located on the remaining portion of the tract (*approved 12-17-1987*)). See exhibit A, below.

- PD-24 provides for two family garden homes (*attached single family dwellings and patio homes as uses "by right" with density of 6.5 dwellings per acre*).

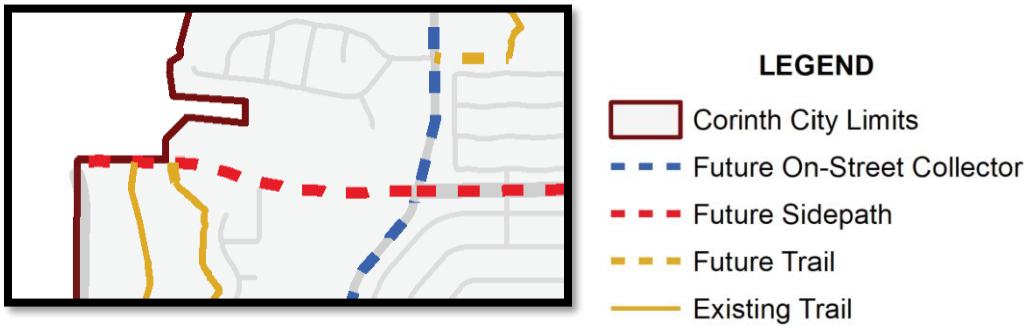
- PD-6 zoning provides for the development a mix of residential uses including townhomes, single-family attached garden homes (*ranging in density from 6.5 to 10 dwelling units per acre*), and neighborhood shopping on ±5 acres at the northwest corner of Lake Sharon and Oakmont Drive as uses "by right."

D. **Future Land Use.** The Comprehensive Plan shows this area as Mixed Residential which provides for a variety of dwelling types ranging in density from 6-10 dwelling units which may include single family, townhouse, multifamily, and neighborhood commercial uses.



Source: Envision Corinth 2040 Comprehensive Plan (Adopted July 2020)

In terms of mobility, the Comprehensive plan identifies a six (6') – ten (10') foot "Sidepath Trail" along Lake Sharon Drive. See excerpt from the Active Transportation Plan below:



Sidepath on Lake Sharon Drive
Source: Envision Corinth 2040 Comprehensive Plan (Adopted July 2020)

E. **Project Design Features for Consideration.** The following key points represent specific departures or design modifications from the regulations outlined in Unified Development Code (UDC) to permit the unique design as presented in *Appendix A- 1 - PD Concept Plan* and other associated attachments as presented in "Supporting Documents" contained in Appendix A. Additionally, each modification standard presented contains a "**justification**" statement for the departure.

1. **Project Proposal/Density.** NexMetro is proposing to rezone the ±24.595 acres using a Planned Development process to construct a unique product type consisting of 215 dwelling units within 209 one-story cottage buildings which equates to approximately 9.0 dwelling units per acre broken down as follows:
   - 30 Duplex Cottages (1-bedroom units (*totaling 60 1-bedroom units*))
   - 87 Cottages (2-bedroom units)
   - 68 Cottages (3-bedroom units)

2. **Specific Uses.** UDC Section 2.07.05.A shall be modified to permit all proposed structures (leasing center, dwelling units, garages, and recreational amenities (pool, spa, dog park, grills, fire pits, pergolas, event lawns, etc. (as further detailed on Attachment 3-PD Landscape Plan) to be permitted on one (1) lot. Further, Section 2.07.07, shall be modified where necessary to meet the intent of the layout of accessory buildings and uses with respect to location, size, and number of detached garages based on the concept presented in Appendix A-1-PD Concept Plan.

   Justification: To permit flexibility and innovation of design and allow for individual one-story primarily detached cottage style buildings to be arranged (maintaining a "single-family detached" type appearance) on a single lot.

3. **Dimensional Regulations/Site Data Table.** UDC Section 2.08.04.shall apply, except as modified from the base zoning district of MF-1 to allow for a **reduction in floor area** from a minimum floor area of 1,050 sf per dwelling unit to a minimum floor area of 680 sf per dwelling unit for the proposed one-bedroom units (attached cottage (duplex) buildings) and a minimum floor area of 1,022 sf per dwelling unit for the two-bedroom units as indicated on Attachment 1-PD Concept Plan (floor area values represent "slab size" floor area). Further, all units throughout the complex shall have private backyard areas (*which is not reflected in the minimum floor area*) as depicted in Appendix A-1 - PD Concept Plan. Table 2 presents the "Site Date Summary" for the overall project.

Table 1 – Dimensional Requirements (Base Zoning and Proposed PD requirements)

ZONING COMPARISON TABLE		
	BASE MF-1	PROP. PD
MINIMUM SETBACKS		
FRONT YARD	30'	25'
SIDE YARD		
INTERIOR LOT	30'	N/A
CORNER LOT	30'	N/A
REAR YARD	30'	20'
GARAGE	N/A	N/A
MINIMUM LOT DIMENSIONS		
LOT AREA (SF)	40,000	40,000
LOT WIDTH	200'	200'
LOT DEPTH	200'	200'
DENSITY (MAX, DU/A)	12	9
MINIMUM FLOOR AREA (SF PER DU)	1,050	680
MAX. BUILDING HT. (FT/STORIES)	35' / 2	30' / 1
MAX. BUILDING AREA (TOTAL)	40%	23%

Table 2 – Site Data Summary

SITE DATA SUMMARY TABLE				
EXISTING ZONING/USE:	PD-6, PD-24 / VACANT			
PROPOSED ZONING:	PD W/MF-1 BASE ZONING			
PROPOSED USE:	RESIDENTIAL COTTAGE COMMUNITY			
NUMBER OF LOTS:	2 (EXISTING); 2 (PROPOSED)			
LOT COVERAGE:	22.8%			
LOT AREA:	AC.		SQ. FT.	
GROSS AREA	24.595		1,071,370	
ROW DEDICATION	0.698		30,389	
NET AREA	23.898		1,040,981	
DENSITY:	9.00	UNITS / ACRE (w/o ROW Ded.)		
PROPOSED BUILDINGS (1 STORY):	AREA*	NO. BLDGS	NO. UNITS	TOTAL
1-BEDROOM (DUPLEX)	1,342	30	60	40,260
2-BEDROOM	1,022	87	87	88,914
3-BEDROOM	1,307	68	68	88,876
STANDARD GARAGE, DETACHED+	831	20	-	16,620
STANDARD GARAGE W/HANDICAP, DETACHED	682	3	-	2,046
LEASING CENTER	1,131	1	-	1,131
TOTALS:		209	215	237,847
PARKING REQUIRED:	UNITS	REQUIRED		PROPOSED
1 BEDROOM (2 SPACES REQ'D; 2 SPACES PROP.)	60	120		120
2 BEDROOM (3 SPACES REQ'D; 2 SPACES PROP.)	87	261		174
3 BEDROOM (4 SPACES REQ'D; 2 SPACES PROP.)	68	272		136
TOTALS:	215	653		430
PARKING PROVIDED:		PROVIDED		
STANDARD SPACES		234		
CARPORT SPACES		144		
HANDICAP SPACES		3		
STANDARD GARAGE SPACES		87		
HANDICAP GARAGE SPACES		3		
TOTALS:		471		
GARAGE SPACES PER UNIT:		41.9%		
OPEN SPACE AREA REQUIRED:	83,278	8%		(SF, %)
OPEN SPACE AREA PROVIDED:				
EVENT LAWN	2,773	0.3%		
PASSIVE NODES	7,024	0.7%		
ACTIVITY NODES	16,802	1.6%		
DOG PARK	11,968	1.1%		
MISC. OPEN SPACE	142,338	13.7%		
TOTALS:	180,905	17.4%		(SF, %)
LANDSCAPE AREA:	500,032	48.0%		(SF, %)
TRAIL DEDICATION:	WIDTH, FT	LENGTH, FT		AREA, SF
LAKE SHARON DRIVE	10	2,189		21,890
OAKMONT DRIVE	6	1,017		6,102
TOTALS:	-	3,206		27,992
IMPERVIOUS AREA:	540,949	52.0%		(SF, %)
LOADING SPACE:	NOT REQUIRED			
OUTSIDE STORAGE:	NONE PROPOSED			
CONSTRUCTION DATES:	Q1 2021 - Q3 2021			

** THESE VALUES REPRESENT "SLAB SIZE" FLOOR AREA*

+ ONE STANDARD GARAGE WILL USE TWO OF FOUR BAYS FOR ON-SITE MAINTENANCE PURPOSES

Justification: The Applicant indicates that the reduction in minimum floor area is necessary to align more with industry standards. At the time that the UDC Ordinance was written, it did not contemplate

this style of development or product type and specifically states that the Planned Development process found in UDC Section 2.06.03 is to provide the City a method to consider new and innovative concepts that may require flexibility in design.

4. **Parking Regulations.** UDC Section 2.09.03. Vehicular Parking Regulations shall apply, except that the **space per unit** as applied to the apartments may be reduced to a minimum of **1.85 spaces per unit**.

   Justification: Documentation provided by NexMetro (*see Appendix A-5 - Parking Demand Study*), suggests that the City's existing parking requirements are higher than data derived from an independent parking study of existing NexMetro developments and reflect actual parking demands on site.

   Specifically, the study indicates that the product yields a parking space demand of 0.75 spaces per bedroom, which equates to 1.85 spaces per unit in a 1, 2, and 3 bedroom unit mix. Further, the UDC was adopted in 2013 and since that time the multi-family regulations (including associated parking requirements) have not been updated to keep up with the market needs. The PD process is the best tool currently to achieve zoning that meets current market requirements for multifamily and the implement the City's adopted vision in the Comprehensive Plan.

5. **Garages.** UDC Section 2.04.07.C.5 requirement that "a minimum of seventy-five (75) percent of all apartments shall have a one-car enclosed garage, two hundred forty (240) square feet minimum, attached or detached, per dwelling unit", shall be modified as follows: Garages and covered parking to be allowed per the Attachment 1 – PD Concept Plan and will provide for an overall minimum of two (2.0) parking spaces per unit, including surface, covered, and garage parking spaces. NexMetro will assign either a covered space or garage space with every unit, ensuring a 100% covered parking per unit ratio across the site.

   Justification: The Applicant's indicates that the ratio proposed (when referencing other NexMetro developments across the Dallas-Fort Worth metroplex), ranks near the top of all projects to date in terms of parking ratios.

6. **Nonresidential Architectural Standards.** UDC Section 2.09.06. shall apply not apply to the project site as the Golf Course property located adjacent to the northern property boundary of the subject site is not residentially zoned. PD-6 indicates that area as specific sub-area for Golf Course and does not require the proposed MF-1 base district to maintain a thirty (30') foot buffer. However, a twenty-five (25') foot front yard setback is being proposed along the major roadways Lake Sharon Drive and Oakmont Drive as well as a twenty (20') foot building setback along all other boundaries.

   Justification: The Applicant is offering a design that goes beyond the UDC requirements to be more in line with Corinth's single family zoning regulations and are more applicable to a single story product.

7. **Landscaping Regulations.** UDC Section 2.09.01 Residential landscaping requirements shall apply and to be subject to the following modifications:
   a. Landscape shrub plantings shall be used to soften the view of wood fencing around backyard areas when viewed from Lake Sharon Drive and/or Oakmont Drive.
   b. Where wainscotting is proposed on exterior side walls only that are visible from a public street, this feature shall be either continuous and/or supplemented with continuous foundation plantings. See Attachment 3- PD Landscape Plan.
      (a) Lake Sharon Drive: refer to Avilla Fairways Conceptual Landscape Plan, sheet LS2 (detail 2, section B), and (b) Oakmont Drive: refer to Avilla Fairways Conceptual Landscape Plan, sheet LS2 (detail 1, section A).

c. Opaque fencing for rear yards shall be allowed for privacy where rear yards are visible from Lake Sharon Rive or Oakmont Drive. All other perimeter fencing shall be ornamental metal with adaptive screening. Double fencing concepts are not desirable, and efforts will be made to reduce conditions that would require such. Additionally, significant interior landscaping shall be required to achieve a level of opacity that sufficiently affords a living screen and privacy. Specific treatments will be further evaluated and defined at time of Site Plan based on best design practices.

d. Streetscapes for Lake Sharon and Oakmont drive shall refer to Avilla Fairways Conceptual Landscape Plan as follows: (a) Lake Sharon Drive: refer to sheets LS2 (detail B) and LS3 (detail 5), and Oakmont Drive: refer to sheets LS2 (detail A) and LS3 (details 4,5,&7).

e. Landscape edge buffers along Lake Sharon Drive and Oakmont Drive shall be planted per Avilla Fairways Conceptual Plan (refer to sheets LS1 and LS2) as shown on Attachment 3-PD Landscape Plan and be according to the following conditions: (a) Shade trees shall be planted at a rate of one (1) per 30 linear of feet of landscaped edge and include at least one (1) ornamental tree provided at a rate of one (1) per every two required shade trees. Trees may be clustered or located to accommodate driveway spacing, utilities, drainage facilities, trails, and similar site features, provided that a visual rhythm is maintained. Further, evergreen shrubs shall be included along the fencing and planted at varying intervals (which includes changes in height) to provide vistas into the development and buffered edges (e.g., variations of four feet minimum and 6-8 feet in height).

f. A continuous evergreen hedgerow a minimum of 4 feet in height shall be provided (along drives, driveways, and perimeter parking areas) where necessary to reduce impact from vehicle headlights.

g. Along the north and west property line, a barrier will be established, and no disturbance shall occur within the drip line and/or critical root line of any tree located adjacent to the property line that extends into Avilla Fairways site. Any tree that dies along the adjacent property line within 2 years of site disturbance shall be replaced/fee-in-lieu-of applied at a rate of 3:1 caliper inch lost.

8. **Private Recreational Areas.** UDC Section 2.04.09.C.8 shall apply, where a minimum of 8% of the gross complex is required to be in the form of private recreation. Note that the requirements of this section, are in addition to the park dedication requirements within 3.05.10. Park and Trail Dedications for Residentially Zoned Property. To meet the Private Recreation requirements, the applicant is providing 2.29 acres or 9.6 % of the Net Acreage in the form of Private Recreation areas which includes all activity nodes, large open space areas, pool/event lawn, and the dog park as shown and detail in Attachment 3-PD Landscape Plan.

9. **Park and Trail Land Dedication**. UDC Section 3.05.10 requires that **Park and Trail dedication for Residentially Zoned Property** to be provided at a rate of 1 acre per/50 DU and/or fees-in-lieu-of (or combination). Because the PD Concept Plan identifies the construction of a "Sidepath Trail" as shown on the Active Transportation Plan in the Envision Corinth 2040: Comprehensive Plan, the area required for the "Sidepath Trail" construction may be used to "**satisfy**" 0.5 acres of the required by UDC Section 3.05.10 Park and Trail Dedications for Residentially Zoned Property for this project site provided the following conditions are met:

a. The developer shall construct a ten (10') foot concrete trail along Lake Sharon Drive in accordance with ADA standards. A pedestrian public access easement shall be provided should the final design of the trail may meander outside of the public right-of-way and into the required 20' landscaped buffer edge.

Justification: Trails are required as part implementing the Comprehensive Plan Mobility Plan objectives.

10. **Rye Road (extension).** The Applicant is dedicating right-of-way and constructing the Rye Road (extension) from its current terminus at the northern property boundary through the subject site to connect with Lake Sharon Drive. Rye Road construction will include five (5') foot sidewalks on both the east and west sides of the street.

    Justification: This connection provides an important second point of access to the Larkspur at Oakmont neighborhood (north of the subject site) for fire and safety purposes. The exiting stubbed out section of Rye Road was done to provide for future connection when property to the subject site eventually developed to provide for additional access and interconnection of street system.

11. **Roundabout at Lake Sharon Drive/Oakmont Drive.** The Applicant shows a detail of the City's proposed future roundabout at the intersection of Lake Sharon and Oakmont Drive on the PD Concept Plan as identified on Master Thoroughfare Plan (*Envision Corinth 2040 Comprehensive Plan*). The roundabout is not a part of the Avilla Fairways project.

    Justification: These roadway improvements are shown on the "Master Thoroughfare Plan" as part of the Envision Corinth 2040 Comprehensive Plan (*adopted July 2020*).

12. **Mechanical Equipment and Screening of Outdoor Waste Storage.** UDC Sections 2.04.07. C.6 and 4.02.13 shall apply, with the additional stipulation that dumpster enclosures will be masonry (or similarly acceptable material) and match the materials of the adjacent dwellings. Further, enclosures shall contain landscape foundation plantings to soften the view and enclosed on all four sides as depicted on the Attachment 1-PD Landscape Concept Plan. Additionally, mechanicals shall be screened with evergreen plant material to create an opaque boarder screen. Screening standards may be adjusted at time of site plan review based on best practices.

13. **Tree Preservation**. UDC Section 2.09.02 Tree Preservation regulations shall apply, except as provided for in the Endeavor Settlement Agreement (2017).

14. **Building Design.** UDC Section 2.09.04 Building Façade Material Standards shall apply as defined in the outlined in below (*See Attachment 5 – PD Design Statement*).

    a. Minimum of 80% masonry on the exterior finishes of buildings. Masonry consists of brick, stone, hardie (cement) board, or stucco. A minimum of 3 distinct elevations to be provided per residential home floor plan with differing roof pitches.
    b. Roof Line. Where visible along the exterior corridors (Lake Sharon Drive and Oakmont Drive), roof pitches shall have a minimum of 8/12 pitch with a mixture ranging from 8/12, 10/12 and 12/12 to provide visual interest. Specifically, no more than two adjacent dwellings with the same roof pitch may be permitted along the corridors. Additionally, dormers, moldings, and other architectural features are required to provide character break up monotony of unit density.
    c. Garage doors shall be designed with architectural elements such as dentil moldings, windows, raised panels, etc., while materials shall match dwellings. Garage rooflines may have variation in roofline and pitch. This design detail will be determined at time of Site Plan.

15. **Lighting and Glare Regulations.** UDC Section 2.09.07. shall apply, and as determined at time of Site Plan, pedestrian scale lighting fixtures shall be considered where practical.

16. **Sign Regulations.** UDC Subsection 4.01 sign regulations shall apply, however, if necessary, standards may be modified as shown on the PD Concept Plan to achieve the "signage and monumentation concepts" provided that visibility and setbacks requirements are met to ensure safety. Further the portal signs will be located during the site plan/construction plan submission.

a. Portal signs to be located within landscape islands designating groupings of units as shown on the Avilla Fairways Conceptual Landscape Plan, sheet LS3.

b. Three (3) total monument signs proposed for this development, one (1) sign at each location:
   i. Lake Sharon Drive driveway connection
   ii. Oakmont Drive driveway connection
   iii. Rye Road and Lake Sharon intersection

17. **Fence and Screening Regulations.** UDC Section 4.02. shall apply, and include the installation of fencing and screening as further outlined below to meet intent of the PD Concept Plan and PD Conceptual Landscape Plan (*see Attachments 1 and 3*):
    a. Lake Sharon Drive: Six (6') foot ornamental fencing with masonry columns every 30 linear feet, along with interior landscaping shall be provided; refer to sheets LS1 & LS2 in Attachment 3 – Landscape Plan.
    b. Oakmont Drive: Six (6') foot Board-on-Board Wood fence with exterior landscape adjacent to Oakmont Drive where dwelling unit backyard adjacent, otherwise six (6') Ornamental fence per sheets LS1 & LS2 shall be provided.
    c. Golf Course: Six (6') foot ornamental fence per sheets LS1 & LS2 shall be provided.
    d. Other Misc. Fence and Screening Standards:
       i. Ornamental located along the Golf Course is not intended to have masonry columns.
       ii. Board-on-Board fence shall have masonry columns every 30 linear feet.
       iii. In instances where rear or side yard wood fencing is visible or fronts Lake Sharon Drive and Oakmont Drive corridors, such fencing shall be provided with a "cap" to ensure finished appearance along corridors.
       iv. Dumpster enclosures shall be screened with landscape foundation plantings and be of masonry material which shall match the material of adjacent dwelling units.

18. Other.
    a. Cottage community building separation minimum to be 8-feet (foundation to foundation). All resident units to be fire sprinkled per NFPA-13D requirements
    b. Cottage community to be 1 story max height residential buildings.

III. Prior Action:

A. **February 22, 2021** – Planning and Zoning Commission recommended held a public meeting and recommended an action of denial to City Council

B. **March 18, 2021** – City Council remanded Avilla Fairways Planned Development back to the Planning and Zoning Commission for further consideration

IV. Supporting Documents:

APPENDIX A – ATTACHMENTS (*Applicant Documents*):

Attachment 1 - PD Concept Plan (*dated 6/22/21*)
Attachment 2 – PD Illustrative Plan (*dated 6/23/21*)
Attachment 3 – PD Conceptual Landscape Plan (*dated 6/23/21*)
Attachment 4 – Elevation Exhibits
Attachment 5 – Parking Demand Study

APPENDIX B – TRAFFIC IMPACT ANALYSIS (*Traffic Impact Analysis Commissioned by the City of Corinth, dated June 11, 2021*):

APPENDIX C – LETTERS

Attachment 1 – Letters from Property Owners within 200 feet of Proposed Rezoning
Attachment 2 – Letters from General Public

APPENDIX D – FLOODPLAIN MAP

APPENDIX E – 200-FOOT NOITIFICATION BOUNDARY EXHIBIT

V. Neighborhood Meetings:

As provided for in Section 2.10.09., of the UDC, the Applicant of a Planned Development rezoning is strongly encouraged (*though not required by City ordinance*) to conduct a neighborhood meeting with homeowners within the vicinity of the rezoning request.

To understand resident concerns, the developer, NexMetro conducted a series of three neighborhood meetings over the past several months to explain the proposed project, seek input, and seek resolve concerns where practicable. Neighborhood meetings were held on January 27, 2021, April 6, 2021, and June 23, 2021. The initial meeting was held at City Hall with remote access also available via Zoom with approximately 25 attendees. The April 6, 2021, meeting was held with the Larkspur neighborhood with approximately 10 attendees, and the June 23, 2021, Zoom Meeting included approximately 50 attendees from Lake Sharon Estates, Larkspur, and greater Oakmont area.

Additionally, on March 23, 2021, the Oakmont area residents held a meeting at the Hawk Elementary parking lot. City Staff was in attendance. The Applicant was not present.

VI. Compliance with the Comprehensive Plan:

The rezoning request for the subject property, as presented, is in accordance with the "Land Use and Development Strategy" designations, Mixed-Residential, and the concepts outlined in the Master Thoroughfare Plan and Active Transportation Plan as set forth in the "Envision Corinth 2040" Comprehensive Plan.

VII. Public Notices:

Notice of the public hearing was published in the June 12, 2021, edition of the Denton Record-Chronicle. Written public notices were mailed to all property owners located within 200' of the subject property proposed for the zoning change on June 11, 2021.

At the time of packet preparation (*June 25, 2021, at 9:30 AM*), we have received seven (7) letters of opposition from property owners located within the 200' written notice boundary and twenty-four (24) letters of opposition from residents located outside of the 200' written boundary from the general public. *Reference Appendix C – Letters and Appendix E - 200' Notification Boundary area exhibit.*

Staff Recommendation/Motion

The concerns raised at the February 22, 2021, Planning and Zoning Commission and the subsequent resident and homeowner meetings have been addressed in detail in this staff report. The application remains generally the same and the proposed use is suitable at this location.

The application as presented complies with the Comprehensive Plan, the proposed uses are less intense than what existing zoning would allow by right, and the existing transportation infrastructure is satisfactory. Further, the development will be required to comply with the City's development regulations.

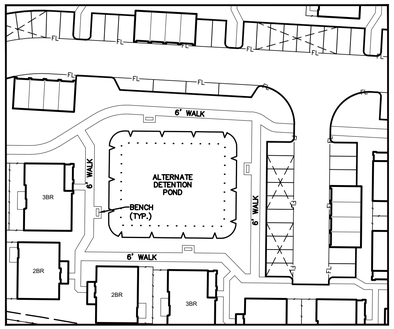
Staff recommends approval as presented.

APPENDIX A

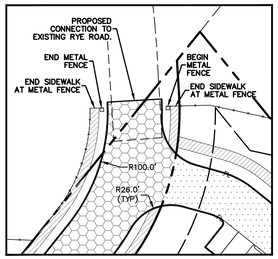
SUPPORTING DOCUMENTS

ATTACHMENTS:

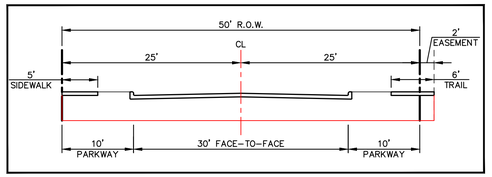
1. PD Concept Plan (*revised date 6/22/21*)
2. PD Illustrative Plan (*revised date 6/23/21*)
3. PD Conceptual Landscape Plan (*revised date 6/23/21*)
4. Elevation Exhibits
5. Parking Demand Study



DETENTION ALTERNATE DETAIL
(NOT TO SCALE)



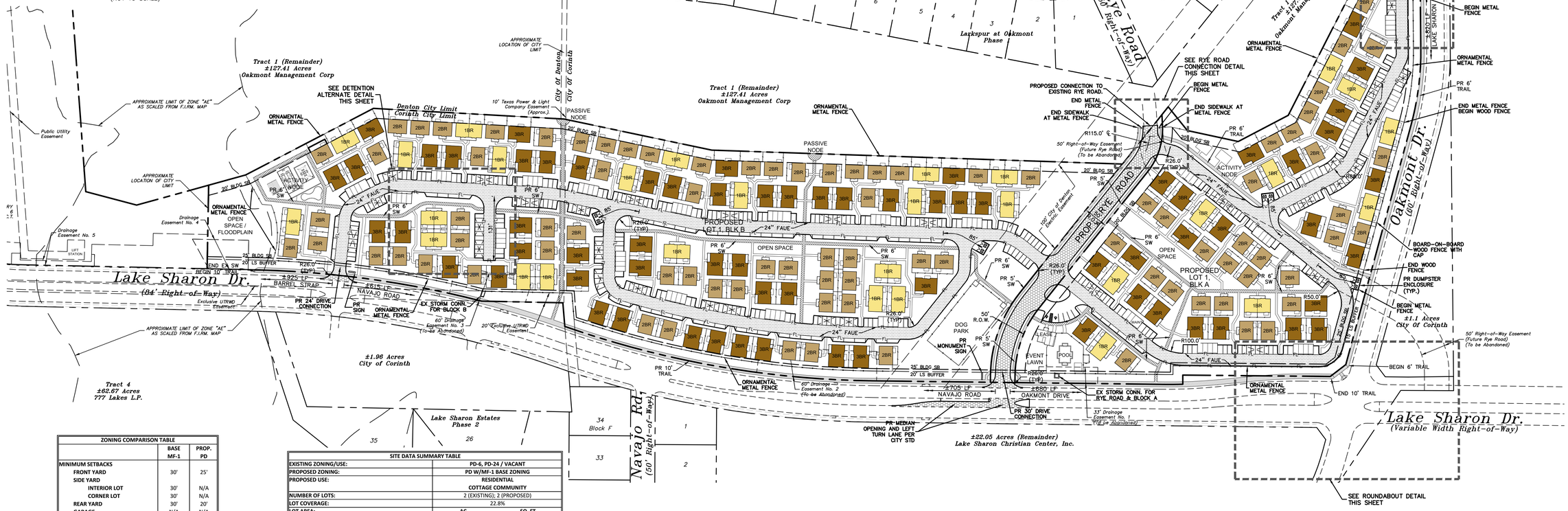
RYE ROAD CONNECTION DETAIL
(NOT TO SCALE)



RYE ROAD TYPICAL SECTION
(NOT TO SCALE)

CONCEPT PLAN NOTES

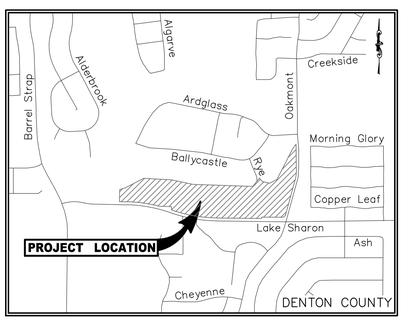
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. ALL FINAL ROAD ALIGNMENTS, EASEMENTS, BUILDING LOCATIONS, AMENITIES TO BE DETERMINED AT THE SITE PLAN PROCESS.
3. ALL STANDARD PARKING SPACES TO BE 9'X18' AND ALL PARALLEL PARKING SPACES TO BE 8'X22'.
4. ALL PUBLIC TRAIL/SIDEWALKS LOCATED ON PRIVATE PROPERTY TO BE LOCATED IN A PEDESTRIAN ACCESS EASEMENT.
5. ALL WOODEN FENCING ADJACENT TO THE PUBLIC STREET TO BE BOARD ON BOARD WITH A CAP. SEE LANDSCAPE PLANS FOR DETAILS.
6. ALL ORNAMENTAL METAL FENCING TO INCLUDE MASONRY COLUMNS SPACED 30' ON CENTER. SEE LANDSCAPE PLANS FOR DETAILS.
7. FINAL LANDSCAPE ALONG OAKMONT SHALL CONFORM TO APPLICABLE SITE DISTANCE VISIBILITY CRITERIA FOR PROPOSED ACCESS LOCATION.



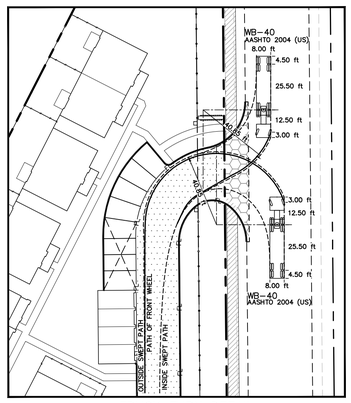
ZONING COMPARISON TABLE	BASE MF-1	PROP. PD
MINIMUM SETBACKS		
FRONT YARD	30'	25'
SIDE YARD		
INTERIOR LOT	30'	N/A
CORNER LOT	30'	N/A
REAR YARD	30'	20'
GARAGE	N/A	N/A
MINIMUM LOT DIMENSIONS		
LOT AREA (SF)	40,000	40,000
LOT WIDTH	200'	200'
LOT DEPTH	200'	200'
DENSITY (MAX, DU/A)	12	9
MINIMUM FLOOR AREA (SF PER DU)	1,050	680
MAX. BUILDING HT. (FT/STORIES)	35' / 2	30' / 1
MAX. BUILDING AREA (TOTAL)	40%	23%

SITE DATA SUMMARY TABLE				
EXISTING ZONING/USE:	PD-6, PD-24 / VACANT			
PROPOSED ZONING:	PD W/MF-1 BASE ZONING			
PROPOSED USE:	RESIDENTIAL COTTAGE COMMUNITY			
NUMBER OF LOTS:	2 (EXISTING); 2 (PROPOSED)			
LOT COVERAGE:	22.8%			
LOT AREA:	AC.		SQ. FT.	
GROSS AREA	24.595		1,071,370	
ROW DEDICATION	0.698		30,389	
NET AREA	23.898		1,040,981	
DENSITY:	9.00	UNITS / ACRE (w/o ROW Ded.)		
PROPOSED BUILDINGS (1 STORY):	AREA*	NO. BLDGS	NO. UNITS	TOTAL
1-BEDROOM (DUPLEX)	1,342	30	60	40,260
2-BEDROOM	1,022	87	87	88,914
3-BEDROOM	1,307	68	68	88,876
STANDARD GARAGE, DETACHED*	831	20	-	16,620
STANDARD GARAGE W/HANDICAP, DETACHED	682	3	-	2,046
LEASING CENTER	1,131	1	-	1,131
TOTALS:		209	215	237,847
PARKING REQUIRED:	UNITS	REQUIRED		PROPOSED
1 BEDROOM (2 SPACES REQ'D; 2 SPACES PROP.)	60	120		120
2 BEDROOM (3 SPACES REQ'D; 2 SPACES PROP.)	87	261		174
3 BEDROOM (4 SPACES REQ'D; 2 SPACES PROP.)	68	272		136
TOTALS:	215	653		430
PARKING PROVIDED:		PROVIDED		
STANDARD SPACES		234		
CARPORT SPACES		144		
HANDICAP SPACES		3		
STANDARD GARAGE SPACES		87		
HANDICAP GARAGE SPACES		3		
TOTALS:		471		
GARAGE SPACES PER UNIT:		41.9%		
OPEN SPACE AREA REQUIRED:	83,278	8%		(SF, %)
OPEN SPACE AREA PROVIDED:				
EVENT LAWN	2,773	0.3%		
PASSIVE NODES	7,024	0.7%		
ACTIVITY NODES	16,802	1.6%		
DOG PARK	11,968	1.1%		
MISC. OPEN SPACE	142,338	13.7%		
TOTALS:	180,905	17.4%		(SF, %)
LANDSCAPE AREA:	500,032	48.0%		(SF, %)
TRAIL DEDICATION:	WIDTH, FT	LENGTH, FT		AREA, SF
LAKE SHARON DRIVE	10	2,189		21,890
OAKMONT DRIVE	6	1,017		6,102
TOTALS:		3,206		27,992
IMPERVIOUS AREA:	540,949	52.0%		(SF, %)
LOADING SPACE:	NOT REQUIRED			
OUTSIDE STORAGE:	NONE PROPOSED			
CONSTRUCTION DATES:	Q1 2021 - Q3 2021			

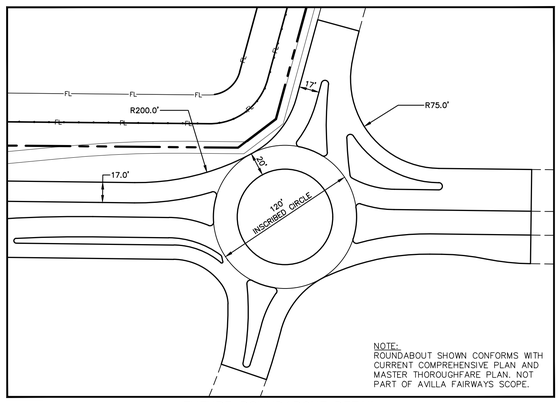
** THESE VALUES REPRESENT "SLAB SIZE" FLOOR AREA*
+ ONE STANDARD GARAGE WILL USE TWO OF FOUR BAYS FOR ON-SITE MAINTENANCE PURPOSES



VICINITY MAP
(NOT TO SCALE)



TRUCK TURN DETAIL
(NOT TO SCALE)



NOTE:
ROUNDABOUT SHOWN CONFORMS WITH CURRENT COMPREHENSIVE PLAN AND MASTER THOROUGHFARE PLAN. NOT PART OF AVILLA FAIRWAYS SCOPE.

FUTURE ROUNDABOUT DETAIL
(NOT TO SCALE)

LEGEND

- PROPOSED METAL FENCE
- PROPOSED WOOD FENCE
- PROPOSED FIRELANE (PRIVATE PAVEMENT)
- PROPOSED ROADWAY (PUBLIC PAVEMENT)
- PROPOSED PUBLIC TRAIL/SIDEWALK
- PROPOSED PRIVATE TRAIL/SIDEWALK

GRAPHIC SCALE
100 0 50 100
(IN FEET)
1 inch = 100 ft.

OWNER/DEVELOPER:
NexMetro Communities
2221 Lakeside Boulevard, Suite 120
Richardson, Texas 75082
Tel. No. (972) 795-0039
Contact: Josh Eadie

ENGINEER:
Lincoln Consulting & Engineering, Inc.
P.O. Box 1176
Wylie, Texas 75298
Tel. No. (214) 215-5066
Contact: Joshua A. Lincoln, P.E.

PD CONCEPT PLAN
AVILLA FAIRWAYS
LAKE SHARON @ OAKMONT
24.595 ACRE TRACT OF LAND
BERRY MERCHANT SURVEY, ABSTRACT NO. 800
A.H. SERREN SURVEY, ABSTRACT NO. 1198
CITY OF CORINTH, DENTON COUNTY, TEXAS
June 22, 2021

LINCOLN CONSULTING & ENGINEERING
LCE
phone: (214) 215-5066
Josh@LincolnCE.com
P.O. Box 1176
Wylie, Texas 75298

PRELIMINARY
FOR REVIEW ONLY
NOT FOR CONSTRUCTION
LINCOLN CONSULTING & ENGINEERING
Firm No. 12123
Engineer: JOSHUA A. LINCOLN, P.E.
P.E. No.: 114389 Date: 6/22/2021

AVILLA FAIRWAYS - City of Corinth, Texas - LC&E PROJECT NO. 1015-003

AVILLA FAIRWAYS
LAKE SHARON @ OAKMONT
24.595 ACRE TRACT OF LAND
City of Corinth , Denton County, Texas

PD CONCEPT PLAN

Scale: 1" = 100'
Designed by: JAL
Drawn by: JAL
Checked by: JAL
Date: June 22, 2021
Project No. 1015-003

CP

FILE: C:\Users\Eric\Lincoln Consulting & Engineering\Joshua Lincoln - Projects\15-003_Corinth-Avilla Fairways\2_Auto\CAD\15-003 Concept Plan.dwg
USER: Eric DATE/TIME: Jun 22, 2021 - 10:28am

KLS
KNAPP LAND SOLUTIONS

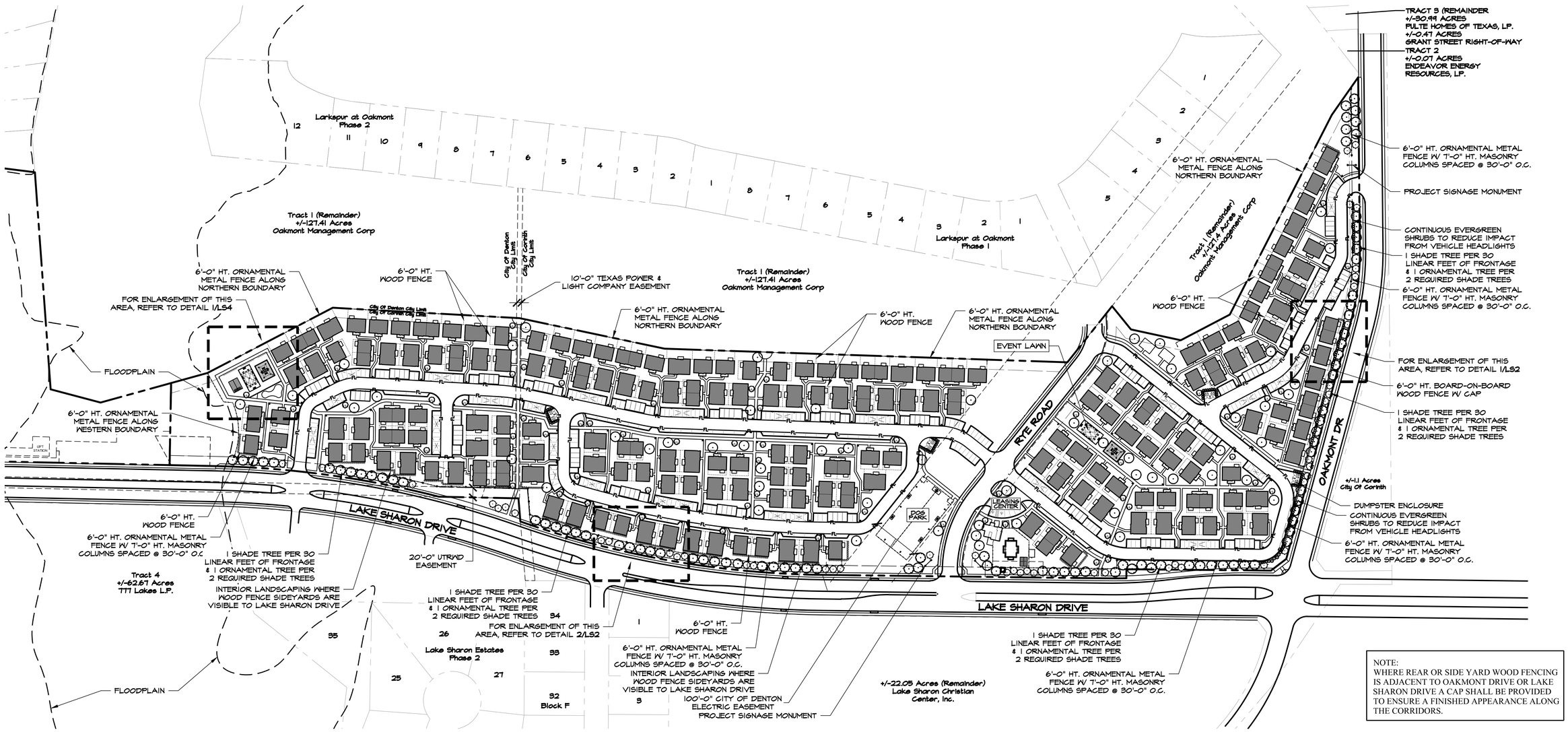
June 23, 2021

Scale 1"=100'
0' 100' 200'

This drawing is a pictorial representation for presentation purposes only and is subject to change without notice. Additionally, no warranty is made to the accuracy, completeness, or of the information contained herein.

Avilla Fairways - Corinth, TX

Illustrative Plan



NOTE:
WHERE REAR OR SIDE YARD WOOD FENCING IS ADJACENT TO OAKMONT DRIVE OR LAKE SHARON DRIVE A CAP SHALL BE PROVIDED TO ENSURE A FINISHED APPEARANCE ALONG THE CORRIDORS.

LANDSCAPE REQUIREMENTS

OAKMONT DRIVE

A. 1-3" CAL. CANOPY TREE / 30 LF OF LANDSCAPE BUFFER
982 LF OF LS BUFFER / 30 LF = 32 - 3" CAL. CANOPY TREES REQUIRED
PROVIDED: 32 - 3" CALIPER CANOPY TREES PROVIDED

B. 1-2" CAL. ORNAMENTAL TREE FOR EVERY 2 CANOPY TREES REQUIRED
32 - 3" CAL. CANOPY TREES / 2 = 16 - 2" CAL. ORNAMENTAL TREES REQUIRED
PROVIDED: 16 - 2" CALIPER ORNAMENTAL TREES PROVIDED

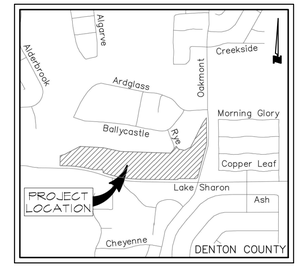
LAKE SHARON DRIVE

A. 1-3" CAL. CANOPY TREE / 30 LF OF LANDSCAPE BUFFER
2,000 LF OF LS BUFFER / 30 LF = 66 - 3" CAL. CANOPY TREES REQUIRED
PROVIDED: 66 - 3" CALIPER CANOPY TREES PROVIDED

B. 1-2" CAL. ORNAMENTAL TREE FOR EVERY 2 CANOPY TREES REQUIRED
66 - 3" CAL. CANOPY TREES / 2 = 33 - 2" CAL. ORNAMENTAL TREES REQUIRED
PROVIDED: 33 - 2" CALIPER ORNAMENTAL TREES PROVIDED

AVILLA FAIRWAYS

~CONCEPTUAL LANDSCAPE PLAN~



LOCATION MAP
NOT TO SCALE

NORTH

100 50 0 100

1" = 100' - 0"

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

NOTE:
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STUDIO 13 DESIGN GROUP

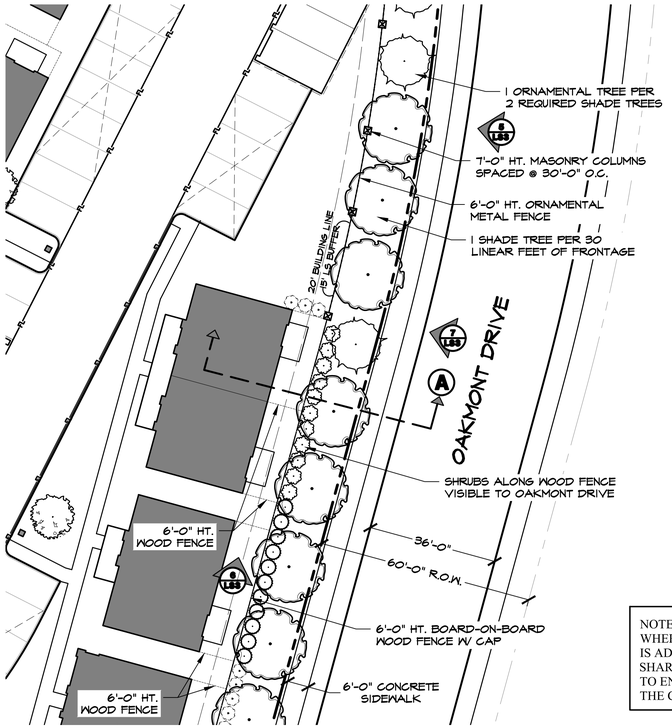
Studio 13 Design Group, PLLC.
386 W. Main Street
Lewisville, Texas 75057
469-635-1900

TBAE Firm #BR643

REGISTERED LANDSCAPE ARCHITECT
LEONARD W. REEVES
1977
STATE OF TEXAS

June 23, 2021

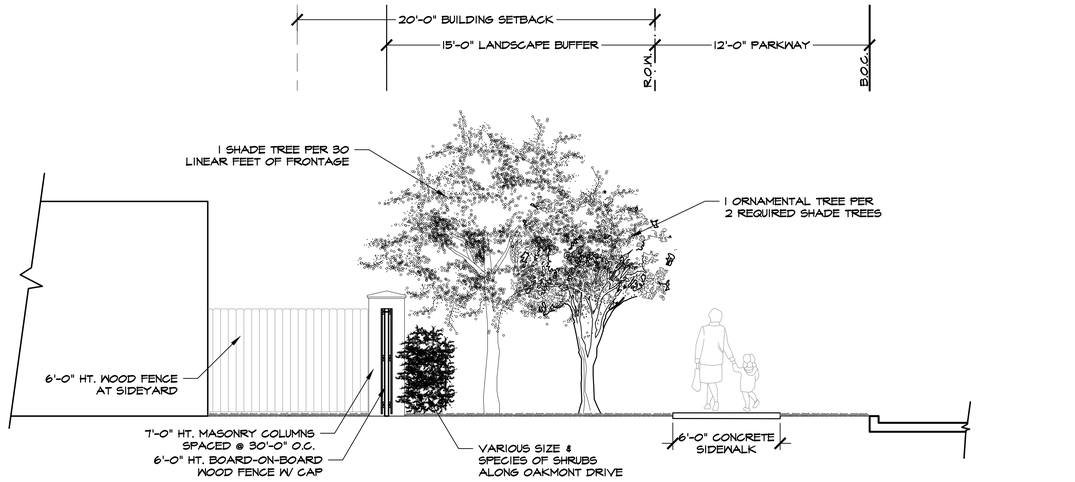
LS1



1 OAKMONT DRIVE FRONTAGE
PLAN

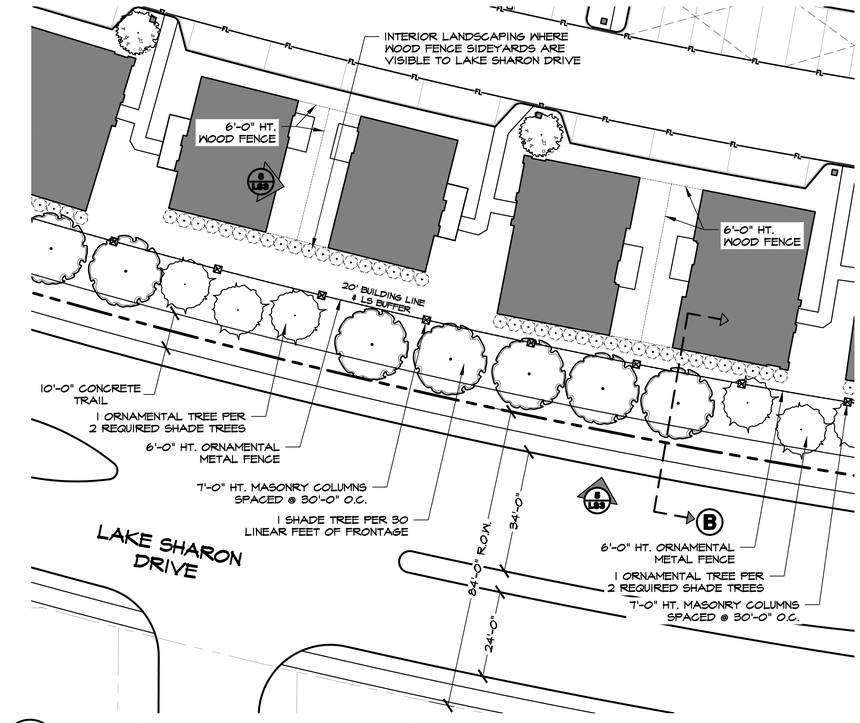
SCALE: 1"=20'-0"

NOTE:
WHERE REAR OR SIDE YARD WOOD FENCING IS ADJACENT TO OAKMONT DRIVE OR LAKE SHARON DRIVE A CAP SHALL BE PROVIDED TO ENSURE A FINISHED APPEARANCE ALONG THE CORRIDORS.



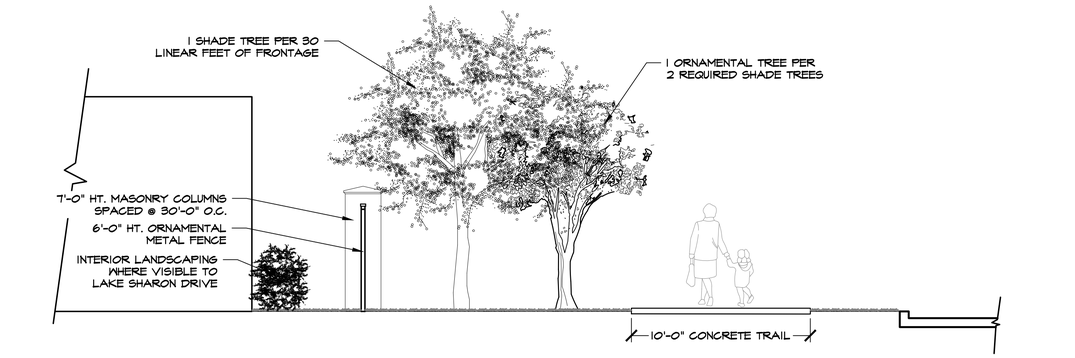
A LANDSCAPE SECTION - OAKMONT DRIVE FRONTAGE
SECTION

SCALE: 1/4"=1'-0"



2 LAKE SHARON DRIVE FRONTAGE
PLAN

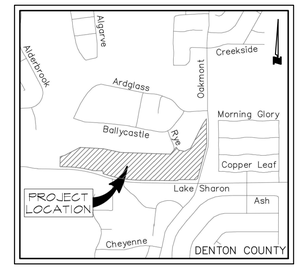
SCALE: 1"=20'-0"



B LANDSCAPE SECTION - LAKE SHARON DRIVE FRONTAGE
SECTION

SCALE: 1/4"=1'-0"

AVILLA FAIRWAYS
~CONCEPTUAL LANDSCAPE PLAN~



LOCATION MAP
NOT TO SCALE

NORTH

20 10 0 20

1" = 20' - 0"

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

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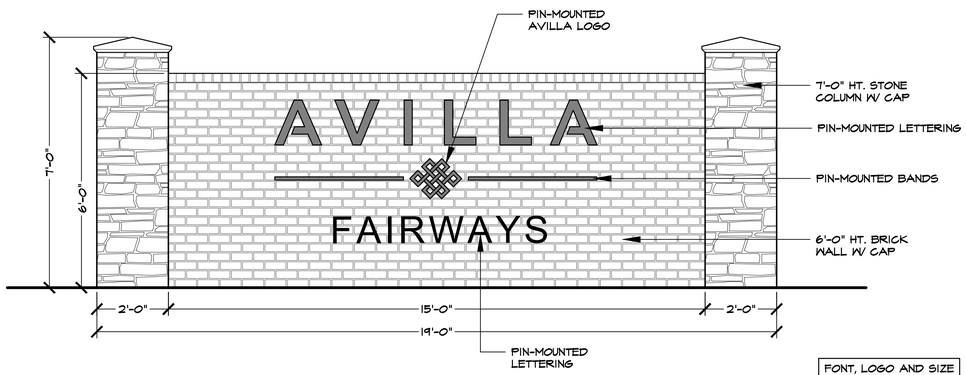
TBAE Firm #BR643

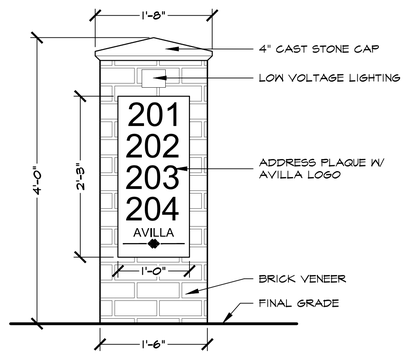
REGISTERED LANDSCAPE ARCHITECT
LEONARD W. REEVES
1977
STATE OF TEXAS

June 23, 2021

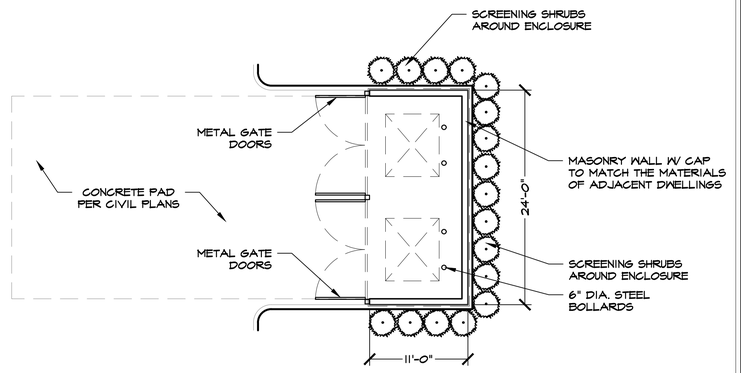
LS2



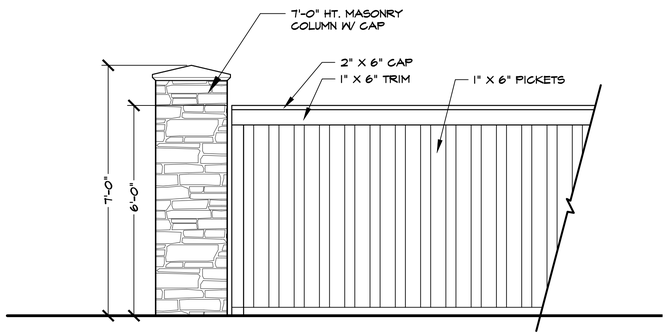
1 PROJECT SIGNAGE MONUMENT
ELEVATION SCALE: 1/2"=1'-0"



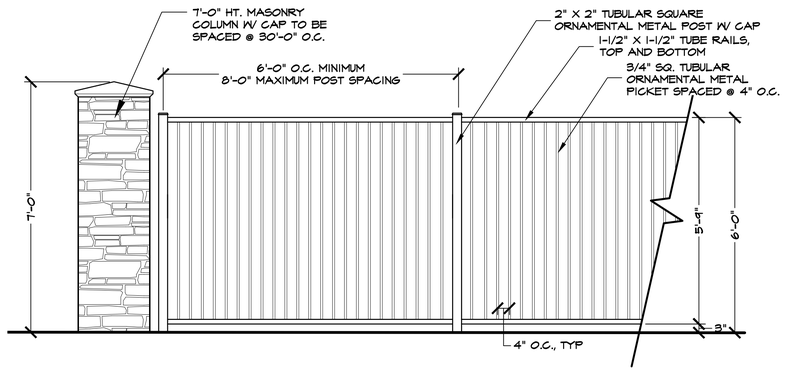
2 UNIT PORTAL SIGN
ELEVATION SCALE: 1"=1'-0"



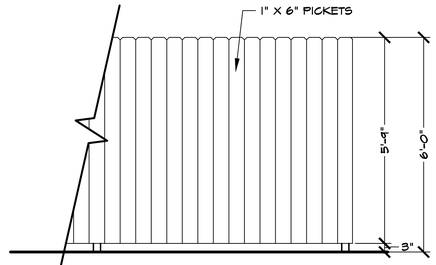
3 DUMPSTER ENCLOSURE
PLAN SCALE: 1/8"=1'-0"



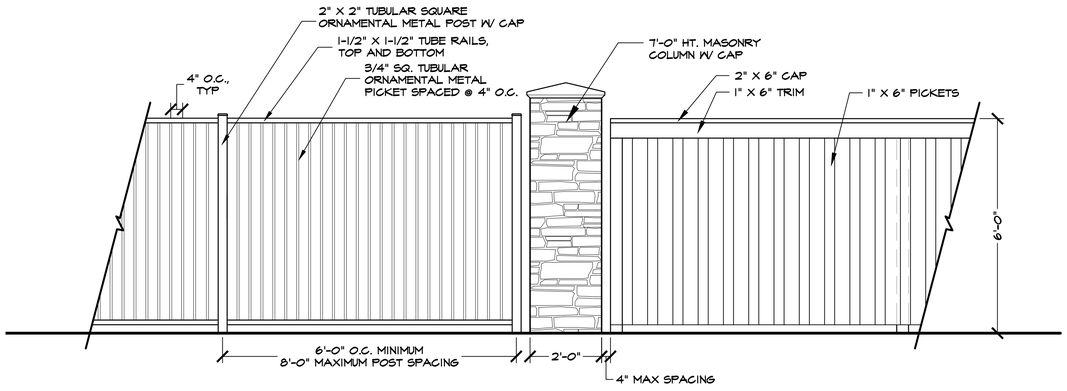
4 6'-0" HT. BOARD-ON-BOARD WOOD FENCE ALONG FRONTAGE
ELEVATION SCALE: 1/2"=1'-0"



5 6'-0" HT. ORNAMENTAL METAL FENCE ALONG FRONTAGE
ELEVATION SCALE: 1/2"=1'-0"

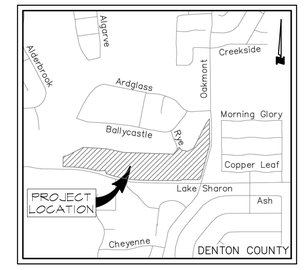


6 6'-0" HT. WOOD FENCE (INTERNAL YARDS)
ELEVATION SCALE: 1/2"=1'-0"



7 PARTIAL ELEVATION: WOOD FENCING TRANSITION TO METAL FENCING
ELEVATION SCALE: ½" = 1'-0"

AVILLA FAIRWAYS
~CONCEPTUAL FENCING & MONUMENTATION~



LOCATION MAP
NOT TO SCALE

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One Inch

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REGISTERED LANDSCAPE ARCHITECT
LEONARD W. REEVES
1977
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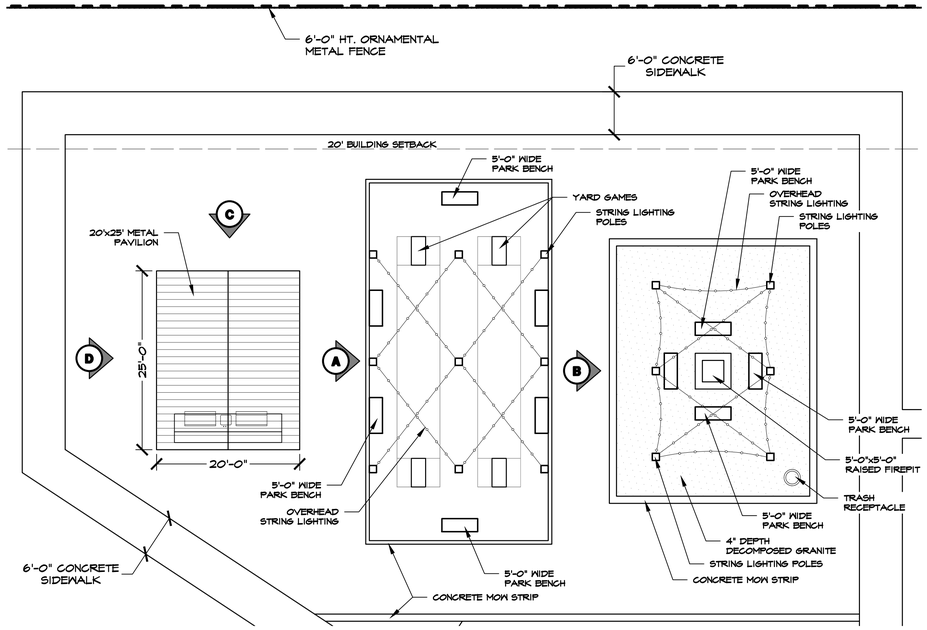
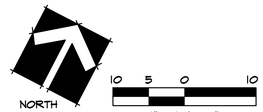
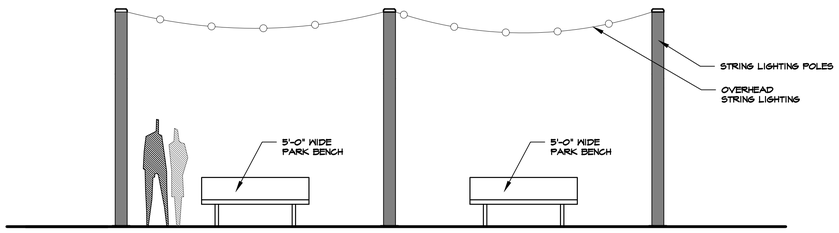
June 23, 2021

