

CITY of NOVI CITY COUNCIL

Agenda Item 6
July 8, 2019



SUBJECT: Approval of the request of GPD Group JSP 18-75 Chick-Fil-A for Zoning Map Amendment 18.731 to rezone the property from Regional Center (RC) to Regional Center with a Planned Development 2 Option (PD-2). The subject property is located at the northeast corner of Novi Road and the I-96 service drive in Section 14. This is required in order to effectuate a PD Option for the subject property. **SECOND READING**

SUBMITTING DEPARTMENT: Community Development Department - Planning

CITY MANAGER APPROVAL: 

BACKGROUND INFORMATION:

The applicant is proposing to demolish the existing vacant building (old Denny's restaurant) to develop a Chick-Fil-A Restaurant located the northeast corner of Novi Road and the I-96 service drive. The new restaurant will be approximately 4,990 square feet and the applicant will be utilizing the Planned Development 2 (PD-2) Option. The proposed restaurant includes a drive-through window and associated canopy over the drive-through lanes, and includes a play area inside the building. The restaurant proposes 114 indoor seats and 16 outdoor seats.

The intent of the PD Planned Development Options, as listed in Section 3.31 of the Zoning Ordinance, is to provide for alternative means of land use development within designated zoning districts, such as RC, Regional Center Zoning District, and to insure that alternative land development permitted under these options will allow site designs that create a desirable environment providing for the harmonious relationship between land use types with respect to: uses of land, the location of uses on the land and the architectural and functional compatibility between uses. The PD-2 Planned Development Option is intended to permit the limited application of:

- (i) More extensive commercial uses in a district otherwise restricted to community and regional oriented shopping centers, or
- (ii) Transitional uses on the periphery of regional oriented shopping centers.

The PD Options contained in Section 3.31 shall be considered only within those areas of the City which are specifically designated for their application on the City's Master Plan for Land Use Map. The subject property is currently not designated as PD-2 on the 2016 Future Land Use Map. The map recommends PD-2 for other outlots around the north and west side of the Twelve Oaks Mall, including the existing McDonald's Restaurant, and for properties in part of West Oaks Mall, and for the Hotel property on the west side of Novi Road, north of I-96 (see attached map). Use of the PD-2 Option for smaller parcels around

the Twelve Oaks Mall would improve the development potential of the lots, since the setbacks provided with the overlay are considerably smaller than in the RC, Regional Center District, and because the uses are expanded to allow additional uses, such as drive-through restaurants (subject to limitations as noted in the ordinance).

Rezoning Request

The property is currently zoned RC, Regional Center. The existing building is currently vacant, but was previously used as a Denny's Restaurant. The existing building is considered a legal non-conforming structure and the parking does not meet the Ordinance requirements. The proposed redevelopment of the site would be required to conform to the Ordinance standards and is not allowed to follow the non-conforming setbacks that currently exist.

As noted in the rezoning review, the current RC, Regional Center zoning would limit the development potential for the site. The applicant is proposing to redevelop the site using PD-2 option which provides a greater flexibility for redevelopment. Per Section 3.31.2.B & C, the Planning Commission may proceed simultaneously with review and recommendation on applications for rezoning, PD Option and preliminary site plan approval. A copy of excerpt from Section 3.31 is attached for reference.

The request for approval of the Preliminary Site Plan, Planned Development Option, Special Land Use, and Stormwater Management Plan, including any noted deviations from the ordinance standards is also being presented for the City Council's approval at the same meeting on July 8, 2019 at the applicant's request. Planning staff recommends approval of the rezoning for the reasons stated in the suggested motion.

Review Summary

The Staff Engineer has reviewed the rezoning request and summarized that the requested rezoning to RC with a PD-2 Option will result in utility demands that are approximately equal to or less than the utility demand if the property were to be developed under the current zoning. The rezoning would have negligible impact on utility demands.

The applicant requested to waive the requirement for a Rezoning Traffic Study as many other traffic related studies are provided, including the submittal of a more comprehensive Traffic Impact Study. The City's Traffic consultant reviewed the submitted Traffic Impact Study provided by the applicant and indicated that the changes of the impacts for the proposed rezoning would be minimal especially considering the small size of the parcel. Most of the potential uses that could have a negative impact for the rezoning would not fit on such a small site. The impacts of the development are not anticipated to degrade levels of service beyond those under existing conditions during either the AM or PM peak periods.

At the First Reading of the rezoning request, the City Council requested that the applicant discuss the expected traffic flow with the owners and management of the Twelve Oaks Mall. Taubman Company has provided a letter indicating the ongoing efforts to work together in good faith to formalize an agreement between the parties that will address any potential adverse impacts on the traffic along Twelve Oaks Mall Drive. Taubman's Director of Development indicates that Twelve Oaks Mall takes no exception to the rezoning of the property to allow for the Chick Fil-A as proposed.

Planning Commission Meeting Summary

The Planning Commission met on April 17, 2019 held a Public Hearing with regard to the rezoning request. Following a brief discussion of the request, the Planning Commission voted to recommend approval to the City Council to rezone the subject property from Regional Commercial (RC) to Regional Commercial with a Planned Development 2 Option (PD-2).

On May 20, 2019, the City Council approved the First Reading of the rezoning request. An excerpt of the meeting minutes is attached.

RECOMMENDED ACTION:

Approval of the request of GPD Group JSP 18-75 Chick-Fil-A for Zoning Map Amendment 18.731 to rezone the property from Regional Center (RC) to Regional Center with a Planned Development 2 Option (PD-2). The subject property is located at the northeast corner of Novi Road and the I-96 service drive in Section 14. This is required in order to effectuate a PD Option for the subject property. **SECOND READING**

Approval of the Second Reading of the rezoning is granted, with a waiver of the required Rezoning Traffic Study, as the applicant has submitted a Traffic Impact Study that addresses the anticipated traffic impacts. This motion is made for the following reasons:

1. The rezoning request fulfills the Master Plan for Land Use objective of fostering a favorable business climate.
2. The rezoning will be consistent with the surrounding zoning and existing developments.
3. The PD-2 Planned Development Option is intended to permit the limited application of (i) more extensive commercial uses in a district otherwise restricted to community and regional oriented shopping centers or (ii) transitional uses on the periphery of regional oriented shopping centers, as this property is located.
4. The rezoning would increase development potential of the subject property.
5. The rezoning provides a redevelopment opportunity for a challenging site in a visible location along the I-96/Novi Road corridor.
6. The rezoning will have a negligible impact on public utilities.

MAPS

Location

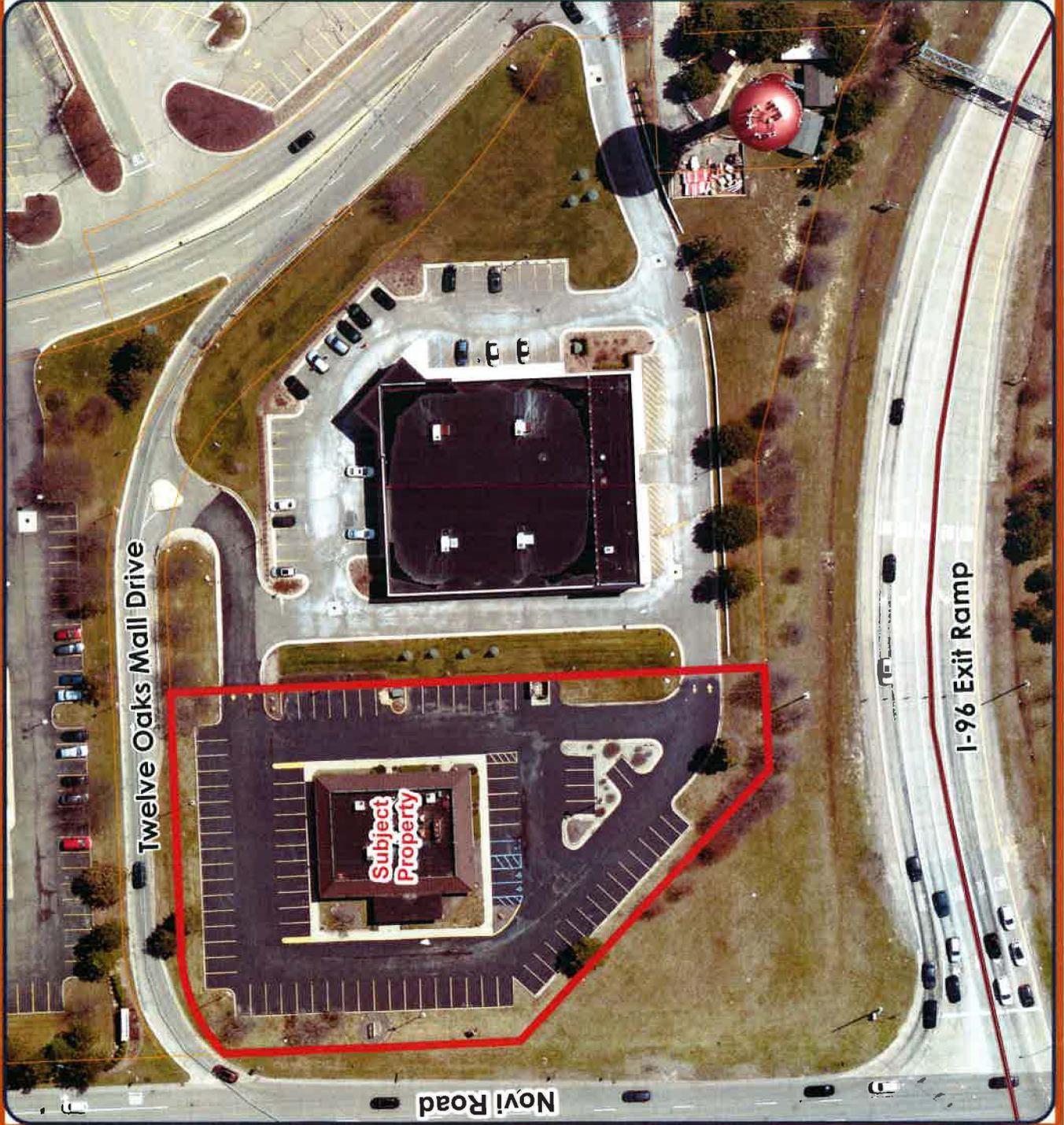
Zoning

Future Land Use

Natural Features

JSP 18-75:CHICK-FIL-A

Location



LEGEND



Sections



City of Novi

Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

Map Author: Sri Komaragiri

Date: 05/07/19

Project: JSP 18-75: CHICK-FIL-A

Version #: 1

Feet

0 15 30 60 90

1 inch = 83 feet



MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

JSP 18-75:CHICK-FIL-A
Zoning



LEGEND

- R-A: Residential Acreage
- R-1: One-Family Residential District
- R-4: One-Family Residential District
- RM-1: Low-Density Multiple Family
- B-3: General Business District
- C: Conference District
- EXPO: EXPO District
- I-1: Light Industrial District
- I-2: General Industrial District
- OS-1: Office Service District
- OSC: Office Service Commercial
- OST: Office Service Technology
- RC: Regional Center District
- TC: Town Center District
- TC-1: Town Center -1 District



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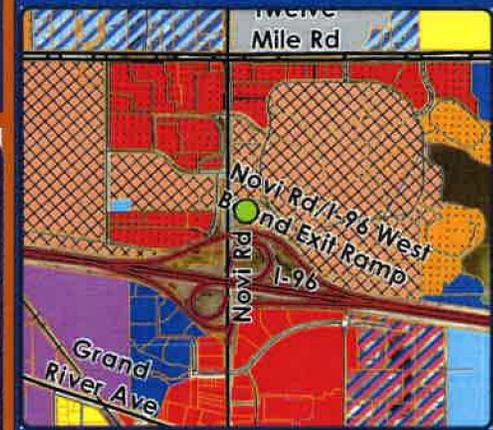


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JSP 18-75:CHICK-FIL-A

Future Land Use



LEGEND

FUTURE LAND USE

- Single Family
- Multiple Family
- PD1
- Community Office
- Office RD Tech
- Office Commercial
- Industrial RD Tech
- Regional Commercial
- TC Commercial
- PD2
- Public
- Cemetery

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JSP 18-75:CHICK-FIL-A

Nat'l Feat res



LEGEND

-  WETLANDS
-  WOODLANDS

City of Novi

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PLANNING REVIEW: REZONING



PLAN REVIEW CENTER REPORT

March 06, 2019

Planning Review

Chick-Fil-A

JZ 18-75 with Rezoning 18.729

PETITIONER

GPD Group

REVIEW TYPE

Rezoning Request from Regional Center (RC) to Regional Center with a Planned Development 2 Options (PD-2)

PROPERTY CHARACTERISTICS

Section	14	
Site Location	22-14-100-50; 27750 Novi Road; north of I-96, east of Novi Road	
Site School District	Novi Community School District	
Current Zoning	Regional Center(RC)	
Proposed Zoning	RC with a PD-2 Option (Planned Development)	
Adjoining Zoning	North	RC
	East	RC
	West	RC
	South	TC across I-96
Current Site Use	Vacant building and unused parking lot (Old Denny's restaurant)	
Adjoining Uses	North	Sit-down restaurant
	East	Twelve Oaks Mall
	West	West Oaks Mall
	South	Novi Town Center
Site Size	1.40 acres	
Plan Date	February 06, 2019	

PROJECT SUMMARY

The petitioner is requesting a Zoning Map amendment for 1.40 acres of property located at the south east corner of Novi Road and Twelve Oaks Drive (Section 15) from Regional Center(RC) to Regional Center with a Planned Development 2 Options (PD-2). The applicant states that the rezoning request is necessary for a possible restaurant with a drive-thru, which could be considered as a Special Land Use under RC with a PD-2 Overlay once the rezoning is approved.

MASTER PLAN FOR LAND USE

The Future Land Use Map of the 2016 City of Novi Master Plan for Land Use identifies this property as Gateway East. The proposal would address the general goal for "Economic Development" listed in Master Plan for Land Use by fulfilling the following objective:

1. **Objective:** Retain and support the growth of existing businesses and attract new businesses to the City of Novi.
2. **Objective:** I-96/Novi Road Study Area. Develop the I-96/Novi Road Study Area in a manner that reflects the importance of this important gateway to the City in terms of its location, visibility, and economic generation. Mitigate impacts to the City's infrastructure. (See page 125)

DEVELOPMENT POTENTIAL

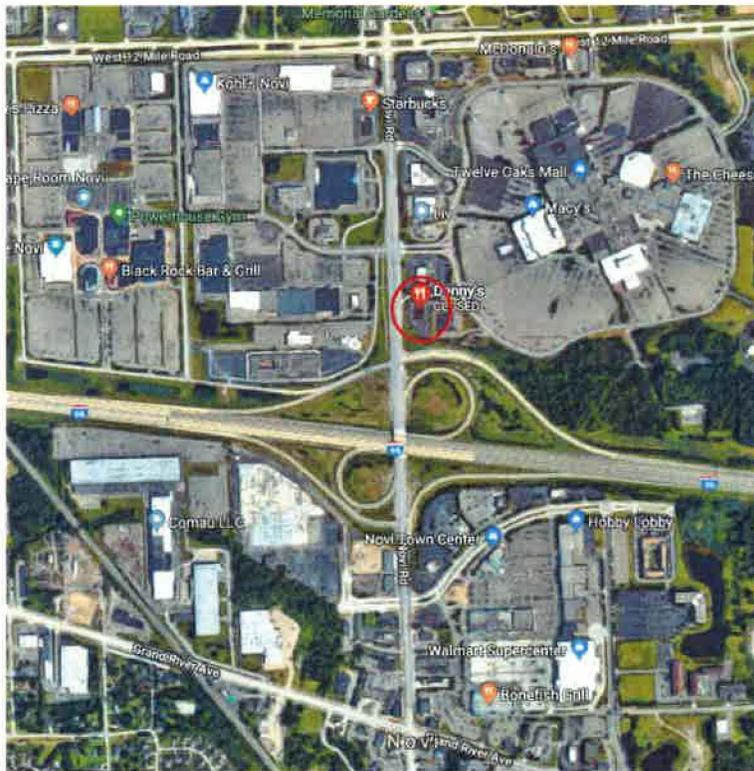
The property is currently zoned Regional Center. Existing building is considered a legal non-conforming structure and the parking lot does not meet the minimum Ordinance requirements for setbacks. Section 7.1.4. of our Zoning Ordinance restricts the redevelopment and/or alteration of non-conforming structures. The proposed redevelopment is required to conform to the Ordinance standards and is not allowed to follow the non-conforming setbacks.

Regional Center allows a variety of uses; however has a minimum building setback requirement for 100 feet for all yards. Community Development had couple of concept meetings with other developers and it is our understanding that the site size coupled with RC development standards could limit the redevelopment potential.

The applicant is proposing to redevelop the site using PD-2 option which provides a greater flexibility for redevelopment. RC does not allow a drive-thru. Rezoning to PD-2 would allow a drive-thru at that location. The applicant states that the proposed development will fit with the surrounding mall development and is similar to MC Donald's drive-thru nearby.

COMPATIBILITY WITH SURROUNDING LAND USE

The following table summarizes the zoning and land use status for the subject property and surrounding properties.



As you can see from the aerial image from Google, the subject property is surrounded by existing uses that are well established. The chances for redevelopment are less. The current zoning and proposed zoning allow similar uses, which will result in similar use even when redeveloped.

Developments south of I-96 are zoned Town Center, which are intended to promote the development of a pedestrian accessible, commercial service district.

Developments north of I-96 zoned Regional Center which includes the subject property are intended to permit major planned commercial centers that will, by virtue of their size, serve not only the local community, but the surrounding market area as well.

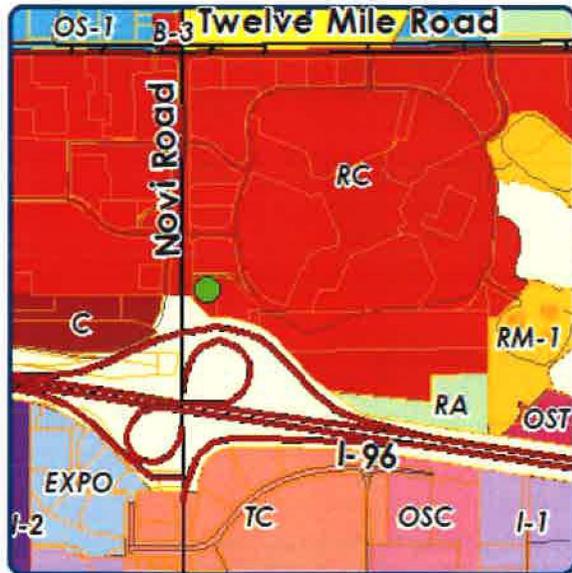
As noted in our Zoning Ordinance, the PD-2 Planned Development Option is intended to permit the limited application of (i) more extensive commercial uses in a district otherwise restricted to community and regional oriented shopping centers or **(ii) transitional uses on the periphery of regional oriented shopping centers.**

Land Use and Zoning: For Subject Property and Adjacent Properties

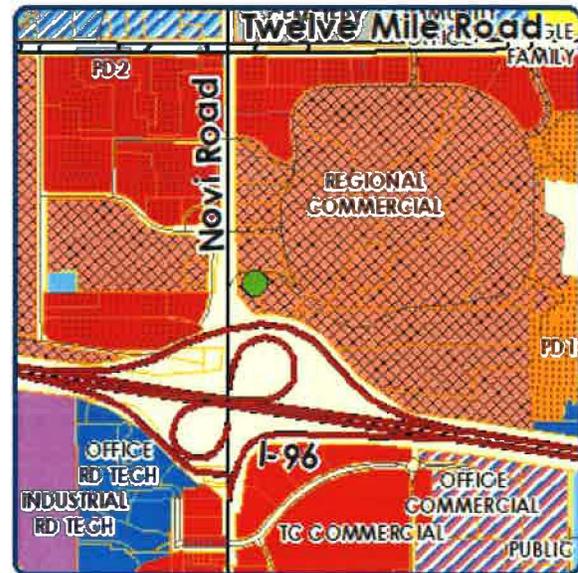
	Existing Zoning	Master Plan Land Use Designation	Existing Land Use
Subject Property	Regional Center	Regional Commercial	Vacant building and parking lot
Northern Parcels (across Twelve Oaks Mall Drive)	Regional Center	Regional Commercial	Red Lobster Restaurant
Eastern Parcels	Regional Center	Regional Commercial	Laz-A-Boy furniture store
Western Parcels (across Novi Road)	Regional Center	Regional Commercial	Carabba's Italian Grill Restaurant
Southern Parcels (across I-96 ROW)	Town Center	Town Center	Novi Town Center shopping center

The surrounding land uses are shown in the above chart. The compatibility of the proposed rezoning with the zoning and uses on the adjacent properties should be considered by the Planning Commission in making the recommendation to City Council on the rezoning request.

Existing Zoning



Future Land Use



COMPARISON OF ZONING DISTRICTS

Related sections of the zoning Ordinance that pertain to the existing zoning and proposed zoning are attached to this review letter for reference.

The PD Planned Development Options contained herein are intended to provide for alternative means of land use development within designated zoning districts. The options contained herein shall be considered only within those areas of the City which are specifically designated for their application on the City's Master Plan for Land Use Map.

The subject property is currently not designated as PD-2 in the Land Use Map. However this is located in close proximity to the properties to the west across Novi Road and properties along Twelve Mile Road which are designated as PD-2. This is also located on the periphery of Twelve Oaks Mall similar to McDonalds drive-thru to the north.

	Regional Center (Existing)	Planned Development-PD-2 Option (Proposed)
Principal Permitted Uses	See attached 3.1.24.	See attached Sec. 3.31.7.B
Special Land Uses	See attached 3.1.24.	All uses under PD-2 are subject to Special land use standards
Minimum Lot Size	Determined by off-street parking, loading, greenbelt screening, yard setback or usable open space requirements	Determined by off-street parking, loading, greenbelt screening, yard setback or usable open space requirements 1.25 Acres for banquet halls, restaurants and other uses listed in 3.31.B.v.
Minimum Lot Width		
Building Height	45 ft. or 3 stories whichever is less	Same as RC
Building Setbacks	Front: 100 feet Rear: 100 feet Side: 100 feet	Front: 50 feet Rear: 20 feet Side: 35 feet (total of two 70 ft.)
Parking Setbacks	Front: 20 feet Rear: 10 feet Side: 10 feet	Front: 20 feet Rear: 10 feet Side: 10 feet

Engineering

The Staff Engineer has reviewed the rezoning request and summarized that the requested rezoning to RC with a PD-2 will result in utility demands that are approximately equal to or less than the utility demand if the property were to be developed under the current zoning. The rezoning would have negligible impact on utility demands.

Traffic

The applicant requested to waive the requirement for a rezoning traffic study as many other traffic related studies are provided. The City's Traffic consultants reviewed the Traffic Impact Study provided by the applicant and indicated that the changes of the impacts for the proposed rezoning would be minimal especially considering the small size of the parcel. Most of the potential uses that could have a negative impact for the rezoning would not fit on such a small site. The impacts of the development are not anticipated to degrade levels of services beyond those under existing conditions during either the AM or PM peak periods. Refer to Traffic study review for more details.

Natural Features

The project site does not contain both City-Regulated Wetlands and Regulated Woodlands.

RECOMMENDATION

Approval of the **Rezoning is recommended** because

- The rezoning request fulfills one of the Master Plan for Land Use objectives by fostering a favorable business climate.
- The rezoning is a recommended land use will be consistent with the surrounding zoning and existing developments.
- The rezoning would increase development potential of the subject property.
- The rezoning provides a redevelopment opportunity for a challenging site in a visible location along I-96/Novi corridor.
- The rezoning will not have impact on public utilities.

Per Section 3.31.2.C, the Planning Commission may proceed simultaneously with review and recommendation on applications for rezoning, PD Option and preliminary site plan approval. Staff review for the proposed site plan under PD-2 option is provided in a separate letter.

NEXT STEP: MASTER PLANNING AND ZONING COMMITTEE (MPZ) MEETING

Proposed Rezoning is currently not supported by our 2016 Master Plan for Land use. A Master Planning and Zoning Committee meeting is scheduled for March 13, 2019 to gather their input.

PLANNING COMMISSION PUBLIC HEARING

If the MPZ Committee provides favorable input for the plans to move forward without requiring additional revisions, staff will schedule a public hearing for **April 17, 2019** meeting. Please provide the following no later than **April 1, 2019**.

1. A rezoning sign should be installed on site as shown on the approved sign location plan.

The following should be provided in response to site plan reviews that were provided under separate cover.

2. A response addressing comments from staff and consultants review letters.
3. Original site plan submittal in PDF format. **No revisions made.**
4. A Physical Façade sample board
5. Color renderings of the site or building, if available for presentation purposes

CITY COUNCIL MEETING

If the Planning Commission makes a favorable recommendation, the plan will be scheduled for next available City Council meeting, date to be determined.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.735.5607 or skomaragiri@cityofnovi.org.



Sri Ravali Komaragiri – Planner

ENGINEERING MEMO: REZONING

MEMORANDUM



TO: SRI KOMARAGIRI, PLANNER
FROM: KATE RICHARDSON, PLAN REVIEW ENGINEER
SUBJECT: REVIEW OF REZONING IMPACT ON PUBLIC UTILITIES
REZONING 18.729, CHICK-FIL-A
DATE: MARCH 7, 2019

The Engineering Division has reviewed a rezoning request for the 1.40 acres located north of I-96 and east of Novi Road. The applicant is requesting to rezone parcel 22-14-100-50 from the existing zoning of Regional Commercial (RC) to Regional Commercial with a Planned Development 2 Options (PD-2). The Master Plan for Land Use indicates a future land use of Regional Commercial.

Utility Demands

A residential equivalency unit (REU) equates to the utility demand from one single family home. If the area were developed under the current zoning, demand on the utilities for the site would be 11.0 REUs per acre for Restaurants. Other acceptable uses under Regional Commercial zoning have lower REUs per acre, thus have less of an impact. The applicant intends to propose a restaurant with a drive-thru and a sit down option, as well as additional parking. This would have an approximate utility demand of 11.0 REUs per acre.

Water System

The site is located within the Intermediate Pressure District. Water service is currently available from an eight-inch water main that runs parallel to Novi Road. The proposed rezoning would have minimal impact on available capacity, pressure and flows in the City's water distribution system.

Sanitary Sewer

The site is located within the Hudson Sewer District. Sanitary service is available by connection to an existing six-inch sanitary sewer to the east of the property. The proposed rezoning is not anticipated to have an impact on the capacity of the downstream sanitary sewer within the City's infrastructure.

Summary

The requested rezoning will result in utility demands that are approximately equal to or less than the utility demand if the property were to be developed under the current zoning. The requested rezoning is not consistent with the future land use for this location. However, it is compatible with the surrounding land uses. Therefore, the rezoning would have negligible impact on utility demands.

cc: Ben Croy, P.E.; Water & Sewer Senior Manager
Barb McBeth, AICP; City Planner
George Melistas; Engineering Senior Manager
Darcy Rechten, P.E.; Construction Engineer

TRAFFIC REVIEW



AECOM
27777 Franklin Road
Southfield
MI, 48034
USA
aecom.com

To:
Barbara McBeth, AICP
City of Novi
45175 10 Mile Road
Novi, Michigan 48375

Project name:
JSP18-0075 Chick-Fil-A Traffic Impact Study
Review Letter
From:
AECOM

Date:
March 4, 2019

CC:
Sri Komaragiri, Lindsay Bell, George Melistas, Darcy
Rechtien, Hannah Smith, Kate Richardson

Memo

Subject: JSP18-0075 Chick-Fil-A Traffic Impact Study Review Letter

The traffic impact study (TIS) for the proposed Chick-Fil-A was reviewed to the level of detail provided and AECOM **recommends approval** of the TIS as long as comments provided below are adequately addressed to the satisfaction of the City.

GENERAL COMMENTS

1. The remainder of the memo will provide comments on a section-by-section basis following the format of the submitted report.

PROJECT SETTING

1. The applicant identified one (1) signalized and five (5) unsignalized intersections as being within the area of study and of interest to the project.
2. Existing traffic volumes were collected by Traffic Data Collection, LLC, on Thursday, January 10th, 2019. Four of the six intersections of interest were counted, with the last two having volumes estimated based on the traffic volume moving up and downstream.
3. AM peak was determined to be 8:00 AM to 9:00 AM. PM peak was determined to be 4:30 PM to 5:30 PM.

PROPOSED ACTION

1. The proposed development is a 4,990 SF Chick-fil-A restaurant. The study includes a preliminary site plan.

TRIP GENERATION

1. The applicant should correct the Weekday PM Peak Hour trip numbers to match the ITE Trip Generation value of 163. If 164 was used instead of 163 due to 81.5 being rounded up for the pass-by and net primary trips, this should be explained on the calculations page.

TRAFFIC VOLUMES

1. Existing traffic volumes for the 2019 'No-Build' condition were taken from the data collected on January 10th.
2. The applicant used the existing traffic patterns to distribute the trips entering and leaving the development.
3. The applicant included figures for both the No-Build 2019 traffic volumes and the Build 2019 traffic volumes in the appendix.

TRAFFIC ANALYSIS

1. The applicant conducted an HCM analysis on each intersection for the No-Build and Build scenarios in Synchro.
2. At the intersection of Novi Road, West Oaks Drive, and Twelve Oaks Drive South, most turning movements/approaches operate between LOS A and LOS D for both AM and PM peaks, with the exception of the northbound left turn and northbound approach, which operates at LOS F in the PM peak for both the No-Build and Build conditions. The applicant notes that the movement likely does not operate as poorly as shown, due to the adaptive operations at the signal.
3. The unsignalized intersections included in the study area all maintain LOS between A and C. Delay at several approaches increased from A to B or B to C, however, B and C are still considered acceptable LOS for an approach.

SUMMARY AND RECOMMENDATIONS

1. The applicant should address the inconsistent number of trips for the PM Peak hour.
2. In summary, the impacts of the development are not anticipated to degrade levels of services beyond those under existing conditions during either the AM or PM peak periods.

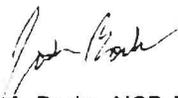
Should the City or applicant have questions regarding this review, they should contact AECOM for further clarification.

Sincerely,

AECOM



Patricia A. Thompson, EIT
Traffic Engineer



Josh A. Bocks, AICP, MBA
Senior Transportation Planner/Project Manager



AECOM
27777 Franklin Road
Southfield
MI, 48034
USA
aecom.com

To:
Barbara McBeth, AICP
City of Novi
45175 10 Mile Road
Novi, Michigan 48375

Project name:
JSP18-0075 Chick-Fil-A Parking and Queueing
Study Review Letter

From:
AECOM

Date:
March 4, 2019

CC:
Sri Komaragiri, Lindsay Bell, George Melistas, Darcy
Rechtien, Hannah Smith, Kate Richardson

Memo

Subject: JSP18-0075 Chick-Fil-A Parking and Queueing Study Review Letter

The Parking and Queueing study for the proposed Chick-Fil-A was reviewed to the level of detail provided and AECOM **recommends approval** of the study as long as comments provided below are adequately addressed to the satisfaction of the City.

GENERAL COMMENTS

1. The remainder of the memo will provide comments on a section-by-section basis following the format of the submitted report.

INTRODUCTION

1. The applicant identified three (3) sites similar to the proposed development. These sites are located throughout the metro Grand Rapids area.
 - a. 28th Street and East Beltline in Grand Rapids, MI
 - b. M-6 and Kalamazoo Avenue in Gaines Township, MI
 - c. US-131 and 54th Street in Wyoming, MI
2. The sites range from 140 SF to 19 SF smaller than the proposed development. Two (2) of the locations have additional shared parking spaces available.

DATA COLLECTION

1. Data collection was conducted on 2 days. The times were selected based on peak site activity.
 - a. Weekend Midday data collection was done on Saturday, January 26th from 12:00 pm to 2:00 pm.
 - b. Weekday Midday and Evening data collection was done on Tuesday, February 5th from 11:00 am to 1:00 pm and 4:00 pm to 6:00 pm. Due to weather issues, no data was collected at the Wyoming location on the 5th.

