

VILLAGE OF BARTLETT

COMMITTEE AGENDA

JUNE 20, 2023

BUILDING AND ZONING COMMITTEE, CHAIRMAN GUNSTEEN

1. Promenade of Bartlett Mixed Use Development
2. Hawk Hollow Middle School and Intersection Analysis
3. Bartlett Liquors and Wine Special Use Permit
4. Orchards Gaming Special Use Permit

COMMUNITY & ECONOMIC DEVELOPMENT COMMITTEE, CHAIRMAN GANDSEY

5. Yummy Poke BEDA Application



Agenda Item Executive Summary

Item Name	Promenade	Committee or Board	Committee
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BUDGET IMPACT

Amount:	N/A	Budgeted	N/A
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List what fund	N/A
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EXECUTIVE SUMMARY

The petitioner is requiring a **Preliminary/Final Plat of Subdivision** to create three (3) lots and **rezone** the 4.6-acre property from the B-3 Neighborhood Shopping District to the B-3 PUD Zoning District.

The petitioner is requesting a **special use permit** to allow a planned unit development and a car wash on Lot 1.

The **Site/PUD Plan** identifies a car wash on lot 1, a 14,000 square foot commercial building on lot 2 and a 6,175 square foot daycare center on lot 3. All the buildings will have similar facades which include metallic grey panels, beige stone masonry and light grey EIFS.

The site will be accessed via curbcuts on County Farm Road and on Newport Boulevard (the existing BP gas station's curbcut on County Farm will be removed). A cross access easement also allows access to the site via the BP gas station's curbcut on Stearns Road. The plans have been reviewed by the DuPage County Division of Transportation and they have no objection to the location of the new curbcut on County Farm Road provided that it replaces the existing curbcut.

ATTACHMENTS (PLEASE LIST)

PDS Memo, cover letter, application, location map, plat of subdivision/PUD, Site/PUD Plan, building elevations and floor plans, landscape plan, traffic study

ACTION REQUESTED

- For Discussion Only - *To review and forward to the Planning & Zoning Commission for further review and to conduct the required public hearing.*
- Resolution
- Ordinance
- Motion

Staff: Kristy Stone, PDS Director

Date: June 8, 2023

LANNING & DEVELOPMENT SERVICES MEMORANDUM

23-29

DATE: June 8, 2023
TO: Kristy Stone, PDS Director
FROM: Daniel Harper, Village Planner 
RE: **(#21-18) Promenade of Bartlett Mixed Use Development**

PETITIONER

Hemant Patel

SUBJECT SITE

Northeast corner of Newport Boulevard and Stearns Road

REQUESTS

Final Plat of Subdivision/PUD
Rezoning from B-3 to B-3 PUD
Special Use Permits – Planned Unit Development and carwash
Site/PUD Plan

SURROUNDING LAND USES

	<u>Land Use</u>	<u>Comprehensive Plan</u>	<u>Zoning</u>
Subject Site	Vacant	Commercial	B-3
North	Townhomes	Attached Residential	SR-5
South	Park*	Open Space*	R-4*
East	Commercial	Commercial	B-3
West	Townhomes	Attached Residential	SR-5

* - Hanover Park

ZONING HISTORY

The subject property was subject to the Boise Cascade annexation agreement approved by Resolution 70-8A and was annexed and rezoned to the A-3 Multiple Family Residence PUD Zoning District by Ordinance 1970-9.

The 1978 Official Comprehensive Plan identified the property for commercial uses and the property was rezoned to B-3 Neighborhood Shopping District as part of the comprehensive rezoning of the Village in 1978.

Ordinance 1998-86 approved a bank and daycare for the western portion of the subject property but the development was never constructed and the property has remained vacant.