LS3



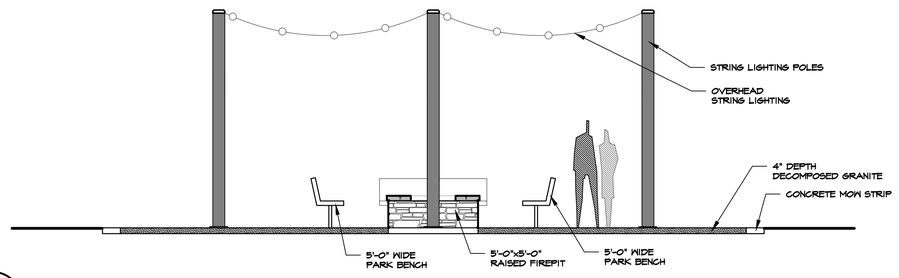


1 AMENITY AREA ENLARGEMENT
PLAN



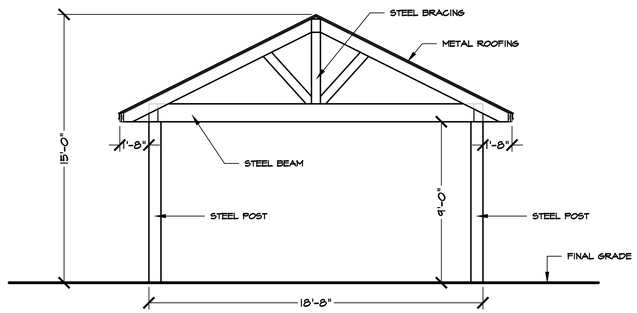
A LIGHTED LAWN AREA
ELEVATION

SCALE: 1/4"=1'-0"



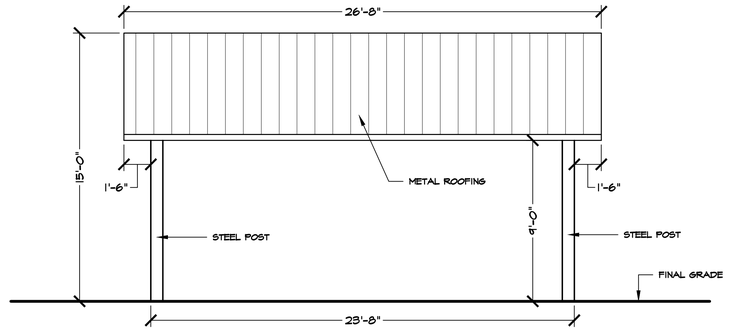
B FIRE PIT AREA
ELEVATION

SCALE: 1" = 1'-0"



C METAL PAVILION - END VIEW
ELEVATION

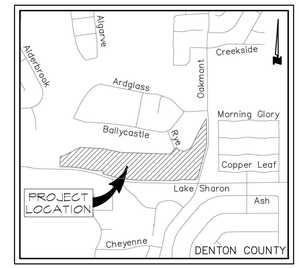
SCALE: 1/4"=1'-0"



D METAL PAVILION - SIDE VIEW
ELEVATION

SCALE: 1/4"=1'-0"

AVILLA FAIRWAYS
~CONCEPTUAL AMENITIES~



LOCATION MAP
NOT TO SCALE

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One Inch

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Lewisville, Texas 75057
469-635-1900
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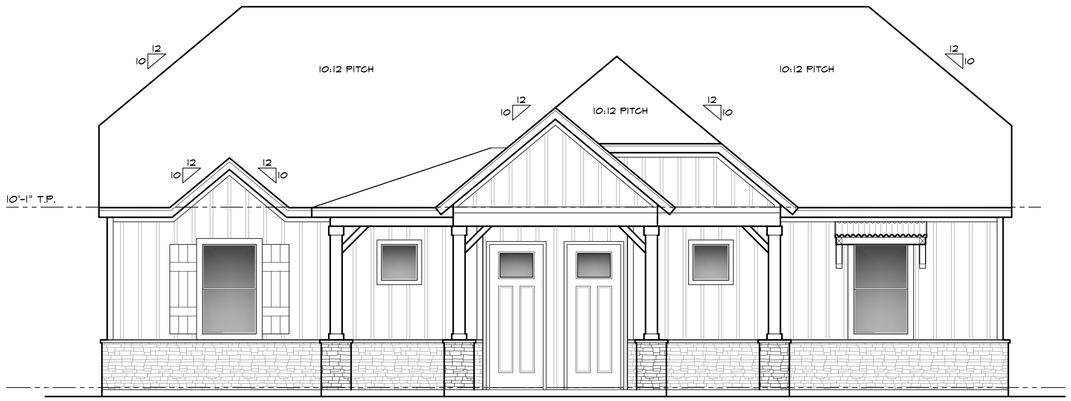
REGISTERED LANDSCAPE ARCHITECT LEONARD W. REEVES 1977 STATE OF TEXAS

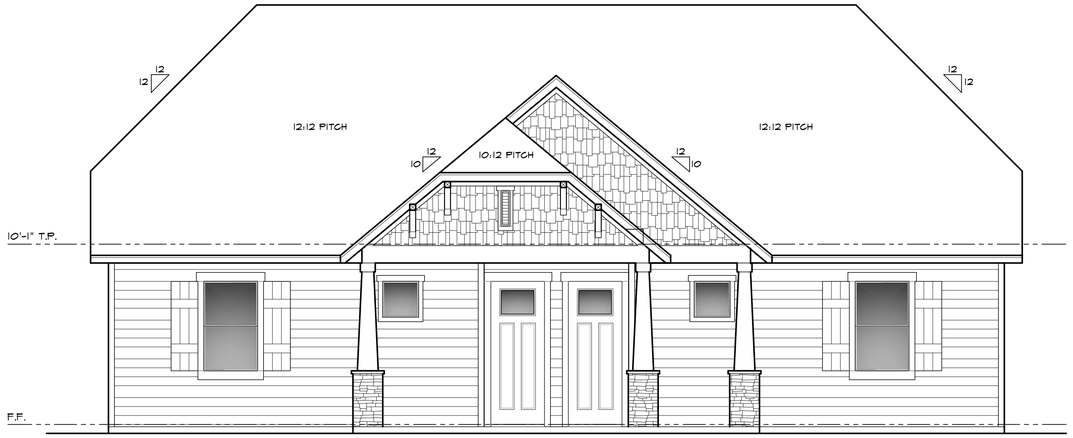
June 23, 2021

LS4



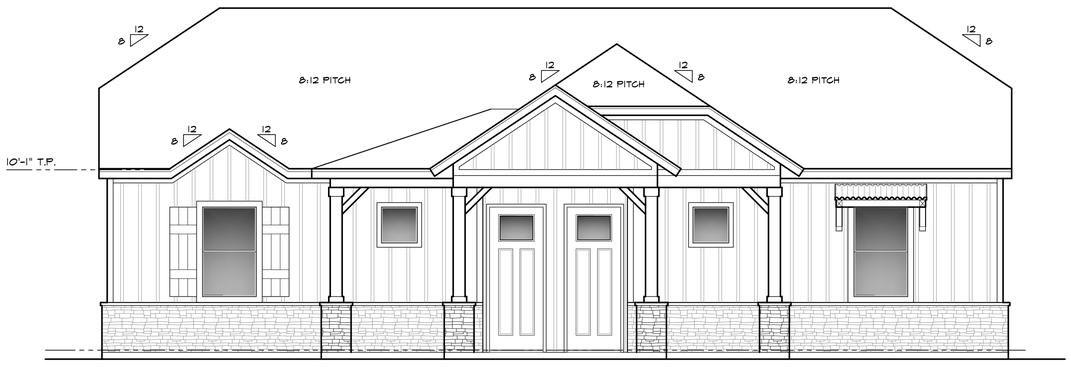
02 FRONT ELEVATION (10:12 PITCH)

SCALE: 1/4"=1'-0"



02 FRONT ELEVATION (12:12 PITCH)

SCALE: 1/4"=1'-0"



01 FRONT ELEVATION (STANDARD 8:12)

SCALE: 1/4"=1'-0"

01 FRONT ELEVATION (STANDARD 8:12)

SCALE: 1/4"=1'-0"

BUILDING TYPE 1A ELEVATIONS

SCALE: 1/4" = 1'-0"

BUILDING TYPE 1B ELEVATIONS

SCALE: 1/4" = 1'-0"

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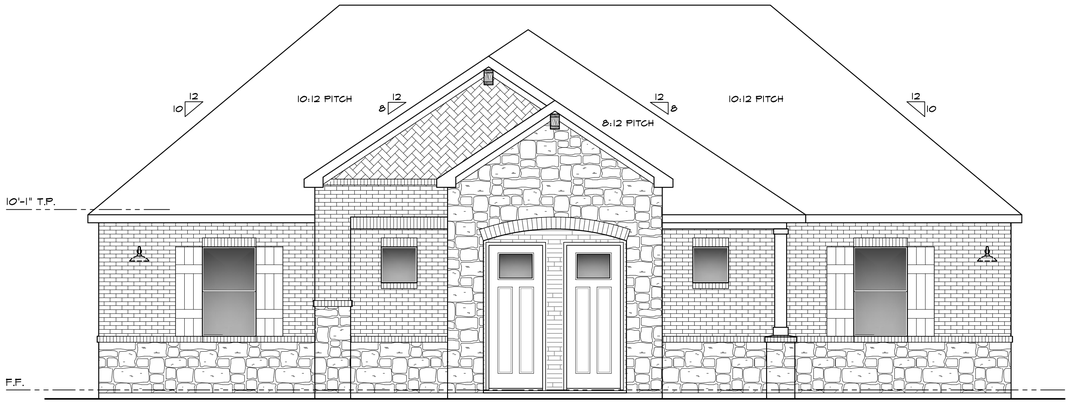
NEXMETRO
AVILLA FAIRWAYS
BUILDING ELEVATIONS
**** CONCEPTUAL PLANS ****

DATE: 01-20-2021



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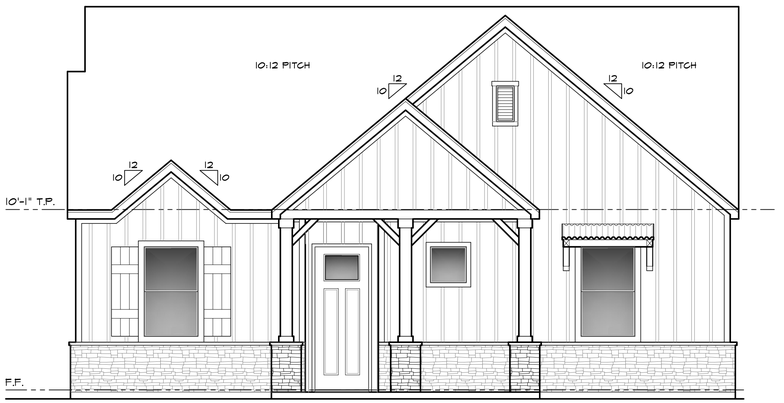

02 FRONT ELEVATION (10:12 PITCH)

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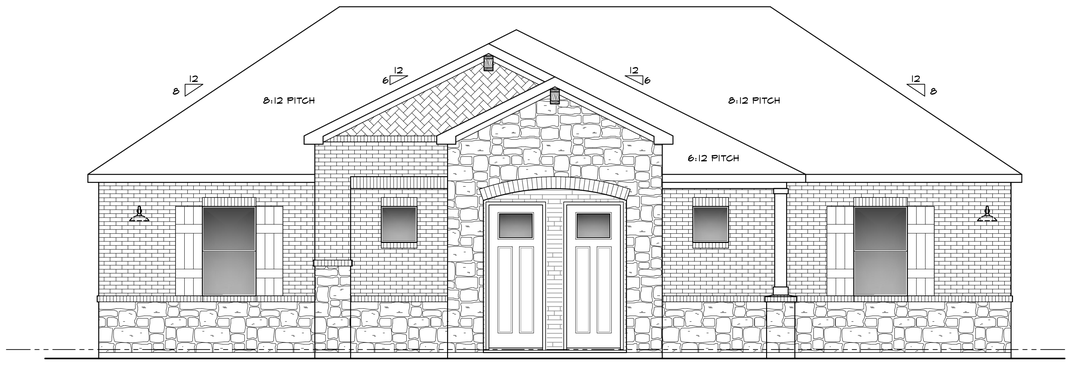

01 FRONT ELEVATION (STANDARD 8:12)

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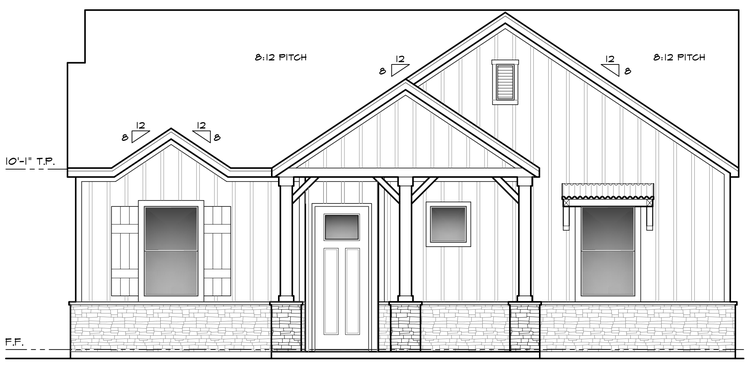

01 FRONT ELEVATION (STANDARD 8:12)

SCALE: 1/4"=1'-0"

BUILDING TYPE 1C ELEVATIONS

SCALE: 1/4" = 1'-0"

BUILDING TYPE 2A ELEVATIONS

SCALE: 1/4" = 1'-0"

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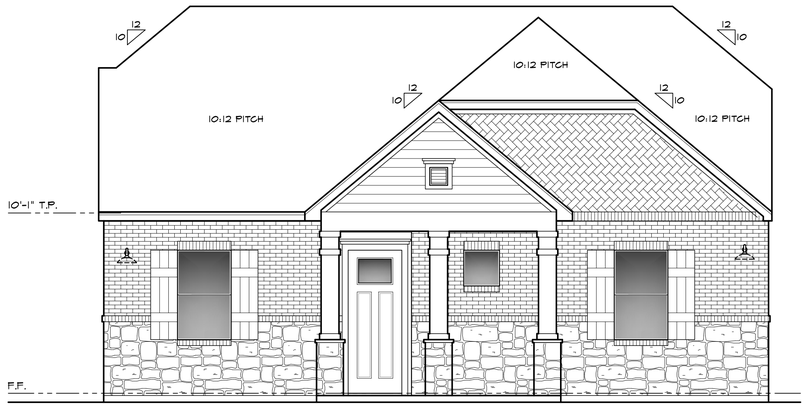

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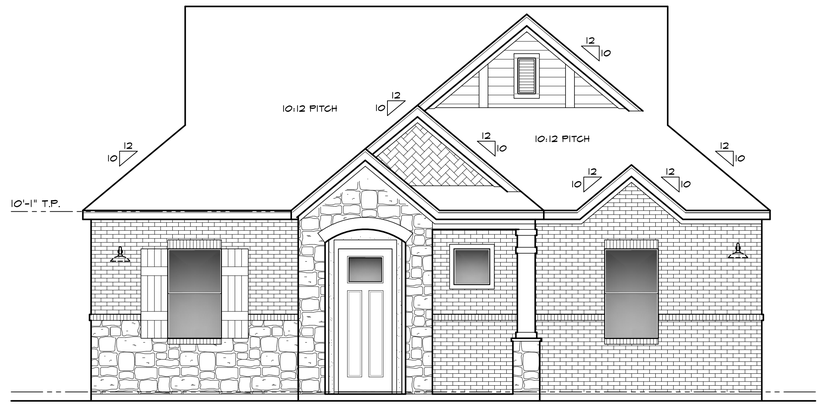

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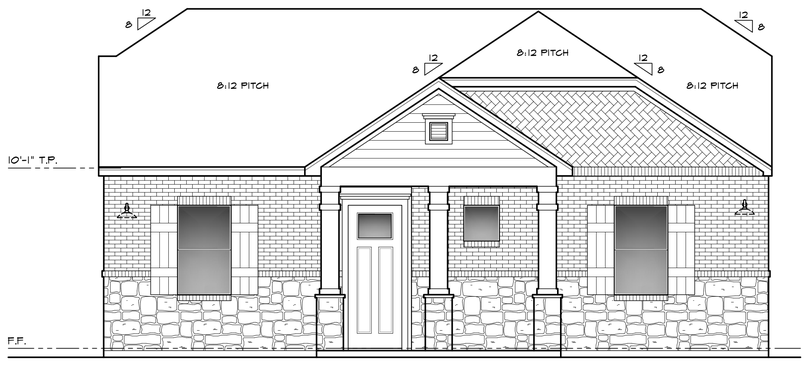

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BUILDING TYPE 2B ELEVATIONS

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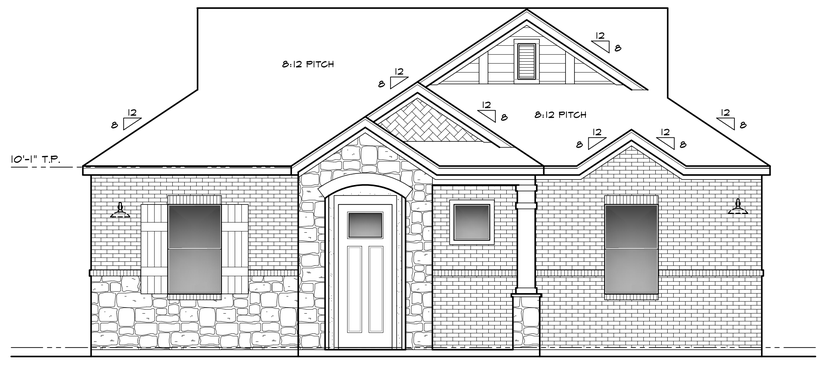

01 FRONT ELEVATION (STANDARD 8:12)

SCALE: 1/4"=1'-0"

BUILDING TYPE 2C ELEVATIONS

SCALE: 1/4" = 1'-0"

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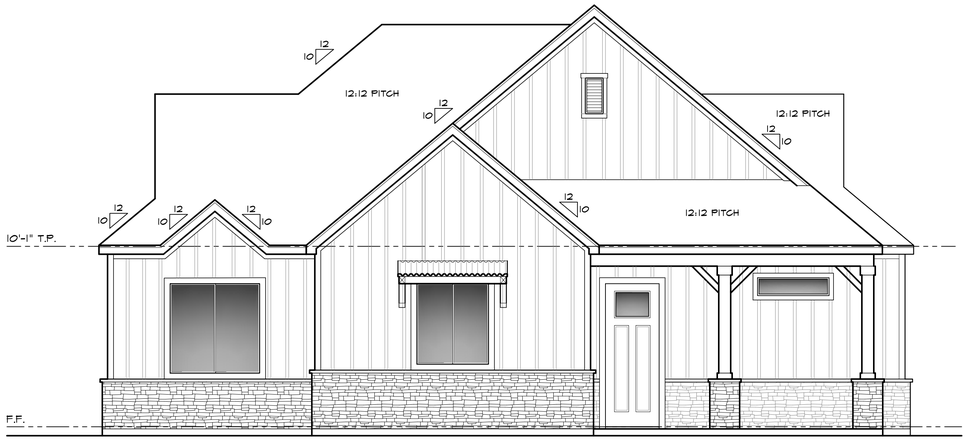

02 FRONT ELEVATION (12:12 PITCH)

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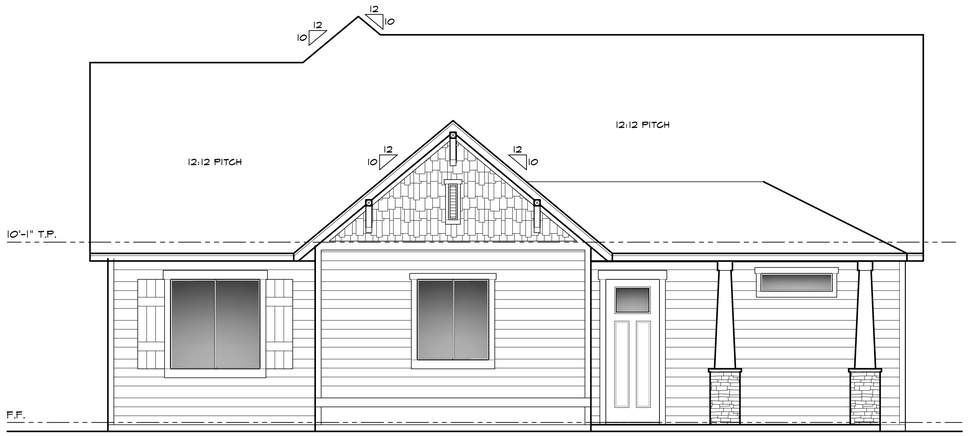

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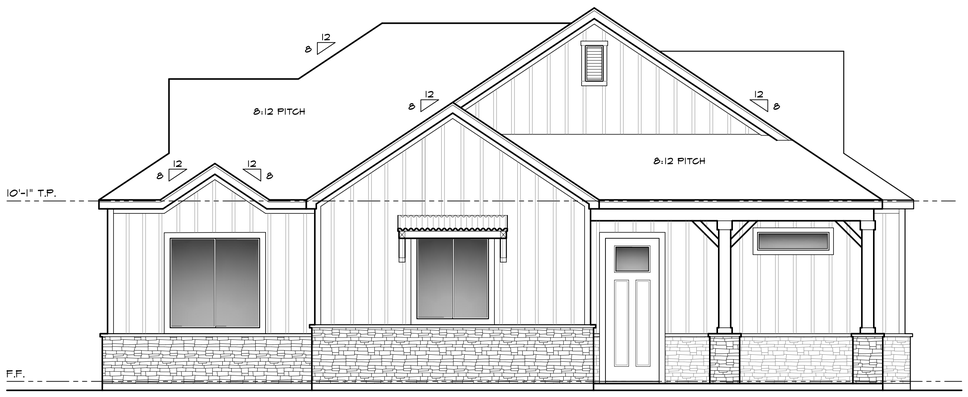

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BUILDING TYPE 3A ELEVATIONS

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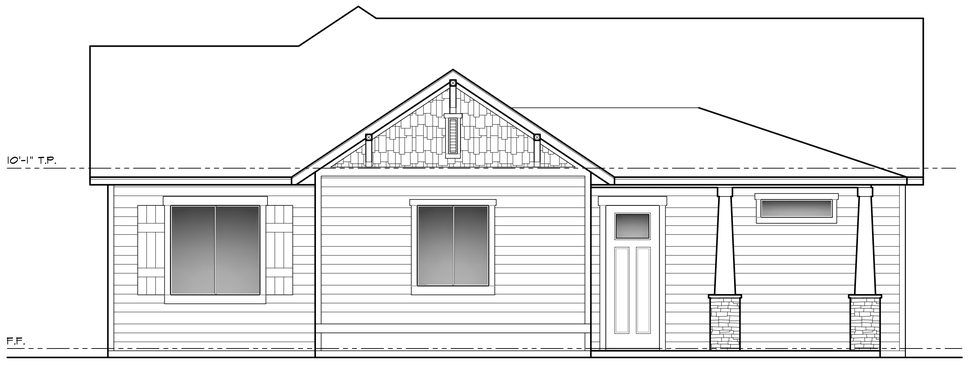

01 FRONT ELEVATION (STANDARD 8:12)

SCALE: 1/4"=1'-0"

BUILDING TYPE 3B ELEVATIONS

SCALE: 1/4" = 1'-0"

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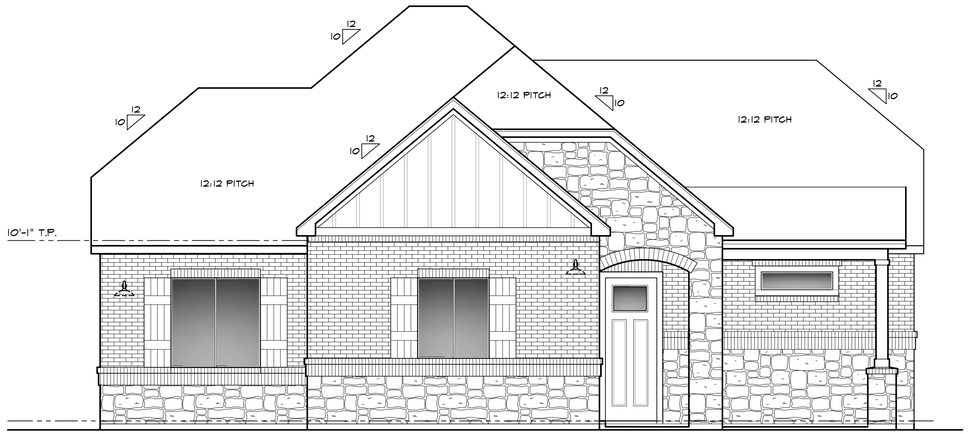
BUILDING ELEVATIONS
CONCEPTUAL PLANS

DATE: 01-20-2021



03 FRONT ELEVATION (10:12 PITCH)

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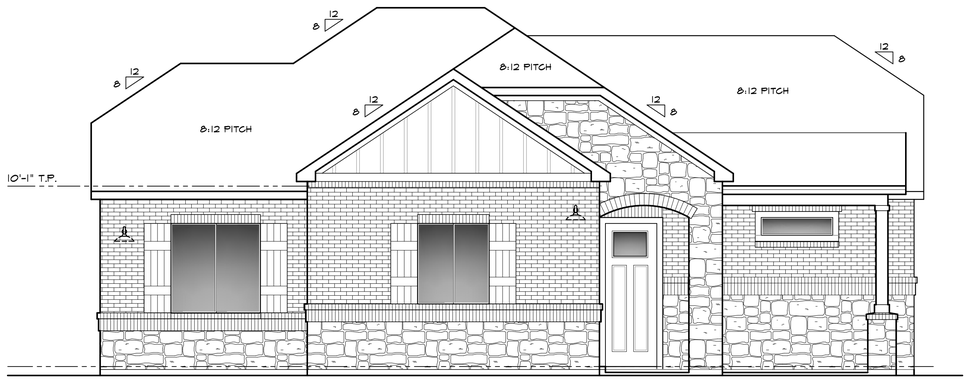

01 FRONT ELEVATION (STANDARD 8:12)

SCALE: 1/4"=1'-0"

BUILDING TYPE 3C ELEVATIONS

SCALE: 1/4" = 1'-0"

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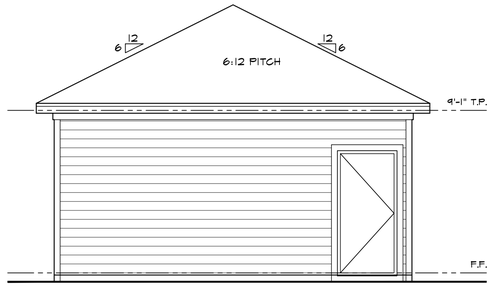
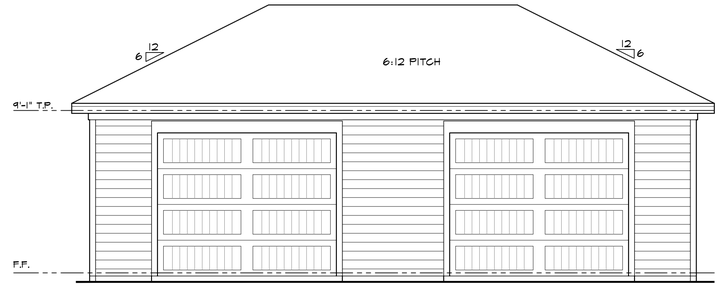
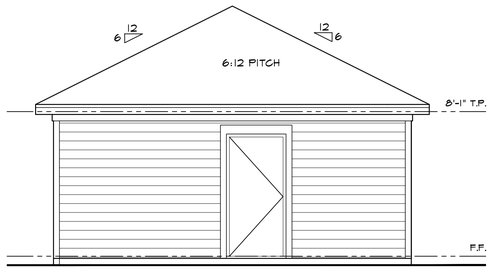
DATE: 01-20-2021



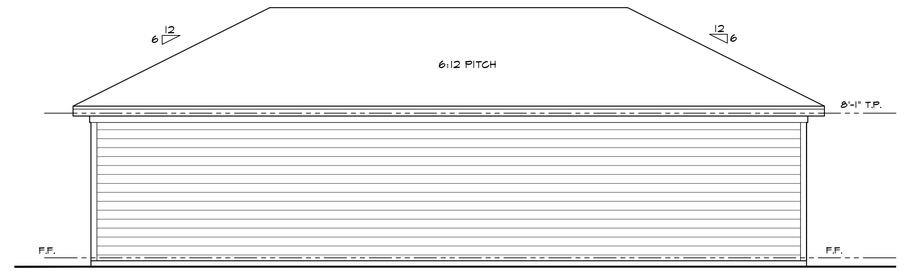
06 - ACCESSIBLE GARAGE - RIGHT ELEVATION



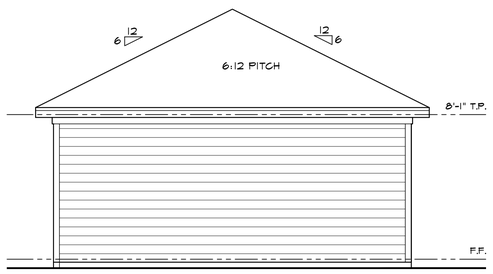
03 - ACCESSIBLE GARAGE - FRONT ELEVATION



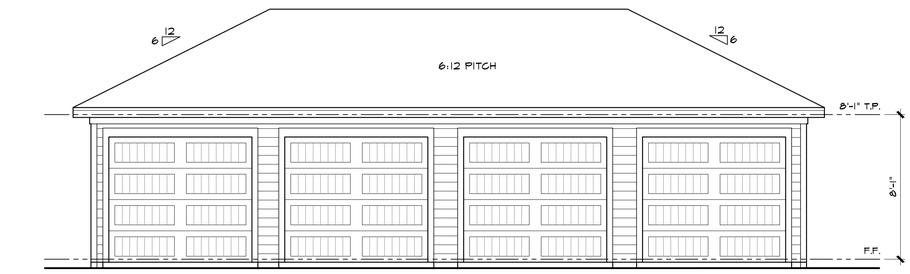
05 - MAINTENANCE BUILDING - SIDE ELEVATION



02 - TYPICAL GARAGE - REAR ELEVATION



04 - TYPICAL GARAGE - SIDE ELEVATION



01 - TYPICAL GARAGE - FRONT ELEVATION

REMOTE GARAGE ELEVATIONS

SCALE: 1/4" = 1'-0"

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NEXMETRO
AVILLA FAIRWAYS
BUILDING ELEVATIONS
CONCEPTUAL PLANS

DATE: 01-20-2021

Technical Memorandum

To: Mr. Josh Hartmann
NEXmetro Communities

From: Kimley-Horn and Associates, Inc.

Date: February 18, 2014

Re: NEXmetro Neighborhoods - Residential Parking Demand Study

---

Introduction

The NEXmetro neighborhood concept is a hybrid housing option of high-end, single-story, detached and duplex rental residences in gated neighborhoods. Compared to traditional multifamily rental developments, the NEXmetro neighborhoods tend to attract an older, higher-income population. The traffic and parking demands of the NEXmetro residents may be closer to that of a mix of traditional single-family detached housing and age-restricted senior housing.

Municipalities have a variety of standards for parking supply minimums or maximums for land uses. Most of the standards would not contain an exact match for the NEXmetro residential neighborhood, so they risk providing too much or too little parking for efficient use of the site. This parking demand study will identify the actual parking demand in established NEXmetro neighborhoods in order to provide guidance for development of future neighborhoods.

NEXmetro Neighborhood Data Collection

The parking occupancy was recorded at the following NEXmetro neighborhoods by site staff or KHA data collectors:

- Avilla Marana One (4050 W. Aerie Drive, Marana, AZ)
- Avilla River (1000 W. River Road, Tucson, AZ)
- Avilla Preserve (2501 W. Orange Grove Road, Tucson, AZ)

Table 1 shows the units and bedroom counts for the neighborhoods at the times of the highest parking demand. The number of occupied units varied slightly through the data collection period, so all parking calculations are performed using the conditions during the highest observed parking demand.

The site staff made observations at 10 AM, 6 PM, 9 PM, and 4 AM on a weekday and a Saturday/Sunday. KHA observations were overnight occupancy counts for a weekday. The counts included visitor parking.

Table 1. NEXmetro Neighborhood Unit Makeup

NEXmetro Neighborhood	Occupied Units	1BR Units	2BR Units	3BR Units	Total Occupied Bedrooms	Garage Spaces Leased	Observation Dates
Marana One	157	31	73	53	336	26	1/15, 1/18, 2/5
River	50	16	17	17	101	6	1/15, 1/18, 2/5, 2/10
Preserve	43	11	17	15	90	12	1/15, 1/18, 2/5, 2/10
Totals:	**250**	58	107	85	**527**	**44**	

Each NEXmetro neighborhood includes covered garages which are available for rent separately from the basic unit rate. As reserved spaces which are not available to any user, these garage spaces are assumed to be occupied at all times. The number of leased garage spaces was provided for each site by the site staff, with a weighted average of 0.18 garage leases per unit, and 0.08 garage leases per bedroom. When garage spaces are not included in occupancy numbers, the resulting occupancy of the general spaces is called "surface" parking.

NEXmetro Neighborhood Time-of-Day Parking Observations

Exhibit 1 shows the surface parking occupancy counts at each location, and notes the number of additional garage spaces which are also considered occupied. This data is from the weekday and weekend counts with four observations per day.

The daytime data shows that the neighborhoods exhibit a typical residential parking occupancy trend, with low occupancy during the weekday daytime, rising occupancy throughout the evening, and an overnight peak between midnight and 6 AM. The weekend data is similar, with the Marana and River neighborhoods showing the expected higher occupancy during the Saturday morning count.

NEXmetro Neighborhood Parking Demand Calculations

Comparing the unit and bedroom count for each neighborhood with the parking occupancy data results in the demand calculations shown in **Table 2**. The maximum surface parking spaces occupied for each neighborhood is the highest individual observation from the data set.

The demand is calculated to find the surface space demand per unit and per bedroom. A second set of calculations shows the total demand (surface plus garage spaces) per unit and per bedroom.

A weighted average of parking demands across all the neighborhoods was also calculated.

Table 2. NEXmetro Neighborhood Parking Demand

NEXmetro Neighborhood	Occupied Units	Occupied Bedrooms	Maximum Observed Surface Parking Spaces Occupied (Date)	Garage Spaces Occupied	Surface + Garage Spaces Occupied	Surface Parking Space Demand Per Unit	Surface Parking Space Demand Per Bedroom	Surface + Garage Parking Space Demand Per Unit	Surface + Garage Parking Space Demand Per Bedroom
Marana One	157	336	229 (1/15)	26	255	1.46	0.68	1.62	0.76
River	50	101	63 (2/5)	6	69	1.26	0.62	1.38	0.68
Preserve	43	90	59 (2/10)	12	71	1.37	0.66	1.65	0.79
Totals / Weighted Avg:	**250**	**527**	**351**	**44**	**395**	**1.40**	**0.67**	**1.58**	**0.75**

The parking demand per bedroom is relatively consistent between the neighborhoods, with a weighted average demand of 0.67 surface spaces per bedroom, and 0.75 total spaces per bedroom.

The parking demand per unit is less consistent across the neighborhoods, probably due to the difference in unit mix for each neighborhood. The River neighborhood has a noticeably lower parking demand per unit than the others, which seems to correspond with its higher percentage of 1-bedroom units.

Parking Demand Comparisons to Traditional Multifamily

Two published sources of national research on parking demand rates are *Shared Parking, 2nd Edition* by the Urban Land Institute (ULI) and *Parking Generation, 4th Edition* by the Institute of Transportation Engineers (ITE). **Table 3** shows the typical parking demand from each resource. For the ITE parking demand, the 85th-percentile of observed demands is often taken as a design value.

Table 3. Parking Demand Comparison

Land Use	Unit of Measure	Peak Parking Demand
ULI *Shared Parking* Residential, Rental	Unit	1.65
ULI *Shared Parking* Residential, Owned	Unit	1.85
ITE *Parking Generation* Low/Mid-Rise Apartment Suburban, Weekday	Unit	1.23 Average 1.94 85th-Percentile
NEXmetro Observed Weighted Average	Unit	1.40 Surface Spaces 1.58 Total Spaces
NEXmetro Observed Maximums at any site	Unit	1.46 Surface Spaces 1.65 Total Spaces

A comparison of the NEXmetro observations using per-unit demands shows that the NEXmetro neighborhoods have parking demands similar to or slightly less than the national reference data for multifamily uses.

NEXmetro Neighborhood Parking Supply Recommendation

Based on a conservative analysis of the parking demand data collected at established neighborhoods, future NEXmetro neighborhoods should have a minimum parking supply set using the following rates:

- **0.90 total parking spaces per bedroom** (surface spaces plus garage spaces, including visitors)

A typical division between surface and garage spaces would be the following minimums:

- **0.75 surface parking spaces per bedroom**
- **0.15 garage parking spaces per bedroom**

The recommended rates include an approximately 10% vacancy rate to improve perceived parking efficiency and quality of life factors within the site. The number of surface spaces needed per bedroom has very little variance between neighborhoods in the observation, showing it is the preferred accounting method for the parking supply. The garage leasing behavior may vary more significantly between sites based on climate and other factors.

If the parking supply is to be calculated per unit, the following minimum rates should be used:

- **1.85 total parking spaces per unit** (surface spaces plus garage spaces, including visitors), with the typical division being:
  - **1.55 surface parking spaces per unit**
  - **0.30 garage parking spaces per unit**

Due to the variability in unit mix at each site, the parking demand per unit is not as certain as using the per bedroom rates. However, the recommended rates per bedroom and per unit are internally consistent for the average 2.1 bedrooms per unit mix at the observed neighborhoods.

As other NEXmetro neighborhoods are completed, continued parking occupancy observations should be made in order to broaden the data set and refine the parking supply recommendations.

END

Attachments: Exhibit 1 - NEXmetro Surface Parking Time-of-Day Observations
NEXmetro Parking Occupancy Observations

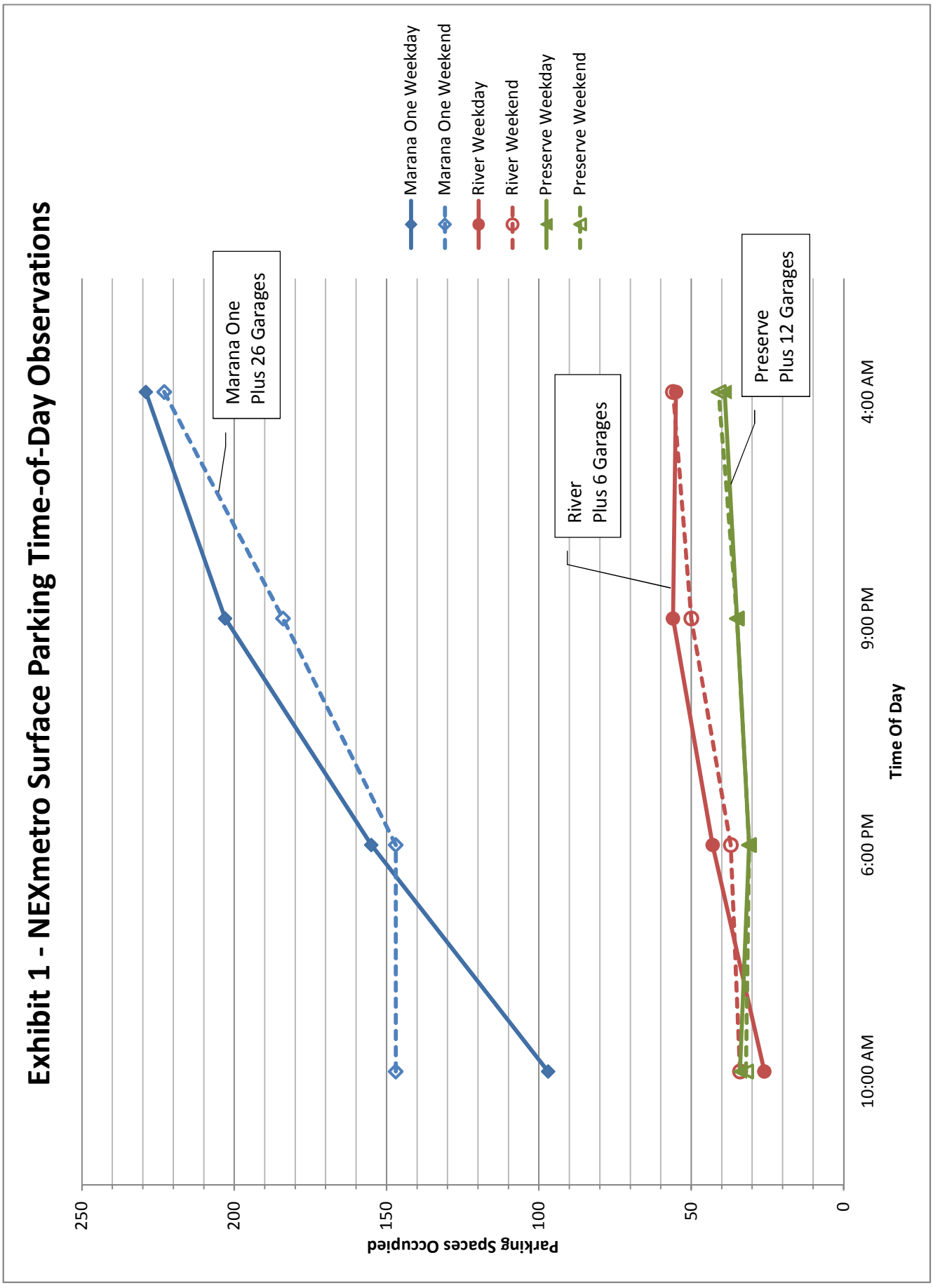
Exhibit 1 - NEXmetro Surface Parking Time-of-Day Observations
Marana One Weekday
Marana One Weekend
River Weekday
River Weekend
Preserve Weekday
Preserve Weekend
Marana One
Plus 26 Garages
River
Plus 6 Garages
Preserve
Plus 12 Garages
Parking Spaces Occupied
250
200
150
100
50
0
10:00 AM
6:00 PM
9:00 PM
4:00 AM
Time Of Day

Parking Occupancy Observations

Site Staff Observations:

Marana One

Date	Day	Time	# of cars
1/15/2014	Wed	10:00 AM	97
1/15/2014	Wed	6:00 PM	155
1/15/2014	Wed	9:00 PM	203
1/16/2014	Thurs	4:00 AM	229
1/18/2014	Sat	10:00 AM	147
1/18/2014	Sat	6:00 PM	147
1/18/2014	Sat	9:00 PM	184
1/19/2014	Sun	4:00 AM	223

Total of 166 units- 157 occupied
26 garages leased

River

Date	Day	Time	# of cars
1/15/2014	Wed	10:00 AM	26
1/15/2014	Wed	6:00 PM	43
1/15/2014	Wed	9:00 PM	56
1/16/2014	Thurs	4:00 AM	55
1/18/2014	Sat	10:00 AM	34
1/18/2014	Sat	6:00 PM	37
1/18/2014	Sat	9:00 PM	50
1/19/2014	Sun	4:00 AM	56

Total of 76 units- 50 occupied
6 garages leased

Preserve

Date	Day	Time	# of cars
1/15/2014	Wed	10:00 AM	34
1/15/2014	Wed	6:00 PM	31
1/15/2014	Wed	9:00 PM	35
1/16/2014	Thurs	4:00 AM	39
1/18/2014	Sat	10:00 AM	32
1/18/2014	Sat	6:00 PM	31
1/18/2014	Sat	9:00 PM	35
1/19/2014	Sun	4:00 AM	41

Total of 184 units (96 released)- 33 occupied
12 garages leased

KHA Observations:

Marana One

Date	Day	Time	# of cars
2/5/2014	Wed	Overnight	224

Total of 166 units- 157 occupied

River

Date	Day	Time	# of cars
2/5/2014	Wed	Overnight	63

Total of 76 units- 50 occupied

2/10/2014	Mon	Overnight	61

Total of 76 units- 50 occupied

Preserve

Date	Day	Time	# of cars
2/5/2014	Wed	Overnight	57

Total of 184 units - 41 occupied

2/10/2014	Mon	Overnight	59

Total of 184 units - 43 occupied

APPENDIX B

TRAFFIC IMPACT ANALYSIS FOR AVILLA FAIRWAYS MULITFAMILY DEVELOPMENT

TRAFFIC IMPACT ANALYSIS FOR AVILLA FAIRWAYS MULTIFAMILY DEVELOPMENT

OAKMONT DRIVE & LAKE SHARON DRIVE CORINTH, TEXAS

Prepared for:

The City of Corinth
3300 Corinth Parkway
Corinth, Texas 76208

Prepared by:

Lee Engineering, LLC
3030 LBJ Freeway, Suite 1660
Dallas, Texas 75234
Phone: (972) 248-3006
Fax: (972) 248-3855

TBPE Firm Registration # F-450

June 2021

T1458.06

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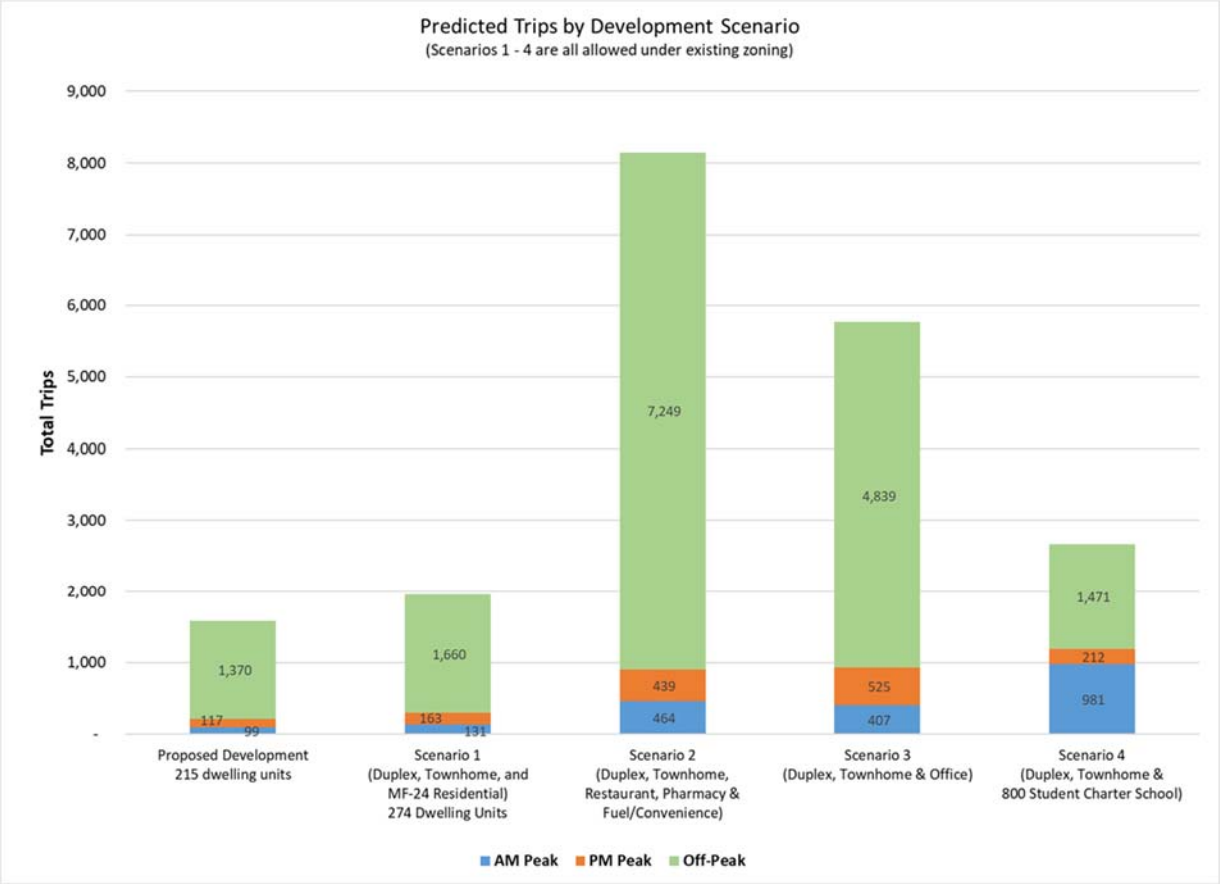
EXECUTIVE SUMMARY

The proposed Avilla Fairways development will be located on the northwest corner of the intersection of Lake Sharon Drive and Oakmont Drive in Corinth, Texas. Based on the preliminary site plan, site access points will include two (2) full-access driveways on Lake Sharon Drive and one (1) full-access driveway on Oakmont Drive. One of the access points on Lake Sharon Drive is the proposed extension of Rye Road, which will provide the neighborhood to the north with a second access point. Two additional access scenarios were analyzed, including only providing access on Lake Sharon Drive (Alternative 1) or requiring Rye Road to operate as a one-way southbound street (Alternative 2).

The proposed development is predicted to generate approximately 1,586 daily trips, 99 trips during the AM peak hour and 117 trips during the PM peak hour. Estimates of other allowable land use possibilities under existing zoning indicate that the site could generate as many as 8,195 daily trips, 979 trips in the AM peak hour, and 517 trips in the PM peak hour. The number of trips generated by the Avilla Fairways development is significantly lower than the number of trips that could be generated under existing zoning, including the maximum residential density allowed under existing zoning. Thus, the proposed development is a significantly less intense traffic generator than others allowed under existing zoning.



While all three site access options are predicted to operate with minimal impact on the surrounding roadway network, the access shown in the proposed site plan results in the least amount of average delay and the shortest queue lengths for most movements. Providing three full-access driveways will result in the least amount of new traffic at the intersection of Lake Sharon Drive and Oakmont Drive. Providing three full-access points as proposed in the site plan will provide the flexibility for traffic circulation, avoids concentrating all development traffic at a single location, and provides greater ingress /egress for better emergency response access to the site. The neighborhood to the north also gains improved emergency access and overall traffic circulation via the new access via Rye Road. It is recommended to consider providing the greatest amount of site access, as shown in the proposed site plan.

Based on the preliminary site plan (Figure 2), an eastbound left turn lane is proposed on Lake Sharon Drive at the Rye Road extension and is anticipated to include adequate vehicle storage. If feasible, it is recommended to also install an eastbound left turn lane on Lake Sharon Drive at the West Driveway, which will be located at an existing median opening on a divided roadway. However, if the culvert crossing precludes construction of an eastbound left-turn lane, consideration should be given to making the western driveway right-in/right-out and lengthening the storage at the Rye Road access point. No other auxiliary lanes were recommended. It should also be noted that sight distance from the East Driveway on Oakmont Drive is less than desired looking to the right due to the horizontal curvature of Oakmont Drive and vegetation. With development of the site, is recommended to remove all vegetation along the west edge of Oakmont Drive within the sight triangle south of East Driveway.

Overall, the existing and planned roadway network is anticipated to fully accommodate the site traffic volumes generated by the proposed Avilla Fairways development.

INTRODUCTION

This traffic study was conducted to analyze the traffic impacts associated with the proposed Avilla Fairways multifamily development in Corinth, Texas located on the northwest corner of the intersection of Lake Sharon Drive and Oakmont Drive. Additionally, this study was conducted to analyze existing traffic operations in the study area along with the impacts to the adjacent residential neighborhood with provision of a second access point. An aerial image showing the location of the site and the count locations is shown in **Figure 1**.

The proposed Avilla Fairways multifamily development includes 215 dwelling units and was assumed to be built-out by 2023. The preliminary site plan for the development is provided in **Figure 2,** with a larger version in the Appendix. The site proposes the following access points:

- Two (2) full-access site driveways on Lake Sharon Drive, including a proposed extension of Rye Road from the adjacent neighborhood; and
- One (1) full-access site driveway on Oakmont Drive.

Two additional scenarios were also analyzed in addition to the proposed site plan:

- Alternative 1 – Only the two access points on Lake Sharon Drive
- Alternative 2 – Rye Road operates as a one-way (outbound) roadway

The following existing study intersections are included:

- Lake Sharon Drive and Oakmont Drive;
- Oakmont Drive and Ardglass Trail; and
- Oakmont Drive and Creekside Drive.

The following elements were included in this study, based on discussion with the City of Corinth:

Data Collection

- Collected existing AM and PM peak hour traffic volumes at the three (3) existing intersections identified above.
- Obtained historical traffic volumes in the vicinity of the proposed development.

Traffic Analysis

- Assessed the general accessibility of the site.
- Estimated the number of trips that will be generated by the proposed new development and by potential developments allowed by existing zoning.
- Estimated the directional distribution of traffic approaching / departing the proposed development.
- Assigned the estimated traffic to the street network.
- Performed capacity analysis for the critical intersections.
- Performed capacity analysis for roadways adjacent to the site.

- Analyzed the impact of the development on the area roadways for the proposed site plan and the alternate scenarios.

Recommendations

- Determined if any roadway improvements are needed to accommodate existing traffic, projected background traffic in the build-out year, and projected site traffic generated by the proposed development.
- Determine preferred alternative between the three site access options.

Figure 1. Vicinity Map of the Study Area

SITE DATA SUMMARY TABLE				
EXISTING ZONING/USE:	PD-6, PD-24 / VACANT			
PROPOSED ZONING:	PD W/MF-1 BASE ZONING			
PROPOSED USE:	RESIDENTIAL COTTAGE COMMUNITY			
NUMBER OF LOTS:	2 (EXISTING); 2 (PROPOSED)			
LOT COVERAGE:	22.8%			
LOT AREA:	AC.		SQ. FT.	
GROSS AREA	24.595		1,071,370	
ROW DEDICATION	0.698		30,389	
NET AREA	23.898		1,040,981	
DENSITY:	9.00	UNITS / ACRE (w/o ROW Ded.)		
PROPOSED BUILDINGS (1 STORY):	AREA	NO. BLDGS	NO. UNITS	TOTAL
1-BEDROOM (DUPLEX)	1,342	30	60	40,260
2-BEDROOM	1,022	87	87	88,914
3-BEDROOM	1,307	68	68	88,876
STANDARD GARAGE, DETACHED*	831	20	-	16,620
STANDARD GARAGE W/HANDICAP, DETACHED	682	3	-	2,046
LEASING CENTER	1,131	1	-	1,131
TOTALS:		209	215	237,847

LEGEND

- PROPOSED METAL FENCE
- PROPOSED WOOD FENCE
- PROPOSED FIRELANE (PRIVATE PAVEMENT)
- PROPOSED ROADWAY (PUBLIC PAVEMENT)
- PROPOSED PUBLIC TRAIL/SIDEWALK
- PROPOSED PRIVATE TRAIL/SIDEWALK

GRAPHIC SCALE

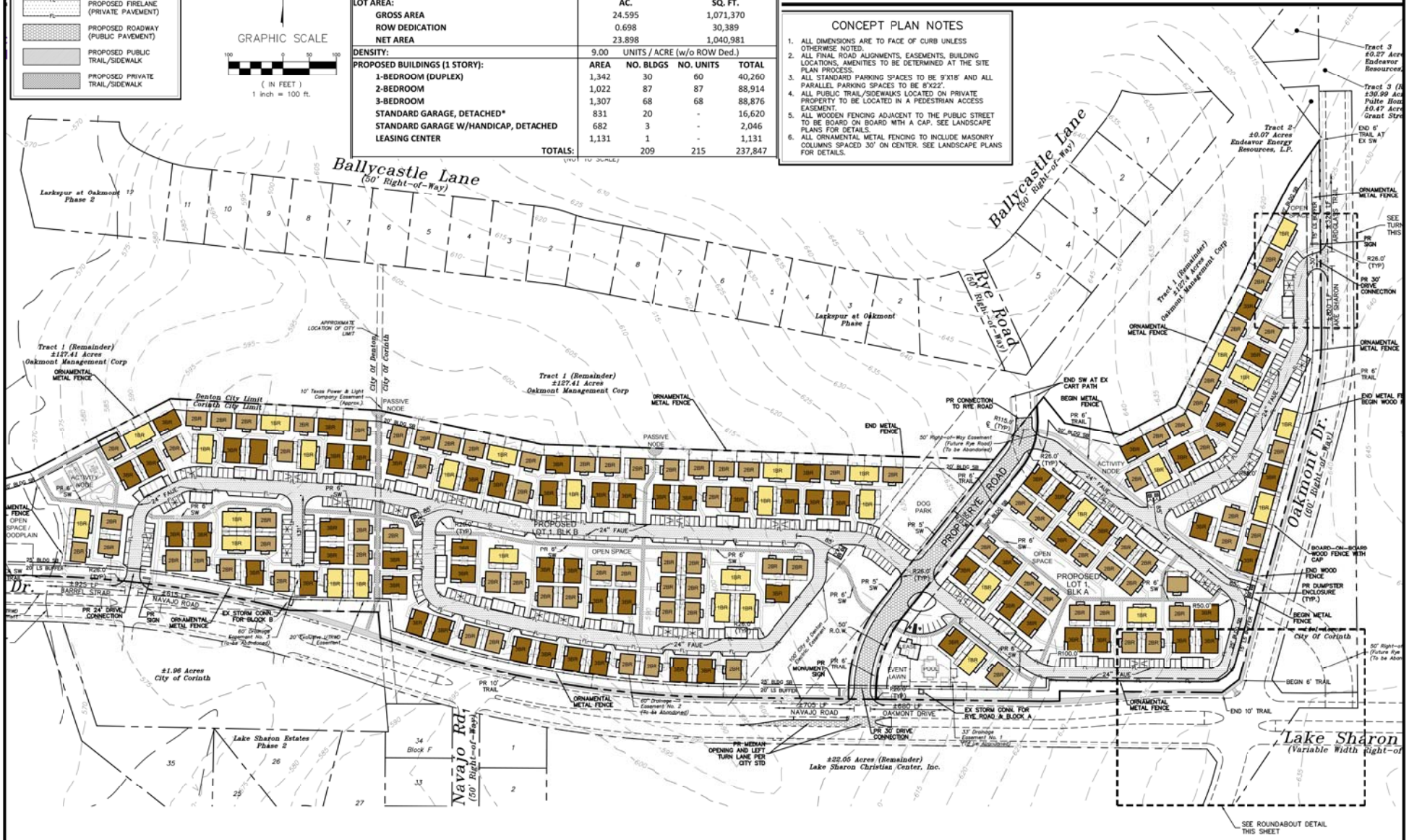
100 0 50 100

(IN FEET)

1 inch = 100 ft.

CONCEPT PLAN NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. ALL FINAL ROAD ALIGNMENTS, EASEMENTS, BUILDING LOCATIONS, AMENITIES TO BE DETERMINED AT THE SITE PLAN PROCESS.
3. ALL STANDARD PARKING SPACES TO BE 9'X18' AND ALL PARALLEL PARKING SPACES TO BE 8'X22'.
4. ALL PUBLIC TRAIL/SIDEWALKS LOCATED ON PRIVATE PROPERTY TO BE LOCATED IN A PEDESTRIAN ACCESS EASEMENT.
5. ALL WOODEN FENCING ADJACENT TO THE PUBLIC STREET TO BE BOARD ON BOARD WITH A CAP. SEE LANDSCAPE PLANS FOR DETAILS.
6. ALL ORNAMENTAL METAL FENCING TO INCLUDE MASONRY COLUMNS SPACED 30' ON CENTER. SEE LANDSCAPE PLANS FOR DETAILS.



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Preliminary Site Plan

Figure 2

SITE ACCESSIBILITY

Site accessibility describes the ease with which vehicles can get to and from a development. A site's accessibility is affected by the geographical location of the development with respect to other activity areas, the roadway system, and physical restraints such as rivers or lakes.

The proposed Avilla Fairways will be located on the northwest corner of the intersection of Lake Sharon Drive and Oakmont Drive in Corinth, Texas. A brief description of the major area roadways is provided below:

Lake Sharon Drive – Lake Sharon Drive is a four-lane divided eastbound-westbound roadway with a 32-foot median and a posted speed limit of 40 miles per hour (mph) in the vicinity of the site. Lake Sharon Drive is classified as a Minor Arterial in the City of Corinth *Master Thoroughfare Plan* (dated March 30, 2021). Lake Sharon Drive has recently been extended west of Oakmont Drive to FM 2499.

Lake Sharon Drive borders the southern edge of the development. The proposed development will have one full-access driveway on Lake Sharon Drive at an existing median opening near the western edge of the site. Additionally, Rye Road is proposed to be extended through the development to provide an additional full-access point on Lake Sharon Drive.

Oakmont Drive – Oakmont Drive is a two-lane undivided northbound-southbound roadway approximately 36-feet wide and with a posted speed limit of 30 mph in the vicinity of the site. Oakmont Drive is classified as a Collector in the City of Corinth *Master Thoroughfare Plan* (dated March 30, 2021).

Oakmont Drive borders the eastern edge of the development. The proposed development will have one full-access driveway on Oakmont Drive, based on the currently proposed site plan. One of the alternative access scenarios will remove this driveway.

The existing intersection of Oakmont Drive and Lake Sharon Drive operates with multiway stop control, with stop signs on all four approaches.

