

**AGENDA
NORTHPORT ZONING BOARD OF ADJUSTMENT
THURSDAY, MARCH 21, 2024**

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF MINUTES

A. February 15, 2024

4. APPROVAL OF THE AGENDA

5. VERIFICATION OF PROPER NOTIFICATION

6. VERIFICATION OF NO CONFLICT OF INTEREST

7. NOTICE OF RIGHT TO APPEAL

8. OLD BUSINESS

9. NEW BUSINESS

A. **V-24-4** - Wayne Darien is requesting a variance from the requirements of Section 608.01 to allow more than one home occupation to be operated in the same dwelling unit for the residence located at 13738 Brandon James Avenue.

B. **V-24-6** - Gene Ray Taylor is requesting a variance from the requirements of article IX to expand a nonconformity and from the unified development site requirements in Section 1002.11 for the property located at 6801 McFarland Boulevard.

C.

- **V-24-7(a)** - D P Holdings, LLC Series McFarland is requesting a variance from the minimum parking space sizes found in Section 610 for the property located at 6375 McFarland Boulevard.
- **V-24-7(b)** - D P Holdings, LLC Series McFarland is requesting a variance from the setback requirements found in Table 4-3 for the property located at 6375 McFarland Boulevard.
- **V-27-7(c)** - D P Holdings, LLC Series McFarland is requesting a variance from the building material standards found in Section 509.03 for the property located at 6375 McFarland Boulevard.

10. DISCUSSION

11. CITIZEN COMMUNICATIONS

12. ADJOURNMENT

NOTICE OF RIGHT TO APPEAL

In accordance with section 11-52-81 of the *Code of Alabama*, any party aggrieved by a decision of this Board tonight may within 15 days from tonight appeal to the Tuscaloosa County Circuit Court by filing with this board a written notice of appeal specifying the decision from which the appeal is taken. This right to appeal is available to the person or entity petitioning this Board tonight and all other parties that may be aggrieved by a decision of this Board.



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PACKETS AND MINUTES

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**OFFICIAL MINUTES
NORTHPORT BOARD OF ZONING ADJUSTMENT
THURSDAY, FEBRUARY 15, 2024**

The Northport Zoning Board of Adjustment was called to order at 6:00 p.m. on Thursday, February 15, 2024, in the Council Chambers of the Northport City Hall by Chair Jon Garner.

Upon roll call the following members were found to be present: Mr. Jon Garner, Mr. Chad Haynie, Ms. Tina Phifer, Mr. Kevin Shobe, Mrs. Jennifer Taylor-White and Mr. Brian Chandler. Absent and failing to vote was Mr. Aubrey Dale. Also, present were staff members Mrs. Julie Ramm, Mr. Shaun Patten, Mrs. Morgan Williams, and Ms. Meredith Mullins.

Approval of Minutes

Motion by Mr. Shobe to approve the minutes for January 18, 2024. **Seconded by Mr. Chandler.** Roll call vote was as follows: Mr. Shobe – Yes; Mr. Chandler – Yes; Mr. Dale – Yes; Mr. Garner – Yes; Ms. Phifer – Yes; and Mrs. Taylor-White - Yes. **Motion Carried.**

Approval of Agenda

Motion by Mr. Haynie to approve the agenda for February 15, 2024. **Seconded by Mr. Shobe.** Roll call vote was as follows: Mr. Haynie – Yes; Mr. Shobe – Yes; Mr. Garner – Yes; Ms. Phifer – Yes; Mrs. Taylor-White – Yes; and Mr. Chandler – Yes. **Motion Carried.**

Approval of Proper Notification- Mrs. Ramm informed the Board that proper notification was given.

Verification of No Conflict of Interest - None

Notice of Right to Appeal

Old Business

New Business

a. **V-24-3** – Devin Kerstetter is requesting a variance from the accessory structure standards found in Section 607.03 to allow metal siding on a building located at 504 Union Chapel Road.

Devin Kerstetter, 504 Union Chapel Road, stated that they are requesting to be allowed to have a metal painted building on their property for storage and workspace. He stated that the issue of the structure being placed 10 feet behind the house, he has no issue with. He stated that he is requesting a variance from sub section K which is in direct relation to what the building is constructed with. Mr. Kerstetter stated that the proposed building will have painted metal siding, a black roof, and landscaping around the front that will match the current residence and they are not looking for the look of a garage.

Mr. Garner asked if the square footage on the building was 800 and what would be the use of this space. Mr. Kerstetter stated that the building would be 800 square feet. He stated that living in an older home, they do not have storage space, and this will allow for that and for him to have a personal gym.

Mr. Shobe asked if he would be okay to move the location of the building. Mr. Kerstetter said the side yard is their best area for placement, however, moving it back to the allotted amount past the house is not an issue. He stated they have the space to do that.

Mr. Haynie asked what the purpose of placing the building on the side of the house for the driveway is that the reason you wanted it there. Mr. Kerstetter stated that the photo presented to the board shows the driveway wraps the side and comes to the side of the house, there is another significant drop off, terrace effect, to another flat area in the back yard. He stated that that area is not accessible by vehicle.

Mr. Garner stated that variance stays with the property and the importance of the reasons we have a zoning ordinance. He stated that the board must take into consideration that this stays forever. He stated that it's more than your consideration but beyond yours when you are not there.

Mr. Haynie asked if the reason behind the use of metal siding was due to the cost of metal is cheaper than brick. Mr. Kerstetter stated that the size of the building and the cost, materials, and maintenance were a concern for him. He stated metal siding would be easier to maintain.

Mr. Shobe asked if it would cost more to have the building located in the backyard. Mr. Kerstetter stated yes, a lot of money would have to be put in the backyard to allow it to be placed there.

Mr. Garner asked if they had considered other siding options. Mr. Kerstetter stated they have not, and they have not priced out other materials either. Mr. Garner asked if they were just under the impression that metal was cheaper. Mr. Kerstetter stated that was correct.

Mr. Haynie asked for staff clarification that if the building was located 10 feet from the front point of the house and was bricked a variance would not be needed. Mrs. Ramm stated that was correct if the building was located 10 feet behind the front point of the house. She stated that the square footage of the building is fine. She stated that if it were materials other than metal. Mr. Haynie asked so even vinyl siding would be fine. Mrs. Ramm stated that the materials would have to be compatible with the materials of the house. She stated for example if there is vinyl on the house then we would allow it.

Mr. Garner asked if the home at this residence brick was. Mr. Kerstetter said yes. Mr. Garner asked if the eave or the soffit on the house was covered in vinyl. Mr. Kerstetter stated no, they have brick, wood and metal gutters. Mr. Garner asked if hardy board would work. Mrs. Ramm stated that hardy board does sound like it is compatible with the house.

Mr. Shobe asked the petitioner what the hardship for the case was. Mr. Kerstetter stated that their building permit was denied for metal siding. He stated that this is the most convenient, quickest way for us to accomplish this task. He stated that this is a prefabricated kit that comes with concrete foundations, with metal studs, metal siding and metal roof. Mr. Garner asked if they get to pick their siding and they don't

have to use metal. Mr. Kerstetter stated no it is metal that comes with the kit, and you pick out your color materials.

Mr. Garner asked the petitioner if there were other kits with different materials that you could purchase. Mr. Kerstetter stated he did not know.

Mrs. Ramm stated that we do need to clarify which supernumerary members would be voting in this case. Mr. Garner stated Ms. Tina Phifer.

Chairman Garner opened the floor up for a public hearing.

Michael Wilsey, 374 Union Chapel Road, stated he was a neighbor right next door. He stated that the houses around them are all brick and were built in the sixties. He stated that the cost of brick is a lot more than it was then. Mr. Wilsey stated that there are metal buildings on this stretch of Union Chapel Road on either end of the road that are businesses that do not look as good as this is proposed to be. He also stated the two houses across the road have metal buildings and are larger and not as nice. He stated he had no issues with the metal building being located on the side of the house and visible from the road. Mr. Wilsey stated that he would understand if they lived on the Northwood Lake side of Union Chapel but on this side of road, we have other metal buildings along this stretch and people who live out of tents. Mr. Wilsey stated that the backyard of this property is an issue for placing the metal building there. He stated that there is a deep ditch that runs through the backyard. He asked the board if an issue on the façade of the building is, could another material be used on the front that matches the house for the street view.

Mr. Garner clarified with the staff that from the front corner the location of the building is not an issue. Mr. Patten stated that the applicant stated that 10 feet from the front point of the house would not be an issue. Mr. Garner asked about issues with square footage. Mr. Patten stated that as completed on the building permit application the square footage would not be an issue. Mr. Garner stated that the issue is the outside material and if he heard correctly that hardy board would be compatible. Mrs. Ramm stated wood or hardy siding is compatible. Mr. Garner asked would vinyl be compatible. Mrs. Ramm stated that they will put that on their building permit application for approval.

Mr. Wisley asked if they are not required to use exactly what their houses are made of. Mr. Garner stated he would defer to the staff for this answer, that what he is hearing is that brick would not necessarily be the only thing compatible with the house. He stated that it's what is compatible with the house but does not have to be the same material. He stated that it was up to the staff to decide.

Mr. Haynie asked if there were any complaints regarding location. Mr. Wisley stated not at all and that the picture is a little deceptive. He stated that the location he is talking about putting the building, it really drops down from the road, it is almost a story building difference.

With no one to appear before the board, Mr. Garner closed the public hearing.

Mr. Garner stated he wanted to point out that even if the motion fails there are still other options.

Mr. Haynie asked if J&J was in this area. Mrs. Ramm stated yes, it is back towards Highway 69, and they have architectural panels.

Mr. Garner stated that the other metal building in the area that was referenced probably pre-dates the ordinance. Mrs. Ramm stated that Strong, Inc. Gym and Tumblebus that are in this area, pre-date the ordinance and there are a couple that are in the county. She asked Mr. Patten for clarification. Mr. Patten stated that yes, they may be referring to the residential accessory structures. He stated that they found a couple of them and based off Google Maps and building permits issued that are larger than the standard accessory structure, either pre-dated the ordinance or was in the county. Mr. Garner stated about the ones that pre-dated the ordinance, if they were to have to do anything to them, they would be required to meet the zoning ordinance requirements.

Mr. Shobe asked Mr. Patten if finance cannot be part of the hardship. Mr. Patten stated that cannot be the sole reason for the hardship.

Motion by Ms. Phifer to make a motion to grant Devin Kerstetter a variance to allow a 20' x 40' metal accessory structure for the property located at 504 Union Chapel Road **Seconded by Mr. Shobe.** Roll call was as follows: Ms. Phifer – No; Mr. Shobe – No; Mr. Garner – No; Mr. Haynie – Yes; and Mr. Chandler – No. **Motion Failed.**

X. DISCUSSION

XI. ADJOURNMENT

All members voted yes by a voice vote and the meeting was adjourned.

Mr. Jon Garner, Chairman

Julie Ramm, Secretary

NORTHPORT ZONING BOARD OF ADJUSTMENT
STAFF REPORT
March 21, 2024

AGENDA ITEM

Case Number: V-24-4

Request: A variance from home occupation standards

Location: 13738 Brandon James Avenue

Applicant: Wayne Darien

SUBJECT PARCEL

Zoning: Residential Single Family (RS-1)

Zoning of Adjacent Property: Residential Single Family (RS-1 & RS-SD)

Proposed Action: To allow more than one home occupation in the same residence.

STAFF COMMENTS

Wayne Darien is seeking a variance from the home occupation standards. Those standards are in section 608 and are included below:

608.01. Home Occupations.

It is the purpose of this Section to provide residents of the City of Northport a wide range of opportunities in the use of their residences in profitable activities. However, the character of the City's residential areas must also be preserved. Therefore, these regulations shall ensure that such activities remain limited in scope so as not to interfere with the principal use of any residential neighborhood or development.

VI-25

March 21, 2018

A. General Regulations. All home occupations shall meet the following criteria:

1. The home occupation must be clearly secondary and incidental to the use of the dwelling unit as a residence. No more than 25 percent of the total floor area of the dwelling shall be used for the home occupation, to a maximum of 500 square feet. For the purposes of this Section, "total floor area" shall include all heated and ventilated areas within the dwelling. Garages, carports, outside storage rooms, and porches shall be excluded.

At the Planning Director's option, a floor plan of the residence may be required, indicating the specific location(s) and extent of the business activity.

2. The exterior appearance of the dwelling unit and/or premises shall not be altered, nor the occupation within the dwelling unit conducted, in any manner that would cause the premises to differ from its residential character or from the character of the neighborhood.

3. The home occupation shall be operated in the existing dwelling unit, which shall not be enlarged to accommodate the business activity.

4. No new accessory structure shall be built, nor shall any existing accessory structure be used, for the purpose of operating the home occupation.
5. There shall be no visible evidence that the dwelling is being used to operate a home occupation. Signs shall not be permitted.
6. No more than two (2) company or commercial vehicles shall be parked at the premises at any time – including but not limited to cars, vans, trucks, and utility trailers. Off-street parking shall be provided on the premises, as required by Section 611. No parking of commercial or residential vehicles shall be permitted on the street or in the required front yard.
7. A maximum of one (1) person not residing in the dwelling may engage in the operation of the home occupation.
8. No merchandise shall be distributed to customers on the premises.
9. All advertising material indicating the business hours, address and/or physical location of the business shall also state “By Appointment Only” and/or “No On Site Service”.
10. There shall be no outside display or storage of materials, goods, supplies, or equipment used in the home occupation on the premises.
11. The operation of a home occupation shall not create any nuisance such as excessive traffic, on-street parking, noise, vibration, glare, odors, fumes, smoke, dust, heat, fire hazards, electrical interference or fluctuation inline voltage, or hazards to any greater extent than that normally experienced in the residential neighborhood, or be present or noticeable beyond the property boundaries of the home occupation premises.

VI-26

March 21, 2018

12. The operation of a home occupation shall not involve the sale of any dangerous or deadly weapons such as knives, firearms, or air guns.
13. The on-site repair of vehicles shall be prohibited as a home occupation.

B. Application Procedures. Any applicant for a home occupation zoning certificate shall pay a fee as established in Section 1007, and submit an application form, together with any required attachments, to the Planning Director. The Planning Director shall have five (5) business days to approve or deny the application, or inform the applicant that more information is needed to reach a decision.

Each applicant for home occupation approval shall submit a deed to the property on which the proposed business will be conducted. If the applicant does not own the property, he/she shall obtain from the owner a signed and notarized letter of authorization to apply for home occupation approval.

No more than one (1) home occupation shall be approved in any residential dwelling unit. A fraternity, sorority, or boarding house shall constitute a single dwelling unit.

If an applicant fails to provide required documentation, or provides insufficient information, to determine compliance with this Section, the application shall be denied.

STAFF RECOMMENDATIONS:

The standards for variances as outlined in section 1109.3 of the Northport Municipal Code are as follows:

1108.03. Standards for Variances. *The Board of Zoning Adjustment shall grant no variance in the strict application of the provision of this Ordinance unless it finds that the following requirements and standards are satisfied. In general, the power to authorize a variance from the terms of this Ordinance shall be sparingly exercised. It is the intent of this Ordinance that the variance be used only to overcome some exceptional physical condition of a parcel of land which poses practical difficulty to its development and prevents its owner from using the property as intended by the Zoning Ordinance. Any variance granted shall be the minimum adjustment necessary for the reasonable use of the land.*

The applicant must prove that the variance will not be contrary to the public interest and that practical difficulty and unnecessary hardship will result if it is not granted. In particular, the applicant shall establish and substantiate in writing that the appeal for the variance conforms to all of the requirements and standards listed below:

A. *The granting of the variance shall be in harmony with the general purpose and intent of the regulations imposed by this Ordinance on the district in which it is located and shall not be injurious to the neighborhood or otherwise detrimental to the public welfare.*

B. *The granting of the variance will not permit the establishment of any use, which is not permitted in the district.*

C. *There must be proof of unique circumstances: there must exist special circumstances or conditions fully described in the findings, applicable to the land or buildings for which the variance is sought, which circumstances or conditions are peculiar to such land or buildings and do not apply generally to land or buildings in the district, and which circumstances or conditions are such that the strict application of the provisions of this Ordinance would deprive the applicant of the reasonable use of such land or building.*

D. *There must be proof of unnecessary hardship. It is not sufficient proof of hardship to show that greater profit would result if the variance were granted. Furthermore, the hardship complained of cannot be self-created; nor can it be established on this basis by one who purchases with or without knowledge of the restrictions; it must result from the application of this Ordinance; it must be suffered directly by the property in question; and evidence of other variances granted under similar circumstances shall not be considered.*

E. *That the granting of the variance is necessary for the reasonable use of the land or building and that the variance as granted by the Board of Zoning Adjustment is the minimum variance that will accomplish this purpose.*

F. *That the proposed variance will not impair an adequate supply of light and air to adjacent property, substantially increase the congestion in the public streets, increase the danger of fire, endanger the public safety, or substantially diminish or impair property values within the adjacent neighborhood.*

G. *That the granting of the variance requested will not confer on the applicant any special privilege that is denied by this Ordinance to other lands, structures, or buildings in the same district.*

The Board may prescribe any safeguard that it deems necessary to secure substantially the objectives of the regulations or provisions to which the variance applies.

SUMMARY:

Wayne Darien is seeking a variance to allow 2 business licenses to be issued for the same residential property. The current ordinance specifies that only 1 home occupation can be approved for each residence. A home occupation has already been issued for one business at this address, an online counseling service. The applicant would like to open a second business, a renovation service. The applicant has stated that all aspects of the businesses would comply with Northport regulations, aside from the portion of the ordinance the variance pertains to. They have also stated that there will be no change in traffic or noise due to the proposed business activities.

For a hardship, the applicant has mentioned the following: Financial burden, resource inefficiency, expansion constraints, business continuity and job security, service disruption, integrated administrative strategy, and strained operational dynamics. The details for these specific hardships can be found in the application packet.

MOTION:

I make a motion to grant Wayne Darien a variance to allow a second home occupation for the property located at 13738 Brandon James Avenue.

← 13578 AL-171
Northport, Alabama
Google Street View
Jan 2024 See more dates

13738 Brandon
James Avenue





 PERMIT PROJECT
FILE #: 24-000110
13738 BRANDON JAMES AV NORTHPORT AL 35475
DARIEN RENOVATIONS LLC. (OWNER WAYNE C. DARIEN)



PERMIT #: V24-000002

Permit Type
Variance/Administrative Appeal

Subtype
Variance 

Work Description:
Darien Renovations LLC. (Owner Wayne C. Darien) 

Applicant
Darien Renovations LLC - Wayne Darien  

Status
Online Application Received 

Valuation
0.00



FEES & PAYMENTS

Plan Check Fees 0.00

Permit Fees 100.00

Total Amount 100.00

Amount Paid 100.00

Balance Due 0.00

☐ Non-Billable



PERMIT DATES

Application Date
01/19/2024

Approval Date

Issue Date:

Expiration Date:

Close Date

Last Inspection

Review the attached process packet (click to download)

Property Information

Property Zoning District



Existing Buildings on Property

13738 Brandon James Ave Northport, AL 35475

Proposed Construction on Property

N/A

Number of Adjoining Properties

Are you the property owner?

Yes



Property Owner

LARK-DARIEN LASHAUNDA R &



Additional Parcel #s

Submittal Documents

Names and Addresses of all Adjoining Properties

[Address Info.docx](#)



Site Plan/Sketch (showing property lines, existing and proposed structures, and dimensions)



Additional Submittal Documents



Request Information

Describe the nature of the request

We Wayne and LaShaunda Darien are reaching out to request a variance for the cohabitation of two distinct businesses, Darien Renovations LLC and Lock & Key Wellness and Counseling Services LLC, at the single address: 13738 Brandon James Ave Northport AL, 35475.

Both Darien Renovations LLC, a home maintenance business, and Lock & Key Wellness and Counseling

Describe the special conditions pertaining to your property (or to your case) which sets your case apart from others in the same zoning district

The purpose of this variance is to request an accommodation for the unique situation where two different businesses, each with their own legal and fiscal requirements, can function simultaneously from one location,

Describe how your appeal (if granted) would impact neighboring properties or how it would or would not be contrary to the public interest

We commit to these operational guidelines:

- No commercial signage will be erected.
- Neighborhood traffic and parking will remain unaffected.
- Business activities will generate no noise or community disturbances.
- All operations will conform to the dwelling's residential form.

Describe the nature of any unnecessary hardship placed upon you by a literal enforcement of the zoning ordinance

The challenges and substantial hardships that would be imposed on Darien Renovations LLC and Lock & Key Wellness and Counseling Services LLC if the requested variance for operating within the same residentially zoned property is not approved.

1. ****Financial Burden****: Without the variance, both businesses would need to secure separate commercial spaces. This would inflict significant financial strain due to the cost of renting additional office space(s), utility expenses, insurance, and possibly higher property taxes, thereby limiting operational funds vital for growth and sustenance.
2. ****Resource Inefficiency****: Furthermore, the requirement for separate locations would result in wasteful duplication of resources. Shared administrative duties and overheads can be efficiently managed from a single location, reducing both the environmental impact and unnecessary expenditure.
3. ****Expansion Constraints****: Both companies are poised to grow and offer more services to the community. The additional overhead of multiple locations could inhibit this growth, potentially.
4. ****Business Continuity and Job Security****: Operating out of a single, affordable space ensures the continuity of two small, community-serving businesses.
5. ****Service Disruption****: Transitioning to a new location might also result in service disruption for our clients. The renovation services and therapeutic support provided by these companies are essential to our clientele, who may be adversely affected during a transition period.

Any additional information you would like to add to help process your request, including evidence of petitioner's interest in the property if petitioner is not the property owner

We would be grateful for your evaluation of this request and are more than willing to supply further information or discuss the matter further. Your support would be instrumental in fostering an economic

☒ BY CHECKING THIS BOX, I HEREBY AGREE TO THE FOLLOWING TERMS AND CONDITIONS

The information contained in this document is true and correct and may be relied upon by the City of Northport. By typing my name and by checking this box, this acknowledges that I am bound by this document just as if I had signed the document rather than typed my name to this document.

Signature

signature.png



OFFICIAL USE ONLY

Date of Planning Commission Meeting

FEE	▼	DESC ▼	QUANTITY	AMOUNT	TOTAL	
Appeal Fee					75.00	
Advertising Fee					25.00	
Plan Check Fees					0.00	
Permit Fees					100.00	
Total Fees					100.00	

 PAYMENTS



DATE	TYPE	REFERENCE	NOTE	RECEIPT #	RECEIVED FROM	AMOUNT	
01/23/2024	Credi	mm		30756	LARK-DAF	100.00	
Amount Paid						100.00	
Balance Due						0.00	

Northport Zoning Board of Adjustment

Variance Request

Zoning

 Agriculture

 General Commercial

 Neighborhood Commercial

 Office and Institutional

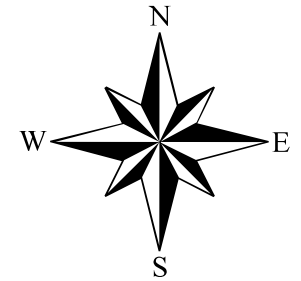
 Residential Single-Family - 1

 Residential Single-Family - 2

 Residential Single-Family - 4

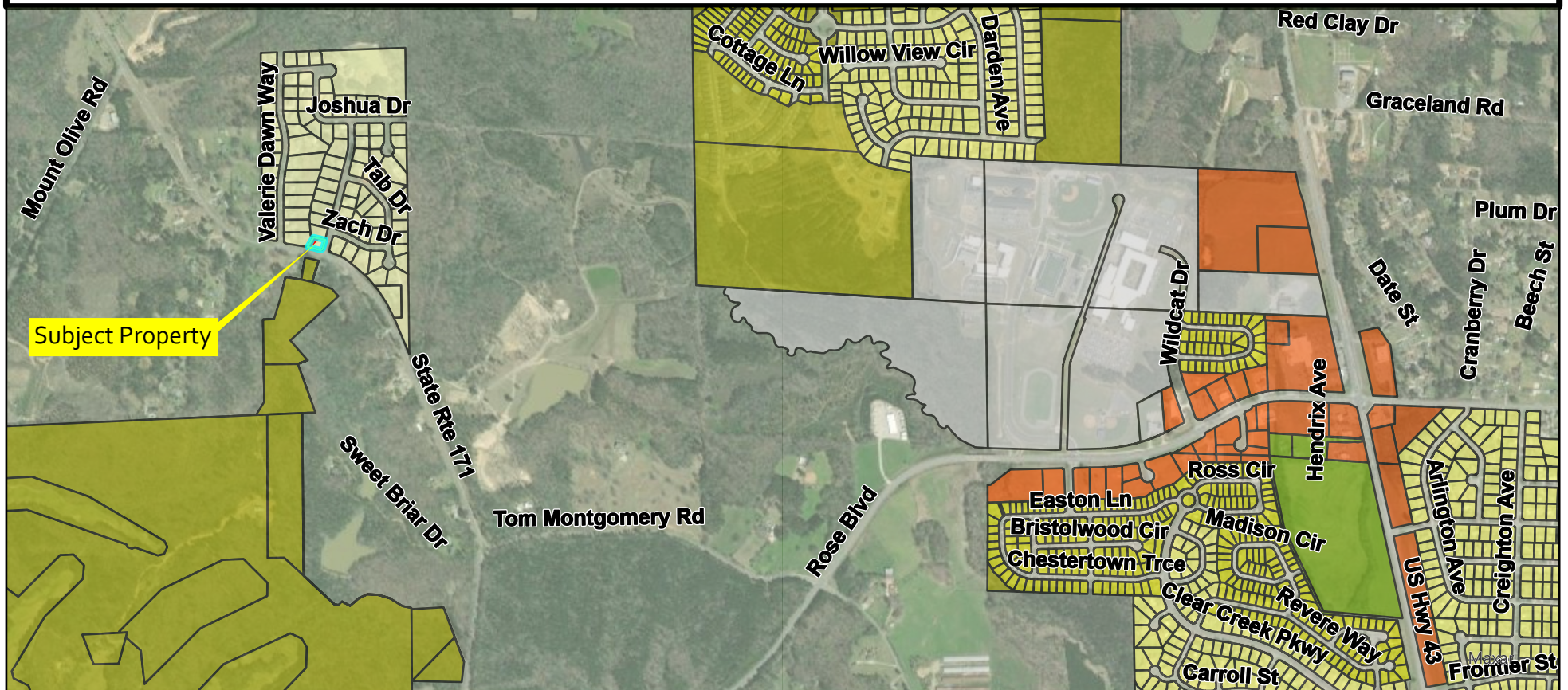
 Residential Single-Family - SD

 Subject Property



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0 1,000 2,000 4,000 Feet



***NORTHPORT ZONING BOARD OF ADJUSTMENT
STAFF REPORT
March 21, 2024***

AGENDA ITEM

Case Number: V-24-6

Request: A variance from nonconformity and site development standards

Location: 6801 McFarland Blvd

Applicant: Gene Ray Taylor

SUBJECT PARCEL

Zoning: Highway Commercial (C6)

Zoning of Adjacent Property: Highway Commercial (C6) & Light Industrial (M-1)

Proposed Action: To allow a nonconformity to be expanded.

STAFF COMMENTS

Gene Ray Taylor is seeking a variance from the nonconformity standards. Those standards are in section 902 and are included below:

Section 902. Authority to Continue.

902.01. Except as otherwise provided in this Article, any nonconforming lot, use, or structure lawfully existing on the effective date of this Ordinance, or subsequent amendment thereto, may be continued so long as it remains otherwise lawful.

902.02. No nonconformity shall be enlarged upon, expanded, or extended unless such alteration is in full compliance with all requirements of this Ordinance, except as noted in this Section. Normal maintenance and incidental repair of nonconformity shall be permitted, provided that this does not violate any other section of the Article.

A. Nothing in this Article shall be deemed to prevent the strengthening or restoration to a safe condition of a structure in accordance with an order of a public official who is charged with protecting the public safety and who declares such structure to be unsafe and orders its restoration to a safe condition; provided that such restoration is not otherwise in violation of the various provisions of this Section prohibiting the repair or restoration of partially damaged or destroyed structures.

B. An extension, for the exclusive purpose of providing required off-street parking or loading spaces, involving no structural alteration or enlargement of such structure, shall not be deemed an expansion of nonconformity, subject to the restrictions of this Article.

C. Nothing in this Article shall be interpreted to prohibit routine maintenance, restoration of a structure to a safe condition, and/or internal renovations, provided the total value of such activities does not exceed 50% of the appraised value of the structure as determined by the Tuscaloosa County Tax Assessor.

902.03. No nonconformity shall be moved in whole or in part, for any distance whatsoever, to any other location on the same or any other lot unless the entire structure shall thereafter conform to the regulations of the zoning district in which it is located after being moved.

902.04. Regardless of any other provision of this Article, no use or structure which is accessory to a principal nonconforming use or structure shall continue after such principal use or structure shall have ceased or terminated, unless it shall thereafter conform to all regulations of this Ordinance.

902.05. The burden of establishing the nonconforming status of any structure or land use under the terms of this Article, in all cases, shall be upon the owner of such nonconformity and not upon the City of Northport.

902.06. In the event that a structure or premise occupied by a nonconforming use becomes and remains vacant for a period of twelve (12) months, or is used for a use that is permitted in the zoning district in which such structure or premises is located, the use of same shall thereafter conform to the use regulations of the district in which such structure or premise is located, regardless of the intent of the owner or occupant.

902.07. **Termination Required by Modification.** A development site that is nonconforming by physical design (i.e., insufficient parking, landscaping, setbacks, etc.), may be utilized for any land use which is permitted at that location. However, any permits for

IX-

April 2, 2012
additional floor area, or the replacement of any structure on the development site, shall be contingent upon bringing the entire site into conformity with all requirements of this Ordinance.

STAFF RECOMMENDATIONS:

The standards for variances as outlined in section 1109.3 of the Northport Municipal Code are as follows:

1108.03. Standards for Variances. *The Board of Zoning Adjustment shall grant no variance in the strict application of the provision of this Ordinance unless it finds that the following requirements and standards are satisfied. In general, the power to authorize a variance from the terms of this Ordinance shall be sparingly exercised. It is the intent of this Ordinance that the variance be used only to overcome some exceptional physical condition of a parcel of land which poses practical difficulty to its development and prevents its owner from using the property as intended by the Zoning Ordinance. Any variance granted shall be the minimum adjustment necessary for the reasonable use of the land.*

The applicant must prove that the variance will not be contrary to the public interest and that practical difficulty and unnecessary hardship will result if it is not granted. In particular, the applicant shall establish and substantiate in writing that the appeal for the variance conforms to all of the requirements and standards listed below:

A. *The granting of the variance shall be in harmony with the general purpose and intent of the regulations imposed by this Ordinance on the district in which it is located and shall not be injurious to the neighborhood or otherwise detrimental to the public welfare.*

B. *The granting of the variance will not permit the establishment of any use, which is not permitted in the district.*

C. *There must be proof of unique circumstances: there must exist special circumstances or conditions fully described in the findings, applicable to the land or buildings for which the variance is sought, which circumstances or conditions are peculiar to such land or buildings and do not apply generally to land or buildings in the district, and which circumstances or conditions are such that the strict application of the provisions of this Ordinance would deprive the applicant of the reasonable use of such land or building.*

D. *There must be proof of unnecessary hardship. It is not sufficient proof of hardship to show that greater profit would result if the variance were granted. Furthermore, the hardship complained of cannot be self-created; nor can it be established on this basis by one who purchases with or without knowledge of the restrictions; it must result from the application of this Ordinance; it must be suffered directly by the property in question; and evidence of other variances granted under similar circumstances shall not be considered.*

E. *That the granting of the variance is necessary for the reasonable use of the land or building and that the variance as granted by the Board of Zoning Adjustment is the minimum variance that will accomplish this purpose.*

F. *That the proposed variance will not impair an adequate supply of light and air to adjacent property, substantially increase the congestion in the public streets, increase the danger of fire, endanger the public safety, or substantially diminish or impair property values within the adjacent neighborhood.*

G. *That the granting of the variance requested will not confer on the applicant any special privilege that is denied by this Ordinance to other lands, structures, or buildings in the same district.*

The Board may prescribe any safeguard that it deems necessary to secure substantially the objectives of the regulations or provisions to which the variance applies.

SUMMARY:

Gene Ray Taylor is seeking a variance to allow an expansion of the current Warrior Tractor business located at 6801 McFarland Blvd. The current site is listed as a legal nonconformity for the following reasons:

- **Landscaping** – New developments in this corridor are required to install a 15' frontage landscaping buffer. Requiring this installation may result in the removal of existing mature trees.
- **Use** – This use was allowed within this zoning district when established but is now only approved through Conditional Use.
- **Parking** – The parking configuration and quantity do not meet current standards. Based on calculations from the engineer, 542 parking spaces would be required for this development, which currently has 89. The applicant has stated that this amount is sufficient to meet the needs of the facility and that the addition will not result in any new employees being hired. The current configuration does not have the required landscaped islands, nor is all of the parking provided on the same parcel as the building it serves.
- **Building Materials** – The existing building features metal siding, which is no longer allowed in this zone.
- **Lot configuration / setbacks** – The site consists of multiple parcels with setback encroachments. The current ordinance would require that all parcels be combined into a single lot. The applicant intends to consolidate all property into one lot at a later date, and this will be required before construction plans can be approved by city staff.

The current ordinance generally allows legal nonconformities to continue operation but requires that they not be expanded unless the entire site is brought into compliance. Considering the proportionally small scope of work included with this addition, the applicant would prefer to pursue a variance from this requirement. The applicant has stated that they would like to expand the facility in a way that is in keeping with the look and function of the current building, which would mean that the proposed expansion features the same nonconforming materials that are on the current building.

For hardships, the applicant has stated that the required improvements would be disruptive to the operation of the business and that the addition is of limited impact to the overall site.