CURRENT DISCUSSION

1. The petitioner is requiring a **Preliminary/Final Plat of Subdivision** to create three (3) lots and **rezone** the 4.6-acre property from the B-3 Neighborhood Shopping District to the B-3 PUD Zoning District.
2. The petitioner is requesting a **special use permit** to allow a planned unit development and a car wash on Lot 1.
3. The **Site/PUD Plan** identifies a car wash on lot 1, a 14,000 square foot commercial building on lot 2 and a 6,175 square foot daycare center on lot 3. All the buildings will have similar facades which include metallic grey panels, beige stone masonry and light grey EIFS.
4. The site will be accessed via curbcuts on County Farm Road and on Newport Boulevard. A cross access easement also allows access to the site via the BP gas station's curbcut on Stearns Road. The plans have been reviewed by the DuPage County Division of Transportation and they have no objections to the location of the new curbcut on County Farm Road provided that the BP Amoco's curbcut on County Farm Road is removed.
5. The **carwash** has three (3) stacking lanes which accommodate a total of 30 vehicles before entering the facility. The lot has nineteen (19) vacuum spaces and five (5) employee parking spaces provided which meets the zoning ordinance requirement.
6. The **multi-tenant commercial building** can be divided into seven (7) units. Lot 2 will provide sixty-two (62) parking spaces including four (4) handicap accessible spaces.
7. The proposed **daycare** includes the required outdoor play area located behind the building and will be enclosed by a fence. The final fence location and type will be determined during the permitting process. The site contains thirty-one (31) parking spaces.
8. The commercial building requires a total of seventy (70) parking spaces and the daycare requires ten (10) spaces. The total combined parking for lots 2 and 3 is 93 spaces and exceeds the zoning ordinance requirement of 80 spaces. A shared parking agreement must be recorded for lots 2 and 3.
9. The site will be accessed via curbcuts on County Farm Road and on Newport Boulevard. A cross access easement also allows access to the site via the BP

gas station's curbcut on Stearns Road. The plans have been reviewed by the DuPage County Division of Transportation and they have no objections to the location of the new curbcut on County Farm Road provided that the BP Amoco's curbcut on County Farm Road is removed.

10. The storm water detention basin is located on lot 2 at the northwest corner of the site.
11. The petitioner is proposing to install a 6-ft tall board on board cedar fence along the north property line as required by the landscape ordinance.
12. The landscape plan, photometric plans and engineering plans are currently under review by Staff. The attached traffic study has been reviewed by the Village's traffic consultant.

RECOMMENDATION

1. The Staff recommends forwarding the petitioner's requests on to the Planning & Zoning Commission for further review and to conduct the required public hearing.
2. Background information is attached for your review.

dh/attachments

x:\comdev\memos 2023\029_Promenade_vbc.docx

RECEIVED

NOV - 2 2021

PLANNING & DEVELOPMENT
VILLAGE OF
BARTLETT

HEMANT PATEL
HP PETROLEUM MANAGEMENT
1710 W ARMITAGE CT, ADDISON, IL 60101.
P: 847-331-1879 F: 847-220-9214 E: babla33@hotmail.com

9-16-21

Re: Proposed Mixed use Development at Northwest corner of County Farm and Stearns Avenue in Bartlett, Outlot 15, Bartlett Subdivision, Unit One -L.

Dear President and Board of Trustees,

The purpose of this letter is to introduce myself and the project for the requested zoning and site plan approval.

I have been in Bartlett Community as an entrepreneur and a service provider to the community for over 20 years. I ran convenience, fast food and gas service operations at the Northwest corner of County Farm and Stearns Avenue in Bartlett. I have developed many local alliances during the operations of my service businesses in the community.

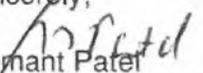
The proposed 4.61 development is a parcel of vacant land contiguous to the above noted business I owned and operated. In running the operations next door, I observed that the vacant land could be developed to add a few well desired businesses in the community that can bring daily convenience. The proposed three uses in the development are a Daycare Center, a Retail Building, and a Car Wash. The development will bring great convenience to the community daily. This development will create a live environment on the land parcel which has remained undeveloped for a long time while other land parcels around are already developed.

Also, the development will create many employment opportunities and tax revenues for the Bartlett Community.

I appreciate you taking the time to review the application, plans and other supporting documents explaining the project in detail. I am hoping that you will allow me to serve the Bartlett Community one more time successfully.

Feel free to contact me incase if you have any questions and/or if you need any additional information.

Sincerely,


Hemant Patel



VILLAGE OF BARTLETT DEVELOPMENT APPLICATION

For Office Use Only

Case # _____

RECEIVED

OCT 20 2021

Planning & Zoning
Village of Bartlett

UNIT ONE - L.
 OUTLOT 15 BARTLETT SUBDIVISION
 PROJECT NAME COUNTY FARM - STEARNS
MIXED USE DEVELOPMENT

PETITIONER INFORMATION (PRIMARY CONTACT)

Name: HEMANT PATEL

Street Address: 1710 W. ARMITAGE CT.

City, State: ADDISON, IL 60101 Zip Code: _____

Email Address: _____ Phone Number: _____

Preferred Method to be contacted: See Dropdown email.