Creekside Drive – Creekside Drive is a two-lane undivided eastbound-westbound roadway with a posted speed limit of 25 mph. Creekside Drive is approximately 24 feet wide west of Oakmont Drive and approximately 40 feet wide east of Oakmont Drive adjacent to the schools. Creekside Drive is classified as a Collector in the City of Corinth *Master Thoroughfare Plan* (dated March 30, 2021). Creekside Drive currently terminates at Post Oak Drive but may be extended to the east in the future, based on the *Master Thoroughfare Plan*.

The existing intersection of Oakmont Drive and Creekside Drive operates with multiway stop control, with stop signs on all four approaches.

Ardglass Trail – Ardglass Trail is a two-lane undivided eastbound-westbound roadway approximately 24-feet wide. There is no posted speed limit. Ardglass Trail is classified as a local roadway in the City of Corinth *Master Thoroughfare Plan* (dated March 30, 2021). Ardglass Trail is currently the only access point for the neighborhood north of the proposed site, but the neighborhood will have an additional access point if Rye Road is extended.

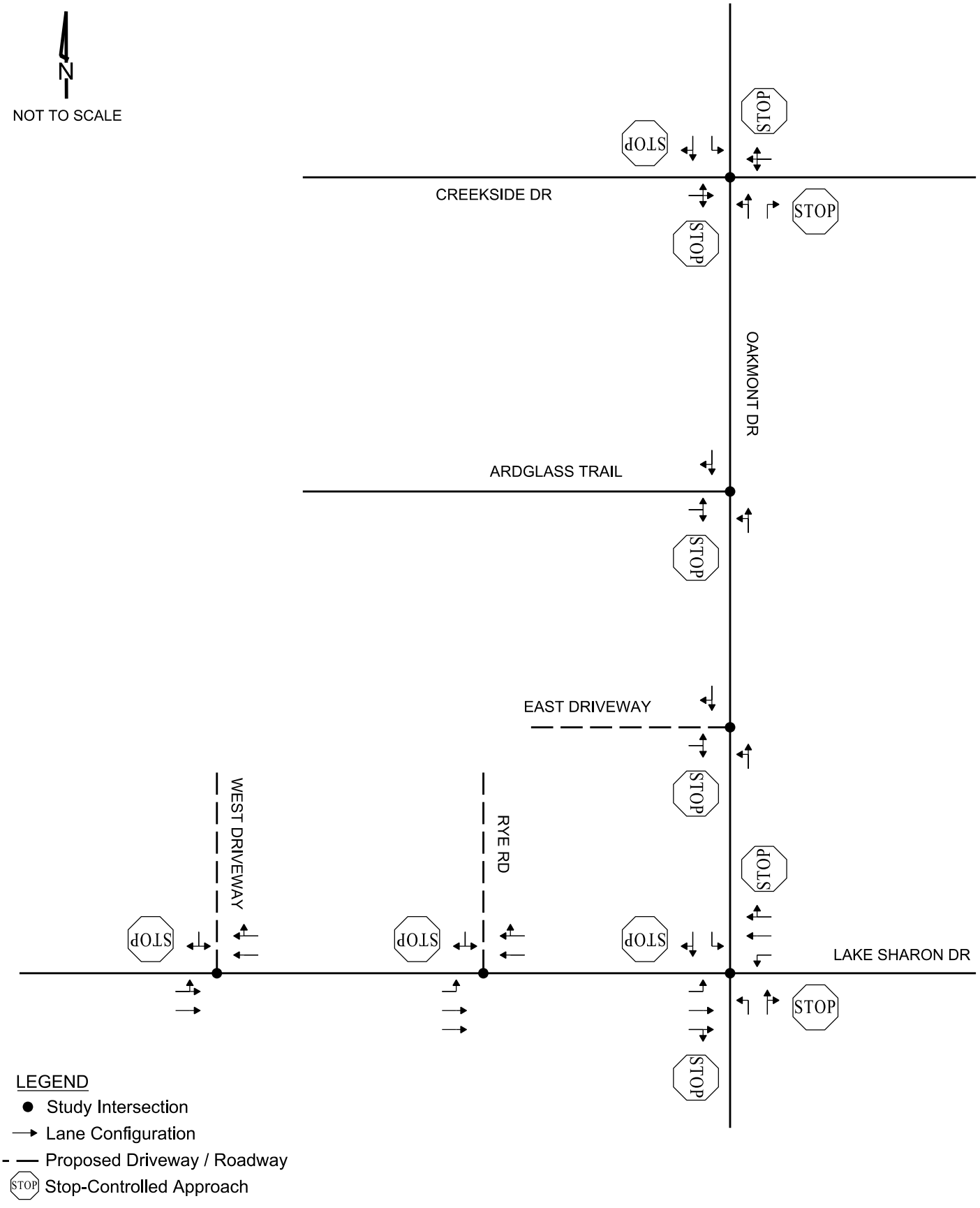
The existing intersection of Oakmont Drive and Ardglass Trail operates with two-way stop control, with a stop sign on the eastbound Ardglass Trail approach. There is no westbound approach at this intersection.

Rye Road – Rye Road is a two-lane undivided northbound-southbound roadway approximately 24-feet wide. There is no posted speed limit. Rye Road is classified as a local roadway in the City of Corinth *Master Thoroughfare Plan* (dated March 30, 2021). Currently, Rye Road terminates approximately 300 feet south of Ballycastle Lane, but is proposed to be extended to Lake Sharon Drive with the development.

The existing intersection lane configurations in the study area are shown in **Figure 3,** along with the existing traffic control at the study intersections. Additionally, the assumed driveway lane configurations based on the site plan (Figure 2) are shown.

Existing transportation modes in the study area are primarily vehicular traffic. There are existing sidewalk facilities along all of the study roadways. There are also marked crosswalks on all approaches at the two multiway stop intersections and along the stop-controlled approach of Ardglass Trail.

As shown in Figure 1, Hawk Elementary School is located approximately ¼-mile north of the site on the southeast corner of the intersection of Oakmont Drive and Creekside Drive. Additionally, Crownover Middle School is located on the east side of the elementary school south of Creekside Drive.



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Existing and Proposed Lane Configurations - Proposed Site Plan Figure 3

PROPOSED DEVELOPMENT

The site is on the northwest corner of Lake Sharon Drive and Oakmont Drive in Corinth, Texas. The site is undeveloped at this time and is zoned as a Planned Development (PD-6) in the City of Corinth *Zoning Map* dated April 2021. The proposed Avilla Fairways development will include 215 multifamily dwelling units and is predicted to be built by 2023.

The site proposes the following access points:

- Two (2) full-access site driveways on Lake Sharon Drive (including the proposed Rye Road extension); and
- One (1) full-access driveway on Oakmont Drive.

Proposed Trip Generation

The number of trips generated by the development is a function of the type and quantity of land use. The number of vehicle trips generated by the development was estimated based on the trip generation rates and equations provided in the publication entitled *Trip Generation Manual, Tenth Edition*, by the Institute of Transportation Engineers (ITE). Estimates of the number of trips generated by the site were made for the weekday AM and PM peak hours, as well as on a daily basis. The trip generation rates/equations utilized are provided in **Table 1**. The directional splits are shown in **Table 2**. The rates and splits for a general urban/suburban area were utilized. Finally, the predicted trip generation results for the proposed multifamily development are shown in **Table 3**.

Table 1. ITE Trip Generation Rates/Equations for Proposed Development

Land Use	ITE Code	Average Weekday	AM Peak Hour	PM Peak Hour
Multifamily Housing (Low-Rise)	220	T = 7.56X – 40.86[1]	Ln(T) = 0.95Ln(X) - 0.51	Ln(T) = 0.89Ln(X) - 0.02

[1]T = Trips Ends; X = Dwelling Units

Table 2. ITE Directional Splits for Proposed Development

Land Use	ITE Code	Average Weekday	AM Peak Hour	PM Peak Hour
Multifamily Housing (Low-Rise)	220	50 / 50 [1]	23/ 77	63 / 37

[1]XX / YY = % entering vehicles / % exiting vehicles for General Urban/Suburban Area

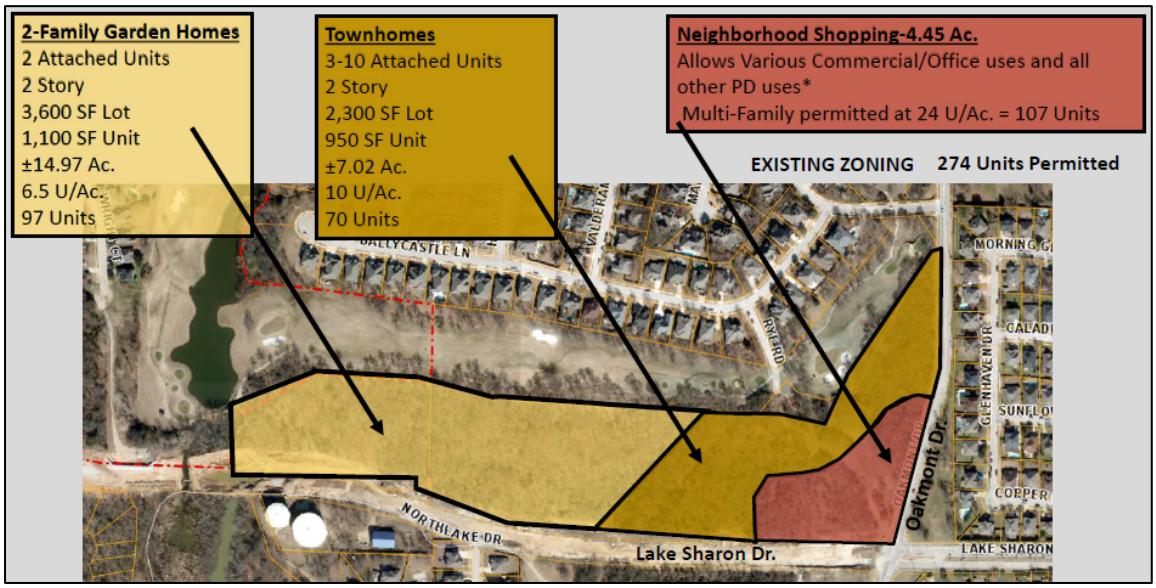
Table 3. Trip Generation Calculations for Avilla Fairways Development

Amount	Units	ITE Land Use (ITE Code)	Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
215	Dwellings	Multi-Family Housing (Low-Rise) (220)	1,586	23	76	99	74	43	117

Allowable Trip Generation for Existing Zoning

Additional trip generation was performed to identify site traffic which could be generated by the site under existing zoning. The majority of the site would include residential land uses under existing zoning, as shown in **Figure 4**. This 'Existing Zoning Density Exhibit' was provided by the City of Corinth. Approximately 4.5 acres on the southeast corner of the site is currently zoned as Neighborhood Shopping, which could include additional residential land use or various commercial/office land uses.

Figure 4. City of Corinth Existing Zoning Density Exhibit for Site



Additional information was provided by the City of Corinth regarding zoning information such as permitted land uses, building heights, lot coverage, maximum floor to area ratio, and parking requirements. Based on this information, four potential scenarios were identified for trip generation purposes, as identified in **Table 4**.

Table 4 also shows the resulting site traffic predicted to be generated under existing zoning for the four scenarios. For reference, the ITE trip generation equations/rates and directional splits utilized for these land uses are included in the Appendix. Additionally, internal capture reductions were applied to applicable scenarios. This methodology is further described in the Appendix.

Table 4. Assumed Land Use Scenarios and Trip Generation Results for Existing Zoning

Amount	Units	ITE Land Use (ITE Code)	Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
ALTERNATE SCENARIO 1 - Existing Zoning (274 Total Duplex, Townhome, and MF-24 Residential)									
97	dwellings	Multifamily Housing (Low-Rise) (220)[1]	694	11	35	46	36	21	57
70	dwellings	Multifamily Housing (Low-Rise) (220)[1]	490	8	26	34	27	16	43
107	dwellings	Multifamily Housing (Low-Rise) (220)	770	12	39	51	40	23	63
		TOTAL	**1,954**	**31**	**100**	**131**	**103**	**60**	**163**
ALTERNATE SCENARIO 2 - Existing Zoning (167 Duplex/Townhome Dwelling Units, Restaurant, Retail/Pharmacy, and Fuel/Convenience)									
97	dwellings	Multifamily Housing (Low-Rise) (220)[1]	694	11	35	46	36	21	57
70	dwellings	Multifamily Housing (Low-Rise) (220)[1]	490	8	26	34	27	16	43
13,000	ft^2	Pharmacy/Drugstore with Drive-Through Window (881)	1,420	27	23	50	67	67	134
5,000	ft^2	Fast-Food Restaurant without Drive-Through Window (933)	1,732	76	50	126	71	71	142
20	vfp	Gasoline/Service Station with Convenience Market (945)	4,108	144	139	283	143	137	280
		SUBTOTAL	8,444	266	273	539	344	312	656
		Internal Capture Trips	292	34	41	75	112	105	217
		TOTAL NET EXTERNAL TRIPS	**8,152**	**232**	**232**	**464**	**232**	**207**	**439**
ALTERNATE SCENARIO 3 - Existing Zoning (167 Duplex/Townhome Dwelling Units + Office)									
97	dwellings	Multifamily Housing (Low-Rise) (220)[1]	694	11	35	46	36	21	57
70	dwellings	Multifamily Housing (Low-Rise) (220)[1]	490	8	26	34	27	16	43
95,564	ft^2	General Office Building (710)	1,016	100	16	116	17	92	109
95,564	ft^2	Medical-Dental Office (720)	3,584	167	47	214	91	235	326
		SUBTOTAL	5,784	286	124	410	171	364	535
		Internal Capture Trips	13	2	1	3	5	5	10
		TOTAL NET EXTERNAL TRIPS	**5,771**	**284**	**123**	**407**	**166**	**359**	**525**
ALTERNATE SCENARIO 4 - Existing Zoning (167 Duplex/Townhome Dwelling Units + 800 Student Charter School)									
97	dwellings	Multifamily Housing (Low-Rise) (220)[1]	694	11	35	46	36	21	57
70	dwellings	Multifamily Housing (Low-Rise) (220)[1]	490	8	26	34	27	16	43
800	students	Charter Elementary School (537)	1,480	478	423	901	39	73	112
		TOTAL	**2,664**	**497**	**484**	**981**	**102**	**110**	**212**

[1] Both duplexes and townhomes are considered part of the 'Multifamily Housing (Low-Rise) land use in the 10th edition of the ITE *Trip Generation Manual*

Table 5 compares the resulting site traffic which could be generated under existing zoning for the four scenarios and the site traffic predicted to be generated by the proposed Avilla Fairways development.

Table 5. Trip Generation Comparison of Proposed Site and Existing Zoning Options

Description	Daily Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
PROPOSED							
Avilla Fairways Site	1,586	23	76	99	74	43	117
PERMITTED UNDER EXISTING ZONING							
1. Residential Only	1,954	31	100	131	103	60	163
2. Residential and Retail Mix	8,152	232	232	464	232	207	439
3. Residential and Office	5,771	284	123	407	166	359	525
4. Residential and Charter School	2,664	497	484	981	102	110	212

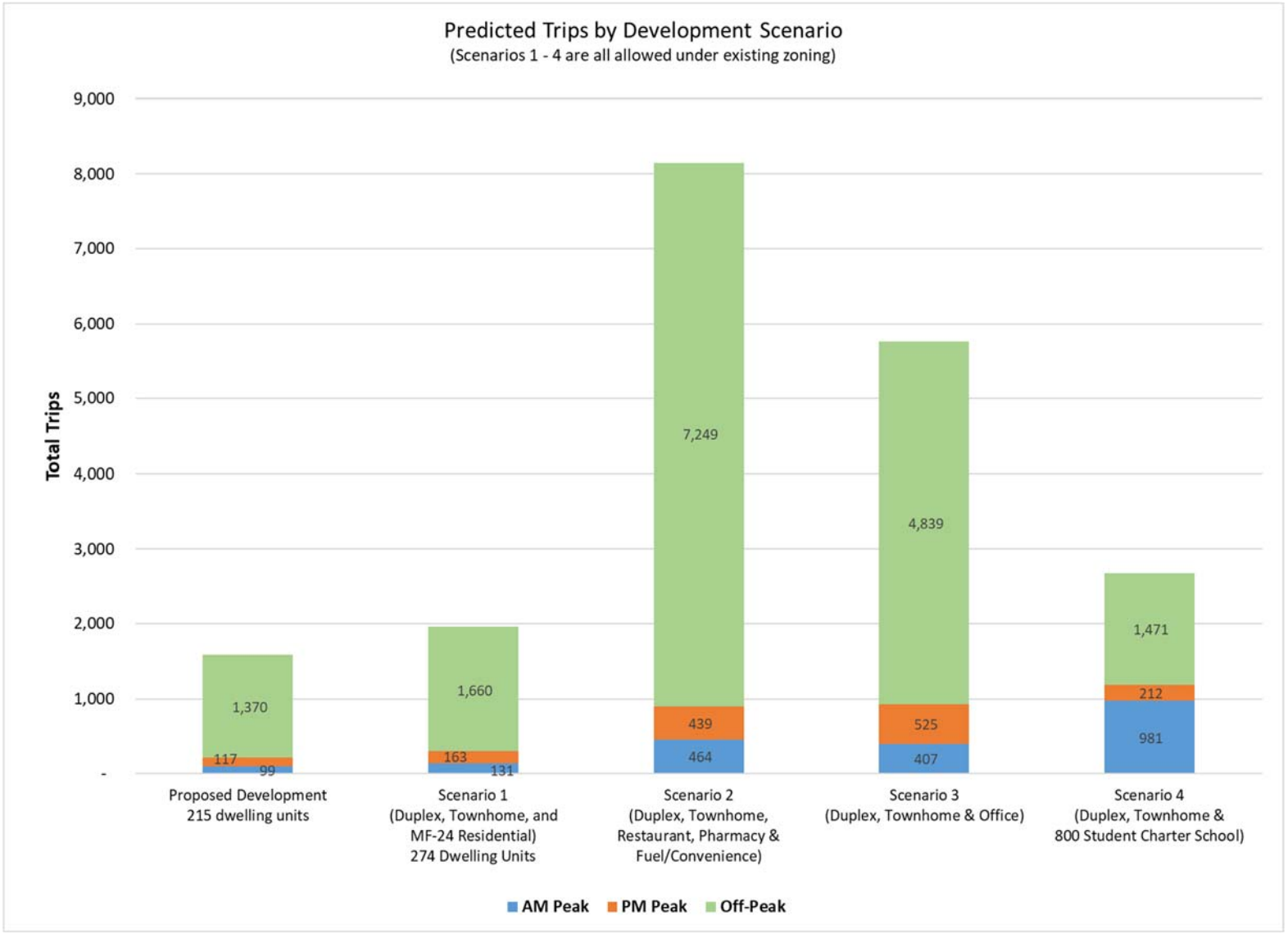
As shown, the proposed Avilla Fairways development is predicted to generate fewer trips than the site could produce under existing zoning. The site would generate a higher number of daily trips, AM peak hour trips, and PM peak hour trips for the scenarios investigated under existing zoning requirements, including the residential-only option. The proposed Avilla Fairways development includes 59 fewer dwelling units than could be allowed under existing zoning.

A visual comparison of predicted trip generation for the proposed site and existing zoning options is shown in **Figure 5**. Figure 5 shows the overall daily trips calculated for each scenario and a breakdown of AM peak hour site traffic, PM peak hour site traffic, and off-peak site traffic.

As shown, the site would produce significantly more traffic if developed with retail uses on the southeast corner, including approximately 4.7 times more AM peak hour trips and approximately 3.7 times more PM peak hour traffic compared to the Avilla Fairways development. Development of office on the southeast corner would also result in significantly more traffic, including approximately 4.1 times more AM peak hour trips and approximately 4.4 times more PM peak hour traffic compared to the Avilla Fairways development. Finally, while including a charter school in the southeast corner would not generate nearly as much traffic on a daily basis, in the AM peak hour nearly 10 times the number of trips would be generated compared to the proposed Avilla Fairways development.

Based on the results, the proposed Avilla Fairways development is predicted to be a less intense traffic generator compared to development which could be allowed under existing zoning.

Figure 5. Comparison of Trip Generation Results for Proposed Development and Existing Zoning Scenarios



EXISTING AND BACKGROUND TRAFFIC VOLUMES

Collected Traffic Volumes

Existing AM and PM peak hour turning movement volumes were collected on Tuesday, April 13, 2021, at the following intersections:

- Oakmont Drive at Lake Sharon Drive;
- Oakmont Drive at Ardglass Trail; and
- Oakmont Drive at Creekside Drive.

Volumes were collected between 6:30 AM and 9:00 AM and between 3:00 PM and 6:30 PM. The overall peak hours for each study intersection were utilized to present a conservative analysis. The collected AM peak hour and PM peak hour volumes are shown in **Figure 6**. Raw data sheets are included in the Appendix.

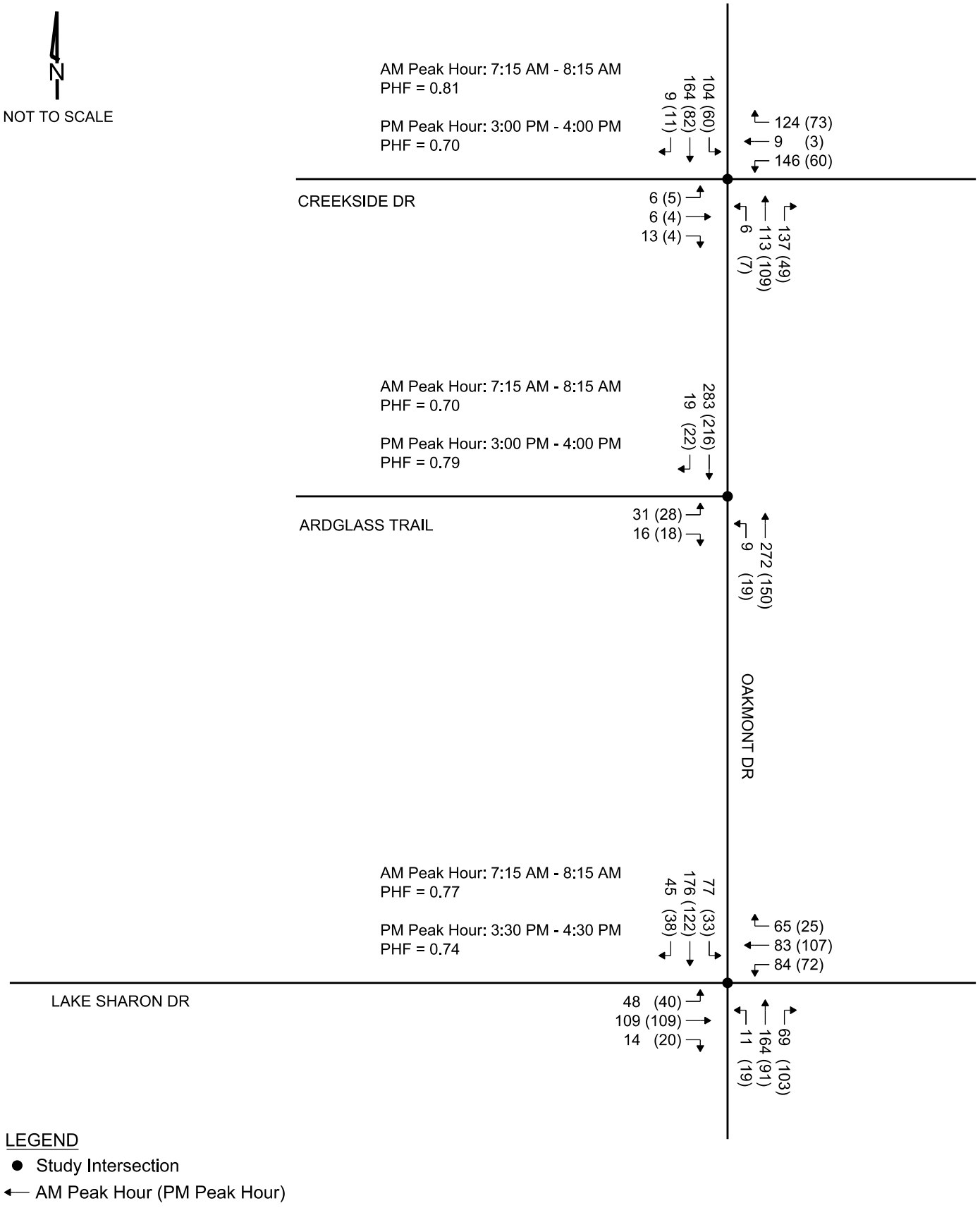
Adjusted Existing (2021) Traffic Volumes

Due to the ongoing COVID-19 pandemic, the collected traffic volumes on Oakmont Drive north of Lake Sharon Drive were compared to historic 2019 NCTCOG volumes on Oakmont Drive in the same location. The AM and PM peak hour volumes from 2019 were grown by an annual growth rate of four percent per year to represent expected volumes in 2021. The resulting peak hour volumes were compared to the collected traffic volumes (Figure 6), as shown in **Table 6**. Based on these results, a COVID adjustment factor of 1.09 was applied to the collected volumes during the AM peak hour and a factor of 1.17 was applied to the collected volumes during the PM peak hour. The adjusted Existing (2021) peak hour traffic volumes are shown in **Figure 7**.

Table 6. Comparison of Collected Peak Hour Volumes to Historic NCTCOG Volumes

2019 NCTCOG DATA[1]		2021 TMC DATA	COMPARISON
AM Peak Hour – Oakmont Dr North of Lake Sharon Dr			
Date 12/3/2019	**Grown to 2021 (4% Annually)**	**Date** 4/13/2021	**Previous Counts (Grown to 2021) : TMC TIA Data**
579	626	577	1.09
PM Peak Hour – Oakmont Dr North of Lake Sharon Dr			
Date 12/3/2019	**Grown to 2021 (4% Annually)**	**Date** 4/13/2021	**Previous Counts (Grown to 2021) : TMC TIA Data**
378	409	349	1.17

[1] *Source: https://trafficcounts.nctcog.org/trafficcount/*



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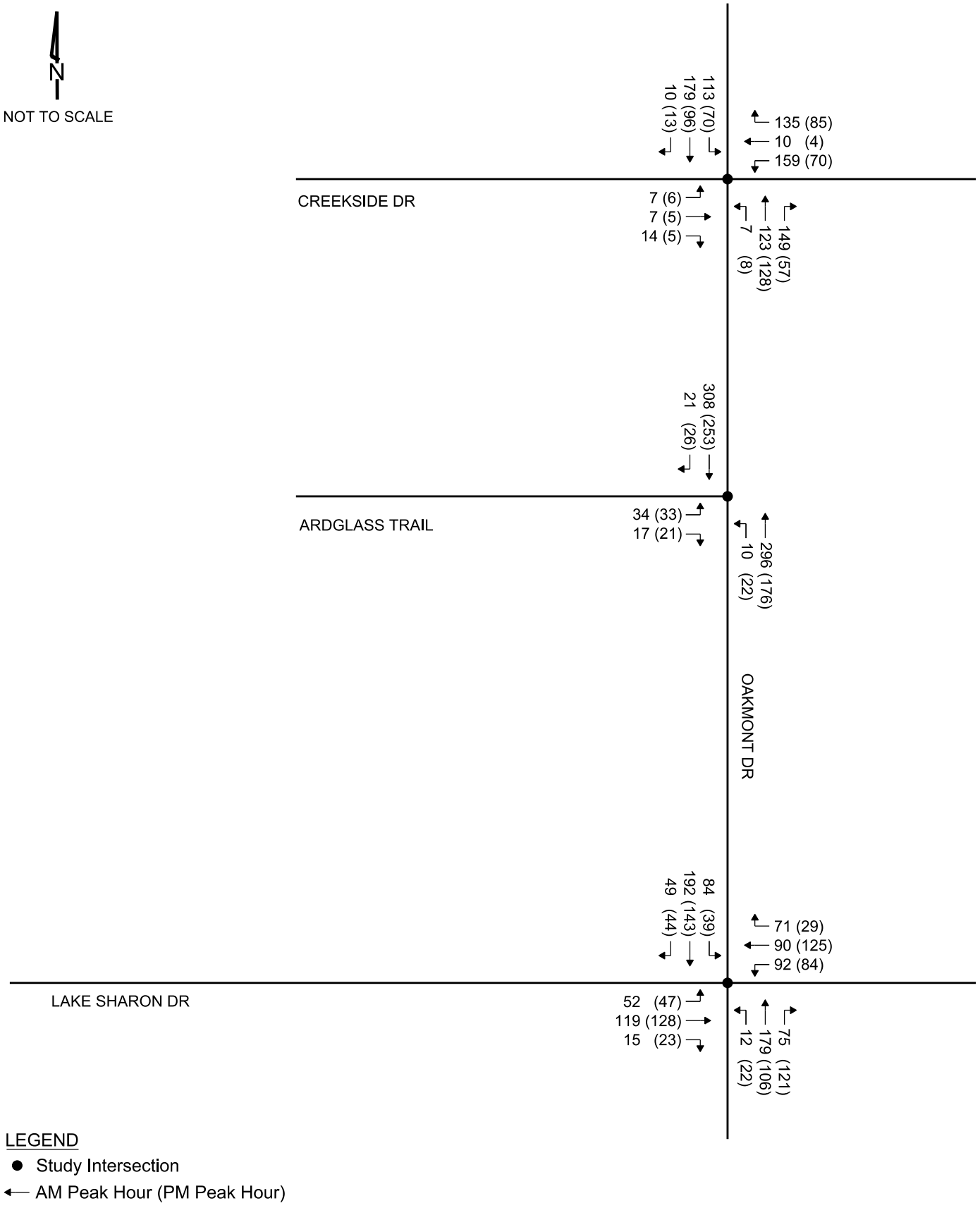
Collected Traffic Volumes - Tuesday, April 13, 2021

Figure 6



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Adjusted Existing (2021) Peak Hour Traffic Volumes

Figure 7

Development of Background Traffic Volumes

Historical daily traffic volumes in the study vicinity were gathered from available online TxDOT and NCTCOG traffic counts in the vicinity of the site, which are summarized in **Table 7**.

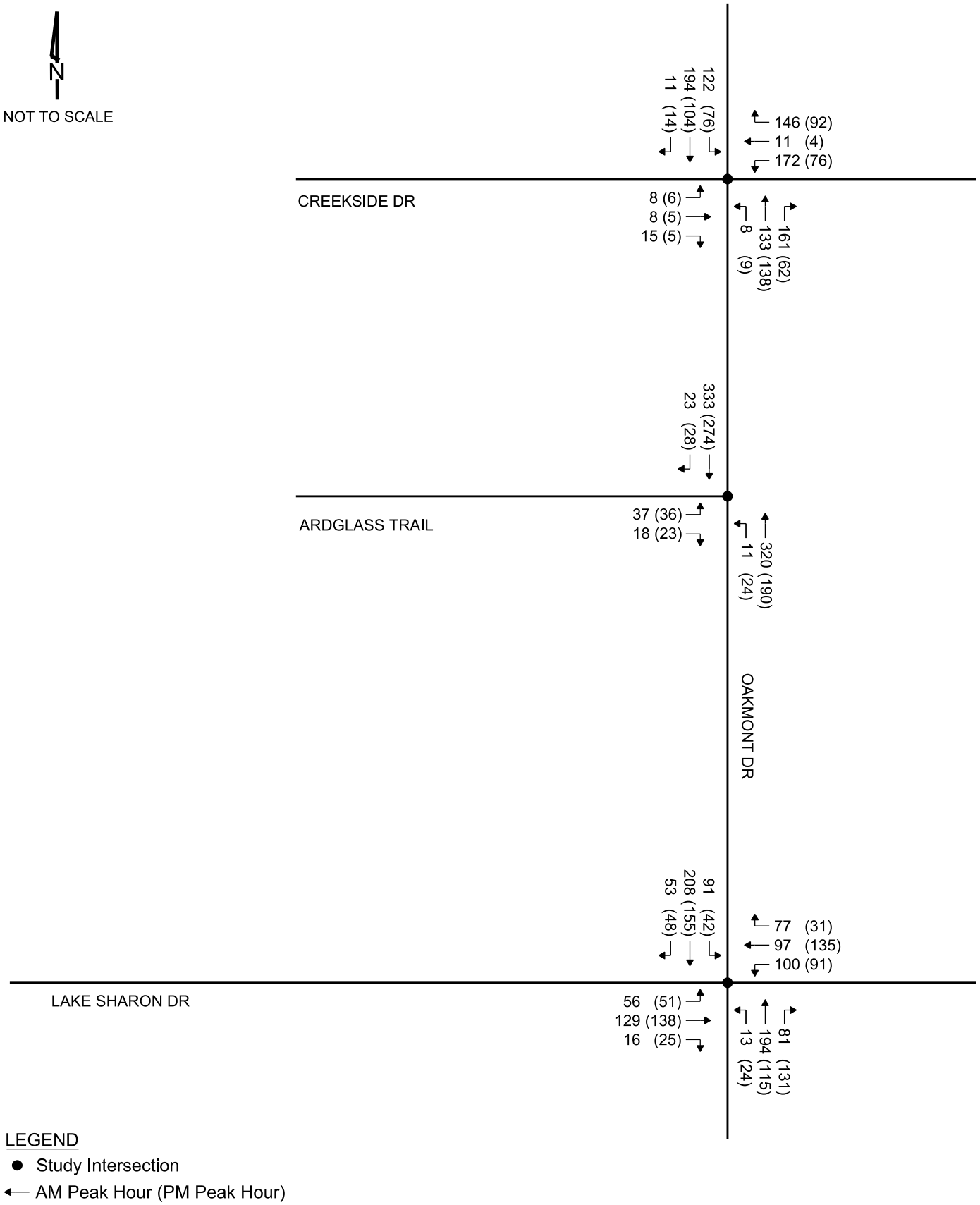
Table 7. Historical Daily Traffic Volumes

Year	Oakmont North of FM 2181[1]	Corinth St West of IH-35[1]	FM 2181 West of Village Pkwy[2]	FM 2181 West of IH-35[2]
2009	3,139	3,996	13,500	19,300
2010	-	-	11,500	19,500
2011	-	-	15,900	18,000
2012	-	-	16,700	19,100
2013	-	-	15,678	16,893
2014	4,474	5,780	12,456	10,933
2015	-	-	15,382	14,255
2016	-	-	19,877	20,848
2017	-	-	22,340	21,661
2018	-	-	17,574	21,661
2019	4,968	6,001	16,835	23,715
Average Growth Rate	5%	4%	2%	2%

[1] *Source: https://trafficcounts.nctcog.org/trafficcount/*
[2] *Source: http://www.txdot.gov/apps/statewide_mapping/StatewidePlanningMap.html*

Based on the TxDOT data, traffic volumes in the vicinity of the site have varied, but have generally grown by approximately two to five percent per year over a ten-year period (2009 to 2019).

Based on these results, background (non-site) traffic volumes for the study area intersections and roadways were estimated by growing the existing (adjusted) traffic volumes at an annual rate of four percent (4%) for two years to obtain the Build-Out Year (2023) Background traffic volumes, as shown in **Figure 8**.



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Build-Out Year (2023) Background Peak Hour Traffic Volumes

Figure 8

TOTAL TRAFFIC VOLUMES

Directional Distribution

The existing traffic volumes in the area, knowledge of the study area, and the proposed site layout were used to determine the directions from which site traffic would approach and depart the development. The assumed directional distribution used for site traffic for the Avilla Fairways development is shown in the following figures:

- **Figure 9** – Proposed site plan (3 driveways)
- **Figure 10** – Alternative 1 (2 driveways)
- **Figure 11** – Alternative 2 (Rye Road as one-way outbound)

For reference, the assumed lane configurations for the site access points for the two alternative scenarios are shown in **Figure 12**. Lane configurations based on the currently proposed site plan (Figure 2) were previously shown in Figure 3. Lane configurations at the existing three intersections along Oakmont Drive were the same for all scenarios.

Site Traffic Volumes

Traffic volumes expected to be generated by the proposed development were assigned to the area roadways and site access points based on the assumed directional distributions identified in Figures 9, 10, and 11. The estimated site generated traffic volumes for the proposed development for the weekday AM and PM hours are shown in the following figures:

- **Figure 13** – Proposed site plan (3 driveways)
- **Figure 14** – Alternative 1 (2 driveways)
- **Figure 15** – Alternative 2 (Rye Road as one-way outbound)

Redistributed Neighborhood Traffic Volumes

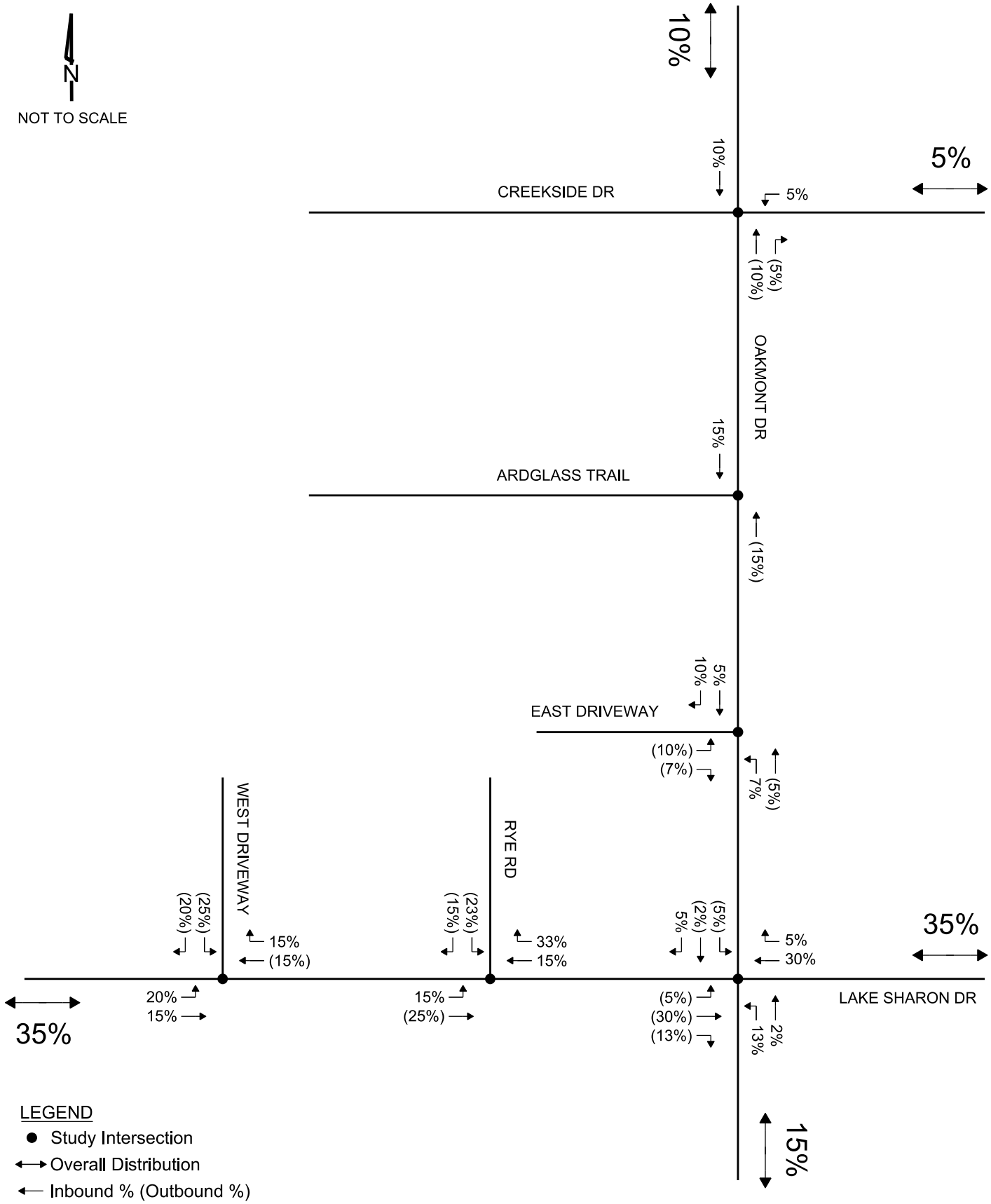
With the extension of Rye Road to Lake Sharon Drive, it is anticipated that some of the existing traffic from the neighborhood to the north would utilize Rye Road rather than Ardglass Trail, which is currently the only access point for that neighborhood. The overall directional distribution was utilized for this traffic. The estimated redistributed peak hour traffic volumes for the neighborhood to the north are shown in the following figures:

- **Figure 16** – Proposed site plan and Alternative 1 (Rye Road as two-way street)
- **Figure 17** – Alternative 2 (Rye Road as one-way outbound)

Projected Total Traffic Volumes

To obtain the projected total traffic volumes at site Build-Out (2023), the estimated site generated traffic volumes at build-out (Figures 13-15) and the redistributed neighborhood traffic volumes (Figures 16-17) were added to the 2023 background traffic volumes (Figure 8). The projected Build-Out Year (2023) Total traffic volumes are shown in the following figures:

- **Figure 18** – Proposed site plan (3 driveways)
- **Figure 19** – Alternative 1 (2 driveways)
- **Figure 20** – Alternative 2 (Rye Road as one-way outbound)



3030 LBJ FREEWAY
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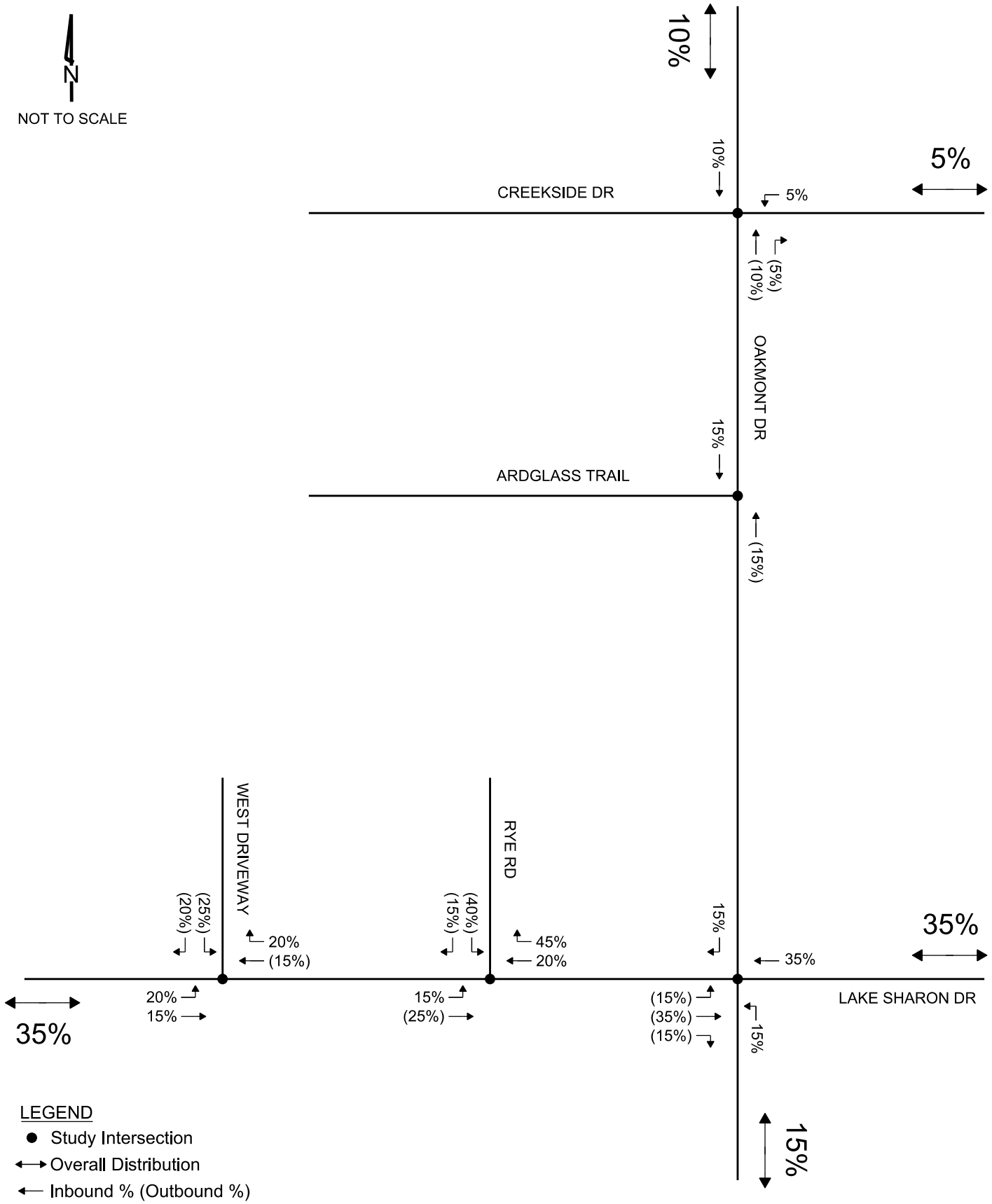
Assumed Directional Distribution - Proposed Site Plan

Figure 9



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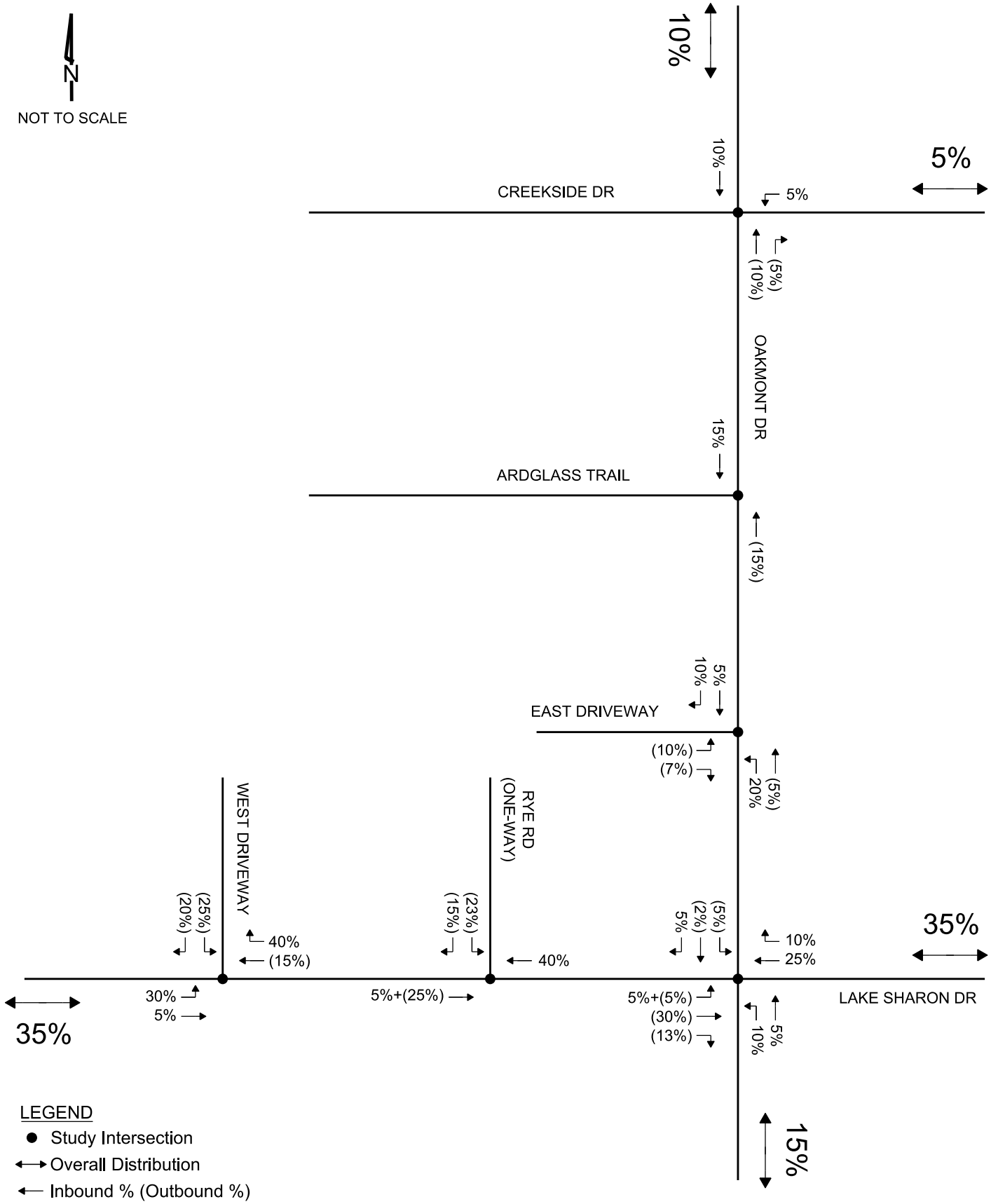
Assumed Directional Distribution - Alternative 1
(Direct Access to Oakmont Drive Eliminated)

Figure 10



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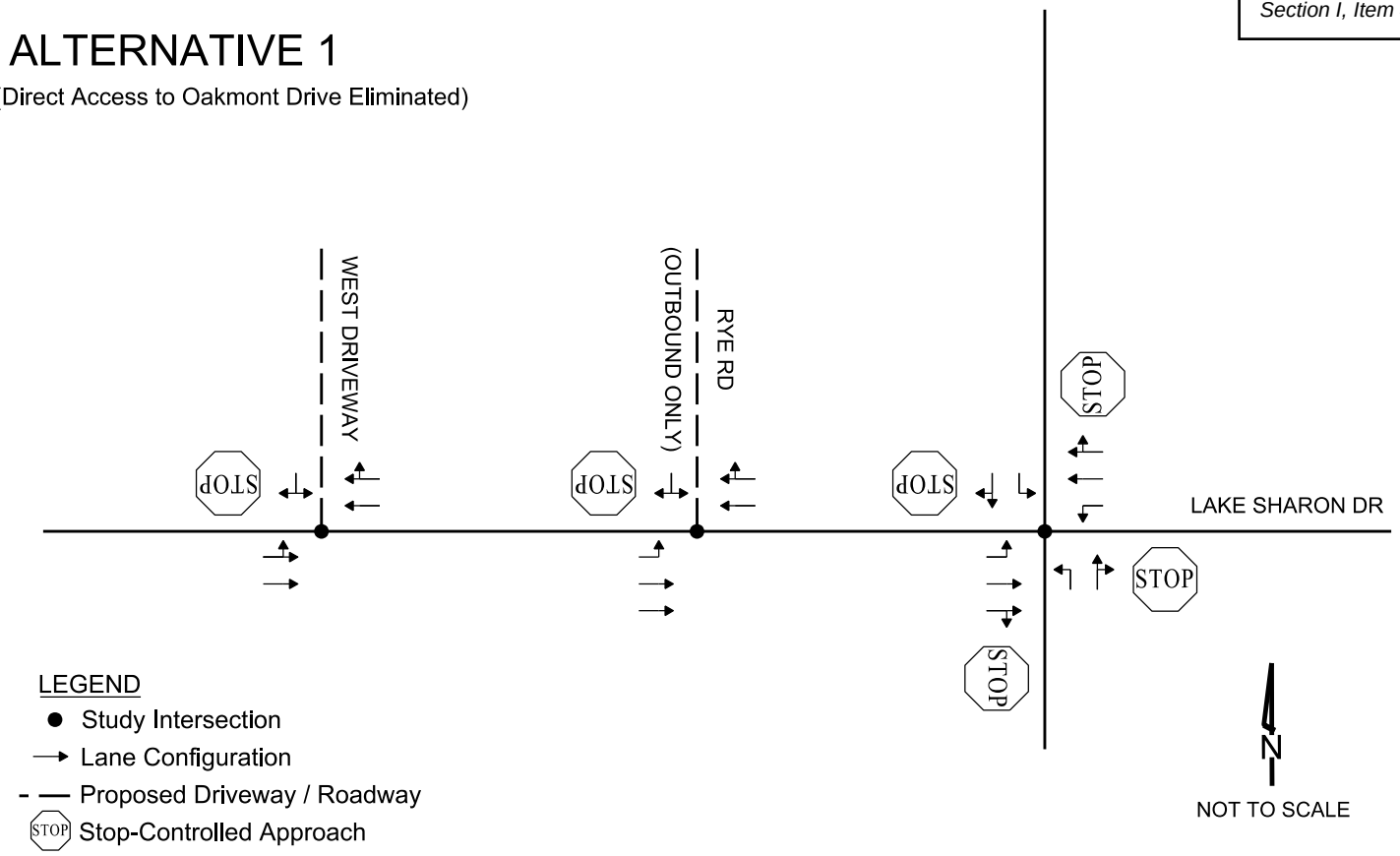
Assumed Directional Distribution - Alternative 2
(Rye Road One-Way Southbound)

Figure 11

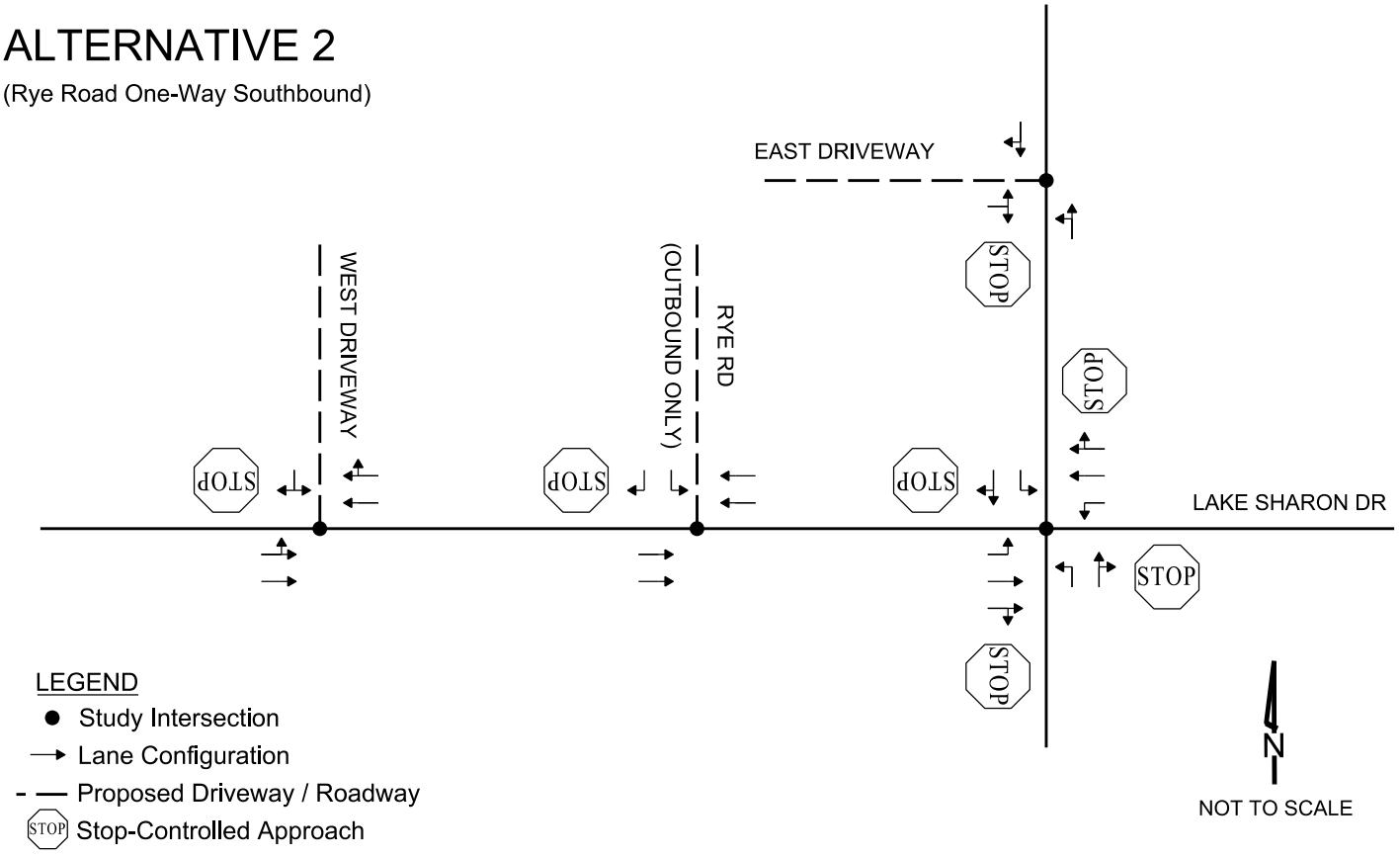
ALTERNATIVE 1

(Direct Access to Oakmont Drive Eliminated)



ALTERNATIVE 2

(Rye Road One-Way Southbound)



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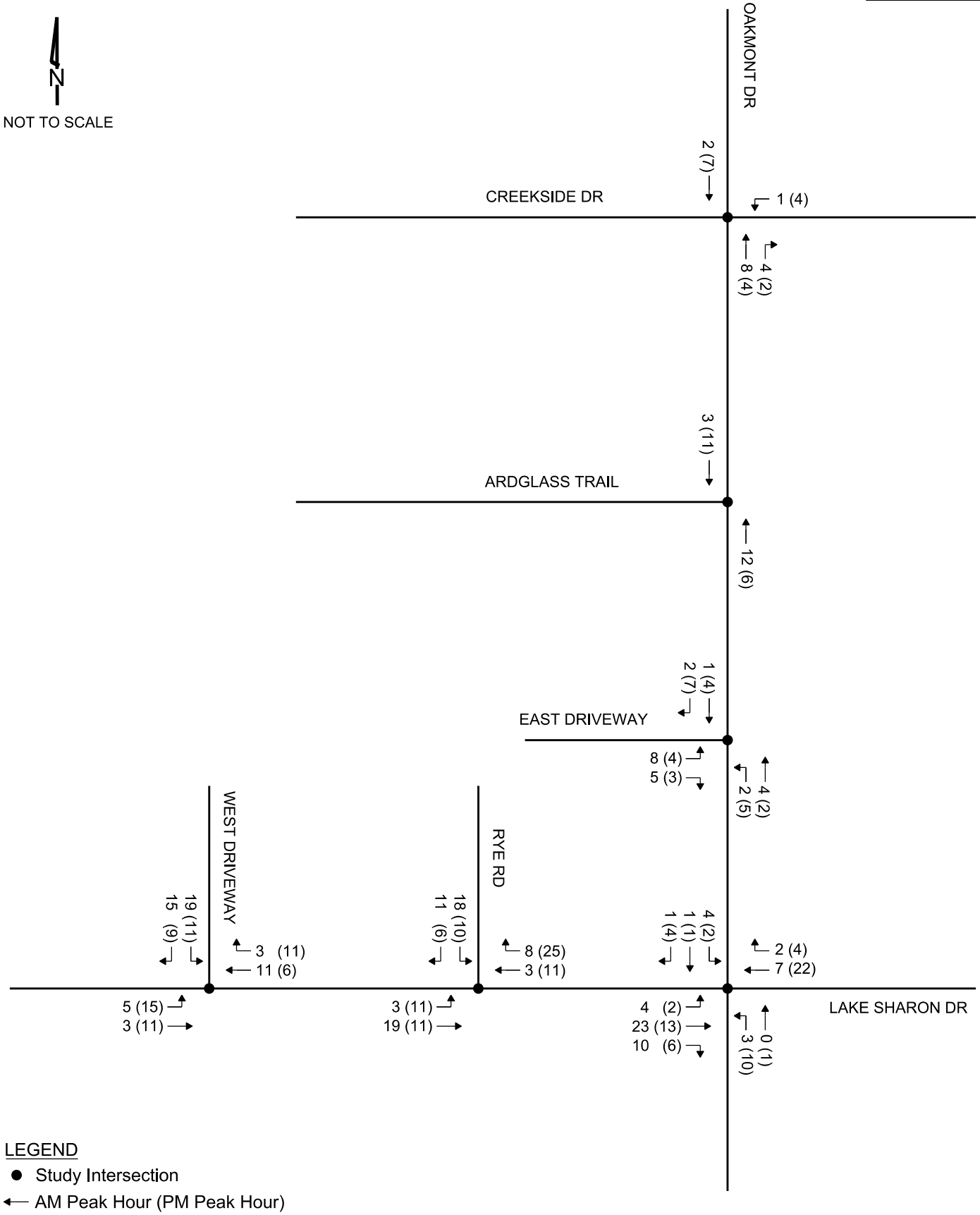
Proposed Driveway Lane Configurations - Alternatives