PARKING DEMAND

1. Parking quantities were collected on 15 minute intervals during the analysis periods. In the report, the applicant provides average and 95th percentile values for the number of vehicles parked in the lot. The maximum values are available in the appendix.
2. The Grand Rapids location had the highest 95th percentile value, at 77 parking spaces (which utilized 18 parking spaces in excess of the spaces available to just the restaurant). The maximum for that location was 79 vehicles parked at 1:00 pm on Saturday.
3. The other two locations peaked at 58 vehicles parked (Wyoming location) and 62 vehicles parked (Gaines Township location), also on Saturday.

DRIVE-THRU QUEUE ANALYSIS

1. Queue length was collected in five (5) minute intervals during the analysis periods. The count includes only vehicles queued behind the vehicle ordering at the kiosk.
2. The Grand Rapids location had the highest 95th percentile queue length, at 20 vehicles during the weekday midday period and 16 vehicles during the weekend period. The peak queue lengths were 20 vehicles during the weekday midday period and 18 during the weekend period. These did exceed the available stacking at this location (10 spaces).
3. The Wyoming location had a peak vehicle queue of 11 on Saturday. This did not exceed the available stacking.
4. The Gaines Township location had a peak vehicle queue of 11 during the weekday evening period. The weekend peak was 7 vehicles. The weekday evening peak exceeded the available stacking.

SUMMARY AND RECOMMENDATIONS

1. In most scenarios, the proposed development should not exceed the parking and vehicle queuing space provided by the site plan. However, should the development experience demand similar to the Grand Rapids location, the drive-thru will impede use of the parking spaces on the north side of the parking lot and there will be insufficient parking available.
2. The parking spaces on the north side of the site and the spillover area for the drive-thru queue could experience conflicts during high-volume periods. We recommend that the applicant consider allocating those spaces as planned employee parking, to prevent a high frequency of conflicts between customers exiting those spaces while others attempt to enter the drive-thru.
3. In instances when the demand for parking exceeds the available spaces, as the peak parked vehicles at the Grand Rapids location suggests can occur, customers will likely park in the adjacent La-Z-Boy Home Furnishings & Decor store parking lot. We recommend that the applicant pursue a shared parking agreement with this facility to alleviate issues with potential parking needs.

Should the City or applicant have questions regarding this review, they should contact AECOM for further clarification.

Sincerely,

AECOM



Patricia A. Thompson, EIT
Traffic Engineer



Josh A. Bocks, AICP, MBA
Senior Transportation Planner/Project Manager

AECOM

TRAFFIC IMPACT STUDY



TRAFFIC IMPACT STATEMENT
Proposed Chick-fil-A

City of Novi, Oakland County, Michigan



Prepared For:



5200 Buffington Road
Atlanta, Georgia 30349

Prepared By:

GPD Group, Professional Corporation
520 South Main Street
Suite 2531
Akron, OH 44311

January 2019

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January 2019

Engineer's Seal

Prepared By:



Handwritten signature of Michael A. Hobbs in blue ink.

Michael A. Hobbs, P.E., PTOE
Registration No. 6201052921
Certification No. 1346

January 24, 2019

Date



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I. Purpose:

This Traffic Impact Statement is being prepared at the request of the City of Novi in association with the proposed construction of a Chick-fil-A restaurant to be located along Novi Road in the City of Novi, Michigan. The purpose of this particular Traffic Impact Statement is to analyze the vehicular operating conditions of the external roadways in the vicinity of the proposed development; both before and after its construction to determine what, if any, impact the proposed development will have on the surrounding roadway network. All internal traffic operations related to the drive-thru operation and on-site parking will be addressed as part of a separate study.

II. Project Setting:

Study Area

The subject property currently contains one (1) vacated structure (former Denny’s restaurant) and is located on the east side of Novi Road just north of the Interstate 96 / Novi Road interchange. The development within the study area consists solely of commercial land uses with the largest being the Twelve Oaks Mall located to the north east of the proposed site. See **Figure 1** for a project location map and **Figure 2** for an aerial photograph of the project area.

Area Roadway System

Currently, Novi Road exists as a six (6) lane asphalt roadway (three (3) travel lanes in each direction) with left and right turn lanes at various intersections. The current posted speed limit on Novi Road is 45 miles per hour (mph). According to information obtained from the Southeast Michigan Council of Governments (SEMCOG), Novi Road is classified as an ‘Other Principal Arterial.’

There is one (1) existing signalized intersection and five (5) unsignalized intersections that are currently located within the study area that are of special interest to this project. The six (6) existing intersections included in this study are as follows:

Novi Road / West Oaks Drive / Twelve Oaks Drive South:

This intersection is currently signalized utilizing a mast arm configuration with signal poles located on each corner of the intersection. The intersection consists of four (4) approaches with the following lane configurations: NB Novi Road – six (6) lanes (left, left, thru, thru, thru, right), SB Novi Road – five (5) lanes (left, thru, thru, thru, right), EB West Oaks Drive – four (4) lanes (left, thru, right, right) and WB Twelve Oaks Drive South – three (3) lanes (left, left, thru-right).

Novi Road / One-Way Mall Drive (EB):

This intersection is currently unsignalized with the One-Way Mall Drive (EB) leg operating as a EB receiving-only lane. The intersection consists of two (2) approaches with the following lane configurations: NB Novi Road – five (5) lanes (thru, thru, thru, thru, thru-right) and SB Novi Road – three (3) lanes (thru, thru, thru). SB left turns are not permitted from Novi Road onto the One-Way Mall Drive.

One-Way Mall Drive (EB) / Commercial Drive #1:

This intersection is currently unsignalized and operates as a right-in / right-out with the Commercial Drive #1 approach operating under stop control. The intersection consists of two (2) approaches with the following lane configurations: NB Commercial Drive #1 – one (1) lane (right) and EB One-Way Mall Drive (EB) – two (2) lanes (thru, right). It should be noted that a third leg (east leg) of this intersection exists as a one (1) lane EB receiving-only lane.

Twelve Oaks Drive South / Twelve Oaks Mall Perimeter Road:

This intersection is currently unsignalized with all approaches operating under stop control. The intersection consists of three (3) approaches with the following lane configurations: NB Twelve Oaks Mall Perimeter Road – three (3) lanes (left, left-thru, thru), SB Twelve Oaks Mall Perimeter Road – two (2) lanes (thru, thru-right) and EB Twelve Oaks Drive South – two (2) lanes (left, right).

Twelve Oaks Mall Perimeter Road / One-Way Mall Drive (EB):

This intersection is currently unsignalized with the One-Way Mall Drive (EB) approach operating under yield control. The intersection consists of three (3) approaches with the following lane configurations: NB Twelve Oaks Mall Perimeter Road – two (2) lanes (thru, thru), SB Twelve Oaks Mall Perimeter Road – two (2) lanes (thru, thru) and EB One-Way Mall Drive (EB) – one (1) lane (right).

Twelve Oaks Mall Perimeter Road / Commercial Drive #2:

This intersection is currently unsignalized with the Commercial Drive #2 approach operating under stop control. The intersection consists of three (3) approaches with the following lane configurations: NB Twelve Oaks Mall Perimeter Road – two (2) lanes (left-thru, thru), SB Twelve Oaks Mall Perimeter Road – two (2) lanes (thru, thru-right) and EB Commercial Drive #2 – one (1) lane (left-right).

Existing Traffic Volumes

For this traffic study, Traffic Data Collection, LLC performed turning movement traffic counts at the following four (4) study intersections on Thursday, January 10, 2019:

- Novi Road / West Oaks Drive / Twelve Oaks Drive South
- Twelve Oaks Drive South / Twelve Oaks Mall Perimeter Road
- One-Way Mall Drive (EB) / Commercial Drive #1
- Twelve Oaks Mall Perimeter Road / Commercial Drive #2

Utilizing the data from the counted intersections above, traffic volumes for the remaining two (2) study intersections were calculated based on the upstream and downstream traffic volumes. From the count data, the AM peak hour of the study area was determined to occur from 8:00 AM to 9:00 AM while the PM peak hour was found to occur from 4:30 PM to 5:30 PM. See **Appendix A** for printouts of the turning movement counts.

III. Proposed Action:

The proposed development will be a Chick-fil-A restaurant consisting of a total of 4,990 square feet (SF) of gross floor area. The proposed development will be constructed on the east side of Novi Road, north of the Interstate 96 / Novi Road interchange. See **Figure 3** for a preliminary site plan.

As shown on the site plan, the proposed development will continue to utilize the one (1) full movement driveway as well as the one (1) right-in / right-out driveway that currently serve the site. The right-in / right-out access point is provided along the One-Way Mall Drive (EB) and will be referred to as Commercial Drive #1 while the full movement access point is provided along Twelve Oaks Perimeter Mall Road and will be referred to as Commercial Drive #2. It should be noted that access to these two (2) driveways is currently provided, and will continue to be provided following the completion of this project, through two (2) shared access points with the neighboring business (La-Z-Boy) immediately to the east of the proposed site.

IV. Trip Generation:

Trip Generation Calculations

The trip generation calculations were performed for the proposed development utilizing the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. This manual includes data from numerous trip generation studies of different land uses that have been performed by public agencies, developers, consulting firms and associations and submitted to ITE. It serves as a tool for estimating the number of vehicle trips generated by a proposed development. For this study, the trip generation calculations will evaluate the AM and PM peak periods.

According to information contained in the ITE Trip Generation Manual, 10th Edition, the proposed Chick-fil-A restaurant is expected to generate the following trip ends once constructed:

LAND USE 934 – Fast-Food Restaurant with Drive-Through Window

- i. Weekday AM Peak Hour (i.e. morning rush hour):
 - = 201 trip ends (102 enter and 99 exit)
 - a. Pass-By Trips (49%)
 - = 98 trip ends (50 enter and 48 exit)
 - b. Net Primary Trips
 - = 103 trip ends (52 enter and 51 exit)
- ii. Weekday PM Peak Hour (i.e. evening rush hour):
 - = 164 trip ends (86 enter and 78 exit)
 - a. Pass-By Trips (50%)
 - = 82 trip ends (43 enter and 39 exit)
 - b. Net Primary Trips
 - = 82 trip ends (43 enter and 39 exit)

Note that the variable utilized in the trip generation calculations was ‘square feet of gross floor area’, which in this particular case is 4,990 SF. See **Appendix B** for the detailed trip generation calculations for the proposed Chick-fil-A restaurant.

A certain portion of vehicles that will travel to and from the site will occur as pass-by traffic. Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Since these trips are attracted from the traffic passing the site on the adjacent roadways, pass-by vehicles that are currently traveling along Novi Road will now be rerouted into and out of the site. Trip generation studies for a fast-food restaurant with a drive-thru window are documented in the ITE [Trip Generation Handbook](#) estimate that pass-by trips make up an average of 49% of the total site trips during the AM peak hour and 50% during the PM peak hour. The remaining trips traveling to and from the site are referred to as primary trips as they consist of new trips on the roadway network traveling directly between the origin and the primary trip destination. While the pass-by capture reduction was applied to the trip generation calculations for the proposed Chick-fil-A, it should be noted that these pass-by trips are still assigned as new turning movements entering and exiting the site at the proposed access locations.

V. Traffic Volumes:

‘No-Build’ Traffic Volumes

The construction of the proposed development is anticipated to be completed in the year 2019 which will serve as the Opening Year for the study. The existing traffic volumes from the turning movement traffic counts will be utilized as the Opening Year 2019 ‘No-Build’ traffic volumes. **Figure 4** displays the Opening Year 2019 ‘No-Build’ peak hour traffic volumes.

Site Trip Distribution & Assignment

The new trips discussed in the Trip Generation section were distributed and assigned to the roadway network based on existing travel volumes/patterns near the site, the surrounding land uses and roadway network, and engineering judgment. It was estimated that 45% of the projected site trips will travel to/from the south on Novi Road, 30% will travel to/from the north on Novi Road, 10% will travel to/from the west on West Oaks Drive, 10% will travel to/from the north on Twelve Oaks Mall Perimeter Road and the remaining 5% will travel to/from the south on Twelve Oaks Mall Perimeter Road.

It is expected that more traffic would likely utilize Commercial Drive #2 for both entering and exiting the site. For entering traffic, only traffic coming from the South on Novi Road will be able to utilize Commercial Drive #1 (right-in / right-out) as it connects to a one-way EB roadway that can only be accessed from vehicles traveling in the NB direction on Novi Road. Therefore, all other entering traffic will need to utilize Commercial Drive #2. For exiting traffic, all traffic not destined to travel south on Twelve Oaks Mall Perimeter Road will need to utilize Commercial Drive #2 as it is the only driveway that will allow vehicles to travel north on Twelve Oaks Mall Perimeter Road and to access Novi Road.

Pass-by trips, since they occur from traffic already traveling by the site, were developed and distributed based on the existing directional distribution of peak hour traffic volumes along Novi Road adjacent to the site. Due to the roadway configuration and limited access to the site from Novi Road, pass-by trips will technically occur as diverted link trips. The peak hour distribution and assignment of new site trips, including both primary and pass-by trips are included in **Appendix C**. An additional figure that combines both primary and pass-by trips to show the total net traffic from the proposed site was also provided.

'Build' Traffic Volumes

In order to create the 'Build' traffic volumes, the site trips discussed in the previous section were added to the Opening Year 2019 'No-Build' peak hour traffic volumes. The 'Build' traffic volumes will allow a direct comparison between the projected traffic conditions without the development and those following the completion of the proposed Chick-fil-A restaurant. **Figure 5** displays the Opening Year 2019 'Build' peak hour traffic volumes.

VI. Traffic Analysis:

HCM Intersection Capacity Analysis

Intersection Capacity analyses were performed for the Opening Year 2019 'No-Build' and 'Build' traffic conditions in order to determine the operating conditions that would be expected to be experienced at each intersection. The quality of the operating conditions experienced by an intersection is measured in terms of Level-of-Service (LOS). Levels-of-Service can range from LOS A to LOS F. Level-of-Service ratings of A – D are considered to be in the acceptable range while Levels-of-Service E and F are considered to be below average with significant levels of delay experienced by vehicles. The Level-of-Service thresholds vary for signalized and unsignalized intersections. The thresholds related to average control delay for both signalized and unsignalized intersections are as follows:

Level-of-Service	Delay Threshold – Signalized (Sec)	Delay Threshold – Unsignalized (Sec)
A	< 10	< 10
B	> 10 - 20	> 10 – 15
C	> 20 - 35	> 15 – 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

The capacity analyses were performed for the weekday AM and PM peak hours utilizing the computer program *Synchro* (Version 9) developed by Trafficware. *Synchro* can provide a macroscopic analysis of an entire roadway system and take into account the interactions and impact of traffic which travels from one intersection to the next. Analysis results reported in the following tables are based on the Highway Capacity Manual (HCM) calculation outputs from the *Synchro* software. The existing signal timings (cycle lengths, splits and clearance intervals) for the Novi Road / West Oaks Drive / Twelve Oaks Drive South intersection were provided by the Oakland County Road Commission for use in this study. These timings were utilized for the capacity analysis of both the Opening Year 2019 'No-Build' and 'Build' traffic conditions. It should be noted that this signalized intersection currently utilizes traffic adaptive operation and these timings represent the back-up timings as noted on the signal permit.

Table 1 on the following page summarizes the HCM Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the Opening Year 2019 'No-Build' vs. 'Build' traffic conditions for the signalized intersection of Novi Road / West Oaks Drive / Twelve Oaks Drive South. See **Appendix D** for the HCM analysis printouts.

Intersection / Movement	'No-Build' Conditions				'Build' Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Novi Road / West Oaks Drive / Twelve Oaks Drive South								
Eastbound Left	D	40.4	D	47.4	D	40.3	D	47.4
Eastbound Thru	D	40.0	D	43.2	D	40.2	D	43.5
Eastbound Right	D	36.9	D	49.8	D	36.9	D	49.8
<i>Eastbound Approach</i>	<i>D</i>	<i>37.6</i>	<i>D</i>	<i>48.8</i>	<i>D</i>	<i>37.7</i>	<i>D</i>	<i>48.8</i>
Westbound Left	D	41.4	D	42.1	D	41.7	D	43.1
Westbound Thru-Right	D	40.6	D	35.4	D	43.7	D	35.3
<i>Westbound Approach</i>	<i>D</i>	<i>41.3</i>	<i>D</i>	<i>41.0</i>	<i>D</i>	<i>42.4</i>	<i>D</i>	<i>41.6</i>
Northbound Left	D	42.8	F	213.9	D	42.8	F	213.9
Northbound Thru	B	19.7	C	33.0	B	19.6	C	32.8
Northbound Right	B	19.3	D	37.2	B	19.3	D	37.2
<i>Northbound Approach</i>	<i>C</i>	<i>22.8</i>	<i>F</i>	<i>80.5</i>	<i>C</i>	<i>22.8</i>	<i>F</i>	<i>81.1</i>
Southbound Left	B	12.6	C	21.4	B	14.2	C	24.2
Southbound Thru	B	10.3	B	19.4	B	11.1	C	20.2
Southbound Right	A	8.7	B	15.9	A	9.3	B	16.6
<i>Southbound Approach</i>	<i>B</i>	<i>10.3</i>	<i>B</i>	<i>19.3</i>	<i>B</i>	<i>11.2</i>	<i>C</i>	<i>20.3</i>
Intersection Total	B	18.0	D	51.5	C	20.6	D	51.6

Note: Red highlighted cells indicate a Level of Service F.

As shown in **Table 1**, all movements and approaches of the Novi Road / West Oaks Drive / Twelve Oaks Drive South intersection are projected to operate at an acceptable LOS D or better during the AM and PM peak hours under the Opening Year 2019 'No-Build' and 'Build' traffic conditions with the exception of the NB left-turn movement and approach during the PM peak hour (which likely operates better than shown due to the previously mentioned traffic adaptive operation). As can be seen in the capacity analysis results, the new traffic from the proposed development will have no additional impact on the operation of the NB left-turn movement and only a minimal impact to the NB approach overall. Most importantly, no movements are expected to degrade to an unacceptable Level-of-Service as a result of the additional site traffic. This indicates that the Novi Road / West Oaks Drive / Twelve Oaks Drive South intersection is anticipated to have sufficient vehicular capacity to accommodate the additional traffic generated by the proposed development.

Table 2 on the following page summarizes the HCM Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the Opening Year 2019 'No-Build' vs. 'Build' traffic conditions for the unsignalized intersections within the study area. See **Appendix D** for the HCM analysis printouts. It should be noted that there are no capacity analysis results for the Novi Road / One-Way Mall Drive (EB) intersection as no movements at this intersection will incur any delay, from an isolated intersection analysis perspective.

Table 2: HCM Intersection Capacity Analysis Summary								
Opening Year 2019 'No-Build' vs. 'Build' Conditions – Unsignalized Intersections								
Intersection / Movement	'No-Build' Conditions				'Build' Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
One-Way Mall Drive (EB) / Commercial Drive #1								
Northbound Right	A	0.0	A	9.2	A	0.0	A	9.2
<i>Northbound Approach</i>	A	0.0	A	9.2	A	0.0	A	9.2
Twelve Oaks Mall Perimeter Road / Twelve Oaks Drive South								
Eastbound Left	A	9.1	B	12.3	A	9.9	B	12.8
Eastbound Right	A	7.3	B	10.8	A	8.5	B	12.5
<i>Eastbound Approach</i>	A	8.9	B	11.5	A	9.3	B	12.6
Northbound Left	A	8.4	B	12.7	A	9.5	B	14.6
Northbound Left-Thru	A	8.3	B	13.2	A	9.5	C	15.4
Northbound Thru	A	6.1	A	7.5	A	6.4	A	7.7
<i>Northbound Approach</i>	A	7.9	B	12.4	A	9.3	B	14.4
Southbound Thru	A	8.0	A	9.8	A	8.7	B	10.3
Southbound Thru-Right	A	7.5	B	12.3	A	8.2	B	13.4
<i>Southbound Approach</i>	A	7.6	B	12.0	A	8.4	B	13.0
Intersection Total	A	8.5	B	12.0	A	9.2	B	13.5
Twelve Oaks Mall Perimeter Road / One-Way Mall Drive (EB)								
Eastbound Right	A	8.7	A	9.5	A	8.9	A	9.7
<i>Eastbound Approach</i>	A	8.7	A	9.5	A	8.9	A	9.7
Twelve Oaks Mall Perimeter Road / Commercial Drive #2								
Eastbound Left-Right	A	0.0	B	11.1	B	10.4	C	15.6
<i>Eastbound Approach</i>	A	0.0	B	11.1	B	10.4	C	15.6
Northbound Left-Thru	A	0.0	A	0.0	A	7.6	A	8.0
Northbound Thru	A	0.0	A	0.0	A	0.0	A	0.0
<i>Northbound Approach</i>	A	0.0	A	0.0	A	1.1	A	0.1

Note: Red highlighted cells indicate a Level of Service F.

As shown in **Table 2**, all unsignalized intersections within the study area are anticipated to operate at an acceptable LOS C or better during the AM and PM peak hours under the Opening Year 2019 'No-Build' and 'Build' traffic conditions. This indicates that the unsignalized intersections within the study area are anticipated to provide sufficient vehicular capacity to accommodate the additional traffic generated by the proposed Chick-fil-A restaurant.

VII. Summary and Recommendations:

This Traffic Impact Statement is being prepared at the request of the City of Novi in association with the proposed construction of a Chick-fil-A restaurant to be located along Novi Road in the City of Novi, Michigan. The purpose of this particular Traffic Impact Statement is to analyze the vehicular operating conditions of the external roadways in the vicinity of the proposed development; both before and after its construction to determine what, if any, impact the proposed development will have on the surrounding roadway network. All internal traffic operations related to the drive-thru operation and on-site parking will be addressed as part of a separate study.

In Summary,

1. The proposed development will be a Chick-fil-A restaurant consisting of a total of 4,990 square feet of gross floor area.
2. According to the site plan, the proposed development will continue to utilize the one (1) full movement driveway as well as the one (1) right-in / right-out driveway that currently serve the site. The right-in / right-out access point is provided along One-Way Mall Drive (EB) and will be referred to as Commercial Drive #1 while the full movement access point is provided along Twelve Oaks Perimeter Mall Road and will be referred to as Commercial Drive #2. It should be noted that access to these two (2) driveways is currently provided, and will continue to be provided following the completion of this project, through two (2) shared access points with the neighboring business (La-Z-Boy) immediately to the east of the proposed development.
3. The proposed development is expected to generate 201 trip ends during the AM peak hour (102 entering and 99 exiting) and 164 trip ends during the PM peak hour (86 entering and 78 exiting).
4. The capacity analysis found that all movements and approaches of the Novi Road / West Oaks Drive / Twelve Oaks Drive South intersection are projected to operate at an acceptable LOS D or better during the AM and PM peak hours under the Opening Year 2019 'No-Build' and 'Build' traffic conditions with the exception of the NB left-turn movement and approach during the PM peak hour. However, the additional traffic from the proposed development will have no additional impact on the operation of the NB left-turn movement and only a minimal impact to the NB approach overall. Most importantly, no movements are expected to degrade to an unacceptable Level-of-Service as a result of the additional project traffic. This indicates that the Novi Road / West Oaks Drive / Twelve Oaks Drive South intersection is anticipated to have sufficient vehicular capacity to accommodate the additional traffic generated by the proposed development.
5. The capacity analysis determined that all unsignalized intersections within the study area are anticipated to operate at an acceptable LOS C or better during the AM and PM peak hours under the Opening Year 2019 'No-Build' and 'Build' traffic conditions.



Based on the information and analyses in this study, GPD Group recommends the following:

1. The proposed development should be constructed as planned utilizing the two (2) existing driveways that currently serve the site.

FIGURES





CAD FILE: G:\2018\20180231\15 TWELVE OAKS_M\TRAFFIC\FIGURES\2_ FIGURE 2_AERIAL.DWG
DATE: 1/10/2019 TIME: 10:15:28 AM
TECHNICIAN: ODOMBROSKY



N.T.S.

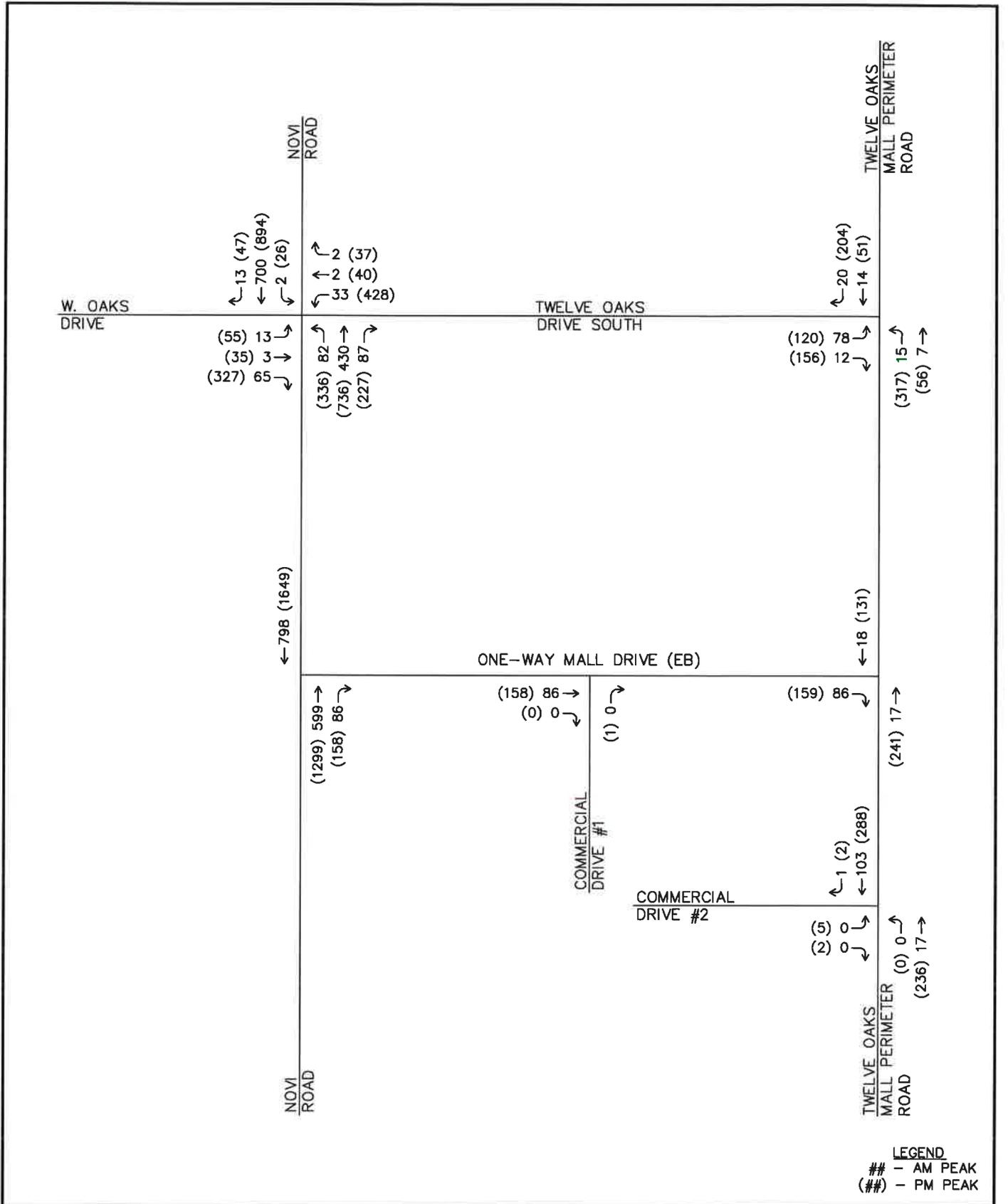
FIGURE 2

AERIAL PHOTOGRAPH

JANUARY 2019



CAD FILE: G:\2018\20180223\15 TWELVE OAKS, MA TRAFFIC FIGURES\4. FIGURE 4_2019 'NO-BUILD' VOLUMES.DWG
 DATE: 1/18/2019 TIME: 10:17:44 AM



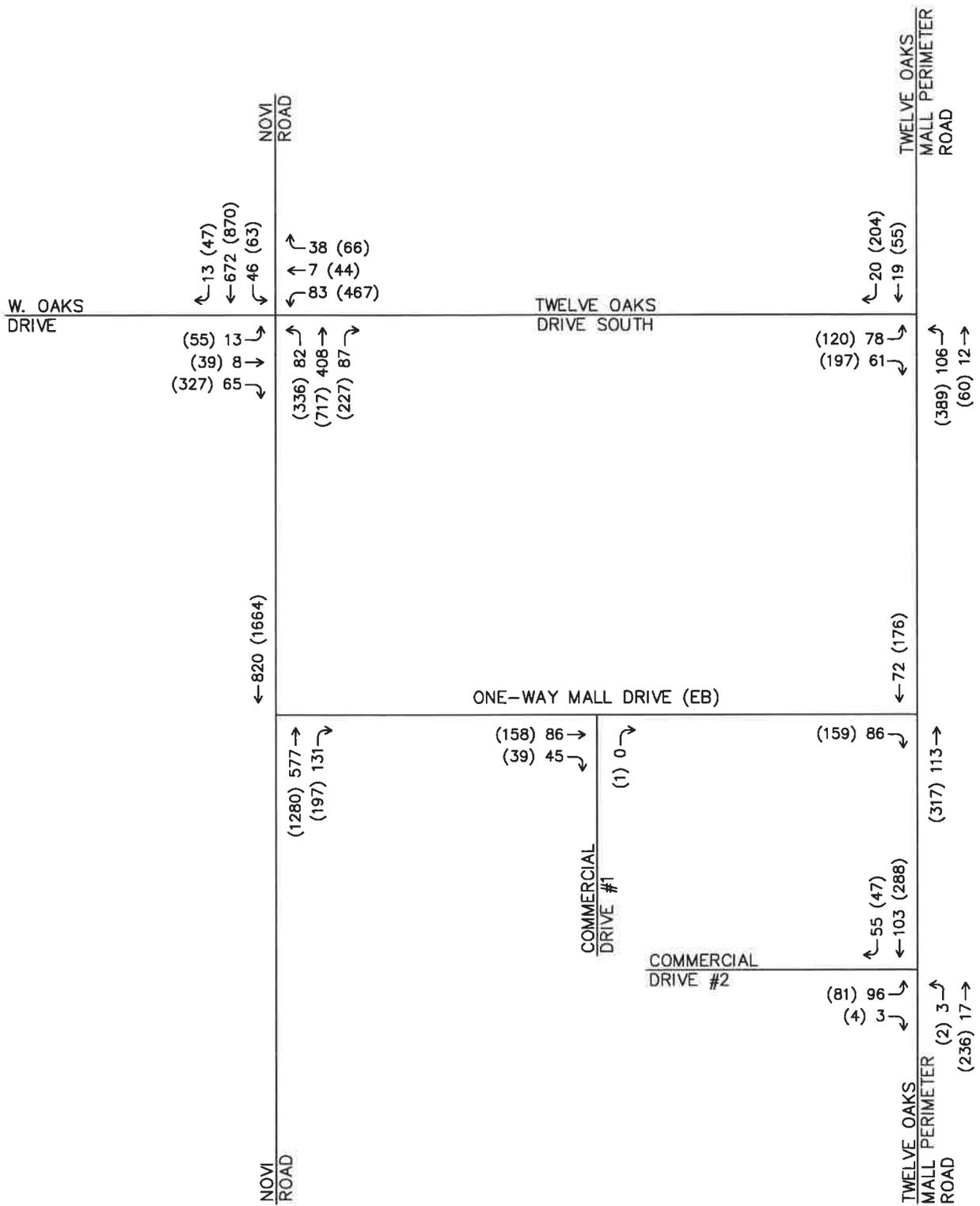
LEGEND
 ## - AM PEAK
 (##) - PM PEAK



FIGURE 4
 OPENING YEAR 2019
 'NO-BUILD'
 TRAFFIC VOLUMES
 JANUARY 2019



CAD FILE: G:\301\19_01\19223\15 TWELVE OAKS_M\TRAFFIC\FIGURES\5. FIGURE 5_2019 'BUILD' VOLUMES.DWG
 DATE: 1/14/2019 TIME: 10:21:37 AM
 TECHNICIAN: DOOMEROSKY



LEGEND
 ## - AM PEAK
 (##) - PM PEAK



N.T.S.