PROPERTY OWNER INFORMATION

Name: HEMANT PATEL

Street Address: _____

City, State: _____ Zip Code: _____

Phone Number: _____

OWNER'S SIGNATURE: H Patel Date: 9/16/21
 (OWNER'S SIGNATURE IS REQUIRED or A LETTER AUTHORIZING THE PETITION SUBMITTAL.)

ACTION REQUESTED (Please check all that apply)

- Annexation
 - PUD (preliminary)
 - PUD (final)
 - Subdivision (preliminary)
 - Subdivision (final)
 - Site Plan (please describe use: commercial, industrial, square footage: RETAIL 14,000 SF
DAYCARE 6,175 SF, CAR WASH - 7,955 SF)
 - Unified Business Center Sign Plan NA
 - Other (please describe) _____
- Text Amendment
 Rezoning See Dropdown to See Dropdown
 Special Use for: _____
 Variation: _____

SIGN PLAN REQUIRED? See Dropdown N.A.

(Note: A Unified Business Center Sign Plan is required for four or more individual offices or businesses sharing a common building entrance or private parking lot.)

PROPERTY INFORMATION

Common Address/General Location of Property: OUTLOT 15 BARTLETT SUB UNIT ONE-L
BARTLETT, IL 60103

Property Index Number ("Tax PIN"/"Parcel ID"): NORTH WEST CORNER OF COUNTY FARM RD
AND STEARNS
AVE.

Zoning: Existing: B-3 See Dropdown
(Refer to Official Zoning Map)

Land Use: Existing: VACANT See Dropdown

Proposed: B-3 See Dropdown

Proposed: COMMERCIAL See Dropdown

Comprehensive Plan Designation for this Property: COMMERCIAL See Dropdown
(Refer to Future Land Use Map)

Acreage: 4.61 ACRES

For PUD's and Subdivisions:

No. of Lots/Units: 3

Minimum Lot: Area 0.902 ACRES Width 160.09 FEET Depth 234 FEET

Average Lot: Area 1.5366 ACRES Width 227.00 FEET Depth 277 FEET

APPLICANT'S EXPERTS (If applicable, including name, address, phone and email)

Attorney N.A.

Engineer

TOM CARROLL

GEO TECH, INC.

1207, CRESTWOOD DR., CREST HILL, IL 60403

Other

P.N 815-730-1010 EMAIL: tcarroll@

geotechincor1
007

FINDINGS OF FACT FOR SITE PLANS

Both the Plan Commission and Village Board must decide if the requested Site Plan meets the standards established by the Village of Bartlett Zoning Ordinance.

The Plan Commission shall make findings based upon evidence presented on the following standards: (Please respond to each of these standards in writing below as it relates to your case. It is important that you write legibly or type your responses as this application will be included with the staff report for the Plan Commission and Village Board to review.)

1. The proposed use is a permitted use in the district in which the property is located.

EXISTING ZONING OF THE PARCEL IS B-3
RETAIL BUILDING, DAYCARE CENTER
AND CAR WASH (SPECIAL USE) ARE ALLOWED
IN B-3 ZONING DISTRICT.

2. The proposed arrangement of buildings, off-street parking, access, lighting, landscaping, and drainage is compatible with adjacent land uses.

CIVIL ENGINEERING PLANS ARE DEVELOPED IN
DETAIL AND DRAWN TO SCALE SHOWING THAT
OFF STREET PARKING, ACCESS, LIGHTING, LANDSCAPING
AND DRAINAGE WILL WORK IN A COMPATIBLE
WAY WITH THE ADJACENT LAND USE.

3. The vehicular ingress and egress to and from the site and circulation within the site provides for safe, efficient and convenient movement of traffic not only within the site but on adjacent roadways as well.

CAREFUL INGRESS AND EGRESS TO AND FROM
THE SITE IN RELATION WITH EXISTING
ROADS AND INTERSECTIONS ARE PLANNED
AFTER REVIEWING MULTIPLE OPTIONS.
CONVENIENT CIRCULATION WITHIN THE
SITE SERVING 3 STRUCTURES, PARKING
AND EXITS TO THE ADJACENT ROADS ARE

Development Application PLANNED AND SHOWN IN THE Page 4
CIVIL ENGINEERING PLANS

4. The site plan provides for the safe movement of pedestrians within the site.

SAFE PEDESTRIAN MOVEMENT WITH WALKWAYS ARE PLANNED AROUND 3 STRUCTURES AND PARKING AREAS, CIVIL ENGINEERING PLANS EXHIBIT THIS.