Figure 12



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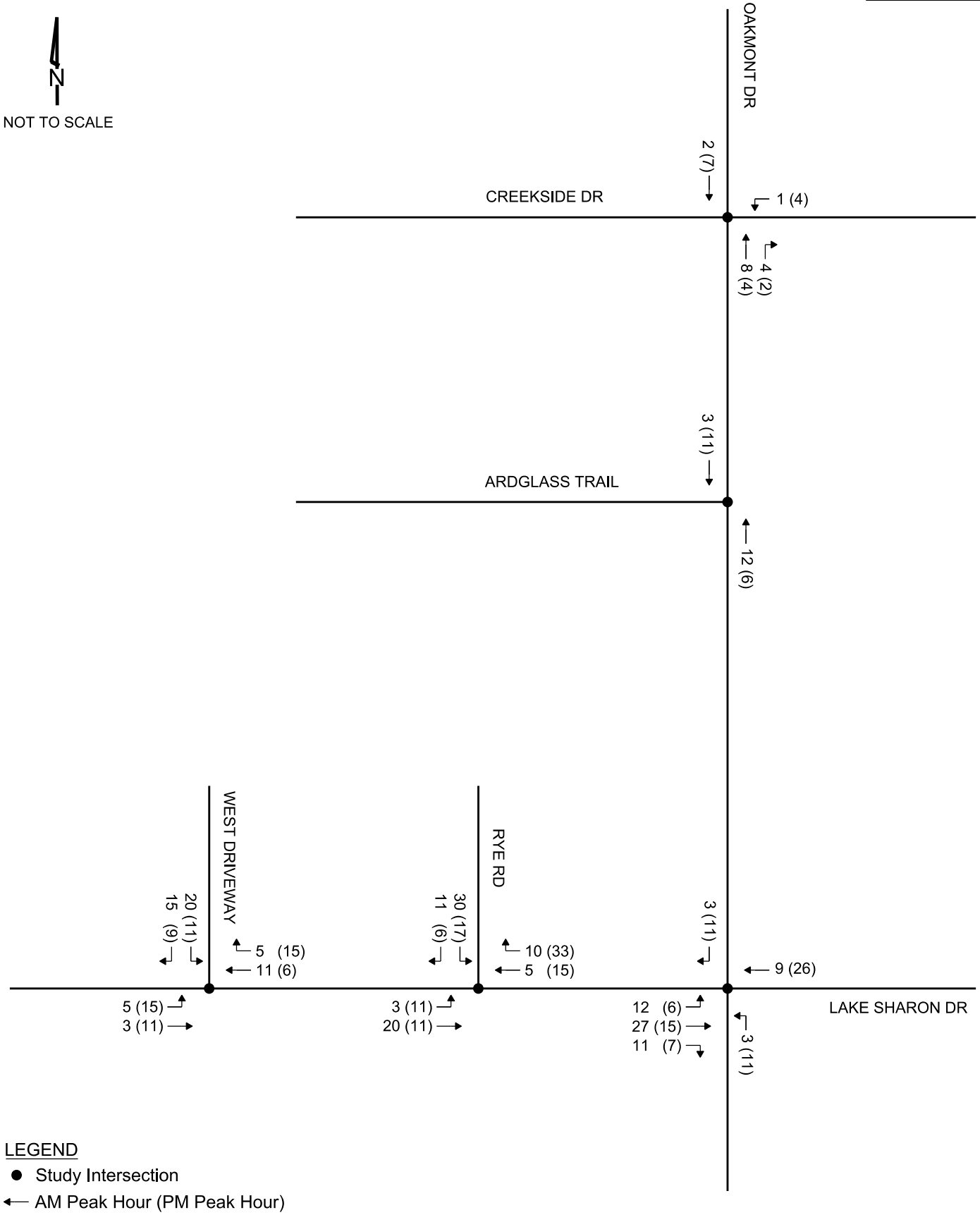
Site Generated Traffic Volumes - Proposed Site Plan

Figure 13



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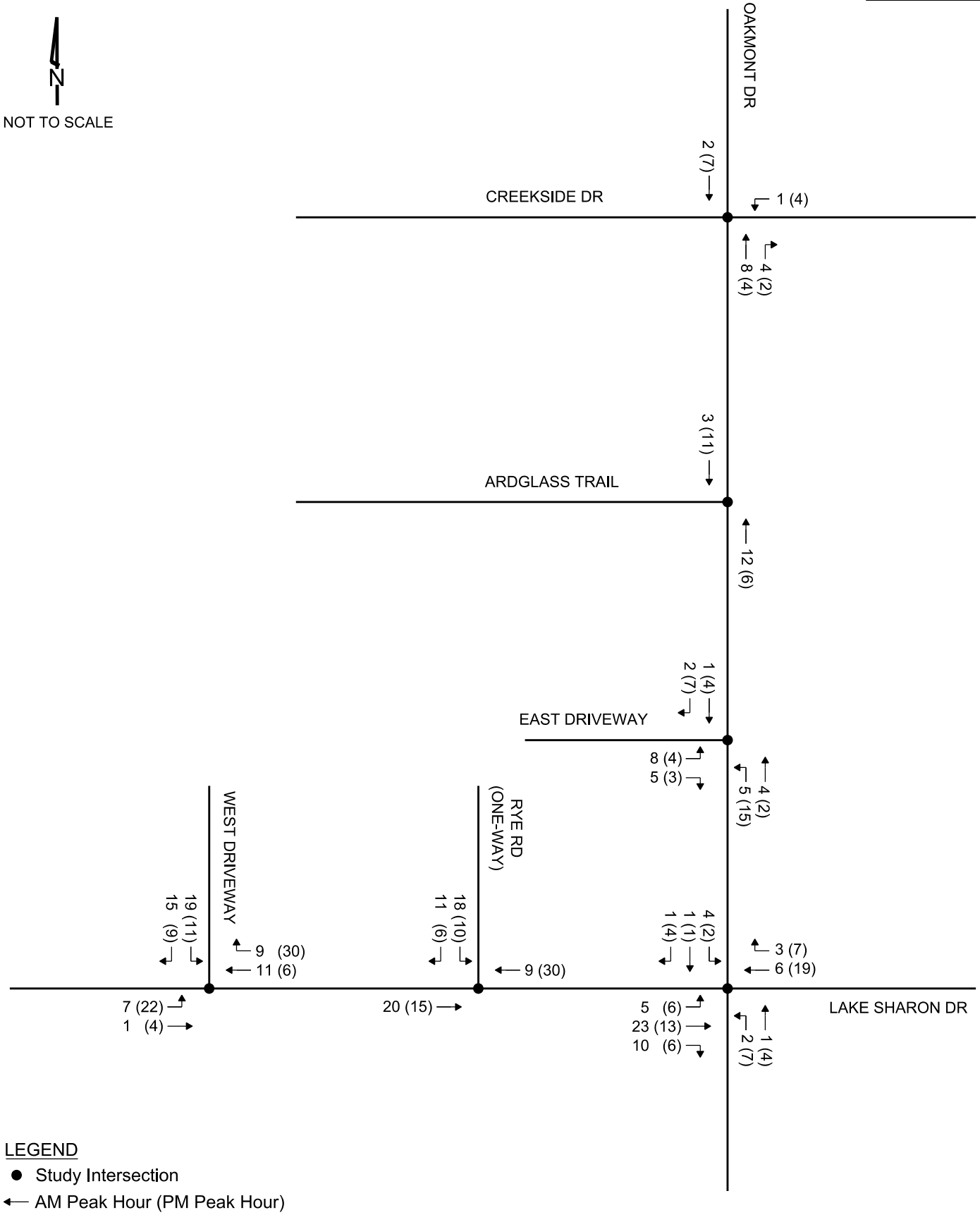
Site Generated Traffic Volumes - Alternative 1
(Direct Access to Oakmont Drive Eliminated)

Figure 14



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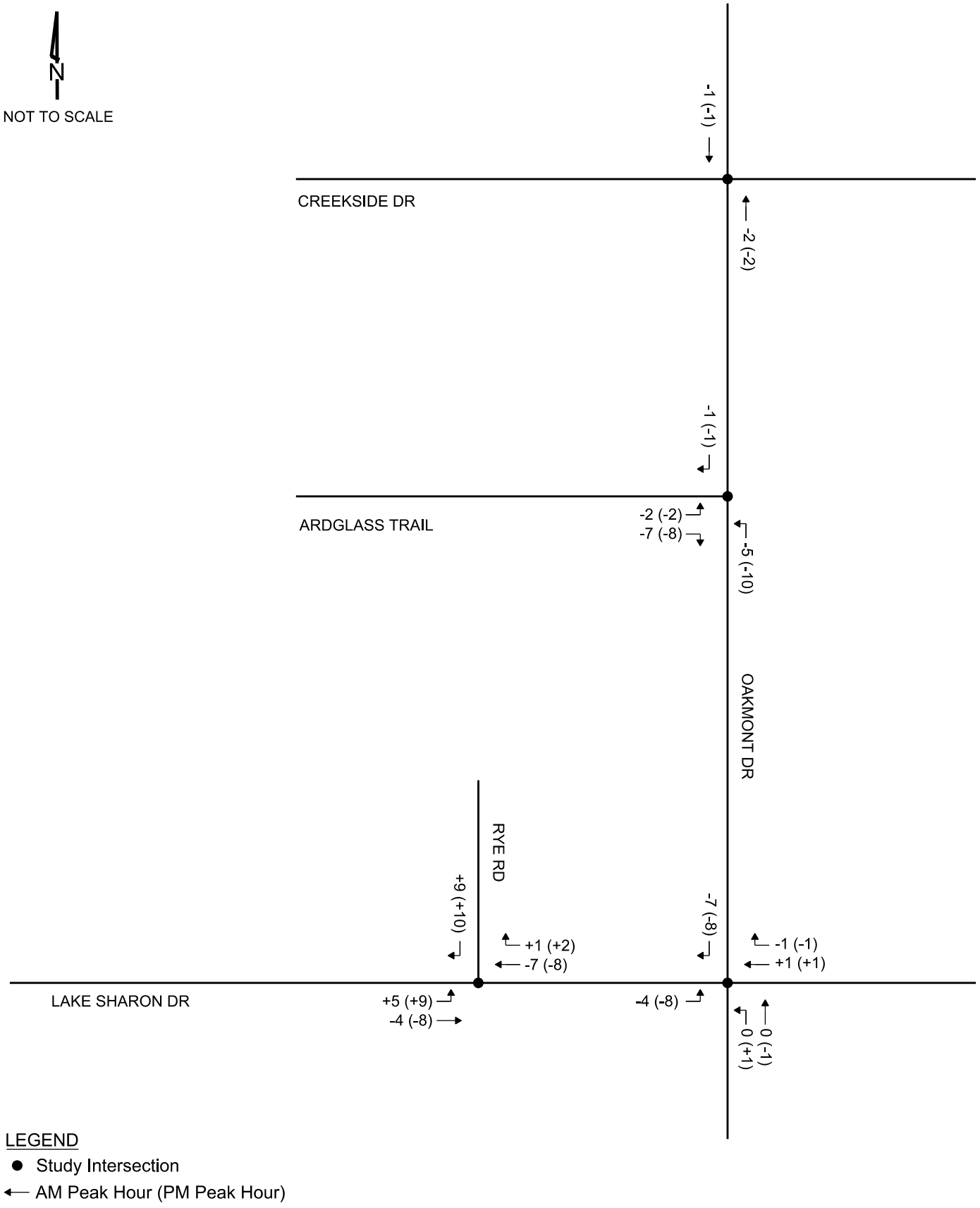
Site Generated Traffic Volumes - Alternative 2
(Rye Road One-Way Southbound)

Figure 15



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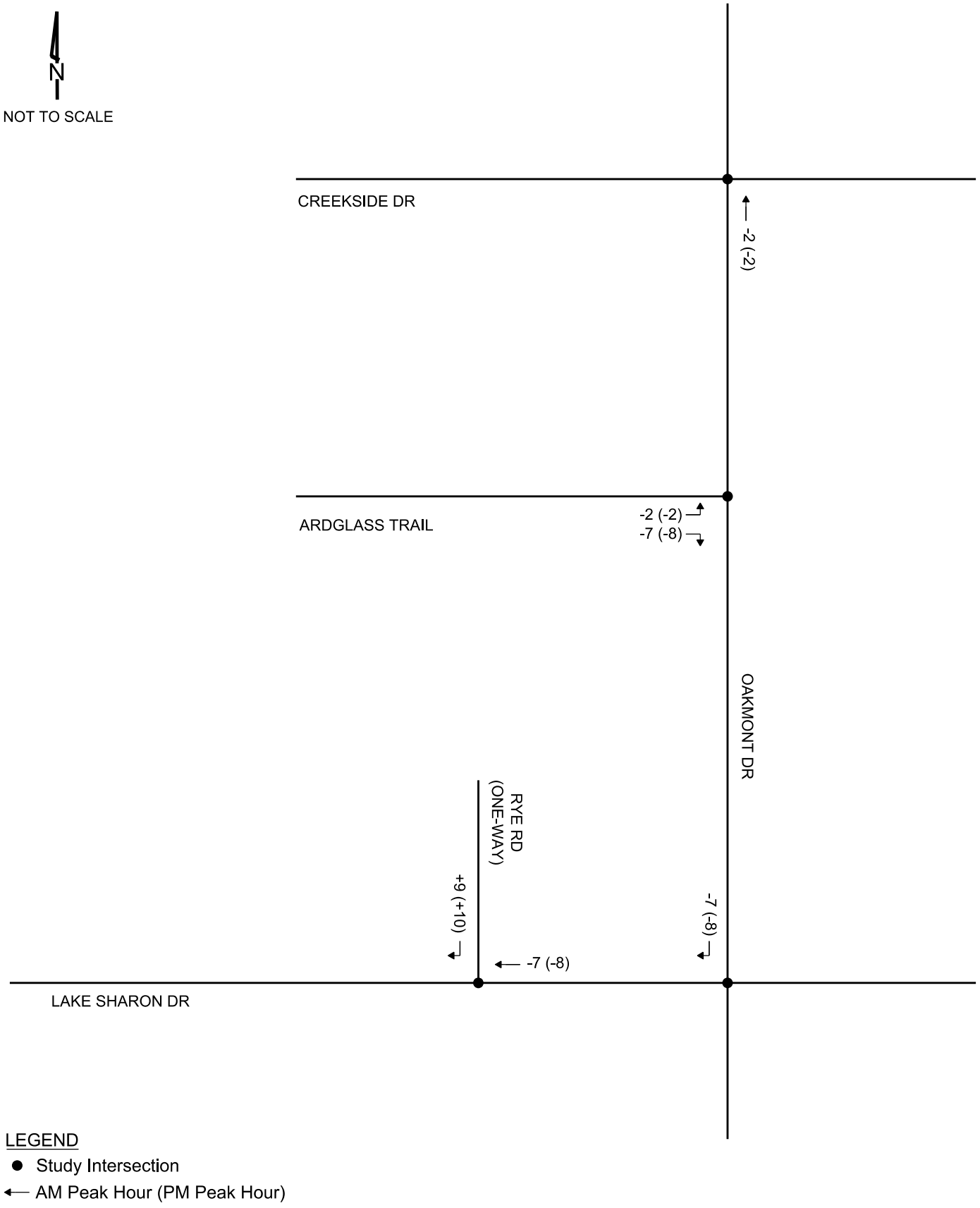
Redistributed Neighborhood Traffic - Proposed Site Plan and Alternative 1

Figure 16



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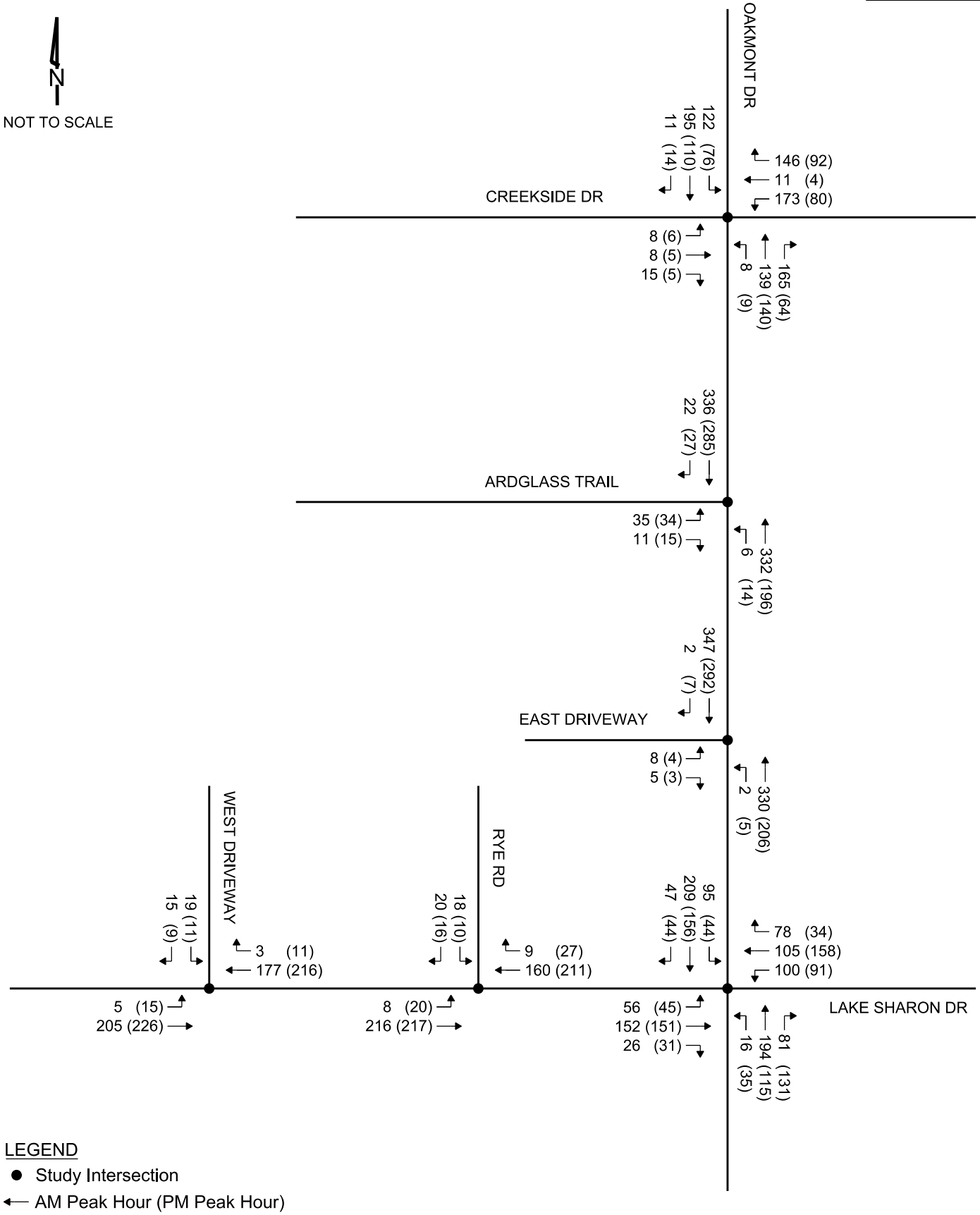
Redistributed Neighborhood Traffic - Alternative 2

Figure 17



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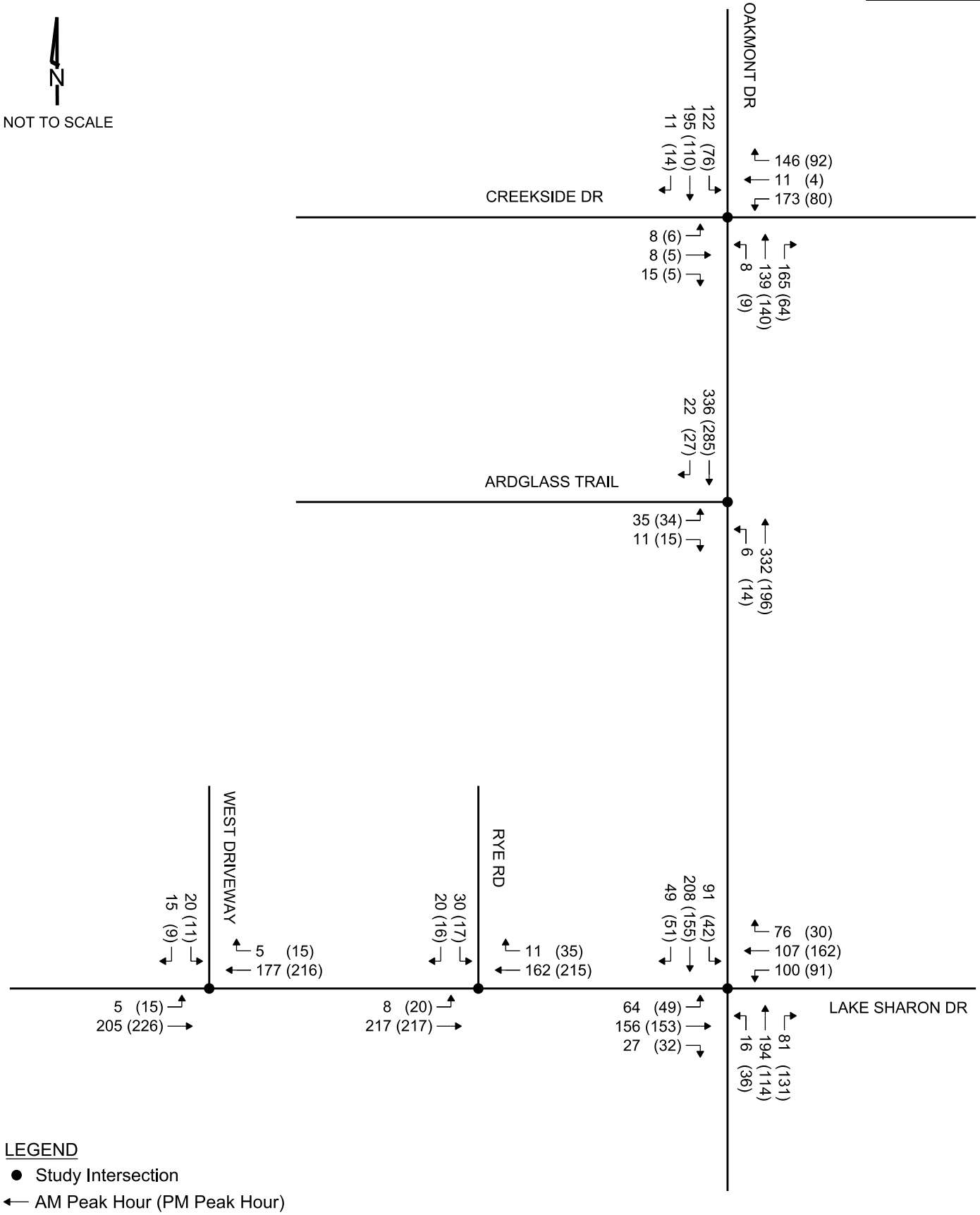
Build Out (2023) Total Traffic Volumes - Proposed Site Plan

Figure 18



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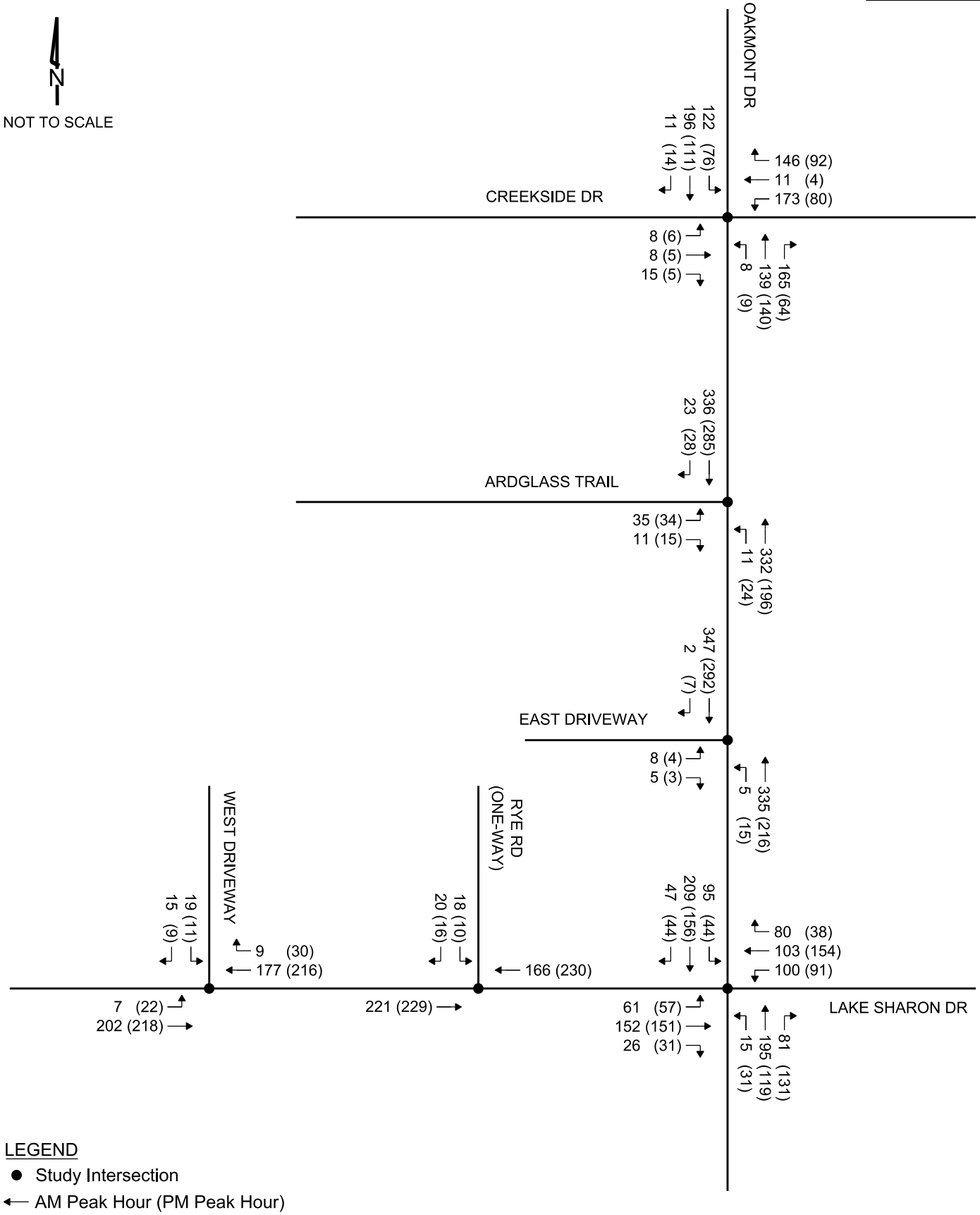
Build Out (2023) Total Traffic Volumes - Alternative 1
(Direct Access to Oakmont Drive Eliminated)

Figure 19



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Build Out (2023) Total Traffic Volumes - Alternative 2
(Rye Road One-Way Southbound)

Figure 20

TRAFFIC ANALYSIS

Intersection Capacity and Level of Service

The Level of Service (LOS) of an intersection is a qualitative measure of capacity and operating conditions and is directly related to vehicle delay. The LOS criteria for an unsignalized intersection are shown in **Table 8**. LOS is given a letter designation from A to F, with LOS A representing very short delays (less than 10 seconds of average control delay per vehicle) and LOS F representing very long delays (more than 50 seconds of average control delay per vehicle). LOS D, ranging from 25.1 to 35.0 seconds of average control delay per vehicle, is typically considered the minimum acceptable condition in an urban environment.

The LOS criteria for a signalized intersection are shown in **Table 9** for reference.

Capacity analyses were conducted for the study area intersections under the following analysis scenarios:

- Existing (2021) traffic conditions (Figure 7)
- Build-Out Year (2023) Background traffic conditions (Figure 8)
- Build-Out (2023) Total traffic conditions for the proposed site plan (Figure 18)
- Build-Out (2023) Total traffic conditions for Alternative 1 (Figure 19)
- Build-Out (2023) Total traffic conditions for Alternative 2 (Figure 20)

Results were obtained using the macroscopic traffic analysis software package *Synchro 10*. Software output sheets are included in the Appendix. It should be noted that HCM methodology does not provide intersection-wide delay or level of service for intersections operating under two-way stop control.

Additional performance measures such as volume to capacity (v/c) ratios and queue lengths also provide an indication of operations. For example, at two-way stop-controlled intersections, main street traffic volumes may impose longer average delays for a small number of side-street vehicles, thus creating vehicle delays which correspond to a poor level of service.

Table 8. Level of Service Criteria for Unsignalized Intersections

Level-of-Service (LOS)	Average Control Delay (seconds/vehicle)	Description
A	≤ 10.0	No delays at intersections with continuous flow of traffic. Uncongested operations: high frequency of long gaps available for all left and right turning traffic. No observable queues.
B	10.1 to 15.0	No delays at intersections with continuous flow of traffic. Uncongested operations: high frequency of long gaps available for all left and right turning traffic. No observable queues.
C	15.1 to 25.0	Moderate delays at intersections with satisfactory to good traffic flow. Light congestion; infrequent backups on critical approaches.
D	25.1 to 35.0	Increased probability of delays along every approach. Significant congestion on critical approaches, but intersection functional. No standing long lines formed.
E	35.1 to 50.0	Heavy traffic flow condition. Heavy delays probable. No available gaps for cross-street traffic or main street turning traffic. Limit of stable flow.
F	> 50.0 or v/c>1.0	Unstable traffic flow. Heavy congestion. Traffic moves in forced flow condition. Average delays greater than one minute highly probable. Total breakdown.

SOURCE: *Highway Capacity Manual (HCM), 6th Edition*, Transportation Research Board, 2016

Table 9. Level of Service Criteria for Signalized Intersections

Level-of-Service (LOS)	Average Control Delay (seconds/vehicle)	Description
A	≤ 10.0	Very low vehicle delays, free flow, signal progression extremely favorable, most vehicles arrive during given signal phase.
B	10.1 to 20.0	Good signal progression, more vehicles stop and experience higher delays than for LOS A.
C	20.1 to 35.0	Stable flow, fair signal progression, significant number of vehicles stop at signals.
D	35.1 to 55.0	Congestion noticeable, longer delays and unfavorable signal progression, many vehicles stop at signals.
E	55.1 to 80.0	Limit of acceptable delay, unstable flow, poor signal progression, traffic near roadway capacity, frequent cycle failures.
F	> 80.0	Unacceptable delays, extremely unstable flow and congestion, traffic exceeds roadway capacity, stop-and-go conditions.

SOURCE: *Highway Capacity Manual (HCM), 6th Edition*, Transportation Research Board, 2016

Existing (2021) Traffic Conditions

The existing lane configurations shown in Figure 3 and the Adjusted Existing (2021) traffic volumes shown in Figure 7 were used for this analysis. **Table 10** presents the analysis results for the existing study intersection under Existing (2021) traffic conditions.

Table 10. Intersection Capacity Analysis Results – Existing (2021) Traffic Conditions

Oakmont Drive at Lake Sharon Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	20.7 (C)[1]	14.0 (B)	14.5 (B)	28.5 (D)	23.0 (C)
PM Peak	16.3 (C)	13.1 (B)	13.4 (B)	20.4 (C)	17.6 (C)
Oakmont Drive at Ardglass Trail (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB	WB	NB Left	SB
AM Peak	---	17.5 (C)	---	8.3 (A)	0.0 (A)
PM Peak	---	13.1 (B)	---	8.2 (A)	0.0 (A)
Oakmont Drive at Creekside Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	13.5 (B)	9.9 (A)	16.7 (C)	11.2 (B)	12.8 (B)
PM Peak	10.1 (B)	8.8 (A)	10.6 (B)	9.9 (A)	9.9 (A)

[1] Delay in seconds/vehicle (Level of Service)
[2] HCM methodology does not provide intersection-wide delay/level of service for TWSC analysis

As shown in Table 10, the study intersections are predicted to operate at acceptable levels of service for existing conditions.

Build-Out Year (2023) Background Traffic Conditions

The existing lane configurations shown in Figure 3 and the Build-Out Year (2023) Background traffic volumes shown in Figure 8 were used for this analysis. **Table 11** presents the analysis results for the study intersection under Build-Out Year (2023) Background traffic conditions. The shaded cells indicate movements which are predicted to operate below acceptable levels of service (LOS D). This scenario does *not* include site generated traffic.

Table 11. Intersection Capacity Analysis Results – Build-Out Year (2023) Background Traffic Conditions

Oakmont Drive at Lake Sharon Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	26.5 (D)[1]	15.2 (C)	15.9 (C)	40.0 (E), *0.83*	30.2 (D)
PM Peak	19.4 (C)	14.2 (B)	14.6 (B)	26.6 (D)	21.2 (C)
Oakmont Drive at Ardglass Trail (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB	WB	NB Left	SB
AM Peak	---	19.5 (C)	---	8.5 (A)	0.0 (A)
PM Peak	---	13.9 (B)	---	8.3 (A)	0.0 (A)
Oakmont Drive at Creekside Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	15.1 (C)	10.3 (B)	19.6 (C)	12.0 (B)	13.9 (B)
PM Peak	10.6 (B)	9.0 (A)	11.2 (B)	10.4 (B)	10.3 (B)

[1] Delay in seconds/vehicle (Level of Service), *v/c ratio for LOS E or F*
[2] HCM methodology does not provide intersection-wide delay/level of service for TWSC analysis

As shown in Table 11, the intersection of Oakmont Drive and Lake Sharon Drive is predicted to begin to operate at LOS D during the AM peak hour, with the northbound approach operating at LOS E. It should be noted that the predicted volume to capacity ratio is for the shared through/right movement specifically. The northbound approach is also predicted to begin to operate at LOS D during the PM peak hour. Additionally, the southbound approach is predicted to begin to operate at LOS D during the AM peak hour.

All other study intersections are predicted to continue to operate at acceptable levels of service for projected 2023 background traffic volumes.

Build-Out (2023) Total Traffic Conditions – Proposed Site Plan

The proposed lane configurations shown in Figure 3 and the Build-Out Year (2023) Total traffic volumes for the proposed site plan (Figure 18) were used for this analysis. Note that all three proposed driveways were assumed to be in place for this scenario. **Table 12** presents the analysis results for the study intersections under Build-Out Year (2023) Total traffic conditions with the proposed site plan configuration. The shaded cells indicate movements which are predicted to operate below acceptable levels of service (LOS D).

Table 12. Intersection Capacity Analysis Results – Build-Out (2023) Total Traffic Conditions - Proposed Site Plan

Oakmont Drive at Lake Sharon Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	28.3 (D)[1]	16.3 (C)	16.7 (C)	44.7 (E), *0.86*	32.1 (D)
PM Peak	20.4 (C)	15.1 (C)	15.4 (C)	28.1 (D)	22.4 (C)
Oakmont Drive at Ardglass Trail (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB	WB	NB Left	SB
AM Peak	---	19.8 (C)	---	8.4 (A)	0.0 (A)
PM Peak	---	13.9 (B)	---	8.3 (A)	0.0 (A)
Oakmont Drive at Creekside Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	15.3 (C)	10.4 (B)	20.0 (C)	12.2 (B)	14.1 (B)
PM Peak	10.8 (B)	9.0 (A)	11.5 (B)	10.5 (B)	10.5 (B)
Lake Sharon Drive at West Driveway (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB Left	WB	NB	SB
AM Peak	---	7.7 (A)	0.0 (A)	---	10.5 (B)
PM Peak	---	7.9 (A)	0.0 (A)	---	11.1 (B)
Lake Sharon Drive at Rye Road (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB Left	WB	NB	SB
AM Peak	---	7.7 (A)	0.0 (A)	---	10.3 (B)
PM Peak	---	8.0 (A)	0.0 (A)	---	10.7 (B)
Oakmont Drive at East Driveway (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB	WB	NB Left	SB
AM Peak	---	14.9 (B)	---	8.3 (A)	0.0 (A)
PM Peak	---	12.6 (B)	---	8.1 (A)	0.0 (A)

[1] Delay in seconds/vehicle (Level of Service), *v/c ratio for LOS E or F*

[2] HCM methodology does not provide intersection-wide delay/level of service for TWSC analysis

As shown in Table 12, the existing study intersections are predicted to operate similar to 2023 background conditions with the addition of site traffic volumes for Build-Out of the development, with some minimal delay added to most approaches.

With the lane and driveway configuration shown in the preliminary site plan (Figure 2), the proposed site driveways are predicted to operate at acceptable levels of service.

Build-Out (2023) Total Traffic Conditions – Alternative 1

The proposed lane configurations shown in Figure 12 and the Build-Out Year (2023) Total traffic volumes for Alternative 1 (Figure 19) were used for this analysis. Note that this scenario assumes only two driveways for the site, with both located on Lake Sharon Drive. **Table 13** presents the

analysis results for the study intersections under Build-Out Year (2023) Total traffic conditions with the Alternative 1 driveway configuration. The shaded cells indicate movements which are predicted to operate below acceptable levels of service (LOS D).

Table 13. Intersection Capacity Analysis Results – Build-Out (2023) Total Traffic Conditions - Alternative 1

Oakmont Drive at Lake Sharon Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	29.1 (D)[1]	16.6 (C)	16.9 (C)	46.3 (E), *0.87*	33.5 (D)
PM Peak	20.9 (C)	15.3 (C)	15.7 (C)	28.6 (D)	23.6 (C)
Oakmont Drive at Ardglass Trail (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB	WB	NB Left	SB
AM Peak	---	19.8 (C)	---	8.4 (A)	0.0 (A)
PM Peak	---	13.9 (B)	---	8.3 (A)	0.0 (A)
Oakmont Drive at Creekside Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	15.3 (C)	10.4 (B)	20.0 (C)	12.2 (B)	14.1 (B)
PM Peak	10.8 (B)	9.0 (A)	11.5 (B)	10.5 (B)	10.5 (B)
Lake Sharon Drive at West Driveway (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB Left	WB	NB	SB
AM Peak	---	7.7 (A)	0.0 (A)	---	10.6 (B)
PM Peak	---	7.9 (A)	0.0 (A)	---	11.2 (B)
Lake Sharon Drive at Rye Road (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB Left	WB	NB	SB
AM Peak	---	7.7 (A)	0.0 (A)	---	10.8 (B)
PM Peak	---	8.0 (A)	0.0 (A)	---	11.4 (B)

[1] Delay in seconds/vehicle (Level of Service), *v/c ratio for LOS E or F*

[2] HCM methodology does not provide intersection-wide delay/level of service for TWSC analysis

As shown in Table 13, this driveway configuration is predicted to slightly increase delay for all movements at the intersection of Oakmont Drive and Lake Sharon Drive compared to the currently proposed site plan. Left turn movements entering the site are predicted to operate similar to the proposed site plan. Exiting movements are predicted to experience slight increases in delay with only two driveways.

No change was predicted at the intersections of Oakmont Drive at Ardglass Trail and at Creekside Drive compared to the proposed site plan.

Build-Out (2023) Total Traffic Conditions – Alternative 2

The proposed lane configurations shown in Figure 12 and the Build-Out Year (2023) Total traffic volumes for Alternative 2 (Figure 20) were used for this analysis. Note that this scenario assumes

all three driveways for the site, but with Rye Road operating as a one-way roadway (outbound only). **Table 14** presents the analysis results for the study intersections under Build-Out Year (2023) Total traffic conditions with the Alternative 2 driveway configuration. The shaded cells indicate movements which are predicted to operate below acceptable levels of service (LOS D).

Table 14. Intersection Capacity Analysis Results – Build-Out (2023) Total Traffic Conditions - Alternative 2

Oakmont Drive at Lake Sharon Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	28.8 (D)[1]	16.3 (C)	16.8 (C)	46.1 (E), *0.87*	32.6 (D)
PM Peak	21.2 (C)	15.3 (C)	15.6 (C)	30.2 (D)	22.9 (C)
Oakmont Drive at Ardglass Trail (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB	WB	NB Left	SB
AM Peak	---	20.3 (C)	---	8.5 (A)	0.0 (A)
PM Peak	---	14.3 (B)	---	8.3 (A)	0.0 (A)
Oakmont Drive at Creekside Drive (Multiway Stop-Control)					
Peak Hour	Intersection	EB	WB	NB	SB
AM Peak	15.3 (C)	10.4 (B)	20.0 (C)	12.2 (B)	14.1 (B)
PM Peak	10.8 (B)	9.1 (A)	11.5 (B)	10.5 (B)	10.5 (B)
Lake Sharon Drive at West Driveway (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB Left	WB	NB	SB
AM Peak	---	7.8 (A)	0.0 (A)	---	10.6 (B)
PM Peak	---	8.0 (A)	0.0 (A)	---	11.4 (B)
Lake Sharon Drive at Rye Road (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB	WB	NB	SB
AM Peak	---	0.0 (A)	0.0 (A)	---	10.0 (B)
PM Peak	---	0.0 (A)	0.0 (A)	---	10.3 (B)
Oakmont Drive at East Driveway (Two-Way Stop-Control)					
Peak Hour	Intersection [2]	EB	WB	NB Left	SB
AM Peak	---	15.1 (C)	---	8.3 (A)	0.0 (A)
PM Peak	---	13.0 (B)	---	8.2 (A)	0.0 (A)

[1] Delay in seconds/vehicle (Level of Service), *v/c ratio for LOS E or F*
[2] HCM methodology does not provide intersection-wide delay/level of service for TWSC analysis

As shown in Table 14, this driveway configuration is predicted to slightly increase delay for all movements at the intersection of Oakmont Drive and Lake Sharon Drive compared to the currently proposed site plan. Similar to Alternative 1, Oakmont Drive at Creekside is predicted to operate the same as with the proposed site plan driveway configuration. On the other hand, the intersection of Oakmont Drive at Ardglass Trail is predicted to experience some slight increase in delay compared to both the proposed site plan and Alternative 1.

Exiting movements from Rye Road are predicted to improve sightly, with two outbound lanes assumed when the roadway operates as one-way. Movements at the other two site driveways are predicted to experience slight increases in delay.

Comparison of Proposed Site Plan, Alternative 1, and Alternative 2

For further comparison of the three options for site access, predicted average performance measures by movement were compared side-by-side for each option. **Table 15** shows the predicted average delay by movement for each scenario.

As shown, minimal differences were predicted in vehicle delay between the three site access options. In general, the access shown in the proposed site plan results in the least amount of average delay for most movements.

In addition, **Table 16** shows the predicted 95th percentile queue lengths identified by *Synchro* for each movement at the above study intersections. Queue lengths were rounded up to the nearest whole number.

As shown, predicted 95th percentile queue lengths are similar between the three site access options. The two alternative options are predicted to add approximately one vehicle to the northbound approach of Oakmont Drive at Lake Sharon Drive during the PM peak hour compared to existing zoning.

The highest 95th percentile queue lengths are predicted to occur during the AM peak hour on Oakmont Drive at Lake Sharon Drive, with approximately nine vehicles in the northbound direction and approximately eight vehicles in the southbound direction. An eight-vehicle queue on the southbound approach would be approximately 200 feet. The proposed East Driveway will be located approximately 800 feet north of Lake Sharon Drive. Thus, the predicted queue length is not anticipated to extend to the site driveway on Oakmont Drive. It should also be noted that the 95th percentile queue only occurs for approximately two to three minutes during the peak 60 minute period.

Overall, all three site access options are predicted to operate at acceptable levels of service with minimal impact on the surrounding roadway network.

Lee Engineering recommends providing all three proposed access points for the Avilla Fairways site. Providing three full-access points, as shown in the proposed site plan, will result in the least amount of new traffic at the intersection of Lake Sharon Drive and Oakmont Drive. The new Rye Road extension will also result in improved ingress and egress access for the existing neighborhood to the north, particularly with both inbound and outbound movements allowed. Finally, providing three full-access points will provide the greatest safety benefit in terms of fire and emergency services access to the site. The Rye Road extension also provide additional fire and emergency access to the adjacent neighborhood to the north.

Table 15. Average Delay (Seconds per Vehicle) by Movement

Intersection	Movement	AM Peak Hour					PM Peak Hour				
		Existing	Background	Proposed Site	Alt 1	Alt 2	Existing	Background	Proposed Site	Alt 1	Alt 2
Oakmont Drive at Lake Sharon Drive (Multiway Stop-Control)	Intersection	20.7	26.5	28.3	29.1	28.8	16.3	19.4	20.4	20.9	21.2
	NB LT	11.7	12.3	12.7	12.8	12.7	11.5	12.1	12.8	13.0	12.8
	NB Thru/RT	29.3	41.3	46.6	48.2	47.9	21.3	28.0	30.3	30.9	32.4
	SB LT	14.2	15.4	16.3	16.3	16.4	12.2	12.9	13.4	13.4	13.5
	SB Thru/RT	26.1	35.3	38.0	39.6	38.6	18.7	22.9	24.4	25.7	25.0
	EB LT	14.1	15.2	15.5	16.0	15.8	12.9	13.8	13.9	14.2	14.6
	EB Thru/RT	14.5	15.9	17.4	17.7	17.4	13.7	15.0	16.1	16.3	16.2
	WB LT	15.7	17.3	18.0	18.3	18.1	14.3	15.7	16.1	16.3	16.4
	WB Thru/RT	14.1	15.6	16.5	16.7	16.7	13.3	14.5	15.9	16.2	15.9
Oakmont Drive at Ardglass Trail (Two-Way Stop Control)	Intersection	-	-	-	-	-	-	-	-	-	-
	NB LT	8.3	8.5	8.4	8.4	8.5	8.2	8.3	8.3	8.3	8.3
	NB Thru	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SB Thru/RT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EB	17.5	19.5	19.8	19.8	20.3	13.1	13.9	13.9	13.9	14.3
Oakmont Drive at Creekside Drive (Multiway Stop-Control)	Intersection	13.5	15.1	15.3	15.3	15.3	10.1	10.6	10.8	10.8	10.8
	NB LT/Thru	11.7	12.6	12.8	12.8	12.8	10.6	11.2	11.4	11.4	11.4
	NB RT	10.8	11.5	11.7	11.7	11.7	8.1	8.4	8.4	8.4	8.4
	SB LT	12.0	12.7	12.8	12.8	12.8	10.0	10.3	10.4	10.4	10.4
	SB Thru/RT	13.3	14.6	14.8	14.8	14.8	9.8	10.3	10.5	10.5	10.5
	EB	9.9	10.3	10.4	10.4	10.4	8.8	9.0	9.0	9.0	9.1
	WB	16.7	19.6	20.0	20.0	20.0	10.6	11.2	11.5	11.5	11.5
Lake Sharon Drive at West Driveway (Two-Way Stop Control)	Intersection			-	-	-			-	-	-
	EB LT			7.7	7.7	7.8			7.9	7.9	8.0
	EB Thru			0.0	0.0	0.0			0.0	0.0	0.0
	WB Thru/RT			0.0	0.0	0.0			0.0	0.0	0.0
	SB			10.5	10.6	10.6			11.1	11.2	11.4
Lake Sharon Drive at Rye Road (Two-Way Stop Control)	Intersection			-	-	-			-	-	-
	EB LT			7.7	7.7				8.0	8.0	
	EB Thru			0.0	0.0	0.0			0.0	0.0	0.0
	WB Thru/RT			0.0	0.0	0.0			0.0	0.0	0.0
	SB			10.3	10.8	10.0			10.7	11.4	10.3
Oakmont Drive at East Driveway (Two-Way Stop Control)	Intersection			-		-			-		-
	NB LT			8.3		8.3			8.1		8.2
	NB Thru			0.0		0.0			0.0		0.0
	SB Thru/RT			0.0		0.0			0.0		0.0
	EB			14.9		15.1			12.6		13.0

Table 16. 95th Percentile Queue in Vehicles by Movement – Build-Out (2023) Total Traffic Scenarios

Intersection	Movement	AM Peak Hour					PM Peak Hour				
		Existing	Background	Proposed Site	Alt 1	Alt 2	Existing	Background	Proposed Site	Alt 1	Alt 2
Oakmont Drive at Lake Sharon Drive (Multiway Stop-Control)	NB LT	1	1	1	1	1	1	1	1	1	1
	NB Thru/RT	6	8	9	9	9	5	6	6	7	7
	SB LT	1	2	2	2	2	1	1	1	1	1
	SB Thru/RT	6	7	8	8	8	4	4	5	5	5
	EB LT	1	1	1	1	1	1	1	1	1	1
	EB Thru/RT	1	2	2	2	2	1	2	2	2	2
	WB LT	2	2	2	2	2	2	2	2	2	2
	WB Thru/RT	2	2	2	2	2	1	2	2	2	2
Oakmont Drive at Ardglass Trail (Two-Way Stop Control)	NB LT	0	0	0	0	0	1	1	0	0	1
	NB Thru	-	-	-	-	-	-	-	-	-	-
	SB Thru/RT	-	-	-	-	-	-	-	-	-	-
	EB	1	1	1	1	1	1	1	1	1	1
Oakmont Drive at Creekside Drive (Multiway Stop-Control)	NB LT/Thru	2	2	2	2	2	2	2	2	2	2
	NB RT	2	2	2	2	2	1	1	1	1	1
	SB LT	2	2	2	2	2	1	1	1	1	1
	SB Thru/RT	2	3	3	3	3	1	1	2	2	2
	EB	1	1	1	1	1	1	1	1	1	1
	WB	4	5	5	5	5	2	2	2	2	2
Lake Sharon Drive at West Driveway (Two-Way Stop Control)	EB LT			0	0	0			0	1	1
	EB Thru			-	-	-			-	-	-
	WB Thru/RT			-	-	-			-	-	-
	SB			1	1	1			1	1	1
Lake Sharon Drive at Rye Road (Two-Way Stop Control)	EB LT			0	0	-			1	1	-
	EB Thru			-	-	-			-	-	-
	WB Thru/RT			-	-	-			-	-	-
	SB			1	1	1			1	1	1
Oakmont Drive at East Driveway (Two-Way Stop Control)	NB LT			0		0			0		1
	NB Thru			-		-			-		-
	SB Thru/RT			-		-			-		-
	EB			1		1			1		1

Potential Mitigation Measures

As identified in the previous tables, the northbound approach of Oakmont Drive at Lake Sharon Drive is predicted to operate at LOS E by 2023 for both background and total traffic conditions. In order to mitigate this poor level of service, the City could consider installation of a northbound right turn lane on Oakmont Drive at Lake Sharon Drive. **Table 17** presents the resulting operation for both Build-Out Year (2023) Background conditions and Build-Out (2023) Total conditions with this mitigation measure. For the purposes of this analysis, only the total scenario based on the proposed site plan is shown. Similar improvements would also occur for the Alternative 1 and Alternative 2 scenarios.

Table 17. Intersection Capacity Analysis Results – Installation of Right Turn Lane on Oakmont Drive at Lake Sharon Drive

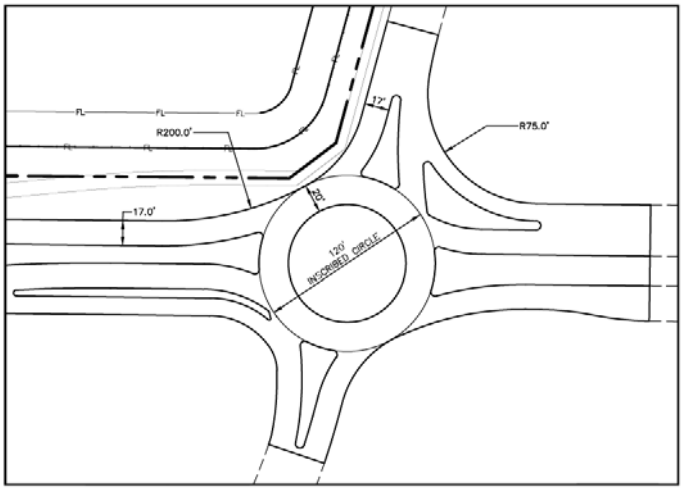
Oakmont Drive at Lake Sharon Drive (Multiway Stop-Control)						
Scenario	Peak Hour	Intersection	EB	WB	NB	SB
2023 Background	AM Peak	19.7 (C)[1]	14.4 (B)	15.0 (B)	19.4 (C)	26.5 (D)
	PM Peak	15.1 (C)	13.5 (B)	13.8 (B)	14.1 (B)	19.1 (C)
2023 Total (Proposed Site Plan)	AM Peak	20.5 (C)	15.3 (C)	15.7 (C)	20.6 (C)	27.6 (D)
	PM Peak	15.8 (C)	14.2 (B)	14.5 (B)	14.6 (B)	20.0 (C)

[1] Delay in seconds/vehicle (Level of Service), *v/c ratio for LOS E or F*

As shown, with the installation of a northbound right turn lane on Oakmont Drive at Lake Sharon Drive, all approaches are predicted to operate at acceptable levels of service.

On the other hand, a roundabout is being considered for evaluation for construction at the intersection of Oakmont Drive and Lake Sharon Drive in the future, based on the City of Corinth *Master Thoroughfare Plan* (dated March 30, 2021). A preliminary roundabout design is also shown on the preliminary site plan, as shown below for reference in **Figure 21**.

Figure 21. Preliminary Roundabout Design in Site Plan – Oakmont Drive at Lake Sharon Drive



FUTURE ROUNDABOUT DETAIL
(NOT TO SCALE)

As shown, the preliminary roundabout design is a single-lane roundabout with right-turn bypass lanes on the eastbound and westbound approaches. **Table 18** presents the resulting operation for both Build-Out Year (2023) Background conditions and Build-Out (2023) Total conditions with this preliminary roundabout design. For the purposes of this analysis, only the total scenario based on the proposed site plan is shown. Similar operation would also occur for the Alternative 1 and Alternative 2 scenarios. This analysis was performed with *SIDRA* roundabout software, with output sheets included in the Appendix.

Table 18. Intersection Capacity Analysis Results –
Installation of Roundabout at Oakmont Drive at Lake Sharon Drive

Oakmont Drive at Lake Sharon Drive (Roundabout)						
Scenario	Peak Hour	Intersection	EB	WB	NB	SB
2023 Background	AM Peak	7.7 (A)[1]	7.1 (A)	5.6 (A)	8.6 (A)	8.9 (A)
	PM Peak	6.9 (A)	6.2 (A)	5.8 (A)	7.9 (A)	7.8 (A)
2023 Total (Proposed Site Plan)	AM Peak	8.0 (A)	7.5 (A)	5.8 (A)	9.2 (A)	9.1 (A)
	PM Peak	7.2 (A)	6.3 (A)	6.1 (A)	8.3 (A)	8.3 (A)

[1] Delay in seconds/vehicle (Level of Service), *v/c ratio for LOS E or F*

As shown, with the installation of a roundabout at the intersection of Oakmont Drive at Lake Sharon Drive, all approaches are predicted to operate at LOS A for both background and total traffic conditions.

ACCESS MANAGEMENT ANALYSIS

Right Turn Lane Analysis

The proposed site access connections to the development were analyzed to determine if right turn lanes would be required.

Based on guidelines presented in TxDOT's *Access Management Manual*, right turn deceleration lanes are considered under the following conditions:

- Right turn volumes greater than 50 vph (if posted speed limit greater than 45 mph)
- Right turn volumes greater than 60 vph (if posted speed limit less than/equal to 45 mph)

Table 17 summarizes the predicted right turn volumes at the proposed site access driveways for Build-Out (2023) Total traffic conditions for each site access option (Figures 18-20).

Table 19. Right Turn Deceleration Lane Analysis Results

Intersection	Scenario	Approach	Speed Limit (mph)	Volume (vph) AM (PM)	Threshold (vph)	Exceed Threshold? AM (PM)
West Driveway at Lake Sharon Drive	Proposed Site Plan	WB	40	3 (11)	60	No (No)
	Alternative 1			5 (15)		No (No)
	Alternative 2			9 (30)		No (No)
Rye Road at Lake Sharon Drive	Proposed Site Plan	WB	40	9 (27)	60	No (No)
	Alternative 1			11 (35)		No (No)
East Driveway at Oakmont Drive	Proposed Site Plan	SB	30	2 (7)	60	No (No)
	Alternative 2			2 (7)		No (No)

Based on the projected site traffic volumes, the predicted right turn volumes at the proposed site access driveways are not predicted to exceed the TxDOT threshold for the consideration of a right turn deceleration lane, and right turn lanes are not required at these locations for any of the site access scenarios.

Left Turn Lane Analysis

Based on the preliminary site plan (Figure 2), an eastbound left turn lane is proposed on Lake Sharon Drive at the Rye Road extension. The proposed left turn lane appears to include approximately 100 feet of storage, which should fully accommodate anticipated queues.

No eastbound left-turn lane is shown at the West Driveway. However, this driveway is proposed to be located at an existing median opening on a divided roadway and was included in all three site access scenarios. If feasible, it is recommended that an eastbound left-turn lane should be constructed on Lake Sharon Drive at West Driveway with development of the site. If the culvert crossing precludes construction of an eastbound left-turn lane, consideration should be given to making the western driveway right-in/right-out and lengthening the storage at the Rye Road access point.

East Driveway is located on the undivided Oakmont Drive. Based on the results shown in the previous section, minimal delay and queuing is anticipated for this movement. However, this location was further evaluated based on TxDOT's procedure for determining whether left turn lanes should be considered on two-lane highways, as presented in TxDOT's *Roadway Design Manual*. **Table 18** summarizes the information presented in Table 3-11 of this manual for a design speed of 40 mph. Note that design values for a 30-mph roadway are not provided in the manual, but the thresholds would be higher for a lower speed.

Table 20: Guide for Left Turn Lanes on Two-Lane Highways (TxDOT)

Opposing Volume (vph)	Advancing Volume (vph)			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
40 mph Design Speed				
800	330	240	180	160
600	410	305	225	200
400	510	380	275	245
200	640	470	350	305
100	720	515	390	340

**SOURCE: TxDOT Roadway Design Manual (Table 3-11)*

Table 19 presents the evaluation results for a northbound left-turn deceleration lane on Oakmont Drive at East Driveway under Build-Out (2023) Total conditions. Analysis was performed for the proposed site plan and for Alternative 2 site access, as this driveway was removed for Alternative 1.

Table 21: Left Turn Deceleration Lane Analysis Results on Oakmont Drive

Peak Hour	Opposing (SB) Volume (vph)	Advancing (NB) Volume (vph)				Volume > Guideline?
		Percent Left Turns	Left Turns	Volume	Guideline[1]	
Build-Out (2023) Total Conditions – Proposed Site Plan						
AM Peak	349	1%	2	332	~650	No
PM Peak	299	2%	5	211	~660	No
Build-Out (2023) Total Conditions – Alternative 2						
AM Peak	349	1%	5	340	~650	No
PM Peak	299	6%	15	231	~550	No

[1]For a 40-mph roadway

As shown, predicted left turn volumes at this driveway are low and guidelines are not met. Therefore, installation of a left-turn lane on Oakmont Drive at East Driveway is not recommended. In addition, striping a left-turn lane along Oakmont Drive may create undesirable lane use during school peak periods.

Sight Distance Evaluation

As part of this traffic analysis, the required intersection sight distance for motorists accessing the adjacent roadway from the proposed site driveways was calculated. The desired sight distance was estimated using the procedures developed by the American Association of State Highway and Transportation Officials (AASHTO) and published in the 2018 edition of *A Policy on Geometric Design of Highways and Streets*. At a stop-controlled location, the motorist should be able to see to the left and to the right to determine if and when adequate gaps exist to perform a left or right turn maneuver. **Table 20** presents the desirable and available intersection sight distance for vehicles exiting the proposed driveways.

Table 22. Intersection Sight Distance for Site Driveways

Major Roadway	Lake Sharon Drive		Oakmont Drive
Posted Speed Limit	40 mph		30 mph
Design Vehicle	Passenger Car		
Driveway	West Driveway	Rye Road	East Driveway
Approach	SB	SB	EB
Desired Intersection Sight Distance	510 feet	510 feet	335 feet
Available Sight Distance to the Left	730 feet	530 feet	680 feet
Available Sight Distance to the Right	>1,000 feet	650 feet	300 feet
Sight Distance Available > Required:			
To the Left	Yes	Yes	Yes
To the Right	Yes	Yes	No

As shown in Table 20, comparison of the field measurements of the available sight distance and the recommended sight distance indicates that adequate sight distance is provided for passenger cars at the proposed site access points on Lake Sharon Drive, based on conditions that existed at the time of the site visit and the posted speed limits.

However, sight distance from the East Driveway on Oakmont Drive is less than desired in looking to the right. Sight distance is obstructed due to the horizontal curvature on Oakmont Drive and due to vegetation.

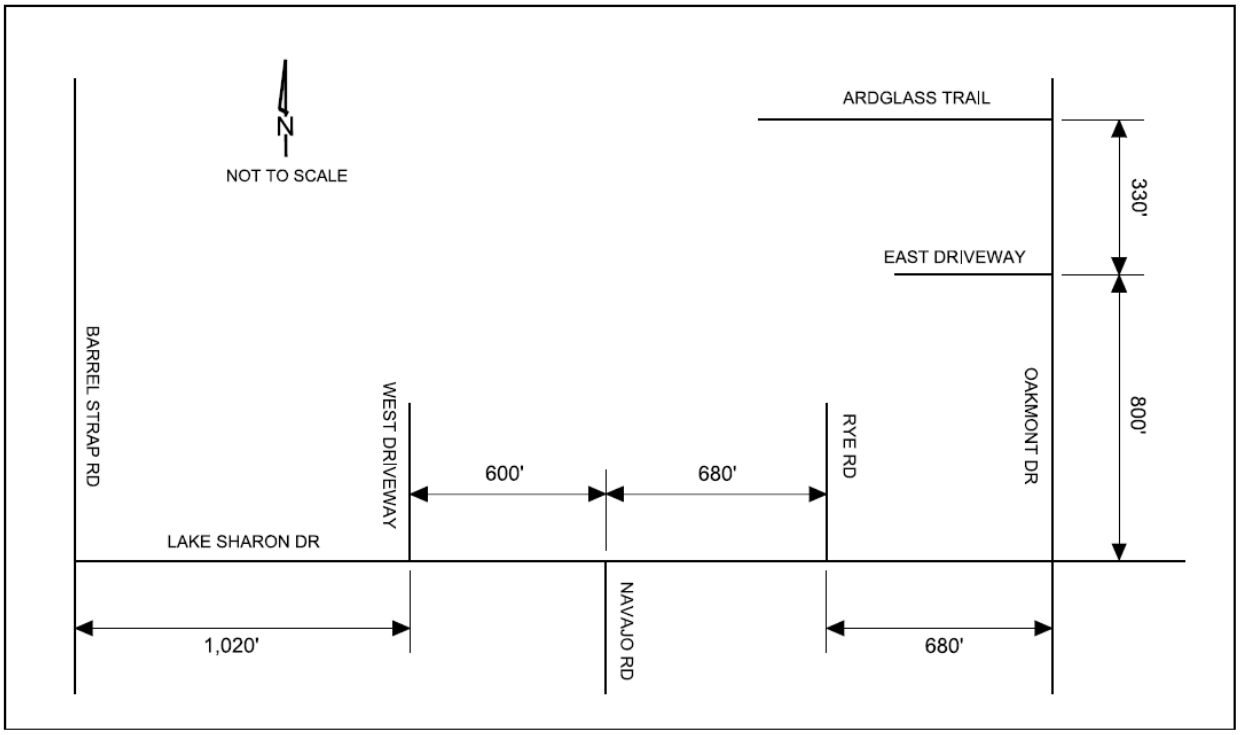
With development of the site, is recommended to remove all vegetation along the west edge of Oakmont Drive within the sight triangle south of East Driveway.