MOTION:

I make a motion to grant Gene Ray Taylor a variance to allow the expansion of a nonconformity for the property located at 6801 McFarland Blvd.





City of Northport Variance Application Packet

All applications, plans, and supporting documents may be submitted by email to planning@cityofnorthport.org.

PROCESS

1. You have requested a variance, special exception or interpretation of the Zoning Ordinance. The Zoning Board of Adjustment has the full authority to rule on cases such as this after a public hearing.
2. The Zoning Board of Adjustment meets in City Hall, located at 3500 McFarland Boulevard, in the Council Chamber at 6:00 p.m. on the third Thursday of each month.
3. You or your agent must be present at the meeting to explain your request and answer questions.
4. No later than the closing of business hours four weeks prior to the meeting, the following must be submitted to the Planning and Inspections Department:
 - An Administrative Appeal Application completely filled out and signed (page 2 and 3 of this packet);
 - The names and mailing addresses of all adjoining property owners as obtained from the Tax Assessor on the first floor of the County Courthouse. Adjoining owners include owners on all sides of the property in question and also the property across streets, creeks, power line right-of-ways, etc.;
 - A filing fee of \$75.00, plus certified mailing fees per adjoining property owner and advertising fees;
 - A small drawing (8x11) of the lot in question with dimensions; existing and proposed new construction with dimensions; distance to the property lines of all structures; any other concerns which may be applicable to your case, such as existing and proposed parking spaces, heights of structures, access roads, etc. The drawing are not required to be professionally prepared, but must be legible and accurate.
5. A decision of the Zoning Board of Adjustment is final. The Circuit Court will hear any appeals to the decision of the Zoning Board of Adjustments. Appeals to the Circuit Court must be applied for within 15 days after a final decision of the Zoning Board of Adjustment has been made.



City of Northport Variance Application Packet

All applications, plans, and supporting documents may be submitted by email to
planning@cityofnorthport.org.

Date of Application: 2-16-24

SUBMITTAL CHECKLIST

- | | |
|---|--|
| ☒ Completed Application | ☒ Designation of Agent Form (if applicant is not property owner) |
| ☒ \$75 Appeal Fee (additional fees may apply) | ☒ Names and Addresses of all Adjoining Properties |
| ☒ Site Plan/Sketch (showing property lines, existing and proposed structures, and dimensions) | |

PROPERTY INFORMATION

Property Address: 6801 McFarland Blvd. Northport, AL 35476
Property Subdivision and Lot Number: N/A
Property Zoning District: C6
Existing Buildings on Property: Yes
Proposed Construction on Property: 15,000 s.f. (12%) expansion to existing facility

PETITIONER INFORMATION

Petitioner Name: Gene Ray Taylor
Petitioner Phone: 205-339-0300 Petitioner Email: grtgo@warriortractor.com
Petitioner Address (if different than property information above): _____

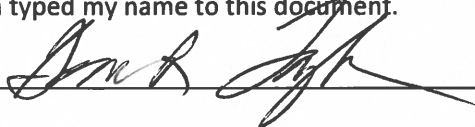
Petitioner is Owner of Property (if yes, skip owner information): ☒ Yes ☐ No

OWNER INFORMATION

Owner Name and/or Company: _____
Owner Mailing Address: _____
Owner Phone: _____ Owner Email: _____

☒ BY CHECKING THIS BOX, I HEREBY AGREE TO THE FOLLOWING TERMS AND CONDITIONS:

The information contained in this document is true and correct and may be relied upon by the City of Northport. By typing my name and by checking this box, this acknowledges that I am bound by this document just as if I had signed the document rather than typed my name to this document.

Applicant Signature:  Date: 2-16-24



City of Northport

Variance Application Packet

All applications, plans, and supporting documents may be submitted by email to
planning@cityofnorthport.org.

REQUEST INFORMATION

Describe the nature of the request:

Warrior Tractor (Gene Ray Taylor) requests a variance to expand an existing non-conformity which includes building materials, landscaping and parking. The request would allow an expansion to the parts warehouse portion of the facility.

Describe the special conditions pertaining to your property (or to your case) which sets your case apart from others in the same zoning district:

See attached.

Describe how your appeal (if granted) would impact neighboring properties or how it would or would not be contrary to the public interest:

The requested variance, if granted, would not impact neighboring properties. This is only a parts warehouse expansion to the facility as it currently operates. Warrior Tractor has been operating at this location for nearly 50 years without negatively impacting neighboring properties.

Any additional information you would like to add to help process your request, including evidence of petitioner's interest in the property if petitioner is not the property owner:

Petitioner owns the property.

Describe the special conditions pertaining to your property (or to your case) which sets your case apart from others in the same zoning district:

Warrior Tractor has been operating in this location for nearly fifty years. The facility was constructed prior to when the current 'use and zoning ordinance' requirements were implemented. Therefore, the property owner respectfully requests for a variance to expand an existing non-conformity.

Regarding the current Architectural Standards (Section 1002.123-B), we are requesting a variance from the following standards:

-
- [Item B-1c] - Unbroken Facades (architectural feature every 75' max.)
 - [Item B-3a-e] - Facades (no blank walls)
 - [Item B-4] - Materials (architectural metal panels / 10' masonry wall at base)
-

The facade of the proposed parts warehouse building will be a continuation of the existing warehouse building facade. The existing facade is currently 26' tall architectural metal wall panels, with an 8' tall fascia panel. There are downspouts (vertical element) at 25' intervals. Additionally, 4'x4' louvered fan units are centered in every 25' bay. The metal wall panels are a dark bronze color, contrasting with white downspouts and louvered fan units.

We propose that the most visually acceptable design concept here is to continue with the design of the existing non-conforming building facade. Implementing the current architectural standards to the facade of the existing structure and expansion will be detrimental to business operations, as the business will not be able to remain open while construction is ongoing (approximately 3-4 months). The existing 'architectural' features (wall panels, downspout, louvered fan, fascia panel) create a pleasant rhythm and scale, mimicking more traditional architectural features (pilasters, columns, cornices). As such, the continuation of the current non-conforming facade makes the most sense from an aesthetic point of view, as well as, allowing the business to remain operational during construction of the parts warehouse expansion.

-
- [Item B-5] - Parking

The occupancy of the new 15,000 sq.ft warehouse expansion is 'Warehouse', and has a low occupant load factor (1/500 sq.ft. gross) based on square footage. Additionally, no additional employees are being hired to work in this new area. The current parking areas contain 89 striped parking spaces along the North and West sides of the building. The existing parking configuration is sufficient for this business. Since there will be no increase in employees with this warehouse expansion, we request a variance from any increase in required parking.

For reference, the Machinery Sales requires (1) space per 400 square feet of gross floor area, plus (2) spaces per service bay, plus (1) space per 2,500 square feet of outdoor display/storage area, per section 610.02 Item B-42. This equates to 542 required parking spaces.

- [Items B-6] – Landscaping

Existing landscaping consists of adequate canopy tree buffers along the East, West and South property lines with canopy trees and foundational landscaping in front of the existing facility. Landscaping will be added to the street side of the warehouse expansion, matching the plant material currently in front of the existing facility. All of the requests listed above will allow the proposed construction area to be limited to 0.5 acres while the remainder of the 30-acre site remains undisturbed and operational.

Due to the longevity of this business at this location, the size of the overall site, the limited impact of this addition, and the fact that the business would not be able continue operations while the required improvements are on-going, we request a variance to expand the existing non-conformity.



City of Northport Designation of Agent Form

All applications, plans, and supporting documents may be submitted by email to
planning@cityofnorthport.org.

I, Gene Ray Taylor, being owner of the property which is the subject of this application hereby authorize Duncan Coker Assoc., P.C., to act as my representative with the City of Northport's (Board of Zoning, and/or Planning Commission, and/or City Council), as required by the type of request listed on the attached application form.

Property Owner Signature: 

Date: 2/16/24

Property Owner Mailing Address: 6801 McFarland Blvd.
Northport, AL 35476
Phone Number: 205-339-0300

Authorized Agent Mailing Address: 302 Merchants Walk, Ste. 250
Tuscaloosa, AL 35406
Phone Number: 205-561-0808

STATE OF ALABAMA

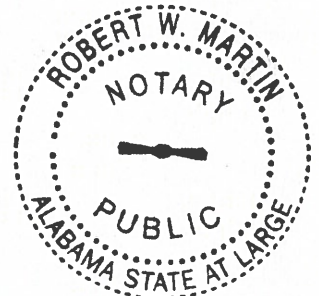
COUNTY OF TUSCALOOSA

I, Robert W. Martin, a Notary Public in and for said County and State, hereby certify that Gene Ray Taylor, whose name is signed to the foregoing document, and who is known to me or acknowledged before me on this day, that being informed of the contents of said document, did execute the same voluntarily on the day that bears the same date.

Given my hand and seal of office this 16th day of February, 2024


Notary Public

My Commission Expires: 12-28-24





City of Northport Designation of Agent Form

All applications, plans, and supporting documents may be submitted by email to
planning@cityofnorthport.org.

I, Gene Ray Taylor, being owner of the property which is the subject of this application
hereby authorize Fitts Architects, Inc. to act as my representative with the City of Northport's
(Board of Zoning, and/or Planning Commission, and/or City Council), as required by the type of request listed
on the attached application form.

Property Owner Signature: _____

Date: 2/16/24

Property Owner Mailing Address: 6801 McFarland Blvd.

Northport, AL 35476

Phone Number: 205-339-0300

Authorized Agent Mailing Address: 817 21st Ave.

Tuscaloosa, AL 35401

Phone Number: 205-759-5792

STATE OF ALABAMA

COUNTY OF TUSCALOOSA

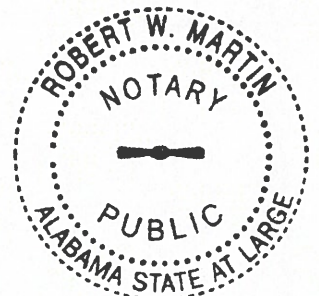
I, Robert W. Martin, a Notary Public in and for said County and State, hereby certify
that Gene Ray Taylor, whose name is signed to the foregoing document, and who is known to
me or acknowledged before me on this day, that being informed of the contents of said document, did
execute the same voluntarily on the day that bears the same date.

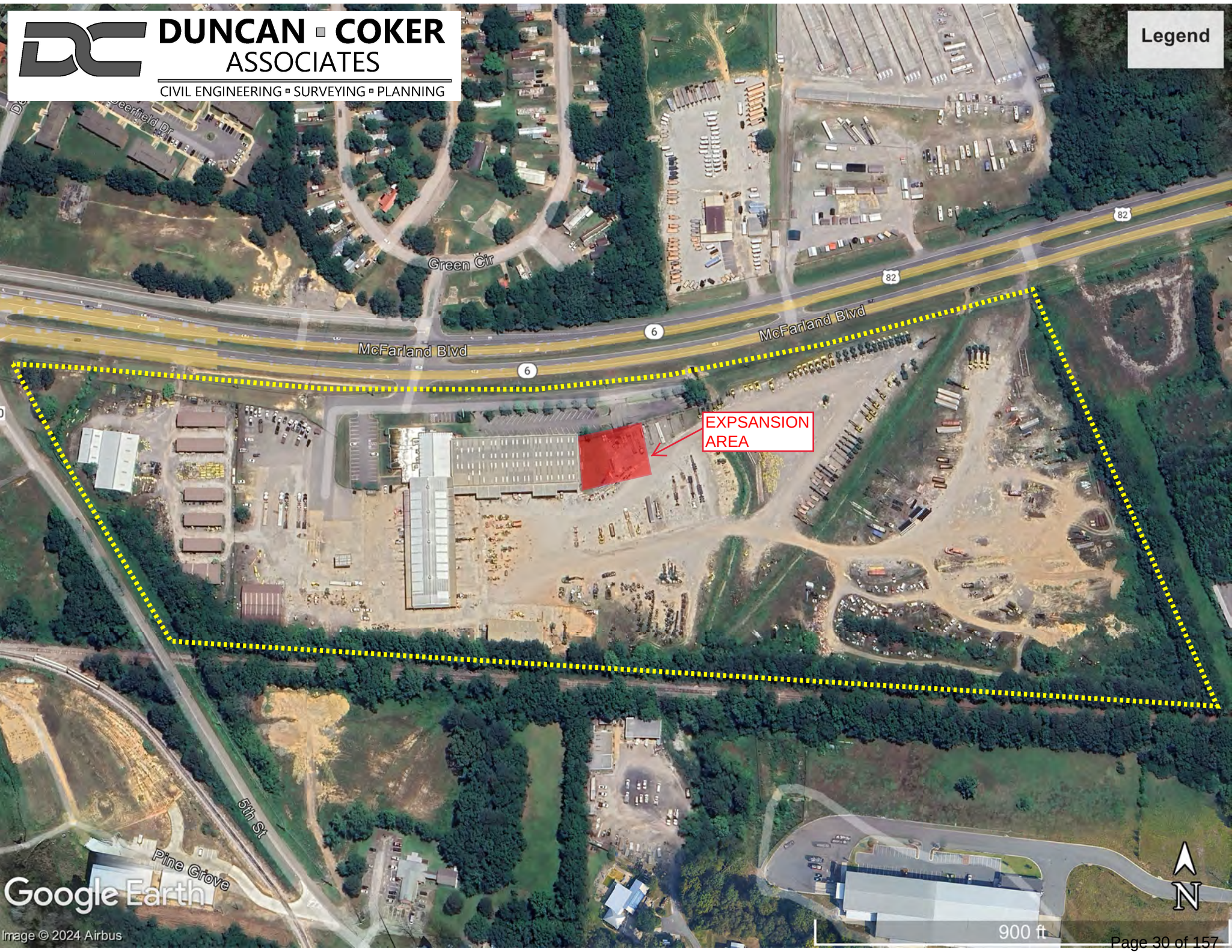
Given my hand and seal of office this 16th day of February, 2024

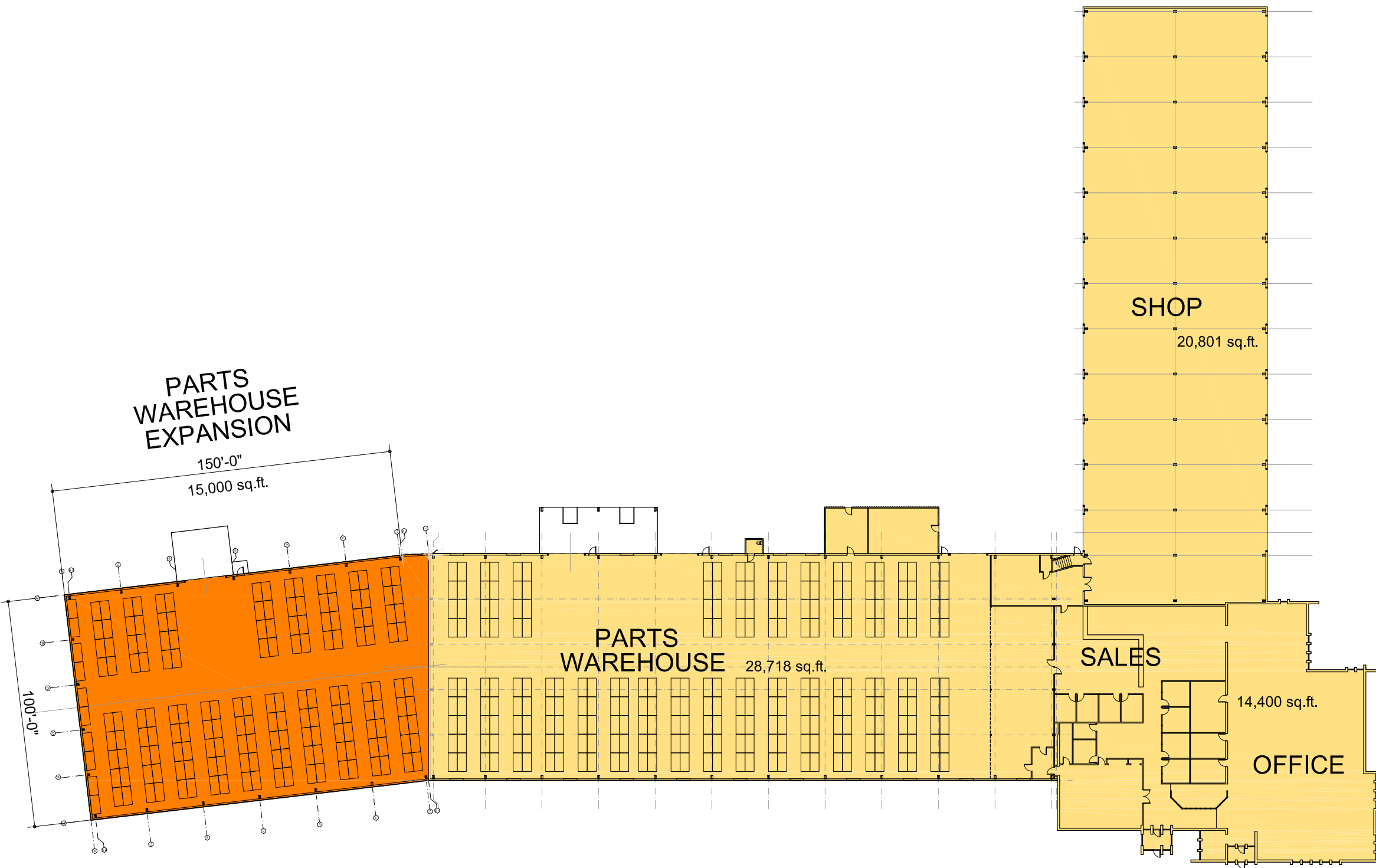
Robert W. Martin

Notary Public

My Commission Expires: 12-28-24







FITTS
ARCHITECTS

817 21st Avenue
Tuscaloosa, Alabama 35401
205.759.5792
www.fittsarchitects.com

PROJECT
PARTS WAREHOUSE
EXPANSION



6801 McFARLAND BLVD
NORTHPORT, ALABAMA

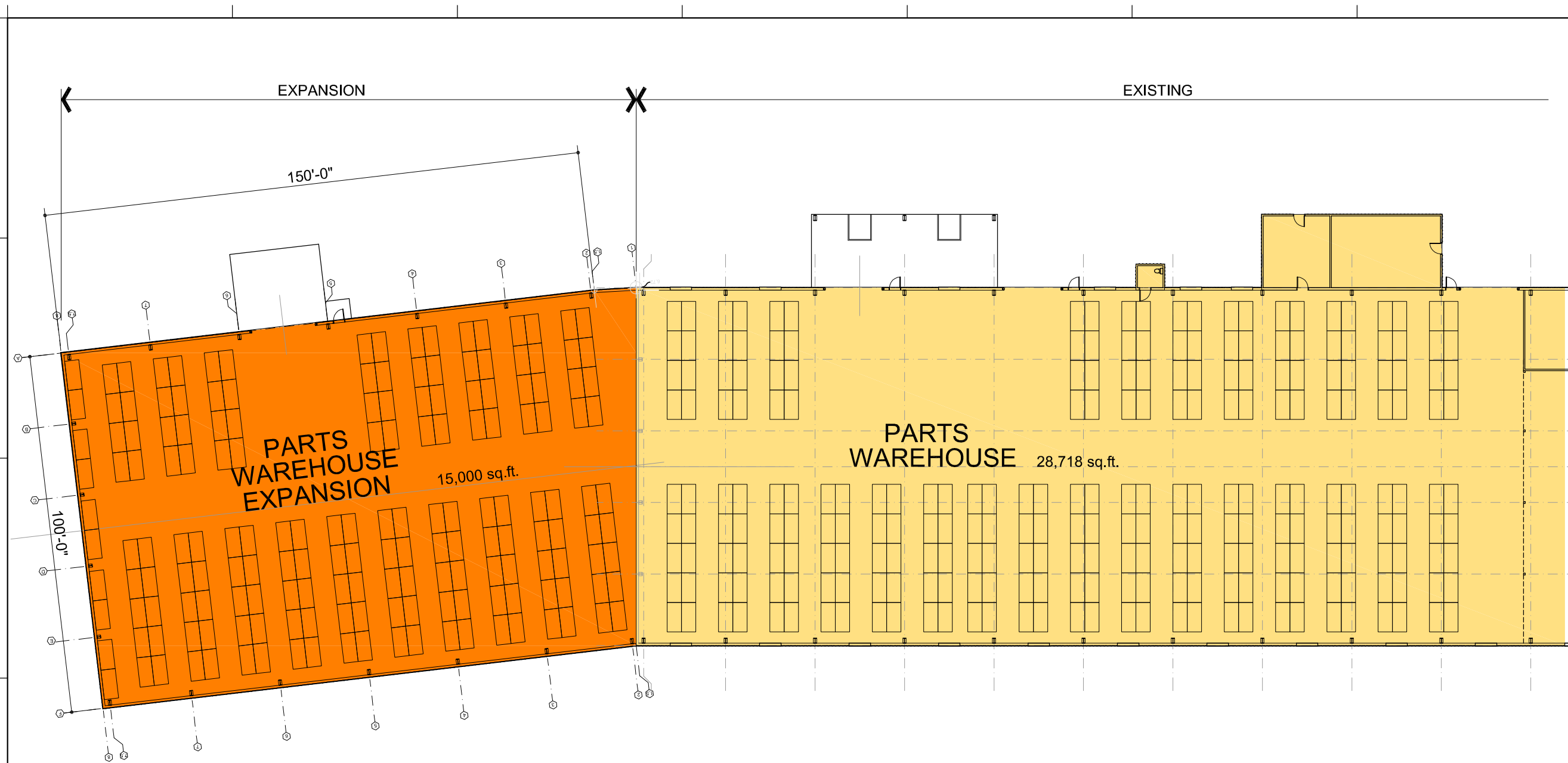
REVISIONS:		
#	DATE	DESCRIPTION

ONE INCH
FULL SCALE DRAWING

PROJECT No. FA 2310
DATE 3 JAN 24
SHEET



1.1



2 FLOOR PLAN
SCALE: 1/32" = 1'-0"
0' 10' 20' 40'



FITTS
ARCHITECTS

817 21st Avenue
Tuscaloosa, Alabama 35401
205.759.5792
www.fittsarchitects.com

PROJECT
PARTS WAREHOUSE
EXPANSION



6801 McFARLAND BLVD
NORTHPORT, ALABAMA

REVISIONS:		
#	DATE	DESCRIPTION

ONE INCH
FULL SCALE DRAWING

PROJECT No.
FA 2310
DATE
3 JAN 24
SHEET

1.2



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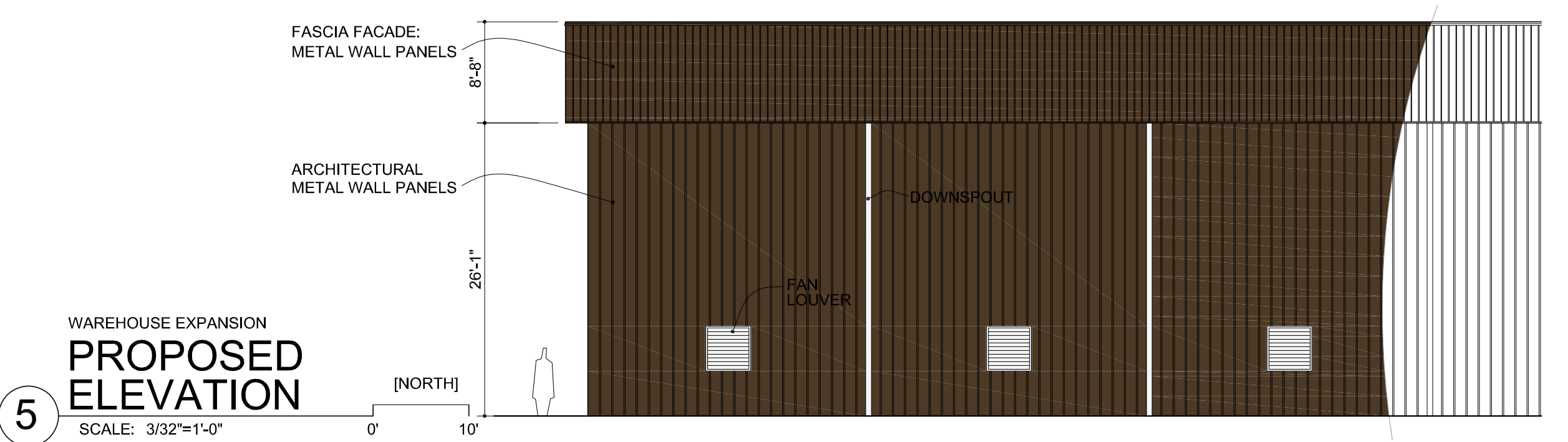
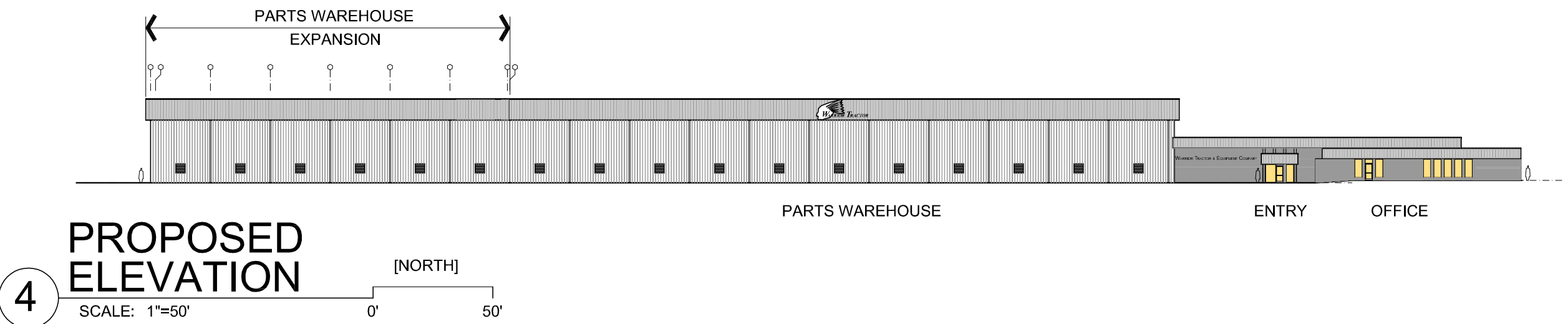
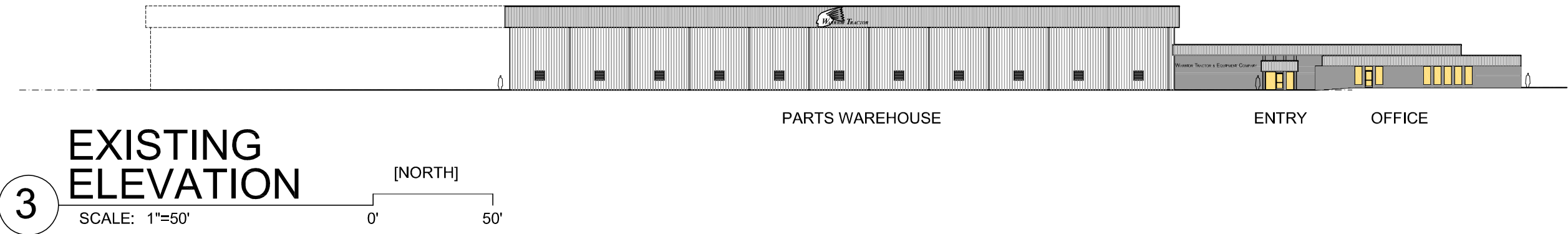
6801 McFARLAND BLVD
NORTHPORT, ALABAMA

REVISIONS:		
#	DATE	DESCRIPTION

ONE INCH
FULL SCALE DRAWING

PROJECT No. FA 2310
DATE 3 JAN 24
SHEET

2.1



NORTH (STREET) ELEVATION



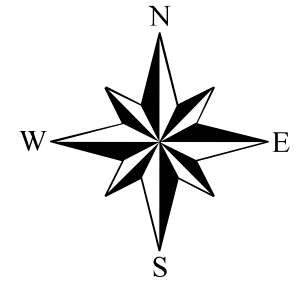
WARRIOR TRACTOR & EQUIPMENT
6801 McFARLAND BLVD
NORTHPORT, ALABAMA

Northport Zoning Board of Adjustment

Variance Request

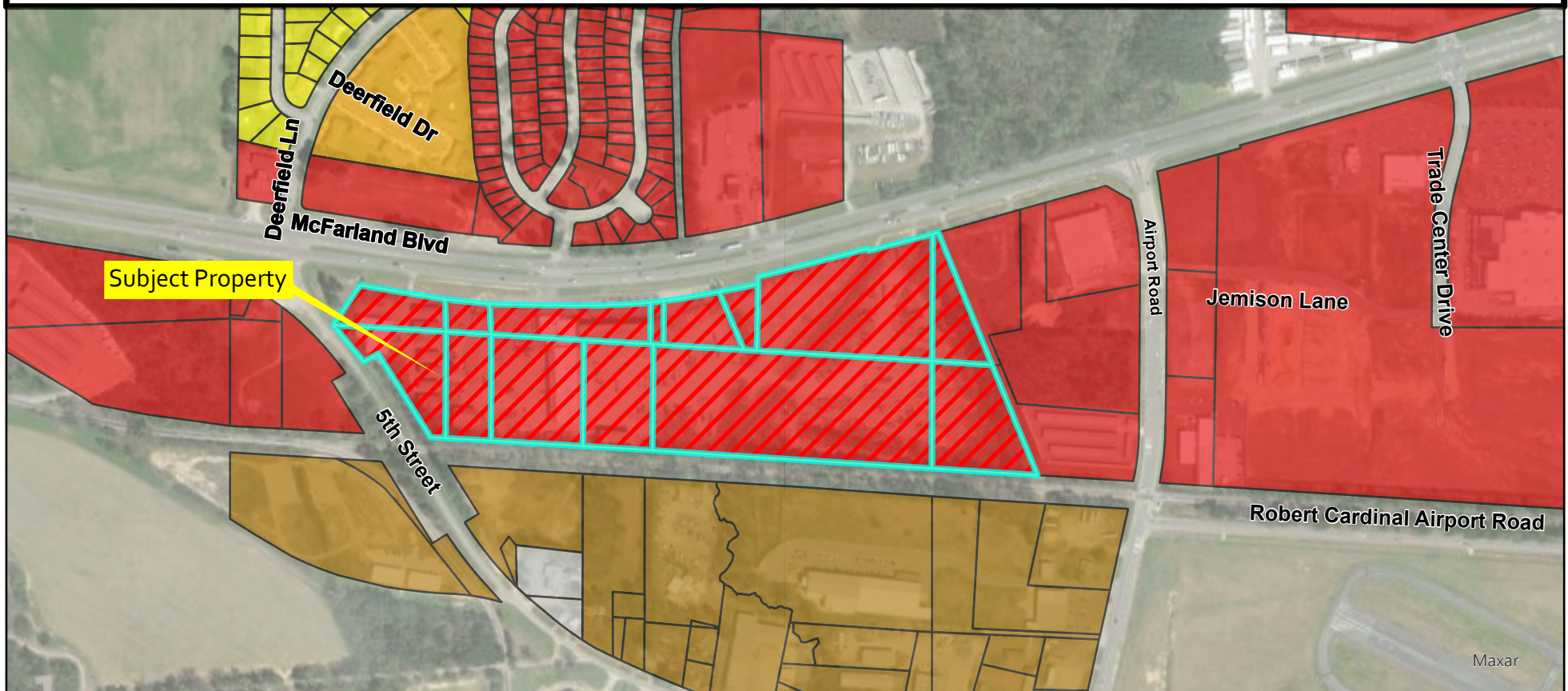
Zoning

- | | |
|--|---|
|  Commercial Highway |  Office and Institutional |
|  Light Industrial |  Residential Multi-Family |
| |  Residential Single-Family - 3 |
| |  Subject Property |



While the City of Northport, Alabama makes every effort to maintain and distribute accurate information, No Warranties and/or Representations of Any Kind are made regarding information, data or services provided. In no event, shall the City of Northport, Alabama be liable in any way to the users of this data. Users of this data shall hold the City of Northport, Alabama harmless in all matters and accounts arising from the use and/or accuracy of this data.

0 500 1,000 2,000 Feet



NORTHPORT ZONING BOARD OF ADJUSTMENT
STAFF REPORT
March 21, 2024

AGENDA ITEM

Case Number: V-24-7

Request: Variances from parking, setback, and building material standards

Location: 6375 McFarland Blvd

Applicant: DP Holdings, LLC

SUBJECT PARCEL

Zoning: Highway Commercial (C6)

Zoning of Adjacent Property: Highway Commercial (C6)

Proposed Action: To allow a canopy that encroaches into a setback, to allow exposed metal columns, and to allow smaller parking spaces.

STAFF COMMENTS

DP Holdings, LLC is seeking a variance from the setback, building material, and parking standards. Those standards are in Table 4-3, and sections 509.03 & 610 and are included below:

Table 4-3: Table of Dimensional Standards – Non Residential Uses.

Zoning District	Maximum Height Of Structure (feet)	Minimum Setbacks (in feet)			
		Front Yard	Rear Yard	One Side ¹	Total Side
AG ²	35 ³	50	50	50	100
O-I	50	25	25	10	20
C-2	40	20	20	10	20
C-3	40	20	20	10	20
C-6	50	40	25	10 ⁵	20 ⁵
M-1	60	4	4	4	4
M-2	60	4	4	4	4

¹ Side Yard on Street shall be equal to Front Yard setback

² See Table 6-2 and Section 603.03 "Performance Residential Developments" for Residential Setbacks

³ Inhabited Structures Only

⁴ Equal to Height of Structure

⁵ May be reduced to zero (0) feet by Special Exception

509.03. Building Materials and Design Review. The Planning Commission shall review submissions for their general compatibility with existing conditions and public improvements according to the process for conditional uses outlined in Article X.