5. There is sufficient mixture of grass, trees and shrubs within the interior and perimeter (including public right-of-way) of the site so that the proposed development will be in harmony with adjacent land uses and will provide a pleasing appearance to the public. Any part of the site plan area not used for buildings, structures, parking or accessways shall be landscaped with a mixture of grass, trees and shrubs. (All landscape improvements shall be in compliance with Chapter 10-11A, Landscape Requirements)

LANDSCAPING PLAN PREPARED BY A LICENSED LANDSCAPE ARCHITECT IN COMPLIANCE WITH THE APPLICABLE ORDINANCE IS PROVIDED IN THE SUBMITTAL.

6. All outdoor storage areas are screened and are in accordance with standards specified by this Ordinance.

NO OUTDOOR STORAGE AREAS ARE NEEDED IN THE SITE PLAN.

FINDINGS OF FACT FOR PLANNED UNIT DEVELOPMENTS

Both the Plan Commission and Village Board must decide if the requested Planned Unit Development meets the standards established by the Village of Bartlett Zoning Ordinance.

The Plan Commission shall make findings based upon evidence presented on the following standards: **(Please respond to each of these standards in writing below as it relates to your case. It is important that you write legibly or type your responses as this application will be included with the staff report for the Plan Commission and Village Board to review.)**

1. The proposed Planned Unit Development is desirable to provide a mix of uses which are in the interest of public convenience and will contribute to the general welfare of the community.

PROPOSED RETAIL BUILDING, DAYCARE AND CARWASH WILL CATER TO NEIGHBORHOOD AND COMMUNITIES ON DAILY BASIS.

2. The Planned Unit Development will not under the circumstances of the particular case be detrimental to the health, safety, morals, or general welfare of persons residing or working in the vicinity or be injurious to property value or improvement in the vicinity.

PROPOSED USES, ALL BASED ON SERVICES AND CONVENIENCE NEEDED BY AVERAGE SUBURBAN FAMILIES.

3. The Planned Unit Development shall conform to the regulations and conditions specified in the Title for such use and with the stipulation and conditions made a part of the authorization granted by the Village Board of Trustees.

DEVELOPER AGREES TO CONFORM.

4. The proposed uses conform to the Comprehensive Plan and the general planning policies of the Village for this parcel.

PROPOSED USES ARE ALLOWABLE
AND SPECIAL USE OCCUPANCIES AS PER
CURRENT ZONE OF THE PARCEL

5. Each of the proposed uses is a permitted or special use in the district or districts in which the Planned Unit Development would be located.

RETAIL AND DAYCARE ARE PERMITTED
USES IN B-3 ZONING DISTRICT
CAR WASH IS SPECIAL USE PERMITTED
IN B-3 ZONING DISTRICT.

6. The Planned Unit Development is designed, located and proposed to be operated and maintained so that the public health, safety and welfare will not be endangered or detrimentally affected.

DEVELOPER HAS CAREFULLY CHOSEN 3 USES
THAT WILL BE ALL FOR CONVENIENCE
OF THE NEIGHBORHOOD FAMILIES AND
THE DEVELOPMENT WILL NOT BE HARMFUL
IN ANY REGARD.

7. It shall not substantially lessen or impede the suitability for permitted use and development of, or be injurious to the use and enjoyment of, or substantially diminish or impair the value of, or be incompatible with, other property in the immediate vicinity.

PROPOSED DEVELOPMENT WILL NOT HAVE
ANY NEGATIVE EFFECT ON NEIGHBORHOOD
COMMUNITES.

8. Impact donations shall be paid to the Village in accordance with all applicable Village ordinances in effect at the time of approval.

DEVELOPER AGREES TO THIS REQUIREMENT.

9. The plans provide adequate utilities, drainage and other necessary facilities.

CIVIL ENGINEERING PLANS DEMONSTRATE ADEQUACY OF UTILITIES, DRAINAGE, PARKING LIGHT ETC.

10. The plans provide adequate parking and ingress and egress and are so designed as to minimize traffic congestion and hazards in the public streets.

CIVIL ENGINEERING PLANS SHOW PARKING STRIPING PLAN, ALISES, PARKING COUNT, TURNING RADII, CONFORMING TO RESPECTIVE INDUSTRY STANDARDS.

11. The plans have adequate site area, which area may be greater than the minimum in the district in which the proposed site is located, and other buffering features to protect uses within the development and on surrounding properties.

PROPOSED SITE PLAN, LANDSCAPING PLAN SHOW THAT PROPOSED STRUCTURES AND ALL SITE COMPONENT REQUIREMENTS ARE MET AS REQUIRED.

12. There is reasonable assurance that, if authorized, the PUD will be completed according to schedule and adequately maintained.