FIGURE 5

OPENING YEAR 2019
 'BUILD'
 TRAFFIC VOLUMES

JANUARY 2019



**APPENDIX A:
TURNING MOVEMENT COUNTS**

Traffic Data Collection, LLC

www.tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By Miovision Video VCU 4G2 & 5RA

File Name : TMC_1 Novi & Twelve Oaks_S_1-10-19
Site Code : TMC_1
Start Date : 1/10/2019
Page No : 1

4 Hour video traffic study was conducted during typical weekday (Tuesday-Thursday) from 7:00 AM - 9:00 AM morning & 4:00 PM - 6:00 PM afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Peds

Start Time	Novi Road Southbound					Twelve Oaks Drive South Westbound					Novi Road Northbound					W. Oaks Drive Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	124	0	0	124	1	0	4	0	5	14	59	8	0	81	16	1	0	0	17	227
07:15 AM	1	139	0	0	140	0	0	2	0	2	8	88	11	0	107	14	0	0	0	14	263
07:30 AM	0	149	0	0	149	1	1	3	0	5	18	78	19	0	115	9	1	0	0	10	279
07:45 AM	7	174	0	0	181	0	0	3	0	3	22	132	16	0	170	23	0	0	0	23	377
Total	8	586	0	0	594	2	1	12	0	15	62	357	54	0	473	62	2	0	0	64	1146
08:00 AM	2	167	0	0	169	0	0	1	0	1	13	120	18	0	151	14	1	5	0	20	341
08:15 AM	5	146	1	0	152	1	0	6	0	7	26	104	26	0	156	17	1	3	0	21	336
08:30 AM	1	194	0	0	195	1	0	12	0	13	12	108	17	0	137	18	0	3	0	21	366
08:45 AM	5	193	1	0	199	0	2	14	0	16	36	98	21	0	155	16	1	2	0	19	389
Total	13	700	2	0	715	2	2	33	0	37	87	430	82	0	599	65	3	13	0	81	1432
*** BREAK ***																					
04:00 PM	13	211	3	0	227	8	8	115	0	131	67	178	91	0	336	94	8	11	0	113	807
04:15 PM	9	192	7	0	208	9	10	104	0	123	67	166	70	0	303	94	10	14	0	118	752
04:30 PM	7	213	6	0	226	8	11	86	0	105	65	167	67	0	299	70	12	17	0	99	729
04:45 PM	16	202	4	0	222	11	10	121	0	142	60	164	100	0	324	73	9	11	0	93	781
Total	45	818	20	0	883	36	39	426	0	501	259	675	328	0	1262	331	39	53	0	423	3069
05:00 PM	12	227	10	0	249	11	10	121	0	142	47	188	80	0	315	81	12	9	0	102	808
05:15 PM	12	252	6	0	270	7	9	100	0	116	55	217	89	0	361	103	2	18	0	123	870
05:30 PM	14	169	5	0	188	6	6	104	0	116	29	152	75	0	256	73	7	10	0	90	650
05:45 PM	14	246	3	1	264	9	10	99	1	119	55	179	95	0	329	76	6	9	0	91	803
Total	52	894	24	1	971	33	35	424	1	493	186	736	339	0	1261	333	27	46	0	406	3131
Grand Total	118	2998	46	1	3163	73	77	895	1	1046	594	2198	803	0	3595	791	71	112	0	974	8778
Apprch %	3.7	94.8	1.5	0		7	7.4	85.6	0.1		16.5	61.1	22.3	0		81.2	7.3	11.5	0		
Total %	1.3	34.2	0.5	0	36	0.8	0.9	10.2	0	11.9	6.8	25	9.1	0	41	9	0.8	1.3	0	11.1	
Pass Cars	117	2952	46	0	3115	73	76	887	0	1036	587	2167	788	0	3542	779	70	111	0	960	8653
% Pass Cars	99.2	98.5	100	0	98.5	100	98.7	99.1	0	99	98.8	98.6	98.1	0	98.5	98.5	98.6	99.1	0	98.6	98.6
Single Units	1	34	0	0	35	0	1	6	0	7	5	24	12	0	41	9	1	1	0	11	94
% Single Units	0.8	1.1	0	0	1.1	0	1.3	0.7	0	0.7	0.8	1.1	1.5	0	1.1	1.1	1.4	0.9	0	1.1	1.1
Heavy Trucks	0	12	0	0	12	0	0	2	0	2	2	7	3	0	12	3	0	0	0	3	29
% Heavy Trucks	0	0.4	0	0	0.4	0	0	0.2	0	0.2	0.3	0.3	0.4	0	0.3	0.4	0	0	0	0.3	0.3
Peds	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
% Peds	0	0	0	100	0	0	0	0	100	0.1	0	0	0	0	0	0	0	0	0	0	0

TDC Traffic Comments: Signalized intersection with push button ped. signals for west, north & east legs. Overhead NTOR electronic case for all approach legs. Video VCU cameras were located within NW & SE intersection quadrants. Note: Peds. are excluded from peak hour reports. Traffic study was performed for Novi Traffic Impact Study (Formerly Denny's @ 27750 Novi Road for GPD Group, Youngstown Ohio).

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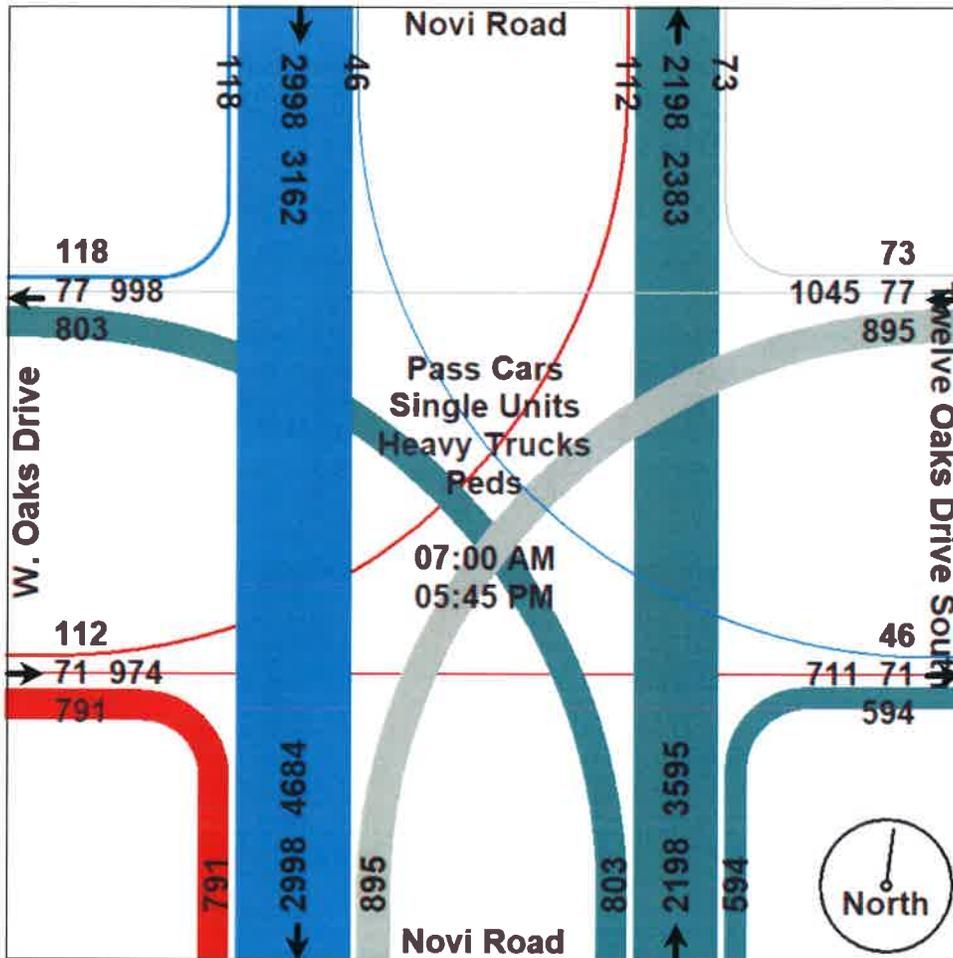
Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
 Study: 4 Hr. Video Turning Movement Count
 Weather: Sunny/Cldy, Dry Deg's 30's
 Count By Miovision Video VCU 4G2 & 5RA

File Name : TMC_1 Novi & Twelve Oaks_S_1-10-19
 Site Code : TMC_1
 Start Date : 1/10/2019
 Page No : 2



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Traffic Study Performed For:

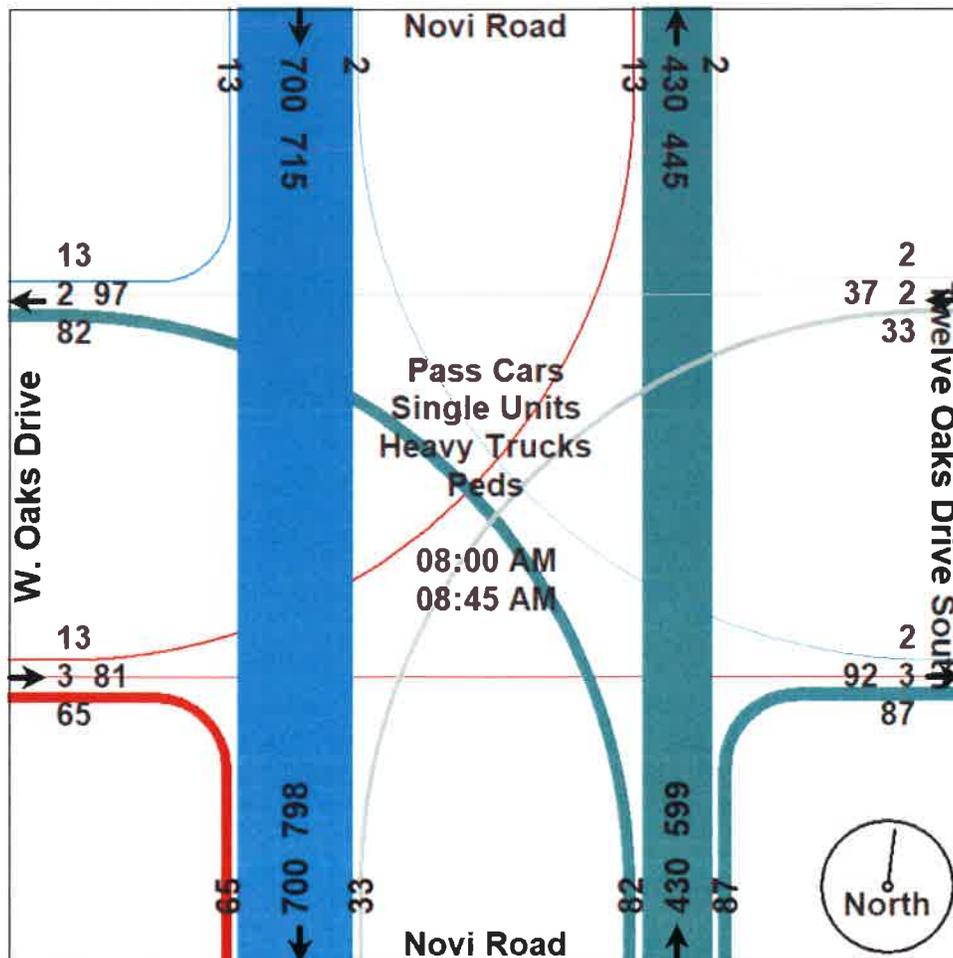
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By Miovision Video VCU 4G2 & 5RA

File Name : TMC_1 Novi & Twelve Oaks_S_1-10-19
Site Code : TMC_1
Start Date : 1/10/2019
Page No : 3

Start Time	Novi Road Southbound				Twelve Oaks Drive South Westbound				Novi Road Northbound				W. Oaks Drive Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	2	167	0	169	0	0	1	1	13	120	18	151	14	1	5	20	341
08:15 AM	5	146	1	152	1	0	6	7	26	104	26	156	17	1	3	21	336
08:30 AM	1	194	0	195	1	0	12	13	12	108	17	137	18	0	3	21	366
08:45 AM	5	193	1	199	0	2	14	16	36	98	21	155	16	1	2	19	389
Total Volume	13	700	2	715	2	2	33	37	87	430	82	599	65	3	13	81	1432
% App. Total	1.8	97.9	0.3		5.4	5.4	89.2		14.5	71.8	13.7		80.2	3.7	16		
PHF	.650	.902	.500	.898	.500	.250	.589	.578	.604	.896	.788	.960	.903	.750	.650	.964	.920
Pass Cars	13	684	2	699	2	2	32	36	85	418	77	580	60	2	13	75	1390
% Pass Cars	100	97.7	100	97.8	100	100	97.0	97.3	97.7	97.2	93.9	96.8	92.3	66.7	100	92.6	97.1
Single Units	0	12	0	12	0	0	0	0	2	8	4	14	3	1	0	4	30
% Single Units	0	1.7	0	1.7	0	0	0	0	2.3	1.9	4.9	2.3	4.6	33.3	0	4.9	2.1
Heavy Trucks	0	4	0	4	0	0	1	1	0	4	1	5	2	0	0	2	12
% Heavy Trucks	0	0.6	0	0.6	0	0	3.0	2.7	0	0.9	1.2	0.8	3.1	0	0	2.5	0.8
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Traffic Study Performed For:

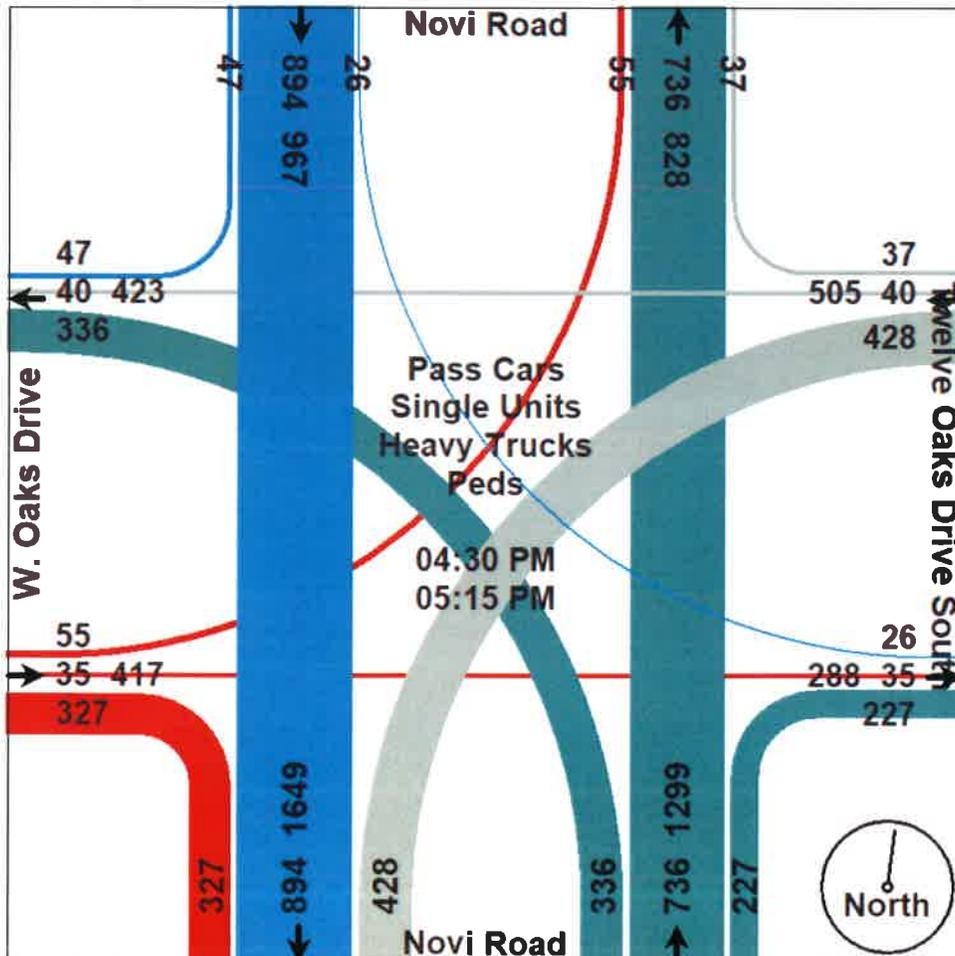
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By Miovision Video VCU 4G2 & 5RA

File Name : TMC_1 Novi & Twelve Oaks_S_1-10-19
Site Code : TMC_1
Start Date : 1/10/2019
Page No : 4

Start Time	Novi Road Southbound				Twelve Oaks Drive South Westbound				Novi Road Northbound				W. Oaks Drive Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	7	213	6	226	8	11	86	105	65	167	67	299	70	12	17	99	729
04:45 PM	16	202	4	222	11	10	121	142	60	164	100	324	73	9	11	93	781
05:00 PM	12	227	10	249	11	10	121	142	47	188	80	315	81	12	9	102	808
05:15 PM	12	252	6	270	7	9	100	116	55	217	89	361	103	2	18	123	870
Total Volume	47	894	26	967	37	40	428	505	227	736	336	1299	327	35	55	417	3188
% App. Total	4.9	92.5	2.7		7.3	7.9	84.8		17.5	56.7	25.9		78.4	8.4	13.2		
PHF	.734	.887	.650	.895	.841	.909	.884	.889	.873	.848	.840	.900	.794	.729	.764	.848	.916
Pass Cars	46	885	26	957	37	40	423	500	226	733	335	1294	326	35	55	416	3167
% Pass Cars	97.9	99.0	100	99.0	100	100	98.8	99.0	99.6	99.6	99.7	99.6	99.7	100	100	99.8	99.3
Single Units	1	6	0	7	0	0	4	4	1	3	0	4	1	0	0	1	16
% Single Units	2.1	0.7	0	0.7	0	0	0.9	0.8	0.4	0.4	0	0.3	0.3	0	0	0.2	0.5
Heavy Trucks	0	3	0	3	0	0	1	1	0	0	1	1	0	0	0	0	5
% Heavy Trucks	0	0.3	0	0.3	0	0	0.2	0.2	0	0	0.3	0.1	0	0	0	0	0.2
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Traffic Study Performed For:

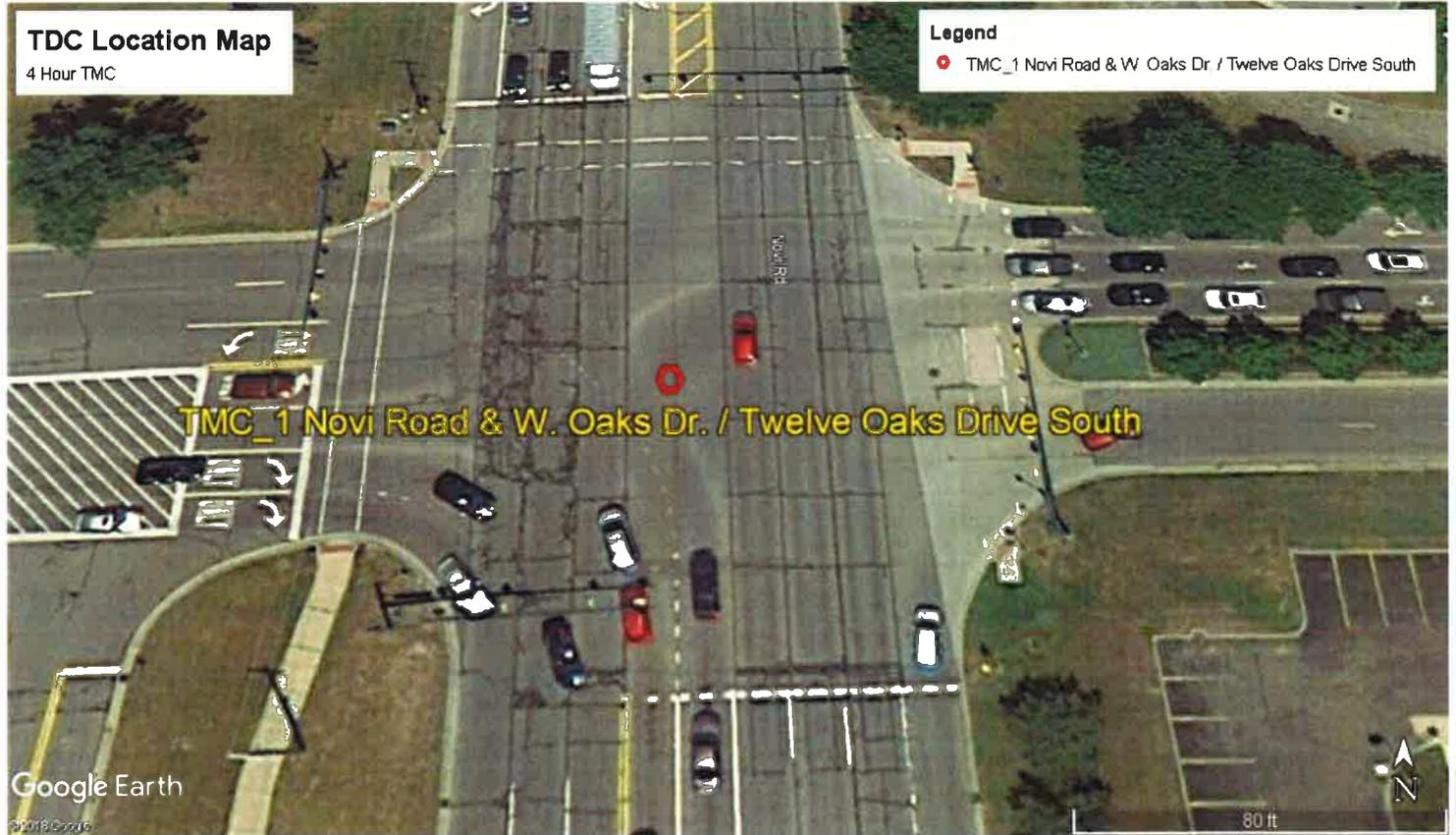
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By: Miovision Video VCU 4G2 & 5RA

File Name : TMC_1 Novi & Twelve Oaks_S_1-10-19
Site Code : TMC_1
Start Date : 1/10/2019
Page No : 5

Aerial Photo



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Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By GH Jamar Ultra Board #22

File Name : TMC_2 Twelve Oaks Mall_S & Twelve Oak Mall_1-10-19
Site Code : TMC_2
Start Date : 1/10/2019
Page No : 1

4 Hour video traffic study was conducted during typical weekday (Tuesday-Thursday) from 7:00 AM - 9:00 AM morning & 4:00 PM - 6:00 PM afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks

Start Time	Twelve Oaks Mall Drive Southbound			Twelve Oaks Mall Drive Northbound			Twelve Oaks Drive South Eastbound			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
07:00 AM	1	1	2	1	4	5	2	14	16	23
07:15 AM	1	2	3	1	1	2	0	9	9	14
07:30 AM	4	1	5	1	1	2	0	18	18	25
07:45 AM	1	4	5	1	2	3	3	19	22	30
Total	7	8	15	4	8	12	5	60	65	92
08:00 AM	1	3	4	2	1	3	1	12	13	20
08:15 AM	1	5	6	2	4	6	2	23	25	37
08:30 AM	9	4	13	1	3	4	5	10	15	32
08:45 AM	9	2	11	2	7	9	4	33	37	57
Total	20	14	34	7	15	22	12	78	90	146
*** BREAK ***										
04:00 PM	50	0	50	18	82	100	38	39	77	227
04:15 PM	44	8	52	14	80	94	42	47	89	235
04:30 PM	44	17	61	14	75	89	38	38	76	226
04:45 PM	52	13	65	23	81	104	41	26	67	236
Total	190	38	228	69	318	387	159	150	309	924
05:00 PM	59	8	67	12	81	93	42	31	73	233
05:15 PM	49	13	62	7	80	87	35	25	60	209
05:30 PM	52	17	69	12	58	70	15	23	38	177
05:45 PM	35	13	48	16	78	94	42	23	65	207
Total	195	51	246	47	297	344	134	102	236	826
Grand Total	412	111	523	127	638	765	310	390	700	1988
Apprch %	78.8	21.2		16.6	83.4		44.3	55.7		
Total %	20.7	5.6	26.3	6.4	32.1	38.5	15.6	19.6	35.2	
Pass Cars	408	107	515	124	635	759	306	386	692	1966
% Pass Cars	99	96.4	98.5	97.6	99.5	99.2	98.7	99	98.9	98.9
Single Units	2	4	6	2	3	5	4	2	6	17
% Single Units	0.5	3.6	1.1	1.6	0.5	0.7	1.3	0.5	0.9	0.9
Heavy Trucks	2	0	2	1	0	1	0	2	2	5
% Heavy Trucks	0.5	0	0.4	0.8	0	0.1	0	0.5	0.3	0.3

TDC Traffic Comments: Non-signalized "T" intersection, with right turn slip lanes. Note: Westbound traffic queued within intersection to Novi Road during 4:45 PM - 5:00 PM peak hour. Traffic study was performed for Novi Traffic Impact Study (Formerly Denny's @ 27750 Novi Road for GPD Group, Youngstown Ohio.

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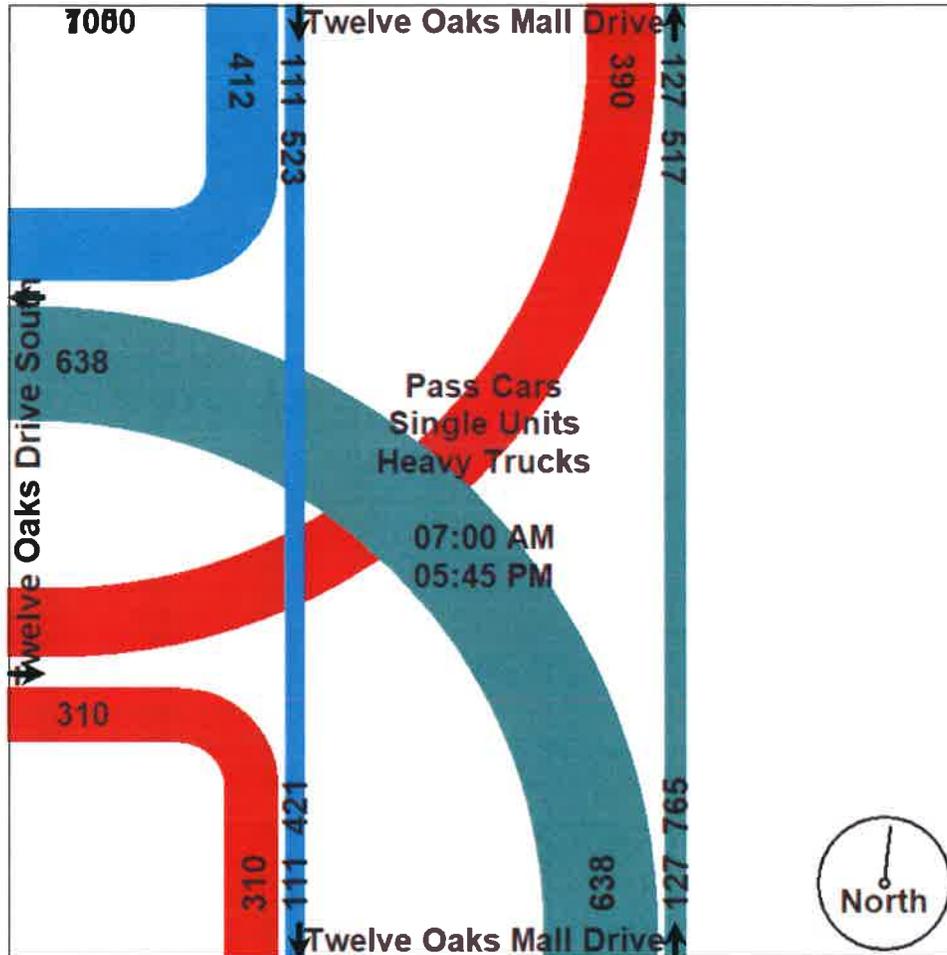
Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By GH Jamar Ultra Board #22

File Name : TMC_2 Twelve Oaks Mall_S & Twelve Oak Mall_1-10-19
Site Code : TMC_2
Start Date : 1/10/2019
Page No : 2



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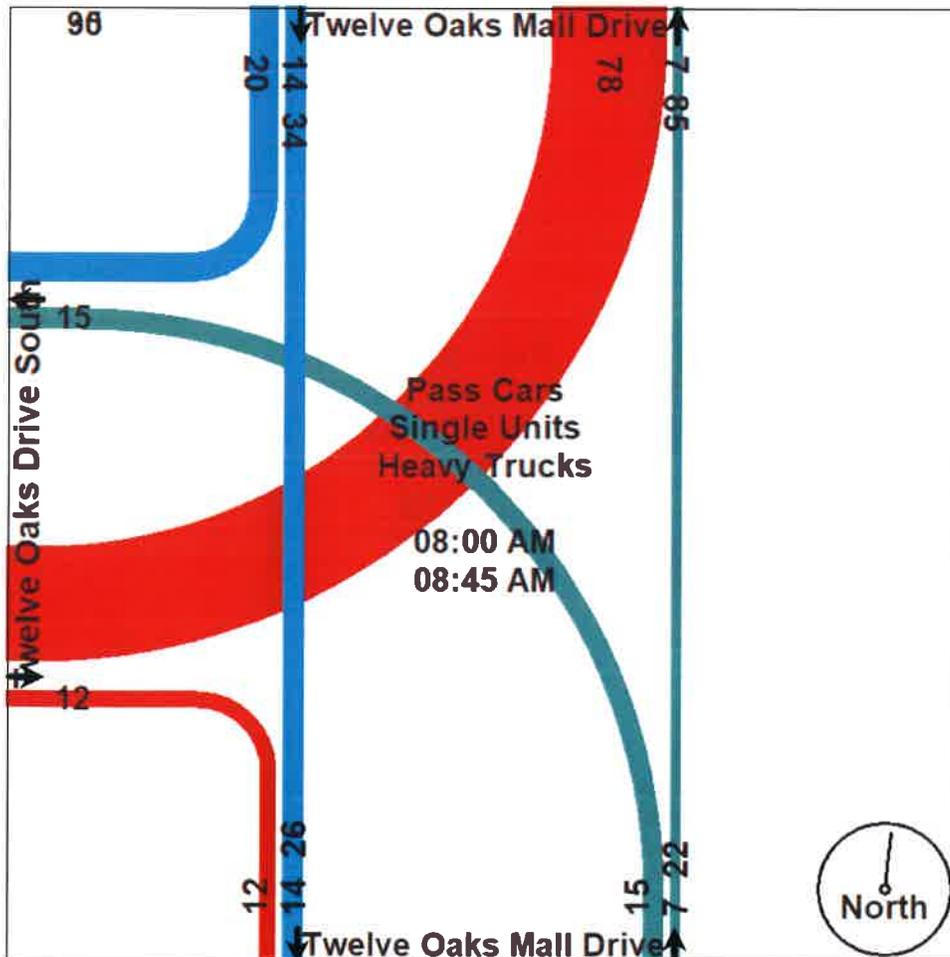
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By: GH Jamar Ultra Board #22

File Name : TMC_2 Twelve Oaks Mall_S & Twelve Oak Mall_1-10-19
Site Code : TMC_2
Start Date : 1/10/2019
Page No : 3

Start Time	Twelve Oaks Mall Drive Southbound			Twelve Oaks Mall Drive Northbound			Twelve Oaks Drive South Eastbound			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	1	3	4	2	1	3	1	12	13	20
08:15 AM	1	5	6	2	4	6	2	23	25	37
08:30 AM	9	4	13	1	3	4	5	10	15	32
08:45 AM	9	2	11	2	7	9	4	33	37	57
Total Volume	20	14	34	7	15	22	12	78	90	146
% App. Total	58.8	41.2		31.8	68.2		13.3	86.7		
PHF	.556	.700	.654	.875	.536	.611	.600	.591	.608	.640
Pass Cars	19	13	32	7	15	22	9	78	87	141
% Pass Cars	95.0	92.9	94.1	100	100	100	75.0	100	96.7	96.6
Single Units	0	1	1	0	0	0	3	0	3	4
% Single Units	0	7.1	2.9	0	0	0	25.0	0	3.3	2.7
Heavy Trucks	1	0	1	0	0	0	0	0	0	1
% Heavy Trucks	5.0	0	2.9	0	0	0	0	0	0	0.7