A. Exterior Building Materials. All building cladding materials shall be described in the application or upon the site plan. Building facades and accessory buildings visible to pedestrian and vehicular traffic shall consist of natural materials such as wood, stone, and manufactured products such as brick, stucco, and architecturally decorative concrete block; other such materials may be approved after review by the Planning Commission.

The use of bright or garish colors shall be prohibited on principle and accessory structures and fencing. All structural supports (i.e., columns) for vehicular canopies shall be clad in one or more of the same materials as the building facades.

Section 610. Off-street Parking, General Requirements.

- A. The requirements listed in this Section specify the minimum number of off-street parking spaces.
- B. For all required off-street parking, the minimum size of each standard parking stall shall be nine (9) feet by twenty (20) feet, exclusive of aisle width, which shall be delineated by striping or other similar means. Parking other than perpendicular parking shall comply with the standards set out in the International Building Code.
- C. Unless otherwise noted, all parking spaces required herein, including adequate driveways and maneuvering areas shall be improved with a suitable, hard surface, permanent type of pavement.
- D. If the required number of spaces is not a whole number, the number of required spaces shall be rounded up to the next higher whole number.
- E. Except as provided in Section 610.02, all required parking spaces shall be provided on the same development site for which they are required; location of required spaces on adjoining property or across a public right-of-way shall be prohibited.
- F. Truck loading spaces shall be an accessible rectangle having a width of twelve (12) feet and a length of forty (40) feet. Any overhead obstructions shall have a vertical clearance of fifteen (15) feet.
- G. All parking spaces shall be delineated by appropriate fixed curbing, painted lines (a

VI-35

March 21, 2018

minimum of four inches (4") wide), or other fixed markers.

- H. Alternate forms of parking (i.e. compact spaces) other than that defined as "standard" above shall be considered by the staff on a case by case basis. Under no circumstances shall such parking comprise more than fifteen (15) percent of the overall required parking.

STAFF RECOMMENDATIONS:

The standards for variances as outlined in section 1109.3 of the Northport Municipal Code are as follows:

1108.03. Standards for Variances. *The Board of Zoning Adjustment shall grant no variance in the strict application of the provision of this Ordinance unless it finds that the following requirements and standards are satisfied. In general, the power to authorize a variance from the terms of this Ordinance shall be sparingly exercised. It is the intent of this Ordinance that the variance be used only to overcome some exceptional physical condition of a parcel of land which poses practical difficulty to its development and prevents its owner from using the property as intended by the Zoning Ordinance. Any variance granted shall be the minimum adjustment necessary for the reasonable use of the land.*

The applicant must prove that the variance will not be contrary to the public interest and that practical difficulty and unnecessary hardship will result if it is not granted. In particular, the applicant shall establish and substantiate in writing that the appeal for the variance conforms to all of the requirements and standards listed below:

A. *The granting of the variance shall be in harmony with the general purpose and intent of the regulations imposed by this Ordinance on the district in which it is located and shall not be injurious to the neighborhood or otherwise detrimental to the public welfare.*

B. *The granting of the variance will not permit the establishment of any use, which is not permitted in the district.*

C. *There must be proof of unique circumstances: there must exist special circumstances or conditions fully described in the findings, applicable to the land or buildings for which the variance is sought, which circumstances or conditions are peculiar to such land or buildings and do not apply generally to land or buildings in the district, and which circumstances or conditions are such that the strict application of the provisions of this Ordinance would deprive the applicant of the reasonable use of such land or building.*

D. *There must be proof of unnecessary hardship. It is not sufficient proof of hardship to show that greater profit would result if the variance were granted. Furthermore, the hardship complained of cannot be self-created; nor can it be established on this basis by one who purchases with or without knowledge of the restrictions; it must result from the application of this Ordinance; it must be suffered directly by the property in question; and evidence of other variances granted under similar circumstances shall not be considered.*

E. *That the granting of the variance is necessary for the reasonable use of the land or building and that the variance as granted by the Board of Zoning Adjustment is the minimum variance that will accomplish this purpose.*

F. *That the proposed variance will not impair an adequate supply of light and air to adjacent property, substantially increase the congestion in the public streets, increase the danger of fire, endanger the public safety, or substantially diminish or impair property values within the adjacent neighborhood.*

G. *That the granting of the variance requested will not confer on the applicant any special privilege that is denied by this Ordinance to other lands, structures, or buildings in the same district.*

The Board may prescribe any safeguard that it deems necessary to secure substantially the objectives of the regulations or provisions to which the variance applies.

SUMMARY:

DP Holdings, LLC is seeking a variance for the construction of a new Chick-Fil-A restaurant on the property located at 6375 McFarland Blvd. The applicant has requested the following variances:

1. **Setbacks** – The applicant is proposing to have a vehicular canopy that would encroach approximately 12 feet into the required 40' front setback.
2. **Building Materials** – The applicant is proposing to have a vehicular canopy with exposed steel columns that are not clad to match the building.
3. **Parking** – The applicant is proposing to shorten the parking spaces from the required 20 feet down to 18 feet.

The reason for the first request is to accommodate a vehicular canopy that also provides shelter for employees working the drive-through lines. For a hardship, the applicant has cited that the property is a corner lot encumbered by 3 “front” setbacks, leaving limited space to install the canopy.

The reason for the second request is to maintain architectural continuity with the design standards used at other Chick-Fil-A locations. The variance, if granted, would allow the development to have a more cohesive design relative to other Chick-Fil-A restaurants.

The third request is to accommodate the additional parking, drive-through stacking spaces, and drive aisle width that the applicant is proposing. Staff feels that this added vehicle storage is beneficial, considering the high volume of traffic often generated by this type of development. The parking spaces proposed meet city requirements for width, but are 2 feet shorter than a standard stall. The current ordinance requires 1 parking space per 100 square feet of floor area, which equates to 57 parking spaces required for this project. The applicant is proposing to provide 77 parking spaces. The current ordinance also requires 7.5 stacking spaces, while the applicant is proposing to provide 46. As a hardship, the applicant has again cited the 3 “front” setbacks that limit site layout, along with the need for more on-site vehicle space than would normally be required for a fast-food restaurant.

MOTION:

I make a motion to grant DP Holdings a variance from the setbacks, building materials, and parking standards as shown on the site plan and application for the property located at 6375 McFarland Blvd.





PERMIT PROJECT
FILE #: 24-000315
6375 MCFARLAND BLVD NORTHPORT AL 35476
CHICK-FIL-A - MCFARLAND BLVD



PERMIT #: V24-000005

Permit Type
Variance/Administrative Appeal

Subtype
Variance

Work Description:
Chick-Fil-A - McFarland Blvd

Applicant
Molly Kilpatrick

Status
Under Review

Valuation
0.00



FEES & PAYMENTS

Plan Check Fees
0.00

Permit Fees
161.01

Total Amount
161.01

Amount Paid
161.01

Balance Due
0.00

☐ Non-Billable



PERMIT DATES

Application Date
02/21/2024

Approval Date

Issue Date:

Expiration Date:

Close Date

Last Inspection

Review the attached process packet (click to download)

Property Information

Property Zoning District

C-6



Existing Buildings on Property

N/A

Proposed Construction on Property

+/- 5,633 SF Chick-fil-A restaurant with drive-thru

Number of Adjoining Properties

7

Are you the property owner?

No



Property Owner

D P HOLDINGS LLC SERIES MCFARLAND



Additional Parcel #s

3103074003002003



Submittal Documents

Notarized Designation to Authorize Agent Form (Click to Download)

[City of Northport Designation of Agent Form_Signed.pdf](#)



Names and Addresses of all Adjoining Properties

[Adjoining Property Owners.pdf](#)



Site Plan/Sketch (showing property lines, existing and proposed structures, and dimensions)

[2024-02-21_397.037 CFA McFarland Blvd_Exhibit.pdf](#)



Additional Submittal Documents

[2024-01-29 - Traffic Impact Analysis - Chick-fil-A - Northport, AL.pdf](#)



[00-LE-00000-X-900BNB-DESIGN OVERVIEW-BRICK.pdf](#)



Request Information

Describe the nature of the request

Three separate variances are requested for the subject property: a variance for the encroachment of the order canopy in the 40' building setback along the western property line, a variance for the minimum parking stall dimensions, and a variance for the required canopy building material.

Describe the special conditions pertaining to your property (or to your case) which sets your case apart from others in the same zoning district

Building Setback Variance:

In the zoning district of C-6, Highway Business, a 40-foot front yard setback is required along all property lines that abut a public road. The subject property is situated on a corner parcel with public roads along its northern, western, and southern boundaries. Consequently, the 40-foot front yard setback is required on three sides of the subject property, unlike other properties in the C-6 zoning district which may only require the 40' front yard setback on one or two sides. Additionally, because the subject site is a proposed a Chick-fil-A restaurant, a greater number of parking spaces, wider drive aisles, and a longer drive-thru stacking distance than what is required by the City of Northport are provided to account for the increased traffic due to a Chick-fil-A restaurant. Reducing these elements to comply with the 40' front yard setback would disrupt internal traffic flow and exacerbate traffic congestion on the surrounding public roads.

Parking Stall Minimum Dimensions Variance:

Based on the traffic study conducted for the subject site, it is expected that the proposed Chick-fil-A development will generate a higher volume of traffic compared to similar developments within the C-6, Highway Business zoning district. A decrease of the required dimensions of the parking stalls is requested to have area for wider drive aisles that enhance the traffic flow within the site along with increasing the total parking spaces available. The proposed drive aisle widths between parking stalls are 25' and 30', exceeding the required 24', to accommodate delivery and garbage trucks and to improve circulation around the parking stalls for restaurant patrons. Furthermore, the 40' building setbacks on the western, northern, and southern property lines limit the available area for placing the building and drive-through, thus reducing the space allocated for parking stalls.

Canopy Building Materials Variance:

The steel pick-up and order canopies are implemented in the proposed Chick-fil-A development as a part of the standard design for Chick-fil-A restaurants. This standard design is used at many existing Chick-fil-A restaurants and promotes cohesive design between all restaurant locations. Other developments in the C-6, Highway Business Zoning designation may or may not have a standard design that is followed for each new location.

Describe how your appeal (if granted) would impact neighboring properties or how it would or would not be contrary to the public interest

Building Setback Variance:

Granting a variance for the 40-foot front yard setback on the western property line would enable the Chick-fil-A restaurant to maintain a sufficient drive-thru stacking distance, ensuring smooth circulation for both dine-in and drive-thru patrons. Moreover, with 374 feet of stacking distance before the order canopy, traffic backups onto public roads would be prevented, benefitting neighboring businesses and their patrons. Additionally, the Chick-fil-A building is proposed to be aligned with others in the area to uphold the intent of the requirement and promote cohesive development along HWY 82.

Parking Stall Minimum Dimensions Variance:

Granting a variance to decrease the parking stall dimensions would enable the Chick-fil-A development to provide an adequate number of parking stalls, discouraging patrons from parking in the lots of neighboring developments and walking to Chick-fil-A. Moreover, by prioritizing wider drive aisles over longer parking stalls, the development can facilitate smoother internal traffic flow and prevent congestion on surrounding public roads. With the proposed drive aisle widths exceeding the required minimum of 24', the Chick-fil-A development aims to align with the intent of the requirement for the benefit of public interest.

Canopy Building Materials Variance:

Approval of the requested variance would not be contrary to the public interest because it would not cause a distracting or unpleasing architectural design. Using uncladded, black steel for pick-up and order canopies results in an aesthetic architectural design that matches the style of the black patio furniture featured at the development. Approval of the requested variance would not influence neighboring properties.

Describe the nature of any unnecessary hardship placed upon you by a literal enforcement of the zoning ordinance

Building Setback Variance:

Enforcing the 40-foot front yard setback on the western property line would prevent Chick-fil-A from providing an order canopy at a location that meets the City of Northport drive-thru stacking distance requirements. The canopy also serves as shelter for employees during inclement weather, ensuring their comfort and safety. Failure to provide this shelter would create undue hardship for Chick-fil-A and its employees.

Parking Stall Minimum Dimensions Variance:

If the parking stall minimum dimensions are enforced and the drive aisle widths remain unchanged as proposed, a row of parking would have to be eliminated due to site constraints. Eliminating a row of parking would exacerbate internal traffic congestion and likely lead to traffic issues on surrounding public roads as patrons wait for parking availability. Additionally, eliminating a row of parking may encourage patrons to park in lots of the surrounding developments, potentially causing traffic issues at those developments.

Canopy Building Materials Variance:

A literal enforcement of the zoning ordinance in this situation would result in a non-standard design for the pick-up and order canopies, consequently disrupting the signature style of Chick-fil-A restaurants.

Any additional information you would like to add to help process your request, including evidence of petitioner's interest in the property if petitioner is not the property owner

Chick-fil-A is currently working on finalizing a lease agreement with the landlord. They are in the final stages and should have it completed in the next couple months. Preliminary pricing plans have been completed for the site and Chick-fil-A is fully prepared to move forward with the project.

☒ BY CHECKING THIS BOX, I HEREBY AGREE TO THE FOLLOWING TERMS AND CONDITIONS

The information contained in this document is true and correct and may be relied upon by the City of Northport. By typing my name and by checking this box, this acknowledges that I am bound by this document just as if I had signed the document rather than typed my name to this document.

Signature
signature.png



OFFICIAL USE ONLY

Date of Planning Commission Meeting

FEES

FEE	DESC	QUANTITY	AMOUNT	TOTAL	
Appeal Fee				75.00	
Adjoining Properties Fee				56.70	
Advertising Fee				25.00	
Convenience Fee		1.0	4.3100	4.31	
Plan Check Fees				0.00	
Permit Fees				161.01	
Total Fees				161.01	

PAYMENTS

DATE	TYPE	REFERENCE	NOTE	RECEIPT #	RECEIVED FROM	AMOUNT	
02/23/2024	Credi	AP0A8E32E	V24-(	35615	- Molly Ki	161.01	
Amount Paid						161.01	
Balance Due						0.00	



City of Northport Designation of Agent Form

All applications, plans, and supporting documents may be submitted by email to
planning@cityofnorthport.org.

I, Salem K. David, Jr., President of DP Holdings, LLC, being owner of the property which is the subject of this application hereby authorize Foresite Group, LLC, to act as my representative with the City of Northport's (Board of Zoning, and/or Planning Commission, and/or City Council), as required by the type of request listed on the attached application form.

Property Owner Signature: [Signature]

Date: 1/18/24

Property Owner Mailing Address: 1203 Overlook Rd N
Tuscaloosa, AL 35406
Phone Number: (205) 641-6167

Authorized Agent Mailing Address: 2101 Magnolia Ave, Suite 100
Birmingham, AL 35205
Phone Number: (205) 397-0370

STATE OF ALABAMA

COUNTY OF TUSCALOOSA

I, Rene W. Sullivan, a Notary Public in and for said County and State, hereby certify that Salem K. David, Jr., whose name is signed to the foregoing document, and who is known to me or acknowledged before me on this day, that being informed of the contents of said document, did execute the same voluntarily on the day that bears the same date.

Given my hand and seal of office this 18 day of JANUARY, 2004

[Signature]
Notary Public

My Commission Expires: 10/27/2026

TRAFFIC IMPACT ANALYSIS FOR

Fast Food Restaurant on McFarland Blvd at Airport Road/64th Avenue

Northport, AL

NOVEMBER 28, 2023

PREPARED FOR:

Mrs. Jenn Santelli
Chick-Fil-A, Inc.
5200 Buffington Road
Atlanta, GA 30349

PREPARED BY:



Foresite Group, LLC
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TABLE OF CONTENTS

LIST OF TABLES.....	ii
LIST OF FIGURES.....	ii
1. Introduction.....	1
2. Existing and Proposed Development Description	4
3. Existing Conditions.....	5
3.1. Transportation Facilities	5
3.2. Traffic Count Data.....	6
3.3. Existing Conditions Capacity Analysis	9
4. Background Growth.....	11
4.1. Growth Rate	11
4.2. Background Conditions Capacity Analysis.....	11
5. Future Conditions	15
5.1. Trip Generation	15
5.2. Distribution.....	15
5.3. Future Traffic Volumes	16
5.4. Turn Lane Analysis	16
5.5. Future Conditions Capacity Analysis	22
5.6. Future Conditions Capacity Alternate Analysis	26
6. Conclusions and Recommendations	28
Appendix A: Site Plan	
Appendix B: Traffic Counts	
Appendix C: Synchro Capacity Analysis	
Appendix D: Trip Generation Calculation	
Appendix E: Turn Lane Worksheets	

LIST OF TABLES

Table 1: Study Intersections.....	5
Table 2: Roadway Characteristics.....	6
Table 3: Existing Conditions Capacity Analysis	10
Table 4: Background (2025) Conditions Capacity Analysis	13
Table 5: Project Trip Generation	15
Table 6: Build (2025) Conditions Capacity Analysis	22
Table 7: Build (2025) Alternate Analysis.....	25

LIST OF FIGURES

Figure 1: Vicinity Map	2
Figure 2: Site Location Aerial.....	3
Figure 3: Existing Lane Geometry.....	7
Figure 4: Existing Traffic Volumes	8
Figure 5: Background (2025) Traffic Volumes	12
Figure 6: Trip Distribution	17
Figure 7: Pass-By Trips	18
Figure 8: Project Trips	19
Figure 9: Future (2025) Traffic Volumes.....	20
Figure 10: Future Lane Geometry	21

1. Introduction

This report contains the results from a traffic impact analysis performed for a proposed fast-food restaurant located at the corner of US 82/McFarland Blvd at Airport Road/64th Avenue in Northport, Alabama. Due to the nature of the proposed development, construction will be completed in a single phase. Full build-out will consist of a 6,101-SF of fast-food restaurant with a drive-through window. The site plan proposes to have extend an access type road, or inter-parcel connection, with access to Jemison Lane and Trade Center Drive. The main route of access to the site is considered Airport Road to Jemison Lane. The site proposes to access driveway on the internal access road.

The purpose of the traffic impact study is to identify the impacts to traffic associated with the planned fast-food restaurant development at the proposed site driveways and the intersections on McFarland Blvd, Airport Road/64th Avenue, Jemison Lane, and Trade Center Drive. In addition to the proposed restaurant development, background traffic growth is being analyzed in the form of a background growth rate. Figure 1 shows the proposed site location in the vicinity of Northport, Alabama. The site location is shown on an aerial image in Figure 2. A copy of the proposed site plan is provided in Appendix A.

This report has been prepared for submittal to Northport and the Alabama Department of Transportation to evaluate the traffic conditions at the site. This report summarizes the data collected, proposed access points, projected traffic at the study intersections, analysis of traffic impacts including level of service (LOS), and conclusions from the analysis.

Figure 1: Vicinity Map

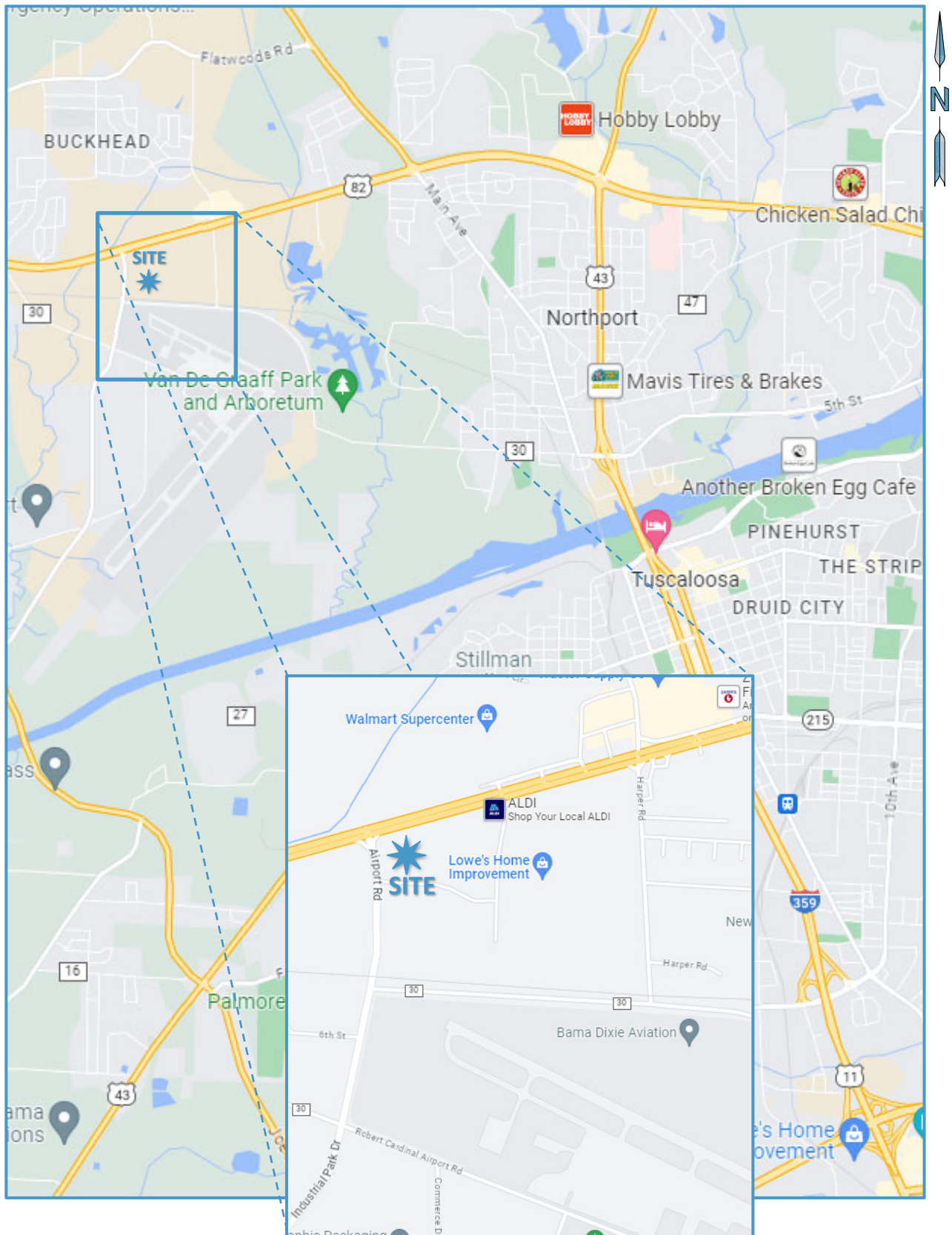
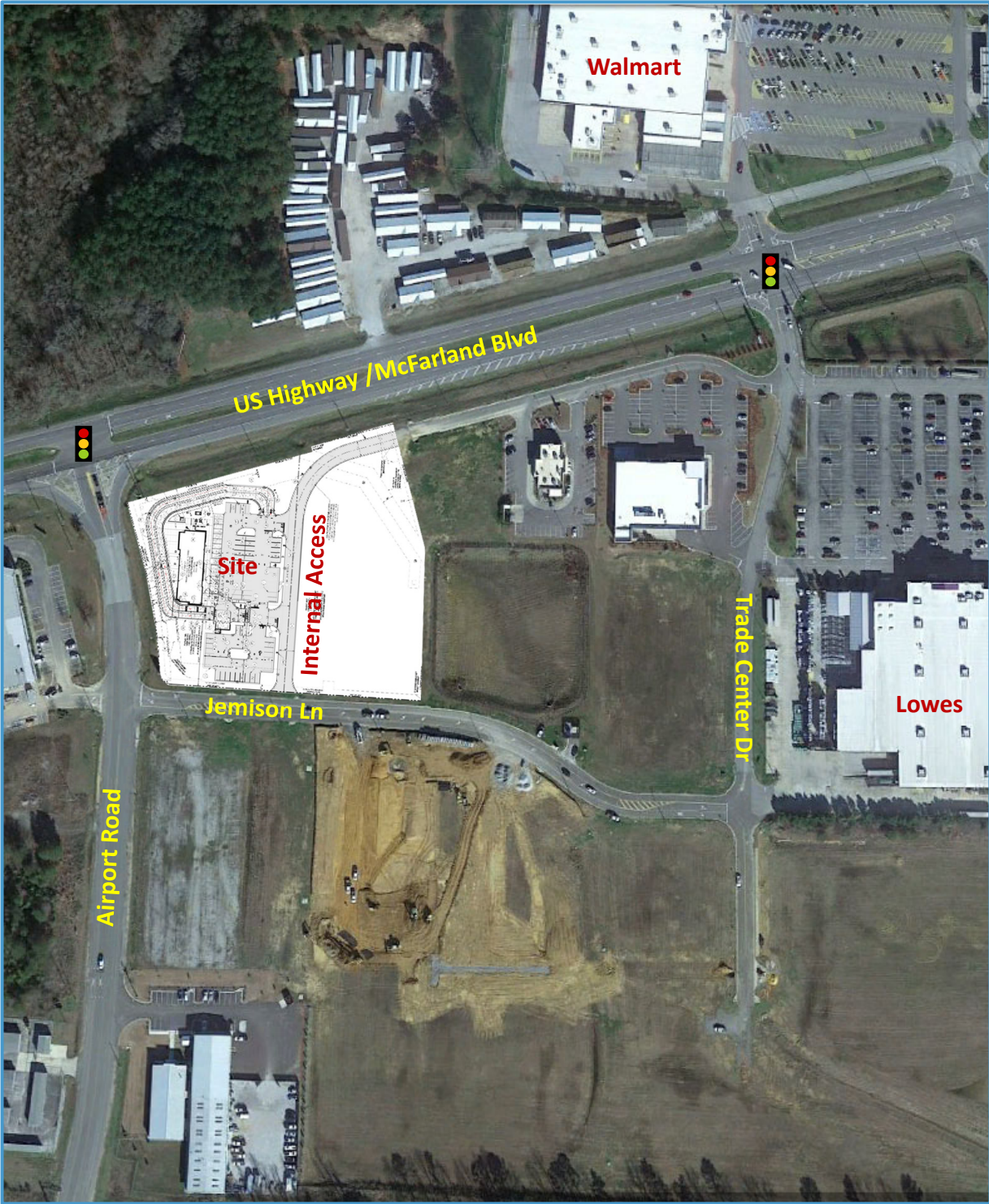


Figure 2: Site Location Aerial



2. Existing and Proposed Development Description

The proposed site is located on the southeast corner of US 82/McFarland Blvd at Airport Road on the north side of Jemison Lane. The site is planned to be developed as an outparcel between Airport Road and Trade Center Drive, as a multiparcel commercial development area. There is currently an Aldi's Grocery Store and fast-food restaurant that will share internal-parcel access with the extension of the internal access road. There is an existing Lowes shopping center development on the east side of Trade Center Drive. The proposed development, at full build-out, will consist of a 6,101-SF fast-food restaurant with a drive-through window. A copy of the proposed site plan is attached in Appendix A.

3. Existing Conditions

3.1. Transportation Facilities

This traffic impact study examines the existing, background (2025), and build (2025) operations of the intersections listed in Table 1. There are five main roadways being analyzed in this report with roadway characteristics summarized in Table 2. The existing lane configuration is shown in Figure 3.

Table 1: Study Intersections

#	Intersections	Traffic Control
1	US 82/McFarland Blvd at Airport Road/64th Avenue	Signalized Intersection
2	Airport Road at Jemison Lane	Side-Street Stop Control
3	US 82/McFarland Blvd at Trade Center Drive/Walmart Driveway	Signalized Intersection
4	Trade Center Drive at Internal Access Road/Lowes Driveway	Side-Street Stop Control
5	Trade Center Drive at Jemison Lane /Lowes Driveway	Side-Street Stop Control
6	Jemison Lane at Internal Access Road	Side-Street Stop Control
7	Internal Access Road Driveway 1	Side-Street Stop Control
8	Internal Access Road Driveway 2	Side-Street Stop Control

US 82/McFarland Blvd is a median divided four-lane roadway section with a posted speed limit of 55 mph in the project area. It runs primarily east to west on the northside of Northport. The roadway is functionally classified as a Principal Arterial.

Airport Road/64th Avenue is an undivided four-lane roadway that runs north to south from Boone Blvd to McFarland Blvd, west of the airport. This road has a posted speed of 45 mph within the project area.

Jemison Lane is an undivided three-lane roadway, with a two-way left-turn center lanes, that runs east and west between Airport Road and Trade Center Drive. This is a local commercial road with a posted speed of 25 mph.

Trade Center Drive is an undivided two-lane roadway that runs north and south between McFarland Blvd and Jemison Lane. This is a local commercial road with a posted speed of 25 mph.

Internal Access Road is an undivided two-lane roadway that currently connects to Trade Center Drive and will be extended to Jemison Lane. This road will provide internal access connectivity to the between the developments and the future outparcel developments.

Table 2: Roadway Characteristics

Roadway	# of Lanes	Posted Speed Limit (MPH)	Functional Classification
US 82/McFarland Blvd	4	55	Principal Arterial
Airport Road/64th Avenue	4	45	Minor Arterial
Jemison Lane	3	25	Local Commercial
Trade Center Drive	2	25	Local Commercial
Internal Access Road	2	25	Local Commercial

3.2. Traffic Count Data

Traffic counts for the intersections in the study were obtained on Tuesday, October 3rd, 2023. Peak hour turning movement counts were collected at the intersections of US 82/McFarland Blvd, Airport Road/64th Ave, and Jemison Lane. Additional data on Trade Center Drive was collected on Wednesday, November 15th, 2023. The existing turning movement counts are provided in Figures 4.

24-hr ADT counts were also collected on Wednesday, October 3rd, 2023. The collected daily ADT volumes on McFarland Blvd west of Airport Road/64th Ave was 26,853 vpd. The collected daily ADT volumes on the Airport Road/64th Avenue were 7,226 vpd.

Figure 3: Existing Lane Geometry

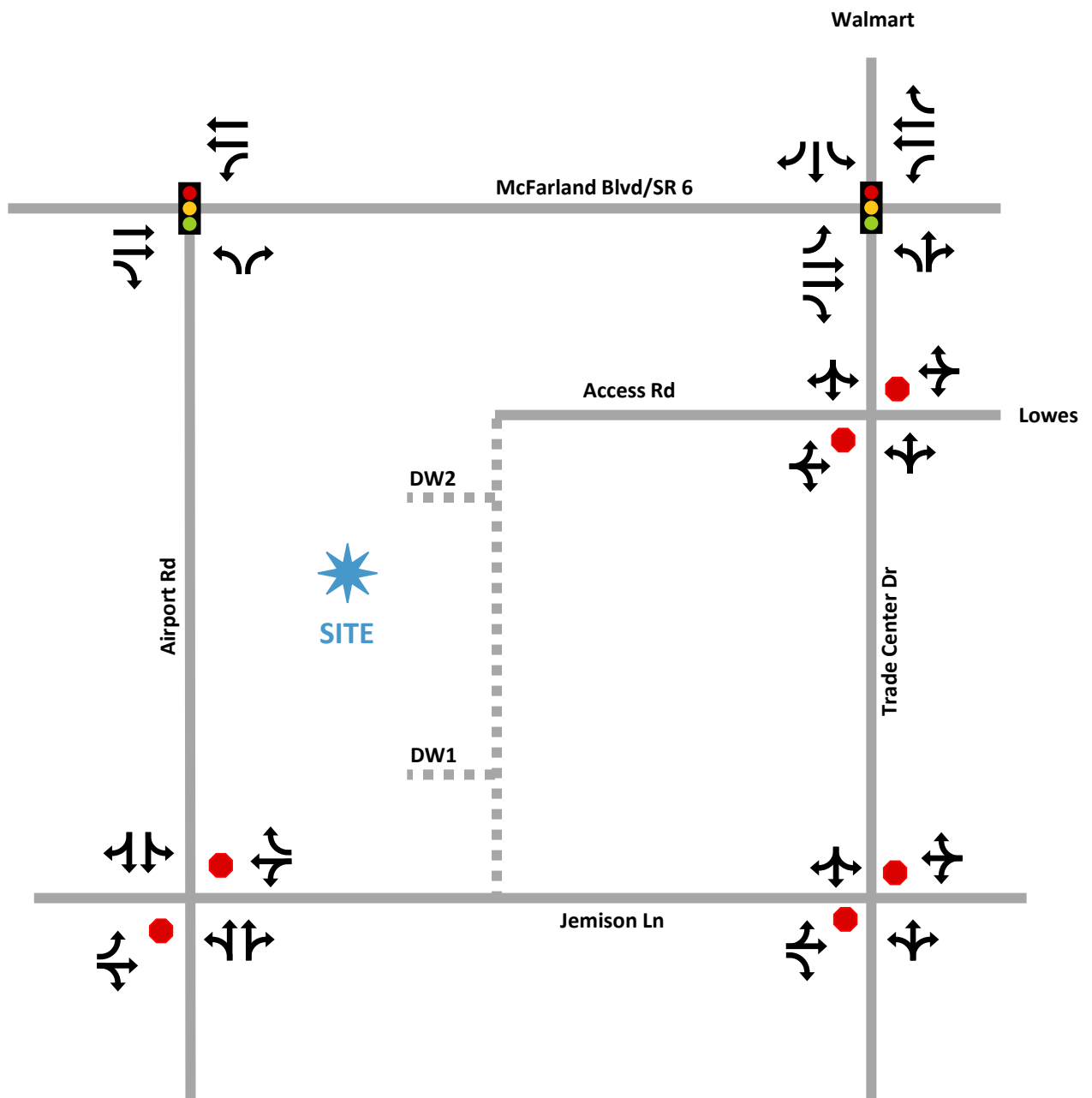
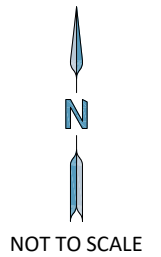
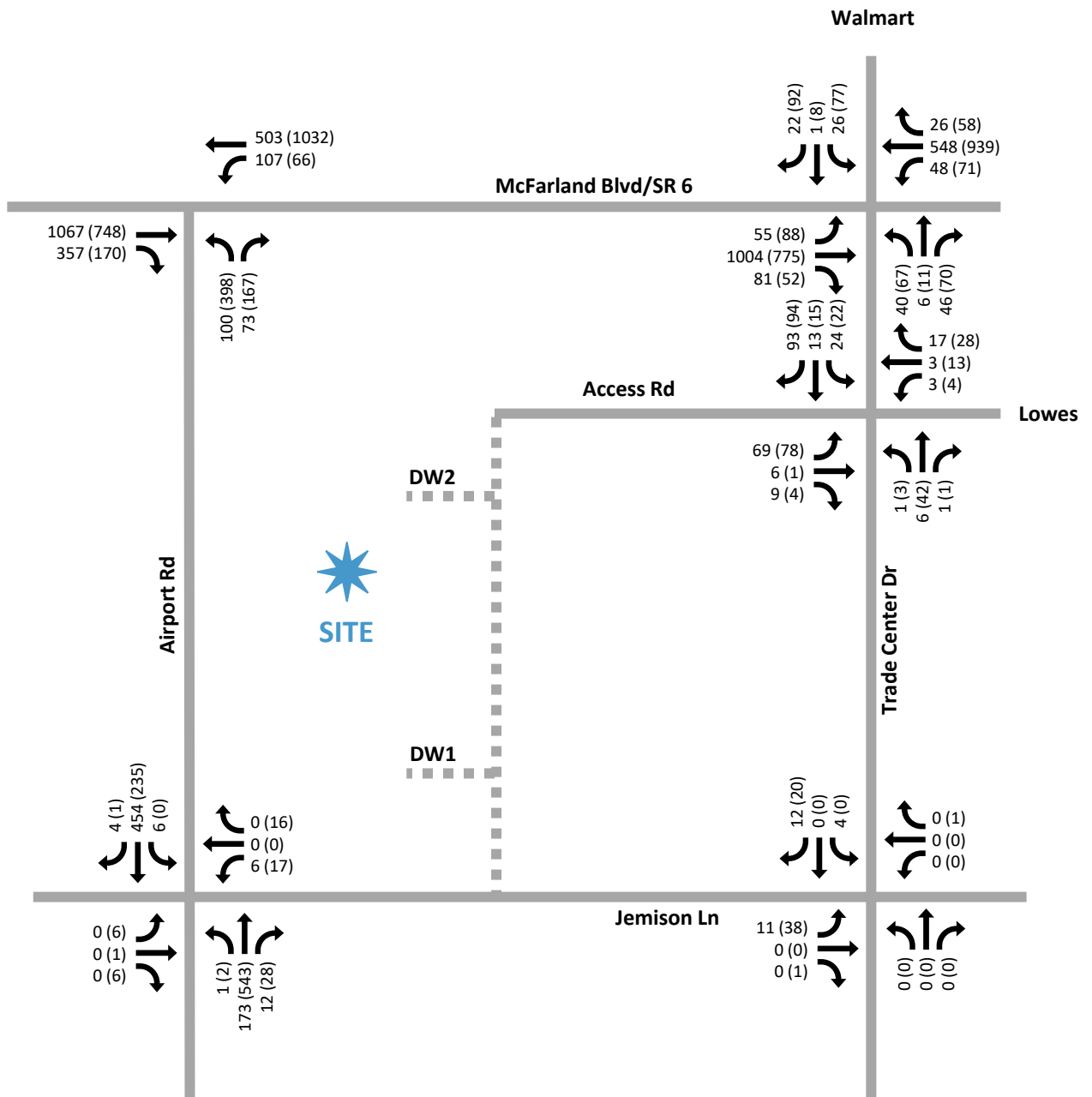
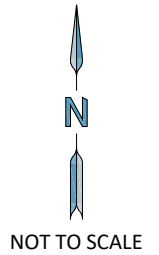


Figure 4: Existing (2023) Traffic Volumes

##(##) → AM (PM) Peak Hour Traffic Volume



3.3. Existing Conditions Capacity Analysis

Existing traffic volumes were entered into a *Synchro 11* model to perform capacity analysis of existing conditions for the AM and PM peak periods. The results of the capacity analysis are shown by lane group movement in Table 3. Average vehicular delays and level-of service, as defined by the Highway Capacity Manual (HCM) 6th Edition are presented, and 95th percentile queues from *SimTraffic 11* are shown. Full *Synchro* output reports are included Appendix C. The existing signal timing were provided by the Alabama Department of Transportation (ALDOT).