DEVELOPER AGREES TO THIS REQUIREMENT.

FINDINGS OF FACT FOR SPECIAL USES

Both the Plan Commission and Village Board must decide if the requested Special Use meets the standards established by the Village of Bartlett Zoning Ordinance.

The Plan Commission shall make findings based upon evidence presented on the following standards: **(Please respond to each of these standards in writing below as it relates to your case. It is important that you write legibly or type your responses as this application will be included with the staff report for the Plan Commission and Village Board to review.)**

1. That the proposed use at that particular location requested is necessary or desirable to provide a service or a facility which is in the interest of public convenience and will contribute to the general welfare of the neighborhood or community.

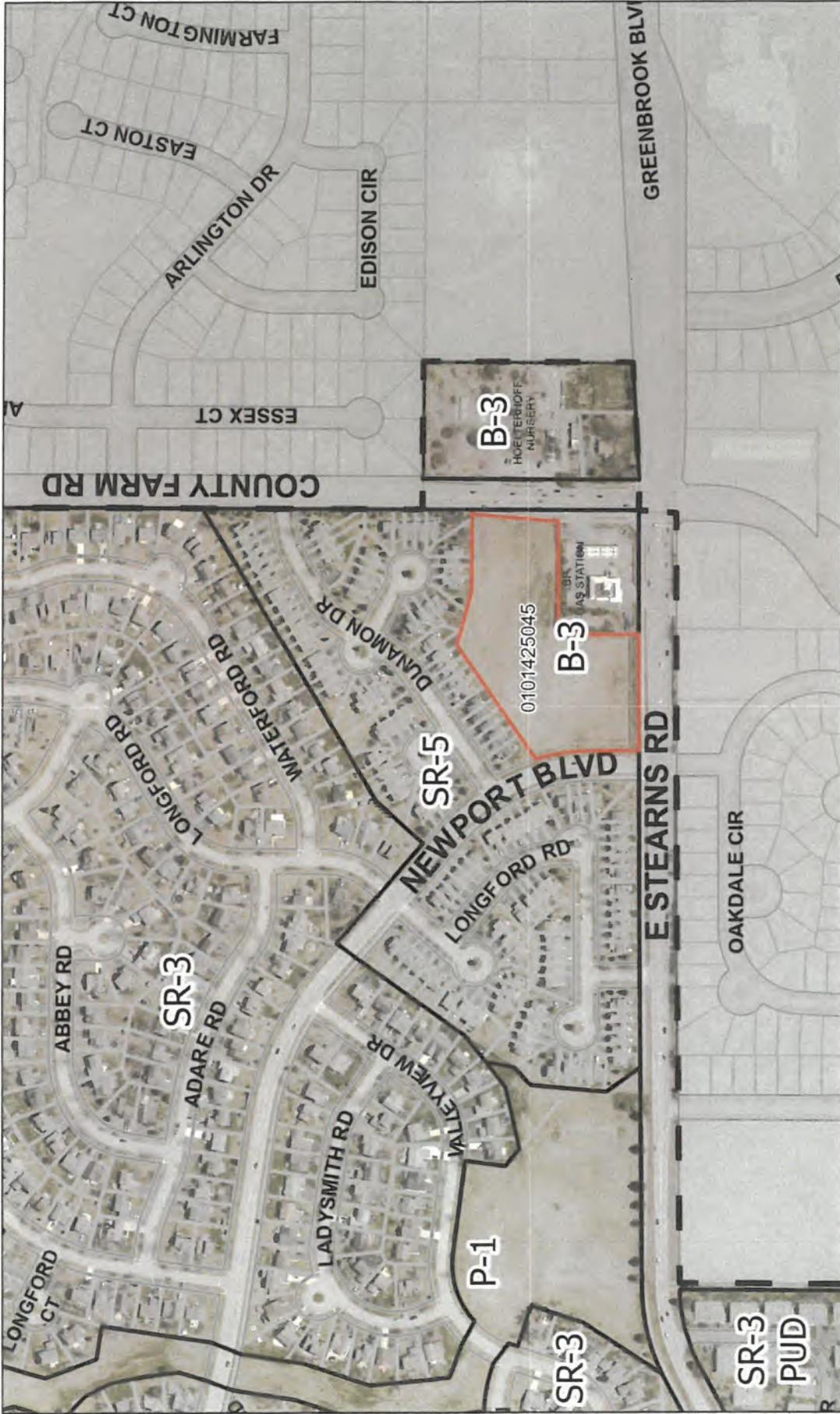
THE DEVELOPMENT WILL BE WITHIN VERY CONVENIENT DISTANCE TO MANY RESIDENTIAL NEIGHBORHOODS FOR RETAIL, DAYCARE AND CAR WASH NEEDS -

2. That such use will not under the circumstances of the particular case be detrimental to the health, safety, morals, or general welfare of persons residing or working in the vicinity or be injurious to property value or improvement in the vicinity.