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Traffic Study Performed For:

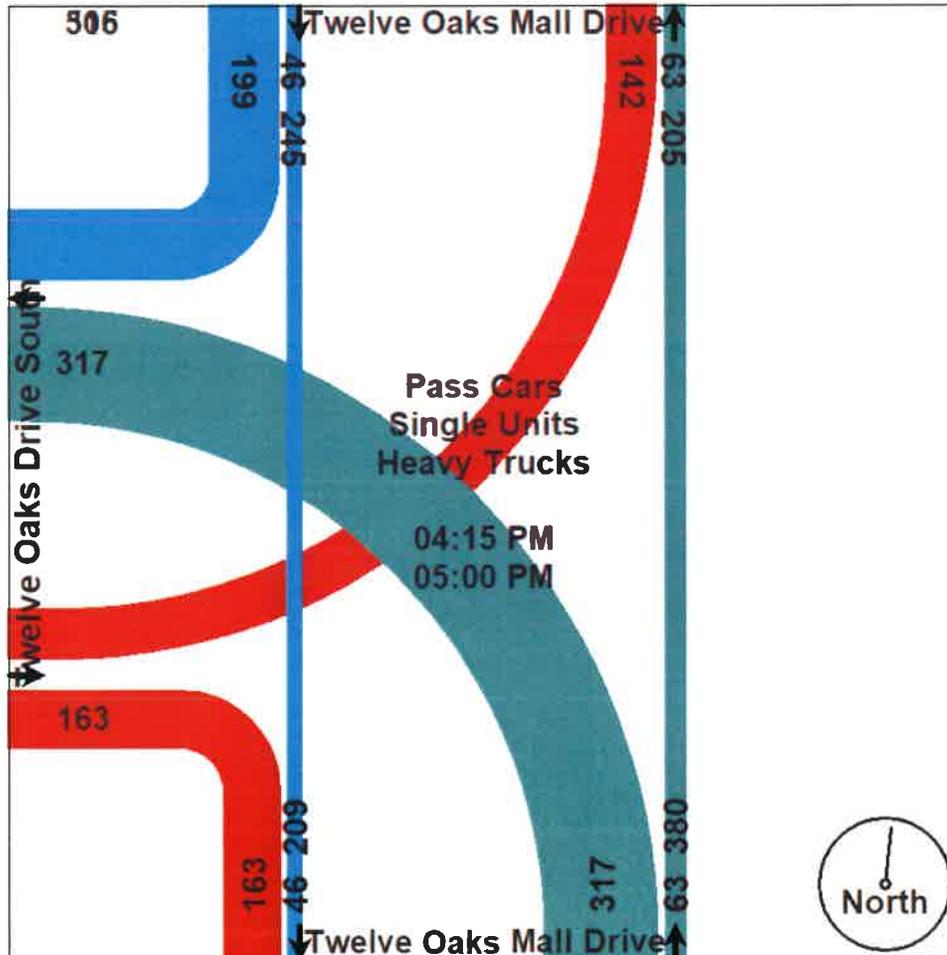
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By GH Jamar Ultra Board #22

File Name : TMC_2 Twelve Oaks Mall_S & Twelve Oak Mall_1-10-19
Site Code : TMC_2
Start Date : 1/10/2019
Page No : 4

Start Time	Twelve Oaks Mall Drive Southbound			Twelve Oaks Mall Drive Northbound			Twelve Oaks Drive South Eastbound			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	44	8	52	14	80	94	42	47	89	235
04:30 PM	44	17	61	14	75	89	38	38	76	226
04:45 PM	52	13	65	23	81	104	41	26	67	236
05:00 PM	59	8	67	12	81	93	42	31	73	233
Total Volume	199	46	245	63	317	380	163	142	305	930
% App. Total	81.2	18.8		16.6	83.4		53.4	46.6		
PHF	843	.676	.914	.685	.978	.913	.970	.755	.857	.985
Pass Cars	197	46	243	62	316	378	163	140	303	924
% Pass Cars	99.0	100	99.2	98.4	99.7	99.5	100	98.6	99.3	99.4
Single Units	1	0	1	0	1	1	0	1	1	3
% Single Units	0.5	0	0.4	0	0.3	0.3	0	0.7	0.3	0.3
Heavy Trucks	1	0	1	1	0	1	0	1	1	3
% Heavy Trucks	0.5	0	0.4	1.6	0	0.3	0	0.7	0.3	0.3



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Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By GH Jamar Ultra Board #22

File Name : TMC_2 Twelve Oaks Mall_S & Twelve Oak Mall_1-10-19
Site Code : TMC_2
Start Date : 1/10/2019
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Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By MM Jamar Ultra Board #23

File Name : TMC_3 Mall Entry Dw & La-Z-Boy_1-10-19
Site Code : TMC_3
Start Date : 1/10/2019
Page No : 1

4 Hour video traffic study was conducted during typical weekday (Tuesday-Thursday) from 7:00 AM - 9:00 AM morning & 4:00 PM - 6:00 PM afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks

Start Time	EB One-Way Mall Entry Drive Westbound			La-Z-Boy Driveway Northbound			EB One-Way Mall Entry Drive Eastbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
07:00 AM	0	0	0	0	0	0	0	10	10	10
07:15 AM	0	0	0	0	0	0	0	13	13	13
07:30 AM	0	0	0	0	0	0	0	10	10	10
07:45 AM	0	0	0	0	0	0	0	24	24	24
Total	0	0	0	0	0	0	0	57	57	57
08:00 AM	0	0	0	0	0	0	0	24	24	24
08:15 AM	0	0	0	0	0	0	0	16	16	16
08:30 AM	0	0	0	0	0	0	0	13	13	13
08:45 AM	0	0	0	0	0	0	0	33	33	33
Total	0	0	0	0	0	0	0	86	86	86
*** BREAK ***										
04:00 PM	0	0	0	0	0	0	0	51	51	51
04:15 PM	0	0	0	1	0	1	0	40	40	41
04:30 PM	0	0	0	0	0	0	0	31	31	31
04:45 PM	0	0	0	0	0	0	0	38	38	38
Total	0	0	0	1	0	1	0	160	160	161
05:00 PM	0	0	0	1	0	1	0	46	46	47
05:15 PM	0	0	0	0	0	0	0	43	43	43
05:30 PM	0	0	0	0	0	0	0	52	52	52
05:45 PM	0	0	0	0	0	0	0	47	47	47
Total	0	0	0	1	0	1	0	188	188	189
Grand Total	0	0	0	2	0	2	0	491	491	493
Apprch %	0	0	0	100	0	0	0	100	99.6	99.6
Total %	0	0	0	0.4	0	0.4	0	99.6	99.6	99.6
Pass Cars	0	0	0	2	0	2	0	490	490	492
% Pass Cars	0	0	0	100	0	100	0	99.8	99.8	99.8
Single Units	0	0	0	0	0	0	0	0	0	0
% Single Units	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	1	1	1
% Heavy Trucks	0	0	0	0	0	0	0	0.2	0.2	0.2

TDC Traffic Comments: Non-signalized "T" intersection. Traffic study was performed for Novi Traffic Impact Study (Formerly Denny's @ 27750 Novi Road for GPD Group, Youngstown Ohio.

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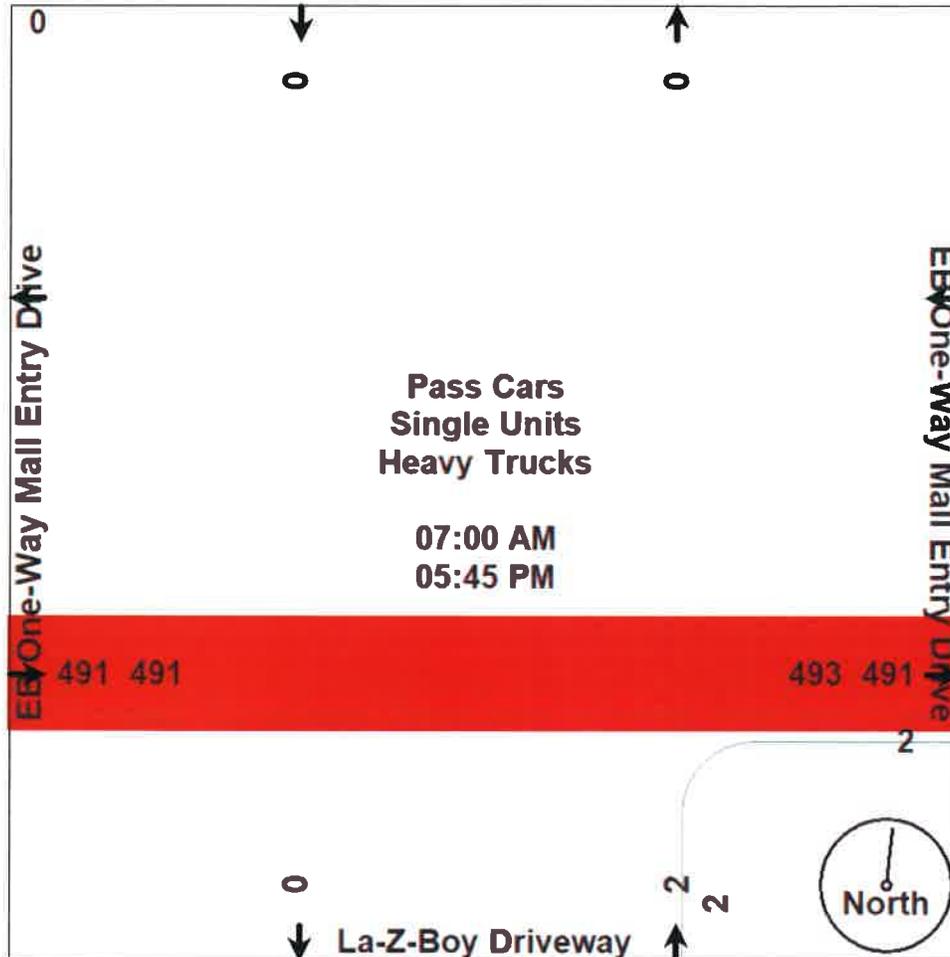
Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By MM Jamar Ultra Board #23

File Name : TMC_3 Mall Entry Dw & La-Z-Boy_1-10-19
Site Code : TMC_3
Start Date : 1/10/2019
Page No : 2



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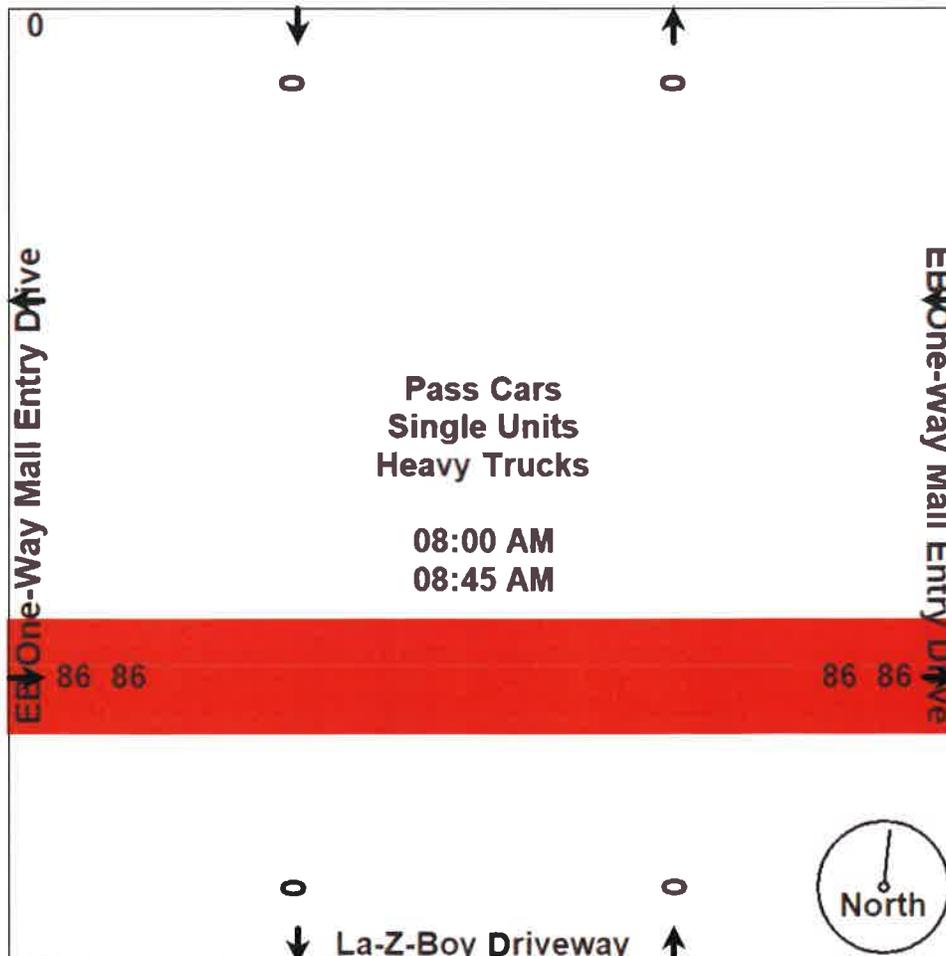
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By MM Jamar Ultra Board #23

File Name : TMC_3 Mall Entry Dw & La-Z-Boy_1-10-19
Site Code : TMC_3
Start Date : 1/10/2019
Page No : 3

Start Time	EB One-Way Mall Entry Drive Westbound			La-Z-Boy Driveway Northbound			EB One-Way Mall Entry Drive Eastbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	0	0	0	0	24	24	24
08:15 AM	0	0	0	0	0	0	0	16	16	16
08:30 AM	0	0	0	0	0	0	0	13	13	13
08:45 AM	0	0	0	0	0	0	0	33	33	33
Total Volume	0	0	0	0	0	0	0	86	86	86
% App. Total	0	0	0	0	0	0	0	100	100	100
PHF	.000	.000	.000	.000	.000	.000	.000	.652	.652	.652
Pass Cars	0	0	0	0	0	0	0	86	86	86
% Pass Cars	0	0	0	0	0	0	0	100	100	100
Single Units	0	0	0	0	0	0	0	0	0	0
% Single Units	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0
% Heavy Trucks	0	0	0	0	0	0	0	0	0	0



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Traffic Study Performed For:

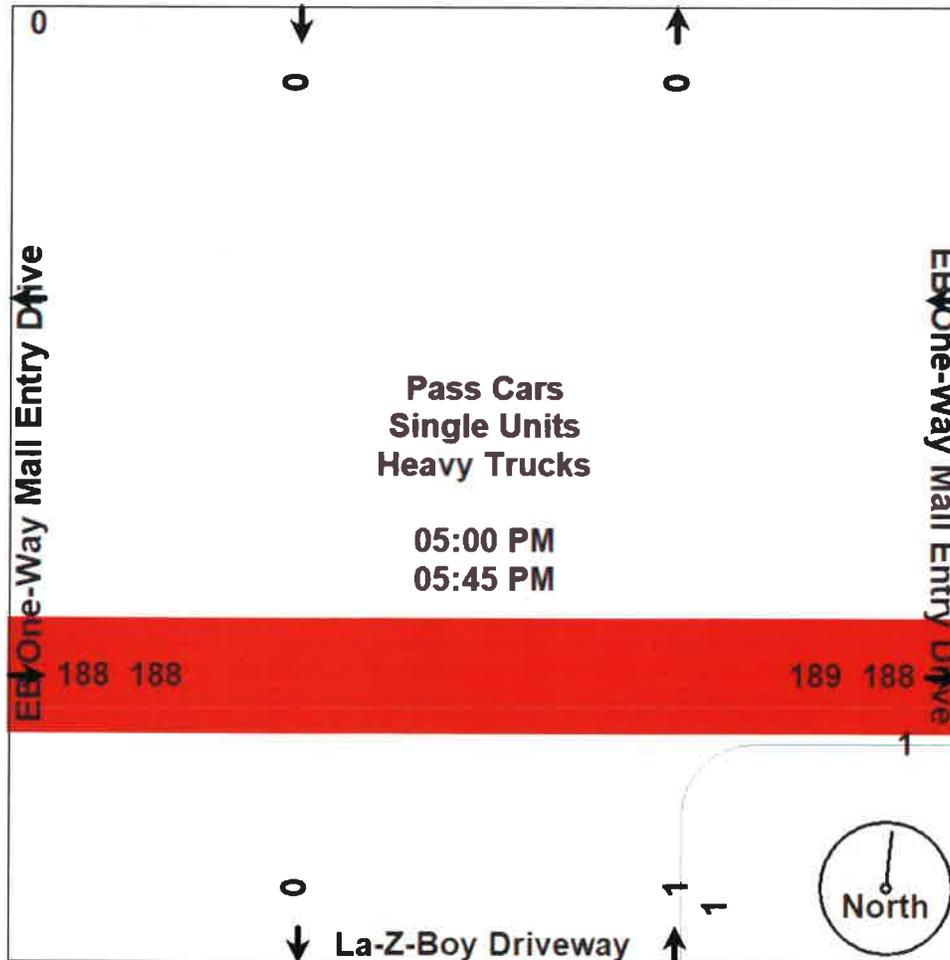
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By MM Jamar Ultra Board #23

File Name : TMC_3 Mall Entry Dw & La-Z-Boy_1-10-19
Site Code : TMC_3
Start Date : 1/10/2019
Page No : 4

Start Time	EB One-Way Mall Entry Drive Westbound			La-Z-Boy Driveway Northbound			EB One-Way Mall Entry Drive Eastbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	1	0	1	0	46	46	47
05:15 PM	0	0	0	0	0	0	0	43	43	43
05:30 PM	0	0	0	0	0	0	0	52	52	52
05:45 PM	0	0	0	0	0	0	0	47	47	47
Total Volume	0	0	0	1	0	1	0	188	188	189
% App. Total	0	0	0	100	0	100	0	100	100	100
PHF	.000	.000	.000	.250	.000	.250	.000	.904	.904	.909
Pass Cars	0	0	0	1	0	1	0	188	188	189
% Pass Cars	0	0	0	100	0	100	0	100	100	100
Single Units	0	0	0	0	0	0	0	0	0	0
% Single Units	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0
% Heavy Trucks	0	0	0	0	0	0	0	0	0	0



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Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By: MM Jamar Ultra Board #23

File Name : TMC_3 Mall Entry Dw & La-Z-Boy_1-10-19
Site Code : TMC_3
Start Date : 1/10/2019
Page No : 5

Aerial Photo



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Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By DM Jamar Ultra Board #24

File Name : TMC_4 Twelve Oaks Mall & La-Z-Boy_1-10-19
Site Code : TMC_4
Start Date : 1/10/2019
Page No : 1

4 Hour video traffic study was conducted during typical weekday (Tuesday-Thursday) from 7:00 AM - 9:00 AM morning & 4:00 PM - 6:00 PM afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks

Start Time	Twelve Oaks Mall Drive Southbound			Twelve Oaks Mall Drive Northbound			La-Z-Boy Drive Eastbound			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
07:00 AM	0	9	9	3	0	3	3	0	3	15
07:15 AM	1	13	14	1	0	1	0	0	0	15
07:30 AM	0	9	9	2	0	2	0	0	0	11
07:45 AM	0	30	30	4	0	4	0	0	0	34
Total	1	61	62	10	0	10	3	0	3	75
08:00 AM	0	29	29	2	0	2	0	0	0	31
08:15 AM	0	20	20	3	0	3	0	0	0	23
08:30 AM	0	20	20	4	0	4	0	0	0	24
08:45 AM	1	34	35	8	0	8	0	0	0	43
Total	1	103	104	17	0	17	0	0	0	121
*** BREAK ***										
04:00 PM	1	84	85	56	0	56	0	1	1	142
04:15 PM	2	72	74	73	0	73	0	0	0	147
04:30 PM	2	57	59	57	0	57	0	0	0	116
04:45 PM	0	74	74	66	0	66	1	2	3	143
Total	5	287	292	252	0	252	1	3	4	548
05:00 PM	0	78	78	59	0	59	1	3	4	141
05:15 PM	0	79	79	54	0	54	0	0	0	133
05:30 PM	0	69	69	45	0	45	0	0	0	114
05:45 PM	2	75	77	54	0	54	1	1	2	133
Total	2	301	303	212	0	212	2	4	6	521
Grand Total	9	752	761	491	0	491	6	7	13	1265
Apprch %	1.2	98.8		100	0		46.2	53.8		
Total %	0.7	59.4	60.2	38.8	0	38.8	0.5	0.6	1	
Pass Cars	8	745	753	485	0	485	6	7	13	1251
% Pass Cars	88.9	99.1	98.9	98.8	0	98.8	100	100	100	98.9
Single Units	1	5	6	6	0	6	0	0	0	12
% Single Units	11.1	0.7	0.8	1.2	0	1.2	0	0	0	0.9
Heavy Trucks	0	2	2	0	0	0	0	0	0	2
% Heavy Trucks	0	0.3	0.3	0	0	0	0	0	0	0.2

TDC Traffic Comments: Non-signalized intersection. Traffic study was performed for Novi Traffic Impact Study (Formerly Denny's @ 27750 Novi Road for GPD Group, Youngstown Ohio.

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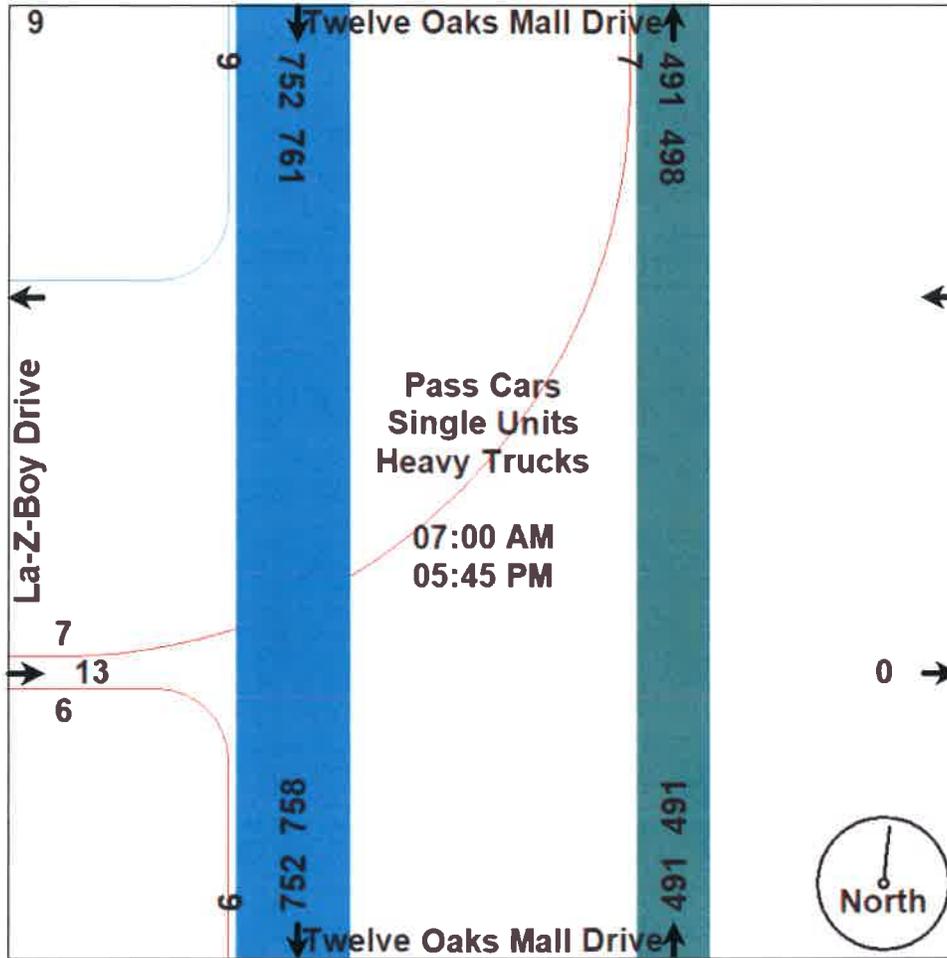
Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By DM Jamar Ultra Board #24

File Name : TMC_4 Twelve Oaks Mall & La-Z-Boy_1-10-19
Site Code : TMC_4
Start Date : 1/10/2019
Page No : 2



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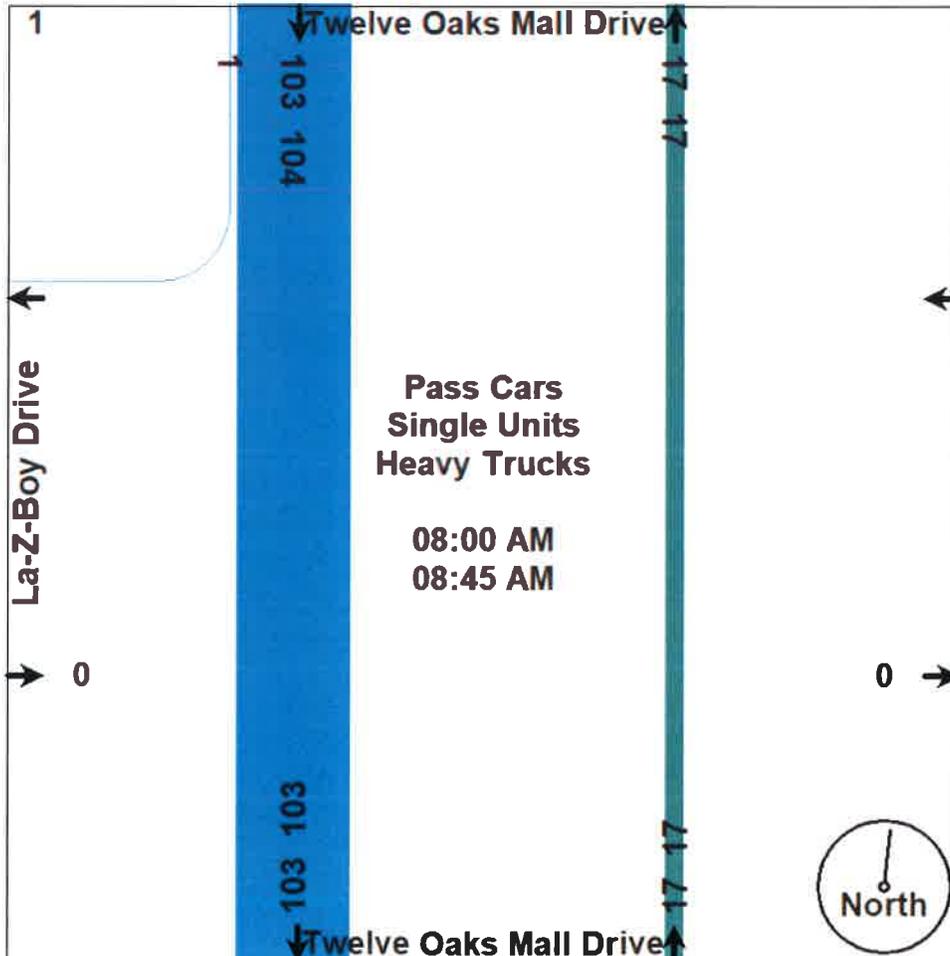
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By DM Jamar Ultra Board #24

File Name : TMC_4 Twelve Oaks Mall & La-Z-Boy_1-10-19
Site Code : TMC_4
Start Date : 1/10/2019
Page No : 3

Start Time	Twelve Oaks Mall Drive Southbound			Twelve Oaks Mall Drive Northbound			La-Z-Boy Drive Eastbound			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	29	29	2	0	2	0	0	0	31
08:15 AM	0	20	20	3	0	3	0	0	0	23
08:30 AM	0	20	20	4	0	4	0	0	0	24
08:45 AM	1	34	35	8	0	8	0	0	0	43
Total Volume	1	103	104	17	0	17	0	0	0	121
% App. Total	1	99		100	0		0	0		
PHF	.250	.757	.743	.531	.000	.531	.000	.000	.000	.703
Pass Cars	0	102	102	17	0	17	0	0	0	119
% Pass Cars	0	99.0	98.1	100	0	100	0	0	0	98.3
Single Units	1	1	2	0	0	0	0	0	0	2
% Single Units	100	1.0	1.9	0	0	0	0	0	0	1.7
Heavy Trucks	0	0	0	0	0	0	0	0	0	0
% Heavy Trucks	0	0	0	0	0	0	0	0	0	0



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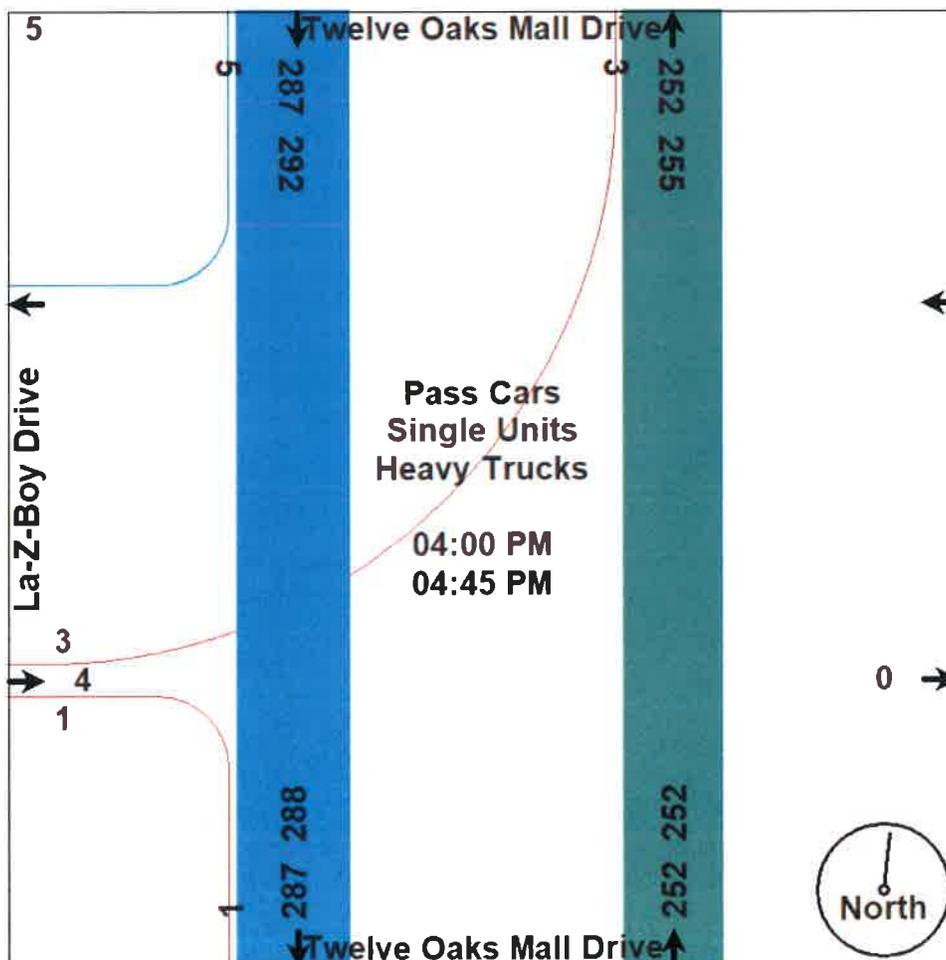
GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By DM Jamar Ultra Board #24

File Name : TMC_4 Twelve Oaks Mall & La-Z-Boy_1-10-19
Site Code : TMC_4
Start Date : 1/10/2019
Page No : 4