US 82/McFarland Blvd at Airport Road/64th Avenue

In the existing conditions this signalized intersection operates at LOS B in both the AM and PM peak periods. The NBL approach lane operates at LOS D in the AM peak period and LOS E in the PM peak period. There are 398 left turning vehicles per hour in the PM peak.

Airport Road/64th Avenue at Jemison Lane

In the existing conditions for the two-way stop-controlled intersection the WBL approach operates at LOS B in the AM peak period and LOS C in the PM peak period. There was not much eastbound traffic shown in the data collection.

It should be noted, for simplicity, this westbound approach was simulated as left turn lane and a separate shared through-right lane. This matches the eastbound approach of the intersection. *Synchro* would not allow the developed lane to serve the through lanes. Drivers do not typically anticipate changing lanes to continue straight in most situations. This will be a recommended change to this intersection and lane section.

US 82/McFarland Blvd at Trade Center Drive/Walmart Driveway

In the existing conditions this signalized intersection operates at LOS A in the AM peak and LOS B in PM peak period. The NB and SB approaches indicate operating at LOS E and LOS F in both peak periods. This is largely result of a coordinated signal system on the minor street approaches.

Trade Center Drive at Internal Access Road

In the existing conditions for the two-way stop-controlled intersection the minor street approaches operate at LOS B or better.

Trade Center Drive at Jemison Lane

There is currently not much existing traffic at this intersection. The road terminates just to the south of this intersection and the Lowes driveway on the east side of the intersection is the back entrance/delivery driveway.

Table 3: Existing Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95 th % Queue (ft)	Delay (s)	LOS	95 th % Queue (ft)
McFarland Blvd at Airport Rd/64th Ave	Signal Control	EBT	13.8	B	278	15.6	B	163
		EBR	0.0	-	-	0.0	-	-
		WBL	10.3	B	93	10.0	B	66
		WBT	0.2	A	102	0.9	A	213
		NBL	54.1	D	151	69.2	E	350
		NBR	0.0	-	-	0.0	-	-
		Intersection	12.0	B	-	18.2	B	-
Airport Rd/64th Ave at Jemison Lane	Side-Street Stop Control	EBL	0.0	-	-	14.4	B	16
		EBT/R	0.0	-	-	10.4	B	29
		WBL/T	12.6	B	19	18.1	C	35
		WBR	0.0	-	-	10.4	B	30
		NBL/T	8.4	A	-	7.8	A	21
		NBT/R	0.0	-	-	0.0	-	-
		SBL/T	7.6	A	10	8.8	A	14
		SBT/R	0.0	-	-	0.0	-	-
		Intersection	0.2	-	-	0.8	-	-
McFarland Blvd at Trade Center Dr	Signal Control	EBL	3.9	A	42	6.4	A	95
		EBT	0.6	A	34	0.3	A	111
		EBR	0.0	-	-	0.0	-	-
		WBL	3.7	A	63	5.2	A	60
		WBT	5.9	A	83	9.3	A	172
		WBR	4.9	A	17	6.7	A	22
		NBL	65.5	E	93	74.5	E	126
		NBT/R	74.7	E	68	96.8	F	82
		SBL	66.2	E	68	76.3	F	128
		SBT	67.5	E	5	78.0	E	32
		SBR	0.0	-	-	0.0	-	-
		Intersection	7.0	A	-	13.7	B	-
Trade Center Dr at Access Road/ Lowes Driveway	Side-Street Stop Control	EB	9.9	A	51	10.6	B	47
		WB	8.8	A	37	9.4	A	54
		NB	7.4	A	-	7.5	A	-
		SB	7.3	A	3	7.3	A	-
		Intersection	4.9	-	-	4.9	A	-
Trade Center Dr at Jemison Lane	Side-Street Stop Control	EBL/T	0.0	-	3	8.4	A	20
		EBR	0.0	-	-	0.0	-	-
		WB	0.0	-	-	0.0	-	-
		NB	0.0	-	-	0.0	-	-
		SB	0.0	-	-	0.0	-	-
		Intersection	0.0	-	-	0.0	-	-

4. Background Growth

4.1. Growth Rate

Background traffic growth is an analysis method used to estimate the growth of traffic that will contribute to the traffic of the roadway network in and around the study area. The background traffic does not include the proposed project that is being studied. The proposed development is expected to have a full build out by 2025, and a growth rate was estimated for the years between the existing volume counts and the future development build out.

For this location relatively conservative growth rate of 2.0% was selected for use in this analysis. This growth rate was applied to the existing volumes on the road network only and not to the private driveway locations. The growth rate was applied to the existing volumes only and was used for the Background (2025), Build (2025) analysis scenarios.

4.2. Background Conditions Capacity Analysis

Background conditions include a 2.0% growth rate per year applied to existing traffic volumes grown to the project build year 2025. The growth rate provides a conservative estimate of future traffic growth in the area. Background traffic volumes are shown graphically in Figure 6.

The background traffic volumes were entered into a *Synchro 11* model which uses the same lane geometry as existing conditions. The results of the capacity analysis are shown by lane group movement in Table 4. Average vehicular delays and level-of service, as defined by the Highway Capacity Manual (HCM) 6th Edition are presented, and 95th percentile queues from *SimTraffic 11* are shown. Full *Synchro* output reports are included Appendix C. These provided timings are used in the analysis of the existing, background and build conditions.

Figure 5: Background (2025) Traffic Volumes

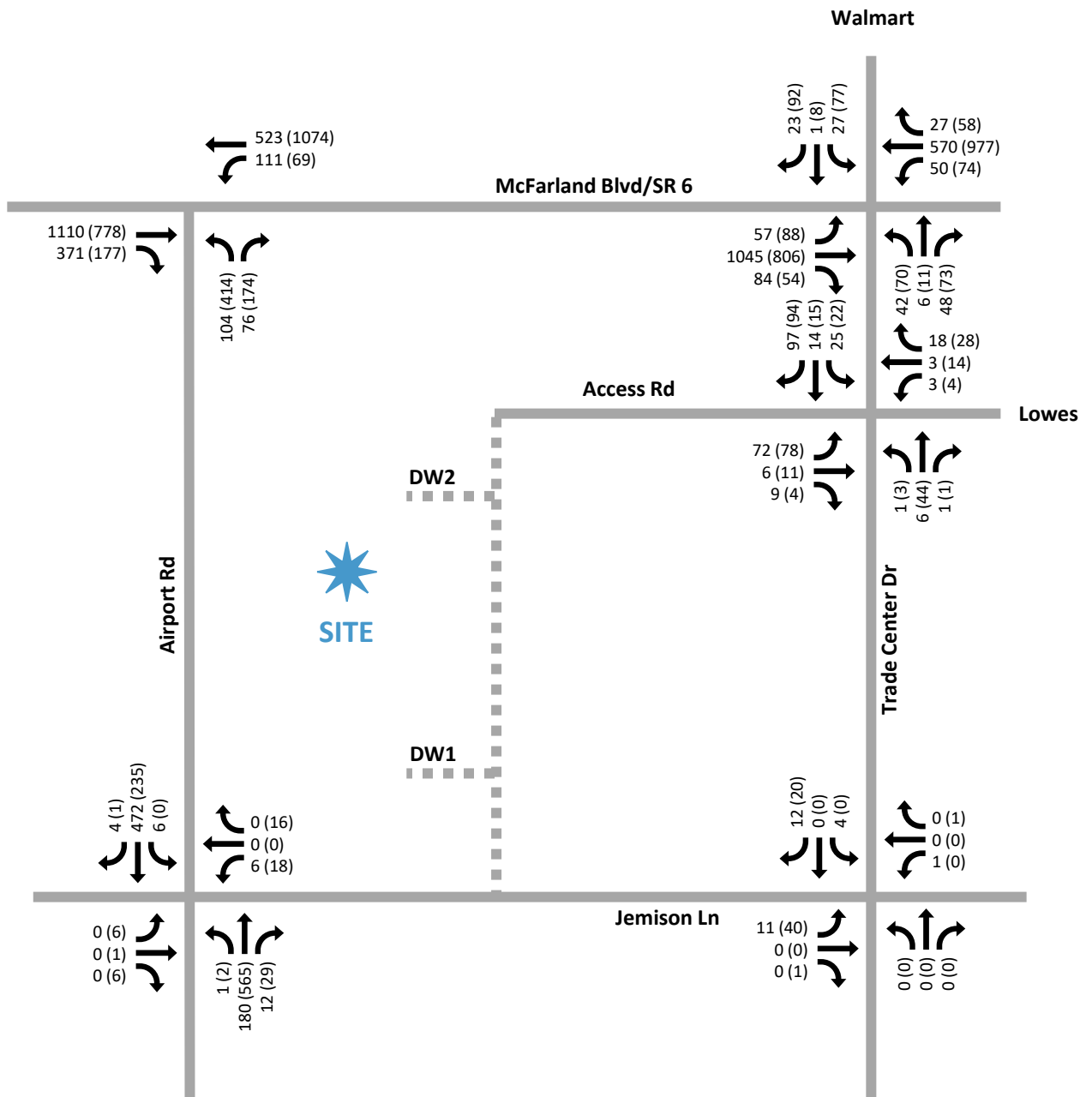
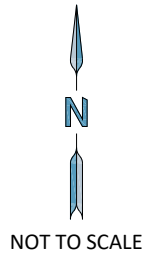
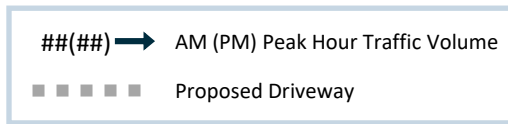


Table 4: Background (2025) Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95 th % Queue (ft)	Delay (s)	LOS	95 th % Queue (ft)
McFarland Blvd at Airport Rd/64th Ave	Signal Control	EBT	14.2	B	292	15.8	B	184
		EBR	0.0	-	-	0.0	-	-
		WBL	10.9	B	113	10.2	B	66
		WBT	0.2	A	105	0.9	A	211
		NBL	54.4	D	175	78.8	F	375
		NBR	0.0	-	-	0.0	-	-
		Intersection	12.3	B	-	20.0	B	-
Airport Rd/64th Ave at Jemison Lane	Side-Street Stop Control	EBL	0.0	-	-	14.5	B	20
		EBT/R	0.0	-	-	10.4	B	28
		WBL/T	12.8	B	21	18.7	C	39
		WBR	0.0	-	-	10.5	B	33
		NBL/T	8.4	A	-	7.8	A	64
		NBT/R	0.0	-	-	0.0	-	-
		SBL/T	7.7	A	7	8.9	A	26
		SBT/R	0.0	-	-	0.0	-	-
		Intersection	0.2	-	-	0.8	-	-
McFarland Blvd at Trade Center Dr	Signal Control	EBL	3.9	A	38	6.7	A	79
		EBT	0.4	A	30	0.3	A	152
		EBR	0.0	-	-	0.0	-	-
		WBL	3.8	A	66	5.3	A	67
		WBT	6.1	A	96	9.6	A	244
		WBR	5.0	A	24	6.8	A	33
		NBL	65.3	E	102	74.0	E	137
		NBT/R	74.4	E	88	96.6	F	114
		SBL	66.2	E	62	76.0	F	139
		SBT	67.5	E	8	77.9	E	30
		SBR	0.0	-	-	0.0	-	-
		Intersection	7.0	A	-	13.7	B	-
Trade Center Dr at Access Road/ Lowes Driveway	Side-Street Stop Control	EB	10.0	B	51	10.7	B	51
		WB	8.8	A	38	9.4	A	49
		NB	7.5	A	-	7.5	A	-
		SB	7.3	A	-	7.3	A	10
		Intersection	5.0	-	-	5.0	A	-
Trade Center Dr at Jemison Lane	Side-Street Stop Control	EBL/T	0.0	-	33	8.4	A	47
		EBR	0.0	-	-	0.0	-	10
		WB	0.0	-	-	0.0	-	12
		NB	0.0	-	-	0.0	-	-
		SB	0.0	-	-	0.0	-	-
		Intersection	0.0	-	-	0.0	-	-

US 82/McFarland Blvd at Airport Road/64th Avenue

In the background conditions this signalized intersection operates at LOS B in both the AM and PM peak periods. The NBL approach lane operates at LOS D in the AM peak period and degrades to LOS F in the PM peak period. This intersection is half-cycled during the PM peak signal timing plan.

Airport Road/64th Avenue at Jemison Lane

In the background conditions for the two-way stop-controlled intersection the WBL approach operates at LOS B in the AM peak period and LOS C in the PM peak period. There was not much eastbound traffic shown in the data collection.

US 82/McFarland Blvd at Trade Center Drive/Walmart Driveway

In the background conditions this signalized intersection continues to operate at LOS A in the AM peak and LOS B in PM peak period. The NB and SB approaches indicate operating at LOS E and LOS F in both peak periods. This is largely result of a coordinated signal system on the minor street approaches.

Trade Center Drive at Internal Access Road

In the background conditions for the two-way stop-controlled intersection the minor street approaches continue to operate at LOS B or better.

Trade Center Drive at Jemison Lane

There is currently not much existing traffic at this intersection. The road terminates just to the south of this intersection and the Lowes driveway on the east side of the intersection is the back entrance/delivery driveway.

5. Future Conditions

5.1. Trip Generation

Project trips for the commercial development were estimated using the equations presented in the Institute of Transportation Engineers' (ITE) latest Trip Generation Manual, 11th Ed., 2021 for the following fast-food restaurant development, expected to have full build-out in 2025. The ITE land use codes utilized for this development are listed below:

- Fast-Food Restaurant with Drive-Through Window ITE Code 934 – 6,101-SF

Having performed several studies for this fast-food restaurant, it is common to expect this fast-food restaurant chain to generate trip volumes that are higher than the typical trip generation weekday rates provided in the ITE manual. To better estimate the traffic volumes that may be generated at this site the higher peak hour of the generator trip rates for the weekends are used in place of the typical weekday peak hour rates. Tables 5 summarizes the trip generation for the proposed development for the appropriate land use codes. The full trip generation worksheets are presented in Appendix D.

Table 5: Project Trip Generation

Project Land Use	Density	ITE LUC	Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
Fast-Food Restaurant with Drive-Through Window	6,101 S.F.	934	3,759	1,880	1,879	337	172	165	336	161	175
Total Trips			3,759	1,880	1,879	337	172	165	336	161	175
Reductions for Internal Capture			0	0	0	0	0	0	0	0	0
Reductions for Modal Split			0	0	0	0	0	0	0	0	0
Reductions for Pass-By Trips			1,880	940	940	165	84	81	168	81	87
Total Net New Project Trips			1,879	940	939	172	88	84	168	80	88

This site is expected to generate 3,759 trips per day (1,880 inbound, 1,879 outbound). In the AM peak the site will generate 337 trips (172 inbound, 165 outbound). Approximately 50% of these trips are considered pass-by trips. The site will generate 336 trips (161 inbound, 175 outbound) during the PM peak period.

5.2. Distribution

The assignment and directional distribution of new project trips was based on residential area densities, existing traffic patterns, and trip destination densities (job centers, schools, and retail developments) in the surrounding area. The directional distribution for the new trips is shown in Figure 6. Pass-by trip distribution is shown in Figure 7.

The distribution assumes that most drivers will use the signal at Airport Road/64th Aven to access the restaurant via Jemison Lane. Some customers may utilize the internal access road as well but that may be largely “internal capture” type trips arriving from the other nearby commercial shopping centers such as Lowes and Walmart. It’s more likely that drivers will use the access road or Jemison Lane eastbound to utilize Trade Center Drive to head east on McFarland Rd.

5.3. Future Traffic Volumes

Project trips estimated in the trip generation and distributed to the roadway network are shown graphically in Figure 8. Future traffic volumes including the proposed development and background traffic growth are shown in Figure 9.

5.4. Turn Lane Analysis

Turn lane warrants were assessed per NCHRP Report 457: Evaluating Intersection Improvement recommendations which evaluates the necessity of a turn lane comparing the amount of turning movements with advancing and opposing volumes. Turn lane warrants that were analyzed were right turn from major road. The left turn lane is considered existing with two-way left turn lane. Turn lane warrant worksheets are provided in Appendix E.

- Airport Road/64th Ave at Jemison Lane
 - NCHRP for SB Left-turn Lane: **WARRANTED**
 - NCHRP for NB Right-turn Lane: *Not Warranted*

A left turn lane on Airport Road/64th Avenue at Jemison Lane is shown to be warranted for this four-lane section roadway. The northbound right turn lane is not warranted.

Figure 6: Trip Distribution

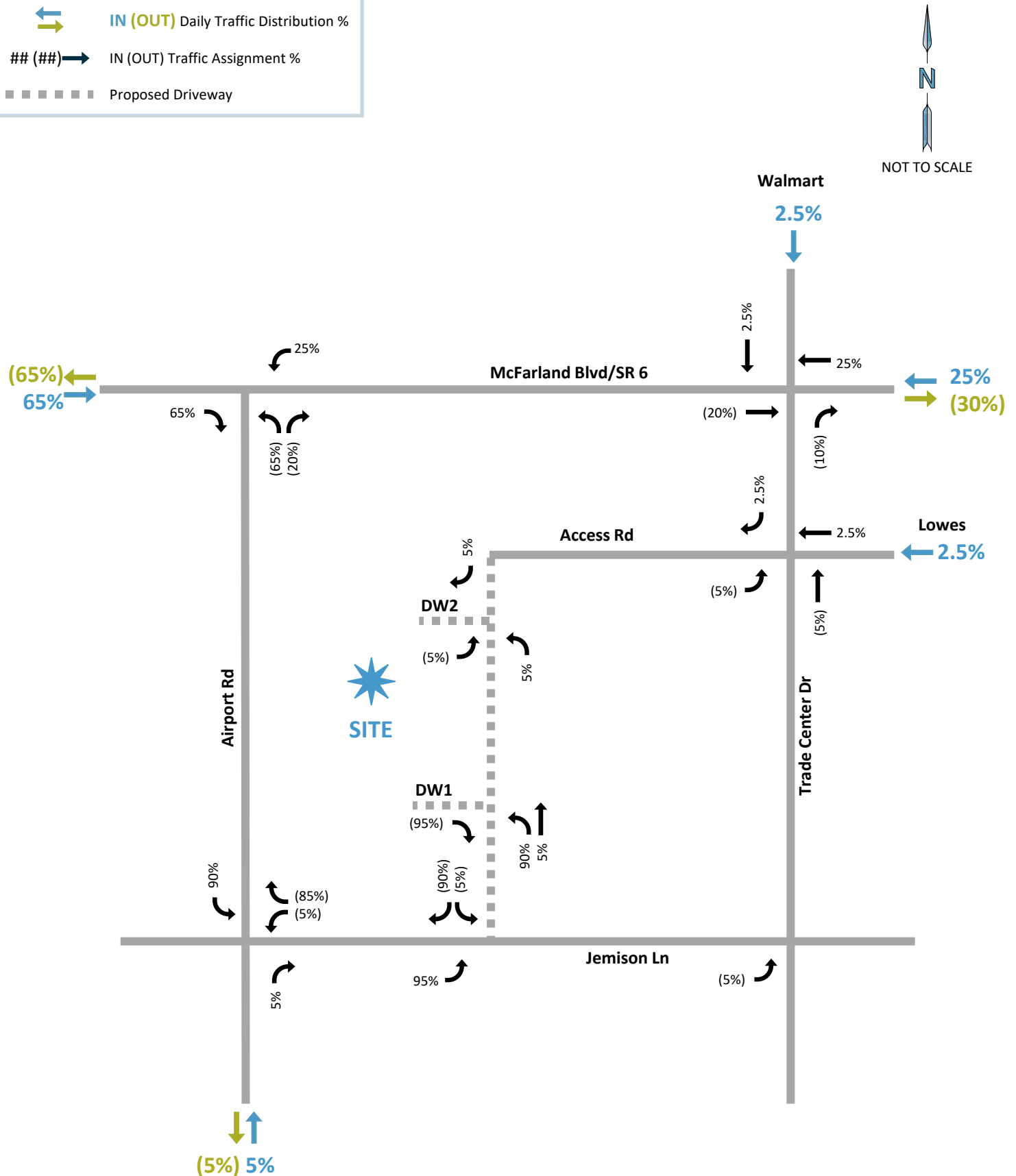
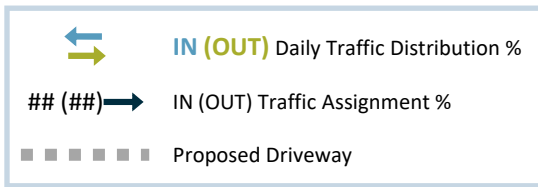


Figure 7: Pass-By Trip Distribution

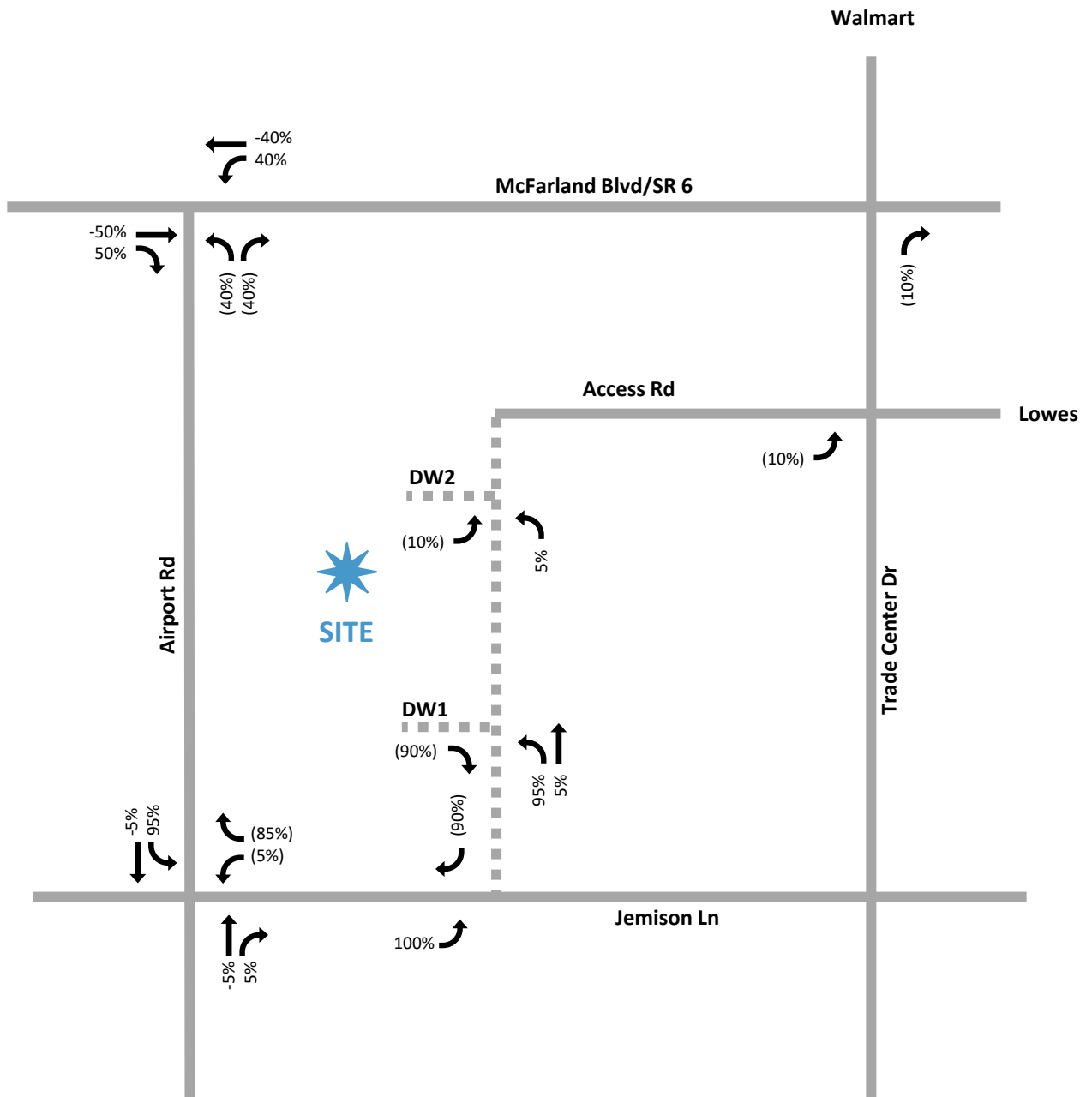
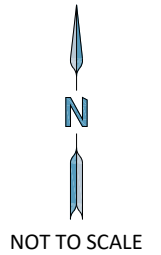
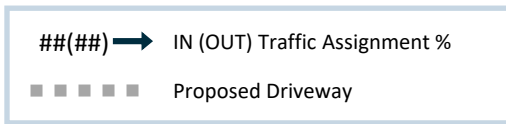


Figure 8: Project Trips

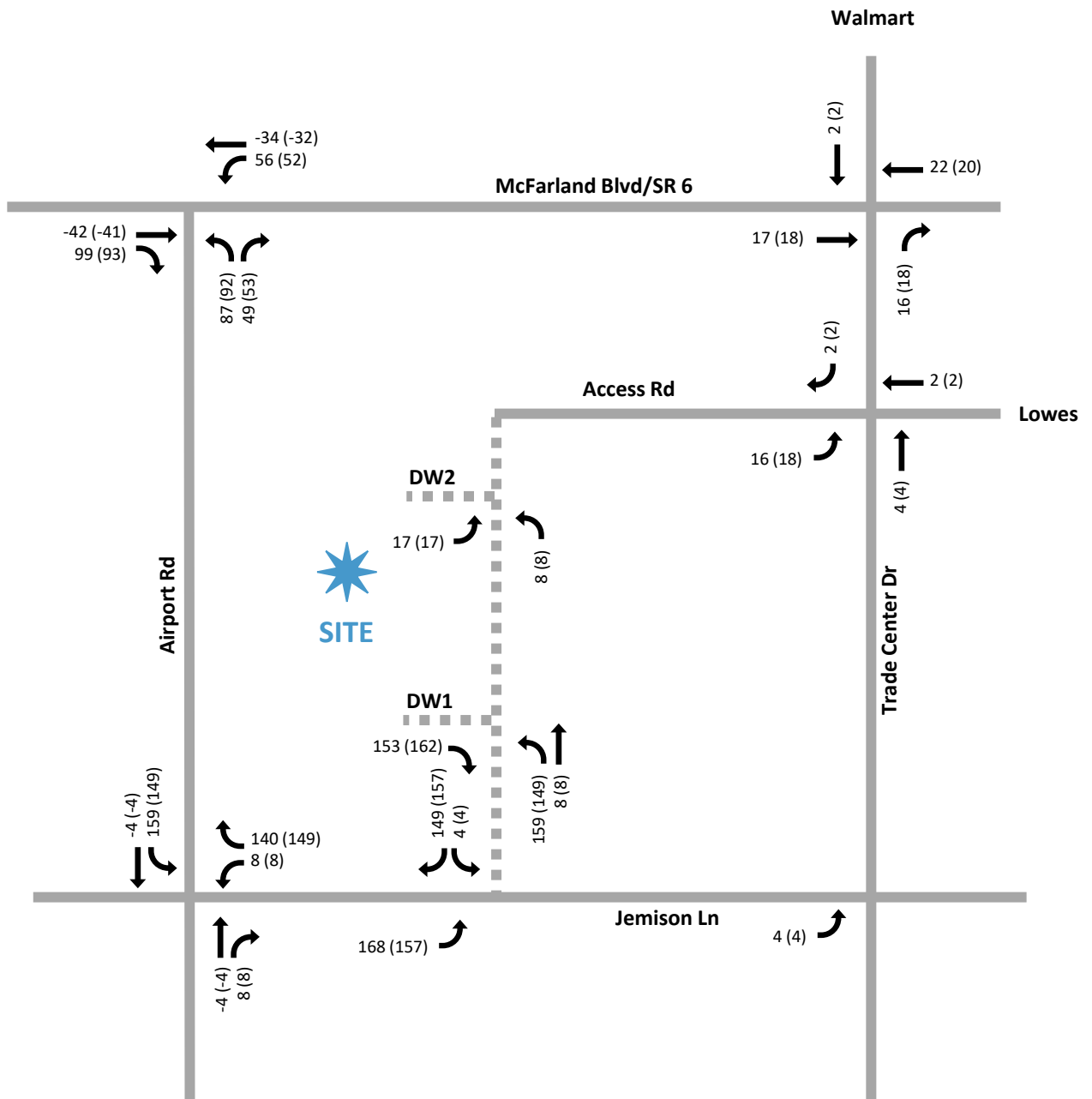
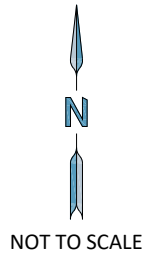
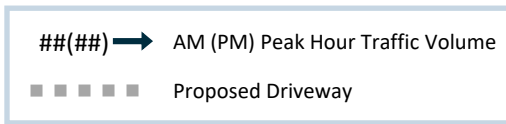