ALL COMPONENTS OF THE DEVELOPMENT WILL BE DESIGNED TO ENHANCE FAMILY ORIENTED AND WILL NOT HAVE ANY NEGATIVE IMPACT TO THE SURROUNDING NEIGHBORHOODS

3. That the special use shall conform to the regulations and conditions specified in this Title for such use and with the stipulation and conditions made a part of the authorization granted by the Village Board of Trustees.

DEVELOPER AGREES TO THIS REQUIREMENT.



ZONING/LOCATION MAP

#21-18 PROMENADE OF BARTLETT

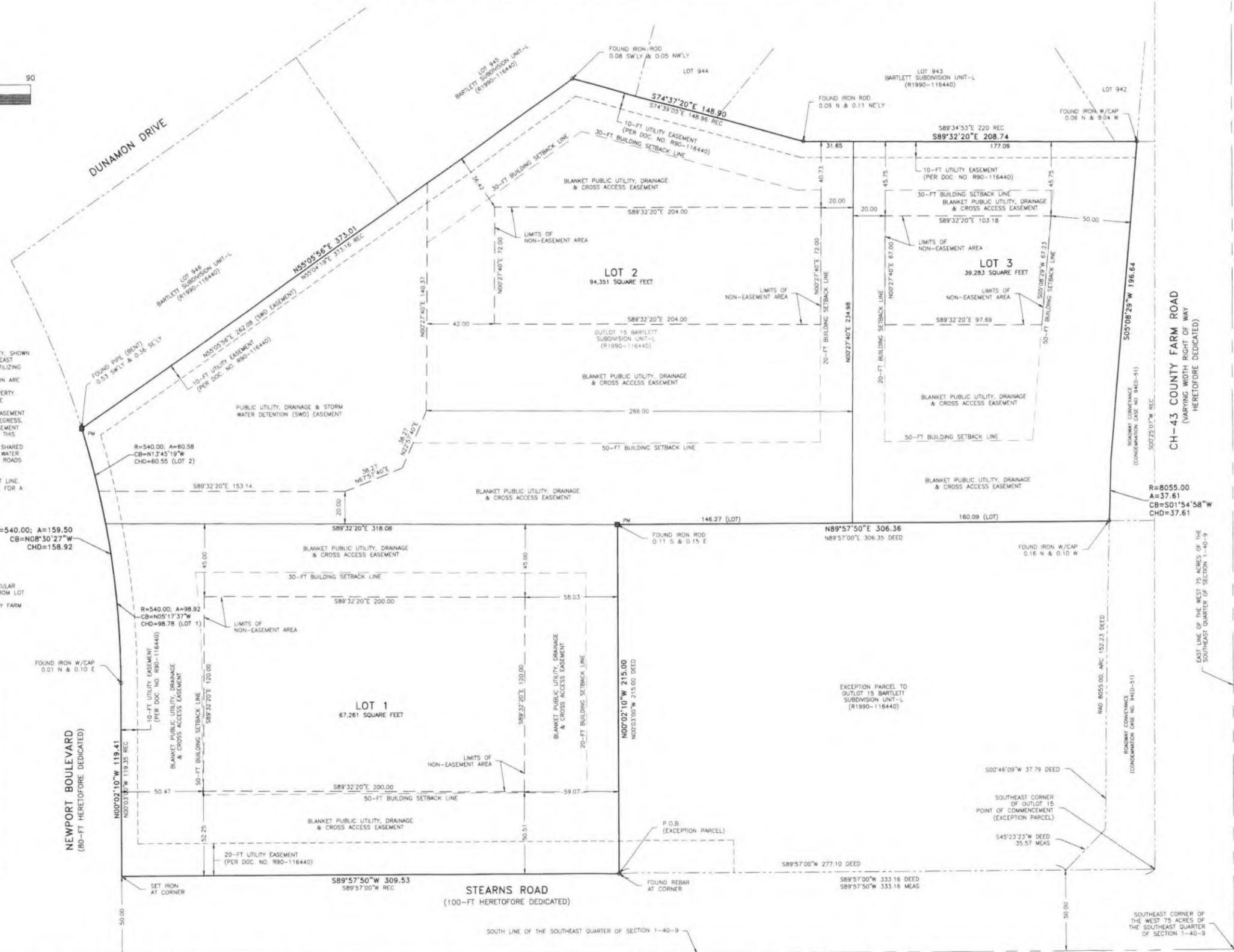
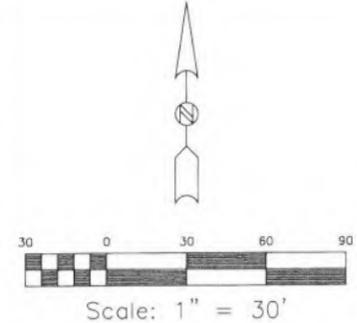
01-01-425-045