Start Time	Twelve Oaks Mall Drive Southbound			Twelve Oaks Mall Drive Northbound			La-Z-Boy Drive Eastbound			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	1	84	85	56	0	56	0	1	1	142
04:15 PM	2	72	74	73	0	73	0	0	0	147
04:30 PM	2	57	59	57	0	57	0	0	0	116
04:45 PM	0	74	74	66	0	66	1	2	3	143
Total Volume	5	287	292	252	0	252	1	3	4	548
% App. Total	1.7	98.3		100	0		25	75		
PHF	.625	.854	.859	.863	.000	.863	.250	.375	.333	.932
Pass Cars	5	285	290	251	0	251	1	3	4	545
% Pass Cars	100	99.3	99.3	99.6	0	99.6	100	100	100	99.5
Single Units	0	0	0	1	0	1	0	0	0	1
% Single Units	0	0	0	0.4	0	0.4	0	0	0	0.2
Heavy Trucks	0	2	2	0	0	0	0	0	0	2
% Heavy Trucks	0	0.7	0.7	0	0	0	0	0	0	0.4



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Traffic Study Performed For:

GPD Group



Project: Novi Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Sunny/Cldy, Dry Deg's 30's
Count By DM Jamar Ultra Board #24

File Name : TMC_4 Twelve Oaks Mall & La-Z-Boy_1-10-19
Site Code : TMC_4
Start Date : 1/10/2019
Page No : 5

Aerial Photo



**APPENDIX B:
ITE TRIP GENERATION CALCULATIONS**

ITE Trip Generation Procedure

Land Use 934 (Fast-Food Restaurant with Drive-Through Window)

Trip Generations per 1000 Sq. Feet Gross Floor Area
Setting / Location: General Urban / Suburban

Weekday Trip Generation and Trip Distribution

Trip Generation Formula: $T = 470.95 * (X)$
where: T = Number of Trips Generated
X = 1000 Sq. Feet Gross Floor Area

Gross Floor Area: 4,990

Total Trip Ends in the Average Weekday: 2,351

Distribution Percentages of Entering and Exiting Trips, From ITE Trip Generation Manual, 10th Edition

Entering Trip Percentage: 50%
Exiting Trip Percentage: 50%
Number of Entering Trips: 1,176
Number of Exiting Trips: 1,175

AM Peak Trip Generation and Trip Distribution (Peak Hour of Adjacent Street)

Trip Generation Formula: $T = 40.19 * (X)$
Total Trip Ends in the AM Peak Hour: 201

Pass-By Rate from ITE Trip Generation Handbook, An ITE Recommended Practice

Pass-By Rate: 49.00%

Primary Trips: 103
Pass-By Trips: 98

Distribution Percentages of Entering and Exiting Trips, From ITE Trip Generation Manual, 10th Edition

Entering Trip Percentage: 51%
Exiting Trip Percentage: 49%

Entering Primary Trips: 52
Exiting Primary Trips: 51

Entering Pass-byTrips: 50
Exiting Pass-by Trips: 48

PM Peak Trip Generation and Trip Distribution (Peak Hour of Adjacent Street)

Trip Generation Formula: $T = 32.67 * (X)$
Total Trip Ends in the PM Peak Hour: 164

Pass-By Rate from ITE Trip Generation Handbook, An ITE Recommended Practice

Pass-By Rate: 50.00%

Primary Trips: 82
Pass-By Trips: 82

Distribution Percentages of Entering and Exiting Trips, From ITE Trip Generation Manual, 10th Edition

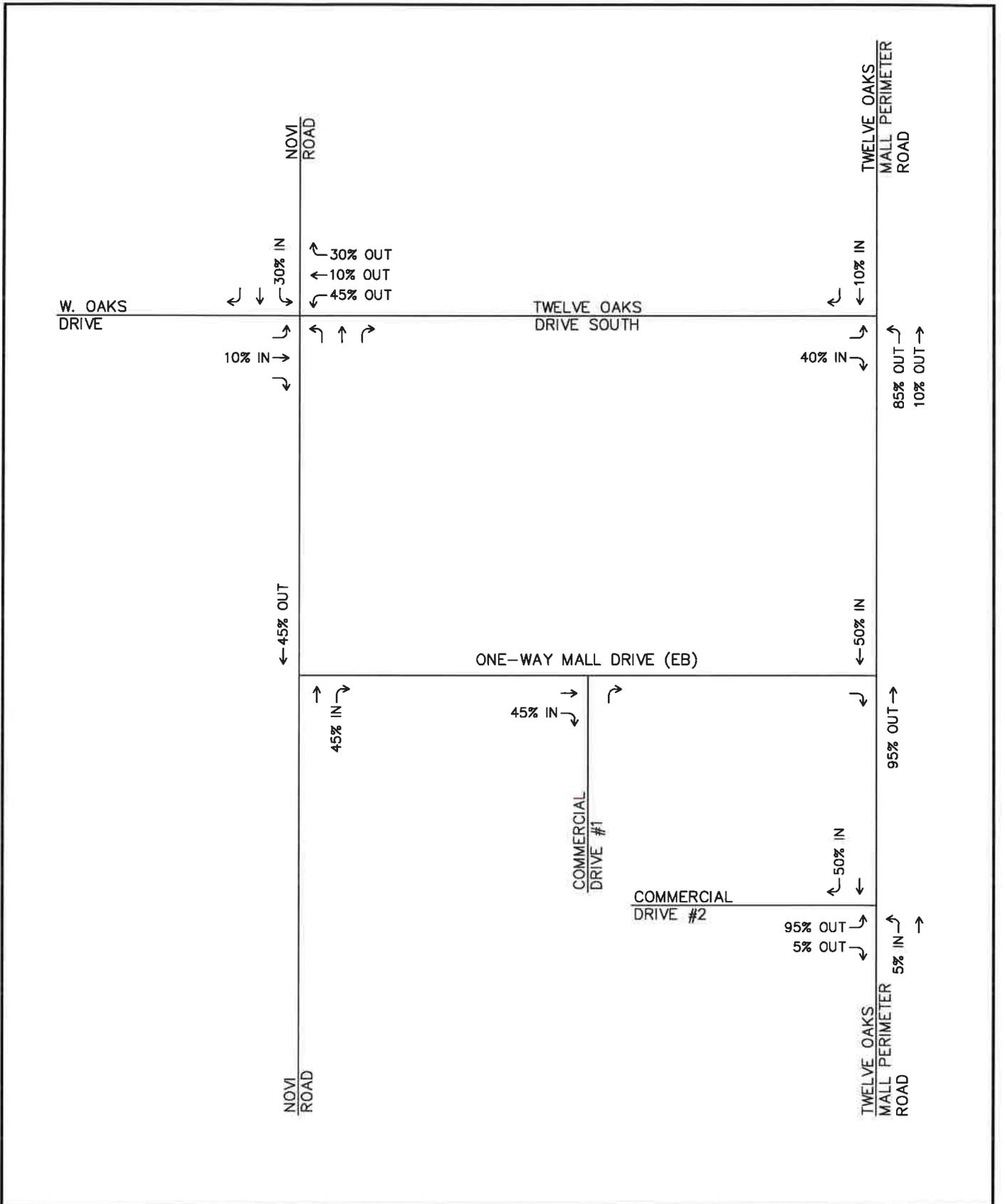
Entering Trip Percentage: 52%
Exiting Trip Percentage: 48%

Entering Primary Trips: 43
Exiting Primary Trips: 39

Entering Pass-byTrips: 43
Exiting Pass-by Trips: 39

**APPENDIX C:
SITE TRIP DISTRIBUTION AND ASSIGNMENT**

CAD FILE: 0:\2018\2018223\15 TWELVE OAKS_MX\TRAFFIC\POURES\APPENDIX C.DWG
 DATE: 1/18/2019 TIME: 10:25:03 AM
 TECHNICIAN: DOUGEROSKY



N.T.S.

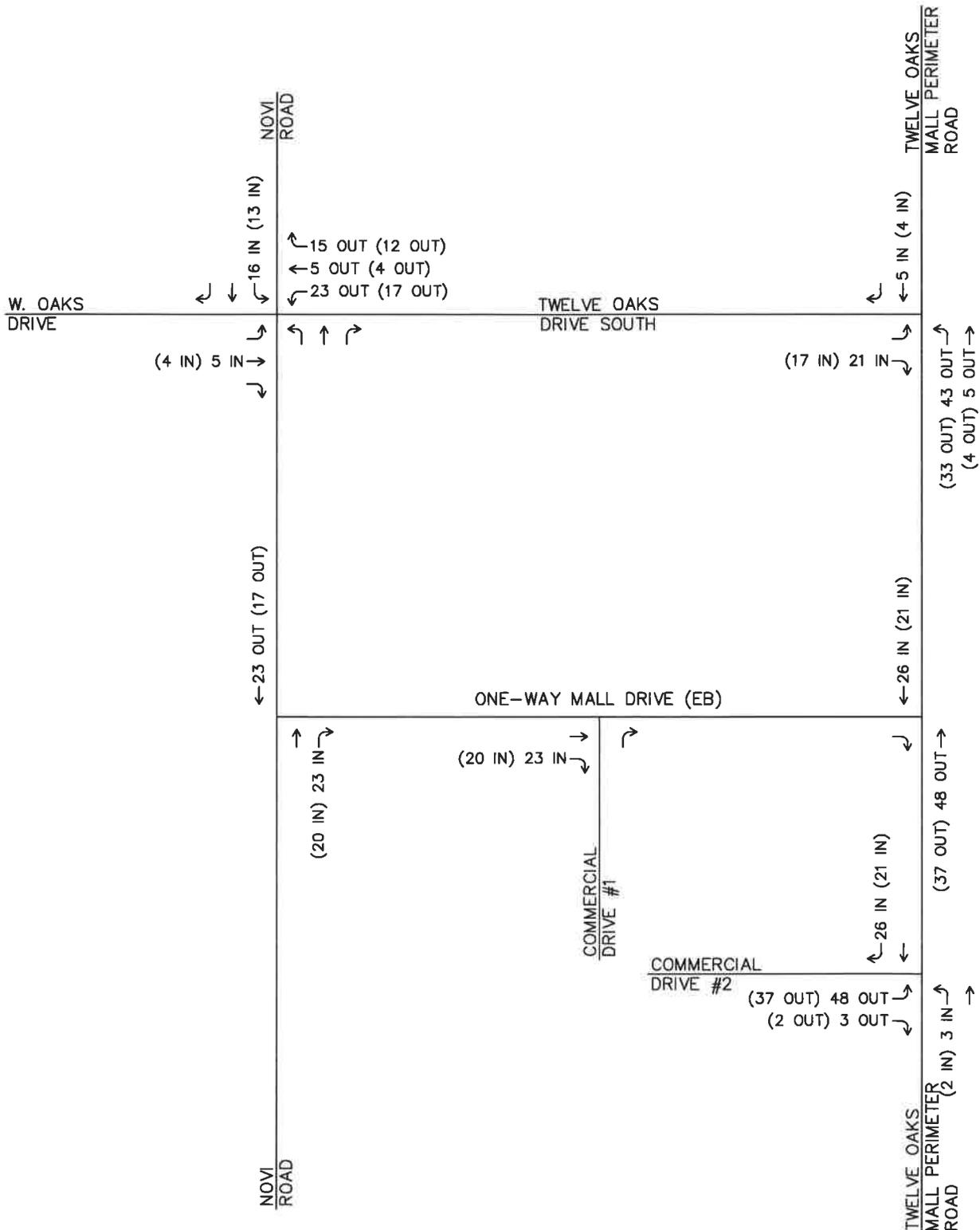
APPENDIX C

PRIMARY SITE TRIP DISTRIBUTION

JANUARY 2019



CAD FILE: D:\2018\20180225\15 TWELVE OAKS, MA\TRAFFIC\FIGURES\APPENDIX C.DWG
 DATE: 1/16/2019 TIME: 10:28:13 AM
 TECHNICIAN: DOOMEROSKY



LEGEND
 ## - AM PEAK
 (##) - PM PEAK



N.T.S.

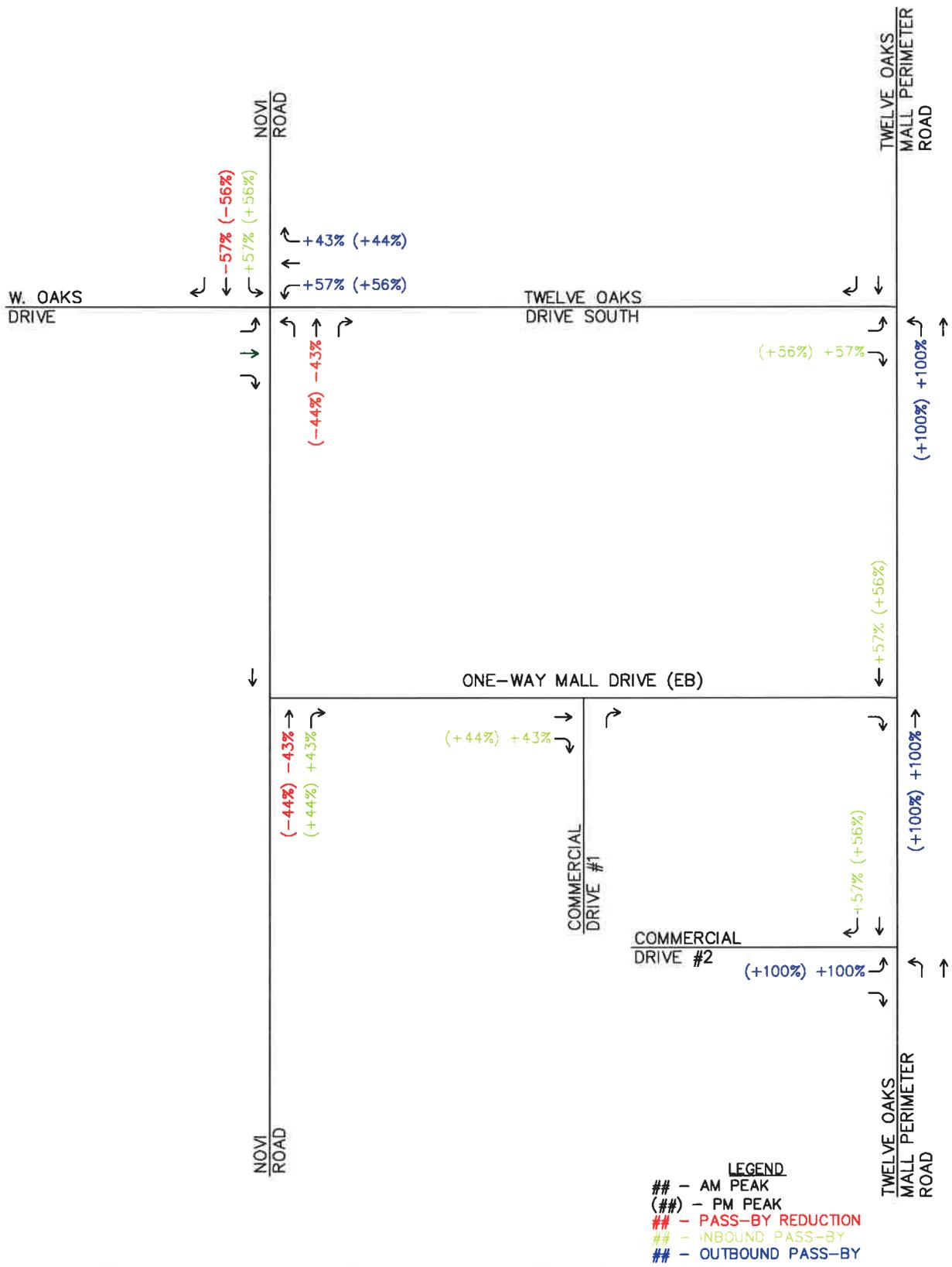
APPENDIX C

PRIMARY SITE TRIP ASSIGNMENT

JANUARY 2019



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 TECHNICIAN: DOOMERUSKY



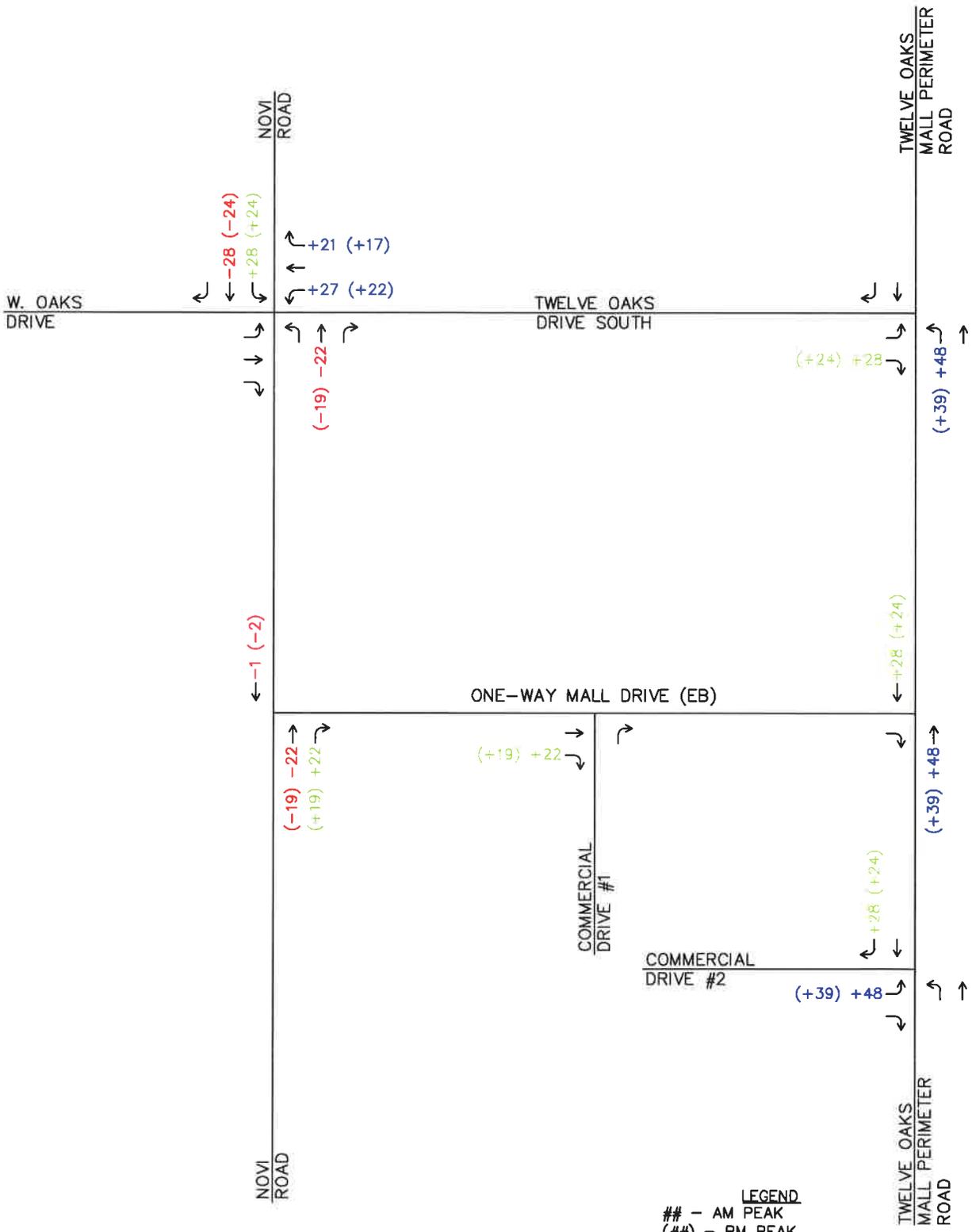
APPENDIX C

PASS-BY TRIP DISTRIBUTION

JANUARY 2019



CAD FILE: D:\2018\1618223\15 TWELVE OAKS_MIA TRAFFIC\FIGURES\APPENDIX C.DWG
 DATE: 1/16/2019 TIME: 10:25:30 AM
 TECHNICIAN: DOOMEROSKY



- LEGEND**
- ## - AM PEAK
 - (##) - PM PEAK
 - ## - PASS-BY REDUCTION
 - ## - INBOUND PASS-BY
 - ## - OUTBOUND PASS-BY



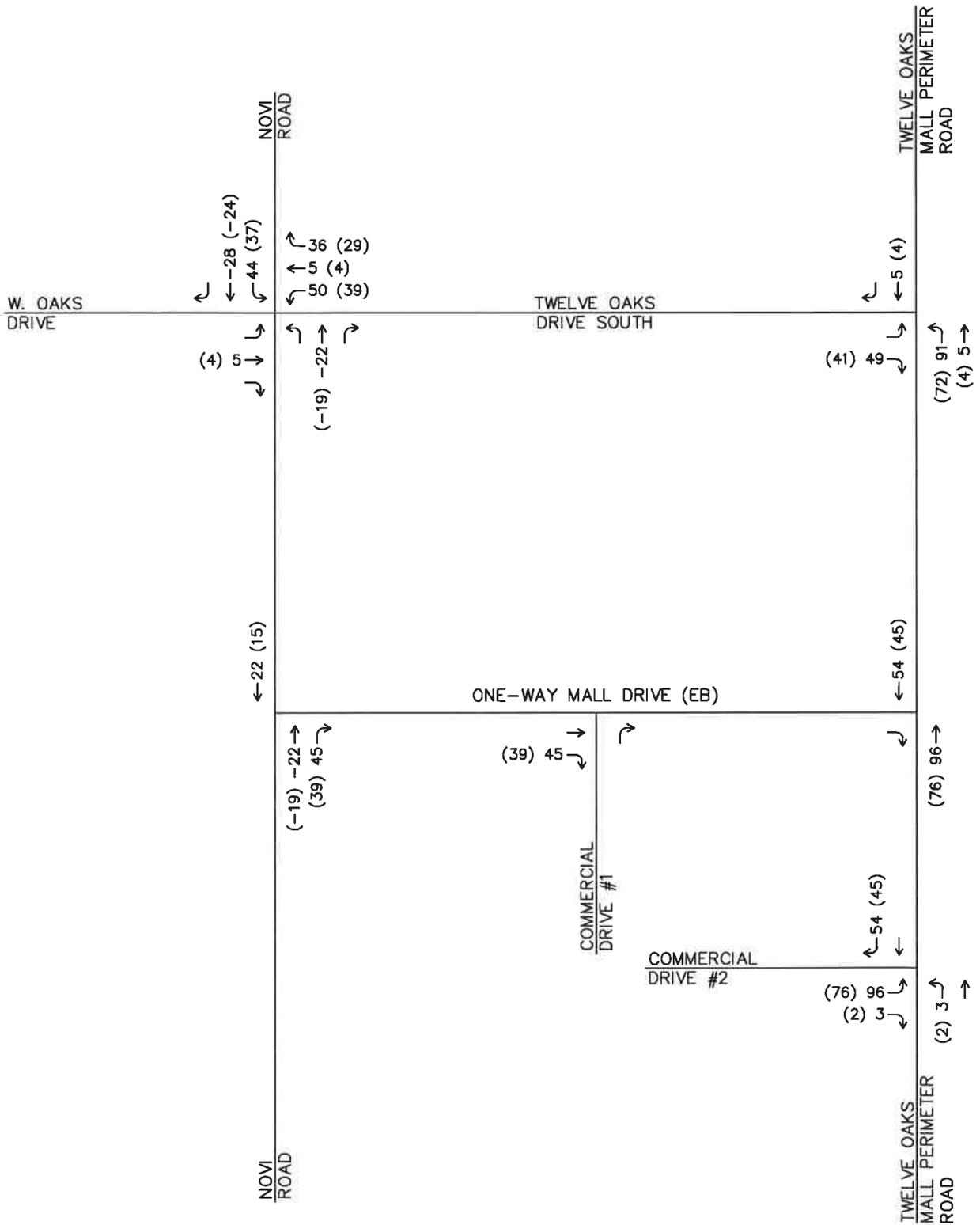
APPENDIX C

PASS-BY TRIP ASSIGNMENT

JANUARY 2019



CAD FILE: G:\2016\20160223\15 TWELVE OAKS, MI\TRAFFIC\FIGURES\APPENDIX C.DWG
 DATE: 1/16/2019 TIME: 10:25:30 AM
 TECHNICIAN: DODMEROSKY



LEGEND
 ## - AM PEAK
 (##) - PM PEAK



N.T.S.

APPENDIX C

COMBINED TOTAL TRIP GENERATION

JANUARY 2019



**APPENDIX D:
HCM INTERSECTION CAPACITY ANALYSIS**

OPENING YEAR 2019 'NO-BUILD' CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖↗	↖↗	↖		↖↗	↕	↖	↖	↕	↖
Traffic Volume (veh/h)	13	3	65	33	2	2	82	430	87	2	700	13
Future Volume (veh/h)	13	3	65	33	2	2	82	430	87	2	700	13
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1429	1759	1845	1900	1900	1792	1845	1863	1900	1863	1900
Adj Flow Rate, veh/h	14	3	68	57	3	3	85	448	91	2	778	14
Adj No. of Lanes	1	1	2	2	1	0	2	3	1	1	3	1
Peak Hour Factor	0.96	0.96	0.96	0.58	0.58	0.58	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	0	33	8	3	0	0	6	3	2	0	2	0
Cap, veh/h	106	84	283	180	46	46	162	1880	591	717	2868	911
Arrive On Green	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.37	0.37	0.24	0.56	0.56
Sat Flow, veh/h	1810	1429	2632	3408	873	873	3312	5036	1583	1810	5085	1615
Grp Volume(v), veh/h	14	3	68	57	0	6	85	448	91	2	778	14
Grp Sat Flow(s),veh/h/ln	1810	1429	1316	1704	0	1746	1656	1679	1583	1810	1695	1615
Q Serve(g_s), s	0.7	0.2	2.1	1.4	0.0	0.3	2.3	5.5	3.4	0.0	7.1	0.3
Cycle Q Clear(g_c), s	0.7	0.2	2.1	1.4	0.0	0.3	2.3	5.5	3.4	0.0	7.1	0.3
Prop In Lane	1.00		1.00	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	84	283	180	0	92	162	1880	591	717	2868	911
V/C Ratio(X)	0.13	0.04	0.24	0.32	0.00	0.07	0.52	0.24	0.15	0.00	0.27	0.02
Avail Cap(c_a), veh/h	121	95	304	341	0	175	206	1880	591	717	2868	911
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	40.0	36.8	41.1	0.0	40.5	41.8	19.4	18.7	12.6	10.1	8.6
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.4	0.0	0.1	1.0	0.3	0.6	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.8	0.7	0.0	0.1	1.0	2.6	1.6	0.0	3.4	0.2
LnGrp Delay(d),s/veh	40.4	40.0	36.9	41.4	0.0	40.6	42.8	19.7	19.3	12.6	10.3	8.7
LnGrp LOS	D	D	D	D		D	D	B	B	B	B	A
Approach Vol, veh/h		85			63			624			794	
Approach Delay, s/veh		37.6			41.3			22.8			10.3	
Approach LOS		D			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.0	40.0		10.8	10.8	57.2		11.3				
Change Period (Y+Rc), s	6.4	6.4		6.0	6.4	6.4		6.0				
Max Green Setting (Gmax), s	16.6	33.6		9.0	5.6	44.6		6.0				
Max Q Clear Time (g_c+I1), s	2.0	7.5		3.4	4.3	9.1		4.1				
Green Ext Time (p_c), s	0.7	0.4		0.0	0.0	0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.0									
HCM 2010 LOS			B									

Chik-fil-A Novi TIS
 2: Commercial Drive #1 & One-Way Mall Drive

Opening Year 2019 'No-Build' - AM Peak Hour

01/15/2019

Intersection

Int Delay, s/veh 0

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↑	↗				↖
Traffic Vol, veh/h	86	0	0	0	0	0
Future Vol, veh/h	86	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	92	92	92	92
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	132	0	0	0	0	0

Major/Minor Major1 Minor1

Conflicting Flow All	0	0	-	132
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	923
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	923
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach EB NB

HCM Control Delay, s	0	0
HCM LOS		A

Minor Lane/Major Mvmt NBLn1 EBT EBR

Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↕↕	↕↕	
Traffic Vol, veh/h	78	12	15	7	14	20
Future Vol, veh/h	78	12	15	7	14	20
Peak Hour Factor	0.61	0.61	0.61	0.61	0.65	0.65
Heavy Vehicles, %	0	25	0	0	7	5
Mvmt Flow	128	20	25	11	22	31
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	8.9	7.9	7.6
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	76%	0%	100%	0%	0%	0%
Vol Thru, %	0%	24%	100%	0%	0%	100%	19%
Vol Right, %	0%	0%	0%	0%	100%	0%	81%
Sign Control	Stop						
Traffic Vol by Lane	8	10	5	78	12	9	25
LT Vol	8	8	0	78	0	0	0
Through Vol	0	2	5	0	0	9	5
RT Vol	0	0	0	0	12	0	20
Lane Flow Rate	12	16	8	128	20	14	38
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.019	0.024	0.007	0.183	0.024	0.021	0.048
Departure Headway (Hd)	5.546	5.427	3.337	5.16	4.385	5.142	4.538
Convergence, Y/N	Yes						
Cap	649	663	1078	689	807	700	794
Service Time	3.25	3.131	1.041	2.939	2.164	2.845	2.241
HCM Lane V/C Ratio	0.018	0.024	0.007	0.186	0.025	0.02	0.048
HCM Control Delay	8.4	8.3	6.1	9.1	7.3	8	7.5
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0.7	0.1	0.1	0.2

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (veh/h)	0	86	0	17	18	0
Future Volume (Veh/h)	0	86	0	17	18	0
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	93	0	18	20	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	29	10	20			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	29	10	20			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	91	100			
cM capacity (veh/h)	982	1069	1595			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	93	9	9	10	10	
Volume Left	0	0	0	0	0	
Volume Right	93	0	0	0	0	
cSH	1069	1700	1700	1700	1700	
Volume to Capacity	0.09	0.01	0.01	0.01	0.01	
Queue Length 95th (ft)	7	0	0	0	0	
Control Delay (s)	8.7	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	8.7	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			6.2			
Intersection Capacity Utilization			15.3%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection

Int Delay, s/veh 0

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			↑↑	↑↑	
Traffic Vol, veh/h	0	0	0	17	103	1
Future Vol, veh/h	0	0	0	17	103	1
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	92	92	53	53	74	74
Heavy Vehicles, %	0	0	0	0	1	2
Mvmt Flow	0	0	0	32	139	1

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	156	70	140	0	-	0
Stage 1	140	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	826	985	1456	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	826	985	1456	-	-	-
Mov Cap-2 Maneuver	826	-	-	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	1010	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s 0 0 0
 HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1456	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗↗	↗↗	↗		↗↗	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (veh/h)	55	35	327	428	40	37	336	736	227	26	894	47
Future Volume (veh/h)	55	35	327	428	40	37	336	736	227	26	894	47
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1900	1900	1900	1900	1900	1900	1881	1863
Adj Flow Rate, veh/h	65	41	327	481	45	42	373	818	252	29	993	52
Adj No. of Lanes	1	1	2	2	1	0	2	3	1	1	3	1
Peak Hour Factor	0.85	0.85	1.00	0.89	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	1	0	0	0	0	0	0	1	2
Cap, veh/h	114	120	407	558	145	136	281	1343	418	588	2235	689
Arrive On Green	0.06	0.06	0.06	0.16	0.16	0.16	0.08	0.26	0.26	0.26	0.44	0.44
Sat Flow, veh/h	1810	1900	2842	3476	906	845	3510	5187	1615	1810	5136	1583
Grp Volume(v), veh/h	65	41	327	481	0	87	373	818	252	29	993	52
Grp Sat Flow(s),veh/h/ln	1810	1900	1421	1738	0	1751	1755	1729	1615	1810	1712	1583
Q Serve(g_s), s	3.3	2.0	6.0	12.8	0.0	4.2	7.6	13.2	13.0	0.0	12.9	1.8
Cycle Q Clear(g_c), s	3.3	2.0	6.0	12.8	0.0	4.2	7.6	13.2	13.0	0.0	12.9	1.8
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	120	407	558	0	281	281	1343	418	588	2235	689
V/C Ratio(X)	0.57	0.34	0.80	0.86	0.00	0.31	1.33	0.61	0.60	0.05	0.44	0.08
Avail Cap(c_a), veh/h	114	120	407	878	0	442	281	1343	418	588	2235	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	42.6	39.4	38.8	0.0	35.2	43.7	31.0	30.9	21.4	18.8	15.7
Incr Delay (d2), s/veh	4.2	0.6	10.3	3.2	0.0	0.2	170.2	2.1	6.3	0.0	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.0	4.7	6.4	0.0	2.0	10.3	6.5	6.5	0.5	6.2	0.8
LnGrp Delay(d),s/veh	47.4	43.2	49.8	42.1	0.0	35.4	213.9	33.0	37.2	21.4	19.4	15.9
LnGrp LOS	D	D	D	D		D	F	C	D	C	B	B
Approach Vol, veh/h		433			568			1443			1074	
Approach Delay, s/veh		48.8			41.0			80.5			19.3	
Approach LOS		D			D			F			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.7	31.0		21.3	14.0	47.7		12.0				
Change Period (Y+Rc), s	6.4	6.4		6.0	6.4	6.4		6.0				
Max Green Setting (Gmax), s	15.6	24.6		24.0	7.6	32.6		6.0				
Max Q Clear Time (g_c+I1), s	2.0	15.2		14.8	9.6	14.9		8.0				
Green Ext Time (p_c), s	0.9	0.8		0.4	0.0	0.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			51.5									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.1