Figure 9: Future (2025) Traffic Volumes

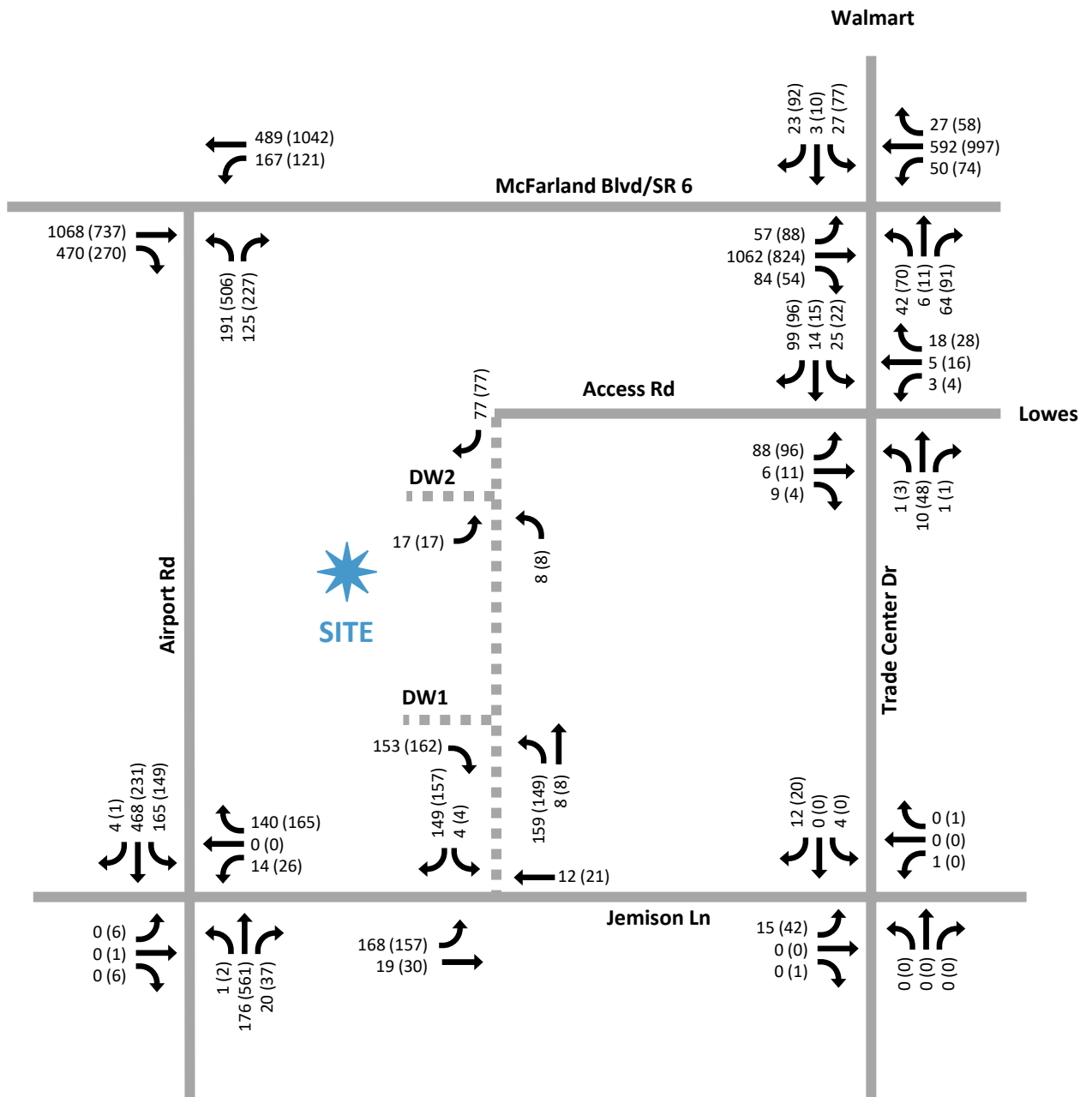
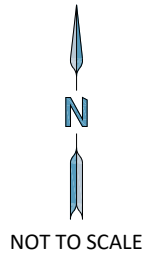
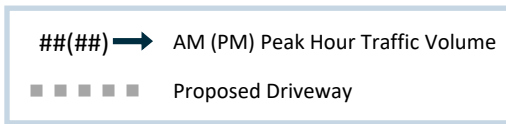
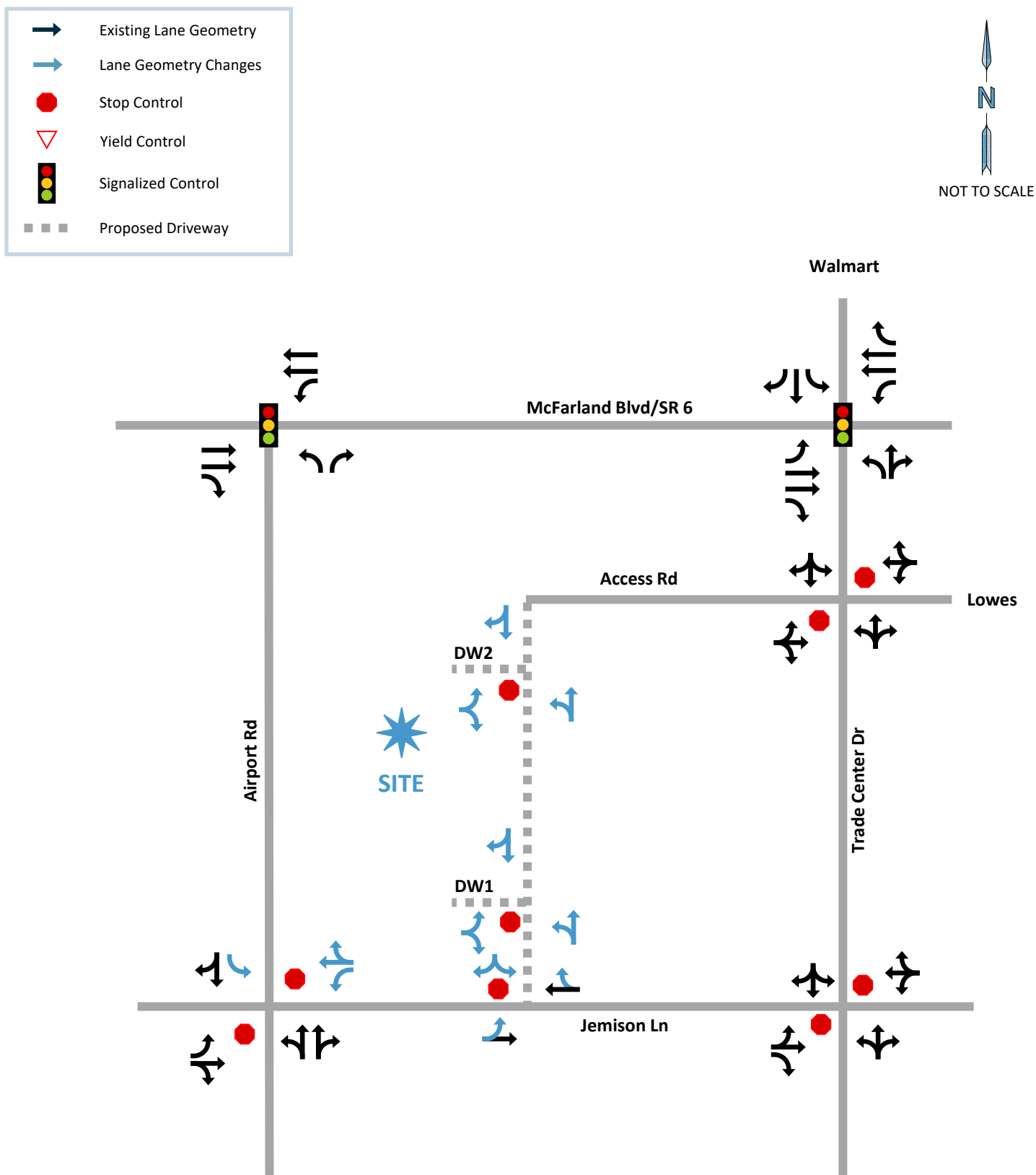


Figure 10: Future Lane Geometry



5.5. Future Conditions Capacity Analysis

Future build conditions were analyzed for capacity and queueing using the methodology set for existing and background conditions. Build conditions (2025) are shown in Table 6.

Table 6: Build (2025) Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95 th % Queue (ft)	Delay (s)	LOS	95 th % Queue (ft)
McFarland Blvd at Airport Rd/64th Ave	Signal Control	EBT	15.1	B	278	16.2	B	210
		EBR	0.0	-	-	0.0	-	-
		WBL	11.9	B	166	10.5	B	105
		WBT	0.2	A	102	0.9	A	221
		NBL	64.9	D	249	158.4	F	442
		NBR	0.0	-	-	0.0	-	327
		Intersection	16.0	B	-	39.2	D	-
Airport Rd/64th Ave at Jemison Lane	Side-Street Stop Control	EBL	0.0	-	-	30.4	D	22
		EBT/R	0.0	-	-	12.2	B	32
		WBL	21.8	B	32	36.5	E	73
		WBT/R	9.7	A	45	12.3	B	322
		NBL/T	8.4	A	10	7.8	A	200
		NBT/R	0.0	-	-	0.0	-	94
		SBL/T	8.1	A	49	9.7	A	79
		SBT/R	0.4	-	11	0.0	-	-
		Intersection	3.2	-	-	4.0	-	-
McFarland Blvd at Trade Center Dr	Signal Control	EBL	4.0	A	66	7.5	A	70
		EBT	0.7	A	50	0.3	A	157
		EBR	0.0	-	-	0.0	-	-
		WBL	3.8	A	58	5.8	A	63
		WBT	6.2	A	111	10.6	B	214
		WBR	5.0	A	8	7.4	A	22
		NBL	65.2	E	90	71.9	E	143
		NBT/R	81.5	F	72	95.4	F	161
		SBL	66.5	E	52	74.3	E	127
		SBT	67.5	E	8	75.9	E	127
		SBR	0.0	-	-	0.0	-	31
		Intersection	8.0	A	-	14.6	B	-
Trade Center Dr at Access Road/ Lowes Driveway	Side-Street Stop Control	EB	10.2	B	48	11.0	B	60
		WB	9.0	A	38	9.6	A	51
		NB	7.5	A	-	7.5	A	10
		SB	7.3	A	10	7.4	A	10
		Intersection	5.3	-	-	5.4	A	-
Trade Center Dr at Jemison Lane	Side-Street Stop Control	EBL/T	0.0	-	36	8.4	A	53
		EBR	0.0	-	-	0.0	-	5
		WB	0.0	-	-	0.0	-	12
		NB	0.0	-	-	0.0	-	-
		SB	0.0	-	-	0.0	-	-
		Intersection	0.0	-	-	0.0	-	-

Table 6: Build (2025) Conditions Capacity Analysis (continued)

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95 th % Queue (ft)	Delay (s)	LOS	95 th % Queue (ft)
Jemison Lane at Internal Access Road	Side-Street Stop Control	EBL	7.5	A	11	7.5	A	21
		EBT	-	-	-	-	-	-
		WBT/R	-	-	-	-	-	18
		SB	9.1	A	51	9.2	A	82
		Intersection	7.6	-	-	7.2	-	-
Access Road at Driveway 1	Side-Street Stop Control	EB	8.9	A	66	9.0	A	119
		NB	7.5	A	-	7.5	A	-
		SB	-	-	-	-	-	-
		Intersection	7.9	-	-	8.0	-	-
Access Road at Driveway 2	Side-Street Stop Control	EB	8.9	A	36	8.9	A	35
		NB	7.4	A	-	7.4	A	12
		SB	-	-	-	-	-	-
		Intersection	2.1	-	-	2.1	-	-

US 82/McFarland Blvd at Airport Road/64th Avenue

In the build conditions this signalized intersection operates at LOS B in the AM peak period and degrades to LOS D in the PM peak period. The NBL approach lane operates at LOS D in the AM peak period and LOS F in the PM peak period with 158.4 seconds of approach delay.

The queuing backup during the PM peak periods can be seen to impact queuing at other intersection on Airport Road/64th Avenue and Jemison Lane.

Airport Road/64th Avenue at Jemison Lane

In the build conditions for the two-way stop-controlled intersection the WBL approach operates at LOS B in the AM peak period and LOS E in the PM peak period. The 95th percentile queuing for the WBT/R approach lane is shown to be 322-ft.

US 82/McFarland Blvd at Trade Center Drive/Walmart Driveway

In the build conditions this signalized intersection continues to operate at LOS A in the AM peak and LOS B in PM peak period. The NB and SB approaches indicate operating at LOS E and LOS F in both peak periods.

Trade Center Drive at Internal Access Road

In the build conditions for the two-way stop-controlled intersection the minor street approaches continue to operate at LOS B or better.

Trade Center Drive at Jemison Lane

There is currently not much existing traffic at this intersection. This project is expected to only generate a minor number of trips through this intersection.

Jemison Lane at Internal Access Road

In the build conditions for the two-way stop-controlled intersection the minor street approaches continue to operate at LOS A.

Internal Access Road at Driveway 1

In the build conditions for the two-way stop-controlled intersection the minor street approaches continue to operate at LOS A.

Internal Access Road at Driveway 2

In the build conditions for the two-way stop-controlled intersection the minor street approaches continue to operate at LOS A.

5.6. Future Conditions Capacity Alternate Analysis

The future build PM peak period analysis indicates there may be some issues with delay and queuing at the signalized intersection of McFarland Blvd at Airport Road/64th Avenue that are having impact to the area, including increasing queuing through Jemison Lane intersections and the internal access road with the fast-food restaurant. This intersection was evaluated with potential changes to mitigate the delay and queuing that has been demonstrated. One such option includes making a signal timing change to increase the Airport Road/64th Avenue split time. The other option includes converting the right-turn only lane to a shared left-right lane and providing the intersection with two northbound turn lanes.

The analysis provided in Table 7 below shows the impacts of the potential mitigation features for the nearby intersections most impacted the delays associated with intersection for McFarland Blvd at Airport Road/64th Avenue.

Table 7: Build (2025) Alternate Analysis

Intersection	Control	Lane Group Movement	PM Peak Hour - Signal Timing			Lane Group Movement	PM Peak Hour - Dual Left Airport Rd		
			Delay (s)	LOS	95 th % Queue (ft)		Delay (s)	LOS	95 th % Queue (ft)
McFarland Blvd at Airport Road	Signal Control	EBT	25.4	C	270	EBT	16.2	B	219
		EBR	0.0	-	-	EBR	0.0	-	-
		WBL	16.4	B	119	WBL	10.5	B	105
		WBT	2.6	A	255	WBT	0.9	A	227
		NBL	43.0	D	339	NBL	54.5	D	236
		NBR	0.0	-	-	NBL/R	0.0	-	246
		Intersection	18.8	B	-	Intersection	15.0	B	-
Airport Road at Jemson Lane	Side-Street Stop Control	EBL	30.4	D	25	EBL	30.4	D	20
		EBT/R	12.2	B	26	EBT/R	12.2	B	32
		WBL	36.5	E	46	WBL	36.5	E	56
		WBT/R	12.3	B	70	WBT/R	12.3	B	74
		NBL/T	7.8	A	15	NBL/T	7.8	A	5
		NBT/R	0.0	-	8	NBT/R	0.0	-	5
		SBL/T	9.7	A	74	SBL/T	9.7	A	65
		SBT/R	0.0	-	17	SBT/R	0.0	-	-
		Intersection	4.0	-	-	Intersection	4.0	-	-
Jemison Lane at Access Road	Side-Street Stop Control	EBL	7.5	A	16	EBL	7.5	A	16
		EBT	-	-	-	EBT	-	-	-
		WBT/R	-	-	-	WBT/R	-	-	-
		SB	9.2	A	50	SB	9.2	A	55
		Intersection	7.2	-	-	Intersection	7.2	-	-
Access Road at Driveway 1	Side-Street Stop Control	EB	9.0	A	119	EB	9.0	A	119
		NB	7.5	A	-	NB	7.5	A	-
		SB	-	-	-	SB	-	-	-
		Intersection	8.0	-	-	Intersection	8.0	-	-
Access Road at Driveway 2	Side-Street Stop Control	EB	8.9	A	31	EB	8.9	A	32
		NB	7.4	A	10	NB	7.4	A	11
		SB	-	-	-	SB	-	-	-
		Intersection	2.1	-	-	Intersection	2.1	-	-

US 82/McFarland Blvd at Airport Road/64th Avenue

By increasing the side street approach split time by 10 seconds the overall intersection improves to LOS B with 18.8 seconds of average intersection delay in the PM peak period. This does have a small increase in delay for the eastbound approach. This could be considered a lower cost, more immediate solution to address increased delays that the site may produce. Synchro calculates yield control or channelized right turn delays at 0.0 and are removed from the intersection.

When the northbound approach is simulated with a left turn lane and a shared left-right turn lane the intersection improves to LOS B with 15.0 seconds of intersection delay. Without the separate right turn lane this approach does increase in delay from option 1 described above but the signal is better able to serve the left turn demand that has increased to 506 vph in the PM peak period.

Airport Road/64th Avenue at Jemison Lane

At this intersection for both conditions the WBT/R lane approach has a decrease in the queuing most likely because the queuing from McFarland Blvd is not backing up through this intersection.

Jemison Lane at Internal Access Road

At this intersection for both conditions the SB approach for the access road has a decrease in the queuing when compared to the proposed build conditions.

6. Conclusions and Recommendations

The proposed site is located on the southeast corner of US 82/McFarland Blvd at Airport Road on the north side of Jemison Lane. The site is planned to be developed as an outparcel between Airport Road and Trade Center Drive, as a multiparcel commercial development area. There is currently an Aldi's Grocery Store and fast-food restaurant that will share internal-parcel access with the extension of the internal access road. There is an existing Lowes shopping center development on the east side of Trade Center Drive. The proposed development, at full build-out, will consist of a 6,101-SF fast-food restaurant with a drive-through window.

The conclusions and recommendations separated by intersection are as follows:

US 82/McFarland Blvd at Airport Road/64th Avenue

- In the build conditions this signalized intersection degrades to LOS D in the PM peak period. The NBL approach lane operates at LOS F in the PM peak period with 158.4 seconds of approach delay. The additional delay and queuing at this intersection begins to impact queuing for the intersection south at Jemison and at the access road from the proposed restaurant.
- When the signal timings are modified to provide more split time for the northbound approach the intersection improves to LOS B and reduces the associated queuing in the area. Adjusting the signal timings can serve as an immediate short-term solution to mitigate impacts from the new site. Additionally, the current PM cycle length is half cycled and that maybe be able to be changed to a full cycle corridor cycle length with the increased traffic from the side street Airport Road.
- The intersection is also shown to improve to LOS B when the right-turn only lane is converted to a shared left-right turn lane. The second shared left-right turn lane is better able to serve the increased left turn demand and provide additional storage capacity. This may be considered as a long-term solution after the future traffic impacts are observed to be necessary in the future.

Airport Road/64th Avenue at Jemison Lane

- It is recommended that this westbound approach be converted to a left-turn only lane and a separate through-right lane. The lanes will serve as de facto left and right turn only lanes with minor through traffic, but the outer through-right lane better aligns with the driveway across the street.
- There is expected to be some delay for vehicles turning left from the westbound approach mainly associated with the volumes on Airport Road/64th Avenue.
- A southbound left turn lane on Airport Road is warranted per NCHRP Report 457: Evaluating Intersection Improvement recommendations.

- A southbound turn lane could be provided with changes to striping allowing for one inbound lane from McFarland Blvd with a developed left turn lane provided in the second existing inside turn lane. Hatching can be provided to the north to develop the left turn lane. Airport Road will then return to two through lanes southbound to the south of the intersection with Jemison Lane.

US 82/McFarland Blvd at Trade Center Drive/Walmart Driveway

- This project is expected to have minor impacts to the signal operation at this intersection.
- As noted in section 3.2 the turning movements at this intersection are interpolated from a different project with a similar intersection design and commercial land uses is the area. The data for this intersection is planned to be recollected so this intersection can be reevaluated if necessary.

Trade Center Drive at Internal Access Road

- This project is expected to have minor impacts to the signal operation at this intersection.
- The existing data at this intersection is also interpolated as described in section 3.2.

Trade Center Drive at Jemison Lane

- There is currently not much existing traffic at this intersection. This project is expected to only generate a minor number of trips through this intersection.
- This eastbound approach also has a shared through-left and a separate right. It's recommended making this a dedicated left turn lane and separate shared through-right lane, unless the through is not aligned with the driveway across the street.

Jemison Lane at Internal Access Road

- In the build conditions for the two-way stop-controlled intersection the minor street approaches continue to operate at LOS A.

Internal Access Road at Driveway 1

- In the build conditions for the two-way stop-controlled intersection the minor street approaches continue to operate at LOS A.

Internal Access Road at Driveway 2

- In the build conditions for the two-way stop-controlled intersection the minor street approaches continue to operate at LOS A.

Appendix A: Site Plan

Appendix B: Traffic Counts

National Data & Surveying Services

Intersection Turning Movement Count

Location: Airport Rd & US 82/SR 6/McFarland Blvd
City: Northport
Control: Signalized

Project ID: 23-210017-001
Date: 10/3/2023

Data - Total

NS/EW Streets:	Airport Rd				Airport Rd				US 82/SR 6/McFarland Blvd				US 82/SR 6/McFarland Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	2 ET	1 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
6:30 AM	13	0	9	0	0	0	0	0	0	259	89	0	23	116	0	0	509
6:45 AM	18	0	13	0	0	0	0	0	0	209	88	0	32	114	0	0	474
7:00 AM	22	0	29	0	0	0	0	0	0	202	69	0	32	112	0	0	466
7:15 AM	24	0	20	0	0	0	0	0	0	285	89	0	19	127	0	0	564
7:30 AM	25	0	9	0	0	0	0	0	0	291	106	0	26	141	0	0	598
7:45 AM	29	0	15	0	0	0	0	0	0	289	93	0	30	123	0	0	579
8:00 AM	27	0	14	0	0	0	0	0	0	224	44	0	22	132	0	1	464
8:15 AM	22	0	20	0	0	0	0	0	0	178	46	0	17	98	0	0	381
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	180	0	129	0	0	0	0	0	0	1937	624	0	201	963	0	1	4035
	58.25%	0.00%	41.75%	0.00%					0.00%	75.63%	24.37%	0.00%	17.25%	82.66%	0.00%	0.09%	
PEAK HR :	07:00 AM - 08:00 AM				0	0	0	0	0	1067	357	0	107	503	0	0	TOTAL
PEAK HR VOL :	100	0	73	0	0.000	0.000	0.000	0.000	0.000	0.917	0.842	0.000	0.836	0.892	0.000	0.000	2207
PEAK HR FACTOR :	0.862	0.000	0.629	0.000						0.897				0.913			0.923
			0.848														
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	2 ET	1 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	58	0	38	0	0	0	0	0	0	184	26	0	8	241	0	0	555
4:15 PM	80	0	28	0	0	0	0	0	0	171	24	0	9	250	0	1	563
4:30 PM	82	0	41	0	0	0	0	0	0	178	38	0	14	271	0	0	624
4:45 PM	94	0	30	0	0	0	0	0	0	170	32	0	17	219	0	0	562
5:00 PM	105	0	65	0	0	0	0	0	0	219	51	0	19	260	0	0	719
5:15 PM	117	0	31	0	0	0	0	0	0	181	49	0	16	282	0	0	676
5:30 PM	85	0	22	0	0	0	0	0	0	140	32	0	14	236	0	0	529
5:45 PM	57	0	22	0	0	0	0	0	0	166	22	0	23	219	0	2	511
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	678	0	277	0	0	0	0	0	0	1409	274	0	120	1978	0	3	4739
	70.99%	0.00%	29.01%	0.00%					0.00%	83.72%	16.28%	0.00%	5.71%	94.15%	0.00%	0.14%	
PEAK HR :	04:30 PM - 05:30 PM				0	0	0	0	0	748	170	0	66	1032	0	0	TOTAL
PEAK HR VOL :	398	0	167	0	0.000	0.000	0.000	0.000	0.000	0.854	0.833	0.000	0.868	0.915	0.000	0.000	2581
PEAK HR FACTOR :	0.850	0.000	0.642	0.000						0.850				0.921			0.897
			0.831														

National Data & Surveying Services

Intersection Turning Movement Count

Location: Airport Rd & Jemison Ln
City: Northport
Control: 1-Way Stop(WB)

Project ID: 23-210017-002
Date: 10/3/2023

Data - Total

NS/EW Streets:	Airport Rd				Airport Rd				Jemison Ln				Jemison Ln				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0.5 ET	0.5 ER	0 EU	0.5 WL	0.5 WT	1 WR	0 WU	
6:30 AM	0	24	1	0	1	111	0	0	0	0	0	0	3	0	0	0	140
6:45 AM	0	29	2	0	0	118	0	0	0	0	0	0	3	0	0	0	152
7:00 AM	0	54	6	0	0	103	1	0	0	0	0	0	1	0	0	0	165
7:15 AM	0	41	2	0	1	106	0	0	0	0	0	0	0	0	0	0	150
7:30 AM	1	35	3	0	1	132	0	0	0	0	0	0	1	0	0	0	173
7:45 AM	0	43	1	0	4	113	3	0	0	0	0	0	4	0	0	0	168
8:00 AM	2	40	9	0	6	61	2	0	0	0	0	0	3	0	1	0	124
8:15 AM	1	41	4	0	4	59	0	0	0	0	0	0	2	1	1	0	113
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	4	307	28	0	17	803	6	0	0	0	0	0	17	1	2	0	1185
	1.18%	90.56%	8.26%	0.00%	2.06%	97.22%	0.73%	0.00%					85.00%	5.00%	10.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	1	173	12	0	6	454	4	0	0	0	0	0	6	0	0	0	656
PEAK HR FACTOR :	0.250	0.801	0.500	0.000	0.375	0.860	0.333	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.948
			0.775				0.872							0.375			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0.5 ET	0.5 ER	0 EU	0.5 WL	0.5 WT	1 WR	0 WU	
4:00 PM	0	87	4	0	0	33	1	1	0	0	1	0	3	0	4	0	134
4:15 PM	0	107	2	0	0	32	1	0	0	0	1	0	2	0	1	0	146
4:30 PM	0	120	8	0	0	50	0	0	1	1	0	0	7	0	3	0	190
4:45 PM	1	114	5	0	0	50	0	0	2	0	1	0	1	0	7	0	181
5:00 PM	1	174	8	0	0	70	1	0	2	0	2	0	3	0	3	0	264
5:15 PM	0	135	7	0	0	65	0	0	1	0	3	0	6	0	3	0	220
5:30 PM	0	111	5	0	0	46	0	0	0	0	0	0	0	0	2	0	164
5:45 PM	0	69	4	0	0	42	0	1	1	0	2	0	3	0	2	0	124
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	917	43	0	0	388	3	2	7	1	10	0	25	0	25	0	1423
	0.21%	95.32%	4.47%	0.00%	0.00%	98.73%	0.76%	0.51%	38.89%	5.56%	55.56%	0.00%	50.00%	0.00%	50.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	2	543	28	0	0	235	1	0	6	1	6	0	17	0	16	0	855
PEAK HR FACTOR :	0.500	0.780	0.875	0.000	0.000	0.839	0.250	0.000	0.750	0.250	0.500	0.000	0.607	0.000	0.571	0.000	0.810
			0.783				0.831				0.813				0.825		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Trade Ctr Dr & Jemison Ln
City: Northport
Control: 1-Way Stop(EB)

Project ID: 23-210017-003
Date: 10/3/2023

Data - Total

NS/EW Streets:	Trade Ctr Dr				Trade Ctr Dr				Jemison Ln				Jemison Ln				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
6:30 AM	0	0	0	0	0	0	3	1	2	0	0	0	0	0	0	0	6
6:45 AM	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5
7:00 AM	0	0	0	0	1	0	1	0	5	0	0	0	0	0	0	0	7
7:15 AM	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	4
7:30 AM	0	0	0	0	1	0	2	0	1	0	0	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	8	0	2	0	0	0	0	0	1	0	11
8:00 AM	0	0	0	0	0	1	6	0	6	0	0	0	0	0	1	0	14
8:15 AM	0	1	0	0	0	0	7	0	3	0	0	0	0	0	0	0	11
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	1	0	0	2	1	31	1	24	0	0	0	0	0	2	0	62
	0.00%	100.00%	0.00%	0.00%	5.71%	2.86%	88.57%	2.86%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM				1	1	23	0	12	0	0	0	0	0	2	0	40
PEAK HR VOL :	0	1	0	0	0.250	0.250	0.719	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.714
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.250	0.250	0.781	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	1	0	0	0	0	0	4	0	2	0	1	0	0	0	0	0	8
4:15 PM	1	0	0	0	1	0	3	0	5	0	0	0	0	0	1	0	10
4:30 PM	0	0	0	0	0	0	6	0	10	0	0	0	0	0	0	0	17
4:45 PM	0	0	0	0	0	0	6	0	7	0	1	0	0	0	0	0	14
5:00 PM	0	0	0	0	0	0	5	0	12	0	0	0	0	0	0	0	17
5:15 PM	0	0	0	0	0	0	3	0	9	0	0	0	0	0	0	0	12
5:30 PM	0	0	0	0	1	0	2	0	5	0	0	0	0	0	0	0	8
5:45 PM	0	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	9
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	0	0	0	2	0	33	0	54	0	2	0	0	0	2	0	95
	100.00%	0.00%	0.00%	0.00%	5.71%	0.00%	94.29%	0.00%	96.43%	0.00%	3.57%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM				0	0	20	0	38	0	1	0	0	0	1	0	60
PEAK HR VOL :	0	0	0	0	0.000	0.000	0.833	0.000	0.792	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.882
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.792	0.000	0.250	0.000	0.000	0.000	0.250	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Trade Ctr Dr & McFarland Blvd/SR 6
City: Northport
Control: Signalized

Project ID: 23-210030-001
Date: 11/15/2023

Data - Total

NS/EW Streets:	Trade Ctr Dr				Trade Ctr Dr				McFarland Blvd/SR 6				McFarland Blvd/SR 6				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0.5 NT	0.5 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	1 WR	0 WU	
6:30 AM	5	2	7	0	1	2	5	0	7	232	14	0	12	101	2	0	390
6:45 AM	8	0	10	0	6	0	7	0	4	192	16	0	7	135	6	0	391
7:00 AM	3	1	11	0	6	0	11	0	12	217	17	1	10	136	6	0	431
7:15 AM	11	0	16	0	9	1	2	0	11	261	18	0	7	122	6	0	464
7:30 AM	13	2	15	0	6	0	2	0	16	264	20	0	18	151	7	0	514
7:45 AM	13	3	4	0	5	0	7	0	15	258	26	0	13	130	7	0	481
8:00 AM	15	3	16	0	12	0	9	0	16	214	21	0	8	103	5	0	422
8:15 AM	4	0	13	0	3	1	9	0	13	182	15	0	8	118	5	0	371
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	72	11	92	0	48	4	52	0	94	1820	147	1	83	996	44	0	3464
	41.14%	6.29%	52.57%	0.00%	46.15%	3.85%	50.00%	0.00%	4.56%	88.26%	7.13%	0.05%	7.39%	88.69%	3.92%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	40	6	46	0	26	1	22	0	54	1000	81	1	48	539	26	0	1890
PEAK HR FACTOR :	0.769	0.500	0.719	0.000	0.722	0.250	0.500	0.000	0.844	0.947	0.779	0.250	0.667	0.892	0.929	0.000	0.919
	0.767				0.721				0.947				0.871				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0.5 NT	0.5 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	1 WR	0 WU	
4:00 PM	15	4	19	0	20	2	25	0	18	178	11	0	14	241	19	0	566
4:15 PM	13	0	17	0	22	2	25	0	27	178	7	1	18	226	19	1	556
4:30 PM	21	5	14	0	14	3	27	0	19	171	14	0	14	235	14	0	551
4:45 PM	16	1	16	0	17	0	13	0	15	185	10	0	10	195	16	1	495
5:00 PM	13	2	24	0	24	3	30	0	33	215	12	0	23	211	16	0	606
5:15 PM	17	3	16	0	22	2	22	0	21	191	16	0	21	246	12	2	591
5:30 PM	17	4	23	0	16	1	22	0	19	131	14	0	16	212	16	0	491
5:45 PM	21	7	14	0	13	3	18	0	8	141	11	0	14	238	16	0	504
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	133	26	143	0	148	16	182	0	160	1390	95	1	130	1804	128	4	4360
	44.04%	8.61%	47.35%	0.00%	42.77%	4.62%	52.60%	0.00%	9.72%	84.45%	5.77%	0.06%	6.29%	87.32%	6.20%	0.19%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	67	11	70	0	77	8	92	0	88	762	52	0	68	887	58	3	2243
PEAK HR FACTOR :	0.798	0.550	0.729	0.000	0.802	0.667	0.767	0.000	0.667	0.886	0.813	0.000	0.739	0.901	0.906	0.375	0.925
	0.925				0.776				0.867				0.904				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Trade Ctr Dr & Aldi/Lowes Internal Access Dwy
City: Northport
Control: 2-Way Stop (EB/WB)

Project ID: 23-210030-002
Date: 11/15/2023

Data - Total

NS/EW Streets:	Trade Ctr Dr				Trade Ctr Dr				Aldi/Lowes Internal Access Dwy				Aldi/Lowes Internal Access Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
6:30 AM	0	0	0	0	6	0	23	0	13	3	3	0	0	1	3	0	52
6:45 AM	2	1	1	0	8	1	14	0	15	0	5	0	0	0	2	0	49
7:00 AM	0	1	0	0	3	2	22	0	11	0	3	0	0	0	1	0	43
7:15 AM	0	2	1	0	4	2	20	0	23	2	3	0	0	1	5	0	63
7:30 AM	1	0	0	0	6	5	27	0	22	0	0	0	2	0	5	0	68
7:45 AM	0	1	0	0	11	4	24	0	13	4	3	0	1	2	6	0	69
8:00 AM	0	4	0	0	8	3	18	0	21	1	1	0	0	2	9	0	67
8:15 AM	1	1	0	0	5	2	16	1	13	2	0	0	1	3	3	0	48
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	4	10	2	0	51	19	164	1	131	12	18	0	4	9	34	0	459
	25.00%	62.50%	12.50%	0.00%	21.70%	8.09%	69.79%	0.43%	81.37%	7.45%	11.18%	0.00%	8.51%	19.15%	72.34%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	7	1	0	29	14	89	0	79	7	7	0	3	5	25	0	267
PEAK HR FACTOR :	0.250	0.438	0.250	0.000	0.659	0.700	0.824	0.000	0.859	0.438	0.583	0.000	0.375	0.625	0.694	0.000	0.967
			0.563				0.846				0.830				0.750		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	3	7	1	0	8	5	15	0	24	2	2	0	0	7	8	0	82
4:15 PM	0	2	1	0	6	0	21	0	18	3	0	0	0	1	8	0	60
4:30 PM	1	15	1	0	8	5	18	0	17	1	0	0	2	3	10	0	81
4:45 PM	1	9	0	0	5	2	13	0	18	2	2	0	0	3	5	0	60
5:00 PM	0	13	0	0	8	2	28	0	21	3	2	0	2	3	4	0	86
5:15 PM	1	5	0	0	1	3	35	0	22	5	0	0	0	4	9	0	85
5:30 PM	1	7	0	0	10	2	18	0	28	2	3	0	0	3	12	0	86
5:45 PM	1	6	0	0	7	1	21	0	29	3	1	0	0	1	4	0	74
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	8	64	3	0	53	20	169	0	177	21	10	0	4	25	60	0	614
	10.67%	85.33%	4.00%	0.00%	21.90%	8.26%	69.83%	0.00%	85.10%	10.10%	4.81%	0.00%	4.49%	28.09%	67.42%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	3	31	0	0	26	8	102	0	100	13	6	0	2	11	29	0	331
PEAK HR FACTOR :	0.750	0.596	0.000	0.000	0.650	0.667	0.729	0.000	0.862	0.650	0.500	0.000	0.250	0.688	0.604	0.000	0.962
			0.654				0.872				0.902				0.700		