2023



FINAL PLAT OF
HD COMMERCIAL SUBDIVISION P.U.D.
 A RESUBDIVISION OF PART OF THE SOUTHWEST QUARTER AND THE SOUTHEAST QUARTER OF SECTION 1,
 TOWNSHIP 40 NORTH, RANGE 9 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN DUPAGE COUNTY, ILLINOIS.

PARCEL INDEX NUMBERS
 01-01-425-045
 DUPAGE COUNTY
 BARTLETT, ILLINOIS



SURVEY NOTES:

1. THE BASIS OF BEARING FOR THE PLAT AND SURVEY, SHOWN HEREON, IS THE STATE PLANE OF ILLINOIS, ZONE EAST (NAD83(2011)), BASED ON GNSS OBSERVATIONS UTILIZING THE TRIMBLE NOW VRS NETWORK.
2. ALL PUBLIC IMPROVEMENTS WITHIN THIS SUBDIVISION ARE HEREBY DEDICATED TO THE PUBLIC.
3. THERE ARE NO WETLANDS LOCATED ON THIS PROPERTY.
4. "R" DENOTES RECORD DISTANCES BASED UPON THE BARTLETT SUBDIVISION UNIT ONE-L.
5. PU, U, E, & DE - DENOTES PUBLIC UTILITY, INGRESS/EGRESS, & DRAINAGE EASEMENT. THE INGRESS/EGRESS EASEMENT BENEFITS THE OWNERS OF LOTS 1 THROUGH 3 IN THIS SUBDIVISION AS WELL AS THE EXCEPTION PARCEL.
6. PU, U, E, & DE - DENOTES PUBLIC UTILITY, INGRESS/EGRESS, & DRAINAGE EASEMENT. THE INGRESS/EGRESS EASEMENT BENEFITS THE OWNERS OF LOTS 1 THROUGH 3 IN THIS SUBDIVISION AS WELL AS THE EXCEPTION PARCEL.
7. EACH OWNER OF LOTS 1, 2, AND 3 WILL HAVE A SHARED RESPONSIBILITY FOR MAINTENANCE OF THE STORM WATER DETENTION BASIN AND THE INTERNAL NETWORK OF ROADS AND STREETS.
8. (LOT) - DENOTES A DIMENSION OF A LOT LINE.
9. (ESMT) - DENOTES A DIMENSION OF AN EASEMENT LINE.
10. ■ PM - INDICATES 9/16" IRON SET IN CONCRETE FOR A PERMANENT MONUMENT.

ACCESS NOTES:

1. THERE SHALL BE AT MOST ONE (1) DIRECT VEHICULAR ACCESS POINT TO CH-43 COUNTY FARM ROAD FROM LOT 1, AS DEPICTED HEREON.
2. ALL OTHER VEHICULAR ACCESS TO CH-43 COUNTY FARM ROAD SHALL BE VIA INTERNAL CIRCULATION.

DATE: 03.15.2023
 BY: [Signature]
 REVISION: CP REVISED PER VILLAGE REVIEW

FINAL PLAT OF
 SUBDIVISION
 DRAWN BY: CP
 CHECKED BY: CP/CT
 JOB # GJN20443
 DATE: 10/13/2021

HD COMMERCIAL
 SUBDIVISION P.U.D.