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↑	↑				↑
Traffic Vol, veh/h	158	0	0	0	0	1
Future Vol, veh/h	158	0	0	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	92	92	50	50
Heavy Vehicles, %	1	1	2	2	0	0
Mvmt Flow	184	0	0	0	0	2

Major/Minor Major1 Minor1

Conflicting Flow All	0	0	-	184
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	864
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	864
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach EB NB

HCM Control Delay, s	0	9.2
HCM LOS		A

Minor Lane/Major Mvmt NBLn1 EBT EBR

Capacity (veh/h)	864	-	-
HCM Lane V/C Ratio	0.002	-	-
HCM Control Delay (s)	9.2	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↖↗	↖↗	
Traffic Vol, veh/h	120	156	317	56	51	204
Future Vol, veh/h	120	156	317	56	51	204
Peak Hour Factor	0.91	0.91	0.90	0.90	0.95	0.95
Heavy Vehicles, %	1	0	1	2	0	1
Mvmt Flow	132	171	352	62	54	215
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	11.5	12.4	12
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	89%	0%	100%	0%	0%	0%
Vol Thru, %	0%	11%	100%	0%	0%	100%	8%
Vol Right, %	0%	0%	0%	0%	100%	0%	92%
Sign Control	Stop						
Traffic Vol by Lane	159	177	37	120	156	34	221
LT Vol	159	158	0	120	0	0	0
Through Vol	0	19	37	0	0	34	17
RT Vol	0	0	0	0	156	0	204
Lane Flow Rate	176	197	41	132	171	36	233
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.328	0.365	0.051	0.259	0.278	0.065	0.381
Departure Headway (Hd)	6.706	6.67	4.46	7.061	5.836	6.539	5.9
Convergence, Y/N	Yes						
Cap	535	539	799	508	614	546	607
Service Time	4.455	4.419	2.208	4.816	3.591	4.296	3.656
HCM Lane V/C Ratio	0.329	0.365	0.051	0.26	0.279	0.066	0.384
HCM Control Delay	12.7	13.2	7.5	12.3	10.8	9.8	12.3
HCM Lane LOS	B	B	A	B	B	A	B
HCM 95th-tile Q	1.4	1.7	0.2	1	1.1	0.2	1.8

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (veh/h)	0	159	0	241	131	0
Future Volume (Veh/h)	0	159	0	241	131	0
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	173	0	262	142	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	273	71	142			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	273	71	142			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	82	100			
cM capacity (veh/h)	694	977	1438			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	173	131	131	71	71	
Volume Left	0	0	0	0	0	
Volume Right	173	0	0	0	0	
cSH	977	1700	1700	1700	1700	
Volume to Capacity	0.18	0.08	0.08	0.04	0.04	
Queue Length 95th (ft)	16	0	0	0	0	
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	9.5	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization			20.1%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection

Int Delay, s/veh 0.3

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			↑↑	↑↑	
Traffic Vol, veh/h	5	2	0	236	288	2
Future Vol, veh/h	5	2	0	236	288	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	44	44	89	89	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	11	5	0	265	313	2

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	447	158	315	0	-	0
Stage 1	314	-	-	-	-	-
Stage 2	133	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	545	866	1257	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	545	866	1257	-	-	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	885	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1257	-	610	-	-
HCM Lane V/C Ratio	-	-	0.026	-	-
HCM Control Delay (s)	0	-	11.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

OPENING YEAR 2019 'BUILD' CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖↗	↖↗	↖		↖↗	↖↗↖	↖	↖	↖↗↖	↖
Traffic Volume (veh/h)	13	8	65	83	7	38	82	408	87	46	672	13
Future Volume (veh/h)	13	8	65	83	7	38	82	408	87	46	672	13
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1429	1759	1845	1900	1900	1792	1845	1863	1900	1863	1900
Adj Flow Rate, veh/h	14	8	68	143	12	66	85	425	91	51	747	14
Adj No. of Lanes	1	1	2	2	1	0	2	3	1	1	3	1
Peak Hour Factor	0.96	0.96	0.96	0.58	0.58	0.58	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	0	33	8	3	0	0	6	3	2	0	2	0
Cap, veh/h	108	85	286	234	17	96	162	1880	591	691	2782	884
Arrive On Green	0.06	0.06	0.06	0.07	0.07	0.07	0.05	0.37	0.37	0.22	0.55	0.55
Sat Flow, veh/h	1810	1429	2632	3408	254	1399	3312	5036	1583	1810	5085	1615
Grp Volume(v), veh/h	14	8	68	143	0	78	85	425	91	51	747	14
Grp Sat Flow(s),veh/h/ln	1810	1429	1316	1704	0	1653	1656	1679	1583	1810	1695	1615
Q Serve(g_s), s	0.7	0.5	2.1	3.7	0.0	4.2	2.3	5.2	3.4	0.0	7.0	0.4
Cycle Q Clear(g_c), s	0.7	0.5	2.1	3.7	0.0	4.2	2.3	5.2	3.4	0.0	7.0	0.4
Prop In Lane	1.00		1.00	1.00		0.85	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	85	286	234	0	114	162	1880	591	691	2782	884
V/C Ratio(X)	0.13	0.09	0.24	0.61	0.00	0.69	0.52	0.23	0.15	0.07	0.27	0.02
Avail Cap(c_a), veh/h	121	95	304	341	0	165	206	1880	591	691	2782	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	40.0	36.7	40.7	0.0	41.0	41.8	19.3	18.7	14.2	10.8	9.3
Incr Delay (d2), s/veh	0.2	0.2	0.2	1.0	0.0	2.7	1.0	0.3	0.6	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.8	1.8	0.0	2.0	1.0	2.4	1.6	0.7	3.3	0.2
LnGrp Delay(d),s/veh	40.3	40.2	36.9	41.7	0.0	43.7	42.8	19.6	19.3	14.2	11.1	9.3
LnGrp LOS	D	D	D	D		D	D	B	B	B	B	A
Approach Vol, veh/h		90			221			601			812	
Approach Delay, s/veh		37.7			42.4			22.8			11.2	
Approach LOS		D			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.4	40.0		12.2	10.8	55.6		11.4				
Change Period (Y+Rc), s	6.4	6.4		6.0	6.4	6.4		6.0				
Max Green Setting (Gmax), s	16.6	33.6		9.0	5.6	44.6		6.0				
Max Q Clear Time (g_c+I1), s	2.0	7.2		6.2	4.3	9.0		4.1				
Green Ext Time (p_c), s	0.7	0.4		0.1	0.0	0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			20.6									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 0

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↑	↑				↑
Traffic Vol, veh/h	86	45	0	0	0	0
Future Vol, veh/h	86	45	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	92	92	92	92
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	132	69	0	0	0	0

Major/Minor Major1 Minor1

Conflicting Flow All	0	0	-	132
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	923
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	923
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach EB NB

HCM Control Delay, s 0 0
 HCM LOS A

Minor Lane/Major Mvmt NBLn1 EBT EBR

Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection

Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕↑	↕↑	
Traffic Vol, veh/h	78	61	106	12	19	20
Future Vol, veh/h	78	61	106	12	19	20
Peak Hour Factor	0.61	0.61	0.61	0.61	0.65	0.65
Heavy Vehicles, %	0	25	0	0	7	5
Mvmt Flow	128	100	174	20	29	31
Number of Lanes	1	1	1	2	2	0

Approach

	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	9.3	9.3	8.4
HCM LOS	A	A	A

Lane

	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	93%	0%	100%	0%	0%	0%
Vol Thru, %	0%	7%	100%	0%	0%	100%	24%
Vol Right, %	0%	0%	0%	0%	100%	0%	76%
Sign Control	Stop						
Traffic Vol by Lane	53	57	8	78	61	13	26
LT Vol	53	53	0	78	0	0	0
Through Vol	0	4	8	0	0	13	6
RT Vol	0	0	0	0	61	0	20
Lane Flow Rate	87	93	13	128	100	19	41
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.14	0.149	0.013	0.203	0.137	0.031	0.058
Departure Headway (Hd)	5.793	5.758	3.58	5.713	4.938	5.713	5.143
Convergence, Y/N	Yes						
Cap	618	622	994	628	725	624	693
Service Time	3.537	3.501	1.323	3.453	2.678	3.468	2.897
HCM Lane V/C Ratio	0.141	0.15	0.013	0.204	0.138	0.03	0.059
HCM Control Delay	9.5	9.5	6.4	9.9	8.5	8.7	8.2
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.5	0.5	0	0.8	0.5	0.1	0.2

Chik-fil-A Novi TIS
4: Mall Perimeter Road & One-Way Mall Drive

Opening Year 2019 'Build' - AM Peak Hour
01/15/2019

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	86	0	113	72	0
Future Volume (Veh/h)	0	86	0	113	72	0
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	93	0	123	78	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	140	39	78			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	140	39	78			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	91	100			
cM capacity (veh/h)	839	1024	1518			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	93	62	62	39	39	
Volume Left	0	0	0	0	0	
Volume Right	93	0	0	0	0	
cSH	1024	1700	1700	1700	1700	
Volume to Capacity	0.09	0.04	0.04	0.02	0.02	
Queue Length 95th (ft)	7	0	0	0	0	
Control Delay (s)	8.9	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	8.9	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization			15.3%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection

Int Delay, s/veh 3.2

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	↔			↕↕	↕↕	
Traffic Vol, veh/h	96	3	3	17	103	55
Future Vol, veh/h	96	3	3	17	103	55
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	92	92	53	53	74	74
Heavy Vehicles, %	0	0	0	0	1	2
Mvmt Flow	104	3	6	32	139	74

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	204	107	213	0	-	0
Stage 1	176	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	771	933	1369	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	768	933	1369	-	-	-
Mov Cap-2 Maneuver	768	-	-	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	997	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	10.4	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1369	-	772	-	-
HCM Lane V/C Ratio	0.004	-	0.139	-	-
HCM Control Delay (s)	7.6	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	39	327	467	44	66	336	717	227	63	870	47
Future Volume (veh/h)	55	39	327	467	44	66	336	717	227	63	870	47
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1900	1900	1900	1900	1900	1900	1881	1863
Adj Flow Rate, veh/h	65	46	327	525	49	74	373	797	252	70	967	52
Adj No. of Lanes	1	1	2	2	1	0	2	3	1	1	3	1
Peak Hour Factor	0.85	0.85	1.00	0.89	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	1	0	0	0	0	0	0	1	2
Cap, veh/h	114	120	407	603	119	179	281	1343	418	566	2169	669
Arrive On Green	0.06	0.06	0.06	0.17	0.17	0.17	0.08	0.26	0.26	0.24	0.42	0.42
Sat Flow, veh/h	1810	1900	2842	3476	684	1033	3510	5187	1615	1810	5136	1583
Grp Volume(v), veh/h	65	46	327	525	0	123	373	797	252	70	967	52
Grp Sat Flow(s),veh/h/ln	1810	1900	1421	1738	0	1718	1755	1729	1615	1810	1712	1583
Q Serve(g_s), s	3.3	2.2	6.0	14.0	0.0	6.1	7.6	12.8	13.0	0.0	12.7	1.9
Cycle Q Clear(g_c), s	3.3	2.2	6.0	14.0	0.0	6.1	7.6	12.8	13.0	0.0	12.7	1.9
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	120	407	603	0	298	281	1343	418	566	2169	669
V/C Ratio(X)	0.57	0.38	0.80	0.87	0.00	0.41	1.33	0.59	0.60	0.12	0.45	0.08
Avail Cap(c_a), veh/h	114	120	407	878	0	434	281	1343	418	566	2169	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	42.7	39.4	38.2	0.0	35.0	43.7	30.8	30.9	24.1	19.5	16.4
Incr Delay (d2), s/veh	4.2	0.7	10.3	4.8	0.0	0.3	170.2	1.9	6.3	0.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.2	4.7	7.1	0.0	2.9	10.3	6.3	6.5	1.4	6.1	0.9
LnGrp Delay(d),s/veh	47.4	43.5	49.8	43.1	0.0	35.3	213.9	32.8	37.2	24.2	20.2	16.6
LnGrp LOS	D	D	D	D		D	F	C	D	C	C	B
Approach Vol, veh/h		438			648			1422			1089	
Approach Delay, s/veh		48.8			41.6			81.1			20.3	
Approach LOS		D			D			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.5	31.0		22.5	14.0	46.5		12.0				
Change Period (Y+Rc), s	6.4	6.4		6.0	6.4	6.4		6.0				
Max Green Setting (Gmax), s	15.6	24.6		24.0	7.6	32.6		6.0				
Max Q Clear Time (g_c+I1), s	2.0	15.0		16.0	9.6	14.7		8.0				
Green Ext Time (p_c), s	0.9	0.8		0.5	0.0	0.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			51.6									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.1

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↑	↑				↑
Traffic Vol, veh/h	158	39	0	0	0	1
Future Vol, veh/h	158	39	0	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	92	92	50	50
Heavy Vehicles, %	1	1	2	2	0	0
Mvmt Flow	184	45	0	0	0	2

Major/Minor Major1 Minor1

Conflicting Flow All	0	0	-	184
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	864
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	864
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach EB NB

HCM Control Delay, s 0 9.2
 HCM LOS A

Minor Lane/Major Mvmt NBLn1 EBT EBR

Capacity (veh/h)	864	-	-
HCM Lane V/C Ratio	0.002	-	-
HCM Control Delay (s)	9.2	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕↕	↕↕	
Traffic Vol, veh/h	120	197	389	60	55	204
Future Vol, veh/h	120	197	389	60	55	204
Peak Hour Factor	0.91	0.91	0.90	0.90	0.95	0.95
Heavy Vehicles, %	1	0	1	2	0	1
Mvmt Flow	132	216	432	67	58	215
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	12.6	14.4	13
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	91%	0%	100%	0%	0%	0%
Vol Thru, %	0%	9%	100%	0%	0%	100%	8%
Vol Right, %	0%	0%	0%	0%	100%	0%	92%
Sign Control	Stop						
Traffic Vol by Lane	195	215	40	120	197	37	222
LT Vol	195	195	0	120	0	0	0
Through Vol	0	20	40	0	0	37	18
RT Vol	0	0	0	0	197	0	204
Lane Flow Rate	216	238	44	132	216	39	234
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.416	0.456	0.058	0.269	0.368	0.074	0.409
Departure Headway (Hd)	6.923	6.893	4.673	7.353	6.126	6.923	6.285
Convergence, Y/N	Yes						
Cap	519	522	761	487	585	515	569
Service Time	4.688	4.658	2.436	5.129	3.901	4.699	4.062
HCM Lane V/C Ratio	0.416	0.456	0.058	0.271	0.369	0.076	0.411
HCM Control Delay	14.6	15.4	7.7	12.8	12.5	10.3	13.4
HCM Lane LOS	B	C	A	B	B	B	B
HCM 95th-tile Q	2	2.4	0.2	1.1	1.7	0.2	2

Chik-fil-A Novi TIS
 4: Mall Perimeter Road & One-Way Mall Drive

Opening Year 2019 'Build' - PM Peak Hour

01/15/2019

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	159	0	317	176	0
Future Volume (Veh/h)	0	159	0	317	176	0
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	173	0	345	191	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	364	96	191			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	364	96	191			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	82	100			
cM capacity (veh/h)	609	942	1380			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	173	172	172	96	96	
Volume Left	0	0	0	0	0	
Volume Right	173	0	0	0	0	
cSH	942	1700	1700	1700	1700	
Volume to Capacity	0.18	0.10	0.10	0.06	0.06	
Queue Length 95th (ft)	17	0	0	0	0	
Control Delay (s)	9.7	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	9.7	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			21.4%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection

Int Delay, s/veh 3.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			↑↑	↑↑	
Traffic Vol, veh/h	81	4	2	236	288	47
Future Vol, veh/h	81	4	2	236	288	47
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	44	44	89	89	92	92
Heavy Vehicles, %	0	0	0	1	1	2
Mvmt Flow	184	9	2	265	313	51

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	476	182	364	0	-	0
Stage 1	339	-	-	-	-	-
Stage 2	137	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	523	836	1206	-	-	-
Stage 1	699	-	-	-	-	-
Stage 2	881	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	522	836	1206	-	-	-
Mov Cap-2 Maneuver	522	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	881	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s 15.6 0.1 0
 HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1206	-	531	-	-
HCM Lane V/C Ratio	0.002	-	0.364	-	-
HCM Control Delay (s)	8	0	15.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.7	-	-

PARKING AND QUEUING STUDY



February 11, 2019

Josh Lyons
GPD Group
520 South Main Street
Suite 2531
Akron, OH 44311

Re: Parking and Drive-Thru Queuing Analysis – Chick-fil-A, Novi, MI

Dear Josh:

Progressive AE has completed data collection at three existing Chick-fil-A sites located within the Grand Rapids, Michigan area. The data collection effort consisted of parking occupancy counts and drive-thru queuing observations. The following pages summarize our analysis regarding the existing parking demand and drive-thru queuing at the existing sites.

INTRODUCTION

Chick-fil-A is proposing a new quick serve restaurant within the City of Novi, Michigan. As part of the site approval process, the City of Novi has requested parking and drive-thru queuing data from similar sites within Michigan. Chick-fil-A identified three sites located within the metro Grand Rapids, Michigan area that are similar to the proposed site in Novi. Table 1 shows a summary of the general site information. Figures 1–3 show aerial maps of each site and are included in the appendix.

Table 1. Existing Chick-fil-A Site Data

Location	Building Size (sft)	Total Available Parking Spaces	Available Drive-Through Stacking ²
28th Street and East Beltline Grand Rapids, MI	4,850	59 ¹	10
M-6 and Kalamazoo Avenue Gaines Township, MI	4,877	80	8
US-131 and 54th Street Wyoming, MI	4,971	64 ¹	12

¹ Additional shared parking spaces available with adjacent retail sites

² Total number of vehicles able to queue in the drive-thru lanes prior to order kiosk without spilling back into the adjacent drive aisle
Source: Progressive AE, February 2019

DATA COLLECTION

Progressive AE collected parking occupancy counts and drive-through vehicle queueing data on Saturday, January 26, 2019, from 12:00 p.m. to 2:00 p.m. Data was also collected on Tuesday, February 5, 2019, from 11:00 a.m. to 1:00 p.m. and 4:00 p.m. to 6:00 p.m. These times were selected based on the peak periods of site activity. The weekday midday and evening time periods were not collected at the 54th Street site as poor weather conditions (winter snow storms) would have affected the results of the analysis.

Parking Demand

The peak period parking occupancy counts were conducted at the sites during the Saturday midday, weekday midday, and weekday evening time periods. The number of vehicles parked within Chick-fil-A's

parking lot, including shared parking spaces, were counted at 15-minute intervals throughout the analysis period. Table 2 shows the 95th percentile and average number of parked vehicles within the parking lot for each time period at the sites. Detailed parking occupancy counts are included in the appendix.

The 28th Street site had the highest parking demand of the three sites, with a 95th percentile demand of 77 vehicles during the Saturday midday time period. The average 95th percentile parking demand of the three sites was 66 vehicles during the Saturday midday time period. The parking demand was slightly lower during the weekday midday and evening time periods.

Drive-Thru Queue Analysis

The peak period drive thru queue analysis was conducted at the sites during Saturday midday, weekday midday, and weekday evening time periods. The number of vehicles in the drive-thru lane queue, beginning after the order kiosk, were counted at 5-minute intervals throughout the analysis period. The counts did not include the vehicle at the order kiosk, but the number of vehicles queued behind the vehicle ordering at the kiosk. Table 2 shows the 95th percentile and average queues for each time period at the sites. Detailed drive-thru counts are included in the appendix.

The 28th Street site had the highest drive-thru queue of the three sites, with a 95th percentile queue of 20 vehicles during the weekday midday time period and 16 vehicles during the Saturday midday time period. These queues were significantly greater than the queues observed at the Gaines Township and 54th Street sites, where the 95th percentile queues were observed to be less than 10 vehicles during all time periods.

Table 2. Chick-fil-A Parking Occupancy and Drive-thru Queuing Summary

Location	Weekday Midday (11 AM–1 PM)		Weekday PM (4–6 PM)		Saturday Midday (12 Noon–2 PM)	
	Parking Occupancy ¹	Drive-thru Queuing ²	Parking Occupancy ¹	Drive-thru Queuing ²	Parking Occupancy ¹	Drive-thru Queuing ²
28th Street & East Beltline Avenue, Grand Rapids, MI						
95 th Percentile	64	20	50	8	77	16
Average	50	9	38	4	71	12
M-6 & Kalamazoo Avenue, Gaines Township, MI						
95 th Percentile	54	5	55	10	62	5
Average	41	2	38	3	52	1
US-131 & 54th Street, Wyoming, MI³						
95 th Percentile	-	-	-	-	58	9
Average	-	-	-	-	46	4
Average (All Sites)						
95 th Percentile	59	13	53	9	66	10
Average	46	6	38	4	56	6

¹ Total number of vehicles parked within Chick-fil-A and shared parking spaces.

² Total number of vehicles queued after the order kiosk, not including the vehicle at the kiosk.

³ Weekday data for the 54th Street site pending.

Source: Progressive AE, February 2019

Sincerely,



Nick LaCroix, PE, PTOE
Senior Transportation Engineer

NDL

c:\77020023\wp_documents\wp_documents\reports\2019_02_11_era_parking_and_queuing_analysis.docx

Technical Appendix
Chick-fil-A Parking and Queuing Analysis

- **Site Figures**
- **Parking and Queuing Data**

Site Figures

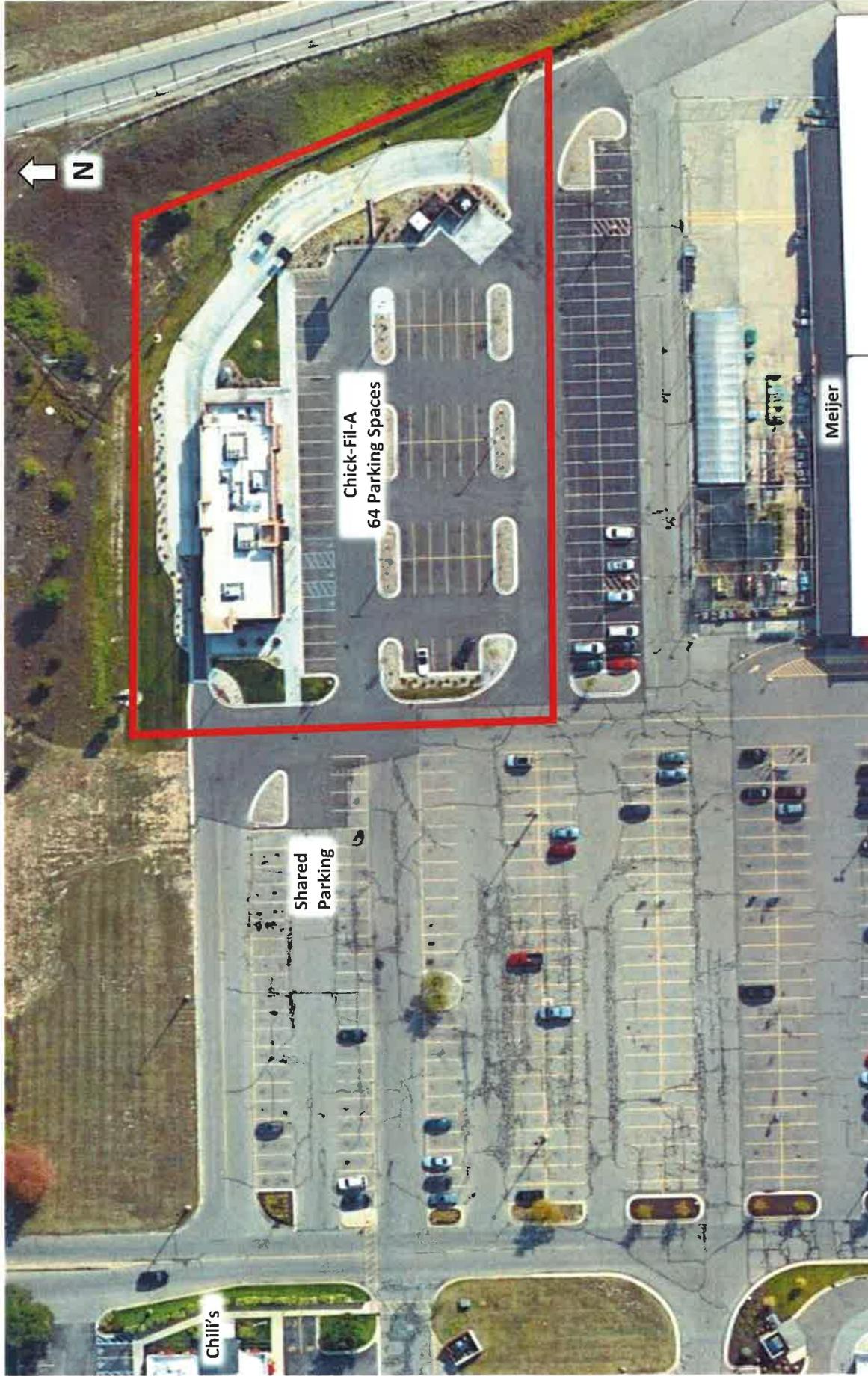
Figure 1. 28th STREET & EAST BELTLINE, GRAND RAPIDS, MI



FIGURE 2. M-6 & KALAMAZOO AVE, GAINES TOWNSHIP, MI



FIGURE 3. US-131 & 54th STREET, WYOMING, MI



Parking and Queuing Data

Location: 28th Street & East Beltline, Grand Rapids, MI

Date: February 5, 2019 (Tuesday)

Time Period: Weekday Midday (11 AM - 1 PM)

Drive-Thru Queue ¹	
Time	Total Queued Vehicles
11:00	0
11:05	1
11:10	0
11:15	2
11:20	1
11:25	1
11:30	3
11:35	5
11:40	10
11:45	6
11:50	9
11:55	12
12:00	16
12:05	18
12:10	17
12:15	20
12:20	20
12:25	20
12:30	13
12:35	13
12:40	11
12:45	8
12:50	7
12:55	7
1:00	7
95th Percentile	20
Average	9

Parking Occupancy	
Time	Total Parked Vehicles
11:00	22
11:15	36
11:30	41
11:45	49
12:00	52
12:15	60
12:30	60
12:45	66
1:00	60
95th Percentile	64
Average	50

¹Number of vehicles after the order kiosk, not including the vehicle at the kiosk

Location: 28th Street & East Beltline, Grand Rapids, MI

Date: February 5, 2019 (Tuesday)

Time Period: Weekday PM (4 - 6 PM)

Drive-Thru Queue ¹	
Time	Total Queued Vehicles
4:00	1
4:05	0
4:10	0
4:15	2
4:20	2
4:25	7
4:30	5
4:35	6
4:40	5
4:45	5
4:50	10
4:55	5
5:00	4
5:05	1
5:10	0
5:15	0
5:20	5
5:25	1
5:30	1
5:35	1
5:40	3
5:45	7
5:50	4
5:55	6
6:00	8
95th Percentile	8
Average	4

Parking Occupancy	
Time	Total Parked Vehicles
4:00	32
4:15	23
4:30	30
4:45	32
5:00	38
5:15	50
5:30	48
5:45	39
6:00	50
95th Percentile	50
Average	38

¹Number of vehicles after the order kiosk, not including the vehicle at the kiosk

Location: 28th Street & East Beltline, Grand Rapids, MI

Date: January 26, 2019 (Saturday)

Time Period: Saturday 12 Noon - 2 PM

Drive-Thru Queue ¹	
Time	Total Queued Vehicles
Noon	18
12:05	12
12:10	13
12:15	10
12:20	6
12:25	5
12:30	11
12:35	12
12:40	11
12:45	12
12:50	13
12:55	10
1:00	11
1:05	15
1:10	12
1:15	11
1:20	10
1:25	12
1:30	10
1:35	10
1:40	16
1:45	16
1:50	15
1:55	13
2:00	13
95th Percentile	16
Average	12

Parking Occupancy	
Time	Total Parked Vehicles
Noon	63
12:15	67
12:30	69
12:45	73
1:00	79
1:15	74
1:30	73
1:45	73
2:00	70
95th Percentile	77
Average	71

¹Number of vehicles after the order kiosk, not including the vehicle at the kiosk

Location: M-6 & Kalamazoo Avenue, Gaines Township, MI

Date: February 5, 2019 (Tuesday)

Time Period: Weekday Midday (11 AM - 1 PM)

Drive-Thru Queue ¹	
Time	Total Queued Vehicles
11:00	0
11:05	0
11:10	0
11:15	1
11:20	0
11:25	3
11:30	2
11:35	7
11:40	5
11:45	5
11:50	3
11:55	0
12:00	4
12:05	3
12:10	1
12:15	5
12:20	0
12:25	4
12:30	1
12:35	2
12:40	2
12:45	3
12:50	3
12:55	3
1:00	0
95th Percentile	5
Average	2

Parking Occupancy	
Time	Total Parked Vehicles
11:00	26
11:15	28
11:30	34
11:45	47
12:00	54
12:15	53
12:30	51
12:45	42
1:00	37
95th Percentile	54
Average	41

¹Number of vehicles after the order kiosk, not including the vehicle at the kiosk

Location: M-6 & Kalamazoo Avenue, Gaines Township, MI

Date: February 5, 2019 (Tuesday)

Time Period: Weekday PM (4 - 6 PM)

Drive-Thru Queue ¹	
Time	Total Queued Vehicles
4:00	1
4:05	0
4:10	0
4:15	0
4:20	0
4:25	0
4:30	0
4:35	0
4:40	0
4:45	0
4:50	4
4:55	8
5:00	4
5:05	2
5:10	11
5:15	1
5:20	11
5:25	4
5:30	3
5:35	4
5:40	7
5:45	4
5:50	5
5:55	5
6:00	0
95th Percentile	10
Average	3

Parking Occupancy	
Time	Total Parked Vehicles
4:00	30
4:15	22
4:30	22
4:45	30
5:00	35
5:15	43
5:30	55
5:45	54
6:00	55
95th Percentile	55
Average	38

¹Number of vehicles after the order kiosk, not including the vehicle at the kiosk

Location: M-6 & Kalamazoo Avenue, Gaines Township, MI

Date: January 26, 2019 (Saturday)

Time Period: Saturday 12 Noon - 2 PM

Drive-Thru Queue ¹	
Time	Total Queued Vehicles
Noon	0
12:05	0
12:10	1
12:15	0
12:20	1
12:25	2
12:30	4
12:35	0
12:40	0
12:45	1
12:50	2
12:55	5
1:00	7
1:05	3
1:10	0
1:15	0
1:20	1
1:25	0
1:30	0
1:35	1
1:40	2
1:45	2
1:50	0
1:55	0
2:00	0
95th Percentile	5
Average	1

Parking Occupancy	
Time	Total Parked Vehicles
Noon	40
12:15	42
12:30	45
12:45	58
1:00	61
1:15	52
1:30	51
1:45	54
2:00	62
95th Percentile	62
Average	52

¹Number of vehicles after the order kiosk, not including the vehicle at the kiosk

Location: US-131 & 54th Street, Wyoming, MI

Date: January 26, 2019 (Saturday)

Time Period: Saturday 12 Noon - 2 PM

Drive-Thru Queue ¹	
Time	Total Queued Vehicles
Noon	0
12:05	1
12:10	5
12:15	2
12:20	0
12:25	1
12:30	3
12:35	0
12:40	0
12:45	1
12:50	3
12:55	0
1:00	4
1:05	4
1:10	8
1:15	5
1:20	5
1:25	9
1:30	11
1:35	9
1:40	5
1:45	4
1:50	6
1:55	8
2:00	3
95th Percentile	9
Average	4

Parking Occupancy	
Time	Total Parked Vehicles
Noon	30
12:15	43
12:30	39
12:45	47
1:00	43
1:15	48
1:30	58
1:45	57
2:00	53
95th Percentile	58
Average	46

¹Number of vehicles after the order kiosk, not including the vehicle at the kiosk

**EXCERPT FROM PLANNING COMMISSION MEETING MINUTES
04-17-2019 PC Meeting**



PLANNING COMMISSION

MINUTES

CITY OF NOVI

Regular Meeting

April 17, 2019 7:00 PM

Council Chambers | Novi Civic Center

45175 W. Ten Mile (248) 347-0475

CALL TO ORDER

The meeting was called to order at 7:00 PM.