VOLUME**US 82/SR 6/McFarland Blvd W/O Airport Rd**

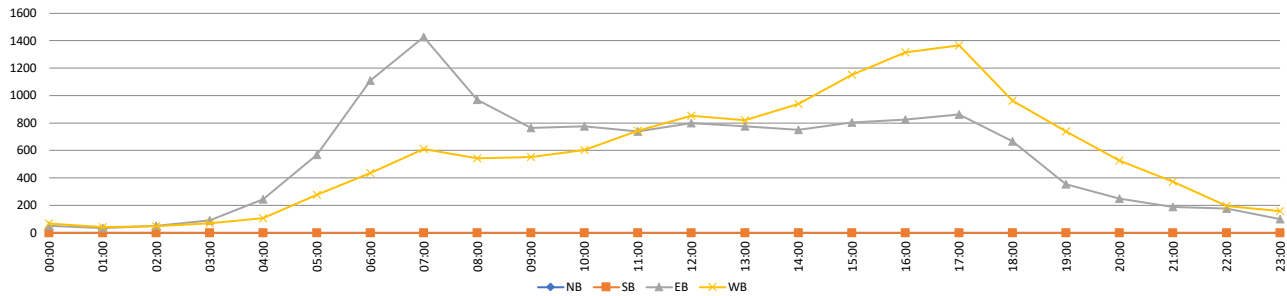
Day: Tuesday

Date: 10/03/2023

City: Northport

Project #: AL23_210018_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS							
																	0	0
15-Minutes Interval												Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME		NB	SB	EB	WB	TOTAL
00:00			18	20	38	12:00			224	199	423	00:00	01:00			51	67	118
00:15			7	25	32	12:15			198	221	419	01:00	02:00			35	42	77
00:30			14	8	22	12:30			188	220	408	02:00	03:00			51	47	98
00:45			12	14	26	12:45			190	213	403	03:00	04:00			90	70	160
01:00			10	14	24	13:00			201	216	417	04:00	05:00			245	107	352
01:15			5	9	14	13:15			180	215	395	05:00	06:00			567	277	844
01:30			12	9	21	13:30			211	189	400	06:00	07:00			1108	435	1543
01:45			8	10	18	13:45			184	199	383	07:00	08:00			1427	611	2038
02:00			6	12	18	14:00			167	226	393	08:00	09:00			968	542	1510
02:15			15	13	28	14:15			199	215	414	09:00	10:00			765	552	1317
02:30			10	6	16	14:30			214	248	462	10:00	11:00			775	602	1377
02:45			20	16	36	14:45			171	249	420	11:00	12:00			738	743	1481
03:00			15	11	26	15:00			195	251	446	12:00	13:00			800	853	1653
03:15			22	11	33	15:15			205	279	484	13:00	14:00			776	819	1595
03:30			24	25	49	15:30			207	303	510	14:00	15:00			751	938	1689
03:45			29	23	52	15:45			196	318	514	15:00	16:00			803	1151	1954
04:00			20	18	38	16:00			212	305	517	16:00	17:00			824	1315	2139
04:15			47	23	70	16:15			194	336	530	17:00	18:00			862	1366	2228
04:30			79	26	105	16:30			215	356	571	18:00	19:00			665	963	1628
04:45			99	40	139	16:45			203	318	521	19:00	20:00			354	738	1092
05:00			134	43	177	17:00			273	367	640	20:00	21:00			248	526	774
05:15			151	49	200	17:15			230	400	630	21:00	22:00			187	372	559
05:30			149	91	240	17:30			171	321	492	22:00	23:00			176	195	371
05:45			133	94	227	17:45			188	278	466	23:00	00:00			99	157	256
06:00			197	75	272	18:00			194	284	478	STATISTICS						
06:15			265	94	359	18:15			183	254	437		NB	SB	EB	WB	TOTAL	
06:30			350	131	481	18:30			163	205	368	Peak Period	00:00	to	12:00			
06:45			296	135	431	18:45			125	220	345	Volume			6820	4095	10915	
07:00			273	135	408	19:00			126	190	316	Peak Hour			7:00	11:00	7:15	
07:15			371	153	524	19:15			80	189	269	Peak Volume			1427	743	2056	
07:30			404	168	572	19:30			69	193	262	Peak Hour Factor			0.883	0.915	0.899	
07:45			379	155	534	19:45			79	166	245							
08:00			267	159	426	20:00			85	148	233	Peak Period	12:00	to	00:00			
08:15			227	123	350	20:15			64	149	213	Volume			6545	9393	15938	
08:30			252	131	383	20:30			45	121	166	Peak Hour			16:30	16:30	16:30	
08:45			222	129	351	20:45			54	108	162	Peak Volume			921	1441	2362	
09:00			203	121	324	21:00			38	106	144	Peak Hour Factor			0.843	0.901	0.923	
09:15			162	138	300	21:15			54	102	156							
09:30			207	136	343	21:30			43	84	127	Peak Period	07:00	to	09:00			
09:45			193	157	350	21:45			52	80	132	Volume			2395	1153	3548	
10:00			209	140	349	22:00			55	44	99	Peak Hour			7:00	7:15	7:15	
10:15			192	174	366	22:15			34	62	96	Peak Volume			1427	635	2056	
10:30			198	148	346	22:30			46	52	98	Peak Hour Factor			0.883	0.945	0.899	
10:45			176	140	316	22:45			41	37	78							
11:00			170	170	340	23:00			36	48	84	Peak Period	16:00	to	18:00			
11:15			209	203	412	23:15			27	44	71	Volume			1686	2681	4367	
11:30			171	176	347	23:30			19	37	56	Peak Hour			16:30	16:30	16:30	
11:45			188	194	382	23:45			17	28	45	Peak Volume			921	1441	2362	
TOTALS	0	0	6820	4095	10915	TOTALS	0	0	6545	9393	15938	Peak Hour Factor			0.843	0.901	0.923	
SPLIT %	0%	0%	62%	38%	41%	SPLIT %	0%	0%	41%	59%	59%							



VOLUME**US 82/SR 6/McFarland Blvd E/O Airport Rd**

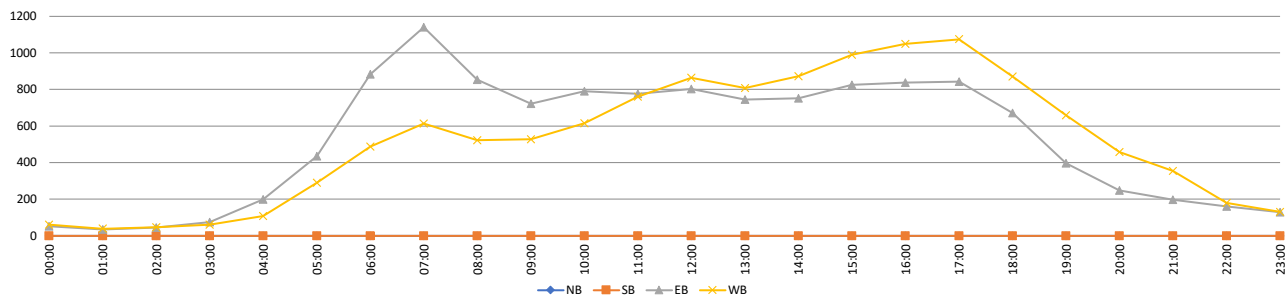
Day: Tuesday

Date: 10/03/2023

City: Northport

Project #: AL23_210018_002

DAILY TOTALS						NB					SB					EB					WB					Total					DAILY TOTALS					
						0					0					12,603					12,432					25,035										
15-Minutes Interval												Hourly Intervals																								
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL																			
00:00			19	20	39	12:00			237	214	451	00:00	01:00		52	60	112																			
00:15			8	17	25	12:15			192	222	414	01:00	02:00		35	39	74																			
00:30			14	8	22	12:30			189	224	413	02:00	03:00		45	46	91																			
00:45			11	15	26	12:45			184	203	387	03:00	04:00		75	61	136																			
01:00			10	14	24	13:00			193	210	403	04:00	05:00		199	108	307																			
01:15			6	9	15	13:15			171	221	392	05:00	06:00		434	289	723																			
01:30			12	8	20	13:30			198	184	382	06:00	07:00		883	488	1371																			
01:45			7	8	15	13:45			183	192	375	07:00	08:00		1140	613	1753																			
02:00			5	13	18	14:00			181	220	401	08:00	09:00		853	522	1375																			
02:15			12	12	24	14:15			190	197	387	09:00	10:00		721	527	1248																			
02:30			10	7	17	14:30			201	228	429	10:00	11:00		790	615	1405																			
02:45			18	14	32	14:45			179	227	406	11:00	12:00		775	760	1535																			
03:00			12	9	21	15:00			227	224	451	12:00	13:00		802	863	1665																			
03:15			15	9	24	15:15			207	243	450	13:00	14:00		745	807	1552																			
03:30			21	17	38	15:30			196	262	458	14:00	15:00		751	872	1623																			
03:45			27	26	53	15:45			194	260	454	15:00	16:00		824	989	1813																			
04:00			17	18	35	16:00			224	255	479	16:00	17:00		837	1049	1886																			
04:15			41	21	62	16:15			196	266	462	17:00	18:00		842	1074	1916																			
04:30			64	28	92	16:30			218	286	504	18:00	19:00		670	870	1540																			
04:45			77	41	118	16:45			199	242	441	19:00	20:00		396	658	1054																			
05:00			107	43	150	17:00			285	280	565	20:00	21:00		248	458	706																			
05:15			113	42	155	17:15			210	299	509	21:00	22:00		197	355	552																			
05:30			113	98	211	17:30			161	251	412	22:00	23:00		160	179	339																			
05:45			101	106	207	17:45			186	244	430	23:00	00:00		129	130	259																			
06:00			171	86	257	18:00			196	253	449	STATISTICS																								
06:15			219	112	331	18:15			193	230	423		NB	SB	EB	WB	TOTAL																			
06:30			270	141	411	18:30			161	193	354	Peak Period	00:00	to	12:00																					
06:45			223	149	372	18:45			120	194	314	Volume				6002	4128	10130																		
07:00			231	145	376	19:00			145	173	318	Peak Hour				7:15	11:00	7:15																		
07:15			303	147	450	19:15			92	166	258	Peak Volume				1147	760	1769																		
07:30			305	167	472	19:30			84	178	262	Peak Hour Factor				0.940	0.913	0.937																		
07:45			301	154	455	19:45			75	141	216																									
08:00			238	154	392	20:00			88	130	218	Peak Period	12:00	to	00:00																					
08:15			200	118	318	20:15			62	134	196	Volume				6601	8304	14905																		
08:30			222	127	349	20:30			45	101	146	Peak Hour				16:30	16:30	16:30																		
08:45			193	123	316	20:45			53	93	146	Peak Volume				912	1107	2019																		
09:00			185	114	299	21:00			39	94	133	Peak Hour Factor				0.800	0.926	0.893																		
09:15			151	125	276	21:15			54	94	148																									
09:30			200	135	335	21:30			52	87	139	Peak Period	07:00	to	09:00																					
09:45			185	153	338	21:45			52	80	132	Volume				1993	1135	3128																		
10:00			212	139	351	22:00			54	43	97	Peak Hour				7:15	7:15	7:15																		
10:15			184	179	363	22:15			31	54	85	Peak Volume				1147	622	1769																		
10:30			197	150	347	22:30			39	49	88	Peak Hour Factor				0.940	0.931	0.937																		
10:45			197	147	344	22:45			36	33	69																									
11:00			186	171	357	23:00			55	37	92	Peak Period	16:00	to	18:00																					
11:15			215	198	413	23:15			31	37	68	Volume				1679	2123	3802																		
11:30			188	183	371	23:30			24	34	58	Peak Hour				16:30	16:30	16:30																		
11:45			186	208	394	23:45			19	22	41	Peak Volume				912	1107	2019																		
TOTALS	0	0	6002	4128	10130	TOTALS	0	0	6601	8304	14905	Peak Hour Factor				0.800	0.926	0.893																		
SPLIT %	0%	0%	59%	41%	40%	SPLIT %	0%	0%	44%	56%	60%																									



VOLUME**Airport Rd S/O US 82/SR 6/McFarland Blvd**

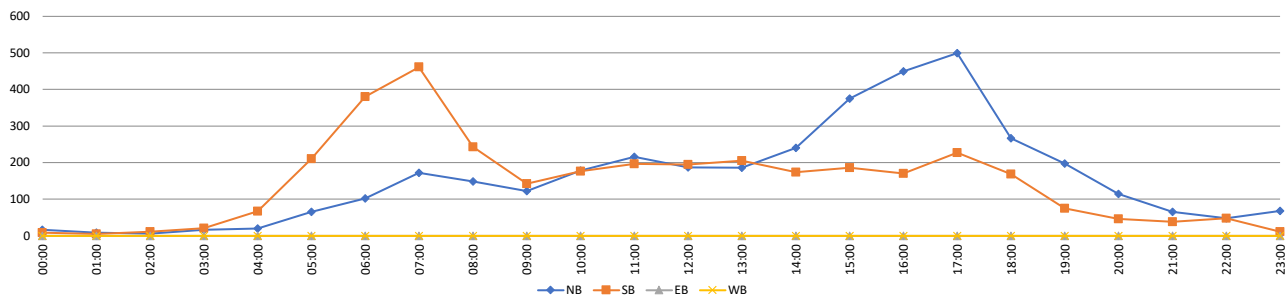
Day: Tuesday

Date: 10/03/2023

City: Northport

Project #: AL23_210018_003

DAILY TOTALS						NB		SB		EB		WB		Total	DAILY TOTALS					
						3,763		3,463		0		0		7,226						
15-Minutes Interval												Hourly Intervals								
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL			
00:00	5	4			9	12:00	52	54			106	00:00	01:00	16	8		24			
00:15	9	0			9	12:15	43	50			93	01:00	02:00	8	5		13			
00:30	2	2			4	12:30	43	46			89	02:00	03:00	6	11		17			
00:45	0	2			2	12:45	49	45			94	03:00	04:00	16	21		37			
01:00	3	3			6	13:00	55	57			112	04:00	05:00	20	67		87			
01:15	1	0			1	13:15	38	53			91	05:00	06:00	65	210		275			
01:30	1	0			1	13:30	39	47			86	06:00	07:00	102	380		482			
01:45	3	2			5	13:45	54	48			102	07:00	08:00	172	461		633			
02:00	1	3			4	14:00	62	42			104	08:00	09:00	148	243		391			
02:15	1	3			4	14:15	51	42			93	09:00	10:00	122	142		264			
02:30	1	2			3	14:30	63	56			119	10:00	11:00	178	176		354			
02:45	3	3			6	14:45	64	34			98	11:00	12:00	216	196		412			
03:00	3	3			6	15:00	103	38			141	12:00	13:00	187	195		382			
03:15	2	7			9	15:15	81	43			124	13:00	14:00	186	205		391			
03:30	8	3			11	15:30	89	59			148	14:00	15:00	240	174		414			
03:45	3	8			11	15:45	102	46			148	15:00	16:00	375	186		561			
04:00	2	5			7	16:00	97	35			132	16:00	17:00	449	170		619			
04:15	5	9			14	16:15	105	33			138	17:00	18:00	499	227		726			
04:30	5	22			27	16:30	124	51			175	18:00	19:00	266	168		434			
04:45	8	31			39	16:45	123	51			174	19:00	20:00	197	75		272			
05:00	4	31			35	17:00	170	71			241	20:00	21:00	114	46		160			
05:15	17	48			65	17:15	147	66			213	21:00	22:00	65	38		103			
05:30	22	65			87	17:30	106	46			152	22:00	23:00	48	48		96			
05:45	22	66			88	17:45	76	44			120	23:00	00:00	68	11		79			
06:00	23	60			83	18:00	75	42			117	STATISTICS								
06:15	27	91			118	18:15	83	49			132		NB	SB	EB	WB	TOTAL			
06:30	22	112			134	18:30	54	44			98	Peak Period	00:00	to	12:00					
06:45	30	117			147	18:45	54	33			87	Volume	1069	1920			2989			
07:00	50	102			152	19:00	61	25			86	Peak Hour	10:45	7:00			7:00			
07:15	44	106			150	19:15	51	16			67	Peak Volume	222	461			633			
07:30	34	132			166	19:30	46	16			62	Peak Hour Factor	0.957	0.873			0.953			
07:45	44	121			165	19:45	39	18			57	Peak Period	12:00	to	00:00					
08:00	41	65			106	20:00	37	16			53	Volume	2694	1543			4237			
08:15	42	64			106	20:15	28	15			43	Peak Hour	16:30	16:30			16:30			
08:30	35	61			96	20:30	28	8			36	Peak Volume	564	239			803			
08:45	30	53			83	20:45	21	7			28	Peak Hour Factor	0.829	0.842			0.833			
09:00	27	39			66	21:00	24	11			35	Peak Period	07:00	to	09:00					
09:15	32	30			62	21:15	18	10			28	Volume	320	704			1024			
09:30	31	37			68	21:30	12	6			18	Peak Hour	7:00	7:00			7:00			
09:45	32	36			68	21:45	11	11			22	Peak Volume	172	461			633			
10:00	43	39			82	22:00	13	13			26	Peak Hour Factor	0.860	0.873			0.953			
10:15	40	53			93	22:15	15	10			25	Peak Period	16:00	to	18:00					
10:30	42	45			87	22:30	8	12			20	Volume	948	397			1345			
10:45	53	39			92	22:45	12	13			25	Peak Hour	16:30	16:30			16:30			
11:00	56	41			97	23:00	33	3			36	Peak Volume	564	239			803			
11:15	55	44			99	23:15	13	2			15	Peak Hour Factor	0.829	0.842			0.833			
11:30	58	48			106	23:30	12	4			16									
11:45	47	63			110	23:45	10	2			12									
TOTALS	1069	1920	0	0	2989	TOTALS	2694	1543	0	0	4237									
SPLIT %	36%	64%	0%	0%	41%	SPLIT %	64%	36%	0%	0%	59%									



VOLUME**Jemison Ln Bet. Airport Rd & Trade Cir Dr**

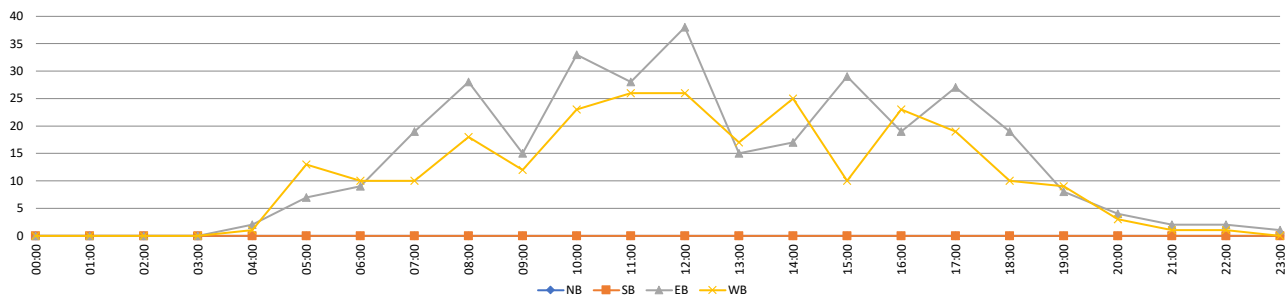
Day: Tuesday

Date: 10/03/2023

City: Northport

Project #: AL23_210018_004

DAILY TOTALS							NB	SB	EB	WB	Total	DAILY TOTALS											
							0	0	322	257								579					
15-Minutes Interval												Hourly Intervals											
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL						
00:00			0	0	0	12:00			17	9	26	00:00	01:00		0	0	0						
00:15			0	0	0	12:15			5	5	10	01:00	02:00		0	0	0						
00:30			0	0	0	12:30			11	6	17	02:00	03:00		0	0	0						
00:45			0	0	0	12:45			5	6	11	03:00	04:00		0	0	0						
01:00			0	0	0	13:00			4	6	10	04:00	05:00		2	1	3						
01:15			0	0	0	13:15			6	6	12	05:00	06:00		7	13	20						
01:30			0	0	0	13:30			2	3	5	06:00	07:00		9	10	19						
01:45			0	0	0	13:45			3	2	5	07:00	08:00		19	10	29						
02:00			0	0	0	14:00			3	6	9	08:00	09:00		28	18	46						
02:15			0	0	0	14:15			3	5	8	09:00	10:00		15	12	27						
02:30			0	0	0	14:30			7	12	19	10:00	11:00		33	23	56						
02:45			0	0	0	14:45			4	2	6	11:00	12:00		28	26	54						
03:00			0	0	0	15:00			7	3	10	12:00	13:00		38	26	64						
03:15			0	0	0	15:15			6	2	8	13:00	14:00		15	17	32						
03:30			0	0	0	15:30			11	1	12	14:00	15:00		17	25	42						
03:45			0	0	0	15:45			5	4	9	15:00	16:00		29	10	39						
04:00			0	0	0	16:00			2	5	7	16:00	17:00		19	23	42						
04:15			1	0	1	16:15			3	4	7	17:00	18:00		27	19	46						
04:30			0	0	0	16:30			10	8	18	18:00	19:00		19	10	29						
04:45			1	1	2	16:45			4	6	10	19:00	20:00		8	9	17						
05:00			0	1	1	17:00			9	5	14	20:00	21:00		4	3	7						
05:15			1	2	3	17:15			9	7	16	21:00	22:00		2	1	3						
05:30			4	3	7	17:30			5	2	7	22:00	23:00		2	1	3						
05:45			2	7	9	17:45			4	5	9	23:00	00:00		1	0	1						
06:00			2	1	3	18:00			4	1	5	STATISTICS											
06:15			3	3	6	18:15			4	4	8								NB	SB	EB	WB	TOTAL
06:30			2	3	5	18:30			7	3	10							Peak Period	00:00	to	12:00		
06:45			2	3	5	18:45			4	2	6							Volume				141	113
07:00			5	1	6	19:00			3	4	7	Peak Hour				10:00	10:45	10:00					
07:15			3	1	4	19:15			1	2	3	Peak Volume				33	27	56					
07:30			6	2	8	19:30			2	1	3	Peak Hour Factor				0.825	0.675	0.875					
07:45			5	6	11	19:45			2	2	4	Peak Period	12:00	to	00:00								
08:00			13	3	16	20:00			3	1	4	Volume				181	144	325					
08:15			7	5	12	20:15			1	0	1	Peak Hour				12:00	12:00	12:00					
08:30			5	3	8	20:30			0	1	1	Peak Volume				38	26	64					
08:45			3	7	10	20:45			0	1	1	Peak Hour Factor				0.559	0.722	0.615					
09:00			6	4	10	21:00			2	0	2	Peak Period	07:00	to	09:00								
09:15			4	3	7	21:15			0	0	0	Volume				47	28	75					
09:30			2	3	5	21:30			0	1	1	Peak Hour				7:30	8:00	7:30					
09:45			3	2	5	21:45			0	0	0	Peak Volume				31	18	47					
10:00			8	3	11	22:00			0	0	0	Peak Hour Factor				0.596	0.643	0.734					
10:15			7	9	16	22:15			0	0	0	Peak Period	16:00	to	18:00								
10:30			10	5	15	22:30			0	1	1	Volume				46	42	88					
10:45			8	6	14	22:45			2	0	2	Peak Hour				16:30	16:30	16:30					
11:00			5	5	10	23:00			1	0	1	Peak Volume				32	26	58					
11:15			5	10	15	23:15			0	0	0	Peak Hour Factor				0.800	0.813	0.806					
11:30			10	6	16	23:30			0	0	0												
11:45			8	5	13	23:45			0	0	0												
TOTALS	0	0	141	113	254	TOTALS	0	0	181	144	325												
SPLIT %	0%	0%	56%	44%	44%	SPLIT %	0%	0%	56%	44%	56%												



VOLUME

Trade Cir Dr N/O Jemison Ln

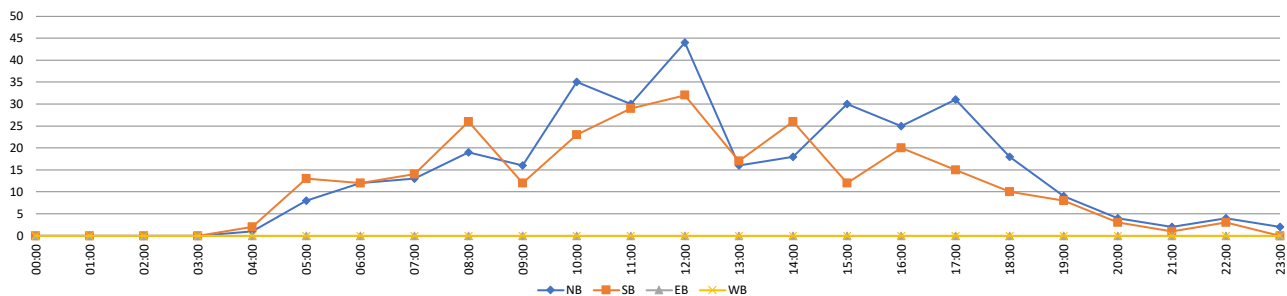
Day: Tuesday

Date: 10/03/2023

City: Northport

Project #: AL23_210018_005

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						337	278	0	0	615							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	17	13			30	00:00	01:00	0	0		0
00:15	0	0			0	12:15	7	6			13	01:00	02:00	0	0		0
00:30	0	0			0	12:30	14	7			21	02:00	03:00	0	0		0
00:45	0	0			0	12:45	6	6			12	03:00	04:00	0	0		0
01:00	0	0			0	13:00	5	7			12	04:00	05:00	1	2		3
01:15	0	0			0	13:15	6	5			11	05:00	06:00	8	13		21
01:30	0	0			0	13:30	2	3			5	06:00	07:00	12	12		24
01:45	0	0			0	13:45	3	2			5	07:00	08:00	13	14		27
02:00	0	0			0	14:00	5	6			11	08:00	09:00	19	26		45
02:15	0	0			0	14:15	3	5			8	09:00	10:00	16	12		28
02:30	0	0			0	14:30	6	11			17	10:00	11:00	35	23		58
02:45	0	0			0	14:45	4	4			8	11:00	12:00	30	29		59
03:00	0	0			0	15:00	8	4			12	12:00	13:00	44	32		76
03:15	0	0			0	15:15	6	2			8	13:00	14:00	16	17		33
03:30	0	0			0	15:30	11	1			12	14:00	15:00	18	26		44
03:45	0	0			0	15:45	5	5			10	15:00	16:00	30	12		42
04:00	0	0			0	16:00	2	4			6	16:00	17:00	25	20		45
04:15	0	0			0	16:15	5	4			9	17:00	18:00	31	15		46
04:30	0	0			0	16:30	11	6			17	18:00	19:00	18	10		28
04:45	1	2			3	16:45	7	6			13	19:00	20:00	9	8		17
05:00	0	1			1	17:00	12	5			17	20:00	21:00	4	3		7
05:15	2	2			4	17:15	9	3			12	21:00	22:00	2	1		3
05:30	4	3			7	17:30	5	3			8	22:00	23:00	4	3		7
05:45	2	7			9	17:45	5	4			9	23:00	00:00	2	0		2
06:00	3	2			5	18:00	3	1			4	STATISTICS					
06:15	4	3			7	18:15	4	4			8		NB	SB	EB	WB	TOTAL
06:30	3	4			7	18:30	7	3			10	Peak Period	00:00	to	12:00		
06:45	2	3			5	18:45	4	2			6	Volume	134	131			265
07:00	5	2			7	19:00	3	4			7	Peak Hour	10:00	11:00			11:00
07:15	3	1			4	19:15	2	1			3	Peak Volume	35	29			59
07:30	1	3			4	19:30	2	1			3	Peak Hour Factor	0.875	0.725			0.868
07:45	4	8			12	19:45	2	2			4	Peak Period	12:00	to	00:00		
08:00	7	8			15	20:00	3	1			4	Volume	203	147			350
08:15	4	7			11	20:15	1	0			1	Peak Hour	12:00	12:00			12:00
08:30	4	4			8	20:30	0	1			1	Peak Volume	44	32			76
08:45	4	7			11	20:45	0	1			1	Peak Hour Factor	0.647	0.615			0.633
09:00	6	4			10	21:00	2	0			2	Peak Period	07:00	to	09:00		
09:15	5	3			8	21:15	0	0			0	Volume	32	40			72
09:30	2	3			5	21:30	0	1			1	Peak Hour	7:45	7:45			7:45
09:45	3	2			5	21:45	0	0			0	Peak Volume	19	27			46
10:00	8	3			11	22:00	0	0			0	Peak Hour Factor	0.679	0.844			0.767
10:15	8	9			17	22:15	0	0			0	Peak Period	16:00	to	18:00		
10:30	10	5			15	22:30	2	3			5	Volume	56	35			91
10:45	9	6			15	22:45	2	0			2	Peak Hour	16:30	16:15			16:30
11:00	5	6			11	23:00	2	0			2	Peak Volume	39	21			59
11:15	5	10			15	23:15	0	0			0	Peak Hour Factor	0.813	0.875			0.868
11:30	11	6			17	23:30	0	0			0						
11:45	9	7			16	23:45	0	0			0						
TOTALS	134	131	0	0	265	TOTALS	203	147	0	0	350						
SPLIT %	51%	49%	0%	0%	43%	SPLIT %	58%	42%	0%	0%	57%						



Appendix C: Synchro Capacity Analysis and Queuing Reports

HCM 6th Signalized Intersection Summary

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

11/21/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1004	81	48	548	26	40	6	46	26	1	22
Future Volume (veh/h)	55	1004	81	48	548	26	40	6	46	26	1	22
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	1091	0	52	596	28	43	7	50	28	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	672	2646		502	2658	1186	174	12	84	122	97	
Arrive On Green	0.05	0.99	0.00	0.04	0.75	0.75	0.03	0.06	0.06	0.02	0.05	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	198	1417	1781	1870	1585
Grp Volume(v), veh/h	60	1091	0	52	596	28	43	0	57	28	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1615	1781	1870	1585
Q Serve(g_s), s	1.1	0.7	0.0	1.0	7.6	0.7	3.4	0.0	5.2	2.2	0.1	0.0
Cycle Q Clear(g_c), s	1.1	0.7	0.0	1.0	7.6	0.7	3.4	0.0	5.2	2.2	0.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	672	2646		502	2658	1186	174	0	95	122	97	
V/C Ratio(X)	0.09	0.41		0.10	0.22	0.02	0.25	0.00	0.60	0.23	0.01	
Avail Cap(c_a), veh/h	731	2646		555	2658	1186	245	0	221	206	256	
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.86	0.86	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.8	0.2	0.0	3.6	5.7	4.9	64.8	0.0	68.8	65.3	67.5	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.1	0.2	0.0	0.7	0.0	5.9	0.9	0.0	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	0.3	0.0	0.3	2.4	0.2	1.6	0.0	2.3	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.9	0.6	0.0	3.7	5.9	4.9	65.5	0.0	74.7	66.2	67.5	0.0
LnGrp LOS	A	A		A	A	A	E	A	E	E	E	
Approach Vol, veh/h	1151			676			100			29		
Approach Delay, s/veh	0.8			5.7			70.7			66.3		
Approach LOS	A			A			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	118.7	7.9	13.4	10.5	118.2	9.0	12.3				
Change Period (Y+Rc), s	4.5	6.5	4.5	4.5	4.5	6.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	88.5	10.5	20.5	10.5	88.5	10.5	20.5				
Max Q Clear Time (g_c+I1), s	3.1	9.6	4.2	7.2	3.0	2.7	5.4	2.1				
Green Ext Time (p_c), s	0.0	3.9	0.0	0.2	0.0	8.6	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
4: Trade Cnt Dr & Access Rd/Lowes

11/21/2023

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	69	6	9	3	3	17	1	6	1	24	13	93
Future Vol, veh/h	69	6	9	3	3	17	1	6	1	24	13	93
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	7	10	3	3	18	1	7	1	26	14	101
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	137	127	65	135	177	8	115	0	0	8	0	0
Stage 1	117	117	-	10	10	-	-	-	-	-	-	-
Stage 2	20	10	-	125	167	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	834	764	999	836	717	1074	1474	-	-	1612	-	-
Stage 1	888	799	-	1011	887	-	-	-	-	-	-	-
Stage 2	999	887	-	879	760	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	806	750	999	811	704	1074	1474	-	-	1612	-	-
Mov Cap-2 Maneuver	806	750	-	811	704	-	-	-	-	-	-	-
Stage 1	887	785	-	1010	886	-	-	-	-	-	-	-
Stage 2	977	886	-	848	747	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.9		8.8		0.9		1.3					
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1474	-	-	819	967	1612	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.111	0.026	0.016	-	-				
HCM Control Delay (s)	7.4	0	-	9.9	8.8	7.3	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0	-	-				