Driveway Spacing Evaluation

According to TxDOT's *Access Management Manual*, required access point spacing is determined based on the posted speed limit of the roadway. For a roadway with a posted speed limit of 30 mph or less, the required minimum access point spacing is 200 feet (Table 2-2, *Access Management Manual*). For a roadway with a posted speed limit of 40 mph, the required minimum access point spacing is 305 feet.

Approximate driveway spacing for the site is shown in **Figure 22**. As shown, proposed driveway spacing exceeds TxDOT requirements for all three site driveways.

Figure 22. Approximate Driveway Spacing for Avilla Fairways Site



ADDITIONAL CONSIDERATIONS

Several additional factors are anticipated to impact the transportation operation in the vicinity of the proposed site.

School Operation

As previously identified, an elementary school and a middle school are both located on the south side of Creekside Drive east of Oakmont Drive, approximately 1,000 feet north of the site. The proposed Avilla Fairways development is located within the attendance boundary for both schools. Both schools are part of Denton ISD. School hours for Hawk Elementary school are 7:40 AM to 3:05 PM. School hours for Crownover Middle School are 8:15 AM to 3:40 PM.

Sidewalks are currently available along both sides of Oakmont Drive for pedestrians walking to the schools. There are also marked crosswalks at the multiway stop-controlled intersection of Oakmont Drive and Creekside Drive.

Field observations were completed during both the morning peak and the afternoon school peak on April 22, 2021. Weather was overcast. Vehicles were observed queueing along the right-hand side of Oakmont Drive in both the northbound and southbound directions to enter the elementary school pick-up line. The northbound queue was observed to extend for approximately 1,500 feet to the south, past both Ardglass Trail and the proposed East Driveway location, prior to the end of the school day. By 3:06 PM, the queue was shortened to approximately 800 feet once pick-up operations began.

Oakmont Drive is approximately 36 feet wide, which allows enough room for through vehicles to bypass the vehicle queue.

A delay study was conducted for the eastbound approach of Ardglass Trail at Oakmont Drive to observe the actual delay in the field, which is likely impacted by the school operations. Delay study sheets are included in the Appendix. In the morning peak between 7:30 AM and 7:45 AM, average vehicle delay was observed to be approximately 19 seconds per vehicle. In the afternoon peak between 3:45 PM and 4:00 PM, average vehicle delay was observed to be approximately 24 seconds per vehicle. This observed delay is similar to the *Synchro* results for the AM peak but higher than the *Synchro* results for the PM peak. However, it should be noted that only the peak 15-minute period was observed rather than the entire peak hour.

City Planning Discussion

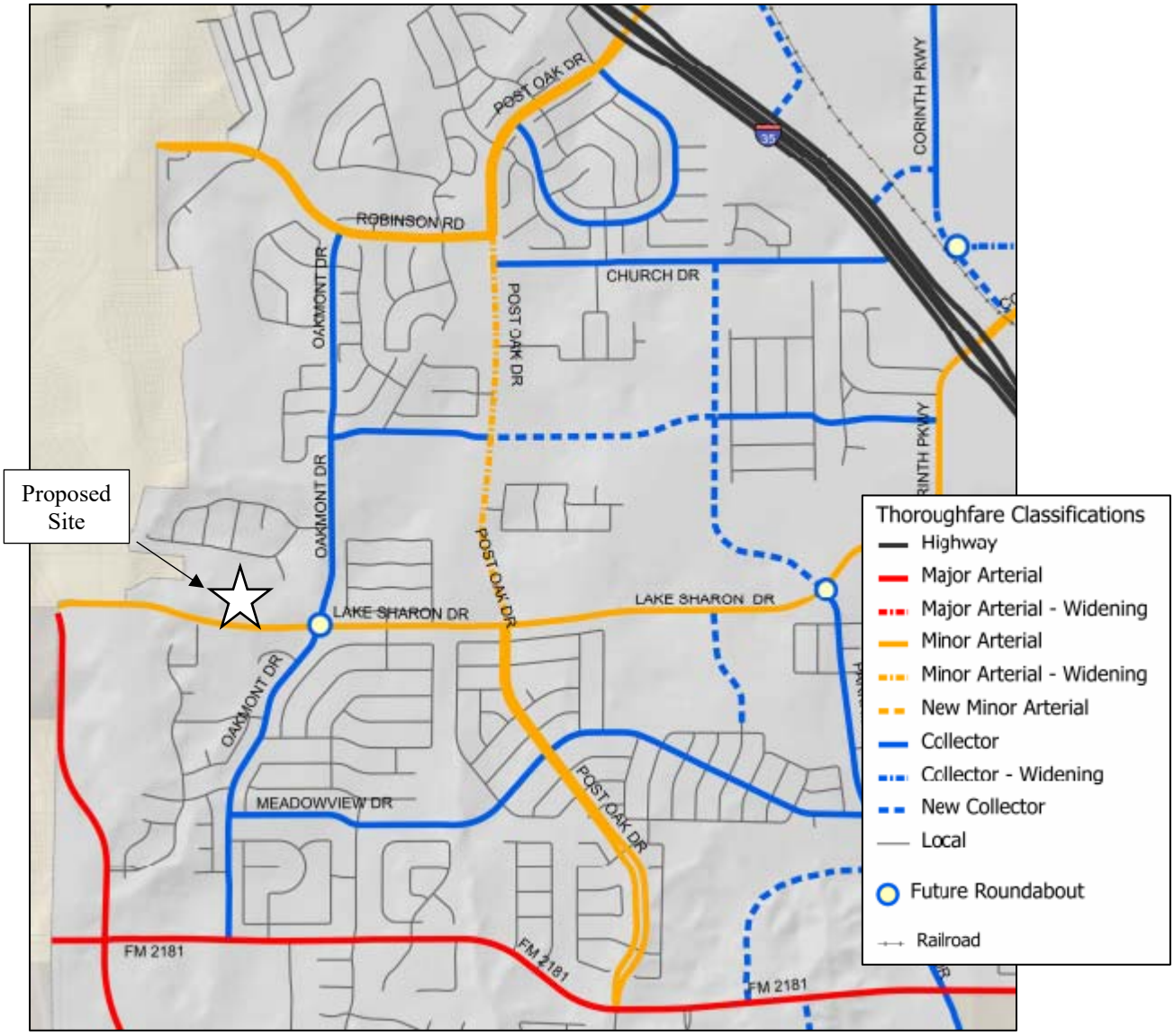
Several City planning documents were reviewed to identify any plans or impacts in the vicinity of the site. As previously stated, the City of Corinth *Master Thoroughfare Plan* (dated March 30, 2021) classifies the study roadways in the following manner:

- Lake Sharon Drive is classified as a Minor Arterial
- Oakmont Drive is classified as a Collector

- Creekside Drive is classified as a Collector.
- The intersection of Lake Sharon Drive and Oakmont Drive is planned as a future roundabout.

A portion of the City thoroughfare plan is shown in **Figure 23** for the area in the vicinity of the proposed site.

Figure 23. Thoroughfare Plan Clip



Source: https://www.cityofcorinth.com/sites/default/files/fileattachments/planning_amp_development/page/2281/master_thoroughfare_plan_layout_3_30_2021.pdf

As shown, several traffic improvements are planned in the vicinity of the site, in addition to the future roundabout. Post Oak Drive is an existing parallel route to Oakmont Drive and is classified as a Minor Arterial. Post Oak Drive is planned to be widened in the future, which will provide additional north-south capacity. The portion of Post Oak Drive between Robinson Road and Lake Sharon Drive is currently a two-lane undivided roadway. Post Oak Drive is a four-lane divided roadway with a 36-foot wide median both south of Lake Sharon Drive and north of Robinson Road.

In addition, Creekside Drive is planned to be extended to the east in the future to tie in to Silver Meadow Lane. This extension will provide additional east-west capacity, especially for school traffic. Finally, Parkridge Drive is planned to be extended north to Church Drive, which will provide additional north-south capacity. Several potential roadway options for this area are illustrated in the City of Corinth *2040 Comprehensive Plan*. Based on the City of Corinth online capital improvement project list, a preliminary alignment for the extension of Parkridge Drive is being reviewed.

Based on the online list of capital improvement projects for the City, Lake Sharon Drive and Dobbs Road are under design to be realigned and provide an underpass at IH-35, which will allow easier access between Lake Sharon Drive and IH-35. This will also provide additional east-west connectivity across the freeway.

Relatively recent improvements in the study area include the extension of Lake Sharon Drive from Oakmont Drive to FM 2499/Barrel Strap Road, which has just recently opened. In addition, FM 2499/Barrel Strap Road was extended from FM 2181 to IH-35 within the previous five years, providing a significant north-south route just west of the proposed site. Barrel Strap Road is a six-lane divided Major Arterial.

Based on the City of Corinth *Future Land Use* map (dated January 20, 2021), much of the undeveloped land in the vicinity of the site is anticipated to be developed as 'Mixed-Residential'. Based on the *2040 Comprehensive Plan,* this land use is anticipated to include a range of single-family lots, multifamily lots, and neighborhood commercial, with an overall residential density of 6 to 10 units per acre. However, based on the thoroughfare plan, it appears that plans are already in place within the City to accommodate traffic generated by this future development.

Based on the location of undeveloped parcels, close vicinity of FM 2499/Barrel Strap Road, and planned widening of Post Oak Road, it does not appear likely that significantly higher traffic would occur on Oakmont Drive.

Higher volumes are likely to occur on Lake Sharon Drive; however, many of these trips will be oriented to IH-35 and not impact the proposed site. In addition, the extension of Creekside Drive to the east will provide additional capacity for future developments.

Overall, the existing and planned roadway network is anticipated to fully accommodate the site traffic volumes generated by the proposed Avilla Fairways development.

CONCLUSIONS AND RECOMMENDATIONS

The proposed Avilla Fairways site will be located on the northwest corner of the intersection of Lake Sharon Drive and Oakmont Drive in Corinth, Texas. Based on the analysis of the site plan and proposed characteristics of the proposed Avilla Fairways, the following conclusions and recommendations can be made:

- The proposed multifamily is estimated to be built-out by 2023. Based on the preliminary site plan, site access points will include two (2) full-access driveways on Lake Sharon Drive and one (1) full-access driveway on Oakmont Drive. One of the access points on Lake Sharon Drive is the proposed extension of Rye Road from the neighborhood to the north, which will provide that neighborhood with a second access point.
- Additional scenarios analyzed included:
    - Alternative 1 – only the two driveways on Lake Sharon Drive, with no access to Oakmont Drive.
    - Alternative 2 – all three access points included, but Rye Road is assumed to operate as a one-way (outbound) roadway.
- Based on ITE trip generation information, the Avilla Fairways is predicted to generate approximately 1,586 trips in a daily basis, including approximately 99 trips during the AM peak hour and approximately 117 trips during the PM peak hour.
- Development allowable under the existing zoning for the site could generate significantly more traffic than the proposed Avilla Fairways development. Estimates of different land use possibilities indicate that the site could generate up to 8,195 trips on a daily basis, up to 979 trips in the AM peak hour, and up to 517 trips in the PM peak hour, depending on land use. Thus, the proposed development is a significantly less intense traffic generator than could be allowed under existing zoning.
- The collected traffic volumes were adjusted by a factor of 1.09 during the AM peak hour and 1.17 during the PM peak hour to account for the COVID-19 pandemic. Background (non-site) traffic volumes for the study area intersections and roadways were estimated by growing the adjusted existing traffic volumes at an annual rate of four percent (4%) until the Build-Out Year (2023).

Intersection Capacity Analysis

The existing study intersections analyzed include:

- Oakmont Drive at Lake Sharon Drive;
- Oakmont Drive at Ardglass Trail; and
- Oakmont Drive at Creekside Drive.

The results of the intersection capacity analysis are described in the following section.

Existing (2021) Conditions

- All three study intersections are predicted to operate at acceptable levels of service for existing conditions.

Build-Out Year (2023) Background Conditions

- The intersection of Oakmont Drive and Lake Sharon Drive is predicted to begin to operate at LOS D overall during the AM peak hour, with the northbound approach operating at LOS E. The predicted volume to capacity ratio for the northbound approach is 0.83 during the AM peak hour.
- If a northbound right-turn lane were installed on Oakmont Drive at Lake Sharon Drive, all approaches would be predicted to operate at acceptable levels of service.
- Furthermore, installation of a roundabout is anticipated at this intersection in the future, based on the City of Corinth *Master Thoroughfare Plan*. Based on the preliminary roundabout design shown in the site plan (Figure 2), this intersection is predicted to operate at LOS A as a single-lane roundabout.

Build-Out Year (2023) Total Conditions

- The existing study intersections are predicted to operate similar to 2023 background conditions with the addition of site traffic volumes for Build-Out of the development, with some minimal delay added to most approaches. This is true for all three site access scenarios, with relatively minor differences between scenarios.
- The proposed site driveways are predicted to operate at acceptable levels of service for all three access scenarios, with relatively minor differences between scenarios as well.
- In general, the access shown in the proposed site plan results in the least amount of average delay and the shortest queue lengths for most movements. However, all three site access options are predicted to operate at acceptable levels of service with minimal impact on the surrounding roadway network.
- It is recommended to consider providing the greatest amount of site access, as shown in the proposed site plan. With three full-access site driveways, predicted volumes at the intersection of Lake Sharon Drive and Oakmont Drive will be minimized. Three access points also provides the greatest safety benefit in terms of fire access.

<u>Access Management</u>

- Based on the projected traffic volumes, installation of a right-turn deceleration lane is not recommended at any of the site driveways for any of the access options.
- Based on the preliminary site plan (Figure 2), an eastbound left turn lane is proposed on Lake Sharon Drive at the Rye Road extension. The proposed left turn lane appears to include approximately 100 feet of storage, which should fully accommodate anticipated queues.
- If feasible, it is recommended to install an eastbound left turn lane on Lake Sharon Drive at the West Driveway as well, as this driveway is proposed to be located at an existing

median opening on a divided roadway and was included in all three site access scenarios.

  - If the culvert crossing precludes construction of an eastbound left-turn lane, consideration should be given to making the western driveway right-in/right-out and lengthening the storage at the Rye Road access point.

- A northbound left turn lane is not recommended on Oakmont Drive at East Driveway based on both traffic volumes and lane usage during school peak periods.
- Comparison of the field measurements of the available sight distance and the recommended sight distance indicates that adequate sight distance is provided for passenger cars at proposed site access points on Lake Sharon Drive based on conditions at the time of the site visit and the posted speed limits.
- However, sight distance from the East Driveway on Oakmont Drive is less than desired looking to the right due to the horizontal curvature of Oakmont Drive and vegetation.
  - With development of the site, is recommended to remove all vegetation along the west edge of Oakmont Drive within the sight triangle south of East Driveway.
- The proposed driveway spacing for the site exceeds TxDOT requirements.

School Operation

- Hawk Elementary School is located approximately 1,000 feet north of the site on the southeast corner of the intersection of Oakmont Drive and Creekside Drive. Additionally, Crownover Middle School is located on the east side of the elementary school south of Creekside Drive. The proposed site is located within the attendance boundary for both schools.
- Sidewalks are currently available along both sides of Oakmont Drive for pedestrians walking to the schools. There are also marked crosswalks at the multiway stop-controlled intersection of Oakmont Drive and Creekside Drive.
- Field observations indicate that northbound vehicle queues on Oakmont Drive extend approximately 1,500 feet south of the entrance to the school pick-up line during the afternoon pick-up period. This queue length extends beyond both Ardglass Trail and the proposed East Driveway.
  - Field observations indicate that the queue length is reduced by approximately fifty percent shortly after pick-up operations begin.
  - Oakmont Drive is approximately 36 feet wide, which appears to allow enough room for through vehicles to bypass the vehicle queue. Vehicles appear to queue along the right-hand curb.
- A delay study conducted for the eastbound approach of Ardglass Trail showed similar delay results compared to the *Synchro* intersection analysis during the AM peak. PM peak delay was observed to be higher than shown in *Synchro*. However, only the peak 15-minute period was observed.

City Planning Discussion

- Relatively recent roadway improvements in the vicinity of the site include the extension of Lake Sharon Drive to FM 2499 and the extension of FM 2499/Barrel Strap Road from FM 281 to IH-35.
- Based on the City *Master Thoroughfare Plan*, *2040 Comprehensive Plan,* and online list of capital improvement projects, several roadway improvements are anticipated in the vicinity of the site in the future:
    - Installation of a roundabout at the intersection of Oakmont Drive and Lake Sharon Drive.
    - Widening of Post Oak Drive between Lake Sharon Drive and Robinson Road to a four-lane divided roadway, providing additional north-south capacity.
    - Extension of Creekside Drive from Post Oak Road to tie into Silver Meadow Lane, providing additional east-west capacity.
    - Extension of Parkridge Drive from Lake Sharon Drive to Church Drive, providing additional north-south capacity.
    - Realignment of Lake Sharon Drive and Dobbs Road with installation of an underpass at IH-35, providing additional east-west connectivity and access to IH-35.
- Based on these planned improvements, it appears that additional infrastructure is being planned for to accommodate future development of vacant parcels.
- Based on the location of undeveloped parcels and adjacent north-south roadway capacity, it is likely traffic volumes on Oakmont Drive will not significantly increase in the future.
- While traffic will likely increase on Lake Sharon Drive, additional capacity will be provided by the extension of Creekside Drive and much of the future traffic will be oriented towards IH-35.
- Overall, the existing and planned roadway network is anticipated to fully accommodate the site traffic volumes generated by the proposed Avilla Fairways development.

APPENDIX

Appendix A: Preliminary Site Plan

Appendix B: Raw Traffic Count Data

Appendix C: Trip Generation Calculations for Existing Zoning

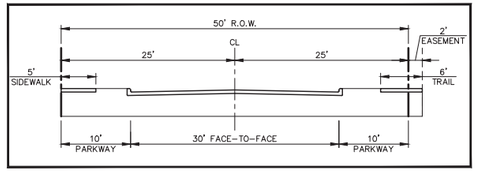
Appendix D: *Synchro* Output Sheets

Appendix E: *SIDRA* Output Sheets

Appendix F: Delay Study

Appendix A:
Preliminary Site Plan

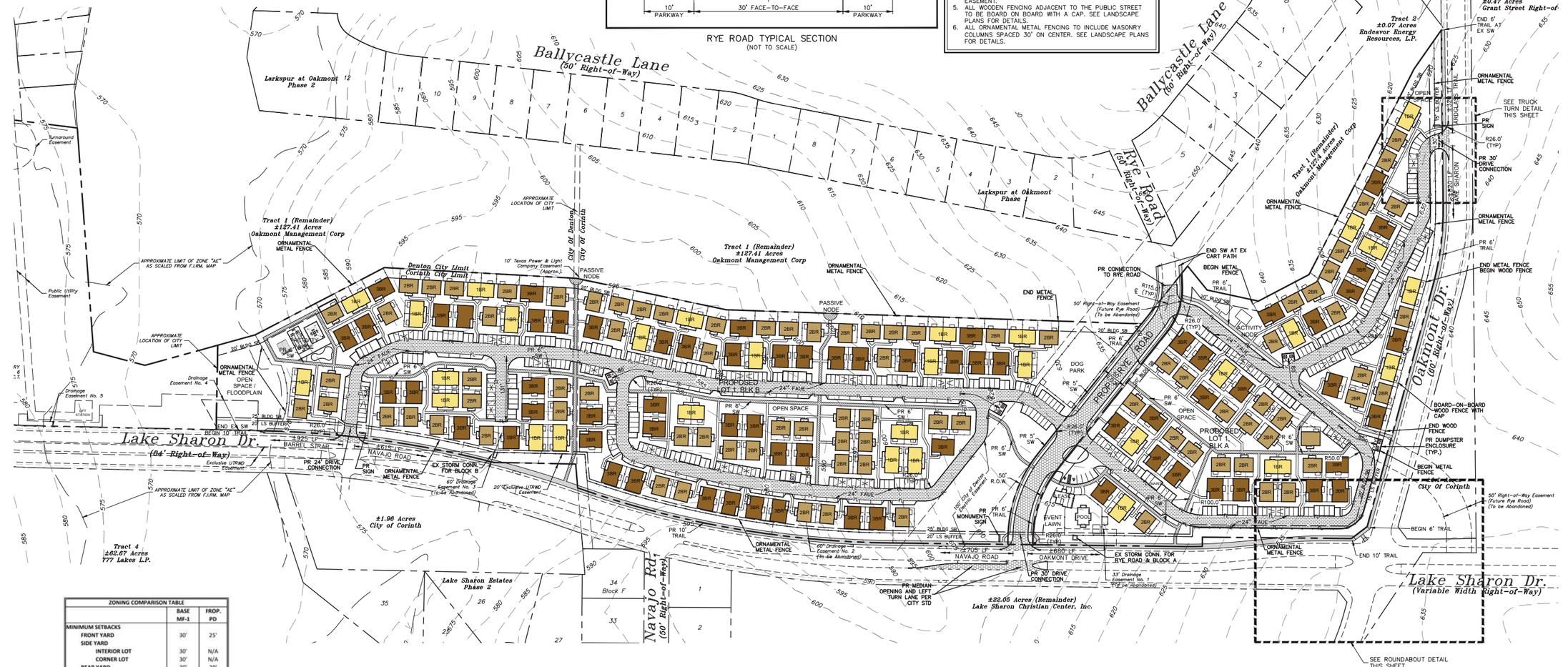
2-17-21 (REV) PD CONCEPT PLAN to show increased 25' setbacks instead of 20'
Also see 2-10-21 PD CONCEPT PLAN with Staff Comments



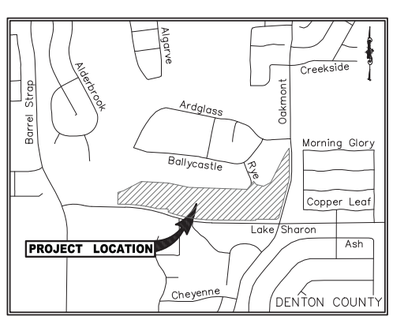
RYE ROAD TYPICAL SECTION
(NOT TO SCALE)

CONCEPT PLAN NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. ALL FINAL ROAD ALIGNMENTS, EASEMENTS, BUILDING LOCATIONS, AMENITIES TO BE DETERMINED AT THE SITE PLAN PROCESS.
3. ALL STANDARD PARKING SPACES TO BE 9'X18' AND ALL PARALLEL PARKING SPACES TO BE 8'X22'.
4. ALL PUBLIC TRAIL/SIDEWALKS LOCATED ON PRIVATE PROPERTY TO BE LOCATED IN A PEDESTRIAN ACCESS EASEMENT.
5. ALL WOODEN FENCING ADJACENT TO THE PUBLIC STREET TO BE BOARD ON BOARD WITH A CAP. SEE LANDSCAPE PLANS FOR DETAILS.
6. ALL ORNAMENTAL METAL FENCING TO INCLUDE MASONRY COLUMNS SPACED 30' ON CENTER. SEE LANDSCAPE PLANS FOR DETAILS.



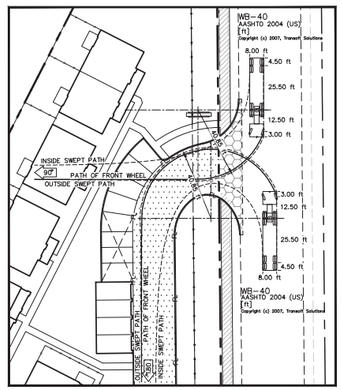
ZONING COMPARISON TABLE	BASE MF-1	PROP. PD
MINIMUM SETBACKS		
FRONT YARD	30'	25'
SIDE YARD		
INTERIOR LOT	30'	N/A
CORNER LOT	30'	N/A
REAR YARD	30'	20'
GARAGE	N/A	N/A
MINIMUM LOT DIMENSIONS		
LOT AREA (SF)	40,000	40,000
LOT WIDTH	200'	200'
LOT DEPTH	200'	200'
DENSITY (MAX, DU/A)	12	9
MINIMUM FLOOR AREA (SF PER DU)	1,050	680
MAX. BUILDING HT. (FT/STORIES)	35' / 2	30' / 1
MAX. BUILDING AREA (TOTAL)	40%	23%



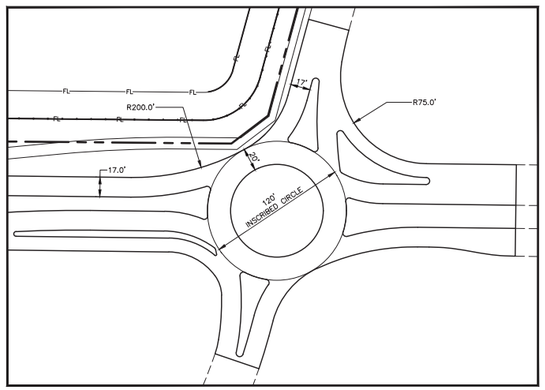
VICINITY MAP
(NOT TO SCALE)

SITE DATA SUMMARY TABLE				
EXISTING ZONING/USE:	PD-6, PD-24 / VACANT			
PROPOSED ZONING:	PD W/MF-1 BASE ZOBING			
PROPOSED USE:	RESIDENTIAL COTTAGE COMMUNITY			
NUMBER OF LOTS:	2 (EXISTING); 2 (PROPOSED)			
LOT COVERAGE:	22.8%			
LOT AREA:	AC.		SQ. FT.	
GROSS AREA	24.595		1071,370	
ROW DEDICATION	0.698		30,389	
NET AREA	23.898		1040,981	
DENSITY:	9.00	UNITS / ACRE (w/o ROW Ded.)		
PROPOSED BUILDINGS (1 STORY):	AREA	NO. BLDGS	NO. UNITS	TOTAL
1-BEDROOM (DUPLEX)	1,342	30	60	40,260
2-BEDROOM	1,022	87	87	88,914
3-BEDROOM	1,307	68	68	88,876
STANDARD GARAGE, DETACHED*	831	20	-	16,620
STANDARD GARAGE W/HANDICAP, DETACHED	682	3	-	2,046
LEASING CENTER	1,131	1	-	1,131
TOTALS:		209	215	237,847
PARKING REQUIRED:	UNITS	REQUIRED		PROPOSED
1 BEDROOM (2 SPACES REQ'D; 2 SPACES PROP.)	60	120		120
2 BEDROOM (3 SPACES REQ'D; 2 SPACES PROP.)	87	261		174
3 BEDROOM (4 SPACES REQ'D; 2 SPACES PROP.)	68	272		136
TOTALS:	215	653		430
PARKING PROVIDED:	PROVIDED			
STANDARD SPACES	234			
CARPORT SPACES	144			
HANDICAP SPACES	3			
STANDARD GARAGE SPACES	87			
HANDICAP GARAGE SPACES	3			
TOTALS:	471			
GARAGE SPACES PER UNIT:	41.9%			
OPEN SPACE AREA:	180,105	17.4%		(SF, %)
LANDSCAPE AREA:	500,332	48.0%		(SF, %)
IMPERVIOUS AREA:	540,349	52.0%		(SF, %)
LOADING SPACE:	NOT REQUIRED			
OUTSIDE STORAGE:	NONE PROPOSED			
CONSTRUCTION DATES:	Q1 2021 - Q3 2021			

* ONE STANDARD GARAGE WILL USE TWO OF FOUR BAYS FOR ON-SITE MAINTENANCE PURPOSES



TRUCK TURN DETAIL
(NOT TO SCALE)



FUTURE ROUNDABOUT DETAIL
(NOT TO SCALE)

LEGEND

- PROPOSED METAL FENCE
- PROPOSED WOOD FENCE
- PROPOSED FIRELANE (PRIVATE PAVEMENT)
- PROPOSED ROADWAY (PUBLIC PAVEMENT)
- PROPOSED PUBLIC TRAIL/SIDEWALK
- PROPOSED PRIVATE TRAIL/SIDEWALK

GRAPHIC SCALE
100 0 50 100
(IN FEET)
1 inch = 100 ft.

OWNER/DEVELOPER:
NexMetro Communities
6688 N. Central Epressway, Suite 275
Dallas, Texas 75206
Tel. No. (602) 559-9388
Contact: Jason Flory, P.E.

ENGINEER:
Lincoln Consulting & Engineering, Inc.
P.O. Box 1176
Wylie, Texas 75298
Tel. No. (214) 215-5066
Contact: Joshua A. Lincoln, P.E.

PD CONCEPT PLAN
AVILLA FAIRWAYS
LAKE SHARON @ OAKMONT
24.595 ACRE TRACT OF LAND
BERRY MERCHANT SURVEY, ABSTRACT NO. 800
A.H. SERREN SURVEY, ABSTRACT NO. 1198
CITY OF CORINTH, DENTON COUNTY, TEXAS
FEBRUARY 10, 2021

REV.	DATE	REMARKS	BY

LCE | LINCOL CONSULTING & ENGINEERING
P.O. Box 1176
Wylie, Texas 75298
phone (214) 215
Josh@LincolnCE

PRELIMINARY
FOR REVIEW ONLY
NOT FOR CONSTRUCTION
LINCOLN CONSULTING & ENGINEERING Firm No. 7228
Engineer: JOSHUA A. LINCOLN, P.E.
P.E. No. 114389 Date: 2/17/2021

AVILLA FAIRWAYS - City of Corinth, Texas - LC&E PROJECT N

PD CONCEPT PLAN

Scale:	1" = 100'
Designed by:	JAL
Drawn by:	JAL
Checked by:	JAL
Date:	February 17, 2021
Project No.	1015-003

CP

FILE: C:\Users\Eric\Lincoln Consulting & Engineering\Joshua Lincoln - Projects\15-003_Corinth-Avilla Fairways\z_Auto\CAD\15-003 Concept Plan.dwg
USER: Eric DATE/TIME: Feb 17, 2021 - 10:32pm

Appendix B:
Raw Traffic Count Data

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ LAKE SHARON DR
Site Code:
Start Date: 04/13/2021
Page No: 1

Turning Movement Data

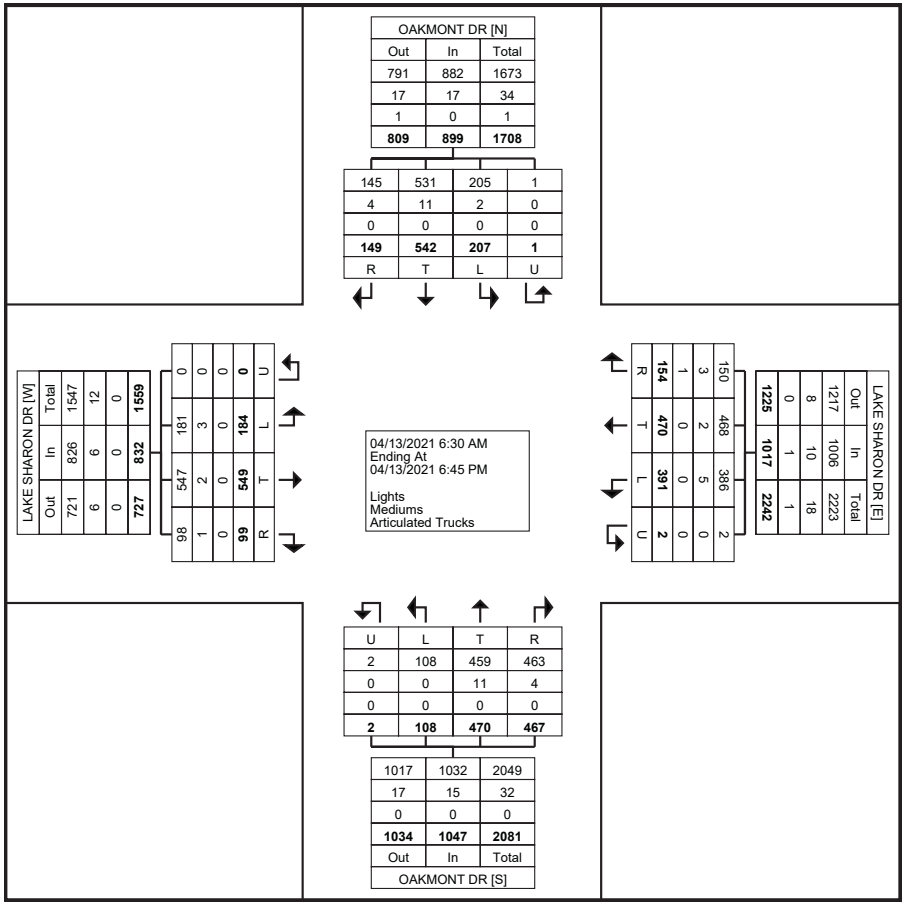
Start Time	OAKMONT DR Southbound					LAKE SHARON DR Westbound					OAKMONT DR Northbound					LAKE SHARON DR Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
6:30 AM	0	5	0	0	5	8	11	2	0	21	3	4	7	0	14	0	8	2	0	10	50
6:45 AM	5	6	2	0	13	16	2	1	0	19	5	6	10	0	21	2	10	1	0	13	66
Hourly Total	5	11	2	0	18	24	13	3	0	40	8	10	17	0	35	2	18	3	0	23	116
7:00 AM	7	9	4	0	20	12	15	5	0	32	5	13	6	0	24	7	14	0	0	21	97
7:15 AM	11	17	4	0	32	12	12	14	0	38	3	21	16	0	40	8	19	1	0	28	138
7:30 AM	28	45	11	0	84	21	15	32	0	68	5	65	13	1	84	17	27	2	0	46	282
7:45 AM	30	64	20	1	115	26	20	13	1	60	2	42	29	1	74	13	44	4	0	61	310
Hourly Total	76	135	39	1	251	71	62	64	1	198	15	141	64	2	222	45	104	7	0	156	827
8:00 AM	8	50	10	0	68	25	36	6	0	67	1	36	11	0	48	10	19	7	0	36	219
8:15 AM	6	24	8	0	38	19	8	5	0	32	6	10	8	0	24	4	30	0	0	34	128
8:30 AM	6	13	2	0	21	28	21	5	0	54	3	10	19	0	32	5	15	3	0	23	130
8:45 AM	1	11	2	0	14	15	11	0	0	26	3	10	11	0	24	4	15	5	0	24	88
Hourly Total	21	98	22	0	141	87	76	16	0	179	13	66	49	0	128	23	79	15	0	117	565
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	24	54	12	0	90	12	13	7	0	32	4	20	19	0	43	3	17	4	0	24	189
3:15 PM	5	14	6	0	25	13	19	7	0	39	2	23	24	0	49	12	19	6	0	37	150
3:30 PM	6	16	7	0	29	12	18	6	1	37	9	28	25	0	62	12	30	4	0	46	174
3:45 PM	12	62	18	0	92	28	43	8	0	79	4	23	28	0	55	6	25	8	0	39	265
Hourly Total	47	146	43	0	236	65	93	28	1	187	19	94	96	0	209	33	91	22	0	146	778
4:00 PM	6	25	9	0	40	15	25	4	0	44	4	21	26	0	51	10	25	5	0	40	175
4:15 PM	9	19	4	0	32	17	21	7	0	45	2	19	24	0	45	12	29	3	0	44	166
4:30 PM	4	15	6	0	25	19	20	2	0	41	4	27	23	0	54	13	28	7	0	48	168
4:45 PM	7	10	4	0	21	9	21	8	0	38	2	17	33	0	52	7	38	8	0	53	164
Hourly Total	26	69	23	0	118	60	87	21	0	168	12	84	106	0	202	42	120	23	0	185	673
5:00 PM	6	17	8	0	31	19	21	5	0	45	5	15	30	0	50	9	18	7	0	34	160
5:15 PM	8	14	1	0	23	17	22	4	0	43	8	20	23	0	51	11	36	5	0	52	169
5:30 PM	5	17	5	0	27	15	27	5	0	47	11	10	36	0	57	7	24	4	0	35	166
5:45 PM	3	17	3	0	23	13	25	3	0	41	6	11	24	0	41	5	18	7	0	30	135
Hourly Total	22	65	17	0	104	64	95	17	0	176	30	56	113	0	199	32	96	23	0	151	630
6:00 PM	6	9	2	0	17	7	29	3	0	39	4	8	12	0	24	3	23	2	0	28	108
6:15 PM	4	9	1	0	14	13	15	2	0	30	7	11	10	0	28	4	18	4	0	26	98
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	207	542	149	1	899	391	470	154	2	1017	108	470	467	2	1047	184	549	99	0	832	3795
Approach %	23.0	60.3	16.6	0.1	-	38.4	46.2	15.1	0.2	-	10.3	44.9	44.6	0.2	-	22.1	66.0	11.9	0.0	-	-
Total %	5.5	14.3	3.9	0.0	23.7	10.3	12.4	4.1	0.1	26.8	2.8	12.4	12.3	0.1	27.6	4.8	14.5	2.6	0.0	21.9	-
Lights	205	531	145	1	882	386	468	150	2	1006	108	459	463	2	1032	181	547	98	0	826	3746
% Lights	99.0	98.0	97.3	100.0	98.1	98.7	99.6	97.4	100.0	98.9	100.0	97.7	99.1	100.0	98.6	98.4	99.6	99.0	-	99.3	98.7
Mediums	2	11	4	0	17	5	2	3	0	10	0	11	4	0	15	3	2	1	0	6	48
% Mediums	1.0	2.0	2.7	0.0	1.9	1.3	0.4	1.9	0.0	1.0	0.0	2.3	0.9	0.0	1.4	1.6	0.4	1.0	-	0.7	1.3

Articulated Trucks	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ LAKE SHARON DR
Site Code:
Start Date: 04/13/2021
Page No: 3



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ LAKE SHARON DR
Site Code:
Start Date: 04/13/2021
Page No: 4

Turning Movement Peak Hour Data (7:15 AM)

Start Time	OAKMONT DR Southbound					LAKE SHARON DR Westbound					OAKMONT DR Northbound					LAKE SHARON DR Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:15 AM	11	17	4	0	32	12	12	14	0	38	3	21	16	0	40	8	19	1	0	28	138
7:30 AM	28	45	11	0	84	21	15	32	0	68	5	65	13	1	84	17	27	2	0	46	282
7:45 AM	30	64	20	1	115	26	20	13	1	60	2	42	29	1	74	13	44	4	0	61	310
8:00 AM	8	50	10	0	68	25	36	6	0	67	1	36	11	0	48	10	19	7	0	36	219
Total	77	176	45	1	299	84	83	65	1	233	11	164	69	2	246	48	109	14	0	171	949
Approach %	25.8	58.9	15.1	0.3	-	36.1	35.6	27.9	0.4	-	4.5	66.7	28.0	0.8	-	28.1	63.7	8.2	0.0	-	-
Total %	8.1	18.5	4.7	0.1	31.5	8.9	8.7	6.8	0.1	24.6	1.2	17.3	7.3	0.2	25.9	5.1	11.5	1.5	0.0	18.0	-
PHF	0.642	0.688	0.563	0.250	0.650	0.808	0.576	0.508	0.250	0.857	0.550	0.631	0.595	0.500	0.732	0.706	0.619	0.500	0.000	0.701	0.765
Lights	76	171	45	1	293	83	83	65	1	232	11	160	68	2	241	46	109	14	0	169	935
% Lights	98.7	97.2	100.0	100.0	98.0	98.8	100.0	100.0	100.0	99.6	100.0	97.6	98.6	100.0	98.0	95.8	100.0	100.0	-	98.8	98.5
Mediums	1	5	0	0	6	1	0	0	0	1	0	4	1	0	5	2	0	0	0	2	14
% Mediums	1.3	2.8	0.0	0.0	2.0	1.2	0.0	0.0	0.0	0.4	0.0	2.4	1.4	0.0	2.0	4.2	0.0	0.0	-	1.2	1.5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0

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Count Name: OAKMONT DR @ LAKE SHARON DR
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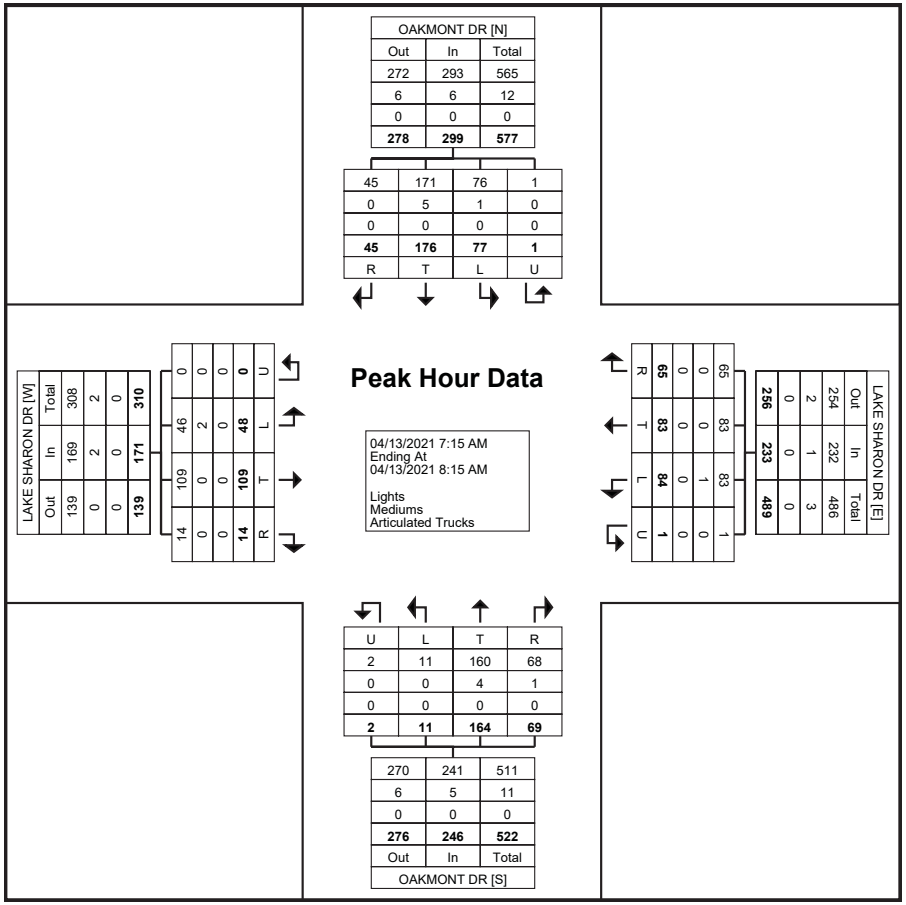


Turning Movement Peak Hour Data Plot (7:15 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ LAKE SHARON DR
Site Code:
Start Date: 04/13/2021
Page No: 6

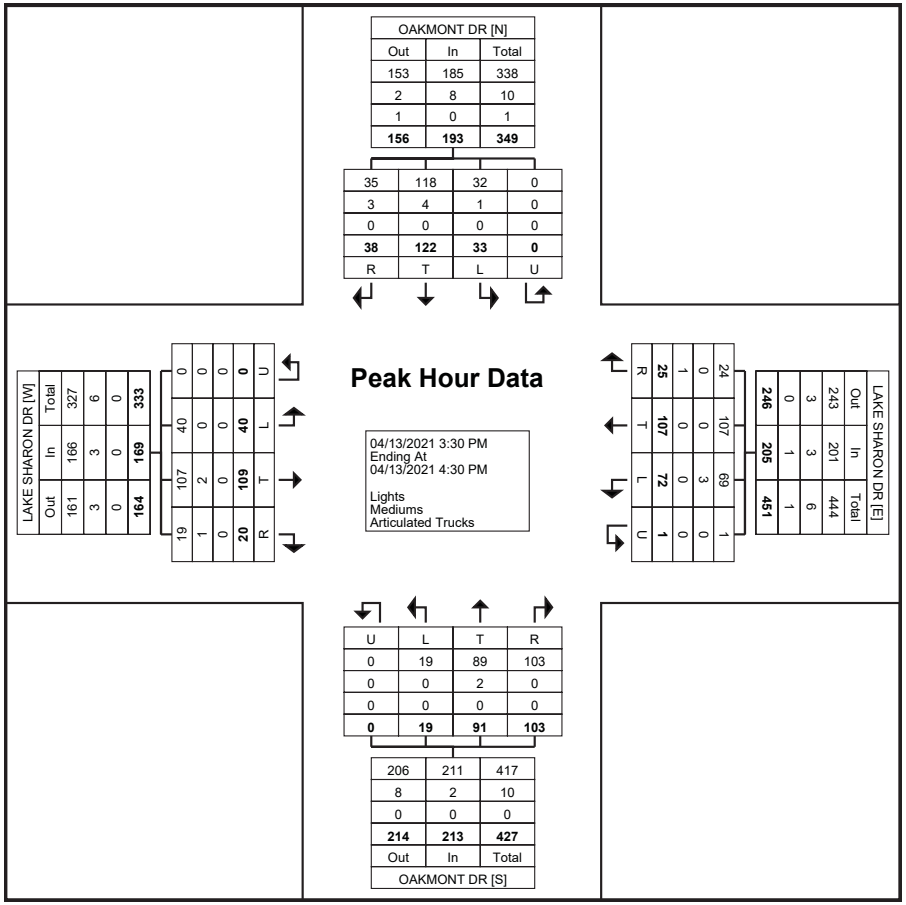
Turning Movement Peak Hour Data (3:30 PM)

Start Time	OAKMONT DR Southbound					LAKE SHARON DR Westbound					OAKMONT DR Northbound					LAKE SHARON DR Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
3:30 PM	6	16	7	0	29	12	18	6	1	37	9	28	25	0	62	12	30	4	0	46	174
3:45 PM	12	62	18	0	92	28	43	8	0	79	4	23	28	0	55	6	25	8	0	39	265
4:00 PM	6	25	9	0	40	15	25	4	0	44	4	21	26	0	51	10	25	5	0	40	175
4:15 PM	9	19	4	0	32	17	21	7	0	45	2	19	24	0	45	12	29	3	0	44	166
Total	33	122	38	0	193	72	107	25	1	205	19	91	103	0	213	40	109	20	0	169	780
Approach %	17.1	63.2	19.7	0.0	-	35.1	52.2	12.2	0.5	-	8.9	42.7	48.4	0.0	-	23.7	64.5	11.8	0.0	-	-
Total %	4.2	15.6	4.9	0.0	24.7	9.2	13.7	3.2	0.1	26.3	2.4	11.7	13.2	0.0	27.3	5.1	14.0	2.6	0.0	21.7	-
PHF	0.688	0.492	0.528	0.000	0.524	0.643	0.622	0.781	0.250	0.649	0.528	0.813	0.920	0.000	0.859	0.833	0.908	0.625	0.000	0.918	0.736
Lights	32	118	35	0	185	69	107	24	1	201	19	89	103	0	211	40	107	19	0	166	763
% Lights	97.0	96.7	92.1	-	95.9	95.8	100.0	96.0	100.0	98.0	100.0	97.8	100.0	-	99.1	100.0	98.2	95.0	-	98.2	97.8
Mediums	1	4	3	0	8	3	0	0	0	3	0	2	0	0	2	0	2	1	0	3	16
% Mediums	3.0	3.3	7.9	-	4.1	4.2	0.0	0.0	0.0	1.5	0.0	2.2	0.0	-	0.9	0.0	1.8	5.0	-	1.8	2.1
Articulated Trucks	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	4.0	0.0	0.5	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.1

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ LAKE SHARON DR
Site Code:
Start Date: 04/13/2021
Page No: 7



Turning Movement Peak Hour Data Plot (3:30 PM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ ARDGLASS TRL
Site Code:
Start Date: 04/13/2021
Page No: 1

Turning Movement Data

Start Time	OAKMONT DR Southbound					Eastbound St. Westbound					OAKMONT DR Northbound					ARDGLASS TRL Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
6:30 AM	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	3	0	1	0	4	16
6:45 AM	0	9	1	0	10	0	0	0	0	0	1	10	0	0	11	1	0	5	0	6	27
Hourly Total	0	15	1	0	16	0	0	0	0	0	1	16	0	0	17	4	0	6	0	10	43
7:00 AM	0	15	0	0	15	0	0	0	0	0	0	23	0	0	23	8	0	6	0	14	52
7:15 AM	0	29	2	0	31	0	0	0	0	0	3	43	0	0	46	9	0	2	0	11	88
7:30 AM	0	81	12	0	93	0	0	0	0	0	1	115	0	0	116	10	0	5	0	15	224
7:45 AM	0	106	2	0	108	0	0	0	0	0	0	69	0	0	69	6	0	8	0	14	191
Hourly Total	0	231	16	0	247	0	0	0	0	0	4	250	0	0	254	33	0	21	0	54	555
8:00 AM	0	67	3	0	70	0	0	0	0	0	5	45	0	0	50	6	0	1	0	7	127
8:15 AM	0	28	1	0	29	0	0	0	0	0	6	12	0	0	18	2	0	5	0	7	54
8:30 AM	0	17	1	0	18	0	0	0	0	0	4	15	0	0	19	2	0	2	0	4	41
8:45 AM	0	11	1	0	12	0	0	0	0	0	1	13	0	0	14	5	0	3	0	8	34
Hourly Total	0	123	6	0	129	0	0	0	0	0	16	85	0	0	101	15	0	11	0	26	256
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	82	5	0	87	0	0	0	0	0	4	39	0	0	43	6	0	3	0	9	139
3:15 PM	0	22	0	0	22	0	0	0	0	0	7	35	0	0	42	9	0	5	0	14	78
3:30 PM	0	31	8	0	39	0	0	0	0	0	0	44	0	0	44	7	0	3	0	10	93
3:45 PM	0	81	9	0	90	0	0	0	0	0	8	32	0	0	40	6	0	7	0	13	143
Hourly Total	0	216	22	0	238	0	0	0	0	0	19	150	0	0	169	28	0	18	0	46	453
4:00 PM	0	33	8	0	41	0	0	0	0	0	6	28	0	0	34	2	0	4	0	6	81
4:15 PM	0	29	6	0	35	0	0	0	0	0	8	30	0	0	38	2	0	2	0	4	77
4:30 PM	0	22	5	0	27	0	0	0	0	0	6	36	0	0	42	3	0	3	0	6	75
4:45 PM	0	18	1	0	19	0	0	0	0	0	4	28	0	0	32	2	0	5	0	7	58
Hourly Total	0	102	20	0	122	0	0	0	0	0	24	122	0	0	146	9	0	14	0	23	291
5:00 PM	0	24	8	0	32	0	0	0	0	0	4	25	0	0	29	7	0	5	0	12	73
5:15 PM	0	23	5	0	28	0	0	0	0	0	3	31	0	0	34	0	0	2	0	2	64
5:30 PM	0	23	3	0	26	0	0	0	0	0	7	16	0	0	23	3	0	4	0	7	56
5:45 PM	0	20	5	0	25	0	0	0	0	0	4	15	0	0	19	4	0	3	0	7	51
Hourly Total	0	90	21	0	111	0	0	0	0	0	18	87	0	0	105	14	0	14	0	28	244
6:00 PM	0	14	1	0	15	0	0	0	0	0	1	12	0	0	13	2	0	0	0	2	30
6:15 PM	0	15	5	0	20	0	0	0	0	0	1	16	0	0	17	4	0	1	0	5	42
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	806	92	0	898	0	0	0	0	0	84	738	0	0	822	109	0	85	0	194	1914
Approach %	0.0	89.8	10.2	0.0	-	0.0	0.0	0.0	0.0	-	10.2	89.8	0.0	0.0	-	56.2	0.0	43.8	0.0	-	-
Total %	0.0	42.1	4.8	0.0	46.9	0.0	0.0	0.0	0.0	0.0	4.4	38.6	0.0	0.0	42.9	5.7	0.0	4.4	0.0	10.1	-
Lights	0	792	88	0	880	0	0	0	0	0	82	724	0	0	806	106	0	83	0	189	1875
% Lights	-	98.3	95.7	-	98.0	-	-	-	-	-	97.6	98.1	-	-	98.1	97.2	-	97.6	-	97.4	98.0
Mediums	0	14	4	0	18	0	0	0	0	0	2	14	0	0	16	3	0	2	0	5	39
% Mediums	-	1.7	4.3	-	2.0	-	-	-	-	-	2.4	1.9	-	-	1.9	2.8	-	2.4	-	2.6	2.0

Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
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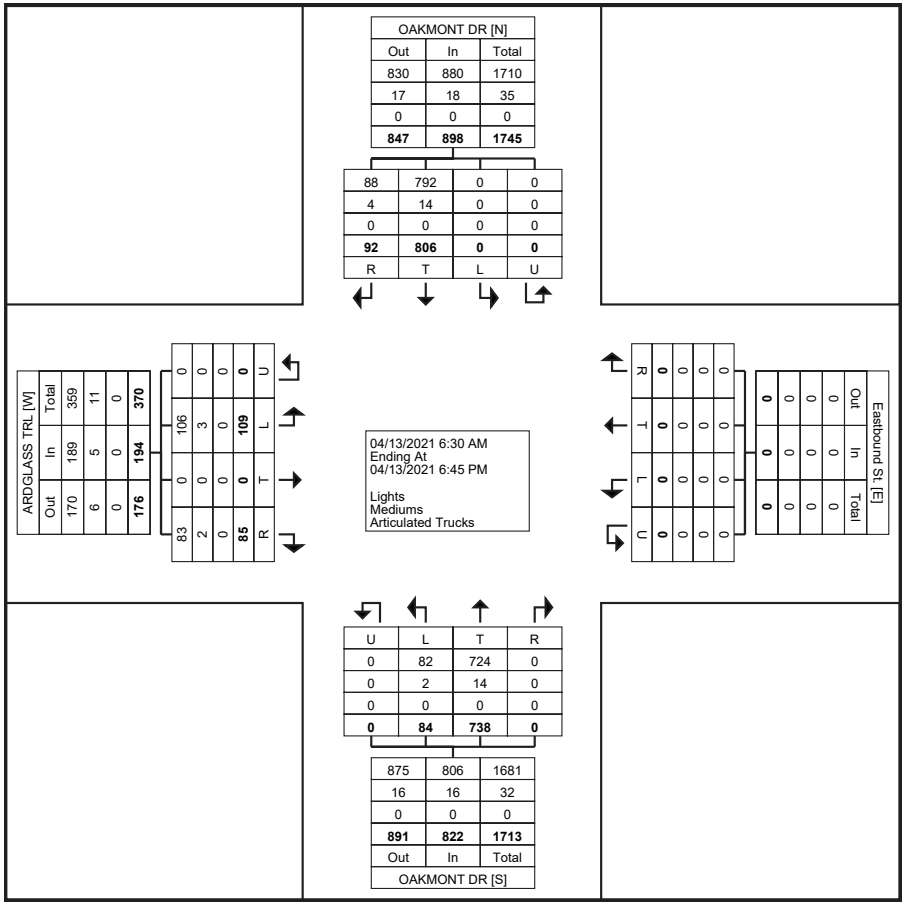
Count Name: OAKMONT DR @ ARDGLASS TRL
Site Code:
Start Date: 04/13/2021
Page No: 3



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ ARDGLASS TRL
Site Code:
Start Date: 04/13/2021

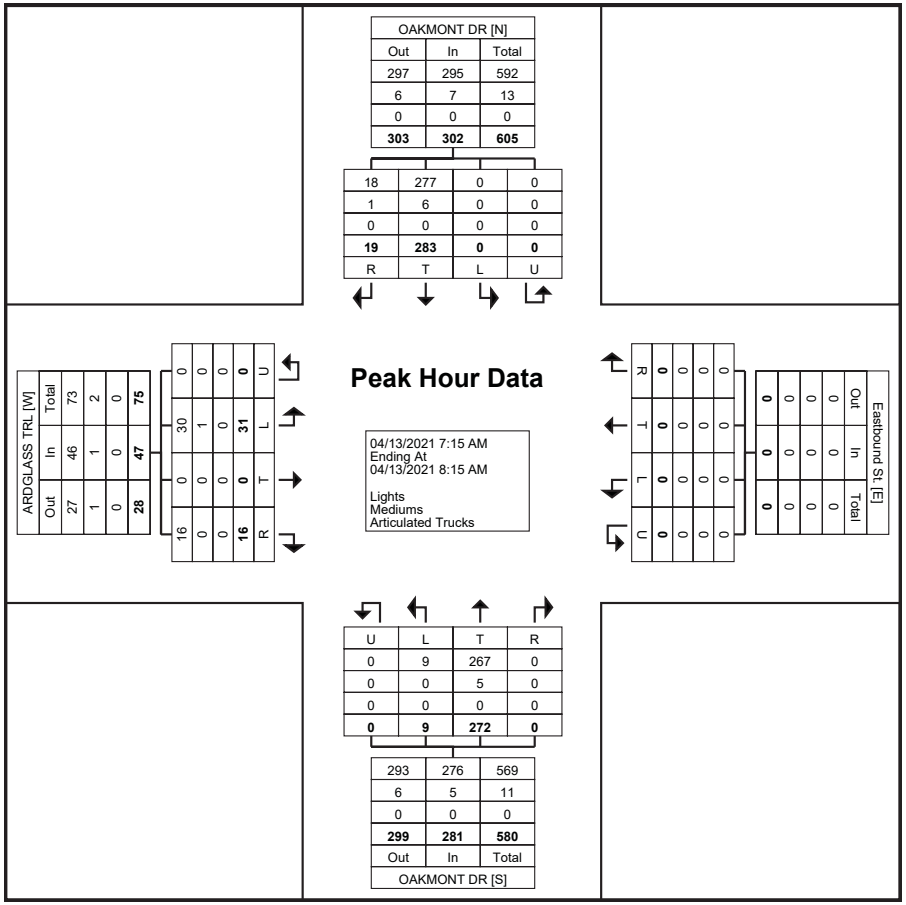
Turning Movement Peak Hour Data (7:15 AM)

Start Time	OAKMONT DR Southbound					Eastbound St. Westbound					OAKMONT DR Northbound					ARDGLASS TRL Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:15 AM	0	29	2	0	31	0	0	0	0	0	3	43	0	0	46	9	0	2	0	11	88
7:30 AM	0	81	12	0	93	0	0	0	0	0	1	115	0	0	116	10	0	5	0	15	224
7:45 AM	0	106	2	0	108	0	0	0	0	0	0	69	0	0	69	6	0	8	0	14	191
8:00 AM	0	67	3	0	70	0	0	0	0	0	5	45	0	0	50	6	0	1	0	7	127
Total	0	283	19	0	302	0	0	0	0	0	9	272	0	0	281	31	0	16	0	47	630
Approach %	0.0	93.7	6.3	0.0	-	0.0	0.0	0.0	0.0	-	3.2	96.8	0.0	0.0	-	66.0	0.0	34.0	0.0	-	-
Total %	0.0	44.9	3.0	0.0	47.9	0.0	0.0	0.0	0.0	0.0	1.4	43.2	0.0	0.0	44.6	4.9	0.0	2.5	0.0	7.5	-
PHF	0.000	0.667	0.396	0.000	0.699	0.000	0.000	0.000	0.000	0.000	0.450	0.591	0.000	0.000	0.606	0.775	0.000	0.500	0.000	0.783	0.703
Lights	0	277	18	0	295	0	0	0	0	0	9	267	0	0	276	30	0	16	0	46	617
% Lights	-	97.9	94.7	-	97.7	-	-	-	-	-	100.0	98.2	-	-	98.2	96.8	-	100.0	-	97.9	97.9
Mediums	0	6	1	0	7	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	13
% Mediums	-	2.1	5.3	-	2.3	-	-	-	-	-	0.0	1.8	-	-	1.8	3.2	-	0.0	-	2.1	2.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ ARDGLASS TRL
Site Code:
Start Date: 04/13/2021
Page No: 5



Turning Movement Peak Hour Data Plot (7:15 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ ARDGLASS TRL
Site Code:
Start Date: 04/13/2021