ROLL CALL

Present: Member Anthony, Member Avdoulos, Member Hornung, Member Lynch, Chair Pehrson

Absent: Member Greco, Member Maday

Also Present: Sri Komaragiri, Planner; Lindsay Bell, Planner; Rick Meader, Landscape Architect; Kate Richardson, Staff Engineer; Beth Saarela, City Attorney; Josh Bocks, Traffic Consultant; Pete Hill, Environmental Consultant; Doug Necci, Façade Consultant

PLEDGE OF ALLEGIANCE

Member Lynch led the meeting attendees in the recitation of the Pledge of Allegiance.

APPROVAL OF AGENDA

Member Avdoulos said I'd like to make an amendment to the agenda to move Item 3 – Lakeview JSP18-16 to be Item 2 on the agenda, and the following items to be numbered accordingly.

Moved by Member Avdoulos and seconded by Member Lynch.

VOICE VOTE TO APPROVE THE APRIL 17, 2019 AGENDA AS AMENDED MOTION MADE BY MEMBER AVDOULOS AND SECONDED BY MEMBER LYNCH.

Motion to approve the April 17, 2019 Planning Commission Agenda. Motion carried 5-0.

AUDIENCE PARTICIPATION

Nobody in the audience wished to speak.

CORRESPONDENCE

There was no correspondence.

COMMITTEE REPORTS

There were no Committee Reports.

CITY PLANNER REPORT

Planner Komaragiri said there is nothing to report.

CONSENT AGENDA

There were no items on the consent agenda.

PUBLIC HEARINGS

1. CHICK-FIL-A JSP18-75

Public hearing at the request of GPD group for JSP 18-75 Chick-Fil-A for Planning Commission's recommendation to the City Council for approval of rezoning from Regional Center (RC) to Regional Center with a Planned Development 2 option (PD-2), Preliminary Site Plan with a PD-2, Special Land Use and Stormwater Management Plan approval. The subject property is located at the southeast corner of Novi Road and Twelve Oaks Mall Road in Section 14. The applicant is proposing to develop a 4,990 square foot Chick-Fil-A restaurant with a drive-through. The applicant will be utilizing the Planned Development 2 (PD-2) option to propose a drive-thru.

Planner Komaragiri said I've gathered that Chick-Fil-A doesn't need any more introduction, so I will go straight to the site plan. The applicant proposes to redevelop the 1.4-acre site located at the northeast corner of Novi Road and I-96 exit ramp intersection. The new restaurant, as you mentioned, will be approximately 4,990 square feet. It includes a drive-thru and a play area inside the building. The restaurant proposes 114 indoor seating and 16 outdoor seating.

The property is currently zoned RC, Regional Commercial. The existing building is considered a legal non-conforming structure, as it doesn't meet the current parking or building setbacks. The proposed redevelopment is required to conform to the Ordinance standards and is not allowed to follow the non-conforming setbacks. As noted in the rezoning review, this would limit the development potential for the site. The applicant is proposing to redevelop the site using the PD-2 Option, which provides a greater flexibility for redevelopment and also allows a drive-thru. The subject property would be rezoned from RC to RC with a PD-2 Option.

The PD-2 Planned Development Option is intended to permit the limited application of more extensive commercial uses in a district otherwise restricted to community and regional oriented shopping centers. Our Future Land Use map indicates Regional Commercial for this and surrounding properties. This is located in close proximity to the properties to the west across Novi Road and properties along Twelve Mile Road which are designated as PD-2. This is also located on the periphery of Twelve Oaks Mall, similar to McDonalds drive-thru to the north.

The Engineering review letter notes that rezoning will result in utility demands that are approximately equal or less than the utility demand if the property were to be developed under the current zoning.

The applicant has submitted a Community Impact Study, Noise Impact Study, Traffic Impact Study, Parking and Queuing Study. The studies noted that the impacts of the development are not anticipated to degrade levels of services beyond those under existing conditions during either the AM or PM peak periods.

Planner Komaragiri said our Zoning Ordinance allows the Planning Commission to proceed simultaneously with review and recommendation on applications for rezoning, PD Option and Preliminary Site Plan with a Special Land Use approval at the same time. Conditions of Special Land Use, as noted in the review letter, should be considered. Deviations from the Ordinance are considered and are subject to City Council approval based on Planning Commission approval and will be part of a PD agreement. The applicant requests about 19 deviations for the current layout. Most of the deviations are because the plan is trying to accommodate a drive-thru and associated uses in a relatively small site.

Some of the deviations are straightforward, such as lack of Rezoning Traffic Study and distance from another restaurant. They are supported by Staff. Some required additional conditions, such as loading zone and dumpster location, which are located in an interior side yard and it was hard to avoid, as the site has frontage on three sides. All parking setback deviations are consistent with existing non-conformities. The proposed building location would require a deviation, with 50 feet required and 32 feet proposed. The applicant may expand on this during their presentation. The building is proposed at the current location to accommodate required queuing and site visibility from Novi Road. The applicant noted that multiple alternatives were considered before setting with this one.

If you may notice, the original plan that was part of the packet included angled parking in this location, but they provided revised layout that shows perpendicular parking. A deviation is required for a lack of bypass lane for a limited stretch, as indicated in the red circle on the screen. The applicant is providing an 11-foot bypass lane when two drive-thru lanes merge into one around the northwest corner. Fire has confirmed that it has access to all sides of the building and has no additional comments or concerns to the proposed layout. Traffic is in support of the layout based on the Queuing Study findings.

Another major deviation that is required is for the lack of minimum parking. Based on the restaurant size, a minimum of 100 spaces are required and the applicant is only providing 65. The applicant has provided a Parking Study to support the proposed number. The Study compared three different existing locations. Two of the location required about 62 spaces at peak time. The Grand Rapids location, which is one of those three, required 79 parking spaces. The proposed parking is closer to the peak demand, however it is less than the 79. However, we recommend that the applicant pursue a shared parking agreement with the La-Z-Boy facility to the east to alleviate issues if potential peak parking reaches parking needs similar to Grand Rapids.

Planner Komaragiri said a Queuing Study was submitted, which compared queuing demand at three similar locations. The existing demand is between 11 and 20,

depending on the location. The current plan proposes 17 spaces from the pick-up window to here. The Traffic review recommended designating the spaces for employee parking, indicated in red, to avoid potential conflict with excessive queuing so people are not stuck in those spaces trying to get out.

Most of the Landscape deviations were not supported earlier based on the packet you received. However, the applicant has been working with our Landscape Architect on possible revisions in the last couple of days. Staff now supports all the deviations at this time, as they made an attempt to reduce the intensity of what they were asking before.

Stormwater would be collected by a single storm sewer collection system and discharged to a regional detention basin, which is why you don't see a pond on the site at this time. The building elevations conform to the code and do not require any waivers. Engineering and Fire recommend approval, with additional changes to be made with Final Site Plan.

As the proposed rezoning is not supported by the Future Land Use map, the rezoning request was presented to the Master Planning and Zoning Committee for input. The Committee provided favorable input and asked the applicant to address issues regarding circulation in and out of the site. Our Traffic consultant, after reviewing this exhibit, recommended that the exiting traffic from the drive-thru should be directed towards the eastern exit, not the northern, because people exiting the site will not be able to turn left at either of those exits and they'd have to turn back to Twelve Oaks Drive to get back to Novi Road. The applicant is going to present and expand on this as part of their presentation.

Planner Komaragiri said the Planning Commission is asked tonight to hold the public hearing and make a recommendation to City Council for the items stated earlier – the rezoning, PD-2 Option, Site Plan, Special Land Use, and Stormwater Management Plan, along with the mentioned deviations. The applicant, Jason Hill, is here tonight the design Engineer, Ellen Selle, and will make a presentation shortly. We have our Traffic Consultant, Josh Bocks, and Façade Consultant, Doug Necci, here tonight if you have any questions for them. Thank you.

Jason Hill, with Chick-Fil-A, said it's good to see you all again, we're excited to be here. The first thing I'd like to do is thank you, Mr. Chair and members of the Planning Commission, for hearing our case tonight. We know it takes time and energy and effort to review it, so we thank you for that. Most of all, I want to thank Sri and the rest of the Staff – you've been really great to work with, you're very smart folks and you represent the City of Novi really well, so we thank you for that and most of all for your thoroughness.

Given that you've got a full agenda tonight, I'll be brief. We're just really excited about being here. I won't go into the Chick-Fil-A spiel per se, I just want you to know that we worked really, really hard to take a unique piece of property that had a lot of physical challenges with it and maximize it to the best of our ability to support our operations. And we worked hard to minimize the number of deviations and working back and forth

with Staff. What you have before you presents the latest and greatest in the innovations that we've got, both inside the building as well as outside of the building on the site specific to the drive-thru use. I think you'll notice that if you go to any of our locations during peak times, we have team members outside taking orders face to face to help efficiency through the drive-thru. And in order to help do that in a way that's most comfortable for our team members, we have instituted some canopies to do that. So we would envision our drive-thru to function at high efficiency at this location because of all the innovations we've got incorporated into this.

As Sri mentioned, we designed the site to maximize the parking as much as we can. We provided the Parking Study, which shows the numbers are pretty close to the 68 spaces that we've been able to provide. We have since reached out to the La-Z-Boy ownership. They're not currently in support of providing us with a Shared Parking Agreement, so I just want to be transparent about that – we're not able to maintain that, so we're hopeful we can garner your support in spite of that. With that, I'll turn it over to Ellen Selle from GPD to give you a low-down on the site layout.

Ellen Selle, with GPD Group, said I'm going to skip through these first few slides since Jason did a great job talking to us about Chick-Fil-A. So here is the overall Twelve Oaks Mall layout, and you can see where Chick-Fil-A is proposing to go. And it's not just a straight up rectangular site, there are some unique characteristics to it. We border Novi Road primarily, we also border I-96 and also Twelve Oaks Road, a one-way just north of us.

So here is just a closer view that shows that same layout that Sri was showing us. You can see that we are looking to best drive the customers out of the site. We've been in discussions with the mall and with the property owner to see what is best for that and also with Sri going through it. So talking with the Traffic engineer, we're looking at putting a Stop sign here at the end of the drive-thru, again forcing all of that traffic out of the site through La-Z-Boy coming out of the southern drive. From there, they have the option to either go north or south. North will take them to the closest signalized intersection, and south will take them around the ring road. And you can see that a little better here. Not everyone will go out those first drives, that can be seen better in the distribution in the Traffic Study so you can look at that a little more to see exactly how many are going to go where.

From there, I also want to point out the Shared Parking that we weren't able to get, as Jason mentioned, but we have done a lot on the site to help get our numbers there. Sri had mentioned that we had I think 63 parking stalls, and we actually have moved that up to 68. With taking those angled spots at the top and making them perpendicular, we've been able to pick up a few spots there. So we're really working to get towards that number. The other thing was the Queuing Study said that 77 was the maximum at the 95 percentile, that was the number of vehicles that were parked at the one particular location out of the three. But the average number was 71, and 71 is a lot closer to the 68 that we're looking at and that was again, only at one of the three. The other three were well under the 68. We also have internally looked at other sites around the Michigan area that have similar size footprint, and they're all within that just under 70 number – between about 55 and 70, and they're all right there and all performing

very well and they're not overly parked. So we are well within that range and we feel comfortable with the number of 68 that we've presented.

And then here is the proposed site plan that is overlaid, you can see where that existing building is, how Sri was talking about the setbacks, and how we have this uniqueness to the site. So we have laid out the building to be along that angled to allow us to have the most amount of stacked cars. We have a 22 stack here and that is a pinchpoint, as Sri pointed out, but that's where the two lanes come together so you don't want those two lanes picking up from the drive-thru area so you need that area to constrict down. So with that, we've talked to the Fire Department and we've actually worked with them to be able to bring the fire truck in along the drive-thru side. If there was a fire, they would have the space. The reason for that bypass lane was so the truck could fully circulate. So we worked our way around that and talked to them about making those modifications and you can see the square in red is our canopy for where our order point is, that's where those two lanes are and then they're going to pinch down into one. And the other area that's kind of in red there, that's where our drive-thru canopy is, and that's been shortened closer to the building so that fire truck can have access. And here you can see it a little better on our site plan. And then these are the auto-turns that just kind of shows you how those vehicles are going to get in and it's still going to work. Here is the garbage pick-up, here is that fire truck that is going to pull in along the building side and still have room to make those maneuverability's, and also we have the box truck that is going to deliver in that loading zone that Sri also pointed out.

Ms. Selle said the Landscape plan we worked through extensively with Rick and I'm so happy to say that today we got confirmation that all the trees we got put in and all the landscaping, we're looking at I think close to 52 trees and we really tried to maximize everywhere we could. Some of the things we discussed are that when we put in the parking stalls, we were able to rearrange some of the square footages up there so we would have space to put in additional endcap trees that were required, also get that square footage up to where we need to be. And then I can show you a little better, here's the landscape plan again and the grading plan. So we've really worked with the existing conditions of the site and one of the conditions was that they wanted the drive-thru screened. So with the site being lower than Novi Road and being lower than the highway right there, we were able to work with those elevations so our site is a little lower, we've also bermed up a little bit and then added the row of trees and shrubs that fully blocked your view of the drive-thru. And then with this, I just wanted to point out the two existing utilities that have limited us from putting in trees in those endcap islands. It's at the two ends closest to the La-Z-Boy, there's some utilities that we're working with that we can't put one in but again, we've worked with Rick to maximize what we can to put additional square footage and all the trees that we could put on site.

And then I just kind of wanted to show some of the elevations. We do have a materials board, it's down there and shows the two different kinds of brick that we're proposing. And this top elevation is the drive-thru side, so that's what you'll see from Novi Road. But again, you won't see all of it because it will be screened by a lot of trees, shrubs, the berm, and then also there will be some cars possibly on the drive-thru so you won't be able to see all of that building. The lower one is what you'll see from the parking lot. The

top elevation here is the front entry that kind of faces caddy corner to Novi Road, and that will have a patio in front. And then the bottom one is obviously the rear, and that faces the dumpster side and the highway side. And these are just generic perspective views, it's not exactly how the site lays out but you can kind of get a better idea of how the building is. And this is the overall floor plan, it shows that Play Place that we discussed.

And this is just so you can see the site plan overall again. But we're happy to say that we've worked through a lot of those waivers and we feel that we have the City's approval on all of the waivers we've asked for. So if you guys have questions, we'd be happy to answer.

Chair Pehrson asked if there was anyone in the audience that wished to address the Planning Commission regarding this project.

Leonard Riber, 42901 W Thirteen Mile Road, said I'm opposed to the rezoning. I don't mind the restaurant, I just don't want to change the way things are. There's always plenty of congestion on Novi Road. Thank you.

Jennifer Riber, 42901 W Thirteen Mile Road, said I'm opposed to the drive-thru aspect of the restaurant. I think that even though they've talked about how they're going to reroute traffic, it's still going to cause too much of a problem. Thank you.

Gladye Moulder, 25147 Sullivan Lane, said I don't know how many of you go out shopping in Christmas season starting October to January. If you try to get out of the mall around that drive, you can't make any turns. The traffic is already backed up all the way inside the mall. I have no issues with having the restaurant. The drive-thru portion of it, it's going to make life a lot more difficult for the shoppers at the mall, people who are trying to get to the mall, get out of the mall. As it is right now without the drive-thru there, if you are trying to get out of the mall on Sunday afternoon for instance. The mall closes at 6 o'clock, and by 5 o'clock, 5:30, the traffic already is backed up. On the exit of the mall to get onto Novi Road, there is one traffic light and a stop sign that is exactly where the site is. How do you think people are going to get in and out of the mall, or for that matter get in and out of the restaurant? Because it's already backed up. Just food for thought. Thank you.

Ron Jones, 42323 Park Ridge Road, said I've been here for over forty years, I don't see anything wrong with replacing one restaurant with another restaurant. And I'm tired of driving all the way to Troy or Toledo for a Chick-Fil-A. I'm in support of this Chick-Fil-A. We've put restaurants in, we've taken restaurants out, we've taken businesses in and out. Sears is closing down, so we have enough removal of some traffic that will help alleviate any Chick-Fil-A parking problem we might have. And Christmas is Christmas, I don't care which mall you go to – you're going to stand in line to get in, stand in line to get out. So I'm in support of Chick-Fil-A.

Dorothy Duchesneau, 125 Henning, said I like chicken. I am concerned, however, with this proposal because of the rezoning to allow the drive-thru. The resulting in and the increasing number of the in and out trips because of the nature of the drive-thru. The

traffic count impact study that was done in mid-January and February will likely be much different than one done in the back-to-school or Christmas holiday season, at least as far as the regional shopping mall is concerned. Although other outlots surrounding this mall can, and some do, include a drive-thru option, this site with the location literally behind the La-Z-Boy does not. This lot's location and its access might have been the reason for this exclusion in the zoning when the mall was created back in the late 70's. Chick-Fil-A is a primary drive-thru location, they say that their expectation is that 60% of their business to be drive-thru. It will have much different traffic patterns and volume compared to the previous 24-hour Denny's. The stacking request of 22 cars seems to indicate this; it is double the 12 slated for the Starbucks expansion across the street, which I supported.

The west-east traffic flow coming off the northbound Novi Road exit from the westbound expressway runs only one way east to the mall road. It's an easy access into the mall without having to use any of the Novi traffic lights when heading north, but that inbound east road also causes issues when you try to get back out. Going south, you have to know that there's a no left turn sign at that spot. On top of that, on the ring road, you do have to keep an eye out for the small sign that says turn right here to get to the Denny's or the La-Z-Boy. For me, grabbing a meal while on the run means getting in and out of a drive-thru location with the least amount of hassle. That means easy access in and quick and easy access back to the road I was on so I can continue my journey to wherever. I would like to know what the mall's views are on the increasing usage of the La-Z-Boy ingress-egress point being used for left turns to get back on the ring road, especially during shopping seasons. The page 220 of your packet shows all those exits more clearly because it shows the entire mall. If you do the expanded Google Maps view of the three similar sites listed by the applicant on pages 170, 370, 475, they show much easier and cleaner and in some cases more ingress and egress points than what is remotely possible for this site. We've lost a Big Boy's and a Bob Evans in the past due to access issues, hate to see that happen to Chick-Fil-A. Thank you.

Michel Duchesneau, 1191 South Lake Drive, said many of the residents of Novi have approached me and said they'd love to see a Chick-Fil-A in Novi. However, this is not the plan or location that should be supported. The applicant's Chick-Fil-A request for rezoning should be denied. The applicant's proposal does not meet the City's current ordinances for a drive-thru restaurant. For this location, the applicant should consider building a restaurant without the drive-thru feature and have more parking. A sit-down restaurant is a viable use for this site under its current zoning. The Denny's restaurant is evidence of that. The restaurant flourished for decades and was still successful when it closed. The applicant's proposal has a lack of on-site parking. This is a major deviation and is the main reason for denying this proposal. The plan that is proposed, and I've updated it, provides for only 68 of the 100 parking spaces required. Currently, Denny's has 90 parking spaces. The applicant's proposal removes 22 parking spaces from what is currently on site. In addition, the applicant's submittal also indicates 20 to 22 vehicles maybe in line stacked up in the drive-thru. This is extensive vehicle stacking, access to parking spaces will be further hindered, customers coming for indoor-outdoor seating will most likely use the La-Z-Boy parking spaces for overflow or convenience.

A bypass lane is required by City Ordinance for a drive-thru. This requirement is not met.

Access to the site is a concern for this establishment. The egress, which has been mentioned, basically routes you in a long way and it's awkward for the drive-thru. The site is too small for the applicant's proposal. This is evidenced by the large number of deviations required and these include not meeting required setbacks and not meeting City's landscaping requirements. It sounds like they have made substantial improvements with the landscaping based on what was said earlier, but it sounds like there are still deviations needed. Every time we grant such a large number of deviations to an applicant, we dilute the value of our Ordinances. Thank you.

Jim Brady, 50983 Glades Court West, said my daughter Megan has some words to say in support of Chick-Fil-A.

Megan Brady, 50983 Glades Court West, said I am nine years old. I am here to support our community and the business in Novi. I believe opening a Chick-Fil-A in the City of Novi is a fabulous idea. When I was younger and I lived in North Carolina, I went to Chick-Fil-A a lot because they had great chicken that was good for you, nice people who worked there, an amazing customer experience, and always very clean. By adding a Chick-Fil-A to Novi, it would bring good tax dollars to the City and give support to the community. Thank you.

Mike Garbacik, 24655 Dinser Drive, said I've lived in Novi since 1988 and I can tell you that the mall now is not what it used to be. We need more things that will drive people to come to the mall, come to Novi, and Chick-Fil-A will be one of those things. Everybody travels to go to Chick-Fil-A, people enjoy it. This mall has 1.5 million square feet of retail space and over 7,000 parking spots. They can get people in and out of there, there is no problem moving around that mall. And having another full operating restaurant instead of the dead, empty, decaying Denny's that it is now – I think that would be a great thing to see the first thing when you come off of the Novi Road exit.

Chair Pehrson asked if there was anyone else that wished to address the Planning Commission regarding this project. Seeing no one, he asked if there was any correspondence.

Member Lynch said yes. We have five letters of support.

Chair Pehrson said those will all be entered into the record. Chair Pehrson closed the public hearing and turned the matter over to the Planning Commission for their consideration.

Member Anthony said Rick, so now we've at least been able to get an update on the Landscaping. I just wanted to hear from you about that update, how you feel about it.

Landscape Architect Meader said so they've eliminated a lot of the waivers that they had, and of the waivers that are left, the primary one would probably be the width of the setback on the southwest corner but that basically has a huge area in front of it so I didn't really think that that was too much of an issue. They have a couple endcaps where they can't have the trees because there are utility conflicts. And then they can't have all of the foundation plantings at the building just because of the way the layout is

and the drive-thru, so they have them across the aisle but there's still a lot. So from the road, it will still look like the foundation is basically landscaped, it's just not right at the foundation. So that's where those primary ones were that we were working through, but they were able to shift things around to get more of the interior islands that I was looking for. So I think it will be a really heavily landscaped site and I think it will be attractive.

Member Anthony said and I think it was 59 trees now that would be there.

Landscape Architect Meader said I didn't count the total trees. If that's what she said, I trust her.

Ms. Selle said it was around 52.

Member Anthony said I do have to say, I didn't think you'd be able to pull off landscaping like that, so good job and good work there. The trees that are closest to the road on Novi Road, are they angled like that so that you don't disrupt the line of sight for cars moving in and out of the road?

Landscape Architect Meader said no they're pretty well centered along there, and they may not even be able to be planted anyway if the Road Commission for Oakland County says no. But they're ok, because that is the drive in only so it's not really blocking any visibility. But the Road Commission does what they want to do, and we will go along with that.

Member Anthony said so the Road Commission will still have final say in making sure that that visibility is open and safe?

Landscape Architect Meader said for those four trees, yes.

Member Anthony said alright, good. I like our rezoning from the Regional Commercial to the PD-2, simply because we maintain control of that property and if this were to move to another business, we also would have another shot at that. When I look at the Traffic Study that I read, we have good engineers that we hire from the outside. They went through and they saw minimal degradation to the traffic, and I think part of that is because the Chick-Fil-A is within the mall complex as opposed to out on Novi Road with the access. So wherever that goes within that mall, you would end up with the same effect anyway. So the traffic seems to fit well. The issue is on the parking, and this question I have for the Chick-Fil-A staff. I know you gave your pitch on that, but have you talked with the mall? Because there is considerable space for parking across in the mall parking lot.

Mr. Hill said yes, our concern with that is that we don't want to direct people to park there because one it's a long way to walk and two there is not adequate pedestrian activity from that mall parking all the way to our site. And we don't want to start introducing the opportunity for people to cross what folks have already described as a busy ring road. Just to keep it safe for everybody.

Member Anthony said yeah, I think you will have parking there anyways. You can see

that this is going to be a pretty popular site, I bet it matches your flow in Grand Rapids. At least with the parking, it's contained. It's not going to cause an overflow out onto Novi Road, it's going to be contained in our mall area. And this leads me to addressing the one comment on a site that has many deviations. Often we have a site that is difficult and you can see where businesses may struggle with that location. But there is an opportunity to put a store that right now has a tremendous draw into a region where we do see some decline. And those deviations are often necessary in order to do that. So I look at this and realize we have a tough spot, but I do think this is good for that particular area and I do feel good that at least the Novi Road traffic is cushioned from the location. And I would support this.

Member Lynch said very briefly, I am familiar with this area. I did own a residential property at the Enclave, which is over there by the mall. And you're right, at Christmas time, traffic is bad with or without the restaurant. There are better ways to avoid the traffic – once you live there, you know to go out the back way. But what's worse than that is having a decaying site, which is what we have now. We have a restaurant, two restaurants, that went out of business. I don't like seeing that either, I think that's worse. Right now, my understanding of the district is drive-thru's are in fact permitted. I like what you did, I know it's a tough site. I think you did a great engineering job with that tough site.

I agree with Member Anthony that Chick-Fil-A is going to be a draw, and not only good for Chick-Fil-A but I think it's going to be good for the mall – when you're there, you go to the mall, you go to Chick-Fil-A. I think it's a good thing for Novi. I don't see the traffic problems, and I'm not too concerned about a few parking space issues with the drive-thru. I am very familiar with that specific area, it's where I used to drive in to get to my property. I think it's a good addition, I think you did the best you could with the site. I think you're well within the zoning. The zoning change really is advantageous for the City, I think the PD-2 Option gives the City a little more say in final approval. So I think that's a good thing. So overall, with that particular site, I think you did an amazing job. I did read through the packet and thank you very much for working with Staff. I am totally in support of this, I think it's going to be good for Novi. I think that Christmas is going to be Christmas, but the other 360 days of the year we have a more even flow. I don't think there are going to be as bad of traffic and parking issues as some may think. If you take Christmas on its own, that whole week there – yeah there is traffic and parking issues everywhere. But if you look at the entire year, I think it's going to be an overall benefit to the City and I appreciate you coming to Novi and I appreciate the work that you did.

Member Hornung said can we put the circulation map on the board? So from what I've seen by studying this packet is that I do see some severe concerns about this particular circulation. Everybody is coming in either through this route at the top and turning in, which I think is typical for northbound traffic. And some folks might come in this way. Now based on what was said earlier, 100% of the vehicles leaving the site will leave through here, is that correct?

Ms. Selle said no, just 100% of the drive-thru traffic will leave that way.

Member Hornung said ok, drive-thru traffic will be forced to go only this way. The parked traffic can make a choice.

Ms. Selle said they still have the option, yes.

Member Hornung said ok. At the current La-Z-Boy location, this area right here is the loading dock for that store. And right here, there are two speed bumps in this space. My question for Staff is, is there anything that would prevent or allow La-Z-Boy to continue to have those for all of that exiting traffic?

Planner Komaragiri said can you please repeat the last part?

Member Hornung said so La-Z-Boy has two speed bumps in the way that all of the drive-thru egress traffic will be leaving the site. Would La-Z-Boy be able to maintain those or even add more if they thought that there was too much traffic going through their loading zone?

Planner Komaragiri said this seems like a good question for Josh Bocks, our Traffic consultant, to respond. I'm pretty sure those speed bumps were part of a traffic calming technique. If you don't mind, I'll defer to Josh.

Traffic Consultant Bocks said good evening. As far as speed bumps, I do not know that answer off the top of my head. That is something that I would have to look in to, I apologize. But it is possible that they could add more, I'm not 100% sure.

Member Hornung said and that drive, that space there that La-Z-Boy is using, is completely on their property and controlled by them? Is that true?

Traffic Consultant Bocks said I believe the roadway is part of the overall site. Their loading zone would have to allow a bypass lane by code anyways, just like the loading zone for Chick-Fil-A and other businesses are required to do.

Member Hornung so that bypass lane right now in this picture is showing two-way traffic. Is the design that traffic could come in through this route, if they so choose, and this is designed and planned for two-way traffic? And we're only required one bypass lane for this particular site?

Traffic Consultant Bocks said I believe so.

Member Hornung said I think one of the things that is going to be paramount in today's meeting is the idea of being good neighbors. And it will be incumbent upon this development ever succeeding that La-Z-Boy and Chick-Fil-A get along really well. Because if La-Z-Boy pulled up a big truck and blocked the way, there's really no other avenue for drive-thru customers to leave and Chick-Fil-A doesn't have any recourse on that. So there's another problem that I've seen in this particular layout. When traffic leaves here, there's currently a blockage right here so that nobody can turn left. So this map is not correct and there is no way to actually do this at this time. So all traffic leaving the Chick-Fil-A must go down to here, and I think they can pull a U-turn over

here but we're looking at approximately 1,100 cars per day on average based on the numbers that were supplied in our packet.

Chair Pehrson said can you show that again?

Member Hornung said so what's happened here, the mall has a curb here in this space.

Chair Pehrson said that stops short up to where that blue arrow is. I've seen it, I was there last night.

Member Hornung I respectfully must disagree because I stopped there on my way here today. My concern, whether it's there or not, is the amount of traffic that we're going to have flowing in an odd configuration. If Chick-Fil-A had an exit to Novi Road, it would plug up Novi Road but what it would not do is a strange U-turn situation going on back here, and a trip through somebody else's property. And based on that, I can't see that this is a good fit. One of the first things that the applicant said when they walked up to the microphone was this site is a bad fit – not those exact words, but that was the message I heard. And I fully agree, I think this site is a bad fit for the particular development. Thank you.

Member Avdoulos said Sri, I was looking at slide 10 in our packet and looking at zooming in on where that boulevard ended. As of now, I don't see an issue, so we could verify that. To the applicants, I've got a couple questions. There's a 22 car stack and then there's 68 spaces?

Mr. Hill said that's correct.

Member Avdoulos said would there ever be a situation where you have all spaces full and the whole thing stacked at the same time?

Mr. Hill said I don't want to say it's impossible, but the frequency with which that would happen would be fairly minimal.

Member Avdoulos said ok, and your hours of operation are still Monday through Saturday, closed on Sunday?

Mr. Hill said that's correct.

Member Avdoulos said so that's one of the things that we were discussing when we had the opportunity to meet with Chick-Fil-A when they were first presenting this project and they were walking through the site and we were looking at what was existing and what was being proposed, and the applicants have really worked towards making the site operate in its maximum efficiency. Chick-Fil-A is a national brand and they know how to look for business and know where to put their business. They've got their queuing and circulation I think down to a science. We're looking at canopies to help protect the cars going in and also their team members as they're going out to make the queuing a little easier. The emergency access, in working with the City and the Fire Department, talking with the mall, and making sure that everything is being addressed, I think that

with the landscaping there were a lot of issues there.