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	3.2	0.2	3.1	0.0	0.0	0.0	0.1		0.1
Total Delay (hr)	0.1	2.1	0.1	0.3	0.5	0.0	0.8	0.1	0.2	0.5	0.0	0.0
Total Del/Veh (s)	8.3	7.5	7.1	22.3	2.9	0.3	65.4	64.0	17.5	77.3		0.7
Stop Delay (hr)	0.0	0.1	0.0	0.3	0.1	0.0	0.7	0.1	0.2	0.5	0.0	0.0
Stop Del/Veh (s)	3.0	0.4	0.5	20.6	0.8	0.2	63.8	61.5	17.3	76.1		0.0

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	4.7
Total Del/Veh (s)	8.9
Stop Delay (hr)	2.2
Stop Del/Veh (s)	4.0

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.1	6.7	3.1	4.9	6.0	2.5	2.5	0.7	0.6	3.2	3.9	2.6
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.9	3.0	2.5	3.1	3.0	2.4	0.2	0.2	0.2	0.5	1.2	0.9

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.2
Total Del/Veh (s)	3.6
Stop Delay (hr)	0.1
Stop Del/Veh (s)	1.7

Total Zone Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.5
Total Delay (hr)	5.0
Total Del/Veh (s)	687.0
Stop Delay (hr)	2.3
Stop Del/Veh (s)	313.1

Intersection: 3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	56	34	52	100	107	68	41	121	80	85	8
Average Queue (ft)	17	3	7	26	31	13	2	41	32	27	0
95th Queue (ft)	42	19	34	63	83	46	17	93	67	68	5
Link Distance (ft)		1192	1192		701	701		146	146	97	97
Upstream Blk Time (%)								0		0	
Queuing Penalty (veh)								0		0	
Storage Bay Dist (ft)	165			185			185				
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: Trade Cnt Dr & Access Rd/Lowes

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	60	36	6
Average Queue (ft)	29	14	0
95th Queue (ft)	51	37	3
Link Distance (ft)		445	146
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

11/21/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	775	52	71	939	58	67	11	70	77	8	92
Future Volume (veh/h)	88	775	52	71	939	58	67	11	70	77	8	92
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	842	0	77	1021	63	73	12	76	84	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	426	2611		580	2612	1165	219	15	93	153	136	
Arrive On Green	0.07	1.00	0.00	0.03	0.74	0.74	0.05	0.07	0.07	0.05	0.07	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	221	1398	1781	1870	1585
Grp Volume(v), veh/h	96	842	0	77	1021	63	73	0	88	84	9	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1619	1781	1870	1585
Q Serve(g_s), s	2.4	0.0	0.0	1.9	19.2	2.0	6.8	0.0	9.7	7.8	0.8	0.0
Cycle Q Clear(g_c), s	2.4	0.0	0.0	1.9	19.2	2.0	6.8	0.0	9.7	7.8	0.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	426	2611		580	2612	1165	219	0	108	153	136	
V/C Ratio(X)	0.23	0.32		0.13	0.39	0.05	0.33	0.00	0.82	0.55	0.07	
Avail Cap(c_a), veh/h	520	2611		674	2612	1165	287	0	229	210	265	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.2	0.0	0.0	5.1	8.9	6.6	73.6	0.0	82.9	73.3	77.8	0.0
Incr Delay (d2), s/veh	0.2	0.3	0.0	0.1	0.4	0.1	0.9	0.0	13.8	3.0	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	0.8	0.1	0.0	0.6	6.8	0.7	3.2	0.0	4.5	3.7	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.4	0.3	0.0	5.2	9.3	6.7	74.5	0.0	96.8	76.3	78.0	0.0
LnGrp LOS	A	A		A	A	A	E	A	F	E	E	
Approach Vol, veh/h		938			1161			161			93	
Approach Delay, s/veh		0.9			8.9			86.6			76.5	
Approach LOS		A			A			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	138.8	14.3	16.5	10.5	138.8	13.1	17.6				
Change Period (Y+Rc), s	4.5	6.5	4.5	4.5	4.5	6.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	103.5	15.5	25.5	15.5	103.5	15.5	25.5				
Max Q Clear Time (g_c+I1), s	4.4	21.2	9.8	11.7	3.9	2.0	8.8	2.8				
Green Ext Time (p_c), s	0.1	8.0	0.1	0.3	0.1	5.9	0.1	0.0				

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
4: Trade Cnt Dr & Access Rd/Lowes

11/21/2023

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	78	1	4	4	13	28	3	42	1	22	15	94
Future Vol, veh/h	78	1	4	4	13	28	3	42	1	22	15	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	1	4	4	14	30	3	46	1	24	16	102

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	190	168	67	171	219	47	118	0	0	47	0	0
Stage 1	115	115	-	53	53	-	-	-	-	-	-	-
Stage 2	75	53	-	118	166	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	770	725	997	792	679	1022	1470	-	-	1560	-	-
Stage 1	890	800	-	960	851	-	-	-	-	-	-	-
Stage 2	934	851	-	887	761	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	725	711	997	776	666	1022	1470	-	-	1560	-	-
Mov Cap-2 Maneuver	725	711	-	776	666	-	-	-	-	-	-	-
Stage 1	888	786	-	958	849	-	-	-	-	-	-	-
Stage 2	889	849	-	867	748	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.6		9.4		0.5		1.2	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1470	-	-	734	864	1560	-
HCM Lane V/C Ratio	0.002	-	-	0.123	0.057	0.015	-
HCM Control Delay (s)	7.5	0	-	10.6	9.4	7.3	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.5	0.2	2.7	0.0	0.0	0.0	2.3	0.1	1.2
Total Delay (hr)	0.6	2.2	0.1	0.2	1.5	0.0	1.3	0.2	0.3	1.5	0.2	0.0
Total Del/Veh (s)	21.7	10.4	8.2	12.6	6.0	1.3	76.7	35.9	17.4	72.0	81.9	0.8
Stop Delay (hr)	0.4	0.4	0.0	0.2	0.6	0.0	1.2	0.2	0.3	1.5	0.2	0.0
Stop Del/Veh (s)	14.1	1.8	1.6	10.2	2.4	0.6	74.9	34.7	16.9	70.8	79.3	0.0

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.4
Total Delay (hr)	8.1
Total Del/Veh (s)	13.0
Stop Delay (hr)	4.9
Stop Del/Veh (s)	7.9

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.6	5.5	2.8	4.4	6.6	2.4	2.1	0.7	0.5	3.9	2.3	2.8
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.5	2.4	2.2	2.5	3.4	2.5	0.1	0.2	0.2	1.0	0.8	1.5

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.3
Total Del/Veh (s)	3.3
Stop Delay (hr)	0.1
Stop Del/Veh (s)	1.8

Total Zone Performance

Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.6
Total Delay (hr)	8.4
Total Del/Veh (s)	970.2
Stop Delay (hr)	5.1
Stop Del/Veh (s)	590.2

Intersection: 3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	155	152	156	72	208	137	31	138	138	112	65
Average Queue (ft)	44	31	34	29	71	42	5	68	39	76	8
95th Queue (ft)	95	100	111	60	172	114	22	126	82	127	32
Link Distance (ft)		1192	1192		701	701		146	146	97	97
Upstream Blk Time (%)								0	0	11	
Queuing Penalty (veh)								0	0	0	
Storage Bay Dist (ft)	165			185			185				
Storage Blk Time (%)	0	0			0						
Queuing Penalty (veh)	0	0			0						

Intersection: 4: Trade Cnt Dr & Access Rd/Lowes

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	68	76	20
Average Queue (ft)	30	23	0
95th Queue (ft)	47	54	0
Link Distance (ft)		445	146
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 1

HCM 6th Signalized Intersection Summary

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

11/21/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1045	84	50	570	27	42	6	48	27	1	23
Future Volume (veh/h)	57	1045	84	50	570	27	42	6	48	27	1	23
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	1136	0	54	620	29	46	7	52	29	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	655	2638		487	2649	1182	178	12	87	124	97	
Arrive On Green	0.07	1.00	0.00	0.04	0.75	0.75	0.03	0.06	0.06	0.02	0.05	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	192	1423	1781	1870	1585
Grp Volume(v), veh/h	62	1136	0	54	620	29	46	0	59	29	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1614	1781	1870	1585
Q Serve(g_s), s	1.2	0.0	0.0	1.0	8.1	0.7	3.6	0.0	5.3	2.3	0.1	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	1.0	8.1	0.7	3.6	0.0	5.3	2.3	0.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	655	2638		487	2649	1182	178	0	98	124	97	
V/C Ratio(X)	0.09	0.43		0.11	0.23	0.02	0.26	0.00	0.60	0.23	0.01	
Avail Cap(c_a), veh/h	714	2638		540	2649	1182	246	0	221	207	256	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.8	0.0	0.0	3.7	5.9	5.0	64.6	0.0	68.7	65.2	67.4	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.1	0.2	0.0	0.8	0.0	5.8	1.0	0.0	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	0.0	0.3	2.5	0.2	1.7	0.0	2.4	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.9	0.4	0.0	3.8	6.1	5.0	65.3	0.0	74.4	66.2	67.5	0.0
LnGrp LOS	A	A		A	A	A	E	A	E	E	E	
Approach Vol, veh/h		1198			703			105			30	
Approach Delay, s/veh		0.6			5.9			70.4			66.2	
Approach LOS		A			A			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	118.3	8.0	13.6	10.5	117.9	9.3	12.3				
Change Period (Y+Rc), s	4.5	6.5	4.5	4.5	4.5	6.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	88.5	10.5	20.5	10.5	88.5	10.5	20.5				
Max Q Clear Time (g_c+I1), s	3.2	10.1	4.3	7.3	3.0	2.0	5.6	2.1				
Green Ext Time (p_c), s	0.1	4.1	0.0	0.2	0.0	9.2	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
4: Trade Cnt Dr & Access Rd/Lowes

11/21/2023

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	72	6	9	3	3	18	1	6	1	25	14	97
Future Vol, veh/h	72	6	9	3	3	18	1	6	1	25	14	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	7	10	3	3	20	1	7	1	27	15	105
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	143	132	68	140	184	8	120	0	0	8	0	0
Stage 1	122	122	-	10	10	-	-	-	-	-	-	-
Stage 2	21	10	-	130	174	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	826	759	995	830	710	1074	1468	-	-	1612	-	-
Stage 1	882	795	-	1011	887	-	-	-	-	-	-	-
Stage 2	998	887	-	874	755	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	796	745	995	804	697	1074	1468	-	-	1612	-	-
Mov Cap-2 Maneuver	796	745	-	804	697	-	-	-	-	-	-	-
Stage 1	881	781	-	1010	886	-	-	-	-	-	-	-
Stage 2	975	886	-	843	741	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	10		8.8			0.9			1.3			
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1468	-	-	809	968	1612	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.117	0.027	0.017	-	-				
HCM Control Delay (s)	7.5	0	-	10	8.8	7.3	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0.1	-	-				

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	3.4	0.2	3.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.1	2.4	0.2	0.3	0.5	0.0	0.8	0.2	0.4	0.6	0.0	0.0
Total Del/Veh (s)	8.4	8.3	8.1	21.8	3.4	0.8	72.5	85.9	28.1	71.1	57.8	0.7
Stop Delay (hr)	0.1	0.2	0.0	0.2	0.2	0.0	0.8	0.2	0.4	0.6	0.0	0.0
Stop Del/Veh (s)	3.4	0.6	0.9	19.9	1.2	0.4	70.8	83.7	27.7	69.8	55.7	0.0

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	5.6
Total Del/Veh (s)	9.9
Stop Delay (hr)	2.6
Stop Del/Veh (s)	4.7

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.9	6.9	3.6	4.1	6.0	2.5	1.7	0.5	0.5	4.2	3.2	2.4
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.7	3.0	2.7	2.4	2.5	2.3	0.2	0.2	0.2	1.5	0.1	0.5

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.3
Total Del/Veh (s)	3.4
Stop Delay (hr)	0.1
Stop Del/Veh (s)	1.5

Total Zone Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.5
Total Delay (hr)	5.9
Total Del/Veh (s)	878.2
Stop Delay (hr)	2.7
Stop Del/Veh (s)	411.2

Intersection: 3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	50	48	50	93	111	76	43	116	94	91	25
Average Queue (ft)	17	1	8	25	37	17	5	48	46	27	1
95th Queue (ft)	38	8	30	66	96	51	24	102	88	62	8
Link Distance (ft)		1192	1192		701	701		146	146	97	97
Upstream Blk Time (%)										0	
Queuing Penalty (veh)										0	
Storage Bay Dist (ft)	165			185			185				
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: Trade Cnt Dr & Access Rd/Lowes

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	54	51
Average Queue (ft)	28	13
95th Queue (ft)	51	38
Link Distance (ft)		445
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

HCM 6th Signalized Intersection Summary

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

11/21/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	806	54	74	977	58	70	11	73	77	8	92
Future Volume (veh/h)	88	806	54	74	977	58	70	11	73	77	8	92
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	876	0	80	1062	63	76	12	79	84	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	409	2605		563	2606	1162	225	15	96	153	136	
Arrive On Green	0.07	1.00	0.00	0.03	0.73	0.73	0.05	0.07	0.07	0.05	0.07	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	213	1404	1781	1870	1585
Grp Volume(v), veh/h	96	876	0	80	1062	63	76	0	91	84	9	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1618	1781	1870	1585
Q Serve(g_s), s	2.5	0.0	0.0	2.0	20.5	2.0	7.1	0.0	10.0	7.8	0.8	0.0
Cycle Q Clear(g_c), s	2.5	0.0	0.0	2.0	20.5	2.0	7.1	0.0	10.0	7.8	0.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	409	2605		563	2606	1162	225	0	111	153	136	
V/C Ratio(X)	0.23	0.34		0.14	0.41	0.05	0.34	0.00	0.82	0.55	0.07	
Avail Cap(c_a), veh/h	504	2605		657	2606	1162	290	0	229	210	265	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.4	0.0	0.0	5.1	9.1	6.7	73.1	0.0	82.8	73.0	77.7	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.1	0.5	0.1	0.9	0.0	13.8	3.0	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	0.8	0.1	0.0	0.7	7.2	0.7	3.3	0.0	4.6	3.7	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	0.3	0.0	5.3	9.6	6.8	74.0	0.0	96.6	76.0	77.9	0.0
LnGrp LOS	A	A		A	A	A	E	A	F	E	E	
Approach Vol, veh/h		972			1205			167			93	
Approach Delay, s/veh		0.9			9.2			86.3			76.2	
Approach LOS		A			A			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	138.5	14.2	16.8	10.5	138.4	13.4	17.6				
Change Period (Y+Rc), s	4.5	6.5	4.5	4.5	4.5	6.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	103.5	15.5	25.5	15.5	103.5	15.5	25.5				
Max Q Clear Time (g_c+I1), s	4.5	22.5	9.8	12.0	4.0	2.0	9.1	2.8				
Green Ext Time (p_c), s	0.1	8.5	0.1	0.3	0.1	6.2	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
4: Trade Cnt Dr & Access Rd/Lowes

11/21/2023

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	78	11	4	1	14	28	3	44	1	22	15	94
Future Vol, veh/h	78	11	4	1	14	28	3	44	1	22	15	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	12	4	1	15	30	3	48	1	24	16	102
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	192	170	67	178	221	49	118	0	0	49	0	0
Stage 1	115	115	-	55	55	-	-	-	-	-	-	-
Stage 2	77	55	-	123	166	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	768	723	997	784	678	1020	1470	-	-	1558	-	-
Stage 1	890	800	-	957	849	-	-	-	-	-	-	-
Stage 2	932	849	-	881	761	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	721	709	997	760	665	1020	1470	-	-	1558	-	-
Mov Cap-2 Maneuver	721	709	-	760	665	-	-	-	-	-	-	-
Stage 1	888	786	-	955	847	-	-	-	-	-	-	-
Stage 2	886	847	-	849	748	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.7		9.4		0.5		1.2					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1470	-	-	728	863	1558	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.139	0.054	0.015	-	-				
HCM Control Delay (s)	7.5	0	-	10.7	9.4	7.3	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.5	0.2	0	-	-				

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.3	0.3	2.6	0.0	0.0	0.1	3.7	0.1	1.3
Total Delay (hr)	0.5	2.7	0.1	0.3	1.8	0.0	1.4	0.2	0.4	1.5	0.2	0.0
Total Del/Veh (s)	20.3	11.7	9.3	13.9	6.7	1.5	70.6	57.1	19.7	63.1	95.2	0.8
Stop Delay (hr)	0.3	0.5	0.0	0.2	0.7	0.0	1.4	0.2	0.4	1.5	0.2	0.0
Stop Del/Veh (s)	13.3	2.2	1.9	11.2	2.8	0.8	68.8	55.2	19.2	61.7	92.8	0.0

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	9.2
Total Del/Veh (s)	13.7
Stop Delay (hr)	5.5
Stop Del/Veh (s)	8.2

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
Total Del/Veh (s)	5.2	6.8	3.0	7.2	2.6	2.8	0.9	0.3	2.6	3.2	2.1	3.2
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	2.9	3.1	2.5	3.9	2.5	0.6	0.2	0.1	0.2	0.7	0.6	1.5

Total Zone Performance

Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.7
Total Delay (hr)	9.5
Total Del/Veh (s)	880.3
Stop Delay (hr)	5.7
Stop Del/Veh (s)	524.5

Intersection: 3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	96	144	173	72	365	292	52	158	146	158	46
Average Queue (ft)	43	45	58	31	97	48	10	79	55	83	9
95th Queue (ft)	79	131	152	67	244	151	33	137	114	139	30
Link Distance (ft)		1192	1192		701	701		146	146	97	97
Upstream Blk Time (%)								0	0	12	
Queuing Penalty (veh)								0	0	0	
Storage Bay Dist (ft)	165			185			185				
Storage Blk Time (%)					1	0					
Queuing Penalty (veh)					1	0					

Intersection: 4: Trade Cnt Dr & Access Rd/Lowes

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	75	73	28
Average Queue (ft)	33	22	1
95th Queue (ft)	51	49	10
Link Distance (ft)		445	669
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 1

HCM 6th Signalized Intersection Summary

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

11/21/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1062	84	50	592	27	42	6	64	27	3	23
Future Volume (veh/h)	57	1062	84	50	592	27	42	6	64	27	3	23
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	1154	0	54	643	29	46	7	70	29	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	641	2635		477	2646	1180	178	9	90	109	99	
Arrive On Green	0.05	0.99	0.00	0.04	0.74	0.74	0.03	0.06	0.06	0.02	0.05	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	146	1461	1781	1870	1585
Grp Volume(v), veh/h	62	1154	0	54	643	29	46	0	77	29	3	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1607	1781	1870	1585
Q Serve(g_s), s	1.2	1.2	0.0	1.0	8.5	0.7	3.6	0.0	7.1	2.3	0.2	0.0
Cycle Q Clear(g_c), s	1.2	1.2	0.0	1.0	8.5	0.7	3.6	0.0	7.1	2.3	0.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.91	1.00		1.00
Lane Grp Cap(c), veh/h	641	2635		477	2646	1180	178	0	99	109	99	
V/C Ratio(X)	0.10	0.44		0.11	0.24	0.02	0.26	0.00	0.78	0.27	0.03	
Avail Cap(c_a), veh/h	700	2635		530	2646	1180	245	0	220	192	256	
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	4.0	0.3	0.0	3.7	6.0	5.0	64.4	0.0	69.3	65.2	67.4	0.0
Incr Delay (d2), s/veh	0.1	0.5	0.0	0.1	0.2	0.0	0.8	0.0	12.1	1.3	0.1	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	0.4	0.0	0.3	2.7	0.2	1.7	0.0	3.3	1.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	0.7	0.0	3.8	6.2	5.0	65.2	0.0	81.5	66.5	67.5	0.0
LnGrp LOS	A	A		A	A	A	E	A	F	E	E	
Approach Vol, veh/h	1216		726				123		32			
Approach Delay, s/veh	0.9		6.0				75.4		66.6			
Approach LOS	A		A				E		E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	118.2	8.0	13.8	10.5	117.7	9.3	12.4				
Change Period (Y+Rc), s	4.5	6.5	4.5	4.5	4.5	6.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	88.5	10.5	20.5	10.5	88.5	10.5	20.5				
Max Q Clear Time (g_c+I1), s	3.2	10.5	4.3	9.1	3.0	3.2	5.6	2.2				
Green Ext Time (p_c), s	0.1	4.3	0.0	0.2	0.0	9.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	8.0											
HCM 6th LOS	A											

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
4: Trade Cnt Dr & Access Rd/Lowes

11/21/2023

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	88	6	9	3	5	18	1	10	1	24	14	99
Future Vol, veh/h	88	6	9	3	5	18	1	10	1	24	14	99
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	7	10	3	5	20	1	11	1	26	15	108

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	147	135	69	144	189	12	123	0	0	12	0	0
Stage 1	121	121	-	14	14	-	-	-	-	-	-	-
Stage 2	26	14	-	130	175	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	821	756	994	825	706	1069	1464	-	-	1607	-	-
Stage 1	883	796	-	1006	884	-	-	-	-	-	-	-
Stage 2	992	884	-	874	754	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	790	742	994	799	693	1069	1464	-	-	1607	-	-
Mov Cap-2 Maneuver	790	742	-	799	693	-	-	-	-	-	-	-
Stage 1	882	782	-	1005	883	-	-	-	-	-	-	-
Stage 2	967	883	-	843	740	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.2		9		0.6		1.3	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1464	-	-	801	935	1607	-
HCM Lane V/C Ratio	0.001	-	-	0.14	0.03	0.016	-
HCM Control Delay (s)	7.5	0	-	10.2	9	7.3	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	2.9	0.2	3.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.2	3.0	0.3	0.3	0.6	0.0	0.9	0.1	0.3	0.5	0.0	0.0
Total Del/Veh (s)	13.4	9.5	9.5	19.5	3.3	0.4	70.1	27.0	16.7	65.9	39.6	0.8
Stop Delay (hr)	0.1	0.3	0.1	0.3	0.2	0.0	0.9	0.1	0.3	0.5	0.0	0.0
Stop Del/Veh (s)	6.6	0.9	1.8	17.8	1.2	0.1	68.5	26.1	16.3	64.8	37.6	0.0

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	6.2
Total Del/Veh (s)	10.2
Stop Delay (hr)	2.7
Stop Del/Veh (s)	4.4

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
Total Del/Veh (s)	5.2	7.4	3.4	4.4	6.3	2.2	0.8	0.5	2.5	2.5	2.5	3.5
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	2.9	4.1	2.2	2.5	2.7	2.4	0.2	0.2	0.1	0.2	0.7	1.5

Total Zone Performance

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.5
Total Delay (hr)	6.5
Total Del/Veh (s)	806.5
Stop Delay (hr)	2.8
Stop Del/Veh (s)	351.6

Intersection: 3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	113	51	67	71	158	52	24	110	90	49	25
Average Queue (ft)	27	4	16	27	40	11	1	44	39	24	1
95th Queue (ft)	66	24	50	58	111	35	8	90	72	52	8
Link Distance (ft)		1192	1192		701	701		146	146	97	97
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	165			185			185				
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: Trade Cnt Dr & Access Rd/Lowes

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	56	28	29
Average Queue (ft)	34	15	1
95th Queue (ft)	48	38	10
Link Distance (ft)	706	445	146
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

HCM 6th Signalized Intersection Summary

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

11/21/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	824	54	74	997	58	70	11	91	77	10	92
Future Volume (veh/h)	88	824	54	74	997	58	70	11	91	77	10	92
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	896	0	80	1084	63	76	12	99	84	11	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	392	2562		547	2563	1143	240	14	117	152	160	
Arrive On Green	0.07	1.00	0.00	0.03	0.72	0.72	0.05	0.08	0.08	0.05	0.09	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	174	1437	1781	1870	1585
Grp Volume(v), veh/h	96	896	0	80	1084	63	76	0	111	84	11	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1612	1781	1870	1585
Q Serve(g_s), s	2.6	0.0	0.0	2.1	22.0	2.1	7.0	0.0	12.2	7.7	1.0	0.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	2.1	22.0	2.1	7.0	0.0	12.2	7.7	1.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.89	1.00		1.00
Lane Grp Cap(c), veh/h	392	2562		547	2563	1143	240	0	131	152	160	
V/C Ratio(X)	0.24	0.35		0.15	0.42	0.06	0.32	0.00	0.85	0.55	0.07	
Avail Cap(c_a), veh/h	487	2562		641	2563	1143	306	0	228	210	265	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.2	0.0	0.0	5.7	10.1	7.3	71.1	0.0	81.6	71.2	75.7	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.1	0.5	0.1	0.7	0.0	13.8	3.1	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	0.8	0.1	0.0	0.7	7.9	0.8	3.3	0.0	5.6	3.7	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.3	0.0	5.8	10.6	7.4	71.9	0.0	95.4	74.3	75.9	0.0
LnGrp LOS	A	A		A	B	A	E	A	F	E	E	
Approach Vol, veh/h		992			1227			187			95	
Approach Delay, s/veh		1.0			10.1			85.8			74.4	
Approach LOS		A			B			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	136.3	14.1	19.1	10.5	136.3	13.3	19.9				
Change Period (Y+Rc), s	4.5	6.5	4.5	4.5	4.5	6.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	103.5	15.5	25.5	15.5	103.5	15.5	25.5				
Max Q Clear Time (g_c+I1), s	4.6	24.0	9.7	14.2	4.1	2.0	9.0	3.0				
Green Ext Time (p_c), s	0.1	8.8	0.1	0.4	0.1	6.4	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
4: Trade Cnt Dr & Access Rd/Lowes

11/21/2023

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	96	11	4	4	16	28	3	48	1	22	15	96
Future Vol, veh/h	96	11	4	4	16	28	3	48	1	22	15	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	12	4	4	17	30	3	52	1	24	16	104
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	198	175	68	183	227	53	120	0	0	53	0	0
Stage 1	116	116	-	59	59	-	-	-	-	-	-	-
Stage 2	82	59	-	124	168	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	761	718	995	778	672	1014	1468	-	-	1553	-	-
Stage 1	889	800	-	953	846	-	-	-	-	-	-	-
Stage 2	926	846	-	880	759	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	713	704	995	754	659	1014	1468	-	-	1553	-	-
Mov Cap-2 Maneuver	713	704	-	754	659	-	-	-	-	-	-	-
Stage 1	887	786	-	951	844	-	-	-	-	-	-	-
Stage 2	878	844	-	848	746	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11		9.6		0.4		1.2					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1468	-	-	719	839	1553	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.168	0.062	0.015	-	-				
HCM Control Delay (s)	7.5	0	-	11	9.6	7.4	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	0.2	0	-	-				

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	2.6	0.3	2.6	0.0	0.0	0.5	10.1	0.1	1.4
Total Delay (hr)	0.5	3.3	0.2	0.3	2.1	0.0	1.4	0.4	0.8	2.0	0.2	0.0
Total Del/Veh (s)	21.8	13.5	10.2	15.8	7.5	1.0	69.6	74.3	28.1	74.1	81.0	0.7
Stop Delay (hr)	0.3	0.7	0.0	0.2	0.9	0.0	1.4	0.4	0.7	1.9	0.2	0.0
Stop Del/Veh (s)	13.8	2.9	1.9	12.9	3.3	0.3	68.0	71.7	27.2	72.8	78.4	0.0

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	0.7
Total Delay (hr)	11.1
Total Del/Veh (s)	15.7
Stop Delay (hr)	6.8
Stop Del/Veh (s)	9.7

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.8	6.9	4.2	4.6	9.1	3.9	2.7	1.3	0.8	3.1	3.4	3.1
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.6	2.8	2.8	2.8	5.6	3.7	0.2	0.6	0.2	0.8	1.5	1.4

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.4
Total Del/Veh (s)	4.2
Stop Delay (hr)	0.2
Stop Del/Veh (s)	2.4

Total Zone Performance

Denied Delay (hr)	0.5
Denied Del/Veh (s)	1.2
Total Delay (hr)	11.5
Total Del/Veh (s)	1035.2
Stop Delay (hr)	7.0
Stop Del/Veh (s)	633.2

Intersection: 3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	110	184	186	72	240	195	30	160	157	112	46
Average Queue (ft)	35	48	55	31	88	65	5	79	91	86	8
95th Queue (ft)	70	142	157	63	214	164	22	143	161	127	31
Link Distance (ft)		1192	1192		701	701		146	146	97	97
Upstream Blk Time (%)								4	3	17	
Queuing Penalty (veh)								3	3	0	
Storage Bay Dist (ft)	165			185			185				
Storage Blk Time (%)		0			2	0					
Queuing Penalty (veh)		0			1	0					

Intersection: 4: Trade Cnt Dr & Access Rd/Lowes

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	91	71	26	28
Average Queue (ft)	37	24	1	1
95th Queue (ft)	60	51	10	10
Link Distance (ft)	706	445	669	146
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Zone Summary

Zone wide Queuing Penalty: 7

HCM 6th Signalized Intersection Summary

1: Airport Road & McFarland Blvd

11/10/2023

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (veh/h)	737	270	121	1042	506	227
Future Volume (veh/h)	737	270	121	1042	506	227
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1826	1826
Adj Flow Rate, veh/h	801	0	132	1133	550	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	5	5	2	5	5
Cap, veh/h	1305		316	1718	617	
Arrive On Green	0.37	0.00	0.13	0.97	0.39	0.00
Sat Flow, veh/h	3647	1547	1739	3647	1565	1547
Grp Volume(v), veh/h	801	0	132	1133	550	0
Grp Sat Flow(s),veh/h/ln	1777	1547	1739	1777	1565	1547
Q Serve(g_s), s	16.6	0.0	4.1	2.6	29.5	0.0
Cycle Q Clear(g_c), s	16.6	0.0	4.1	2.6	29.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1305		316	1718	617	
V/C Ratio(X)	0.61		0.42	0.66	0.89	
Avail Cap(c_a), veh/h	1305		404	1718	617	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.88	0.88	1.00	0.00
Uniform Delay (d), s/veh	23.3	0.0	15.6	0.8	25.4	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.8	1.8	17.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	1.3	0.8	12.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.4	0.0	16.4	2.6	43.0	0.0
LnGrp LOS	C		B	A	D	
Approach Vol, veh/h	801			1265	550	
Approach Delay, s/veh	25.4			4.0	43.0	
Approach LOS	C			A	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.0		40.0	10.5	39.5
Change Period (Y+Rc), s		6.5		4.5	4.5	6.5
Max Green Setting (Gmax), s		43.5		35.5	10.5	28.5
Max Q Clear Time (g_c+I1), s		4.6		31.5	6.1	18.6
Green Ext Time (p_c), s		8.7		0.8	0.1	3.4
Intersection Summary						
HCM 6th Ctrl Delay			18.8			
HCM 6th LOS			B			

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
2: Airport Rd/Airport Road & Jemison Ln

11/10/2023

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			↰↱			↰↱	
Traffic Vol, veh/h	6	1	6	26	0	165	2	561	37	149	231	1
Future Vol, veh/h	6	1	6	26	0	165	2	561	37	149	231	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	1	7	28	0	179	2	610	40	162	251	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	885	1230	126	1084	1210	325	252	0	0	650	0	0
Stage 1	576	576	-	634	634	-	-	-	-	-	-	-
Stage 2	309	654	-	450	576	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	239	176	901	171	181	671	1310	-	-	932	-	-
Stage 1	470	500	-	434	471	-	-	-	-	-	-	-
Stage 2	676	461	-	558	500	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	148	140	901	142	144	671	1310	-	-	932	-	-
Mov Cap-2 Maneuver	148	140	-	142	144	-	-	-	-	-	-	-
Stage 1	469	399	-	433	470	-	-	-	-	-	-	-
Stage 2	494	460	-	441	399	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.6		15.6		0		4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1310	-	-	148	507	142	671	932	-	-
HCM Lane V/C Ratio	0.002	-	-	0.044	0.015	0.199	0.267	0.174	-	-
HCM Control Delay (s)	7.8	0	-	30.4	12.2	36.5	12.3	9.7	0.4	-
HCM Lane LOS	A	A	-	D	B	E	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.7	1.1	0.6	-	-

HCM 6th Signalized Intersection Summary

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

11/10/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	712	103	43	910	113	70	18	97	160	28	243
Future Volume (veh/h)	173	712	103	43	910	113	70	18	97	160	28	243
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	774	0	47	989	123	76	20	105	174	30	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	2417		562	2362	1054	250	23	122	210	237	
Arrive On Green	0.10	1.00	0.00	0.03	0.66	0.66	0.05	0.09	0.09	0.09	0.13	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	260	1365	1781	1870	1585
Grp Volume(v), veh/h	188	774	0	47	989	123	76	0	125	174	30	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1625	1781	1870	1585
Q Serve(g_s), s	6.5	0.0	0.0	1.5	23.3	5.1	6.9	0.0	13.7	15.5	2.6	0.0
Cycle Q Clear(g_c), s	6.5	0.0	0.0	1.5	23.3	5.1	6.9	0.0	13.7	15.5	2.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	398	2417		562	2362	1054	250	0	145	210	237	
V/C Ratio(X)	0.47	0.32		0.08	0.42	0.12	0.30	0.00	0.86	0.83	0.13	
Avail Cap(c_a), veh/h	465	2417		656	2362	1054	317	0	230	210	265	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.1	0.0	0.0	8.4	14.0	11.0	69.8	0.0	80.9	67.1	69.8	0.0
Incr Delay (d2), s/veh	0.7	0.3	0.0	0.1	0.5	0.2	0.7	0.0	17.2	23.1	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	2.1	0.1	0.0	0.5	8.9	1.9	3.2	0.0	6.5	8.6	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	0.3	0.0	8.5	14.6	11.2	70.5	0.0	98.1	90.2	70.0	0.0
LnGrp LOS	B	A		A	B	B	E	A	F	F	E	
Approach Vol, veh/h		962			1159			201			204	
Approach Delay, s/veh		2.3			14.0			87.6			87.2	
Approach LOS		A			B			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	126.2	20.0	20.6	10.5	128.9	13.3	27.3				
Change Period (Y+Rc), s	4.5	6.5	4.5	4.5	4.5	6.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	103.5	15.5	25.5	15.5	103.5	15.5	25.5				
Max Q Clear Time (g_c+I1), s	8.5	25.3	17.5	15.7	3.5	2.0	8.9	4.6				
Green Ext Time (p_c), s	0.3	7.9	0.0	0.4	0.0	5.3	0.1	0.1				