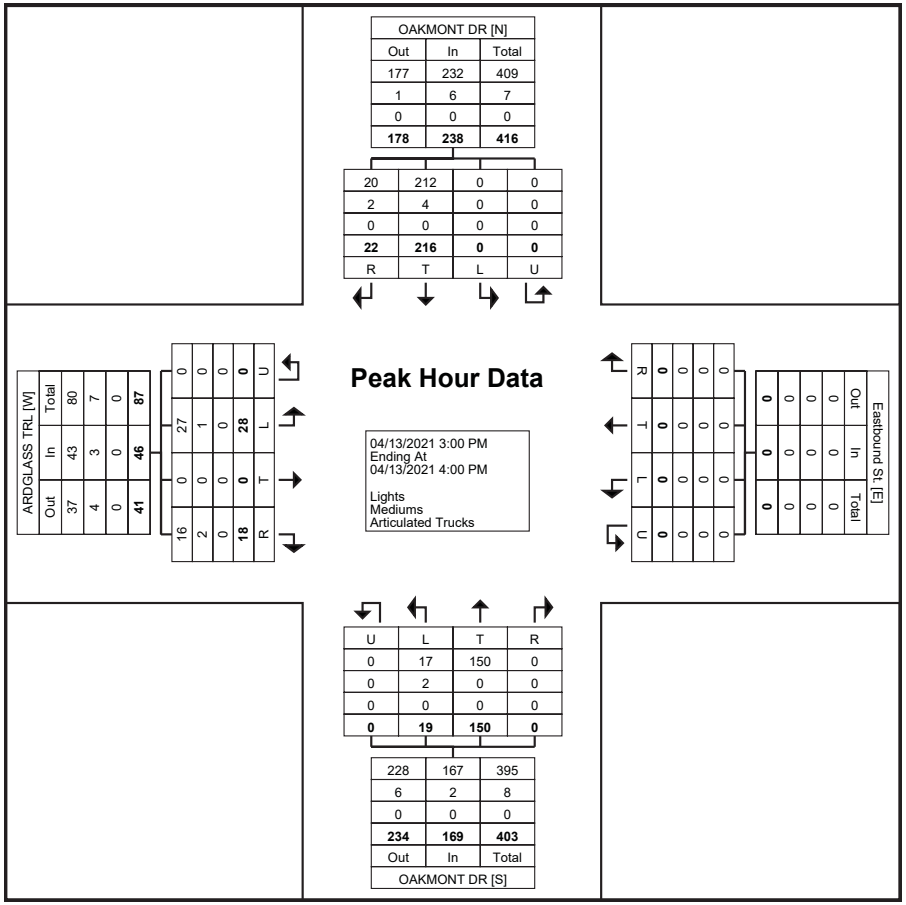
Turning Movement Peak Hour Data (3:00 PM)

Start Time	OAKMONT DR Southbound					Eastbound St. Westbound					OAKMONT DR Northbound					ARDGLASS TRL Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
3:00 PM	0	82	5	0	87	0	0	0	0	0	4	39	0	0	43	6	0	3	0	9	139
3:15 PM	0	22	0	0	22	0	0	0	0	0	7	35	0	0	42	9	0	5	0	14	78
3:30 PM	0	31	8	0	39	0	0	0	0	0	0	44	0	0	44	7	0	3	0	10	93
3:45 PM	0	81	9	0	90	0	0	0	0	0	8	32	0	0	40	6	0	7	0	13	143
Total	0	216	22	0	238	0	0	0	0	0	19	150	0	0	169	28	0	18	0	46	453
Approach %	0.0	90.8	9.2	0.0	-	0.0	0.0	0.0	0.0	-	11.2	88.8	0.0	0.0	-	60.9	0.0	39.1	0.0	-	-
Total %	0.0	47.7	4.9	0.0	52.5	0.0	0.0	0.0	0.0	0.0	4.2	33.1	0.0	0.0	37.3	6.2	0.0	4.0	0.0	10.2	-
PHF	0.000	0.659	0.611	0.000	0.661	0.000	0.000	0.000	0.000	0.000	0.594	0.852	0.000	0.000	0.960	0.778	0.000	0.643	0.000	0.821	0.792
Lights	0	212	20	0	232	0	0	0	0	0	17	150	0	0	167	27	0	16	0	43	442
% Lights	-	98.1	90.9	-	97.5	-	-	-	-	-	89.5	100.0	-	-	98.8	96.4	-	88.9	-	93.5	97.6
Mediums	0	4	2	0	6	0	0	0	0	0	2	0	0	0	2	1	0	2	0	3	11
% Mediums	-	1.9	9.1	-	2.5	-	-	-	-	-	10.5	0.0	-	-	1.2	3.6	-	11.1	-	6.5	2.4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ ARDGLASS TRL
Site Code:
Start Date: 04/13/2021
Page No: 7



Turning Movement Peak Hour Data Plot (3:00 PM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ CREEKSIDE DR
Site Code:
Start Date: 04/13/2021
Page No: 1

Turning Movement Data

Start Time	OAKMONT DR Southbound					CREEKSIDE DR Westbound					OAKMONT DR Northbound					CREEKSIDE DR Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
6:30 AM	1	6	0	0	7	1	0	1	0	2	0	8	0	0	8	1	1	0	0	2	19
6:45 AM	3	15	0	0	18	2	0	0	0	2	1	5	3	0	9	2	0	2	0	4	33
Hourly Total	4	21	0	0	25	3	0	1	0	4	1	13	3	0	17	3	1	2	0	6	52
7:00 AM	2	20	0	0	22	4	1	2	0	7	1	12	6	0	19	3	0	1	0	4	52
7:15 AM	6	42	0	0	48	7	1	5	0	13	0	17	11	0	28	1	0	1	0	2	91
7:30 AM	24	77	6	0	107	31	1	11	0	43	3	52	47	0	102	3	1	4	0	8	260
7:45 AM	29	26	2	0	57	56	2	50	0	108	2	32	44	0	78	2	0	6	0	8	251
Hourly Total	61	165	8	0	234	98	5	68	0	171	6	113	108	0	227	9	1	12	0	22	654
8:00 AM	45	19	1	0	65	52	5	58	1	116	1	12	35	1	49	0	5	2	0	7	237
8:15 AM	4	17	3	0	24	9	1	19	0	29	0	13	1	0	14	0	0	3	0	3	70
8:30 AM	0	17	1	0	18	4	0	2	0	6	0	11	3	0	14	1	1	3	0	5	43
8:45 AM	2	8	0	0	10	4	1	0	0	5	0	15	2	0	17	1	0	1	0	2	34
Hourly Total	51	61	5	0	117	69	7	79	1	156	1	51	41	1	94	2	6	9	0	17	384
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	3	25	3	0	31	9	0	5	0	14	0	35	16	0	51	0	1	2	0	3	99
3:15 PM	23	16	3	0	42	2	0	4	0	6	0	24	11	0	35	2	1	1	0	4	87
3:30 PM	28	21	4	0	53	14	0	15	0	29	1	19	10	0	30	0	1	0	0	1	113
3:45 PM	6	20	1	0	27	35	3	49	0	87	6	31	12	0	49	3	1	1	0	5	168
Hourly Total	60	82	11	0	153	60	3	73	0	136	7	109	49	0	165	5	4	4	0	13	467
4:00 PM	3	20	3	0	26	17	0	10	0	27	3	22	2	0	27	1	0	2	0	3	83
4:15 PM	4	20	1	0	25	7	0	7	0	14	3	25	9	0	37	3	0	4	0	7	83
4:30 PM	5	18	2	0	25	7	0	8	0	15	5	24	8	0	37	2	0	3	0	5	82
4:45 PM	4	14	1	0	19	4	0	6	0	10	1	28	5	0	34	1	1	2	0	4	67
Hourly Total	16	72	7	0	95	35	0	31	0	66	12	99	24	0	135	7	1	11	0	19	315
5:00 PM	4	20	3	0	27	9	0	5	0	14	2	20	11	1	34	0	0	3	0	3	78
5:15 PM	3	19	2	0	24	6	0	5	0	11	1	18	9	0	28	0	0	1	0	1	64
5:30 PM	1	20	3	0	24	4	0	0	0	4	4	9	4	0	17	3	1	2	0	6	51
5:45 PM	2	19	1	0	22	3	1	0	0	4	1	16	4	0	21	0	0	2	0	2	49
Hourly Total	10	78	9	0	97	22	1	10	0	33	8	63	28	1	100	3	1	8	0	12	242
6:00 PM	2	9	5	0	16	4	0	3	0	7	0	13	8	0	21	0	0	2	0	2	46
6:15 PM	5	19	1	0	25	0	1	3	0	4	0	17	3	0	20	1	2	0	0	3	52
Grand Total	209	507	46	0	762	291	17	268	1	577	35	478	264	2	779	30	16	48	0	94	2212
Approach %	27.4	66.5	6.0	0.0	-	50.4	2.9	46.4	0.2	-	4.5	61.4	33.9	0.3	-	31.9	17.0	51.1	0.0	-	-
Total %	9.4	22.9	2.1	0.0	34.4	13.2	0.8	12.1	0.0	26.1	1.6	21.6	11.9	0.1	35.2	1.4	0.7	2.2	0.0	4.2	-
Lights	206	498	45	0	749	280	17	262	1	560	35	473	253	2	763	30	15	48	0	93	2165
% Lights	98.6	98.2	97.8	-	98.3	96.2	100.0	97.8	100.0	97.1	100.0	99.0	95.8	100.0	97.9	100.0	93.8	100.0	-	98.9	97.9
Mediums	3	9	1	0	13	11	0	6	0	17	0	5	11	0	16	0	1	0	0	1	47
% Mediums	1.4	1.8	2.2	-	1.7	3.8	0.0	2.2	0.0	2.9	0.0	1.0	4.2	0.0	2.1	0.0	6.3	0.0	-	1.1	2.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
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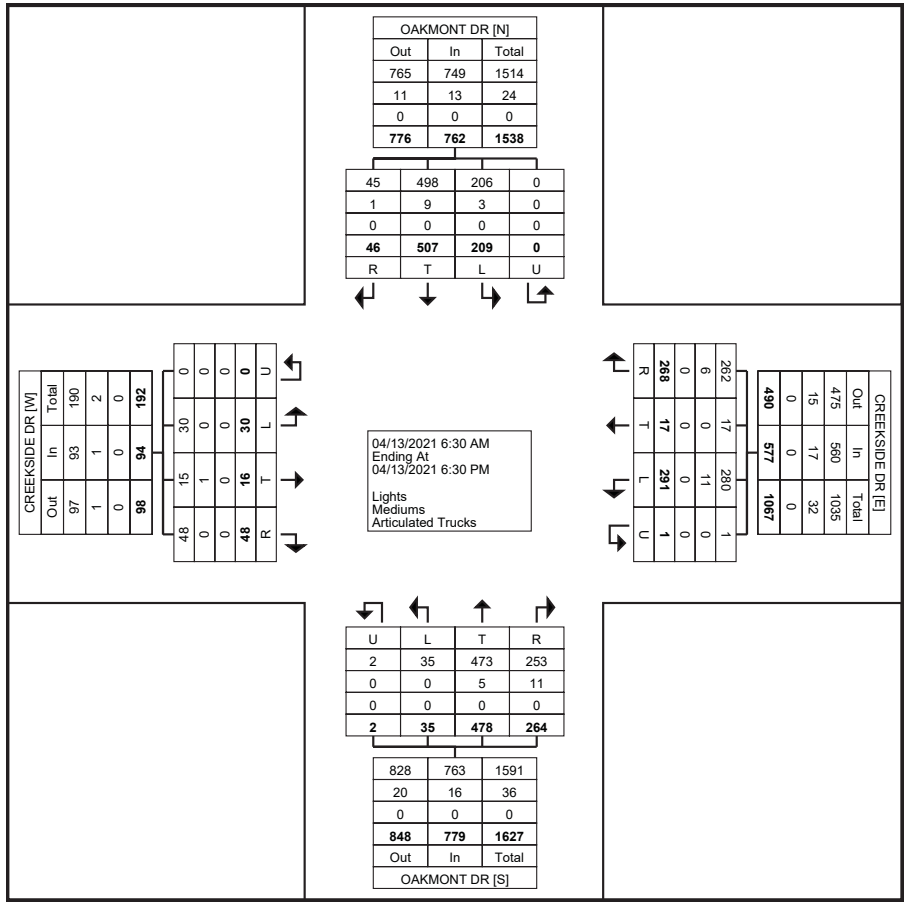
Count Name: OAKMONT DR @ CREEKSIDE DR
Site Code:
Start Date: 04/13/2021
Page No: 3



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ CREEKSIDE DR
Site Code:
Start Date: 04/13/2021
Page No: 4

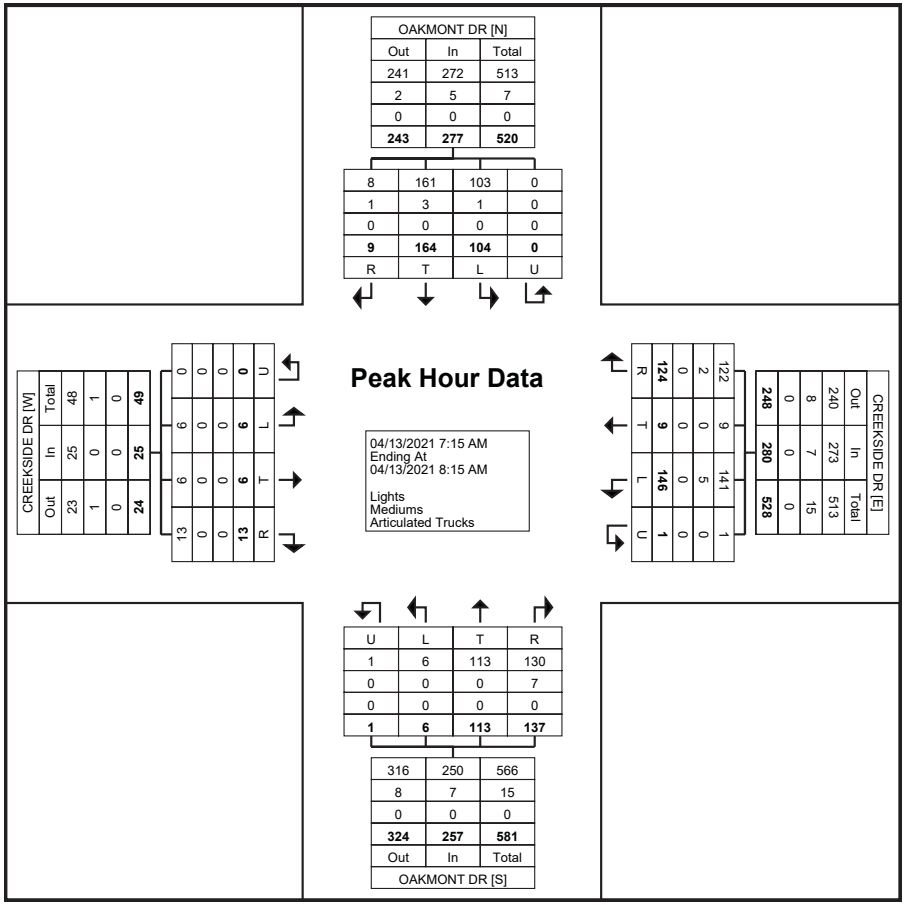
Turning Movement Peak Hour Data (7:15 AM)

Start Time	OAKMONT DR Southbound					CREEKSIDE DR Westbound					OAKMONT DR Northbound					CREEKSIDE DR Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:15 AM	6	42	0	0	48	7	1	5	0	13	0	17	11	0	28	1	0	1	0	2	91
7:30 AM	24	77	6	0	107	31	1	11	0	43	3	52	47	0	102	3	1	4	0	8	260
7:45 AM	29	26	2	0	57	56	2	50	0	108	2	32	44	0	78	2	0	6	0	8	251
8:00 AM	45	19	1	0	65	52	5	58	1	116	1	12	35	1	49	0	5	2	0	7	237
Total	104	164	9	0	277	146	9	124	1	280	6	113	137	1	257	6	6	13	0	25	839
Approach %	37.5	59.2	3.2	0.0	-	52.1	3.2	44.3	0.4	-	2.3	44.0	53.3	0.4	-	24.0	24.0	52.0	0.0	-	-
Total %	12.4	19.5	1.1	0.0	33.0	17.4	1.1	14.8	0.1	33.4	0.7	13.5	16.3	0.1	30.6	0.7	0.7	1.5	0.0	3.0	-
PHF	0.578	0.532	0.375	0.000	0.647	0.652	0.450	0.534	0.250	0.603	0.500	0.543	0.729	0.250	0.630	0.500	0.300	0.542	0.000	0.781	0.807
Lights	103	161	8	0	272	141	9	122	1	273	6	113	130	1	250	6	6	13	0	25	820
% Lights	99.0	98.2	88.9	-	98.2	96.6	100.0	98.4	100.0	97.5	100.0	100.0	94.9	100.0	97.3	100.0	100.0	100.0	-	100.0	97.7
Mediums	1	3	1	0	5	5	0	2	0	7	0	0	7	0	7	0	0	0	0	0	19
% Mediums	1.0	1.8	11.1	-	1.8	3.4	0.0	1.6	0.0	2.5	0.0	0.0	5.1	0.0	2.7	0.0	0.0	0.0	-	0.0	2.3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ CREEKSIDE DR
Site Code:
Start Date: 04/13/2021
Page No: 5



Turning Movement Peak Hour Data Plot (7:15 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: OAKMONT DR @ CREEKSIDE DR
Site Code:
Start Date: 04/13/2021

Turning Movement Peak Hour Data (3:00 PM)

Start Time	OAKMONT DR Southbound					CREEKSIDE DR Westbound					OAKMONT DR Northbound					CREEKSIDE DR Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
3:00 PM	3	25	3	0	31	9	0	5	0	14	0	35	16	0	51	0	1	2	0	3	99
3:15 PM	23	16	3	0	42	2	0	4	0	6	0	24	11	0	35	2	1	1	0	4	87
3:30 PM	28	21	4	0	53	14	0	15	0	29	1	19	10	0	30	0	1	0	0	1	113
3:45 PM	6	20	1	0	27	35	3	49	0	87	6	31	12	0	49	3	1	1	0	5	168
Total	60	82	11	0	153	60	3	73	0	136	7	109	49	0	165	5	4	4	0	13	467
Approach %	39.2	53.6	7.2	0.0	-	44.1	2.2	53.7	0.0	-	4.2	66.1	29.7	0.0	-	38.5	30.8	30.8	0.0	-	-
Total %	12.8	17.6	2.4	0.0	32.8	12.8	0.6	15.6	0.0	29.1	1.5	23.3	10.5	0.0	35.3	1.1	0.9	0.9	0.0	2.8	-
PHF	0.536	0.820	0.688	0.000	0.722	0.429	0.250	0.372	0.000	0.391	0.292	0.779	0.766	0.000	0.809	0.417	1.000	0.500	0.000	0.650	0.695
Lights	58	80	11	0	149	56	3	71	0	130	7	107	49	0	163	5	4	4	0	13	455
% Lights	96.7	97.6	100.0	-	97.4	93.3	100.0	97.3	-	95.6	100.0	98.2	100.0	-	98.8	100.0	100.0	100.0	-	100.0	97.4
Mediums	2	2	0	0	4	4	0	2	0	6	0	2	0	0	2	0	0	0	0	0	12
% Mediums	3.3	2.4	0.0	-	2.6	6.7	0.0	2.7	-	4.4	0.0	1.8	0.0	-	1.2	0.0	0.0	0.0	-	0.0	2.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0

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1120 W. Lovers Lane

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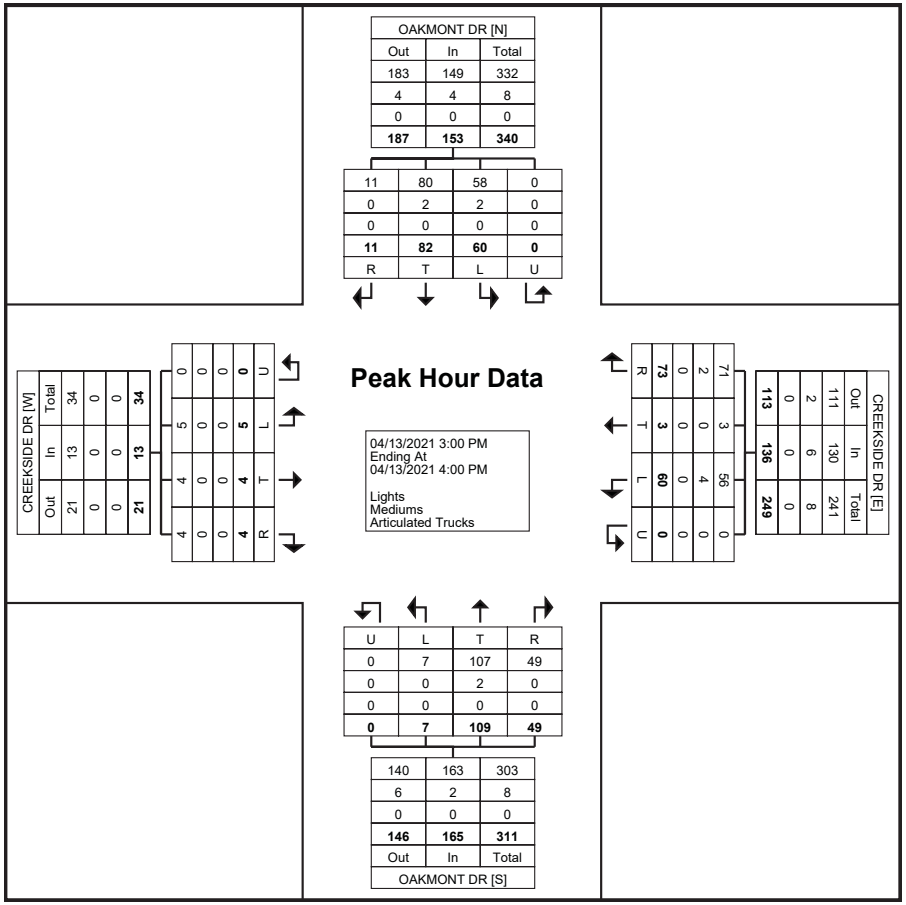
Count Name: OAKMONT DR @ CREEKSIDE DR
Site Code:
Start Date: 04/13/2021
Page No: 7



Turning Movement Peak Hour Data Plot (3:00 PM)

Appendix C:
Trip Generation Calculations for Existing Zoning

Alternate Trip Generation Calculations

The number of trips generated by the development is a function of the type and quantity of land use. The number of vehicle trips generated by the development was estimated based on the trip generation rates and equations provided in the publication entitled *Trip Generation Manual, Tenth Edition*, by the Institute of Transportation Engineers (ITE). Estimates of the number of trips generated by the site were made for the weekday AM and PM peak hours, as well as on a daily basis, for the assumed land uses possible under existing zoning, as previously identified in Table 4 of the report. The trip generation rates/equations utilized are provided in **Table 1A**. The directional splits are shown in **Table 2A**. The rates and splits for a general urban/suburban area were utilized.

Table 1A. ITE Trip Generation Rates/Equations

Land Use	ITE Code	Average Weekday	AM Peak Hour	PM Peak Hour
Multifamily Housing (Low-Rise)	220	T = 7.56X – 40.86[1]	Ln(T) = 0.95Ln(X) - 0.51	Ln(T) = 0.89Ln(X) - 0.02
Charter Elementary School (537)	537	T = 1.85Y	T = 1.17Y – 34.68	T = 0.14Y
General Office Building	710	Ln(T) = 0.97Ln(Z) + 2.50	T = 0.94Z + 26.49	Ln(T) = 0.95Ln(Z) + 0.36
Medical-Dental Office	720	T = 38.42Z - 87.62	Ln(T) = 0.89Ln(Z) + 1.31	T = 3.39Z + 2.02
Pharmacy/Drugstore with Drive-Through Window	881	T = 109.16Z	T = 3.84Z	T = 10.29Z
Fast-Food Restaurant without Drive-Through Window	933	T = 346.23Z	T = 25.10Z	T = 28.34Z
Gasoline/Service Station with Convenience Market	945	T = 205.36V	T = 19.00V – 96.53	T = 13.99V

[1]T = Trips Ends; X = Dwelling Units; Y = Students; Z = 1,000 Square Feet; V = Vehicle Fueling Positions

Table 2A. ITE Directional Splits

Land Use	ITE Code	Average Weekday	AM Peak Hour	PM Peak Hour
Multifamily Housing (Low-Rise)	220	50 / 50 [1]	23 / 77	63 / 37
Charter Elementary School (537)	537	50 / 50	53 / 47	35 / 65
General Office Building	710	50 / 50	86 / 14	16 / 84
Medical-Dental Office	720	50 / 50	78 / 22	28 / 72
Pharmacy/Drugstore with Drive-Through Window	881	50 / 50	53 / 47	50 / 50
Fast-Food Restaurant without Drive-Through Window	933	50 / 50	60 / 40	50 / 50
Gasoline/Service Station with Convenience Market	945	50 / 50	51 / 49	51 / 49

[1]XX / YY = % entering vehicles / % exiting vehicles for General Urban/Suburban Area

Internal Capture

In a mixed-use development, land uses tend to interact and thus attract a portion of each other's trip generation. This phenomenon is known as "internal capture" and results in a lesser percentage of trips assumed to use the external roadway system. Internal capture adjustments were applied, where applicable, to the trip generation estimates.

Criteria set forth in the ITE's *Trip Generation Handbook, Third Edition* were used to estimate the appropriate internal capture adjustment. A spreadsheet tool was developed to calculate internal capture as part of the National Cooperative Highway Research Program (NCHRP) project 8-51. Spreadsheets calculating internal capture for the proposed development are included at the end of this Appendix section.

Inputs to the internal capture method include the base trip generation, assumed mode split for external trips, vehicle occupancy estimates, and average land use proximity. The base trip generation was developed from the information shown in Tables 1A and 2A above. Transit mode split was based on the prospect of future transit service in the vicinity, assumed to be 0% for each type of land use on the site.

Vehicle occupancy (i.e. the number of passengers per vehicle) was assumed based on queries to a local Dallas-Forth Worth area subset of the Federal Highway Administration's 2009 National Household Travel Survey (NHTS) database at http://nhts.ornl.gov. The database was queried separately for each land use on the site. For example, DFW travelers reported an average rate of 1.11 persons per vehicle for going to work but 2.32 persons per vehicle for going out to eat.

The internal capture effect of the site was estimated by measuring the average land use proximity (i.e. walking distances) between the estimated centroids of each land use type on the site. For the purposes of this study, a general walking distance of 1,000 feet was estimated based on the size of the site.

Site Generated Traffic Volumes

The trip generation calculations for the four existing zoning scenarios are shown in **Table 3A**. The table includes overall trip generation, internal capture trips, external trips. As previously stated, the four scenarios represent possible development land uses and intensities allowed under existing zoning. For comparison purposes, the anticipated trip generation for the proposed Avilla Fairways development is also shown.

Table 3A. Trip Generation Calculations for Proposed Site and for Site with Existing Zoning

Amount	Units	ITE Land Use (ITE Code)	Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
PROPOSED SITE - 215 Dwelling Units									
215	dwellings	Multifamily Housing (Low-Rise) (220)	1,586	23	76	99	74	43	117
ALTERNATE SCENARIO 1 - Existing Zoning (274 Total Duplex, Townhome, and MF-24 Residential)									
97	dwellings	Multifamily Housing (Low-Rise) (220)[1]	694	11	35	46	36	21	57
70	dwellings	Multifamily Housing (Low-Rise) (220)[1]	490	8	26	34	27	16	43
107	dwellings	Multifamily Housing (Low-Rise) (220)	770	12	39	51	40	23	63
		TOTAL	**1,954**	**31**	**100**	**131**	**103**	**60**	**163**
ALTERNATE SCENARIO 2 - Existing Zoning (167 Duplex/Townhome Dwelling Units, Restaurant, Retail/Pharmacy, and Fuel/Convenience)									
97	dwellings	Multifamily Housing (Low-Rise) (220)[1]	694	11	35	46	36	21	57
70	dwellings	Multifamily Housing (Low-Rise) (220)[1]	490	8	26	34	27	16	43
13,000	ft^2	Pharmacy/Drugstore with Drive-Through Window (881)	1,420	27	23	50	67	67	134
5,000	ft^2	Fast-Food Restaurant without Drive-Through Window (933)	1,732	76	50	126	71	71	142
20	vfp	Gasoline/Service Station with Convenience Market (945)	4,108	144	139	283	143	137	280
		SUBTOTAL	8,444	266	273	539	344	312	656
		Internal Capture Trips	292	34	41	75	112	105	217
		TOTAL NET EXTERNAL TRIPS	**8,152**	**232**	**232**	**464**	**232**	**207**	**439**
ALTERNATE SCENARIO 3 - Existing Zoning (167 Duplex/Townhome Dwelling Units + Office)									
97	dwellings	Multifamily Housing (Low-Rise) (220)[1]	694	11	35	46	36	21	57
70	dwellings	Multifamily Housing (Low-Rise) (220)[1]	490	8	26	34	27	16	43
95,564	ft^2	General Office Building (710)	1,016	100	16	116	17	92	109
95,564	ft^2	Medical-Dental Office (720)	3,584	167	47	214	91	235	326
		SUBTOTAL	5,784	286	124	410	171	364	535
		Internal Capture Trips	13	2	1	3	5	5	10
		TOTAL NET EXTERNAL TRIPS	**5,771**	**284**	**123**	**407**	**166**	**359**	**525**
ALTERNATE SCENARIO 4 - Existing Zoning (167 Duplex/Townhome Dwelling Units + 800 Student Charter School)									
97	dwellings	Multifamily Housing (Low-Rise) (220)[1]	694	11	35	46	36	21	57
70	dwellings	Multifamily Housing (Low-Rise) (220)[1]	490	8	26	34	27	16	43
800	students	Charter Elementary School (537)	1,480	478	423	901	39	73	112
		TOTAL	**2,664**	**497**	**484**	**981**	**102**	**110**	**212**

[1] Both duplexes and townhomes are considered part of the 'Multifamily Housing (Low-Rise) land use in the 10th edition of the ITE *Trip Generation Manual*

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Lake Sharon at Oakmont	**Organization:**	Lee Engineering
Project Location:	Corinth, TX	**Performed By:**	KWN
Scenario Description:	Zoning with Retail	**Date:**	4/16/2021
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	881,945			333	171	162
Restaurant	933			126	76	50
Cinema/Entertainment				0		
Residential	220			80	19	61
Hotel				0		
All Other Land Uses[2]				0		
Total				539	266	273

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.11			1.11		
Retail	1.77			1.77		
Restaurant	2.32			2.32		
Cinema/Entertainment	2.18			2.18		
Residential	1.54			1.54		
Hotel	1.93			1.93		
All Other Land Uses[2]	1.71			1.71		

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		37	0	1	0
Restaurant	0	16		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	19	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,005	508	497
Internal Capture Percentage	15%	15%	15%
External Vehicle-Trips[3]	464	232	232
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	6%	13%
Restaurant	32%	15%
Cinema/Entertainment	N/A	N/A
Residential	7%	21%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Lake Sharon at Oakmont
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.11	0	0	1.11	0	0
Retail	1.77	171	303	1.77	162	287
Restaurant	2.32	76	176	2.32	50	116
Cinema/Entertainment	2.18	0	0	2.18	0	0
Residential	1.54	19	29	1.54	61	94
Hotel	1.93	0	0	1.93	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	83		37	0	40	0
Restaurant	36	16		0	5	3
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	19	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		97	40	0	0	0
Retail	0		88	0	1	0
Restaurant	0	24		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	52	35	0		0
Hotel	0	12	11	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	17	286	303	162	0	0
Restaurant	56	120	176	52	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	27	29	18	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	38	249	287	141	0	0
Restaurant	17	99	116	43	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	20	74	94	48	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Lake Sharon at Oakmont	**Organization:**	Lee Engineering
Project Location:	Corinth, TX	**Performed By:**	KWN
Scenario Description:	Zoning with Retail	**Date:**	4/16/2021
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				414	210	204
Restaurant				142	71	71
Cinema/Entertainment				0		
Residential				100	63	37
Hotel				0		
All Other Land Uses[2]				0		
Total				656	344	312

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.11			1.11		
Retail	1.77			1.77		
Restaurant	2.32			2.32		
Cinema/Entertainment	2.18			2.18		
Residential	1.54			1.54		
Hotel	1.93			1.93		
All Other Land Uses[2]	1.71			1.71		

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail					1000	
Restaurant					1000	
Cinema/Entertainment						
Residential		1000	1000			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		48	0	45	0
Restaurant	0	68		0	16	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	18	9	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,217	634	583
Internal Capture Percentage	34%	32%	35%
External Vehicle-Trips[3]	437	232	205
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	23%	26%
Restaurant	35%	51%
Cinema/Entertainment	N/A	N/A
Residential	63%	47%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Lake Sharon at Oakmont
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.11	0	0	1.11	0	0
Retail	1.77	210	372	1.77	204	361
Restaurant	2.32	71	165	2.32	71	165
Cinema/Entertainment	2.18	0	0	2.18	0	0
Residential	1.54	63	97	1.54	37	57
Hotel	1.93	0	0	1.93	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	7		105	14	87	18
Restaurant	5	68		13	28	12
Cinema/Entertainment	0	0	0		0	0
Residential	2	18	9	0		2
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		30	3	0	4	0
Retail	0		48	0	45	0
Restaurant	0	186		0	16	0
Cinema/Entertainment	0	15	5		4	0
Residential	0	28	18	0		0
Hotel	0	7	8	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	86	286	372	162	0	0
Restaurant	57	108	165	47	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	61	36	97	23	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	93	268	361	151	0	0
Restaurant	84	81	165	35	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	27	30	57	19	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Lake Sharon at Oakmont	**Organization:**	Lee Engineering
Project Location:	Corinth, TX	**Performed By:**	KWN
Scenario Description:	Zoning with Office	**Date:**	4/16/2021
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710,720			330	267	63
Retail				0		
Restaurant				0		
Cinema/Entertainment				0		
Residential	220			80	19	61
Hotel				0		
All Other Land Uses[2]				0		
Total				410	286	124

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.11			1.11		
Retail	1.77			1.77		
Restaurant	2.32			2.32		
Cinema/Entertainment	2.18			2.18		
Residential	1.54			1.54		
Hotel	1.93			1.93		
All Other Land Uses[2]	1.71			1.71		

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	489	325	164
Internal Capture Percentage	1%	1%	1%
External Vehicle-Trips[3]	407	284	123
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	1%	0%
Retail	N/A	N/A
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	2%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Lake Sharon at Oakmont
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.11	267	296	1.11	63	70
Retail	1.77	0	0	1.77	0	0
Restaurant	2.32	0	0	2.32	0	0
Cinema/Entertainment	2.18	0	0	2.18	0	0
Residential	1.54	19	29	1.54	61	94
Hotel	1.93	0	0	1.93	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	44	0	1	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	19	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	12		0	0	1	0
Restaurant	41	0		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	9	0	0	0		0
Hotel	9	0	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	2	294	296	265	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	29	29	19	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	70	70	63	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	92	94	60	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Lake Sharon at Oakmont	**Organization:**	Lee Engineering
Project Location:	Corinth, TX	**Performed By:**	KWN
Scenario Description:	Zoning with Office	**Date:**	4/16/2021
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				435	108	327
Retail				0		
Restaurant				0		
Cinema/Entertainment				0		
Residential				100	63	37
Hotel				0		
All Other Land Uses[2]				0		
Total				535	171	364

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.11			1.11		
Retail	1.77			1.77		
Restaurant	2.32			2.32		
Cinema/Entertainment	2.18			2.18		
Residential	1.54			1.54		
Hotel	1.93			1.93		
All Other Land Uses[2]	1.71			1.71		

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office					1000	
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	4	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	637	217	420
Internal Capture Percentage	2%	3%	1%
External Vehicle-Trips[3]	525	166	359
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	2%	1%
Retail	N/A	N/A
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	4%	4%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Lake Sharon at Oakmont
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.11	108	120	1.11	327	363
Retail	1.77	0	0	1.77	0	0
Restaurant	2.32	0	0	2.32	0	0
Cinema/Entertainment	2.18	0	0	2.18	0	0
Residential	1.54	63	97	1.54	37	57
Hotel	1.93	0	0	1.93	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		73	15	0	7	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	24	12	0		2
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	4	0
Retail	37		0	0	45	0
Restaurant	36	0		0	16	0
Cinema/Entertainment	7	0	0		4	0
Residential	68	0	0	0		0
Hotel	0	0	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	2	118	120	106	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	93	97	60	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	4	359	363	323	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	55	57	36	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Appendix D:
Synchro Output Sheets

Intersection	
Intersection Delay, s/veh	20.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	119	15	92	90	71	12	179	75	84	192	49
Future Vol, veh/h	52	119	15	92	90	71	12	179	75	84	192	49
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	68	155	19	119	117	92	16	232	97	109	249	64
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	14	14.5	28.5	23
HCM LOS	B	B	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	70%	0%	100%	73%	0%	100%	30%	0%	80%
Vol Right, %	0%	30%	0%	0%	27%	0%	0%	70%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	254	52	79	55	92	60	101	84	241
LT Vol	12	0	52	0	0	92	0	0	84	0
Through Vol	0	179	0	79	40	0	60	30	0	192
RT Vol	0	75	0	0	15	0	0	71	0	49
Lane Flow Rate	16	330	68	103	71	119	78	131	109	313
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.038	0.729	0.175	0.252	0.169	0.3	0.185	0.292	0.258	0.685
Departure Headway (Hd)	8.671	7.955	9.342	8.788	8.588	9.045	8.527	8.017	8.51	7.877
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	414	455	384	408	417	398	421	447	423	460
Service Time	6.391	5.675	7.102	6.547	6.348	6.801	6.283	5.773	6.229	5.596
HCM Lane V/C Ratio	0.039	0.725	0.177	0.252	0.17	0.299	0.185	0.293	0.258	0.68
HCM Control Delay	11.7	29.3	14.1	14.5	13.1	15.7	13.2	14.1	14.2	26.1
HCM Lane LOS	B	D	B	B	B	C	B	B	B	D
HCM 95th-tile Q	0.1	5.8	0.6	1	0.6	1.2	0.7	1.2	1	5.1

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	17	10	296	308	21
Future Vol, veh/h	34	17	10	296	308	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	2	2	2	2	5
Mvmt Flow	49	24	14	423	440	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	906	455	470	0	-	0
Stage 1	455	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Critical Hdwy	6.43	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	305	605	1092	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	300	605	1092	-	-	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.5	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1092	-	361	-	-
HCM Lane V/C Ratio	0.013	-	0.202	-	-
HCM Control Delay (s)	8.3	0	17.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	7	14	159	10	135	7	123	149	113	179	10
Future Vol, veh/h	7	7	14	159	10	135	7	123	149	113	179	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	3	2	2	2	2	5	2	2	11
Mvmt Flow	9	9	17	196	12	167	9	152	184	140	221	12
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.9	16.7	11.2	12.8
HCM LOS	A	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	0%	25%	52%	100%	0%
Vol Thru, %	95%	0%	25%	3%	0%	95%
Vol Right, %	0%	100%	50%	44%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	149	28	304	113	189
LT Vol	7	0	7	159	113	0
Through Vol	123	0	7	10	0	179
RT Vol	0	149	14	135	0	10
Lane Flow Rate	160	184	35	375	140	233
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.286	0.29	0.061	0.592	0.264	0.406
Departure Headway (Hd)	6.407	5.666	6.372	5.677	6.805	6.258
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	559	631	557	634	526	574
Service Time	4.172	3.43	4.465	3.732	4.568	4.021
HCM Lane V/C Ratio	0.286	0.292	0.063	0.591	0.266	0.406
HCM Control Delay	11.7	10.8	9.9	16.7	12	13.3
HCM Lane LOS	B	B	A	C	B	B
HCM 95th-tile Q	1.2	1.2	0.2	3.9	1.1	2

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	128	23	84	125	29	22	106	121	39	143	44
Future Vol, veh/h	47	128	23	84	125	29	22	106	121	39	143	44
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	2	5	4	2	2	2	2	2	3	3	8
Mvmt Flow	64	173	31	114	169	39	30	143	164	53	193	59
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	13.1	13.4	20.4	17.6
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	47%	0%	100%	65%	0%	100%	59%	0%	76%
Vol Right, %	0%	53%	0%	0%	35%	0%	0%	41%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	227	47	85	66	84	83	71	39	187
LT Vol	22	0	47	0	0	84	0	0	39	0
Through Vol	0	106	0	85	43	0	83	42	0	143
RT Vol	0	121	0	0	23	0	0	29	0	44
Lane Flow Rate	30	307	64	115	89	114	113	95	53	253
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.067	0.62	0.151	0.258	0.194	0.267	0.248	0.202	0.121	0.532
Departure Headway (Hd)	8.157	7.276	8.579	8.063	7.863	8.463	7.913	7.618	8.25	7.578
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	438	494	417	444	454	423	453	469	433	475
Service Time	5.928	5.046	6.362	5.846	5.645	6.241	5.691	5.395	6.023	5.351
HCM Lane V/C Ratio	0.068	0.621	0.153	0.259	0.196	0.27	0.249	0.203	0.122	0.533
HCM Control Delay	11.5	21.3	12.9	13.7	12.5	14.3	13.3	12.3	12.2	18.7
HCM Lane LOS	B	C	B	B	B	B	B	B	B	C
HCM 95th-tile Q	0.2	4.2	0.5	1	0.7	1.1	1	0.7	0.4	3.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	21	22	176	253	26
Future Vol, veh/h	33	21	22	176	253	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	4	11	10	2	2	9
Mvmt Flow	42	27	28	223	320	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	616	337	353	0	-	0
Stage 1	337	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Critical Hdwy	6.44	6.31	4.2	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.399	2.29	-	-	-
Pot Cap-1 Maneuver	451	685	1163	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	439	685	1163	-	-	-
Mov Cap-2 Maneuver	439	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	764	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1163	-	510	-	-
HCM Lane V/C Ratio	0.024	-	0.134	-	-
HCM Control Delay (s)	8.2	0	13.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	5	5	70	4	85	8	128	57	70	96	13
Future Vol, veh/h	6	5	5	70	4	85	8	128	57	70	96	13
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	7	2	3	2	2	2	3	2	2
Mvmt Flow	9	7	7	100	6	121	11	183	81	100	137	19
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.8	10.6	9.9	9.9
HCM LOS	A	B	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	38%	44%	100%	0%
Vol Thru, %	94%	0%	31%	3%	0%	88%
Vol Right, %	0%	100%	31%	53%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	136	57	16	159	70	109
LT Vol	8	0	6	70	70	0
Through Vol	128	0	5	4	0	96
RT Vol	0	57	5	85	0	13
Lane Flow Rate	194	81	23	227	100	156
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.296	0.108	0.035	0.32	0.166	0.233
Departure Headway (Hd)	5.492	4.756	5.554	5.075	5.986	5.38
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	649	744	648	702	594	660
Service Time	3.28	2.543	3.554	3.148	3.777	3.17
HCM Lane V/C Ratio	0.299	0.109	0.035	0.323	0.168	0.236
HCM Control Delay	10.6	8.1	8.8	10.6	10	9.8
HCM Lane LOS	B	A	A	B	A	A
HCM 95th-tile Q	1.2	0.4	0.1	1.4	0.6	0.9

Intersection	
Intersection Delay, s/veh	26.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	129	16	100	97	77	13	194	81	91	208	53
Future Vol, veh/h	56	129	16	100	97	77	13	194	81	91	208	53
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	73	168	21	130	126	100	17	252	105	118	270	69
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	15.2	15.9	40	30.2
HCM LOS	C	C	E	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	71%	0%	100%	73%	0%	100%	30%	0%	80%
Vol Right, %	0%	29%	0%	0%	27%	0%	0%	70%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	275	56	86	59	100	65	109	91	261
LT Vol	13	0	56	0	0	100	0	0	91	0
Through Vol	0	194	0	86	43	0	65	32	0	208
RT Vol	0	81	0	0	16	0	0	77	0	53
Lane Flow Rate	17	357	73	112	77	130	84	142	118	339
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.043	0.833	0.2	0.29	0.195	0.345	0.211	0.337	0.294	0.783
Departure Headway (Hd)	9.112	8.394	9.907	9.349	9.151	9.567	9.046	8.533	8.947	8.312
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	393	432	361	384	392	375	396	420	402	434
Service Time	6.874	6.156	7.68	7.122	6.923	7.337	6.816	6.302	6.707	6.072
HCM Lane V/C Ratio	0.043	0.826	0.202	0.292	0.196	0.347	0.212	0.338	0.294	0.781
HCM Control Delay	12.3	41.3	15.2	15.9	14.1	17.3	14.2	15.6	15.4	35.3
HCM Lane LOS	B	E	C	C	B	C	B	C	C	E
HCM 95th-tile Q	0.1	7.9	0.7	1.2	0.7	1.5	0.8	1.5	1.2	6.8

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	18	11	320	333	23
Future Vol, veh/h	37	18	11	320	333	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	2	2	2	2	5
Mvmt Flow	53	26	16	457	476	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	982	493	509	0	-	0
Stage 1	493	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Critical Hdwy	6.43	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	275	576	1056	-	-	-
Stage 1	612	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	576	1056	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	614	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.5	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1056	-	327	-	-
HCM Lane V/C Ratio	0.015	-	0.24	-	-
HCM Control Delay (s)	8.5	0	19.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.9	-	-

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	8	15	172	11	146	8	133	161	122	194	11
Future Vol, veh/h	8	8	15	172	11	146	8	133	161	122	194	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	3	2	2	2	2	5	2	2	11
Mvmt Flow	10	10	19	212	14	180	10	164	199	151	240	14
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.3	19.6	12	13.9
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	26%	52%	100%	0%
Vol Thru, %	94%	0%	26%	3%	0%	95%
Vol Right, %	0%	100%	48%	44%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	161	31	329	122	205
LT Vol	8	0	8	172	122	0
Through Vol	133	0	8	11	0	194
RT Vol	0	161	15	146	0	11
Lane Flow Rate	174	199	38	406	151	253
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.321	0.325	0.072	0.66	0.294	0.455
Departure Headway (Hd)	6.634	5.89	6.808	5.847	7.023	6.474
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	538	606	529	613	509	552
Service Time	4.42	3.675	4.808	3.916	4.807	4.258
HCM Lane V/C Ratio	0.323	0.328	0.072	0.662	0.297	0.458
HCM Control Delay	12.6	11.5	10.3	19.6	12.7	14.6
HCM Lane LOS	B	B	B	C	B	B
HCM 95th-tile Q	1.4	1.4	0.2	4.9	1.2	2.4

Intersection	
Intersection Delay, s/veh	19.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	138	25	91	135	31	24	115	131	42	155	48
Future Vol, veh/h	51	138	25	91	135	31	24	115	131	42	155	48
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	2	5	4	2	2	2	2	2	3	3	8
Mvmt Flow	69	186	34	123	182	42	32	155	177	57	209	65
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	14.2	14.6	26.6	21.2
HCM LOS	B	B	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	47%	0%	100%	65%	0%	100%	59%	0%	76%
Vol Right, %	0%	53%	0%	0%	35%	0%	0%	41%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	246	51	92	71	91	90	76	42	203
LT Vol	24	0	51	0	0	91	0	0	42	0
Through Vol	0	115	0	92	46	0	90	45	0	155
RT Vol	0	131	0	0	25	0	0	31	0	48
Lane Flow Rate	32	332	69	124	96	123	122	103	57	274
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.078	0.719	0.175	0.297	0.224	0.307	0.285	0.232	0.138	0.614
Departure Headway (Hd)	8.667	7.783	9.128	8.61	8.407	8.991	8.439	8.143	8.737	8.062
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	416	469	393	418	427	400	426	441	410	447
Service Time	6.367	5.483	6.885	6.366	6.164	6.745	6.192	5.896	6.488	5.813
HCM Lane V/C Ratio	0.077	0.708	0.176	0.297	0.225	0.307	0.286	0.234	0.139	0.613
HCM Control Delay	12.1	28	13.8	15	13.6	15.7	14.5	13.4	12.9	22.9
HCM Lane LOS	B	D	B	B	B	C	B	B	B	C
HCM 95th-tile Q	0.3	5.7	0.6	1.2	0.8	1.3	1.2	0.9	0.5	4

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	23	24	190	274	28
Future Vol, veh/h	36	23	24	190	274	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	4	11	10	2	2	9
Mvmt Flow	46	29	30	241	347	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	666	365	382	0	-	0
Stage 1	365	-	-	-	-	-
Stage 2	301	-	-	-	-	-
Critical Hdwy	6.44	6.31	4.2	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.399	2.29	-	-	-
Pot Cap-1 Maneuver	421	660	1134	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	408	660	1134	-	-	-
Mov Cap-2 Maneuver	408	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	746	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1134	-	479	-	-
HCM Lane V/C Ratio	0.027	-	0.156	-	-
HCM Control Delay (s)	8.3	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	5	5	76	4	92	9	138	62	76	104	14
Future Vol, veh/h	6	5	5	76	4	92	9	138	62	76	104	14
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	7	2	3	2	2	2	3	2	2
Mvmt Flow	9	7	7	109	6	131	13	197	89	109	149	20
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9	11.2	10.4	10.3
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	38%	44%	100%	0%
Vol Thru, %	94%	0%	31%	2%	0%	88%
Vol Right, %	0%	100%	31%	53%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	62	16	172	76	118
LT Vol	9	0	6	76	76	0
Through Vol	138	0	5	4	0	104
RT Vol	0	62	5	92	0	14
Lane Flow Rate	210	89	23	246	109	169
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.332	0.122	0.036	0.361	0.187	0.261
Departure Headway (Hd)	5.687	4.948	5.727	5.287	6.184	5.577
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	634	725	625	686	581	646
Service Time	3.414	2.675	3.766	3.287	3.911	3.304
HCM Lane V/C Ratio	0.331	0.123	0.037	0.359	0.188	0.262
HCM Control Delay	11.2	8.4	9	11.2	10.3	10.3
HCM Lane LOS	B	A	A	B	B	B
HCM 95th-tile Q	1.5	0.4	0.1	1.6	0.7	1

Intersection	
Intersection Delay, s/veh	28.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	152	26	100	105	78	16	194	81	95	209	47
Future Vol, veh/h	56	152	26	100	105	78	16	194	81	95	209	47
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	73	197	34	130	136	101	21	252	105	123	271	61
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	16.3	16.7	44.7	32.1
HCM LOS	C	C	E	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	71%	0%	100%	66%	0%	100%	31%	0%	82%
Vol Right, %	0%	29%	0%	0%	34%	0%	0%	69%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	275	56	101	77	100	70	113	95	256
LT Vol	16	0	56	0	0	100	0	0	95	0
Through Vol	0	194	0	101	51	0	70	35	0	209
RT Vol	0	81	0	0	26	0	0	78	0	47
Lane Flow Rate	21	357	73	132	100	130	91	147	123	332
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.054	0.863	0.204	0.348	0.257	0.356	0.236	0.36	0.317	0.798
Departure Headway (Hd)	9.413	8.694	10.092	9.533	9.285	9.858	9.336	8.831	9.259	8.636
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	380	414	355	376	385	364	384	407	387	419
Service Time	7.188	6.469	7.881	7.322	7.073	7.641	7.118	6.613	7.035	6.412
HCM Lane V/C Ratio	0.055	0.862	0.206	0.351	0.26	0.357	0.237	0.361	0.318	0.792
HCM Control Delay	12.7	46.6	15.5	17.4	15.3	18	15	16.5	16.3	38
HCM Lane LOS	B	E	C	C	C	C	B	C	C	E
HCM 95th-tile Q	0.2	8.5	0.8	1.5	1	1.6	0.9	1.6	1.3	7.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	11	6	332	336	22
Future Vol, veh/h	35	11	6	332	336	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	2	2	2	2	5
Mvmt Flow	50	16	9	474	480	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	988	496	511	0	-	0
Stage 1	496	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.43	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	273	574	1054	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	574	1054	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	603	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.8	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1054	-	309	-	-
HCM Lane V/C Ratio	0.008	-	0.213	-	-
HCM Control Delay (s)	8.4	0	19.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	8	15	173	11	146	8	139	165	122	195	11
Future Vol, veh/h	8	8	15	173	11	146	8	139	165	122	195	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	3	2	2	2	2	5	2	2	11
Mvmt Flow	10	10	19	214	14	180	10	172	204	151	241	14
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.4	20	12.2	14.1
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	0%	26%	52%	100%	0%
Vol Thru, %	95%	0%	26%	3%	0%	95%
Vol Right, %	0%	100%	48%	44%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	165	31	330	122	206
LT Vol	8	0	8	173	122	0
Through Vol	139	0	8	11	0	195
RT Vol	0	165	15	146	0	11
Lane Flow Rate	181	204	38	407	151	254
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.335	0.334	0.073	0.665	0.295	0.46
Departure Headway (Hd)	6.651	5.907	6.86	5.879	7.056	6.507
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	537	603	525	611	506	549
Service Time	4.437	3.693	4.86	3.95	4.841	4.292
HCM Lane V/C Ratio	0.337	0.338	0.072	0.666	0.298	0.463
HCM Control Delay	12.8	11.7	10.4	20	12.8	14.8
HCM Lane LOS	B	B	B	C	B	B
HCM 95th-tile Q	1.5	1.5	0.2	5	1.2	2.4

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	205	177	3	19	15
Future Vol, veh/h	5	205	177	3	19	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	270	233	4	25	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	237	0	-	0	384	119
Stage 1	-	-	-	-	235	-
Stage 2	-	-	-	-	149	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1327	-	-	-	591	910
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1327	-	-	-	587	910
Mov Cap-2 Maneuver	-	-	-	-	587	-
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1327	-	-	-	696
HCM Lane V/C Ratio	0.005	-	-	-	0.064
HCM Control Delay (s)	7.7	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	216	160	9	18	20
Future Vol, veh/h	8	216	160	9	18	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	284	211	12	24	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	223	0	-	0	381	112
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1343	-	-	-	594	920
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1343	-	-	-	589	920
Mov Cap-2 Maneuver	-	-	-	-	589	-
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1343	-	-	-	727
HCM Lane V/C Ratio	0.008	-	-	-	0.069
HCM Control Delay (s)	7.7	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	5	2	330	347	2
Future Vol, veh/h	8	5	2	330	347	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	7	3	434	457	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	899	459	460	0	-	0
Stage 1	459	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	309	602	1101	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	308	602	1101	-	-	-
Mov Cap-2 Maneuver	308	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	649	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1101	-	379	-	-
HCM Lane V/C Ratio	0.002	-	0.045	-	-
HCM Control Delay (s)	8.3	0	14.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	20.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	151	31	91	158	34	35	115	131	44	156	44
Future Vol, veh/h	45	151	31	91	158	34	35	115	131	44	156	44
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	2	5	4	2	2	2	2	2	3	3	8
Mvmt Flow	61	204	42	123	214	46	47	155	177	59	211	59
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	15.1	15.4	28.1	22.4
HCM LOS	C	C	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	47%	0%	100%	62%	0%	100%	61%	0%	78%
Vol Right, %	0%	53%	0%	0%	38%	0%	0%	39%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	246	45	101	81	91	105	87	44	200
LT Vol	35	0	45	0	0	91	0	0	44	0
Through Vol	0	115	0	101	50	0	105	53	0	156
RT Vol	0	131	0	0	31	0	0	34	0	44
Lane Flow Rate	47	332	61	136	110	123	142	117	59	270
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.117	0.739	0.159	0.335	0.264	0.314	0.342	0.272	0.149	0.629
Departure Headway (Hd)	8.888	8.002	9.388	8.868	8.644	9.198	8.645	8.36	9.044	8.38
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	403	452	382	405	415	391	416	430	397	430
Service Time	6.639	5.754	7.147	6.627	6.403	6.957	6.403	6.118	6.8	6.135
HCM Lane V/C Ratio	0.117	0.735	0.16	0.336	0.265	0.315	0.341	0.272	0.149	0.628
HCM Control Delay	12.8	30.3	13.9	16.1	14.5	16.1	15.9	14.2	13.4	24.4
HCM Lane LOS	B	D	B	C	B	C	C	B	B	C
HCM 95th-tile Q	0.4	6	0.6	1.4	1	1.3	1.5	1.1	0.5	4.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	15	14	196	285	27
Future Vol, veh/h	34	15	14	196	285	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	4	11	10	2	2	9
Mvmt Flow	43	19	18	248	361	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	662	378	395	0	-	0
Stage 1	378	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.44	6.31	4.2	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.399	2.29	-	-	-
Pot Cap-1 Maneuver	424	649	1121	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	416	649	1121	-	-	-
Mov Cap-2 Maneuver	416	-	-	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	760	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1121	-	467	-	-
HCM Lane V/C Ratio	0.016	-	0.133	-	-
HCM Control Delay (s)	8.3	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	5	5	80	4	92	9	140	64	76	110	14
Future Vol, veh/h	6	5	5	80	4	92	9	140	64	76	110	14
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	7	2	3	2	2	2	3	2	2
Mvmt Flow	9	7	7	114	6	131	13	200	91	109	157	20
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9	11.5	10.5	10.5
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	38%	45%	100%	0%
Vol Thru, %	94%	0%	31%	2%	0%	89%
Vol Right, %	0%	100%	31%	52%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	64	16	176	76	124
LT Vol	9	0	6	80	76	0
Through Vol	140	0	5	4	0	110
RT Vol	0	64	5	92	0	14
Lane Flow Rate	213	91	23	251	109	177
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.339	0.127	0.037	0.373	0.188	0.276
Departure Headway (Hd)	5.726	4.987	5.784	5.336	6.22	5.616
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	628	719	618	679	578	639
Service Time	3.456	2.716	3.826	3.336	3.95	3.347
HCM Lane V/C Ratio	0.339	0.127	0.037	0.37	0.189	0.277
HCM Control Delay	11.4	8.4	9	11.5	10.4	10.5
HCM Lane LOS	B	A	A	B	B	B
HCM 95th-tile Q	1.5	0.4	0.1	1.7	0.7	1.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	226	216	11	11	9
Future Vol, veh/h	15	226	216	11	11	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	305	292	15	15	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	307	0	-	0	493	154
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	193	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1250	-	-	-	505	864
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	821	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1250	-	-	-	495	864
Mov Cap-2 Maneuver	-	-	-	-	495	-
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	821	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1250	-	-	-	613
HCM Lane V/C Ratio	0.016	-	-	-	0.044
HCM Control Delay (s)	7.9	0.1	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	217	211	27	10	16
Future Vol, veh/h	20	217	211	27	10	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	293	285	36	14	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	321	0	-	0	504	161
Stage 1	-	-	-	-	303	-
Stage 2	-	-	-	-	201	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1236	-	-	-	497	855
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	813	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1236	-	-	-	486	855
Mov Cap-2 Maneuver	-	-	-	-	486	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	813	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1236	-	-	-	662
HCM Lane V/C Ratio	0.022	-	-	-	0.053
HCM Control Delay (s)	8	-	-	-	10.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	3	5	206	292	7
Future Vol, veh/h	4	3	5	206	292	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	4	7	278	395	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	692	400	404	0	-	0
Stage 1	400	-	-	-	-	-
Stage 2	292	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	410	650	1155	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	407	650	1155	-	-	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	672	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1155	-	485	-	-
HCM Lane V/C Ratio	0.006	-	0.02	-	-
HCM Control Delay (s)	8.1	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	29.1
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	156	27	100	107	76	16	194	81	91	208	49
Future Vol, veh/h	64	156	27	100	107	76	16	194	81	91	208	49
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	83	203	35	130	139	99	21	252	105	118	270	64
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	16.6	16.9	46.3	33.5
HCM LOS	C	C	E	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	71%	0%	100%	66%	0%	100%	32%	0%	81%
Vol Right, %	0%	29%	0%	0%	34%	0%	0%	68%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	275	64	104	79	100	71	112	91	257
LT Vol	16	0	64	0	0	100	0	0	91	0
Through Vol	0	194	0	104	52	0	71	36	0	208
RT Vol	0	81	0	0	27	0	0	76	0	49
Lane Flow Rate	21	357	83	135	103	130	93	145	118	334
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.055	0.871	0.234	0.359	0.266	0.359	0.243	0.36	0.307	0.809
Departure Headway (Hd)	9.499	8.779	10.129	9.57	9.319	9.949	9.427	8.929	9.352	8.724
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	376	411	353	374	384	361	380	402	383	414
Service Time	7.28	6.56	7.919	7.36	7.109	7.737	7.214	6.716	7.134	6.506
HCM Lane V/C Ratio	0.056	0.869	0.235	0.361	0.268	0.36	0.245	0.361	0.308	0.807
HCM Control Delay	12.8	48.2	16	17.7	15.5	18.3	15.2	16.7	16.3	39.6
HCM Lane LOS	B	E	C	C	C	C	C	C	C	E
HCM 95th-tile Q	0.2	8.7	0.9	1.6	1.1	1.6	0.9	1.6	1.3	7.3

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	11	6	332	336	22
Future Vol, veh/h	35	11	6	332	336	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	2	2	2	2	5
Mvmt Flow	50	16	9	474	480	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	988	496	511	0	-	0
Stage 1	496	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.43	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	273	574	1054	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	574	1054	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	603	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.8	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1054	-	309	-	-
HCM Lane V/C Ratio	0.008	-	0.213	-	-
HCM Control Delay (s)	8.4	0	19.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	8	15	173	11	146	8	139	165	122	195	11
Future Vol, veh/h	8	8	15	173	11	146	8	139	165	122	195	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	3	2	2	2	2	5	2	2	11
Mvmt Flow	10	10	19	214	14	180	10	172	204	151	241	14
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.4	20	12.2	14.1
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	0%	26%	52%	100%	0%
Vol Thru, %	95%	0%	26%	3%	0%	95%
Vol Right, %	0%	100%	48%	44%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	165	31	330	122	206
LT Vol	8	0	8	173	122	0
Through Vol	139	0	8	11	0	195
RT Vol	0	165	15	146	0	11
Lane Flow Rate	181	204	38	407	151	254
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.335	0.334	0.073	0.665	0.295	0.46
Departure Headway (Hd)	6.651	5.907	6.86	5.879	7.056	6.507
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	537	603	525	611	506	549
Service Time	4.437	3.693	4.86	3.95	4.841	4.292
HCM Lane V/C Ratio	0.337	0.338	0.072	0.666	0.298	0.463
HCM Control Delay	12.8	11.7	10.4	20	12.8	14.8
HCM Lane LOS	B	B	B	C	B	B
HCM 95th-tile Q	1.5	1.5	0.2	5	1.2	2.4