So I think based on what has been presented, all the efforts that have been made, I think we're taking a site that is going to be difficult because of its geometry and configuration but I think the placement of the building, the way that we're looking at providing the drive-thru, and understanding the queuing is all thought through. I have to say that nowadays, most restaurants that are being built or are already built are adding drive-thru's anyway. That's part of the method of doing business nowadays, everyone wants things quick. Mostly all of the Panera's that I know have started to add drive-thru's, Jimmy John's is doing the same thing. It's just part of our culture. So I think if we have corporations and companies that are trying to make it safer for us, that's all we can expect. I think it is a bonus for the City, I agree with the comments from Member Anthony and Member Lynch related to this as a PD-2 so that allows us to have some flexibility so that if it's rezoned, it's not a permanent rezoning and it's something that can be worked with in the future. So, saying that, I'd like to make a motion.

Motion made by Member Avdoulos and seconded by Member Lynch.

ROLL CALL VOTE TO RECOMMEND APPROVAL OF REZONING MOTION MADE BY MEMBER AVDOULOS AND SECONDED BY MEMBER LYNCH.

In the matter of the request of GPD Group for JSP 18-75 Chick-Fil-A, JSP 18-75 with Zoning Map Amendment 18.729, motion to recommend approval to City Council to rezone the subject property from Regional Commercial (RC) to Regional Commercial with a Planned Development 2 Option (PD-2) for the following reasons:

- 1. The recommendation includes the following ordinance deviations for consideration by the City Council:
 - i. Deviation to waive the required Rezoning Traffic study as a Traffic Impact Study is submitted that addresses the traffic impacts.****
- 2. The rezoning request fulfills one of the Master Plan for Land Use objectives by fostering a favorable business climate.**
- 3. The rezoning is a recommended land use that will be consistent with the surrounding zoning and existing developments.**
- 4. The rezoning would increase development potential of the subject property.**
- 5. The rezoning provides a redevelopment opportunity for a challenging site in a visible location along I-96/Novi Road corridor.**
- 6. The rezoning will not have impact on public utilities.**

Motion carried 4-1 (Hornung).

ROLL CALL VOTE TO RECOMMEND APPROVAL OF SPECIAL LAND USE MOTION MADE BY MEMBER AVDOULOS AND SECONDED BY MEMBER LYNCH.

In the matter of the request of GPD Group for JSP 18-75 Chick-Fil-A, motion to recommend approval to the City Council for Special Land Use based on and subject to the following:

- 1. The proposed use will not cause any detrimental impact on existing thoroughfares (based on Traffic review);**

2. The proposed use will not cause any detrimental impact on the capabilities of public services and facilities *(based on Engineering rezoning memo and the review)*;
3. The proposed use is compatible with the natural features and characteristics of the land *(because there are no regulated natural features on site)*;
4. The proposed use is compatible with adjacent uses of land *(because the proposed use is similar to an existing restaurant use with an addition of drive-thru)*;
5. The proposed use is consistent with the goals, objectives, and recommendations of the City's Master Plan for Land Use *(as it fulfills one of the Master Plan objectives to attract new businesses within City of Novi)*;
6. The proposed use will promote the use of land in a socially and economically desirable manner *(as it fulfills one of the Master Plan objectives to attract new businesses within City of Novi)*;
7. The proposed use is (1) listed among the provision of uses requiring special land use review as set forth in the various zoning districts of this Ordinance, and (2) is in harmony with the purposes and conforms to the applicable site design regulations of the zoning district in which it is located.

This motion is made because the plan is otherwise in compliance with Article 3, Article 4, Article 5, and Article 6 of the Zoning Ordinance and all other applicable provisions of the Ordinance. *Motion carried 4-1 (Hornung).*

ROLL CALL VOTE TO RECOMMEND APPROVAL OF PRELIMINARY SITE PLAN MOTION MADE BY MEMBER AVDOULOS AND SECONDED BY MEMBER LYNCH.

In the matter of the request of GPD Group for JSP 18-75 Chick-Fil-A, motion to recommend approval to the City Council for Preliminary Site Plan with a PD-2 Option based on and subject to the following:

1. Planning Commission findings that the standards of Section 3.31.4 of the Zoning Ordinance are adequately addressed, as identified in the Planning Review Letter;
2. The applicant shall direct exiting traffic from the site to the eastern exit to Twelve Oaks Mall road with appropriate site signage, subject to review and approval by City's Traffic Consultant at the time of final site plan submittal;
3. The dumpster pick up times shall not conflict with peak hour traffic;
4. The recommendation includes the following ordinance deviations for consideration by the City Council:
 - i. Deviation from Sec. 5.2.12.C to allow reduction of minimum required parking spaces for fast food restaurants. A minimum of 100 are required, 65 are proposed;
 - ii. Deviation from Section 3.31.7.B.v.a, the use conditions for fast food drive-thru under PD-2 Option as listed under that requires a minimum distance of 1,000 feet between a proposed independently freestanding restaurant from any other such use on the same side of the street;
 - iii. Deviation from Section 5.3.11.D that requires a bypass lane, minimum of 18 feet width. The applicant is providing an 11 foot by pass lane when two drive-thru lanes merge into one around the Northwest corner of the building;

- iv. Deviation from Section 3.31.7.D for not meeting the minimum building setback requirements for exterior side yard along I-96 (south west frontage). A minimum of 50 feet is required, 32 feet is proposed;
 - v. Deviation from Section 3.31.7.D for not meeting the minimum parking setback requirements for Exterior side yard along Twelve Oaks Mall Road (North). A minimum of 20 feet is required, 14.5 feet is proposed;
 - vi. Deviation from Section 3.31.7.D for not meeting the minimum parking setback requirements for Exterior side yard along I-96 (Southwest). A minimum of 20 feet is required, 9.3 feet is proposed;
 - vii. Deviation from Section 3.31.7.D for not meeting the minimum parking setback requirements for rear yard (east). A minimum of 20 feet is required, 6 feet is proposed;
 - viii. Deviation from Section 5.4.1 for reduction of minimum required loading area. A minimum of 2,110 square feet is required and 360 square feet is proposed;
 - ix. Deviation from Section 4.19.2.F for allowing a dumpster in the exterior side yard instead of required rear yard.
 - x. Deviation from Section 4.19.2.F for allowing a dumpster in the parking setback. A minimum of 20 feet is required and 12.1 feet is provided.
 - xi. Landscape deviation from Section 5.5.3.B.ii and iii for insufficient greenbelt width along I-96 frontage.
 - xii. Landscape deviation from Section 5.5.3.B.ii and iii for lack of berm or wall along entire frontage.
 - xiii. Landscape deviation from Section 5.5.3.B.ii and iii for deficiency in greenbelt plantings (sub canopy trees).
 - xiv. Landscape deviation from Section 5.5.3.C.(3) Chart footnote for deficiency in perimeter parking lot canopy trees. 24 deciduous canopy trees are required. 13 canopy trees and 6 sub canopy trees are proposed.
 - xv. Landscape deviation from Section 5.5.3.C. for deficiency in interior parking lot trees. 12 trees required, 9 trees proposed.
 - xvi. Landscape deviation Section 5.5.3.C. for missing endcap island trees.
 - xvii. Landscape deviation from Section 5.5.3.D. for providing less than 60% landscape along the façade facing road.
 - xviii. Landscape deviation from Section 5.5.3.D. for proposing some of the required building foundation landscaping away from the building. Supported by staff.
5. The findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan.

This motion is made because the plan is otherwise in compliance with Article 3, Article 4, and Article 5 of the Zoning Ordinance and all other applicable provisions of the Ordinance. *Motion carried 4-1 (Hornung).*

**ROLL CALL VOTE TO RECOMMEND APPROVAL OF STORMWATER MANAGEMENT PLAN
MOTION MADE BY MEMBER AVDOULOS AND MEMBER LYNCH.**

In the matter of the request of GPD Group for JSP 18-75 Chick-Fil-A, motion to recommend approval to the City Council for Storm water Management Plan based on and subject to the findings of compliance with Ordinance standards in the staff and

consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan. This motion is made because it otherwise in compliance with Chapter 11 of the Code of Ordinances and all other applicable provisions of the Ordinance. Motion carried 4-1 (Hornung).

**EXCERPT FROM CITY COUNCIL MEETING MINUTES
05-20-2019 CC Meeting**

**REGULAR MEETING OF THE COUNCIL OF THE CITY OF NOVI
MONDAY, MAY 20, 2019 AT 7:00 P.M.
COUNCIL CHAMBERS – NOVI CIVIC CENTER – 45175 TEN MILE ROAD**

Mayor Gatt called the meeting to order at 7:00 P.M.

PLEDGE OF ALLEGIANCE

ROLL CALL: Mayor Gatt, Mayor Pro Tem Staudt, Council Members Breen, Casey, Mutch, Poupard, Verma

ALSO PRESENT: Pete Auger, City Manager
Thomas Schultz, City Attorney

APPROVAL OF AGENDA:

Mayor Gatt added to Mayor and Council Issues: DTE

CM 19-05-080 Moved by Staudt, seconded by Poupard; CARRIED UNANIMOUSLY

To approve the Agenda as amended.

Roll call vote on CM 19-05-080 **Yeas: Staudt, Breen, Casey, Mutch, Poupard, Verma, Gatt**
Nays: None

PUBLIC HEARING: None

PRESENTATIONS:

1. Recognition of Novi High School's donation to Make-A-Wish Foundation – Wendy DuVall, Community Outreach & Events Specialist

Mayor Gatt introduced Ms. Duvall and Nicole Carter, Novi High School Principal to join him at the podium. Mayor Gatt said the presentation that evening was the recognition of Novi High School's donation to Make-A-Wish Foundation. He asked Ms. Carter to give the audience an overview of what this was all about. Mayor Gatt said the Make-A-Wish Foundation is truly one of his favorite charities in the whole world. He has a niece who has afforded herself of their services, they are terrific. He said what the Novi High School students did was outstanding.

Ms. Carter said she it was another great day to be a Novi Wildcat. She was delighted to be there that evening and she asked Rachel Schypinski, Student Council Advisor to join her at the podium. She is the Novi High School Student Council Advisor. They had the distinct honor and privilege of introducing to you their sensational "Wish Week" Leadership Team, the Executive Board Members of Novi High School Student Council. They sincerely thanked Novi Middle School and Novi Early Childhood Education Center who partnered with our High School to raise funds for our "Wish Week". She said their original goal was to raise \$10,000 dollars, they were elated to share with everyone that they raised \$30,200 dollars for Make-A-Wish Foundation. The wishes of four children will

Ginger Barrons, 24777 Glenda, Novi, said she had two issues. She said she looked at the plan for Chick-Fil-A and she said she felt that they were trying to put a square peg in a round hole. She didn't believe it was the right location for that particular venue. She said she was not opposed to Chick-Fil-A, she just thought it needed a larger plot of land and she thought we had quite a bit available in Novi. Secondly, regarding Lakeshore Park she said she also looked at the landscaping plan and she was also surprised to hear that at the direction of Council a wraparound deck had been added. She came there to ask them to remove the east portion of that deck which would be intrusive to the neighbor's home to the east side. She said when she looked at the park plan it was a lot better than what they originally started with. However, when she looked at it she still can see a lot of cement, a lot of building, and not much park. She found that disappointing. She wished that some of it had been pushed back further in the park. She agreed with the previous speaker about the landscaping. There is not adequate screening there mostly because the topography of the land, not because of what you are bringing in, but the height variances. She asked that Council keep those things in mind, and to take another look at the deck and the lighting on the building.

Dan Jones, General Manager of Twelve Oaks Mall, 27500 Novi Road. He commented on the Chick-Fil-A development and stated that they have a vested interest in the property there. Even though they don't own the property, they have easements over our property and our anchor store property. In order to access their business as well as the free flow of traffic, if you are familiar with that stretch of the Ring Road closet to Chick-Fil-A as well as Twelve Oaks Mall exit closet to Chick-Fil-A they are very busy areas on key dates for them. It is their expectation that Chick-Fil-A work with Twelve Oaks Mall on traffic management plans to mitigate any issues. He said they have reached out to them and have a verbal commitment with them. There are a lot of positive attributes obviously with this development, but ultimately they want to make sure that they have a plan in place with Chick-Fil-A in order to make sure that it is the best for all of our customers, citizens, their business and our business.

CONSENT AGENDA REMOVALS AND APPROVALS:

- A. Approve Minutes of:
 - 1. May 6, 2019 – Regular meeting

- B. Enter Executive Session immediately following the regular meeting of May 20, 2019 in the Council Annex for the purpose of discussing privileged correspondence from legal counsel.

- C. Approval to award a unit price contract for as-needed catch basin, storm water pipe, and concrete slab stabilization services to Havener Tech, LLC, using the Farmington Hills contract (extended to MITN members), for a one-year term at an estimated cost of \$96,000.

- D. Approval of Resolution to change the name of Nadlan Drive to Hexagon Way.

E. Approval of Claims and Accounts – Warrant No. 1036

CM 19-05-081 Moved by Casey, seconded by Verma; CARRIED UNANIMOUSLY

To approve the Consent Agenda as presented.

Roll call vote on CM 19-05-081

**Yeas: Breen, Casey, Mutch, Poupard, Verma,
Gatt, Staudt**

Nays: None

MATTERS FOR COUNCIL ACTION

1. Consideration of the request of GPD group for JSP 18-75 Chick-Fil-A for approval of rezoning from Regional Center (RC) to Regional Center with a Planned Development 2 Option (PD-2) in order to effectuate a PD Option for the subject property. The subject property is located at the northwest corner of Novi Road and the I-96 service drive in Section 14. **FIRST READING**

Mayor Gatt commented that we have heard from the General Manager of Twelve Oaks Mall that they have no objection to this property that Chick-Fil-A being built. Having been part of this community for 40-years he used to eat at the Denny's when it was the only night time establishment in Novi. It always struck him that it was good for the City because the traffic coming in exited from Novi Road and went into that restaurant, but to leave it certainly didn't affect traffic one bit. You had to enter onto a private road, the Twelve Oaks ring road to get back on to a City street. For years that was the case and nothing is different in this matter. He said Chick-Fil-A brings some sort of pizzazz to the City. He said that he didn't have any objections to them building in that location; he thought it was a perfect spot. He had no objections to that and he has no objections to the first reading.

Mayor Pro Tem Staudt said there has been a lot of conversation amongst a lot of people in the last few days primarily related to exiting. It was great to hear from the General Manager of Twelve Oaks Mall. He felt that was important because it is their ring road that is going to be affected by this and their customers during certain times of the year. It is good to hear that he has reached out and they are interested in seeing a very good tenant going into a completely empty run-down building by tearing it down and replacing it with a beautiful building. He asked if there was a representative from Chick-fil-A that could talk about the exit traffic. He said he was speaking on behalf of many people and it is the biggest issue.

Ellen Foley, CPD Group in Akron, Ohio said they did discuss at the Planning Commission meeting extensively about the traffic and she was aware that it is a hot topic. They did perform a traffic study that analyzed the intersection at Novi Road. It analyzed some of the different ring road intersections. They looked at doing some possible signage as well. She believed the way that they left it after the last meeting was that they were going to work with the owner/operator of the mall to figure out if we needed those signs, and maybe they would be just temporary signs and placed only during the

busiest time of the season. The sign was going to limit left turns. They thought that it would be best to only limit that during heaviest traffic which is at the end of the year for that shopping center. Mayor Pro Tem Staudt said when this concludes he hoped that she would meet with Mr. Jones, General Manager of Twelve Oaks Mall and initiate that discussion. Mayor Pro Tem Staudt said every Council Member has driven back there on the curve to try to get out. He said he has been to a Chick-Fil-A, and many truckers frequent the business. He asked where they expect a semi-truck to pull in and park in that particular area. He wondered if this was something they would work out with the Twelve Oaks Mall. He believed the truckers would park and walk over to get their Chick-Fil-A. Ms. Foley said this is the first she has heard about with truckers. She explained that they do have accessibility for their semi-trucks and delivery trucks to get on to their site. They have worked through all of that with the Planning Department. This is the first she has heard about allowing trucks to come in and park and take up normal parking stalls. She said Jason Hill, with Chick-Fil-A was at the Planning Commission meeting and he spoke about that relationship with the franchise, Chick-Fil-A and the owner/operator of the La-Z-Boy Furniture Store, and they are also working with Twelve Oaks Mall. She said if situations like that do arise then that is something that should be handled between those owners/operators instead of them trying to handle it from the corporate level. She said that would be something they would deal with if it comes up. It is not something that they were aware of until this moment. Mayor Pro Tem Staudt said that every Chick-Fil-A he has been visited he has seen 18-wheelers sitting somewhere and the guys walking in. It is not a bad thing; clearly there is no room for parking in the actual area that the restaurant is going to sit. Ms. Foley said she would hope that they would respect that. Mayor Pro Tem Staudt said there are some interesting angles there; it would be hard to turn. Hopefully you don't lose too much business from that. He wondered if there was anything else that she would like to talk about relative to the exiting from the facility, and clearly it is very important to Council that they work some kind of accommodation with Twelve Oaks Mall. They have been an extremely long-term partner of the City and we will be heavily siding with them because it is their property and their rights, so it is really important to work something out with them. Ms. Foley said yes, she agreed.

CM 19-05-082 Moved by Staudt, seconded by Poupard; MOTION CARRIED: 5-2

Approval of the request of GPD group for JSP 18-75 Chick-Fil-A for approval of rezoning from Regional Center (RC) to Regional Center with a Planned Development 2 Options (PD-2) in order to effectuate a PD Option for the subject property. The subject property is located at the northwest corner of Novi Road and the 1-96 service drive in Section 14. FIRST READING

Approval is of the First Reading of the rezoning is granted, with a waiver of the required Rezoning Traffic Study, as the applicant has submitted a Traffic Impact Study that addresses the anticipated traffic impacts, for the following reasons:

- 1. The rezoning request fulfills the Master Plan for Land Use objective of fostering a favorable business climate.**
- 2. The rezoning will be consistent with the surrounding zoning and existing developments.**
- 3. The PD-2 Planned Development Option is intended to permit the limited application of (i) more extensive commercial uses in a district otherwise restricted to community and regional oriented shopping centers or (ii) transitional uses on the periphery of regional oriented shopping centers, as this property is located.**
- 4. The rezoning would increase development potential of the subject property.**
- 5. The rezoning provides a redevelopment opportunity for a challenging site in a visible location along the 1-96/Novi Road corridor.**
- 6. The rezoning will have a negligible impact on public utilities.**

Member Mutch thought it would be helpful if City Attorney Schultz would talk about how this PD-2 Planned Development Option works because we don't see many of these requests. He said it doesn't follow their typical approval process. He asked City Attorney Schultz to give a summary version of what we are going to be doing by moving this forward. What we are approving that evening and what is appropriate discussion for that evening versus the next step in the process.

City Attorney Schultz said Member Mutch was correct; the PD-2 Planned Development Option is not very often used. It is available in the RC District. The way the ordinance is written now contemplates that the PD-2 Option be done in the City's Master Plan for Land Use Map. This piece is not shown there, so what is actually proposed is a rezoning from RC District to the RC District with the PD-2 Planned Development Option. We are suggesting and we gave correspondence to this effect to Council that trailing along behind this would be a clarification that it could be an option shown in the Master Plan for Land Use Map or the Zoning Map which is really what you are being asked to do that evening. This would be the first-step of a two-step process for the Chick-Fil-A site. This is the rezoning, first reading, the idea is to bring it back at a future meeting for a second reading to accomplish the rezoning and to put the PD-2 Option on the Zoning Map and he believed that Chick-Fil-A is intending to bring the Site Plan with all the details that Council will get to see at that second reading. He said that City Planner McBeth said yes, that was correct. Member Mutch clarified that right now the discussion is primarily focused on the rezoning request and how issues that pertain to that would be appropriate for discussion. He said that they didn't have a Site Plan in the Council Packet. He asked for confirmation that the Site Plan approval is through the City Council. City Attorney Schultz said yes, that was correct. Member Mutch said that a future meeting we are going to have a Site Plan in front of Council where we can talk about the more specific elements of some of the things that come up and that would be the appropriate time to talk about them. City Attorney Schultz replied yes, this meeting is asking Council if they want to utilize the PD-2 Option in this area. Member Mutch wondered how the site would function because of some of the comments that

had been made that evening. He wasn't sure if tonight would be the appropriate time to discuss those. He wanted to give City staff and the applicant a heads up that the areas he is focused on, assuming this moves forward at the Site Plan level, is along the lines of what Mayor Pro Tem Staudt talked about in terms of how this site would function in relation to the Mall property, specifically the mall ring road. Some of his concerns were related to the traffic counts that had been provided. He will be asking questions about that and how that will function. He said even basic things, like why isn't there a stop sign at the exit to the ring road, which there is not currently one today. Those are things for a future meeting, but he wanted to give folks a heads up that those things are on his radar to discuss. The other concern was the rezoning issue. He had a couple concerns about the process and how this has been brought forward. City Attorney Schultz did touch on one of them. He mentioned the fact that this property is not on our Master Plan for Land Use designated as a PD-2 Option. We have larger areas zoned RC District and smaller areas that are designated for the PD-2 Option. He said presumably at the time the Master Plan was adopted some thought went into which properties would be designated in such a way and which ones were not and they were excluded. He asked City Attorney Schultz that when he looks at the language of the Zoning Ordinance it specifically limits the application based on what is in the Master Plan. He wondered if it was a requirement that is not really a requirement, is it optional thing that Council chooses to honor or not honor. He questioned how that functioned. City Attorney Schultz said it starts out in the intent section of the ordinance so it is not a regulatory section in the ordinance, but it does work its way through the rest of the ordinance also. He said the way he would look at it is that ultimately Council will decide whether or not this particular piece of property should be able to be used for the uses in the PD-2 Option. It is a very discretionary determination just whether or not to approve the PD-2 Option, but the most discretionary thing you do to determine whether or not rezone land. The idea is to get the City Council's view on whether or not this is a use that it wants to see here as opposed to going through that Master Plan Map amendment process. That also involves Council, but it is primarily Planning Commission. Member Mutch stated that was one issue that he had, he had a concern about rezoning properties without having that level of review. He thought the ordinance from his viewpoint was pretty clear in the language to limit it as well. He said another concern he had was just in the information provided to Council. He said Council is very reliant on staff to provide them with memos that explain to them what is going on in terms of the ordinance and the Master Plan. There was discussion about this being a transitional use and how that was consistent with the language of the ordinance. He agreed this area is kind of a transitional area, but that is not what the language or the ordinance actually says. The language of the ordinance is very specific in the kinds of transitional uses in terms of those being transitional uses being mixed use development with residential component. He felt like the information provided by staff was not consistent with the language of the ordinance which bothered him. The reality is we are not all going back and reading every paragraph of the zoning ordinance to make sure that really is what it says. They are depending on staff and City administration to provide an accurate statement of what the language of the ordinance and the City Attorney as well, to provide an accurate statement about what language is in the ordinance and how it should be applied in this situation. The fact that looking at the

language in the ordinance not being consistent with what is being reported to us causes a problem for him in terms of the review. It implies something that's not actually there in the ordinance language and it creates an impression that is inconsistent. He said that this was a tough request for him because he thought there was some validity to looking at this property as a PD-2 eligible property. He thought process wise it was important for Council to follow what the ordinance says. We have a Master Plan and we are supposed to be following it. He knows they say that the Master Plan is not carved in stone, it is a living, breathing thing, it has to adapt with the times. Changes in the Master Plan should follow the appropriate process. It is not just a change in the Master Plan at the whim of the Planning Commission or the City Council. Otherwise what is the point of our Master Plan nobody follows it. He has real concerns with that. He was concerned about ordinance application and following the language of our ordinances. He said it seemed like we have two systems here at the City. If you come in with a development and it doesn't meet the ordinance standards often times we seem to be saying we will figure out a way to work with you. In fact we are going to go ahead and propose that we will change the ordinance language so that it is not a problem for you or anybody else in the future. He said when residents come in and ask for the City to apply the ordinance and they say things like why can't you provide notification beyond 300 feet so that my house gets notified when there is a rezoning. Or why can't you have additional landscaping above and beyond what the ordinance allows. The City says, no, we can't do that, we have to stick to the plain language of the ordinance, there is no leeway at all, and that is just how it has to be. He said this wasn't targeted at Chick-Fil-A. This has been going on for a while. This particular request highlighted several of those things. While he is open to the concept here for the rezoning request, he had real issues with some of the process that we followed, or not followed as the case may be in this particular request.

Member Casey said she was going to put a couple of thoughts on the record so there are no surprises should this carry forward. She said she drove the site over lunchtime trying all different routes. She did not go all along the Ring Road because if she was going through a drive-thru the important factor was speed. She said she had some significant concerns about the traffic flow. She expected to see a Site Plan that has very specific ideas from them, after working with the team at Twelve Oaks Mall for how you are going to help control the traffic and make it the safest you can for the people that will be visiting the property and then getting through the Twelve Oaks ring road. That is a very clear expectation of hers. With that she said she will have the presumption that has been vetted through Twelve Oaks and that we have the thumbs up approval from the group that this is something that meets their needs and this is what they are looking for. If she votes yes on the tentative it doesn't mean it is a slam dunk for the second round of approval.

Member Breen echoed the comments made by her colleagues regarding the procedure here and the traffic that is a major concern. One thing that she looks at when she approached a development or proposal is that everything built and developed here in Novi is subject to the preservation and protection of the public health, safety, and welfare. She stated that this is something that she really tries to bear

in mind. She was concerned that they are being asked to rezone this without a Site Plan available. She thought it was important that they also keep in mind the long-term vision for our City and how we want the City to look and feel. She said she lives by this site, she drives by the site. Yesterday she went to the site and it is a maze back there. It is difficult to navigate if you are not familiar with the area. She could see a lot of potential accidents waiting for them to happen. She reviewed the Planning Commission minutes and she has some of the concerns that were voiced there also. One of the concerns noted was about the traffic that goes behind the La-Z-Boy Furniture Store. She recognized that the Master Plan is fluid and we need to be able to adapt to changing needs and projects. She was concerned with the lack of consistency that we have in enforcing this. It is not consistent with the Future Land Use. It is a difficult piece of land; she understood that given how the other buildings are constructed there. She was also concerned about the flow of traffic. She looked at the other franchises here in Michigan and how the drive-thru queues exceeded available stacking space. She stated that she has listened to her fellow residents that have voiced concerns about how this business has supported organizations that are adverse to LGBTQ rights. In fact some of these organizations have promoted conversion therapy, and have spoken out against same sex marriage. She said she was adamantly opposed to such views; however, that being said, she didn't believe that decisions should be made from this bench based upon other people think or feel on these issues. That is not her role. Any decision she makes today is going to be based upon the traffic study, familiarity with the site, the lack of consistency with the Future Land Use, the lack of a Site Plan that is available so she can really get a feel for how this will work, but mostly the procedure on which we are going forward with this.

Mayor Gatt said he was curious to see if there was any kind of change in the way that you can exit that restaurant. It seemed impossible to him. He is anxious to see what they come up with. He said as far as the traffic, he doesn't understand all of the concern because there is no traffic going on to a City street exiting that restaurant. He agreed with his colleague, we are behind the Twelve Oaks Mall that is one of our biggest and best partners of the community. If they have no problems with it, then he had no problems with it. He welcomes Chick-Fil-A and again for years when it was popular, Denny's was one of the most popular restaurants in the whole City. It was packed all of the time up until 2 or 3 o'clock in the morning and during normal business hours. There were no accidents. He was a cop and there was no problems exiting that restaurant going on to the ring road. There are not many exits once you get on to that ring road going in that direction you will go around to Twelve Mile or all away around to Novi Road. There is no other way out. That is why he will be very curious to see what some of his colleagues was talking about if there is something that can be done to alter that. He didn't believe there was.

Mayor Pro Tem Staudt asked City Attorney Schultz if the motion was made legally permissible to be voted on. City Attorney Schultz said yes. Mayor Pro Tem Staudt asked if Council was allowed to change Master Plans at their discretion. City Attorney Schultz said no, that is not what is before them in the motion. Mayor Pro Tem Staudt thanked him.

Roll call votes on CM 19-05-082

Yeas: Casey, Poupard, Verma, Gatt, Staudt
Nays: Mutch, Breen

2. Approval to award a construction contract for Lakeshore Park renovation project to DeMaria Building Company, Inc., the lowest qualified bidder with the most advantageous bid for the City, in the amount of \$4,820,400 and amend the budget for a total project cost of \$5,866,242 with the final form of the agreement to be reviewed and approved by the City Manager and City Attorney.

City Manager Auger said he had a few things he wanted to comment on. This has been a long process for the staff who has worked closely not only with the residents, City Council, the NSA Architects and there has been a lot of give and take in this project. One of the big items that have changed is the lighting concept. First of all there was confusion when we do a project, we try to follow all of the ordinances that we lay down for everybody else. We make sure that people put in improved parking lots like we have done on this site. He said the lighting was reduced and they showed a map on the overhead to indicate where they reduced 30 lights around the park area. He said they have taken extra steps and one of the upgrades to the lighting program is an advanced lighting system where we can remotely control the lights on this site. They plan on reducing those to 50 percent after usage of the building. Building usage was another big item brought up. Social media was awash with several different things that are supposedly going on or when they are going on. City Council was direct when they told us what they wanted this building for which is Parks and Recreation Programming, specifically Lakeshore Summer Camp for the kids. The building is currently obsolete that we are using for the kids. Staff has been concerned the last couple of years about the State not licensing us as a day care center at that site. The other items were to bring other Parks and Recreation programming for Older Adult Services. They also added on Library services and programs. Those are the programs that we intend on using this facility for. He said several times people came to the podium and asked what time are the programs going to run and what time will they get out of there. He said he could honestly say, we don't know. If a program is running and is popular, we will run it. If it not getting attendance they do not do it the following year and try to find something that someone might want to do. Those program times change. We do not run many programs after 9 p.m. so that might give you an idea. The park still closes at dusk, but sometimes in the winter if we do programming up there and it goes to 6:30 p.m., it gets dark at 5:30 p.m. so of course we will have the lights on. Staff is here to answer any questions. There have been a lot of changes from the non-motorized route and trying to widen it on the road side. We found out that we couldn't do that because the new standards we have to move a bunch of telephones poles, light poles along the road. It is a lot safer to move non-motorized traffic away from the road. We had to follow the topography through the park to get it back to the roadway. We are ready to answer any questions that you may have.

Mayor Gatt asked staff if they wanted to speak or just wait for any questions. PRCS Director Muck said they would stand-by for questions. Mayor Gatt said that this has

ADJOURNMENT – There being no further business to come before Council, the meeting was adjourned at 10:20 P.M.

Dawn Spaulding, Deputy City Clerk

Robert J. Gatt, Mayor

Transcribed by Deborah S. Aubry

Date approved: May 20, 2019

LETTER OF SUPPORT
From Twelve Oaks Mall



Mrs. Sri Ravali Komaragiri
Planner, City of Novi
45175 Ten Mile Road
Novi Michigan, 48375

July 1, 2019

Dear Mrs. Komaragiri,

TVO Mall Owner LLC, Owner of Twelve Oaks Mall (Twelve Oaks Mall), is submitting this letter regarding the Novi City Council consideration of the request of GPO group for JSP 18-75 Chick-Fil-A for approval of rezoning from Regional Center (RC) to Regional Center with a Planned Development 2 Option (PD-2) in order to effectuate a PD Option for the subject property.

Twelve Oaks Mall continues to work in good faith with the applicant, NOVI Real Estate Group (Owner) and Chick-fil-A (Ground Lessee), to formalize an agreement between the parties that addresses to the best of our abilities any potential adverse impacts on the traffic along Twelve Oaks Mall Drive. With that being said, Twelve Oaks Mall takes no exception to the rezoning of the property to allow for the Chick-fil-A as proposed by the applicant.

Please do not hesitate to reach out to me with any questions or concerns.

Sincerely,

William Sallörte
Director, Development
Manager for The Taubman Company LLC,
Managing Agent on behalf of
TVO Mall Owner LLC

CC:

Peter Zingas, Novi Real Estate Group
Jason Hill, Chick-fil-A, Inc.
Justin Lurk, Cushman & Wakefield
Dan Jones, Twelve Oaks Mall

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