Intersection Summary

HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
4: Trade Cnt Dr & Access Rd/Lowes

11/10/2023

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	56	0	0	0	0	57	0	41	0	76	20	76
Future Vol, veh/h	56	0	0	0	0	57	0	41	0	76	20	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	0	0	0	0	62	0	45	0	83	22	83

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	306	275	64	275	316	45	105	0	0	45	0	0
Stage 1	230	230	-	45	45	-	-	-	-	-	-	-
Stage 2	76	45	-	230	271	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	646	632	1000	677	600	1025	1486	-	-	1563	-	-
Stage 1	773	714	-	969	857	-	-	-	-	-	-	-
Stage 2	933	857	-	773	685	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	581	596	1000	647	566	1025	1486	-	-	1563	-	-
Mov Cap-2 Maneuver	581	596	-	647	566	-	-	-	-	-	-	-
Stage 1	773	673	-	969	857	-	-	-	-	-	-	-
Stage 2	877	857	-	729	646	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.9		8.7		0		3.3	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1486	-	-	581	1025	1563	-
HCM Lane V/C Ratio	-	-	-	0.105	0.06	0.053	-
HCM Control Delay (s)	0	-	-	11.9	8.7	7.4	0
HCM Lane LOS	A	-	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.2	-

HCM 6th TWSC
5: Trade Cnt Dr & Jemision Ln/Lowes

11/10/2023

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	0	1	0	0	1	0	0	0	4	0	20
Future Vol, veh/h	42	0	1	0	0	1	0	0	0	4	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	0	1	0	0	1	0	0	0	4	0	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	20	19	11	20	30	0	22	0	0	0	0	0
Stage 1	19	19	-	0	0	-	-	-	-	-	-	-
Stage 2	1	0	-	20	30	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	993	875	1070	993	863	-	1593	-	-	-	-	-
Stage 1	1000	880	-	-	-	-	-	-	-	-	-	-
Stage 2	1022	-	-	999	870	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	875	1070	992	863	-	1593	-	-	-	-	-
Mov Cap-2 Maneuver	-	875	-	992	863	-	-	-	-	-	-	-
Stage 1	1000	880	-	-	-	-	-	-	-	-	-	-
Stage 2	1022	-	-	998	870	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0			
HCM LOS	-	-	-	-

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1593	-	-	-	1070	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.001	-	-	-	-
HCM Control Delay (s)	0	-	-	-	8.4	-	-	-	-
HCM Lane LOS	A	-	-	-	A	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	-	-	-	-

HCM 6th TWSC
6: Jemison Ln/Jemison Ln & Access

11/10/2023

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	157	30	0	0	21	0	0	0	0	4	0	157
Future Vol, veh/h	157	30	0	0	21	0	0	0	0	4	0	157
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	171	33	0	0	23	0	0	0	0	4	0	171

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	23	0	0	33	0	0	484	398	33	398	398	23
Stage 1	-	-	-	-	-	-	375	375	-	23	23	-
Stage 2	-	-	-	-	-	-	109	23	-	375	375	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1592	-	-	1579	-	-	493	540	1041	562	540	1054
Stage 1	-	-	-	-	-	-	646	617	-	995	876	-
Stage 2	-	-	-	-	-	-	896	876	-	646	617	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1592	-	-	1579	-	-	379	482	1041	516	482	1054
Mov Cap-2 Maneuver	-	-	-	-	-	-	379	482	-	516	482	-
Stage 1	-	-	-	-	-	-	577	551	-	889	876	-
Stage 2	-	-	-	-	-	-	751	876	-	577	551	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.3	0	0	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1592	-	-	1579	-	-	1027
HCM Lane V/C Ratio	-	0.107	-	-	-	-	-	0.17
HCM Control Delay (s)	0	7.5	-	-	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0.4	-	-	0	-	-	0.6

Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	162	149	8	0	0
Future Vol, veh/h	0	162	149	8	0	0
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	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	176	162	9	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	334	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	661	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	595	1084	1622	-	-	-
Mov Cap-2 Maneuver	595	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	7.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1622	-	1084	-	-	
HCM Lane V/C Ratio	0.1	-	0.162	-	-	
HCM Control Delay (s)	7.5	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	-	0.6	-	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	0	8	0	0	77
Future Vol, veh/h	17	0	8	0	0	77
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	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	9	0	0	84

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	60	42	84
Stage 1	42	-	-
Stage 2	18	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	947	1029	1513
Stage 1	980	-	-
Stage 2	1005	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	941	1029	1513
Mov Cap-2 Maneuver	941	-	-
Stage 1	974	-	-
Stage 2	1005	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	7.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1513	-	941	-	-
HCM Lane V/C Ratio	0.006	-	0.02	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

1: Airport Road & McFarland Blvd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.3
Denied Del/Veh (s)	0.4	2.7	0.1	0.0	0.2	0.0	0.0	0.4
Total Delay (hr)	5.7	0.5	1.0	6.8	3.6	0.0	0.2	17.7
Total Del/Veh (s)	26.8	6.2	26.6	22.5	26.1	2.6	2.6	21.2
Stop Delay (hr)	3.4	0.0	0.7	3.1	2.9	0.0	0.0	10.1
Stop Del/Veh (s)	16.0	0.0	18.8	10.2	21.0	0.6	0.1	12.1

2: Airport Rd/Airport Road & Jemison Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.0	0.1	0.3	0.2	0.0	0.0	0.0	0.1
Total Delay (hr)	0.1	0.0	0.0	0.1	0.3	0.0	0.1	0.0	0.5	0.4	0.0	1.5
Total Del/Veh (s)	27.1	9.0	3.3	20.1	5.6	1.6	0.7	0.3	11.4	5.6	9.4	4.4
Stop Delay (hr)	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.2	0.1	0.0	0.7
Stop Del/Veh (s)	25.9	6.3	3.2	17.9	5.0	0.0	0.0	0.0	5.0	1.1	4.8	2.2

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	1.6	0.3	1.9
Denied Del/Veh (s)	0.1	0.0	0.2	2.4	0.3	2.8	1.6	1.8	0.9	36.5	36.0	27.9
Total Delay (hr)	1.5	2.8	0.3	0.1	2.6	0.1	1.5	0.3	0.6	3.0	0.7	0.2
Total Del/Veh (s)	29.6	13.6	9.5	12.7	10.4	2.5	70.1	89.1	24.3	66.6	83.3	2.9
Stop Delay (hr)	1.0	0.5	0.0	0.1	1.3	0.0	1.5	0.3	0.6	3.0	0.7	0.1
Stop Del/Veh (s)	19.3	2.5	0.9	10.3	5.1	1.1	68.5	86.5	23.8	65.2	81.1	1.7

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	All
Denied Delay (hr)	4.1
Denied Del/Veh (s)	5.5
Total Delay (hr)	13.7
Total Del/Veh (s)	18.4
Stop Delay (hr)	9.1
Stop Del/Veh (s)	12.2

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	EBL	WBR	NBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.1	0.0	0.1	0.0	0.1	0.3
Total Del/Veh (s)	7.2	3.9	1.3	3.6	4.1	2.9	3.9
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	5.3	3.6	0.4	0.8	1.1	0.8	2.0

5: Trade Cnt Dr & Jemision Ln/Lowes Performance by movement

Movement	EBL	EBR	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.1		0.0	0.0	0.4
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.4	3.1		1.9	0.4	3.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.4	3.0		0.0	0.0	1.7

6: Jemison Ln/Jemision Ln & Access Performance by movement

Movement	EBL	EBT	WBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Total Del/Veh (s)	2.5	0.8	0.3	3.8	0.6	2.8	2.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Stop Del/Veh (s)	0.3	0.3	0.0	2.9	0.3	2.7	1.3

7: Access & DW1 Performance by movement

Movement	EBR	NBL	NBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.0	0.1
Total Delay (hr)	0.1	0.0	0.0	0.2
Total Del/Veh (s)	2.9	1.1	0.3	2.0
Stop Delay (hr)	0.1	0.0	0.0	0.1
Stop Del/Veh (s)	2.6	0.0	0.0	1.3

8: DW2 & Access Rd Performance by movement

Movement	EBL	NBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.6	1.9	0.4	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.4	0.4	0.0	0.4

Total Network Performance

Denied Delay (hr)	4.5
Denied Del/Veh (s)	4.6
Total Delay (hr)	35.0
Total Del/Veh (s)	35.5
Stop Delay (hr)	20.4
Stop Del/Veh (s)	20.7

Intersection: 1: Airport Road & McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	292	250	55	150	275	278	361	116
Average Queue (ft)	179	128	2	63	155	158	224	4
95th Queue (ft)	270	214	31	119	242	255	339	66
Link Distance (ft)	1004	1004			1192	1192	364	364
Upstream Blk Time (%)							0	0
Queuing Penalty (veh)							2	0
Storage Bay Dist (ft)			300	300				
Storage Blk Time (%)					0			
Queuing Penalty (veh)					0			

Intersection: 2: Airport Rd/Airport Road & Jemison Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (ft)	26	29	64	93	41	17	104	29
Average Queue (ft)	7	7	16	40	1	1	41	1
95th Queue (ft)	25	26	46	70	15	8	74	17
Link Distance (ft)	143	143		374	480	480	364	364
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			75					
Storage Blk Time (%)			1	1				
Queuing Penalty (veh)			2	0				

Intersection: 3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	197	158	174	126	305	243	113	144	132	125	106	121
Average Queue (ft)	72	36	44	21	127	71	19	75	65	106	30	43
95th Queue (ft)	143	110	125	74	280	188	70	125	126	129	80	124
Link Distance (ft)		1192	1192		701	701		146	146	97	97	97
Upstream Blk Time (%)								1	1	49	2	3
Queuing Penalty (veh)								1	1	0	0	0
Storage Bay Dist (ft)	165			185			185					
Storage Blk Time (%)	1	0			4	0						
Queuing Penalty (veh)	3	0			2	0						

Intersection: 4: Trade Cnt Dr & Access Rd/Lowes

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	65	51	16	32
Average Queue (ft)	29	22	1	2
95th Queue (ft)	53	46	11	15
Link Distance (ft)	706	445	669	146
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Trade Cnt Dr & Jemision Ln/Lowes

Movement	EB	EB	WB
Directions Served	L	TR	LTR
Maximum Queue (ft)	70	19	10
Average Queue (ft)	27	1	0
95th Queue (ft)	54	12	5
Link Distance (ft)		593	656
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	125		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 6: Jemision Ln/Jemision Ln & Access

Movement	EB	SB
Directions Served	L	LTR
Maximum Queue (ft)	28	62
Average Queue (ft)	3	35
95th Queue (ft)	16	50
Link Distance (ft)		123
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Access & DW1

Movement	EB
Directions Served	LR
Maximum Queue (ft)	84
Average Queue (ft)	43
95th Queue (ft)	73
Link Distance (ft)	119
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: DW2 & Access Rd

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	29	20
Average Queue (ft)	9	1
95th Queue (ft)	31	10
Link Distance (ft)	137	117
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 11

HCM 6th Signalized Intersection Summary

1: Airport Road & McFarland Blvd

11/10/2023

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (veh/h)	737	270	121	1042	506	227
Future Volume (veh/h)	737	270	121	1042	506	227
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1826	1826
Adj Flow Rate, veh/h	801	0	132	1133	398	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	5	5	2	5	5
Cap, veh/h	1729		404	2112	443	
Arrive On Green	0.49	0.00	0.12	1.00	0.28	0.00
Sat Flow, veh/h	3647	1547	1739	3647	1565	1547
Grp Volume(v), veh/h	801	0	132	1133	398	0
Grp Sat Flow(s),veh/h/ln	1777	1547	1739	1777	1565	1547
Q Serve(g_s), s	13.4	0.0	3.3	0.0	22.0	0.0
Cycle Q Clear(g_c), s	13.4	0.0	3.3	0.0	22.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1729		404	2112	443	
V/C Ratio(X)	0.46		0.33	0.54	0.90	
Avail Cap(c_a), veh/h	1729		506	2112	443	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.88	0.88	1.00	0.00
Uniform Delay (d), s/veh	15.3	0.0	10.1	0.0	31.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.4	0.9	23.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	1.0	0.3	10.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.2	0.0	10.5	0.9	54.5	0.0
LnGrp LOS	B		B	A	D	
Approach Vol, veh/h	801			1265	398	
Approach Delay, s/veh	16.2			1.9	54.5	
Approach LOS	B			A	D	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	60.0		30.0		9.7	50.3
Change Period (Y+Rc), s	6.5		4.5		4.5	6.5
Max Green Setting (Gmax), s	53.5		25.5		10.5	38.5
Max Q Clear Time (g_c+I1), s	2.0		24.0		5.3	15.4
Green Ext Time (p_c), s	8.9		0.2		0.1	4.9
Intersection Summary						
HCM 6th Ctrl Delay			15.0			
HCM 6th LOS			B			
Notes						
User approved volume balancing among the lanes for turning movement.						
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.						

HCM 6th TWSC
2: Airport Rd/Airport Road & Jemison Ln

11/10/2023

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1	6	26	0	165	2	561	37	149	231	1
Future Vol, veh/h	6	1	6	26	0	165	2	561	37	149	231	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	1	7	28	0	179	2	610	40	162	251	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	885	1230	126	1084	1210	325	252	0	0	650	0	0
Stage 1	576	576	-	634	634	-	-	-	-	-	-	-
Stage 2	309	654	-	450	576	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	239	176	901	171	181	671	1310	-	-	932	-	-
Stage 1	470	500	-	434	471	-	-	-	-	-	-	-
Stage 2	676	461	-	558	500	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	148	140	901	142	144	671	1310	-	-	932	-	-
Mov Cap-2 Maneuver	148	140	-	142	144	-	-	-	-	-	-	-
Stage 1	469	399	-	433	470	-	-	-	-	-	-	-
Stage 2	494	460	-	441	399	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.6		15.6		0		4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1310	-	-	148	507	142	671	932	-	-
HCM Lane V/C Ratio	0.002	-	-	0.044	0.015	0.199	0.267	0.174	-	-
HCM Control Delay (s)	7.8	0	-	30.4	12.2	36.5	12.3	9.7	0.4	-
HCM Lane LOS	A	A	-	D	B	E	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.7	1.1	0.6	-	-

HCM 6th Signalized Intersection Summary

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

11/10/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	712	103	43	910	113	70	18	97	160	28	243
Future Volume (veh/h)	173	712	103	43	910	113	70	18	97	160	28	243
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	774	0	47	989	123	76	20	105	174	30	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	2417		562	2362	1054	250	23	122	210	237	
Arrive On Green	0.10	1.00	0.00	0.03	0.66	0.66	0.05	0.09	0.09	0.09	0.13	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	260	1365	1781	1870	1585
Grp Volume(v), veh/h	188	774	0	47	989	123	76	0	125	174	30	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1625	1781	1870	1585
Q Serve(g_s), s	6.5	0.0	0.0	1.5	23.3	5.1	6.9	0.0	13.7	15.5	2.6	0.0
Cycle Q Clear(g_c), s	6.5	0.0	0.0	1.5	23.3	5.1	6.9	0.0	13.7	15.5	2.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	398	2417		562	2362	1054	250	0	145	210	237	
V/C Ratio(X)	0.47	0.32		0.08	0.42	0.12	0.30	0.00	0.86	0.83	0.13	
Avail Cap(c_a), veh/h	465	2417		656	2362	1054	317	0	230	210	265	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.86	0.86	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.1	0.0	0.0	8.4	14.0	11.0	69.8	0.0	80.9	67.1	69.8	0.0
Incr Delay (d2), s/veh	0.7	0.3	0.0	0.1	0.5	0.2	0.7	0.0	17.2	23.1	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	2.1	0.1	0.0	0.5	8.9	1.9	3.2	0.0	6.5	8.6	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	0.3	0.0	8.5	14.6	11.2	70.5	0.0	98.1	90.2	70.0	0.0
LnGrp LOS	B	A		A	B	B	E	A	F	F	E	
Approach Vol, veh/h		962			1159			201			204	
Approach Delay, s/veh		2.4			14.0			87.6			87.2	
Approach LOS		A			B			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	126.2	20.0	20.6	10.5	128.9	13.3	27.3				
Change Period (Y+Rc), s	4.5	6.5	4.5	4.5	4.5	6.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	103.5	15.5	25.5	15.5	103.5	15.5	25.5				
Max Q Clear Time (g_c+I1), s	8.5	25.3	17.5	15.7	3.5	2.0	8.9	4.6				
Green Ext Time (p_c), s	0.3	7.9	0.0	0.4	0.0	5.3	0.1	0.1				

Intersection Summary

HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
4: Trade Cnt Dr & Access Rd/Lowes

11/10/2023

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	56	0	0	0	0	57	0	41	0	76	20	76
Future Vol, veh/h	56	0	0	0	0	57	0	41	0	76	20	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	0	0	0	0	62	0	45	0	83	22	83

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	306	275	64	275	316	45	105	0	0	45	0	0
Stage 1	230	230	-	45	45	-	-	-	-	-	-	-
Stage 2	76	45	-	230	271	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	646	632	1000	677	600	1025	1486	-	-	1563	-	-
Stage 1	773	714	-	969	857	-	-	-	-	-	-	-
Stage 2	933	857	-	773	685	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	581	596	1000	647	566	1025	1486	-	-	1563	-	-
Mov Cap-2 Maneuver	581	596	-	647	566	-	-	-	-	-	-	-
Stage 1	773	673	-	969	857	-	-	-	-	-	-	-
Stage 2	877	857	-	729	646	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.9		8.7		0		3.3	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1486	-	-	581	1025	1563	-
HCM Lane V/C Ratio	-	-	-	0.105	0.06	0.053	-
HCM Control Delay (s)	0	-	-	11.9	8.7	7.4	0
HCM Lane LOS	A	-	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.2	-

HCM 6th TWSC
5: Trade Cnt Dr & Jemision Ln/Lowes

11/10/2023

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	0	1	0	0	1	0	0	0	4	0	20
Future Vol, veh/h	42	0	1	0	0	1	0	0	0	4	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	0	1	0	0	1	0	0	0	4	0	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	20	19	11	20	30	0	22	0	0	0	0	0
Stage 1	19	19	-	0	0	-	-	-	-	-	-	-
Stage 2	1	0	-	20	30	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	993	875	1070	993	863	-	1593	-	-	-	-	-
Stage 1	1000	880	-	-	-	-	-	-	-	-	-	-
Stage 2	1022	-	-	999	870	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	875	1070	992	863	-	1593	-	-	-	-	-
Mov Cap-2 Maneuver	-	875	-	992	863	-	-	-	-	-	-	-
Stage 1	1000	880	-	-	-	-	-	-	-	-	-	-
Stage 2	1022	-	-	998	870	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0			
HCM LOS	-	-	-	-

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1593	-	-	-	1070	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.001	-	-	-	-
HCM Control Delay (s)	0	-	-	-	8.4	-	-	-	-
HCM Lane LOS	A	-	-	-	A	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	-	-	-	-

HCM 6th TWSC
6: Jemison Ln/Jemison Ln & Access

11/10/2023

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	157	30	0	0	21	0	0	0	0	4	0	157
Future Vol, veh/h	157	30	0	0	21	0	0	0	0	4	0	157
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	171	33	0	0	23	0	0	0	0	4	0	171

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	23	0	0	33	0	0	484	398	33	398	398	23
Stage 1	-	-	-	-	-	-	375	375	-	23	23	-
Stage 2	-	-	-	-	-	-	109	23	-	375	375	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1592	-	-	1579	-	-	493	540	1041	562	540	1054
Stage 1	-	-	-	-	-	-	646	617	-	995	876	-
Stage 2	-	-	-	-	-	-	896	876	-	646	617	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1592	-	-	1579	-	-	379	482	1041	516	482	1054
Mov Cap-2 Maneuver	-	-	-	-	-	-	379	482	-	516	482	-
Stage 1	-	-	-	-	-	-	577	551	-	889	876	-
Stage 2	-	-	-	-	-	-	751	876	-	577	551	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.3	0	0	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1592	-	-	1579	-	-	1027
HCM Lane V/C Ratio	-	0.107	-	-	-	-	-	0.17
HCM Control Delay (s)	0	7.5	-	-	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0.4	-	-	0	-	-	0.6

Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	162	149	8	0	0
Future Vol, veh/h	0	162	149	8	0	0
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	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	176	162	9	0	0

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	334	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	661	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	595	1084	1622	-	-	-
Mov Cap-2 Maneuver	595	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	726	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	7.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.1	-	0.162	-	-
HCM Control Delay (s)	7.5	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.6	-	-

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	0	8	0	0	77
Future Vol, veh/h	17	0	8	0	0	77
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	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	9	0	0	84

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	60	42	84
Stage 1	42	-	-
Stage 2	18	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	947	1029	1513
Stage 1	980	-	-
Stage 2	1005	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	941	1029	1513
Mov Cap-2 Maneuver	941	-	-
Stage 1	974	-	-
Stage 2	1005	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	7.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1513	-	941	-	-
HCM Lane V/C Ratio	0.006	-	0.02	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

1: Airport Road & McFarland Blvd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.3
Denied Del/Veh (s)	0.4	2.7	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay (hr)	3.5	0.4	0.7	5.3	4.1	0.0	0.4	14.5
Total Del/Veh (s)	16.7	5.7	22.5	17.5	28.1	2.0	6.7	17.3
Stop Delay (hr)	1.8	0.0	0.5	2.0	3.5	0.0	0.2	8.0
Stop Del/Veh (s)	8.6	0.0	14.9	6.6	24.1	0.2	3.0	9.6

2: Airport Rd/Airport Road & Jemison Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.4	0.0	0.2	0.2	0.2	0.0	0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.2	0.3	0.0	0.1	0.0	0.4	0.3	0.0	1.3
Total Del/Veh (s)	13.6	17.8	3.6	19.2	5.1	2.7	0.6	0.4	10.9	5.3		3.9
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.2	0.1	0.0	0.6
Stop Del/Veh (s)	12.4	14.3	3.5	17.0	4.6	0.6	0.0	0.0	4.7	0.8		1.9

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	1.9	0.2	2.4
Denied Del/Veh (s)	0.1	0.0	0.0	2.8	0.3	2.6	1.7	0.0	1.3	43.2	29.1	35.0
Total Delay (hr)	1.3	2.6	0.3	0.1	2.5	0.1	1.2	0.3	0.5	2.9	0.7	0.2
Total Del/Veh (s)	26.5	12.5	9.5	14.1	10.0	2.2	68.0	68.0	17.8	63.3	81.9	2.4
Stop Delay (hr)	0.9	0.6	0.0	0.1	1.2	0.0	1.2	0.3	0.5	2.8	0.6	0.1
Stop Del/Veh (s)	17.7	2.7	1.3	11.4	4.8	0.9	66.5	65.4	17.4	61.7	79.6	1.3

3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd Performance by movement

Movement	All
Denied Delay (hr)	4.8
Denied Del/Veh (s)	6.4
Total Delay (hr)	12.6
Total Del/Veh (s)	16.8
Stop Delay (hr)	8.3
Stop Del/Veh (s)	11.1

4: Trade Cnt Dr & Access Rd/Lowes Performance by movement

Movement	EBL	WBR	NBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.1	0.0	0.1	0.3
Total Del/Veh (s)	6.0	2.7	2.0	4.0	4.3	2.8	3.6
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	3.9	2.6	1.2	1.1	1.1	0.8	1.7

5: Trade Cnt Dr & Jemision Ln/Lowes Performance by movement

Movement	EBL	EBR	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.9	0.0	0.1	0.0	0.0	0.6
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.2	2.5	2.2	1.7	0.4	2.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.4	2.3	2.2	0.0	0.0	1.5

6: Jemison Ln/Jemision Ln & Access Performance by movement

Movement	EBL	EBT	WBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.3
Total Del/Veh (s)	2.4	0.5	0.4	6.1	0.6	2.9	2.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Stop Del/Veh (s)	0.3	0.2	0.0	5.0	0.3	2.8	1.4

7: Access & DW1 Performance by movement

Movement	EBR	NBL	NBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.0	0.1
Total Delay (hr)	0.1	0.0	0.0	0.2
Total Del/Veh (s)	3.0	1.1	0.2	2.1
Stop Delay (hr)	0.1	0.0	0.0	0.1
Stop Del/Veh (s)	2.6	0.0	0.0	1.4

8: DW2 & Access Rd Performance by movement

Movement	EBL	NBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	1.9	0.3	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.4	0.4	0.0	0.3

Total Network Performance

Denied Delay (hr)	5.1
Denied Del/Veh (s)	5.3
Total Delay (hr)	30.6
Total Del/Veh (s)	30.7
Stop Delay (hr)	17.5
Stop Del/Veh (s)	17.6

Intersection: 1: Airport Road & McFarland Blvd

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	L	T	T	L	LR
Maximum Queue (ft)	246	200	112	244	252	264	261
Average Queue (ft)	135	87	55	123	130	163	157
95th Queue (ft)	219	170	105	213	227	236	246
Link Distance (ft)	999	999		1186	1186	364	364
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			300				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: Airport Rd/Airport Road & Jemison Ln

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	TR	LT
Maximum Queue (ft)	26	29	67	100	9	12	82
Average Queue (ft)	4	10	23	42	0	0	38
95th Queue (ft)	20	32	56	74	5	5	65
Link Distance (ft)	143	143		374	480	480	364
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			75				
Storage Blk Time (%)			0	1			
Queuing Penalty (veh)			0	0			

Intersection: 3: Trade Cnt Dr/Walmart & McFarland Blvd/McFarland Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	154	161	168	66	301	274	52	136	151	120	97	112
Average Queue (ft)	71	35	38	19	122	72	14	64	59	102	30	32
95th Queue (ft)	124	110	114	49	270	199	43	121	113	135	74	108
Link Distance (ft)		1186	1186		701	701		146	146	97	97	97
Upstream Blk Time (%)								0	1	38	2	2
Queuing Penalty (veh)								0	1	0	0	0
Storage Bay Dist (ft)	165			185			185					
Storage Blk Time (%)	0	0			3	0						
Queuing Penalty (veh)	1	0			1	0						

Intersection: 4: Trade Cnt Dr & Access Rd/Lowes

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	55	42	23	41
Average Queue (ft)	25	21	1	4
95th Queue (ft)	50	42	13	23
Link Distance (ft)	706	445	669	146
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Trade Cnt Dr & Jemision Ln/Lowes

Movement	EB	EB	WB
Directions Served	L	TR	LTR
Maximum Queue (ft)	59	20	19
Average Queue (ft)	26	1	1
95th Queue (ft)	50	10	10
Link Distance (ft)		593	656
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	125		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Jemison Ln/Jemision Ln & Access

Movement	EB	SB
Directions Served	L	LTR
Maximum Queue (ft)	26	63
Average Queue (ft)	2	36
95th Queue (ft)	16	55
Link Distance (ft)		123
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Access & DW1

Movement	EB
Directions Served	LR
Maximum Queue (ft)	98
Average Queue (ft)	49
95th Queue (ft)	80
Link Distance (ft)	119
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: DW2 & Access Rd

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	29	21
Average Queue (ft)	10	1
95th Queue (ft)	32	11
Link Distance (ft)	137	117
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 4

Appendix D: Trip Generation Calculation

Trip Generation

Calculation of Anticipated Project Trips

Based upon methodology from ITE's *Trip Generation Manual*, 11th Edition (2021)

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Project Land Use	Project Density	Project Trips			ITE Code	Variable	Equation Used ¹	In/Out Distribution
		Total	Inbound	Outbound				
Fast-Food Restaurant with Drive-Through Window	6,101 S.F.				934	1,000 S.F.		
Daily		3,759	1,880	1,879			T = 616.12(X)	50% / 50%
AM Peak Hour		337	172	165			T = 55.25(X)	51% / 49%
PM Peak Hour		336	161	175			T = 55.15(X)	48% / 52%
Reductions for Internal Capture								
Daily	0%	0	0	0				
AM Peak Hour	0%	0	0	0				
PM Peak Hour	0%	0	0	0				
Reductions for Modal Split								
Daily	0%	0	0	0				
AM Peak Hour	0%	0	0	0				
PM Peak Hour	0%	0	0	0				
Reductions for Pass-By Trips								
Daily	50%	1,880	940	940				
AM Peak Hour	49%	165	84	81				
PM Peak Hour	50%	168	81	87				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		1,879	940	939				
AM Peak Hour		172	88	84				
PM Peak Hour		168	80	88				

Appendix E: Turn Lane Worksheets

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

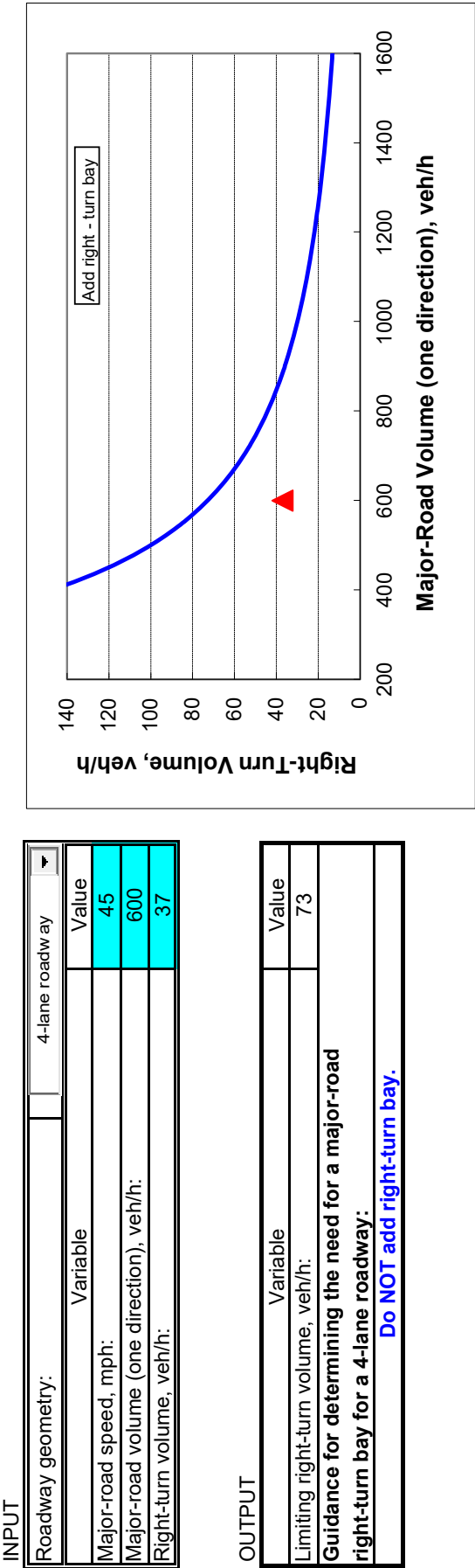


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

4-lane roadway

INPUT

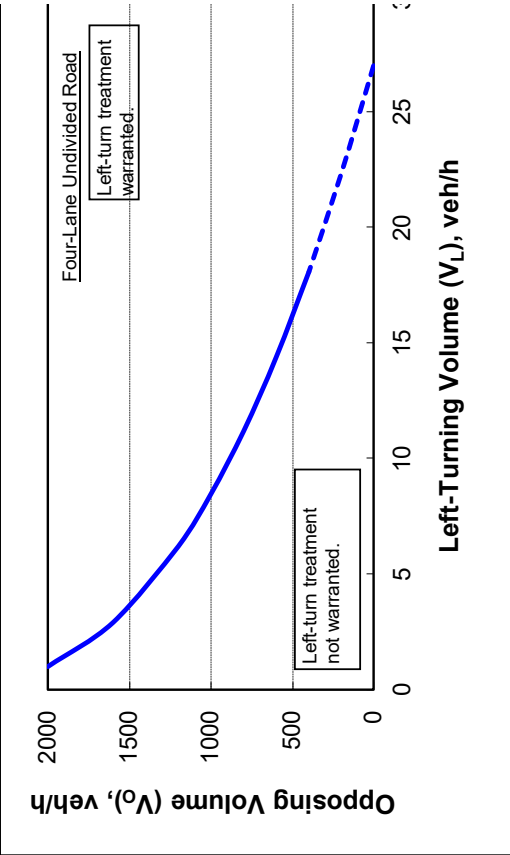
Variable	Value
Left-turning volume (V_L), veh/h:	149
Advancing volume (V_A), veh/h:	380
Opposing volume (V_O), veh/h:	600

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay: Left-turn treatment warranted.	

CALIBRATION CONSTANTS

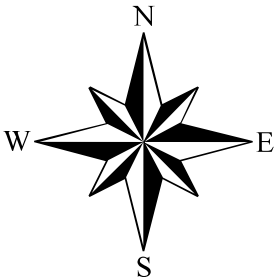
Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0



Note: When $V_O < 400$ veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h ($V_A > 400$ veh/h).

Northport Zoning Board of Adjustment

Variance Request



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- Zoning**
- Commercial Highway
 - General Commercial
 - Light Industrial
 - Mobile Home Park
 - Office and Institutional
 - Residential Single-Family - 1
 - Residential Single-Family - 4
 - Subject Property