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	205	177	5	20	15
Future Vol, veh/h	5	205	177	5	20	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	270	233	7	26	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	240	0	-	0	386	120
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	149	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1324	-	-	-	590	909
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1324	-	-	-	586	909
Mov Cap-2 Maneuver	-	-	-	-	586	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1324	-	-	-	691
HCM Lane V/C Ratio	0.005	-	-	-	0.067
HCM Control Delay (s)	7.7	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	217	162	11	30	20
Future Vol, veh/h	8	217	162	11	30	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	286	213	14	39	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	227	0	-	0	385	114
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	165	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1339	-	-	-	591	917
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	847	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1339	-	-	-	586	917
Mov Cap-2 Maneuver	-	-	-	-	586	-
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	847	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1339	-	-	-	685
HCM Lane V/C Ratio	0.008	-	-	-	0.096
HCM Control Delay (s)	7.7	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Intersection Delay, s/veh	20.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	153	32	91	162	30	36	114	131	42	155	51
Future Vol, veh/h	49	153	32	91	162	30	36	114	131	42	155	51
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	2	5	4	2	2	2	2	2	3	3	8
Mvmt Flow	66	207	43	123	219	41	49	154	177	57	209	69
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	15.3	15.7	28.6	23.6
HCM LOS	C	C	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	47%	0%	100%	61%	0%	100%	64%	0%	75%
Vol Right, %	0%	53%	0%	0%	39%	0%	0%	36%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	245	49	102	83	91	108	84	42	206
LT Vol	36	0	49	0	0	91	0	0	42	0
Through Vol	0	114	0	102	51	0	108	54	0	155
RT Vol	0	131	0	0	32	0	0	30	0	51
Lane Flow Rate	49	331	66	138	112	123	146	114	57	278
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.121	0.743	0.174	0.342	0.271	0.317	0.354	0.267	0.144	0.651
Departure Headway (Hd)	8.968	8.081	9.446	8.927	8.699	9.284	8.729	8.47	9.108	8.424
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	400	447	379	402	413	387	412	423	393	429
Service Time	6.724	5.837	7.208	6.687	6.46	7.042	6.488	6.228	6.866	6.182
HCM Lane V/C Ratio	0.122	0.74	0.174	0.343	0.271	0.318	0.354	0.27	0.145	0.648
HCM Control Delay	13	30.9	14.2	16.3	14.7	16.3	16.2	14.3	13.4	25.7
HCM Lane LOS	B	D	B	C	B	C	C	B	B	D
HCM 95th-tile Q	0.4	6.1	0.6	1.5	1.1	1.3	1.6	1.1	0.5	4.5

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	15	14	196	285	27
Future Vol, veh/h	34	15	14	196	285	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	4	11	10	2	2	9
Mvmt Flow	43	19	18	248	361	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	662	378	395	0	-	0
Stage 1	378	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.44	6.31	4.2	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.399	2.29	-	-	-
Pot Cap-1 Maneuver	424	649	1121	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	416	649	1121	-	-	-
Mov Cap-2 Maneuver	416	-	-	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	760	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1121	-	467	-	-
HCM Lane V/C Ratio	0.016	-	0.133	-	-
HCM Control Delay (s)	8.3	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	5	5	80	4	92	9	140	64	76	110	14
Future Vol, veh/h	6	5	5	80	4	92	9	140	64	76	110	14
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	7	2	3	2	2	2	3	2	2
Mvmt Flow	9	7	7	114	6	131	13	200	91	109	157	20
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9	11.5	10.5	10.5
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	38%	45%	100%	0%
Vol Thru, %	94%	0%	31%	2%	0%	89%
Vol Right, %	0%	100%	31%	52%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	64	16	176	76	124
LT Vol	9	0	6	80	76	0
Through Vol	140	0	5	4	0	110
RT Vol	0	64	5	92	0	14
Lane Flow Rate	213	91	23	251	109	177
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.339	0.127	0.037	0.373	0.188	0.276
Departure Headway (Hd)	5.726	4.987	5.784	5.336	6.22	5.616
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	628	719	618	679	578	639
Service Time	3.456	2.716	3.826	3.336	3.95	3.347
HCM Lane V/C Ratio	0.339	0.127	0.037	0.37	0.189	0.277
HCM Control Delay	11.4	8.4	9	11.5	10.4	10.5
HCM Lane LOS	B	A	A	B	B	B
HCM 95th-tile Q	1.5	0.4	0.1	1.7	0.7	1.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	226	216	15	11	9
Future Vol, veh/h	15	226	216	15	11	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	305	292	20	15	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	312	0	-	0	495	156
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	193	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1245	-	-	-	504	862
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	821	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1245	-	-	-	494	862
Mov Cap-2 Maneuver	-	-	-	-	494	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	821	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1245	-	-	-	611
HCM Lane V/C Ratio	0.016	-	-	-	0.044
HCM Control Delay (s)	7.9	0.1	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	217	215	35	17	16
Future Vol, veh/h	20	217	215	35	17	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	293	291	47	23	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	338	0	-	0	516	169
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	201	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1218	-	-	-	489	845
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	813	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1218	-	-	-	478	845
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	813	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1218	-	-	-	606
HCM Lane V/C Ratio	0.022	-	-	-	0.074
HCM Control Delay (s)	8	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	28.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	152	26	100	103	80	15	195	81	95	209	47
Future Vol, veh/h	61	152	26	100	103	80	15	195	81	95	209	47
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	79	197	34	130	134	104	19	253	105	123	271	61
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	16.3	16.8	46.1	32.6
HCM LOS	C	C	E	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	71%	0%	100%	66%	0%	100%	30%	0%	82%
Vol Right, %	0%	29%	0%	0%	34%	0%	0%	70%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	276	61	101	77	100	69	114	95	256
LT Vol	15	0	61	0	0	100	0	0	95	0
Through Vol	0	195	0	101	51	0	69	34	0	209
RT Vol	0	81	0	0	26	0	0	80	0	47
Lane Flow Rate	19	358	79	132	100	130	89	148	123	332
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.051	0.87	0.223	0.349	0.258	0.357	0.232	0.366	0.319	0.802
Departure Headway (Hd)	9.456	8.737	10.118	9.559	9.311	9.904	9.382	8.87	9.303	8.681
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	378	412	354	375	384	362	382	404	386	416
Service Time	7.231	6.512	7.905	7.346	7.097	7.69	7.167	6.655	7.078	6.455
HCM Lane V/C Ratio	0.05	0.869	0.223	0.352	0.26	0.359	0.233	0.366	0.319	0.798
HCM Control Delay	12.7	47.9	15.8	17.4	15.3	18.1	15	16.7	16.4	38.6
HCM Lane LOS	B	E	C	C	C	C	B	C	C	E
HCM 95th-tile Q	0.2	8.7	0.8	1.5	1	1.6	0.9	1.6	1.3	7.1

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	11	11	332	336	23
Future Vol, veh/h	35	11	11	332	336	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	2	2	2	2	5
Mvmt Flow	50	16	16	474	480	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1003	497	513	0	-	0
Stage 1	497	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Critical Hdwy	6.43	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	267	573	1052	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	261	573	1052	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	596	-	-	-	-	-
Stage 2	603	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.3	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1052	-	300	-	-
HCM Lane V/C Ratio	0.015	-	0.219	-	-
HCM Control Delay (s)	8.5	0	20.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	8	15	173	11	146	8	139	165	122	196	11
Future Vol, veh/h	8	8	15	173	11	146	8	139	165	122	196	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	3	2	2	2	2	5	2	2	11
Mvmt Flow	10	10	19	214	14	180	10	172	204	151	242	14
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.4	20	12.2	14.1
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	0%	26%	52%	100%	0%
Vol Thru, %	95%	0%	26%	3%	0%	95%
Vol Right, %	0%	100%	48%	44%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	165	31	330	122	207
LT Vol	8	0	8	173	122	0
Through Vol	139	0	8	11	0	196
RT Vol	0	165	15	146	0	11
Lane Flow Rate	181	204	38	407	151	256
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.335	0.334	0.073	0.666	0.295	0.462
Departure Headway (Hd)	6.653	5.909	6.865	5.882	7.056	6.507
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	537	603	525	611	506	549
Service Time	4.442	3.698	4.865	3.953	4.843	4.294
HCM Lane V/C Ratio	0.337	0.338	0.072	0.666	0.298	0.466
HCM Control Delay	12.8	11.7	10.4	20	12.8	14.8
HCM Lane LOS	B	B	B	C	B	B
HCM 95th-tile Q	1.5	1.5	0.2	5	1.2	2.4

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	202	177	9	19	15
Future Vol, veh/h	7	202	177	9	19	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	266	233	12	25	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	245	0	-	0	390	123
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	151	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1318	-	-	-	586	905
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1318	-	-	-	581	905
Mov Cap-2 Maneuver	-	-	-	-	581	-
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	861	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1318	-	-	-	690
HCM Lane V/C Ratio	0.007	-	-	-	0.065
HCM Control Delay (s)	7.8	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	221	166	0	18	20
Future Vol, veh/h	0	221	166	0	18	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	291	218	0	24	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	364	109
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	146	-
Critical Hdwy	-	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	0	-	-	0	609	924
Stage 1	0	-	-	0	797	-
Stage 2	0	-	-	0	866	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	609	924
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	866	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	609	924
HCM Lane V/C Ratio	-	-	0.039	0.028
HCM Control Delay (s)	-	-	11.2	9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	5	5	335	347	2
Future Vol, veh/h	8	5	5	335	347	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	7	7	441	457	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	914	459	460	0	-	0
Stage 1	459	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	303	602	1101	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	301	602	1101	-	-	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.1	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1101	-	373	-	-
HCM Lane V/C Ratio	0.006	-	0.046	-	-
HCM Control Delay (s)	8.3	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	151	31	91	154	38	31	119	131	44	156	44
Future Vol, veh/h	57	151	31	91	154	38	31	119	131	44	156	44
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	2	5	4	2	2	2	2	2	3	3	8
Mvmt Flow	77	204	42	123	208	51	42	161	177	59	211	59
Number of Lanes	1	2	0	1	2	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	15.3	15.6	30.2	22.9
HCM LOS	C	C	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	48%	0%	100%	62%	0%	100%	57%	0%	78%
Vol Right, %	0%	52%	0%	0%	38%	0%	0%	43%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	250	57	101	81	91	103	89	44	200
LT Vol	31	0	57	0	0	91	0	0	44	0
Through Vol	0	119	0	101	50	0	103	51	0	156
RT Vol	0	131	0	0	31	0	0	38	0	44
Lane Flow Rate	42	338	77	136	110	123	139	121	59	270
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.104	0.76	0.202	0.337	0.265	0.318	0.337	0.283	0.151	0.636
Departure Headway (Hd)	8.975	8.096	9.438	8.918	8.694	9.3	8.745	8.436	9.139	8.475
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	399	446	380	403	413	386	411	426	392	427
Service Time	6.729	5.849	7.201	6.681	6.457	7.059	6.504	6.195	6.898	6.233
HCM Lane V/C Ratio	0.105	0.758	0.203	0.337	0.266	0.319	0.338	0.284	0.151	0.632
HCM Control Delay	12.8	32.4	14.6	16.2	14.6	16.4	15.9	14.5	13.5	25
HCM Lane LOS	B	D	B	C	B	C	C	B	B	C
HCM 95th-tile Q	0.3	6.4	0.7	1.5	1.1	1.3	1.5	1.1	0.5	4.3

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	15	24	196	285	28
Future Vol, veh/h	34	15	24	196	285	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	4	11	10	2	2	9
Mvmt Flow	43	19	30	248	361	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	687	379	396	0	-	0
Stage 1	379	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.44	6.31	4.2	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.399	2.29	-	-	-
Pot Cap-1 Maneuver	410	648	1120	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	397	648	1120	-	-	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	667	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.3	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1120	-	450	-	-
HCM Lane V/C Ratio	0.027	-	0.138	-	-
HCM Control Delay (s)	8.3	0	14.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	5	5	80	4	92	9	140	64	76	111	14
Future Vol, veh/h	6	5	5	80	4	92	9	140	64	76	111	14
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	7	2	3	2	2	2	3	2	2
Mvmt Flow	9	7	7	114	6	131	13	200	91	109	159	20
Number of Lanes	0	1	0	0	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.1	11.5	10.5	10.5
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	38%	45%	100%	0%
Vol Thru, %	94%	0%	31%	2%	0%	89%
Vol Right, %	0%	100%	31%	52%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	64	16	176	76	125
LT Vol	9	0	6	80	76	0
Through Vol	140	0	5	4	0	111
RT Vol	0	64	5	92	0	14
Lane Flow Rate	213	91	23	251	109	179
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.339	0.127	0.037	0.373	0.188	0.279
Departure Headway (Hd)	5.73	4.991	5.789	5.34	6.222	5.619
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	628	719	618	679	578	639
Service Time	3.458	2.719	3.831	3.34	3.95	3.348
HCM Lane V/C Ratio	0.339	0.127	0.037	0.37	0.189	0.28
HCM Control Delay	11.4	8.4	9.1	11.5	10.4	10.5
HCM Lane LOS	B	A	A	B	B	B
HCM 95th-tile Q	1.5	0.4	0.1	1.7	0.7	1.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	218	216	30	11	9
Future Vol, veh/h	22	218	216	30	11	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	295	292	41	15	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	333	0	-	0	521	167
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	208	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1223	-	-	-	485	848
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	807	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1223	-	-	-	471	848
Mov Cap-2 Maneuver	-	-	-	-	471	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	807	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1223	-	-	-	589
HCM Lane V/C Ratio	0.024	-	-	-	0.046
HCM Control Delay (s)	8	0.1	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	229	230	0	10	16
Future Vol, veh/h	0	229	230	0	10	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	309	311	0	14	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	466	156
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	155	-
Critical Hdwy	-	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	0	-	-	0	525	862
Stage 1	0	-	-	0	716	-
Stage 2	0	-	-	0	857	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	525	862
Mov Cap-2 Maneuver	-	-	-	-	525	-
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	857	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	525	862
HCM Lane V/C Ratio	-	-	0.026	0.025
HCM Control Delay (s)	-	-	12	9.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	3	15	216	292	7
Future Vol, veh/h	4	3	15	216	292	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	4	20	292	395	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	732	400	404	0	-	0
Stage 1	400	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	388	650	1155	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	380	650	1155	-	-	-
Mov Cap-2 Maneuver	380	-	-	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1155	-	462	-	-
HCM Lane V/C Ratio	0.018	-	0.02	-	-
HCM Control Delay (s)	8.2	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	129	16	100	97	77	13	194	81	91	208	53
Future Vol, veh/h	56	129	16	100	97	77	13	194	81	91	208	53
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	73	168	21	130	126	100	17	252	105	118	270	69
Number of Lanes	1	2	0	1	2	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	3
HCM Control Delay	14.4	15	19.4	26.5
HCM LOS	B	B	C	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	73%	0%	100%	30%	0%	80%
Vol Right, %	0%	0%	100%	0%	0%	27%	0%	0%	70%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	194	81	56	86	59	100	65	109	91	261
LT Vol	13	0	0	56	0	0	100	0	0	91	0
Through Vol	0	194	0	0	86	43	0	65	32	0	208
RT Vol	0	0	81	0	0	16	0	0	77	0	53
Lane Flow Rate	17	252	105	73	112	77	130	84	142	118	339
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.042	0.591	0.226	0.191	0.276	0.185	0.33	0.201	0.32	0.281	0.747
Departure Headway (Hd)	8.952	8.444	7.734	9.447	8.899	8.704	9.137	8.624	8.119	8.558	7.933
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	400	428	464	380	404	412	394	417	443	422	458
Service Time	6.699	6.191	5.48	7.201	6.652	6.457	6.886	6.373	5.868	6.258	5.633
HCM Lane V/C Ratio	0.043	0.589	0.226	0.192	0.277	0.187	0.33	0.201	0.321	0.28	0.74
HCM Control Delay	12.1	22.7	12.7	14.4	15	13.4	16.3	13.5	14.7	14.6	30.6
HCM Lane LOS	B	C	B	B	B	B	C	B	B	B	D
HCM 95th-tile Q	0.1	3.7	0.9	0.7	1.1	0.7	1.4	0.7	1.4	1.1	6.2

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	138	25	91	135	31	24	115	131	42	155	48
Future Vol, veh/h	51	138	25	91	135	31	24	115	131	42	155	48
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	2	5	4	2	2	2	2	2	3	3	8
Mvmt Flow	69	186	34	123	182	42	32	155	177	57	209	65
Number of Lanes	1	2	0	1	2	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	3
HCM Control Delay	13.5	13.8	14.1	19.1
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	65%	0%	100%	59%	0%	76%
Vol Right, %	0%	0%	100%	0%	0%	35%	0%	0%	41%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	115	131	51	92	71	91	90	76	42	203
LT Vol	24	0	0	51	0	0	91	0	0	42	0
Through Vol	0	115	0	0	92	46	0	90	45	0	155
RT Vol	0	0	131	0	0	25	0	0	31	0	48
Lane Flow Rate	32	155	177	69	124	96	123	122	103	57	274
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.076	0.341	0.354	0.166	0.281	0.212	0.292	0.27	0.22	0.131	0.581
Departure Headway (Hd)	8.416	7.91	7.202	8.661	8.15	7.951	8.537	7.993	7.702	8.292	7.627
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	454	497	413	439	450	419	448	464	431	472
Service Time	6.193	5.687	4.979	6.442	5.931	5.731	6.314	5.77	5.478	6.064	5.398
HCM Lane V/C Ratio	0.075	0.341	0.356	0.167	0.282	0.213	0.294	0.272	0.222	0.132	0.581
HCM Control Delay	11.9	14.8	13.9	13.2	14.1	12.9	14.8	13.7	12.7	12.3	20.5
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B	C
HCM 95th-tile Q	0.2	1.5	1.6	0.6	1.1	0.8	1.2	1.1	0.8	0.4	3.6

Intersection	
Intersection Delay, s/veh	20.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	152	26	100	105	78	16	194	81	95	209	47
Future Vol, veh/h	56	152	26	100	105	78	16	194	81	95	209	47
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	73	197	34	130	136	101	21	252	105	123	271	61
Number of Lanes	1	2	0	1	2	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	3
HCM Control Delay	15.3	15.7	20.6	27.6
HCM LOS	C	C	C	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	66%	0%	100%	31%	0%	82%
Vol Right, %	0%	0%	100%	0%	0%	34%	0%	0%	69%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	194	81	56	101	77	100	70	113	95	256
LT Vol	16	0	0	56	0	0	100	0	0	95	0
Through Vol	0	194	0	0	101	51	0	70	35	0	209
RT Vol	0	0	81	0	0	26	0	0	78	0	47
Lane Flow Rate	21	252	105	73	132	100	130	91	147	123	332
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.053	0.61	0.234	0.194	0.331	0.244	0.339	0.224	0.342	0.301	0.755
Departure Headway (Hd)	9.228	8.72	8.008	9.605	9.056	8.812	9.387	8.874	8.378	8.781	8.17
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	388	413	448	374	397	407	383	405	429	410	442
Service Time	6.984	6.476	5.764	7.361	6.812	6.568	7.14	6.627	6.131	6.529	5.917
HCM Lane V/C Ratio	0.054	0.61	0.234	0.195	0.332	0.246	0.339	0.225	0.343	0.3	0.751
HCM Control Delay	12.5	24.3	13.2	14.7	16.3	14.4	16.9	14.2	15.5	15.3	32.1
HCM Lane LOS	B	C	B	B	C	B	C	B	C	C	D
HCM 95th-tile Q	0.2	3.9	0.9	0.7	1.4	0.9	1.5	0.8	1.5	1.2	6.3

Intersection	
Intersection Delay, s/veh	15.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	151	31	91	158	34	35	115	131	44	156	44
Future Vol, veh/h	45	151	31	91	158	34	35	115	131	44	156	44
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	2	5	4	2	2	2	2	2	3	3	8
Mvmt Flow	61	204	42	123	214	46	47	155	177	59	211	59
Number of Lanes	1	2	0	1	2	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	3
HCM Control Delay	14.2	14.5	14.6	20
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	62%	0%	100%	61%	0%	78%
Vol Right, %	0%	0%	100%	0%	0%	38%	0%	0%	39%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	115	131	45	101	81	91	105	87	44	200
LT Vol	35	0	0	45	0	0	91	0	0	44	0
Through Vol	0	115	0	0	101	50	0	105	53	0	156
RT Vol	0	0	131	0	0	31	0	0	34	0	44
Lane Flow Rate	47	155	177	61	136	110	123	142	117	59	270
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.114	0.352	0.366	0.15	0.316	0.249	0.298	0.323	0.257	0.141	0.593
Departure Headway (Hd)	8.65	8.144	7.435	8.883	8.372	8.151	8.715	8.17	7.89	8.548	7.894
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	412	440	482	402	427	439	411	438	453	418	454
Service Time	6.442	5.935	5.226	6.682	6.171	5.95	6.507	5.962	5.681	6.334	5.68
HCM Lane V/C Ratio	0.114	0.352	0.367	0.152	0.319	0.251	0.299	0.324	0.258	0.141	0.595
HCM Control Delay	12.6	15.3	14.5	13.3	15	13.7	15.2	14.9	13.4	12.7	21.6
HCM Lane LOS	B	C	B	B	B	B	C	B	B	B	C
HCM 95th-tile Q	0.4	1.6	1.7	0.5	1.3	1	1.2	1.4	1	0.5	3.8

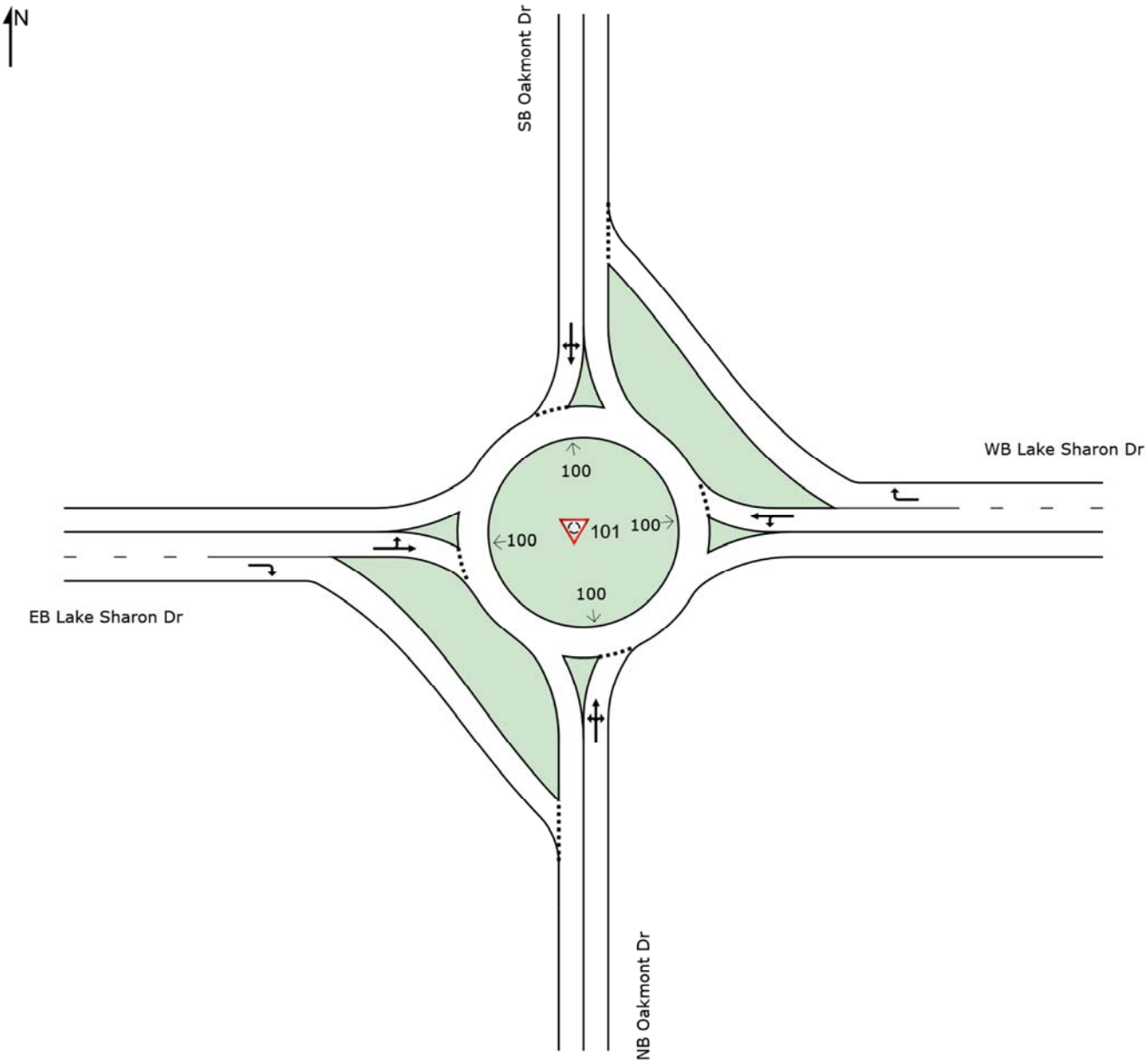
Appendix E:
SIDRA Output Sheets

SITE LAYOUT

Site: 101 [2023 Background AM Peak (Site Folder: General)]

Build-Out (2023) Background AM Peak
Single-Lane Roundabout
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: LEE ENGINEERING LLC | Licence: PLUS / 1PC | Created: Wednesday, May 12, 2021 1:24:26 PM
Project: H:\T1458.06 - Traffic Study, Oakmont at Lake Sharon\Sidra\oakmont at lake sharon.sip9

MOVEMENT SUMMARY

Site: 101 [2023 Background AM Peak (Site Folder: General)]

Build-Out (2023) Background AM Peak
Single-Lane Roundabout
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: NB Oakmont Dr														
3	L2	13	3.0	17	3.0	0.407	8.6	LOS A	2.2	55.0	0.60	0.53	0.60	33.3
8	T1	194	3.0	252	3.0	0.407	8.6	LOS A	2.2	55.0	0.60	0.53	0.60	33.2
18	R2	81	3.0	105	3.0	0.407	8.6	LOS A	2.2	55.0	0.60	0.53	0.60	32.3
Approach		288	3.0	374	3.0	0.407	8.6	LOS A	2.2	55.0	0.60	0.53	0.60	33.0
East: WB Lake Sharon Dr														
1	L2	100	3.0	130	3.0	0.256	6.1	LOS A	1.1	28.7	0.48	0.39	0.48	33.3
6	T1	97	3.0	126	3.0	0.256	6.1	LOS A	1.1	28.7	0.48	0.39	0.48	33.2
16	R2	77	3.0	100	3.0	0.098	4.4	LOS A	0.4	9.8	0.41	0.30	0.41	34.4
Approach		274	3.0	356	3.0	0.256	5.6	LOS A	1.1	28.7	0.46	0.37	0.46	33.6
North: SB Oakmont Dr														
7	L2	91	3.0	118	3.0	0.458	8.9	LOS A	2.7	68.3	0.57	0.46	0.57	32.6
4	T1	208	3.0	270	3.0	0.458	8.9	LOS A	2.7	68.3	0.57	0.46	0.57	32.5
14	R2	53	8.0	69	8.0	0.458	9.0	LOS A	2.7	68.3	0.57	0.46	0.57	31.5
Approach		352	3.8	457	3.8	0.458	8.9	LOS A	2.7	68.3	0.57	0.46	0.57	32.4
West: EB Lake Sharon Dr														
5	L2	56	4.0	73	4.0	0.284	7.4	LOS A	1.2	30.8	0.57	0.55	0.57	33.2
2	T1	129	3.0	168	3.0	0.284	7.3	LOS A	1.2	30.8	0.57	0.55	0.57	33.2
12	R2	16	3.0	21	3.0	0.022	4.0	LOS A	0.1	2.0	0.43	0.29	0.43	34.7
Approach		201	3.3	261	3.3	0.284	7.1	LOS A	1.2	30.8	0.56	0.53	0.56	33.3
All Vehicles		1115	3.3	1448	3.3	0.458	7.7	LOS A	2.7	68.3	0.55	0.47	0.55	33.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [2023 Background PM Peak (Site Folder: General)]

Build-Out (2023) Background PM Peak
Single-Lane Roundabout
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: NB Oakmont Dr														
3	L2	24	3.0	32	3.0	0.378	7.9	LOS A	2.0	51.0	0.55	0.46	0.55	33.5
8	T1	115	3.0	155	3.0	0.378	7.9	LOS A	2.0	51.0	0.55	0.46	0.55	33.4
18	R2	131	3.0	177	3.0	0.378	7.9	LOS A	2.0	51.0	0.55	0.46	0.55	32.5
Approach		270	3.0	365	3.0	0.378	7.9	LOS A	2.0	51.0	0.55	0.46	0.55	33.0
East: WB Lake Sharon Dr														
1	L2	91	4.0	123	4.0	0.283	6.1	LOS A	1.3	33.5	0.43	0.32	0.43	33.6
6	T1	135	3.0	182	3.0	0.283	6.0	LOS A	1.3	33.5	0.43	0.32	0.43	33.5
16	R2	31	3.0	42	3.0	0.037	3.5	LOS A	0.1	3.6	0.33	0.19	0.33	34.9
Approach		257	3.4	347	3.4	0.283	5.8	LOS A	1.3	33.5	0.42	0.31	0.42	33.7
North: SB Oakmont Dr														
7	L2	42	3.0	57	3.0	0.356	7.7	LOS A	1.8	46.3	0.56	0.48	0.56	33.3
4	T1	155	3.0	209	3.0	0.356	7.7	LOS A	1.8	46.3	0.56	0.48	0.56	33.3
14	R2	48	8.0	65	8.0	0.356	7.9	LOS A	1.8	46.3	0.56	0.48	0.56	32.2
Approach		245	4.0	331	4.0	0.356	7.8	LOS A	1.8	46.3	0.56	0.48	0.56	33.1
West: EB Lake Sharon Dr														
5	L2	51	3.0	69	3.0	0.267	6.5	LOS A	1.2	29.8	0.51	0.44	0.51	33.8
2	T1	138	3.0	186	3.0	0.267	6.5	LOS A	1.2	29.8	0.51	0.44	0.51	33.7
12	R2	25	5.0	34	5.0	0.034	3.9	LOS A	0.1	3.2	0.40	0.26	0.40	34.6
Approach		214	3.2	289	3.2	0.267	6.2	LOS A	1.2	29.8	0.50	0.42	0.50	33.8
All Vehicles		986	3.4	1332	3.4	0.378	6.9	LOS A	2.0	51.0	0.51	0.42	0.51	33.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [2023 Total AM Peak (Site Folder: General)]

Build-Out (2023) Total AM Peak
Existing Site Plan Volumes
Single-Lane Roundabout
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: NB Oakmont Dr														
3	L2	16	3.0	21	3.0	0.427	9.2	LOS A	2.4	61.1	0.63	0.59	0.67	33.0
8	T1	194	3.0	252	3.0	0.427	9.2	LOS A	2.4	61.1	0.63	0.59	0.67	32.9
18	R2	81	3.0	105	3.0	0.427	9.2	LOS A	2.4	61.1	0.63	0.59	0.67	32.0
Approach		291	3.0	378	3.0	0.427	9.2	LOS A	2.4	61.1	0.63	0.59	0.67	32.7
East: WB Lake Sharon Dr														
1	L2	100	3.0	130	3.0	0.267	6.3	LOS A	1.2	30.3	0.48	0.40	0.48	33.3
6	T1	105	3.0	136	3.0	0.267	6.3	LOS A	1.2	30.3	0.48	0.40	0.48	33.2
16	R2	78	3.0	101	3.0	0.100	4.4	LOS A	0.4	9.9	0.41	0.30	0.41	34.4
Approach		283	3.0	368	3.0	0.267	5.8	LOS A	1.2	30.3	0.46	0.37	0.46	33.5
North: SB Oakmont Dr														
7	L2	95	3.0	123	3.0	0.463	9.1	LOS A	2.7	68.9	0.58	0.48	0.58	32.5
4	T1	209	3.0	271	3.0	0.463	9.1	LOS A	2.7	68.9	0.58	0.48	0.58	32.4
14	R2	47	8.0	61	8.0	0.463	9.2	LOS A	2.7	68.9	0.58	0.48	0.58	31.4
Approach		351	3.7	456	3.7	0.463	9.1	LOS A	2.7	68.9	0.58	0.48	0.58	32.3
West: EB Lake Sharon Dr														
5	L2	56	4.0	73	4.0	0.321	7.9	LOS A	1.4	35.7	0.59	0.57	0.59	33.0
2	T1	152	3.0	197	3.0	0.321	7.9	LOS A	1.4	35.7	0.59	0.57	0.59	33.0
12	R2	26	3.0	34	3.0	0.036	4.1	LOS A	0.1	3.3	0.43	0.31	0.43	34.6
Approach		234	3.2	304	3.2	0.321	7.5	LOS A	1.4	35.7	0.57	0.54	0.57	33.2
All Vehicles		1159	3.3	1505	3.3	0.463	8.0	LOS A	2.7	68.9	0.56	0.50	0.57	32.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [2023 Total PM Peak (Site Folder: General)]

Build-Out (2023) Total PM Peak
Existing Site Plan Volumes
Single-Lane Roundabout
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: NB Oakmont Dr														
3	L2	35	3.0	47	3.0	0.398	8.3	LOS A	2.1	54.5	0.57	0.49	0.57	33.2
8	T1	115	3.0	155	3.0	0.398	8.3	LOS A	2.1	54.5	0.57	0.49	0.57	33.2
18	R2	131	3.0	177	3.0	0.398	8.3	LOS A	2.1	54.5	0.57	0.49	0.57	32.2
Approach		281	3.0	380	3.0	0.398	8.3	LOS A	2.1	54.5	0.57	0.49	0.57	32.7
East: WB Lake Sharon Dr														
1	L2	91	4.0	123	4.0	0.314	6.5	LOS A	1.5	38.2	0.45	0.34	0.45	33.5
6	T1	158	3.0	214	3.0	0.314	6.4	LOS A	1.5	38.2	0.45	0.34	0.45	33.4
16	R2	34	3.0	46	3.0	0.041	3.5	LOS A	0.2	3.9	0.32	0.18	0.32	34.9
Approach		283	3.3	382	3.3	0.314	6.1	LOS A	1.5	38.2	0.43	0.32	0.43	33.6
North: SB Oakmont Dr														
7	L2	44	3.0	59	3.0	0.372	8.3	LOS A	1.9	47.9	0.59	0.53	0.59	33.1
4	T1	156	3.0	211	3.0	0.372	8.3	LOS A	1.9	47.9	0.59	0.53	0.59	33.0
14	R2	44	8.0	59	8.0	0.372	8.5	LOS A	1.9	47.9	0.59	0.53	0.59	32.0
Approach		244	3.9	330	3.9	0.372	8.3	LOS A	1.9	47.9	0.59	0.53	0.59	32.8
West: EB Lake Sharon Dr														
5	L2	45	3.0	61	3.0	0.278	6.6	LOS A	1.2	31.3	0.52	0.45	0.52	33.8
2	T1	151	3.0	204	3.0	0.278	6.6	LOS A	1.2	31.3	0.52	0.45	0.52	33.7
12	R2	31	5.0	42	5.0	0.042	4.0	LOS A	0.2	4.0	0.40	0.27	0.40	34.6
Approach		227	3.3	307	3.3	0.278	6.3	LOS A	1.2	31.3	0.50	0.42	0.50	33.9
All Vehicles		1035	3.4	1399	3.4	0.398	7.2	LOS A	2.1	54.5	0.52	0.44	0.52	33.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix F:
Delay Study

Intersection Delay Study

Field Sheet
(arranged for 15-second time intervals)

Location: Corinth, TX - Oakmont Drive at Ardglass Trail Approach: Eastbound Movement: EBL & EBR

Date: 04/22/21 Weather: Overcast Study No.: Observer: Curtis Hefner

Time (minute starting at)	Total Number of Vehicles Stopped in the Approach at Time:				Approach Volume	
	+0 sec.	+ 15 sec.	+ 30 sec.	+ 45 sec.	Number Stopped	Number Not Stopping
7:30 AM	0	0	0	0	0	
7:31	0	0	0	0	3	
7:32	1	1	0	0	1	
7:33	1	1	0	0	2	
7:34	1	0	0	0	1	
7:35	0	0	1	0	1	
7:36	0	2	1	0	2	
7:37	0	0	0	0	0	
7:38	0	0	0	0	1	
7:39	1	0	1	0	1	
7:40	0	1	1	0	1	
7:41	0	2	3	3	3	
7:42	2	0	0	0	1	
7:43	0	0	0	0	1	
7:44	0	0	1	0	1	
Subtotal:	6	7	8	3	19	
Total:	24				19	

Total Delay = Total Number Stopped x Sampling Interval

= 24 x 15 = 360 veh-sec

$$\text{Average Delay per Stopped Vehicle} = \frac{\text{Total Delay}}{\text{Number of Stopped Vehicles}}$$

= 360 / 19 = 18.95 sec.

$$\text{Average Delay per Approach Vehicle} = \frac{\text{Total Delay}}{\text{Approach Volume}}$$

= 360 / 19 = 18.95 sec.

$$\text{Percent of Vehicles Stopped} = \frac{\text{Number of Stopped Vehicles}}{\text{Approach Volume}} = 19 / 19 = 100 \text{ percent}$$

Intersection Delay Study

Field Sheet
(arranged for 15-second time intervals)

Location: Corinth, TX - Oakmont Drive at Ardglass Trail Approach: Eastbound Movement: EBL & EBR

Date: 04/22/21 Weather: Overcast Study No.: Observer: Curtis Hefner

Time (minute starting at)	Total Number of Vehicles Stopped in the Approach at Time:				Approach Volume	
	+0 sec.	+ 15 sec.	+ 30 sec.	+ 45 sec.	Number Stopped	Number Not Stopping
3:45 pm	0	0	0	1	1	
3:46	1	2	0	1	2	
3:47	0	0	0	0	1	
3:48	1	1	1	2	2	
3:49	2	0	0	1	1	
3:50	0	0	1	0	1	
3:51	0	0	0	0	0	
3:52	0	0	0	0	0	
3:53	0	0	0	0	0	
3:54	0	0	0	1	1	
3:55	0	0	1	0	1	
3:56	0	0	0	0	0	
3:57	0	0	0	0	0	
3:58	0	0	0	0	0	
3:59	0	0	0	0	0	
Subtotal:	4	3	3	6	10	
Total:	16				10	

Total Delay = Total Number Stopped x Sampling Interval

= 16 x 15 = 240 veh-sec

$$\text{Average Delay per Stopped Vehicle} = \frac{\text{Total Delay}}{\text{Number of Stopped Vehicles}}$$

= 240 / 10 = 24 sec.

$$\text{Average Delay per Approach Vehicle} = \frac{\text{Total Delay}}{\text{Approach Volume}}$$

= 240 / 10 = 24 sec.

$$\text{Percent of Vehicles Stopped} = \frac{\text{Number of Stopped Vehicles}}{\text{Approach Volume}} = 10 / 10 \times 100 = 100 \text{ percent}$$

APPENDIX C
LETTERS

APPENDIX C

LETTERS FROM PROPERTY OWNERS WITHIN 200 FEET OF THE SUBJECT PROPERTY

Miguel Inclan

From: Cheryl Small <casmall1101@gmail.com>
Sent: Tuesday, June 22, 2021 7:34 PM
To: Miguel Inclan
Subject: Casting a vote for the rezoning at Oakmont & Lake Sharon

My name is Cheryl Small and my husband is Shawn Small. We live at 2702 Navajo Road Corinth, TX 76210.

We want to vote NO for the planned rezoning at Lake Sharon and Oakmont Drive.

It seems, by what we've read, this is not a multi-family addition, but it's a mixed residential area.

The plans for the roundabout at Oakmont Drive will be dangerous to the amount of students that walk home, especially the elementary students from Hawk Elementary School. Roundabouts are constant moving cars and we feel extremely dangerous for students.

What about the inconsistent overall existing PD zoning ordinances for the Oakmont Country Club? I know there were issues when Lake Sharon was going in concerning this.

Lastly, the amount of traffic and how it's being directed is ridiculous in the new plans. You will be setting us up for immense congestion and back up. The influx of traffic and noise that we are dealing with just on Lake Sharon with the current neighborhoods has been a huge adjustment.

The speed limit isn't followed well, people fishing there at the lake and parking on our street and the foot traffic have all increased greatly without the new zoning development.

There has got to be a better option then squeezing in a bunch of homes in such a small area that is not conducive to the area.

Thank you for considering our vote.

Shawn & Cheryl Small

Cheryl Small
469.569.1079

Miguel Inclan

From: Totiro Clark <totiro.nk.clark@gmail.com>
Sent: Tuesday, June 22, 2021 9:00 PM
To: Miguel Inclan
Cc: Nancy Gegbe
Subject: Objection to Proposed Rezoning - Avilla Fairways Proposal

To Mr. Miguel Inclan, City Planner,

My wife and I would like to voice our unequivocal objection to the rezoning of the parcel of land that is currently planned for development by NextMetro on the corner of Oakmont Drive and Lake Sharon Drive. Our house is within the 200 feet limit, as we are the first house in the Larkspur subdivision along Ardglass. We chose to move to this neighborhood because we believed it to be a good place to lay down roots and to continue to grow and nurture our family. The area in the adjoining tract of land is currently zoned to allow for townhomes and two-family garden homes. Changing the Zoning requirements is absolutely unnecessary.

It is my understanding that with the implementation of Avilla Fairways and the additional population it will bring, the area traffic rating will be an F according to a recent analysis. We have two schools within a mile of our location and the proposed new neighborhood. The schools have a combined student population of over 1,400 students and could not withstand the additional influx of students, nor could the area deal with the additional traffic that the Avilla Fairways development would bring. This is not even mentioning the danger posed to the students who walk to BOTH schools daily.

The proposed rezoning to identify the land as mixed residential, not multi-family, is inconsistent with the overall existing PD zoning ordinances for Oakmont Country Club Estates. The proposal would also allow/encourage a potentially dangerous and completely unnecessary addition to what my wife and I felt was an idyllic location to settle down.

The increased traffic, population density that would result from the change, and type of property proposed 200 feet from ours would also make our property much less desirable and valuable. My wife and I have done research on the other neighborhoods developed by this company and have identified that these specific types of developments have an extremely negative impact on the areas in which they are placed. If all sides of the proposed development are single family homes, then why would this type of development be placed here and not additional single family homes? This would be an unacceptable addition to the neighborhood for all the above mentioned reasons, and my wife and I OBJECT to the proposal.

--
Very Respectfully,

Totiro and Nancy Clark
321.323.9683

CORINTH
PLANNING & DEVELOPMENT

Planning and Zoning Commission City Hall and Video Conference Meeting
Date: MONDAY, JUNE 28, 2021 AT 6:30 P.M.
City Council Regular City Hall and Video Conference Meeting
Date: THURSDAY, JULY 15, 2021 AT 7:00 P.M.

Hearings Location: City Hall, 3300 Corinth Parkway, Corinth, TX 76208 and remotely at https://www.cityofcorinth.com/remotesession

Dear Property Owner:

On **Monday, June 28, 2021, at 6:30 PM, the City of Corinth Planning and Zoning Commission will hold a public hearing** to consider testimony and make a recommendation to the Corinth City Council on the item listed below, and on **Thursday, July 15 , 2021, at 7:00 PM, the Corinth City Council will hold a public hearing** to consider testimony and consider the approval of an Ordinance regarding the item listed below:

A rezoning request to amend the zoning classification from PD-6 Planned Development District, Ordinance No. 87-12-17-24, for Two Family Garden Homes, Townhomes, and Neighborhood Shopping and PD 24 Planned Development District, Ordinance No. 99-12-16-45 for Two Family Garden Homes to a Planned Development District with a base zoning district of MF-1 Multi-Family Residential, on approximately ±24.595 acres of land within the A.H. Serren Survey, Abstract No. 1198 and the B. Merchant Survey, Abstract No. 800, City of Corinth, Denton County, Texas. **The property is generally located at the northwest corner of Lake Sharon Drive and Oakmont Drive and east of FM 2499. (Avilla Fairways PD ZAPD20-0004)**

As a property owner within two hundred (200) feet of this property, you are invited to attend this meeting, either in person or through video conference, and voice your opinion at the public hearing. You are not required to be present, but all interested parties wanting to be heard should participate through the time and methods stated above.

For your information, the latest version of the Planned Development Concept Plan for the subject property is enclosed with this letter. Please note that the concept plan is subject to change.

Additionally, your opinion regarding the request on the property described above may be expressed by notation on this form or by letter. You may support or oppose this request; your opposition will be considered a protest. Written comments must be received by the **City of Corinth Planning and Development Department at 3300 Corinth Parkway, Corinth, Texas 76208 (protests must be received 3 days prior to public hearings).** Comments may also be sent by email to **Miguel Inclan, Planner, at miguel.inclan@cityofcorinth.com**. Additionally, if you have any questions regarding the proposed item you may call **940-498-3263** for assistance.

I am writing in **(Check as applicable) Support:** ___ **Opposition:** ✓ of the proposal. OPPOSED

DOOTY, CHRISTOPHER & KIMBERLEY
2405 GLENHAVEN DR
CORINTH, TX 76210

RECD JUN 24 2021

Name/Address/City: (Please Print) (Required

2405 Glenhaven Dr Corinth, TX. 76210

In accordance with Section 418.016 of the Texas Government Code, the Corinth Planning and Zoning Commission and the City Council may participate in this meeting remotely in compliance with the Texas Open Meetings Act and under the provisions provided by the Governor of Texas in conjunction with the Declaration of Disaster enacted March 13, 2020 and as amended on March 24, 2020.

Miguel Inclan

From: Chip Lucas <chiplucas@yahoo.com>
Sent: Tuesday, June 22, 2021 5:19 PM
To: Miguel Inclan
Cc: Larkspur
Subject: Objection to Proposed Rezoning - Endeavor Tract

To: Miguel Inclan, City Planner

Dear Mr. Inclan:

We would like to voice our STRONG objection to the rezoning of the Endeavor tract at the NW corner of Lake Sharon Drive and Oakmont Drive. Our house directly backs up to the fairway that borders this tract and is only one house down from Rye Rd., so is well within the 200 feet limit area most affected.

When my wife and I moved to the Oakmont Country Club Estates Larkspur neighborhood, this adjoining tract was included in the existing PD zoning ordinances, and so changing it now would be inconsistent at the very least. The tract shows as “Mixed Residential”, so changing it to multi-family does not meet the city’s own definition of Mixed Residential, nor does it comply with the city’s Comprehensive Plan. The existing zoning already allows for townhomes and two-family garden homes, which are not much different than the smaller units being proposed, so there is NO NEED to change the zoning.

The current infrastructure (schools, streets, utilities) is NOT designed to support the increased population density and parking requirements, and the proposed roundabout at Oakmont Dr. and Lake Sharon Dr. will make the area EXTREMELY dangerous for the many school-aged children who walk to Hawk Elementary and Crownover Middle Schools. Oakmont Dr. is already problematic during school drop-off and pick up hours, and adding this many more students will make the situation untenable. Also, we can see NO USEFUL PURPOSE for extending Rye Rd. from Larkspur into the proposed subdivision, even if it were for ‘emergency access only’. In addition to the fact that we do not believe that this emergency access can or will be enforced, it will make it that much more dangerous for golfers, as now they will have to cross a street for two consecutive holes. Certainly we do not need the tremendous amount of overflow traffic that will result from this development spilling into Larkspur, which is not designed for it at all. We also understand that the current traffic study is incomplete, so any decision to change the zoning would be made with incomplete information at best.

The increased population density, increased parking requirements, increased traffic, and the type of property proposed DIRECTLY across from us will serve to make our own property much less desirable as well as less valuable. I have seen many examples of developments such as the one proposed, and as the target renters have much less investment in the property, it will soon have very negative impact on the entire area. We really do not understand why similar type housing to those located on BOTH SIDES of Lake Sharon Dr. could not be an option, at least where it directly adjoins Larkspur.

Sincerely,

Edgar C. (Chip) and Suzanne Lucas
1308 Ballycastle Ln.
Corinth, TX 76210

CORINTH
PLANNING & DEVELOPMENT

Planning and Zoning Commission City Hall and Video Conference Meeting
Date: MONDAY, JUNE 28, 2021 AT 6:30 P.M.
City Council Regular City Hall and Video Conference Meeting
Date: THURSDAY, JULY 15, 2021 AT 7:00 P.M.

Hearings Location: City Hall, 3300 Corinth Parkway, Corinth, TX 76208 and remotely at https://www.cityofcorinth.com/remotesession

Dear Property Owner:

On **Monday, June 28, 2021, at 6:30 PM, the City of Corinth Planning and Zoning Commission will hold a public hearing** to consider testimony and make a recommendation to the Corinth City Council on the item listed below, and on **Thursday, July 15 , 2021, at 7:00 PM, the Corinth City Council will hold a public hearing** to consider testimony and consider the approval of an Ordinance regarding the item listed below:

A rezoning request to amend the zoning classification from PD-6 Planned Development District, Ordinance No. 87-12-17-24, for Two Family Garden Homes, Townhomes, and Neighborhood Shopping and PD 24 Planned Development District, Ordinance No. 99-12-16-45 for Two Family Garden Homes to a Planned Development District with a base zoning district of MF-1 Multi-Family Residential, on approximately ±24.595 acres of land within the A.H. Serren Survey, Abstract No. 1198 and the B. Merchant Survey, Abstract No. 800, City of Corinth, Denton County, Texas. **The property is generally located at the northwest corner of Lake Sharon Drive and Oakmont Drive and east of FM 2499. (Avilla Fairways PD ZAPD20-0004)**

As a property owner within two hundred (200) feet of this property, you are invited to attend this meeting, either in person or through video conference, and voice your opinion at the public hearing. You are not required to be present, but all interested parties wanting to be heard should participate through the time and methods stated above.

For your information, the latest version of the Planned Development Concept Plan for the subject property is enclosed with this letter. Please note that the concept plan is subject to change.

Additionally, your opinion regarding the request on the property described above may be expressed by notation on this form or by letter. You may support or oppose this request; your opposition will be considered a protest. Written comments must be received by the **City of Corinth Planning and Development Department at 3300 Corinth Parkway, Corinth, Texas 76208 (protests must be received 3 days prior to public hearings).** Comments may also be sent by email to **Miguel Inclan, Planner, at miguel.inclan@cityofcorinth.com**. Additionally, if you have any questions regarding the proposed item you may call **940-498-3263** for assistance.

I am writing in **(Check as applicable) Support:** ____ **Opposition:** X of the proposal.

We oppose for the following reasons: ① ~~Traffic~~ Safety issues and related risk to school children ② Quality and type of development is inconsistent with current neighborhoods ③ increased noise and pedestrian activity creating unwanted disturbance due to high density of development and proposed dog park ④ inconsistent with overall existing PD zoning ordinances for Oakmont Country Club Estates.

Name/Address/City: (Please Print) (Required)

Alfred + Teresa Coughan 1400 Ballycastle Ln CORINTH

In accordance with Section 418.016 of the Texas Government Code, the Corinth Planning and Zoning Commission and the City Council may participate in this meeting remotely in compliance with the Texas Open Meetings Act and under the provisions provided by the Governor of Texas in conjunction with the Declaration of Disaster enacted March 13, 2020 and as amended on March 24, 2020.

June 22, 2021

OBJECTION to Proposed Rezoning

City of Corinth Planning and Development Department,

As shared in February 2021, we would like to reiterate our STRONG opposition to the proposed rezoning on the corner of Lake Sharon Drive and Oakmont Drive. We just purchased our home in December 2020, which is located on the corner of Ballycastle Lane and Rye Road. This rezoning will have a significant negative impact directly on our property and livelihood, as well as that of our community.

Over the past several months, our community has expressed various concerns with this proposed development. In February 2021, the P&Z Commission voted against this proposal due to our community's widespread opposition and concerns.

The proposal does not comply with the City's Comprehensive Plan, which designates this land as mixed residential, not multi-family. Changing it to multi-family does not meet the city's own definition of mixed residential. The existing zoning already allows for townhomes and two-family garden homes, which are not much different than the smaller units proposed by the developer, so there is no need to change the zoning.

The city's current infrastructure is not designed to support the large increase in population in an already dense area, further congesting our schools, roadways, parking, and traffic. Adding 471+ additional daily travelers in this highly populated community creates significant concerns for children who walk to and from school unsupervised. Oakmont Drive is already overly congested during drop-off and pick-up hours and adding more students/traffic to this mix will make it even more problematic. Hawk, Crownover, and Guyer are highly desired schools and adding additional students from a high-density community will cause further capacity constraints.

The connection of Rye Road is also a huge concern, as there is no valid reason to do so. The proposed property already has three different entryways/exits, so justifying it as an 'emergency access only' does not make sense and cannot be reasonably enforced without residential burden. The Larkspur community has only had one entryway/exit since initial development and was maintained as such during expansion, so why would this community need four? Connecting two separately owned developments will cause excessive traffic overflow within Larkspur (which is ultimately shifting the problem from a city street to a residential street) and create further safety concerns for our children.

The proposal to build rental housing on an island surrounded by middle to upper income properties will obviously have a significant negative impact on our property value and others within our community. Since target renters have little to no investment in their property, this will quickly have a widespread negative impact on surrounding neighborhoods. We have also seen many examples where property management turnover is inevitable, which leads to diminished maintenance, lighter restrictions on renters, and concern for increased crime. This is a large concern for us, especially due to the proximity to Hawk Elementary and Crownover Middle School, which our children attend.

We have been residents of Oakmont/Corinth for over 15 years and have watched this area rapidly flourish, especially the neighborhoods surrounding Hawk Elementary and Crownover Middle School. Our

previous Oakmont residence was more heavily trafficked as time went on, so we recently chose this home for its secluded, peaceful nature. One thing that we have always loved about Corinth is its proximity to larger cities, but it has also maintained the rural, small-town atmosphere with a healthy balance regarding development. Over-developing this area will make it less desirable to live, especially with long-standing residents who have invested their livelihood here.

We ask that you hear and respect the concerns of your community. We believe there are more suitable areas for a development of this nature.

Respectfully,

David and Brittani Graham
1310 Ballycastle Lane
Corinth, TX 76210

Miguel Inclan

From: Tina Zamora <tvaleez@yahoo.com>
Sent: Thursday, June 24, 2021 1:40 PM
To: Miguel Inclan
Cc: Jennifer Olive; Cody Gober; brian.rush@boards.cityofcorinth; Wade May; Rodney Thornton; Billy Roussel; Rob zamora; Helen-Eve Beadle
Subject: Avila Fairways PD ZAPD20-0004

Roberto & Tina Zamora
2700 Navajo Rd

We are in Opposition of the Avila Fairways, Lake Sharon @ Oakmont proposal.

Aside from our home being in the buffer zone (unacceptable) we have issues with the proximity to schools and the students safety with the increase of traffic, and the density of this proposal is not conducive to this area.

Regards
Roberto & Tina

Sent from my iPad

APPENDIX C
LETTERS FROM GENERAL PUBLIC

Miguel Inclan

From: Bob Novinsky <rnovinsky@charter.net>
Sent: Tuesday, June 22, 2021 9:31 PM
To: Helen-Eve Beadle
Cc: Home - Bob
Subject: Opposition to NexMetro rezoning case

Ms. Olive,
My name is Bob Novinsky and I have resided for over 15 years in the Oakmont development on Redrock Drive.
I strongly oppose the rezoning proposed by NexMetro/ Avila at the corner of Lake Sharon and Oakmont Drive.
Here are my concerns:

1. it does not comply with the City's Comprehensive Plan, which shows that tract as "Mixed Residential"
2. it is inconsistent with the overall existing PD zoning ordinances for Oakmont Country Club Estates (which this tract is included in),
3. increased density which will create significant traffic flow issues,
4. decreased or insufficient parking requirements,
5. increased traffic during school drop-off & pick-up hours because of new street onto Oakmont Dr. and increased traffic & parking within Larkspur subdivision (abutting this tract/across from Hawk) if Rye Street is connected for anything other than emergency access only,
6. dangerous for our school kids who walk to and from Hawk Elementary and Crownover Middle Schools because of the proposed roundabout at Oakmont Dr. & Lake Sharon Dr., and
7. the existing zoning already allows for townhomes and two-family garden homes (not much different than the smaller units proposed by the developer) so there is NO NEED to change the zoning.

I appreciate your attention and would hope that you would vote against and reject this rezoning proposal.

Thank you,
Bob Novinsky
2212 Redrock Drive
Corinth TX
214-316-8175

Miguel Inclan

From: Michelle Mixell
Sent: Friday, June 25, 2021 9:32 AM
To: Miguel Inclan
Subject: FW: Zoning change at Oakmont Dr. & Lake Sharon Drive

From: John & Cherie Holt <jncnboyz@comcast.net>
Sent: Friday, June 25, 2021 9:30 AM
To: Michelle Mixell <Michelle.Mixell@cityofcorinth.com>
Subject: Zoning change at Oakmont Dr. & Lake Sharon Drive

Hello Michelle,
I would like to express to following concerns regarding the above mentioned Zoning change:

1. It will be dangerous for our school kids who walk to and from Hawk Elementary and Crownover Middle Schools because of the proposed roundabout at Oakmont Dr. & Lake Sharon Dr.
2. The existing zoning already allows for townhomes and two-family garden homes (not much different than the smaller units proposed by the developer) so there is NO NEED to change the zoning to be multi-family.

As fairly new residents of Corinth, we are a little surprised and disappointed that this is being considered. Corinth is a great place to live but increased street parking, traffic, and congestion don't seem appealing.

Thank you for your consideration and what you do for the City of Corinth.

Best,
Cherie Holt

Miguel Inclan

From: Amy Conine <akconine@yahoo.com>
Sent: Wednesday, June 23, 2021 8:51 PM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy Roussel
Subject: Lake Sharon/Oakmont Zoning Request

Hello,

My name is Amy Conine, and I live at 1705 Goshawk Lane in the Eagle Pass Community of Corinth. This email is in reference to the zoning changes requested by Avilla Fairways. I would like officially state that I am against the zoning changes.

I attended the initial informational meeting on January 27th, the Planning & Zoning meeting on February 22nd, and the second informational meeting via Zoom on June 23rd. After seeing their initial proposal, I was disappointed to see that Avilla had made minimal changes based on discussion points and input of the community. One of these points was the maximum bedroom occupancy and car spaces per dwelling. As a realtor and property manager, I can say that all of Denton/Corinth rental properties are appealing to student tenants. I frequently receive applications for properties in residential areas that will be seven people for a four bedroom, or six for a three bedroom. In many instances, the neighborhood HOAs have By-Laws that prevent this type of occupancy, or the Landlord limits the number of vehicles allowed to prevent this type of occupancy. Considering the representative for Avilla referred to his concern over Fair Housing laws, it shows he does not have a grasp of what the Fair Housing laws apply to, nor does he understand the rental market in this area. His lack of concern for community input reveals an overall dismissal of resident concern. Therefore, I reach out to you, as the representatives of our community, to not dismiss our concerns.

Avilla mentioned that they do not typically appeal to applicants with children or college students. However, none of their other locations are located within walking distance of two schools, specifically schools with the ratings that Hawk and Crownover have. I have visited their Avilla Fossil Creek location, and while I would say it is not aesthetically pleasing, I will say, one of their talking points, is its convenience to TCU. Source: https://www.avillafossilcreek.com/mapsanddirections?gadid=515092478582&device=c&network=g&keyword=avilla%20fossil%20creek&adgroup=120446769505&campaign=12766325031&gclid=CjwKCAjwt8uGBhBAEiwAayu_9XO50dfomEABB84pA-QxsrnMMdOJpkYsh76cvLaIIRrsMijYQcLSGhoCADUQAvD_BwE

Furthermore, I am against this zoning change request due to the increased traffic on Oakmont. Oakmont has a heavy pedestrian presence not just during at the beginning and end of the school day, but also after Crowover's athletic practices end between 5:30-6:00 PM. With students walking home in both directions on Oakmont, they are already competing with the traffic of commuters returning home, but would now have to contend with an additional access point on Oakmont, as well as a potential traffic circle, that as one city employee described, would have a "landing pad" for students to stand on as traffic swirled around them. There is nothing that sounds safe about having a landing pad. At the initial informational meeting, we were told by a city employee that a traffic study would be completed. At the Planning & Zoning meeting, the city attorney stated that it was

not required. These conflicting statements seem to suggest that the city does not have any plans to potential impact on its citizens. This is a dangerous oversight and a concern.

I could go on, and I will in future emails if needed, but I believe the current zoning that allows for townhomes and two-family garden homes is satisfactory for the area. I appreciate the time and dedication that you provide for our city on behalf of its citizens, and I implore to be our voice in regards to this matter.

Thank you,

Amy Conine
REALTOR

Mobile: 940-368-2160
Serving the DFW area
Web: https://www.crownretx.com/

Miguel Inclan

From: Michelle del Carpio <ittychelle@yahoo.com>
Sent: Wednesday, June 23, 2021 1:54 PM
To: Helen-Eve Beadle
Subject: Rezoning of NW corner of Lake Sharon and Oakmont

Dear Helen-Eve Beadle,

I am writing to you today to let you know that I oppose the proposed zoning change for the Endeavor tract at the NW corner of Lake Sharon Drive and Oakmont Drive.

I would like to start off by making it clear that I object to anything that will enable a developer to build multiple rental properties in my neighborhood. This is not the kind of neighborhood I moved into 17 years ago, and not the kind of neighborhood I want to live in now. This developer is well known for building a rental neighborhood then selling it off a few years later and all original agreements about upkeep, etc. are then gone and the area rapidly declines. The City of Corinth does not need nor does its citizens want this type of development in our area.

Additionally, this development is very close to a school. This will greatly increase traffic in this area and add the need for a crossing guard to aid elementary school students walking home. The intersection at Lake Sharon and Oakmont will have so much traffic, that a stop light and additional turn lanes will be needed at the very least. The speed limit on Lake Sharon was just increased to 40 mph and it will be hard enough for children to get to and from school safely with the intersection and area as it is. Adding a roundabout is a terrible idea and it is too dangerous for 5 and 6 year old children to have to navigate through on their way to and from school. As an adult, I don't even want to think about having to navigate crossing a roundabout, let alone small children!

This doesn't even address the added crime that will come to the area due to renters. Renters have little to no loyalty to their neighbors or city. They do not care about the area they are renting in. It is just another temporary place for them to live before they move on to the next place. Statistics show that crime is higher near rental properties. The residents in the golf course area did not buy half a million dollar homes to have a rental property built right next door. This will drive property values down and will result in many of your long time residents to lose money on their property.

After the issues with the water and electricity in February, I think city infrastructure needs to be improved before focusing on adding additional rental properties in the area. The area along Lake Sharon is a water shed and there are already flooding and drainage problems on Blue Holly. Adding more concrete to this area is not the answer. Please focus on improving the lives of those long time residents that have hung in through thick and thin with the city before adding new "rental homes".

Please do not enable or allow this type of development in our city. Your job is not to work for the developers, but to work for the citizens.

Sincerely,

17-year Resident
Michelle del Carpio
2506 Blue Holly Drive
Cypress Point Estates

Miguel Inclan

From: Wendy Dixon <dixon4ttu@gmail.com>
Sent: Tuesday, June 22, 2021 11:17 AM
To: Helen-Eve Beadle
Subject: Protesting the zoning change

Dear Ms. Beadle,

When my family moved back to Texas 3 years ago, we happily chose Corinth (specifically across from Hawk and Crownover) for the excellent schools, safe neighborhoods and the small town feeling community.

We love taking family walks and bike rides through the beautiful tree-lined streets and waving to friends and neighbors along the way.

My children walk to school daily and feel safe when crossing the street thanks to our thoughtful crossing guard.

When I learned about the plans for a small townhouse area being built in the Lake Sharon and Oakmont area a few months ago, I joined the zoom calls and was one of many who shared my concerns. My husband and I were relieved when the plans were voted down so we could continue to enjoy our safe community with lots of beautiful trees.

I understand there is another proposal so I would like to share my concerns:

1. Increased traffic during school drop off and pick up hours because of new streets and more traffic. The safety of our children should be a TOP priority for you as part of the Planning and Zoning Commission.

2. The zoning change does not comply with the city's comprehensive plan which shows that tract as mixed residential. Can this zoning be changed to leave the land as is which is a beautiful area of trees?

3. Increased population density. The schools are great but adding a large number of new students isn't feasible.

4. A roundabout at Oakmont Drive and Lake Sharon is extremely dangerous. The traffic is designed to not stop flowing at a round-about. What about all of the children who walk to school? How will they navigate crossing the street safely when a large percentage of drivers don't even understand how to drive in a round-about?

5. Smaller properties including 600 square foot homes will decrease property value in the area. We all paid a high price to live in this community.

6. The existing zoning already allows for townhomes and two-family garden homes so there is no need to change the zoning unless it changes it to stay as a beautiful park area with trees.

As a concerned citizen of Corinth, I greatly appreciate your time and attention to this matter.

I ask you to please reconsider any proposals of building anything in that area unless it is a beautification project including parks and walking trails for the community.

Thank you,

Wendy

Miguel Inclan

From: Joan Dudley <joan.dudley@gmail.com>
Sent: Wednesday, June 23, 2021 8:30 PM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy Roussel
Subject: Oakmont Drive and Lake Sharon Drive Proposed Rezoning

We strongly object to the rezoning of the Endeavor trat at the NW corner of Lake Sharon Drive and Oakmont Drive. There are multiple reasons we are protesting this change:

. It does not comply with the City's ComprehensivePlan, which shows that trace as "Mixed Residential" (sochangingit to multi-family does not meet theCity's own definition of Mixed Residential.f

. It is inconsistent with the overall existing PD zoning ordinances for Oakmont CountryClub Estates (which this tract is included in).

. Increased density (more dwelling units per acre) than current zoning.

. Decreased parking requirements than current zoning.

Miguel Inclan

From: Joan Dudley <joan.dudley@gmail.com>
Sent: Wednesday, June 23, 2021 8:58 PM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy Roussel
Subject: Re: Oakmont Drive and Lake Sharon Drive Proposed Rezoning

Continuation of Joan Dudley e-mail

. Increased traffic during school drop-off & pick-up hours because of new street onto Oakmont Drive and increased traffic & parking within Larkspur subdivision(abutting this tract/across from Hawk)

. Dangerous for our school kids who walk to and from Hawk Elementaryand Crownover Middle Schools because of the proposed roundabout at Oakmont Dr. & Lake Sharon Dr.

. The existing zoning already allows for townhomes and two-family garden homes (not much different than the smaller units proposed by the developer) so there is NO NEED to change the zoning to be multi-family.

We believe the Best & Highest use of said Property would definitely be single family homes that would fit in much better with adjacent homes & properties.

As taxpayers, voters & residents in this City, WE ARE DEFINITELY AGAINST THIS PROPOSAL!

Thomas & Joni Dudley
1002 Balleycastle Lane
Corinth, TX 76210

p.s. WE ARE ALSO VERY CONCERNED THAT WE WILL BE LOSING ALL OR SOME OF THE TREES ON HOLE #13!!!!!

On Wed, Jun 23, 2021 at 8:29 PM Joan Dudley <joan.dudley@gmail.com> wrote:

> **We strongly object to the rezoning of the Endeavor trat at the NW corner of Lake Sharon Drive and Oakmont Drive. There are multiple reasons we are protesting this change:**
>
> **. It does not comply with the City's ComprehensivePlan, which shows that trace as "Mixed Residential" (sochangingit to multi-family does not meet theCity's own definition of Mixed Residential.f**
>
> **. It is inconsistent with the overall existing PD zoning ordinances for Oakmont CountryClub Estates (which this tract is included in).**
>
> **. Increased density (more dwelling units per acre) than current zoning.**

. Decreased parking requirements than current zoning.

Miguel Inclan

From: Karen Field <karenfield@mac.com>
Sent: Monday, June 21, 2021 9:09 AM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy Roussel
Subject: Proposed rezoning at Oakmont and Lake Sharon

As a Corinth resident, I am disheartened that the proposed rezoning, specifically the Avilla Fairways project, is being represented to the Corinth Planning and Zoning commission.

I am worried about our schools and the increase in traffic. More than 1,400 kids attend Hawk Elementary and Crownover Middle School. So many of these kids walk to and from school; this is a very pedestrian neighborhood. The proposed roundabout is a horrible idea. Now cars don't even have to stop at Oakmont and Lake Sharon? And the new housing developments on Lake Sharon are only going to compound the mess. Show me a roundabout near two schools in a residential neighborhood. Will there be a crossing guard to help these school age children cross this busy intersection? We're talking kids as young as nine years old holding their little sister's hand. Most of the children who attend these schools do not meet the district requirement for riding a bus. Will an exemption be made for this? Has the traffic study been completed? I remember seeing a traffic camera installed on April 13, 2021. Here are a few pics from around that day, eight weeks ago. The proposed roundabout will be just past this line of waiting cars. This is a pretty typical day, maybe the line a little longer, due to the rain and less foot traffic. I know, as a Larkspur resident, I'm often one of multiple cars waiting to turn left into this mess every school morning.


CORINTH

The Rye Road access connecting Larkspur to Avilla should be for emergency access only. We do not need more cars in Larkspur! The developer has decreased their parking requirements, and thus underestimated the number of spots truly needed. Rye Road and Ballycastle could potentially be an alternate route to avoid the current traffic situation or worse, additional parking. I read somewhere that without a roundabout and without extending Rye Road a preliminary traffic study concluded this area would be rated an F. Makes me wonder if maybe this isn't the right location for another housing project.

Let's talk about the schools, and neighboring schools. It's been stated that this community hopes to attract an older, retired age resident who possibly is interested in golf. I beg to differ. Hawk Elementary is in the top 10 percent of elementary schools in Texas, ranked 344 out of 4479. Crownover is ranked 261 out of 2193. Neighboring schools: McNair Elementary is 783, Nelson Elementary is 1077, Pecan Creek Elementary is 1115 and Corinth Elementary is 2041 out of 4479 elementary schools in Texas. Hawk is the only one in the top 10 percent. There is a reason why Oakmont residents and surrounding neighborhoods purchase their homes in this area. We want the best for our children. The Avilla housing project is going to also attract families that want to attend highly successful schools. Will Hawk and Crownover be able to handle this influx and still keep their high rankings? Sadly, I don't think so. Generally folks living in apartments don't tend to stay in one place for years. They are not truly invested in their communities. Unfortunately the result is a revolving door and the schools are going to have to fill the gap. What first attracted us to the area, exemplary schools, is going to decline.

Isn't the proposed rezoning inconsistent with the overall existing PD zoning ordinances for Oakmont Country Club Estates. Plus it's my understanding that the city of Corinth's comprehensive plan shows this sleeper property as mixed

residential, not multi-family. I'm confused as to why the city is entertaining a potential development that i
with their comprehensive plan.

Aren't several developers interested in this land? Why not entertain some of the other proposals that maybe don't require rezoning and better yet, keep with the city's comprehensive plan.

Miguel Inclan

From: Karen Field <karenfield@mac.com>
Sent: Monday, June 21, 2021 7:01 PM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy Roussel
Subject: Proposed rezoning at Oakmont and Lake Sharon

I realized I forgot to sign, so I am resending my initial email.

Dear City Leaders,

As a Corinth resident, I am disheartened that the proposed rezoning, specifically the Avilla Fairways project, is being represented to the Corinth Planning and Zoning commission.

I am worried about our schools and the increase in traffic. More than 1,400 kids attend Hawk Elementary and Crownover Middle School. So many of these kids walk to and from school; this is a very pedestrian neighborhood. The proposed roundabout is a horrible idea. Now cars don't even have to stop at Oakmont and Lake Sharon? And the new housing developments on Lake Sharon are only going to compound the mess. Show me a roundabout near two schools in a residential neighborhood. Will there be a crossing guard to help these school age children cross this busy intersection? We're talking kids as young as nine years old holding their little sister's hand. Most of the children who attend these schools do not meet the district requirement for riding a bus. Will an exemption be made for this? Has the traffic study been completed? I remember seeing a traffic camera installed on April 13, 2021. Here are a few pics from around that day, eight weeks ago. The proposed roundabout will be just past this line of waiting cars. This is a pretty typical day, maybe the line a little longer, due to the rain and less foot traffic. I know, as a Larkspur resident, I'm often one of multiple cars waiting to turn left into this mess every school morning.


CORINTH

The Rye Road access connecting Larkspur to Avilla should be for emergency access only. We do not need more cars in Larkspur! The developer has decreased their parking requirements, and thus underestimated the number of spots truly needed. Rye Road and Ballycastle could potentially be an alternate route to avoid the current traffic situation or worse, additional parking. I read somewhere that without a roundabout and without extending Rye Road a preliminary traffic study concluded this area would be rated an F. Makes me wonder if maybe this isn't the right location for another housing project.

Let's talk about the schools, and neighboring schools. It's been stated that this community hopes to attract an older, retired age resident who possibly is interested in golf. I beg to differ. Hawk Elementary is in the top 10 percent of elementary schools in Texas, ranked 344 out of 4479. Crownover is ranked 261 out of 2193. Neighboring schools: McNair Elementary is 783, Nelson Elementary is 1077, Pecan Creek Elementary is 1115 and Corinth Elementary is 2041 out of 4479 elementary schools in Texas. Hawk is the only one in the top 10 percent. There is a reason why Oakmont residents and surrounding neighborhoods purchase their homes in this area. We want the best for our children. The Avilla housing project is going to also attract families that want to attend highly successful schools. Will Hawk and Crownover be able to handle this influx and still keep their high rankings? Sadly, I don't think so. Generally folks living in apartments don't tend to stay in one place for years. They are not truly invested in their communities. Unfortunately the result is a revolving door and the schools are going to have to fill the gap. What first attracted us to the area, exemplary schools, is going to decline.

Isn't the proposed rezoning inconsistent with the overall existing PD zoning ordinances for Oakmont Country Club Estates. Plus it's my understanding that the city of Corinth's comprehensive plan shows this sleeper property as mixed

residential, not multi-family. I'm confused as to why the city is entertaining a potential development that i
with their comprehensive plan.

Aren't several developers interested in this land? Why not entertain some of the other proposals that maybe don't require rezoning and better yet, keep with the city's comprehensive plan.

Thank you for your time,
Karen Steger
1307 Ardglass Trail

Miguel Inclan

From: finntj18@gmail.com
Sent: Monday, June 21, 2021 12:34 PM
To: Helen-Eve Beadle; Bill Heidemann; Sam Burke; Sam Burke; Steve Holzwarth; Tina Henderson; Kelly Pickens
Subject: Rezoning of NW corner of Lake Sharon Drive and Oakmont Drive

Once again, we would like to express our concerns regarding the rezoning of the NW corner of Lake Sharon Drive and Oakmont Drive. We have done additional research and find the following issues to be of concern to us:

1. This tract is included in the Oakmont Country Club Estates and the changes are inconsistent with the overall existing PD zoning ordinances.
2. What is proposed has more residences per acre than current zoning allows.
3. It does not appear to comply with the city's comprehensive plan – that plan shows the tract as "Mixed Residential". If it is changed to multi-family, then it does not meet the city's definition of "Mixed Residential".
4. Reduced parking requirements from the current zoning.
5. Then there is the concern regarding increased traffic around a multi-school area and adding a roundabout through which young children would have to walk to get to school. Add to that, the parents who already line up for blocks in order to drop off children could cause additional problems for morning and afternoon traffic in a roundabout.
6. Another street (Rye) funneling traffic onto Oakmont Drive would cause increased congestion in that area. Or increased congestion into the Larkspur subdivision onto Ballycastle Lane and Ardglass Trail.

Please reconsider and keep this area consistent with the other areas in Oakmont Country Club Estates.

Thank you for reading this email and considering the concern we as citizens of Corinth have regarding this rezoning.

Toni and Don Finn

Miguel Inclan

From: Bob Foster <bobfosta@yahoo.com>
Sent: Wednesday, June 23, 2021 9:59 AM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy Roussel
Subject: AGAINST zoning change for Avilla Fairways proposal

Ladies and Gentlemen,

I am writing to voice my opposition to the Avilla Fairways proposal by NexMetro development.

It is inconsistent with Corinth's comprehensive plan to to change the area from as mixed residential to multi-family zoning. I purchased my home and have remained in this area based upon the protections of existing zoning within Oakmont Country Club Estates and Corinth's comprehensive plan.

Please DO NOT move forward with the zoning change and help us maintain our community as has been intended.

I love to see development and growth, however it much be a controlled growth in order to remain consistent with the City of Corinth's Comprehensive plan. Thank you for your consideration.

Regards,

Robert Foster
2712 Navajo Road
Corinth, TX 76210
940-453-4369

Miguel Inclan

From: Tiffany Gough <gough.tiffany@gmail.com>
Sent: Tuesday, June 22, 2021 4:12 PM
To: Helen-Eve Beadle; Cody Gober; Jennifer Olive; Brian Rush; Wade May; Rodney Thornton; Billy Roussel
Subject: Objection to proposed rezoning for Avilla Fairways

Dear P&Z Committee Members,

I am a resident of Larkspur at Oakmont with two young children who will be walking to and from school beginning in the fall. I am already concerned about the flow of traffic on Oakmont near our home and the presence of only one crossing guard in that area and I have even greater concerns about the effects of the rezoning proposed under the Avilla Fairways proposal. We bought our home here so our children could safely walk to and from school. This area must remain mixed residential or single family only. Please note my strong objections to this proposal in your deliberations. Thank you.

Best regards,
Tiffany Gough
(2207 Makena Ct, Corinth)

Miguel Inclan

From: juliehillrealty@gmail.com
Sent: Monday, June 21, 2021 3:04 PM
To: Helen-Eve Beadle
Subject: Zoning change at Oakmont Dr. & Lake Sharon Drive

I am objecting to the rezoning of the Endeavor tract at the NW corner of Lake Sharon Drive and Oakmont Drive

1. This does not comply with the City's Comprehensive Plan, which shows that tract as "Mixed Residential" (so changing it to multi-family does not meet the City's own definition of Mixed Residential),
2. It is inconsistent with the overall existing PD zoning ordinances for Oakmont Country Club Estates (which this tract is included in),
3. This will increase density (more dwelling units per acre) than current zoning,
4. It decreased parking requirements than current zoning,
5. It will increased traffic during school drop-off & pick-up hours because of new street onto Oakmont Dr. and increased traffic & parking within Larkspur subdivision (abutting this tract/across from Hawk) if Rye Street is connected for anything other than emergency access only [by the way, I asked the City earlier this week for a copy of the traffic study and was told it is not yet complete],
6. This will be more dangerous for our school kids who walk to and from Hawk Elementary and Crownover Middle Schools because of the proposed roundabout at Oakmont Dr. & Lake Sharon Dr., and
7. AND, the existing zoning already allows for townhomes and two-family garden homes (not much different than the smaller units proposed by the developer) so there is NO NEED to change the zoning to be multi-family.

Miguel Inclan

From: Mindy Jameson <mindy115@hotmail.com>
Sent: Wednesday, June 23, 2021 12:52 PM
To: Miguel Inclan; Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; BillyRoussel@boards.cityofcorinth.com
Subject: Oakmont Dr. and Lake Sharon Dr. Proposed Rezoning / Avilla Fairways Proposal

Importance: High

Good Afternoon,

I am writing in regards to the Oakmont Drive and Lake Sharon Drive Proposed rezoning and the Avilla Fairways proposal.

We live in Larkspur, which will be directly impacted by this development. We will be able to see the development from our yard, which is currently beautiful green space - golf course and trees. The entire feel of our neighborhood will diminish will this development, as will the value of our homes. Oakmont is a beautiful community, and the City of Corinth should be proud of that and fight to conserve what we all have and love. This zoning variance request is not appropriate. I would hate to see Oakmont diminish…we have worked very hard to purchase our home and live in this wonderful community.

We have children that attend Hawk Elementary AND Crownover Middle School…this development is literally STEPS from these schools, where our children, as well as approximately 1400+ other children attend school. There is a large number of children who walk/bike home from these schools on a daily basis unsupervised. The proposed traffic changes at Rye Road and Oakmont/Lake Sharon would put these children (OUR children) in danger. The traffic is already bad before and after school…adding more traffic to this area would be a HUGE mistake for the City of Corinth.

Please consider how this would impact the community. Oakmont is SAFE right now – why would you want to change that? These apartment homes would bring in HUNDREDS of people to a very small area. Apartment homes produce more crime by default…they just do…we moved here because it is SAFE for our family. Also, renters do not show pride in their homes, as they do not own them. There would be an increase NOISE as well as SAFETY and CRIME concerns. We would soon see the entire area go downhill. The development company does not care about Oakmont or Corinth. They also do not care about Avilla Fairway or their other communities (which they seem to just turn around a sale anyway). I have seen many houses go up for sale in our community this year (more than ever before)…if this rezoning is approved, I guarantee you will see many more people leave the area. Oakmont is now a very nice, family oriented, golf course community. Bringing in a development such as this will diminish that family oriented feel. WHY would you want that for Corinth? The golf course will suffer (no one wants to stare at apartment homes), wildlife and trees will be plowed over, and our schools will experience overcrowding and safety concerns. Why would you not want to protect and preserve the characteristics that make Oakmont and Corinth such a great place to live?

After the winter storms, there is solid proof that the infrastructure in Corinth is not ready for another 200+ homes on a 24 acre lot. This is too much, and the city is not prepared to handle it at this time. You need to protect Corinth and make improvements (water/internet/roads/etc.) before moving forward with this or any other large development!

We moved to Corinth to get away from school over crowding. We wanted our children at Hawk and Crownover. We wanted to be near the golf course and experience the family environment and community feel of Oakmont. If this

happens, we will have to sell our house and move out of Oakmont. This directly impacts our CHILDREN. T
what we want in our community. This is NOT what we want our children to grow up next to. This is NOT what we want to see when we look out our window.

Please, PLEASE do not fail this community. Please stop this development from happening.

Thank you for your time,

Mindy Jameson
1103 Ballycastle Lane
Larkspur @ Oakmont Resident

Sent from Mail for Windows 10

Miguel Inclan

From: Jenn Kirkley <jkirkley15@me.com>
Sent: Tuesday, June 22, 2021 8:49 AM
To: Helen-Eve Beadle
Subject: Fwd: Opposition to zoning change to Endeavor Tract (lake Sharon & Oakmont)

Sent from my iPad

Begin forwarded message:

From: Jenn Kirkley <jkirkley15@me.com>
Date: June 22, 2021 at 8:43:29 AM CDT
To: eve.Beadle@cityofcorinth.com, Jennifer.Olive@boards.cityofcorinth.com, Cody.Gober@boards.cityofcorinth.com, Brian.Rush@boards.cityofcorinth.com, Wade.May@boards.cityofcorinth.com, Rodney.thornton@boards.cityofcorinth.com, Billy.Roussel@boards.cityofcorinth.com
Subject: Opposition to zoning change to Endeavor Tract (lake Sharon & Oakmont)

All
My name is Jennifer Kirkley , I reside at 1107 Ballycastle Lane. I oppose this zoning change for the following reasons and you should too!

1. The increased density of THIS plan is over the top ridiculous.
2 It does not even meet the zoning requirements of Oakmont Country Club Estates
We bought our homes believing these zoning requirements would be upheld
3. The increase in traffic will be mind boggling and so detrimental to our neighborhood it is not fathomable.
4. This increase in traffic is also so dangerous to the numerous school children walking back and forth to children each day, not to mention the transient clients that this development is going to attract.

5 The existing zoning allows for townhomes and two family garden homes, so there
Is NO need to change the zoning!

Please do not destroy the golf course, our beautiful way of life here in Corinth, endanger the children, for developer, who will be gone in 3 years!

Respectfully
Jennifer Kirkley

Sent from my iPad

Miguel Inclan

From: delores knowles <dermknow@yahoo.com>
Sent: Tuesday, June 22, 2021 3:20 PM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy Roussel; Tina Henderson; Bill Heidemann; Steve Holzwarth
Subject: Protest of Zoning Change at Oakmont Dr & Lake Sharon Rd Corinth Tx

Dear Mayor Heidemann, Council Member Ms Henderson, Council Member Mr Holzworth and Zoning Committee Members:

I wish to inform you of my formal protest of the proposed rezoning of the Endeavor tract at the NW corner of Lake Sharon Drive and Oakmont Drive. My protests are based on the following

1. this proposal does not comply with the City's Comprehensive Plan, which shows that tract as "Mixed Residential" (so changing it to multi-family does not meet the City's own definition of Mixed Residential),
2. it is inconsistent with the overall existing PD zoning ordinances for Oakmont Country Club Estates (which this tract is included in),
3. increased density (more dwelling units per acre) than current zoning,
4. decreased parking requirements than current zoning,
5. increased traffic during school drop-off & pick-up hours because of new street onto Oakmont Dr. and increased traffic & parking within Larkspur subdivision (abutting this tract/across from Hawk) if Rye Street is connected for anything other than emergency access only
6. dangerous for our school children who walk to and from Hawk Elementary and Crownover Middle Schools because of the proposed roundabout at Oakmont Dr. & Lake Sharon Dr.
7. the existing zoning already allows for townhomes and two-family garden homes (not much different than the smaller units proposed by the developer) so there is NO NEED to change the zoning to be multi-family.

Thank you for your consideration.
Sincerely
Delores Knowles
1107 Oakhollow Dr
Corinth Tx

I live at 1401 Ballycastle Lane; Rye Road is in front of my mailbox and driveway. There is already a problem because coming up from the end of the street it is difficult to see the cars from the other end. What about the golf carts trying to cross? Will golfers want to hear the traffic and try to cross a one-way street? What if golfers stop coming to our course; then what? No greens to look at, just cheap rentals, car ports, cars and walls.

When school is in session the traffic in the morning and after school is already a problem. Parents park on Ardglass because the traffic is so bad on Oakmont. I know about the morning traffic due to the fact I leave early for health reasons. Having a roundabout is not safe for the children. The students leave at different times in the afternoon; due to school activities. No crossing guard(s) after a certain time. Having lived here for 15 years; we have had to fight the City Council when we needed the three way signs at Oakmont and Robinson, which they didn't want to do. Safety is not a major concern to them.

I saw the housing they build and they are CHEAP looking. When I built that was not what I was told would be built there. Corinth does not need any more apartments and that's what they are - one story apartments. Why mess up our neighbor hood? We paid to live in a quite golf club area not a rental community. Rye Road needs to have an "emergency gate" if they must open the road.

Miguel Inclan

From: James Leverett <j.leveretttx@gmail.com>
Sent: Wednesday, June 23, 2021 6:24 PM
To: Miguel Inclan
Cc: Gabe & Lupe Silva Friends; Chip Lucas; Teresa; Carol Leverett Family
Subject: Objection to the Proposed Rezoning - Endeavor Tract

To: Miguel Inclan, City Planner

Dear Sir,

I have written before but I feel it needs to be said again, I Strongly object to any effort on the part of the City of Corinth to Rezone the Endeavor tract of land bordering Larkspur, hole 12, and hole 13 of Oakmont CC.
I live on the 13th hole, right across the fairway from this tract of land.

I have multiple reasons to object:

1. The current infrastructure of roads, schools, streets, utilities are NOT sufficient to support an increased building density and population density increase. The P&Z has already ruled against this once. Sending it back just telegraphs the counsels intentions regardless of their constituents desire.
2. The school children's safety is a huge concern. Having to try and cross at a round about is an accident waiting to happen. If you put personnel there to stop cars, you have defeated the purpose of the round about.
3. The traffic backup waiting to drop kids off in the morning and pick them up in the afternoon, already causes huge lines of cars waiting on Oakmont drive. Add to that the additional traffic from increased population due to this multi family development, and you have a bigger mess.
4. I am not against what zoning currently exists and has existed for 30+ years. We did not move in unwittingly hoping that no one would move in across the fairway, but I am completely against changing the zoning to accommodate multi-family housing. Build what it is zoned for.
5. The examples of past developments like this one proposed, are a disgrace. They may look good when they are built. They promise the world, but then they sell it to another company to run. In very short order, they are run down, low rent units. Maybe the city counsel should go look at some of the past projects that are more than a couple of years old.
6. The access into Larkspur via Rye road will only increase traffic in an area not designed for high traffic load. That traffic still has to dump onto or come off of Oakmont which further exacerbates the traffic issues on Oakmont.
7. Last, but not least in my mind, is the lost revenue/value of our homes. We paid a premium for our lots on the golf course and built high end homes. Had we known that there would be increased population density, increased traffic, and multi-family units across from us, we would have built somewhere else. You might say that there will not be a loss of value. I say you are already wrong. Homes in this subdivision were selling for $200+ / sq. ft. as recently as April 2021. Since it has become known that there could potentially be multi-family units across the fairway, 3 homes on the market currently are either not receiving offers or they are so low, it's laughable.

Please reconsider this carefully and maintain the current zoning, which would be very similar to the existing housing on both side of this development.

Thank You,

Jim and Carol Leverett
1220 Ballycastle Ln
Corinth, TX 76210

Miguel Inclan

From: Aaron Petty <aaronpetty@mygrande.net>
Sent: Monday, June 21, 2021 8:49 PM
To: Helen-Eve Beadle
Subject: Protest - NextMetro Zoning Change

Helen-Eve Beadle,

I live at 1402 Ballycastle Lane and I am protesting the zoning change for the following reasons:

1) It does not comply with the City's Comprehensive Plan, which shows that tract as "Mixed Residential" *(changing it to multi-family does not meet the City's own definition of Mixed Residential)*

2) It is inconsistent with the overall existing PD zoning ordinances for Oakmont Country Club Estates *(which this tract is included in)*

3) Increased density in a compressed area (already congested)

4) Decreased parking requirements

5) Increased traffic during school drop-off & pick-up hours because of new street onto Oakmont Dr. and increased traffic & parking within Larkspur subdivision (abutting this tract/across from Hawk) if Rye Street is connected for anything other than emergency access only

6) Dangerous for our school kids who walk to and from Hawk Elementary and Crownover Middle Schools because of the proposed roundabout at Oakmont Dr. & Lake Sharon Dr.

7) The existing zoning already allows for townhomes and two-family garden homes (not much different than the smaller units proposed by NextMetro) so there is NO NEED to change the zoning.

* I never received any formal notification of any kind relative to the NextMetro development.

Thanks,
Aaron & Bridget Petty
1402 Ballycastle Lane

Miguel Inclan

From: Ronald Ribman <ronribman@gmail.com>
Sent: Tuesday, June 22, 2021 7:39 PM
To: Helen-Eve Beadle
Cc: Jennifer.Olive@boardsofcorinth.com; cody.gober@boardsofcorinth.com; Brian.Rush@boardsofcorinth.com; Wade.May@boardsofcorinth.com; Rodney.Thornton@boardsofcorinth.com; Billy.Roussel@boardsofcorinth.com
Subject: Avila Fairways

Dear Ms. Beadle,Jennifer Olive,Cody Gober, Brian Rush, Wade May, Rodney Thornton, William Roussel III,

I strongly object to The Avila Fairways housing project. I can't think of a single benefit this project will bring to the residents of Larkspur, unless you consider increased crowding, greater pollution, crime, school traffic accidents, transient rental housing and the general diminishment of property values making this area a less pleasant place to live a benefit.

Sincerely,

Ronald Ribman, Ph.D

Tiffany and Frankie Sanford
1105 Ardglass Trail
Corinth, TX 76210

June 21, 2021

Via Email: miguel.inclan@cityofcorinth.com

Planning and Zoning Commission
Corinth City Hall
3300 Corinth Parkway
Corinth, TX 76208
Attn: Miguel Inclan

Re: Avilla Fairways PD ZAPD20-0004; Public Hearing for Proposed Rezoning of the Northwest Corner of Lake Sharon Drive and Oakmont Drive, Corinth, Texas (the "Endeavor Tract")

Dear Mr. Inclan:

My husband and I live in Larkspur Phase II, which is the closest residential neighborhood within Oakmont Country Club Estates to the Endeavor Tract, and we oppose the rezoning that has been proposed for the Endeavor Tract by NexMetro Communities. We have lived in Corinth for 20 years in neighborhoods that abut Oakmont Drive and own units and work in the Robinson Road office condos located at Robinson Road and State School Road. We are committed to Corinth being a wonderful place to live and work.

Our first objection is that the proposed rezoning does not comply with the City's comprehensive plan, which is found in Ordinance No. 20-07-16-22, Envision Corinth 2040 Comprehensive Plan. Per the City of Corinth's Land Use and Development Strategy map in the City's Comprehensive Plan, the tract at the northwest corner of Lake Sharon Drive and Oakmont Drive is intended to be "Mixed Residential". The proposed rezoning to make the tract "multi-family" is not "Mixed Residential" as defined in the City's Comprehensive Plan. Section 211.004(a) of the Texas Local Government Code requires that "Zoning regulations must be adopted in accordance with a comprehensive plan...." It is a violation of Texas statutory requirements to approve a zoning change that does not comply with comprehensive plan. The entirety of Section 211.004 of the Texas Local Government Code is as follows:

> "Texas Local Governmental Code Sec. 211.004. COMPLIANCE WITH COMPREHENSIVE PLAN. (a) Zoning regulations must be adopted in accordance with a comprehensive plan and must be designed to:
>
> (1) lessen congestion in the streets;
> (2) secure safety from fire, panic, and other dangers;
> (3) promote health and the general welfare;
> (4) provide adequate light and air;
> (5) prevent the overcrowding of land;

(6) avoid undue concentration of population; or

(7) facilitate the adequate provision of transportation, water, sewers, schools, parks, and other public requirements.

(b) Repealed by Acts 1997, 75th Leg., ch. 459, Sec. 2, eff. Sept. 1, 1997.

Acts 1987, 70th Leg., ch. 149, Sec. 1, eff. Sept. 1, 1987. Amended by Acts 1989, 71st Leg., ch. 458, Sec. 1, eff. Aug. 28, 1989; Acts 1997, 75th Leg., ch. 459, Sec. 2, eff. Sept. 1, 1997."

Several aspects of the proposed rezoning do not comply with Section 211.004(a) of the Texas Local Government Code:

1. The existing site zoning is PD-24 (which allows for two family garden homes (aka attached single-family dwellings and patio homes as uses with a density of 6.5 dwellings per acre) and PD-6 (which allows townhomes, single-family attached garden homes ranging in density from 6.5 to 10 dwellings per acre) and neighborhood shopping. The rezoning requested (9 dwelling units per acre) would increase the density on the tract, which violates Section 211.004(a)(5) & (6) of the Texas Local Government Code to prevent the overcrowding of land and to avoid undue concentration of population.

2. The new access streets from the Endeavor Tract to Oakmont Drive (which is shown on the revised Concept Plan dated June 10, 2021as being 320 feet from the existing Ardglass Trail) would cause too much increased traffic between 7:15 a.m. and 8:30 a.m. and between 2:30 p.m. and 4:00 p.m. when students are being taken to and from Hawk Elementary School and Crownover Middle School. We have children who attend both Hawk Elementary School and Crownover Middle School and are concerned about increased traffic on Oakmont Drive. Current traffic during school drop-off and pick-up traffic on Oakmont Drive for Hawk and Crownover is very heavy and cars line up all down Oakmont Drive to Lake Sharon Drive waiting to get into the school parking lots. The additional access onto Oakmont Drive violates Section 211.004(a)(1) of the Texas Local Government Code to lessen congestion in the streets.

3. The proposed roundabout at the intersection of Oakmont Drive and Lake Sharon Drive would create a dangerous situation for kids walking to and from school each school day from the Lake Sharon and Cypress Point Estates neighborhoods. The Denton Record Chronicle had an article on June 11, 2021 about how drivers on roundabouts in Denton have trouble maneuvering those intersections. The closest roundabout to Oakmont Country Club Estates is the one in Unicorn Lake and that intersection is not located near two schools and is not a heavy pedestrian area. The drivers at the intersection of Lake Sharon Drive and Oakmont Drive need to have a 4-way stop or traffic lights to allow for pedestrian safety. The proposed roundabout violates Section 211.004(a)(2) of the Texas Local Government Code to secure safety from fire, panic, and other dangers. Additionally, upon any development of the Endeavor Tract, the school zone for must be extended to the intersection of Oakmont Drive and Lake Sharon Drive and a crossing-guard must be hired for school arrival and dismissal times because of the increased traffic with Lake Sharon

Drive connecting to FM 2499 and the increase in traffic from any new development at Lake Sharon Drive and Oakmont Drive to provide for pedestrian safety. It took a fatal accident at the intersection of Robinson Road and Oakmont Drive before a 3-way stop was put in at that intersection and we do not want a similar situation at the intersection of Lake Sharon Drive and Oakmont Drive.

4. A rezoning of the Endeavor Tract to a PD with a Multi-Family 1 base would allow an overall higher density development that would increase the burden on our utilities, such as water and electricity. As shown by our experiences in February 2021 with electricity and water outages, we do not have reliable infrastructure to serve our existing needs, much less an additional 215 residential units. The proposed rezoning violates Section 211.004(a)(7) of the Texas Local Government Code to facilitate the adequate provision of transportation, water, sewers, schools, parks, and other public requirements.

In addition to violating the Texas Local Government Code, the rezoning of the Endeavor Tract to be multi-family is spot zoning, which singles out a small tract of land and treats it differently from similar surrounding land and is illegal in Texas per the decision of the Texas Supreme Court in *City of Pharr v. Tippitt*, 616 S.W.2nd 173 (Tex.1981). In that case, the Texas Supreme Court identified the following factors to be reviewed in determining whether a rezoning is spot rezoning: (a) whether the City has disregarded the zoning ordinance or long-range master plans and maps that have been adopted by ordinance; (b) the nature and degree of an adverse impact on surrounding properties (is the change substantially inconsistent with surrounding properties); (c) whether the use of the property as presently zoned is suitable or unsuitable; and (d) whether the rezoning ordinance bears a substantial relationship to the public health, safety, morals or general welfare or protect and preserve historical and cultural places and areas.

The Endeavor Tract is part of PD-6 Planned Development District, Ordinance No. 87-12-17-24, for Two Family Garden Homes and PD 24 Planned Development District, Ordinance No. 99-12-16-45 for Two Family Garden Homes, Townhomes, and Neighborhood Shopping, which are part of the overall Oakmont Country Club Estates planned development. The rezoning application requested that the rezoning have a "base zoning district of MF-1 Multi-Family Residential" with variances detailed in the February 22, 2021 meeting memorandum (as amended by the revised Concept Plan submitted by the developer). This does not match the overall development plan for the land within Oakmont Country Club Estates, which was developed based upon a long-range master plan and maps in the PD ordinances adopted by the City of Corinth. As Oakmont Country Club Estates has been developed over the years, the portions of Oakmont Country Club Estates that are zoned as PD-6 do not contain any multi-family residences. MF-1 Multi-Family Residential is not a base zoning district for any other portion of Oakmont Country Club Estates. Owners within Larkspur I & II, Lake Sharon Estates, and Cypress Point Estates purchased homes with the expectation that the PD-6 zoning would remain consistent within Oakmont Country Club Estates.

Additionally, I understand that if the zoning of the Endeavor Tract is changed to multi-family, then the Oakmont Country Club Estates Property Owners Association (the "Oakmont POA") has agreed to deannex the Endeavor Tract from the Oakmont POA, which means the

residents within the Endeavor Tract would not pay annual Oakmont POA dues and would not be subject to architectural requirements and review by the Oakmont POA. This is directly contrary to the Endeavor Tract being part of the long-range master plan and maps for the development of Oakmont Country Club Estates.

The existing zoning of the Endeavor Tract already allows townhomes and two-family garden homes and does not require a complete rezoning to allow for a development such as the one proposed by NexMetro. It seems that the portion of the Endeavor Tract that is designated for neighborhood shopping could be rezoned to be for townhomes or two-family garden homes (or some other residential use) and would comply with the comprehensive plan for Mixed Residential and with the developer's desire for additional residential units within the Endeavor Tract. Additionally, any variations to the existing zoning (such as reduced front, side and rear yard setbacks) could be proposed by the developer to the City's Board of Adjustment.

We oppose the reduction of required parking spaces within the Endeavor Tract, which is proposed to be two spaces per unit per the revised Concept Plan. If you drive through neighborhoods located on either side of Oakmont Drive, households typically have two or more vehicles per residence and, even with garages and driveways for those residences, there are always vehicles parked in the streets. The proposed zoning change for the Endeavor Tract provides for two parking spaces for each unit, which includes garages and covered spaces in that count. So if a one-bedroom unit has one couple living in that unit and that couple has two vehicles (which is typical since we do not have public transportation in the area and people need to drive to work and shop), then there will not be enough parking for any guests within the Endeavor Tract. If a family with two adults and two teenagers of driving age live in a 3-bedroom unit within the Endeavor Tract, they might have three or four vehicles and nowhere to park all of their vehicles within the Endeavor Tract.

Related to such parking matter, we additionally oppose the connection of the Endeavor Tract to the Larkspur subdivision by the proposed extension of Rye Street for anything other than emergency access. Having residents and visitors from the Endeavor Tract use Rye Street would increase traffic in the Larkspur subdivision, which currently has limited traffic since no one uses the subdivision as a pass-through to another neighborhood, and would allow residents of or visitors to the Endeavor Tract to use residential streets within Larkspur for overflow parking.

My husband and I request that the Planning and Zoning Commission recommend denial of the proposed rezoning of the Endeavor Tract.

Sincerely,

Tiffany Sanford

Tiffany Sanford

cc:

Helen-Eve Beadle, AICP Via Email: Helen-Eve.Beadle@cityofcorinth.com
Director of Planning and Development

Jennifer Olive Via Email: Jennifer.Olive@boards.cityofcorinth.com
P&Z Commission, Place 1 Commissioner

Coby Gober Via Email: Cody.Gober@boards.cityofcorinth.com
P&Z Commission, Place 2 Commissioner

Brian Rush Via Email: Brian.Rush@boards.cityofcorinth.com
P&Z Commission, Place 3 Chair

Wade May Via Email: Wade.May@boards.cityofcorinth.com
P&Z Commission, Place 4 Vice Chair

Rodney Thornton Via Email: Rodney.Thornton@boards.cityofcorinth.com
P&Z Commission, Place 5 Commissioner

William Roussel III Via Email: Billy.Roussel@boards.cityofcorinth.com
P&Z Commission, 1st Alternate

To Whom it May Concern:

I would like to express my concerns regarding the zone change at Oakmont Dr. and Lake Sharon Dr. While I think the proposed rental community would be a welcome addition to Corinth I do NOT believe that this particular location is suitable for what they are wanting to build. The surrounding area is a very quiet and quant community where our kids are able to walk to school and people run and walk the area all the time. We also have multiple members of Oakmont CC who live in the surrounding area that drive golf carts to and from the CC. All of this would possibly have to change if we had more traffic in the area. This would change the feel of the community that is the Oakmont area. As I understand it that tract of land was zoned, years ago before any of the surrounding neighborhoods were there, as a mixed residential use. This was before there were two schools in the picture both of which are at capacity with just the surrounding neighborhoods already. Bringing more people who will just rent into the area will increase the capacity at our children's schools along with increased traffic on Lake Sharon Dr and Oakmont Dr. During school times drop off and pick-up times, special events at the schools etc we already have traffic issues at the schools. This is a community where most people own their own home and you have residents that have lived here over 20 years. This tract is already zoned for mixed residential which means that townhomes or garden homes would fit and blend in with the surrounding neighborhoods.

I personally have nothing against renters and would actually love it if my son and wife could live there while they are looking for their forever home; however, the short-term occupancy doesn't fit in with people who have made this area their forever homes. Renters do come and go and unless there is something in the contract with Avilla that says they can never sell to another management company we have no assurances that the property will be kept up to match the standards of the communities that surround it. This coupled with the fact that Oakmont CC does bring a sense of a golf course community

and ruining the natural trees and foliage that make the golf course so beautiful will likely decrease people wanting to join.

As a board member for the Lake Sharon Estates I'm also concerned with what removing all the trees and vegetation will affect the dam that we are getting possibly ready to take ownership of. We've seen nothing showing what the plans would be in order to keep Lake Sharon from being impacted by the development, if that exists we would love to see it.

Thanks for your time,

Christi Sessions

Lake Sharon Estates, HOA VP

817-988-4245

Christi.sessions@yahoo.com

Miguel Inclan

From: Christi Sessions <christi.sessions@yahoo.com>
Sent: Monday, June 21, 2021 1:11 PM
To: Helen-Eve Beadle
Subject: P&Z meeting letter
Attachments: PZ letter.docx

Helen,

Please see attached my letter of protest against the development that is being proposed for the tract of land at Oakmont Dr and Lake Sharon Dr. Please let me know if you have any questions. I am planning on being on the call on Wed night.

Thanks

Christi Sessions

Miguel Inclan

From: Gabriel Silva <ganso98@yahoo.com>
Sent: Monday, June 21, 2021 9:17 AM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy Roussel
Subject: Objection to Rezoning - No to Avila Homes!

Hello all Planning and Zoning Commission Members and Staff, hope you are doing well.

Writing (again) to express my complete disagreement and objecting to the rezoning of the Endeavor tract at the NW corner of Lake Sharon Drive and Oakmont Drive.

We've been through this before and we have expressed our multiple concerns about this before. Allowing the rezoning and giving green light to a monster project like Avila Homes will change our city forever.

The proposed rezoning will only serve the developer and, once they make a profit, they will sell the property and leave the city and it's residents with a big problem.

This project doesn't comply with the City's Comprehensive Plan, which shows that tract as "Mixed Residential" (so changing it to multi-family does not meet the City's own definition of Mixed Residential). It is also inconsistent with the overall existing PD zoning ordinances for Oakmont Country Club Estates (which this tract is included in),

If built, the increase in density will increased traffic during school drop-off & pick-up hours because of new street onto Oakmont Dr. and increased traffic & parking within Larkspur subdivision (abutting this tract/across from Hawk) if Rye Street is connected for anything other than emergency access only [by the way... where's the traffic study results?) It will become very dangerous for our school kids who walk to and from Hawk Elementary and Crownover Middle Schools because of the proposed roundabout at Oakmont Dr. & Lake Sharon Dr., and the existing zoning already allows for townhomes and two-family garden homes (not much different than the smaller units proposed by the developer) so there is NO NEED to change the zoning.

Also, the property value for those homes adjacent to the project will be greatly affected... not to mention the area will show and increase in violence and crime (big density projects like this ALWAYS bring crime and violence and they are multiple studies made about this).

Please listen to your citizens. This rezoning has been denied by P&Z before for this same project. We've been through this before... please deny the rezoning request.

YOUR CITY. YOUR VOICE.... right?

Yours,

Gabriel E Silva
1222 Ballycastle Ln
Corinth, TX 76210

Miguel Inclan

From: Smith,Fred <Fred.Smith@edwardjones.com>
Sent: Thursday, June 24, 2021 3:39 PM
To: Miguel Inclan
Subject: Avilla Fairways

Miguel,

I am a homeowner in Larkspur. I live at 1317 Ardglass Trail which is the first house in the subdivision. Below are some comments on this proposed development:

1. Corinth is a very nice city. It takes work to achieve that status.
2. The greater Oakmont area is the core of our community. It is composed to single family housing.
3. Rental communities distract from the community because of their transitory nature. Once approved this can never be undone even when it is realized that it was a mistake.
4. In society there is a great feeling that the people's representatives are not listening to their constituents and so it is with the case of the Avilla Fairways proposal. There have been several meetings where severe opposition was expressed only to find that the city is still trying to ram this through
5. I and others oppose this been a rental community.
6. There should be no connection to Rye Road, not even one way.
7. There should be no access to Oakmont Drive. All access should be off of Lake Sharon
8. It is absurd to think about putting a roundabout at Lake Sharon and Oakmont Drive. There are large numbers of children that walk through this intersection daily. A roundabout creates a major hazard. This obviously means this rental community is going to create too much traffic.
9. Surely everyone should direct their abilities to creative use of this property in the center of single family homes instead of trying to push this through. Please do not destroy our community by short sighted decisions. Try to make a positive decision that will enhance our community instead of a decision that will start the area into decline.
10. Promises from the owners of a rental community will never be kept. They will hold for 5 or so years and then sell to a new owner.

Fred

Fred Smith, CFP | *Financial Advisor*

Edward**Jones**
MAKING SENSE OF INVESTING

1205 Bent Oaks Court
Suite 110
Denton, Texas 76210

940-382-6342
fred.smith@edwardjones.com
Text the word "Connect" to 31268 to
start texting with us

WHAT TO EXPECT FROM OUR PRACTICE:

We want to understand what's important to you.
We have an established process to allow us to build personalized strategies that help you achieve your goals.
We will partner together to keep you on track to achieve your goals.

Fred Smith, CFP®
Financial Advisor
Edward Jones
1205 Bent Oaks Ct
Suite 110
Denton, TX 76210
(940) 382-6342
www.edwardjones.com

Miguel Inclan

From: Jeff Wickstrom <Jeff.Wickstrom@PACCAR.com>
Sent: Tuesday, June 22, 2021 3:17 PM
To: Michelle.Mixel@cityofcorinth.com; Miguel Inclan
Subject: RE: Zoning Change - Avilla location on Lake Sharon/Oakmont

I heard there's another meeting coming up on this topic.
See Email below

From: Jeff Wickstrom
Sent: Wednesday, April 14, 2021 11:37 AM
To: Michelle.Mixel@cityofcorinth.com; Miguel.Inclan@cityofcorinth.com
Subject: Zoning Change - Avilla location on Lake Sharon/Oakmont

I am opposed to the zoning change and building of apartments near the Oakmont golf course. We moved to Oakmont for the rolling hills and wooded area and have been very happy here. **Apartments are not what this community needs.**

Please consider the following concerns:

- Rental property is inconsistent with the current owner properties, near a private golf course community
- Negative impact to Oakmont saftey/family community, especially Larkspur
- Reduction in property value with rental property and high turn around
- Increased traffic congestion; Rye Road does not need to open into Larkspur, creating more traffic and a place for people to cut through (safety)
- Reduction in trees and impact to area wildlife
- Unsafe for children walking to local schools

Thank you for your time and support in this matter, sincerely
Jeff Wickstrom
2200 Valderamma Lane
Corinth, Texas

From: Helen-Eve Beadle <Helen-Eve.Beadle@cityofcorinth.com>
Sent: Wednesday, April 14, 2021 11:32 AM
To: Jeff Wickstrom <Jeff.Wickstrom@PACCAR.com>
Subject: Automatic reply: Zoning Change - Avilla location on Lake Sharon/Oakmont

I will be out of the office Wednesday, April 14 through Friday April 16, 2021. I will respond to your email on Monday, April 19, 2021.
If you need immediate assistance please contact Michelle Mixell or Miguel Inclan
Thank you.

Miguel Inclan

From: Sue Wood <swood2474@gmail.com>
Sent: Wednesday, June 23, 2021 11:04 AM
To: Helen-Eve Beadle; Jennifer Olive; Cody Gober; Brian Rush; Wade May; Rodney Thornton; Billy.Rouseel@boards.cityofcorinth.com
Cc: Tony Alfano
Subject: Opposition to Oakmont Drive and Lake Sharon Drive Proposed Rezoning

Hello,
My name is Susan Wood and I am co-owner of property at 1006 Ballycastle Ln, Corinth, TX 76210 with Tony Alfano who is copied on this email.

We are opposed to the Avilla Fairways proposal to rezone property at the corner of Oakmont Drive and Lake Sharon Drive. Numerous reasons have been expressed by members of our community. You should have these on file. Please make note of our opposition to the proposed rezoning.

Thank you for your time and consideration.

Sincerely,
Susan Wood
1006 Ballycastle Lane
Corinth, TX 76210

Miguel Inclan

From: Katherine Woodward <katbird28@gmail.com>
Sent: Wednesday, June 23, 2021 2:33 PM
To: Helen-Eve Beadle
Subject: Objection to Proposed Rezoning - Endeavor Tract

Dear Ms. Beadle,

I would like to voice my very strong objection to the rezoning of the Endeavor tract at the NW corner of Lake Sharon Drive and Oakmont Drive. Although my home is not within the 200 foot limit because the fairway is wide at that point, it does back up to the fairway directly adjoining the proposed development.

When I purchased my home in Larkspur in 2012, this adjoining tract was included in the existing PD zoning ordinances. It was zoned "Mixed Residential" and allows for townhomes and two-family garden homes. The size of those entities is not much different than the proposed units, but the density is much greater.

The greatly increased density of the current proposal is the primary reason I so strongly object to the change in zoning. As it currently is, Oakmont Drive is a very busy street and route to FM 2181. During school arrival and departure times, Oakmont Drive, a wide two-lane road, becomes a very congested four lane road that comes to a standstill. Entry to and exits from Larkspur are very difficult under those conditions now. With increased population density in the immediate area, Oakmont Drive will become even more dangerous for both vehicles and the school-age children walking to and from Hawk Elementary and Crownover Middle School. The proposed roundabout at Lake Sharon and Oakmont Drive will do nothing to alleviate that danger or congestion. Students who must pass through that intersection will face a gauntlet of vehicles every day. I also see no rational reason to open Rye Road into the proposed development. It will do nothing but increase traffic trying to enter and exit Larkspur and increase the danger to golfers as they try to cross to the next hole.

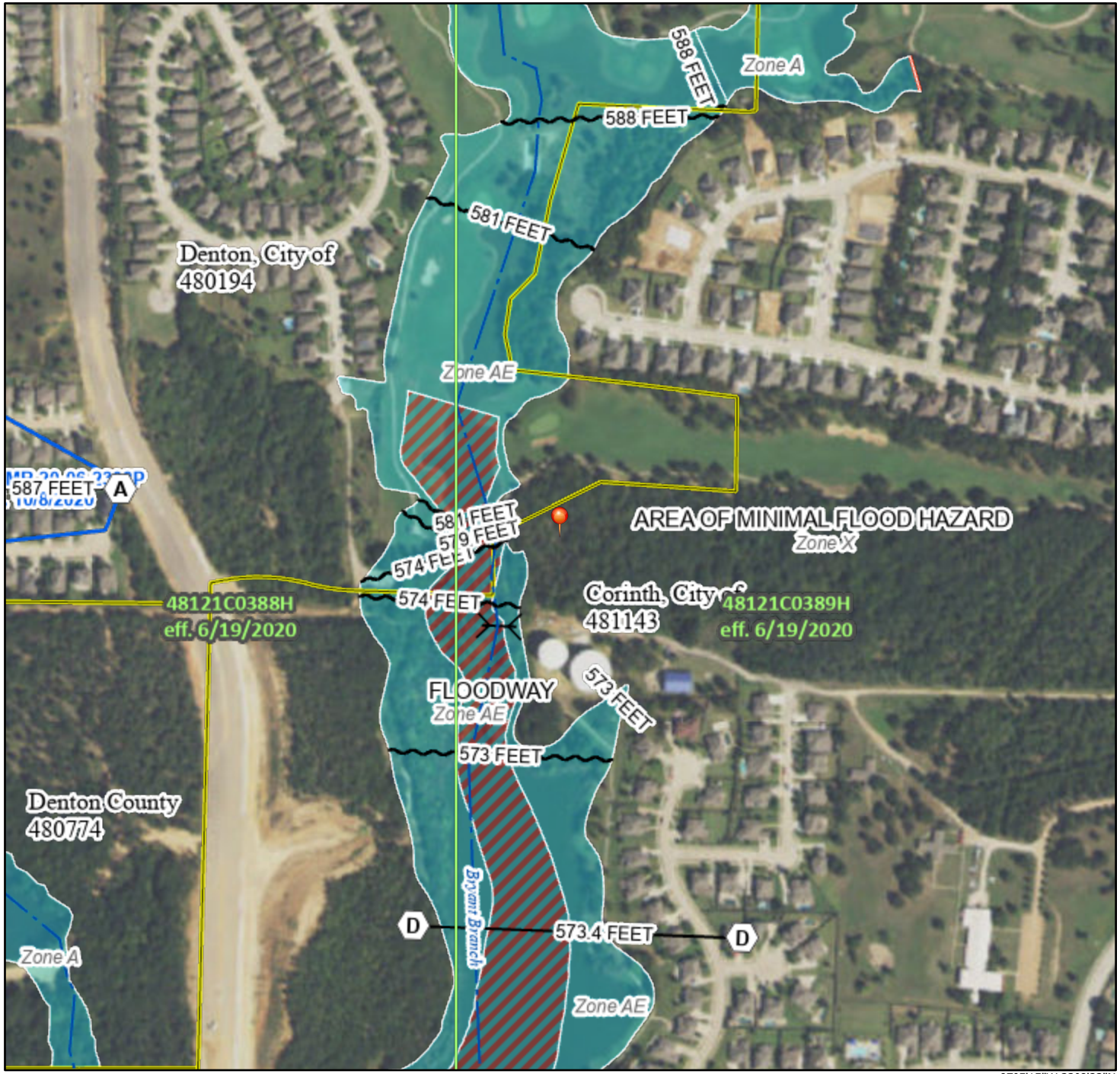
Finally, the increased density will inevitably make the properties that all of us in Larkspur purchased for the character and peacefulness of the neighborhood less desirable and less valuable. Homes that are comparable to those that exist on both sides of Lake Sharon would be more consistent with the surrounding neighborhoods and all of us would maintain the value of our investments.

Sincerely,
Katherine Woodward
1306 Ballycastle Ln.
Corinth, TX 76210

National Flood Hazard Layer FIRMette

FEMA

97°5'53"W 33°8'52"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

97°5'15"W 33°8'22"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND IND UT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

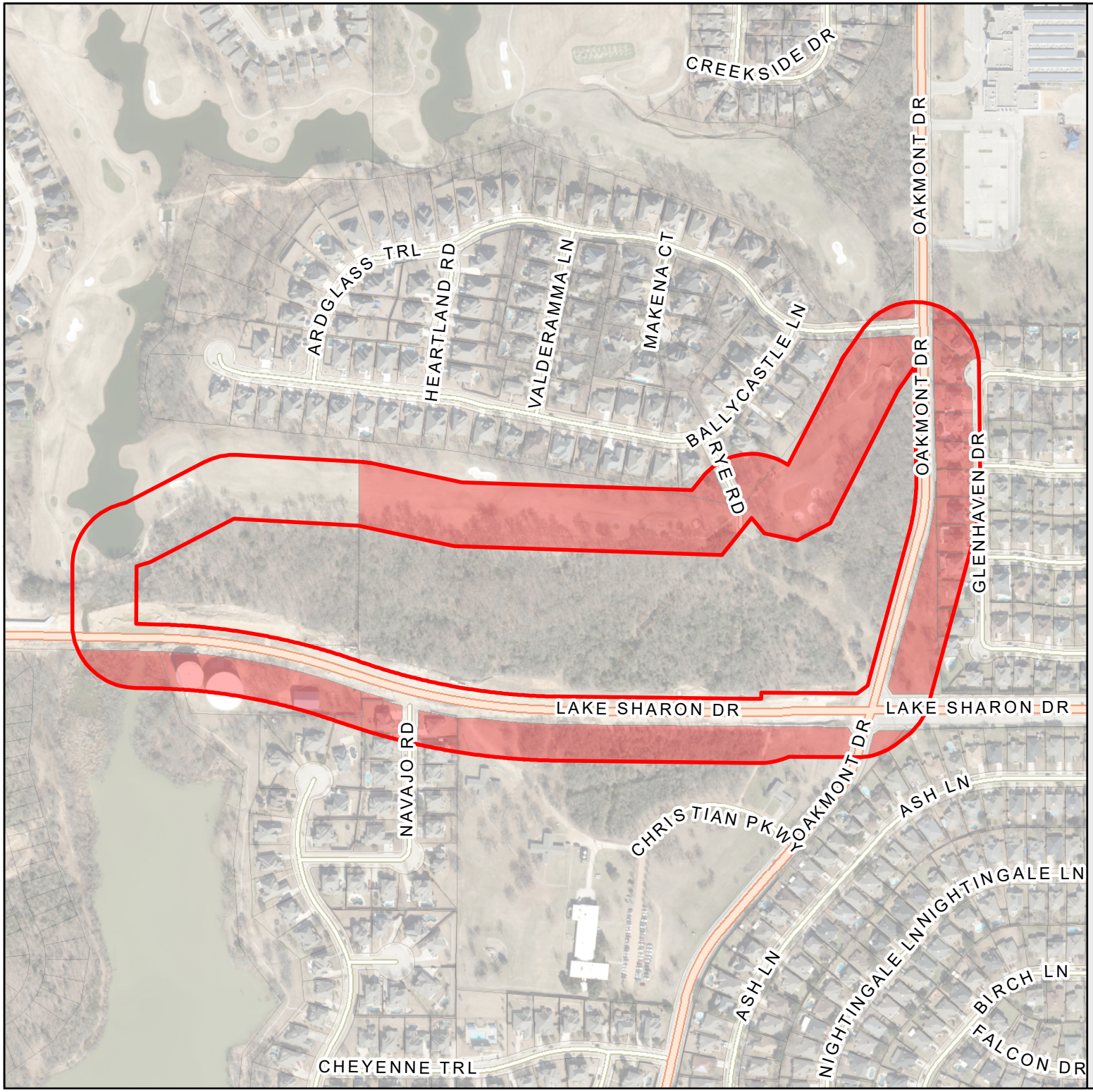
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/24/2021 at 8:39 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community id FIRM panel number, and FIRM effective date. Map i unmapped and unmodernized areas cannot be use regulatory purposes.

Parcels within 200ft. of Property to be Rezoned.

City of Corinth, TX



Legend

- 200 ft. Buffer
- Clipped Parcel

N
W
E
S

0 300 262 Feet