GEOTECH INC.
 CONSULTING ENGINEERS - LAND SURVEYORS
 1207 CEDARWOOD DRIVE CREST HILL, ILLINOIS 60403 815/730-1010

1
 GJN20443



RETAIL BUILDING FRONT ELEVATION



CARWASH FRONT ELEVATION



DAYCARE CENTER FRONT ELEVATION

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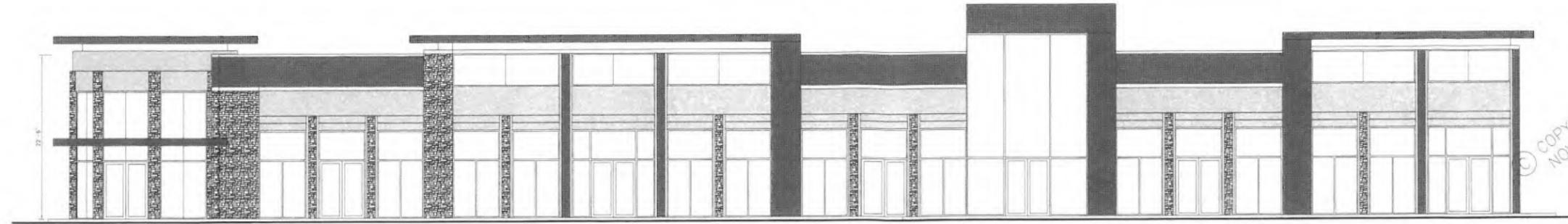
NOVA DESIGN BUILD, INC.
ARCHITECTS ENGINEERS
2044 TECHWAY ROAD NORTHBROOK, IL 60062
PHONE NO. (847) 514 0704 / FAX NO. (888) 769 6356

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CONFIRMATION FROM NOVA DESIGN BUILD, INC.

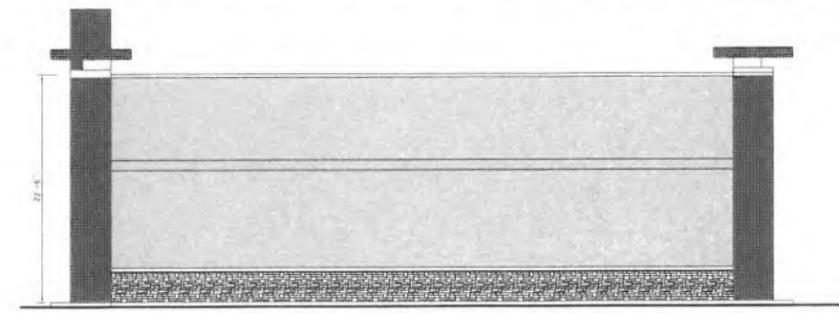
PROPOSED
MIXED-USE DEVELOPMENT
AT
OUTLOT 15 IN BARTLETT SUBDIVISION UNIT ONE-L,
BARTLETT IL 60103

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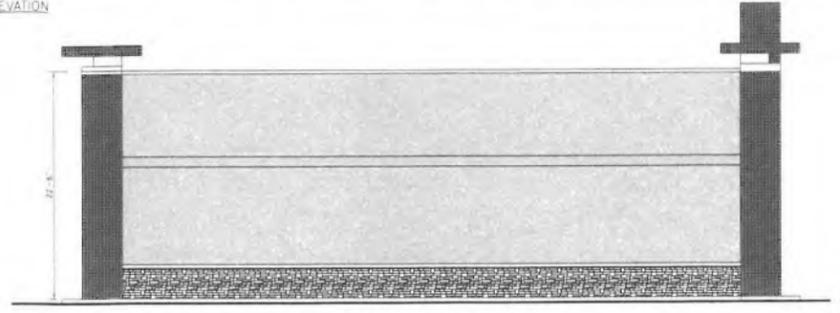
DWG. TITLE	NO.	DATE	REMARKS



1 PROP. SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



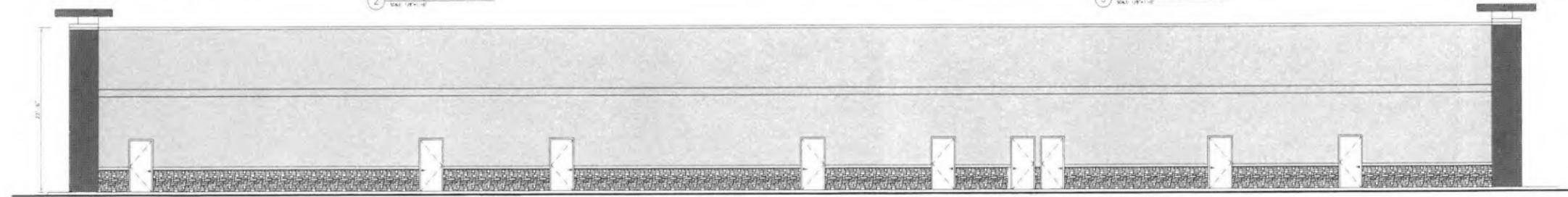
2 PROP. EAST ELEVATION
SCALE: 1/8" = 1'-0"



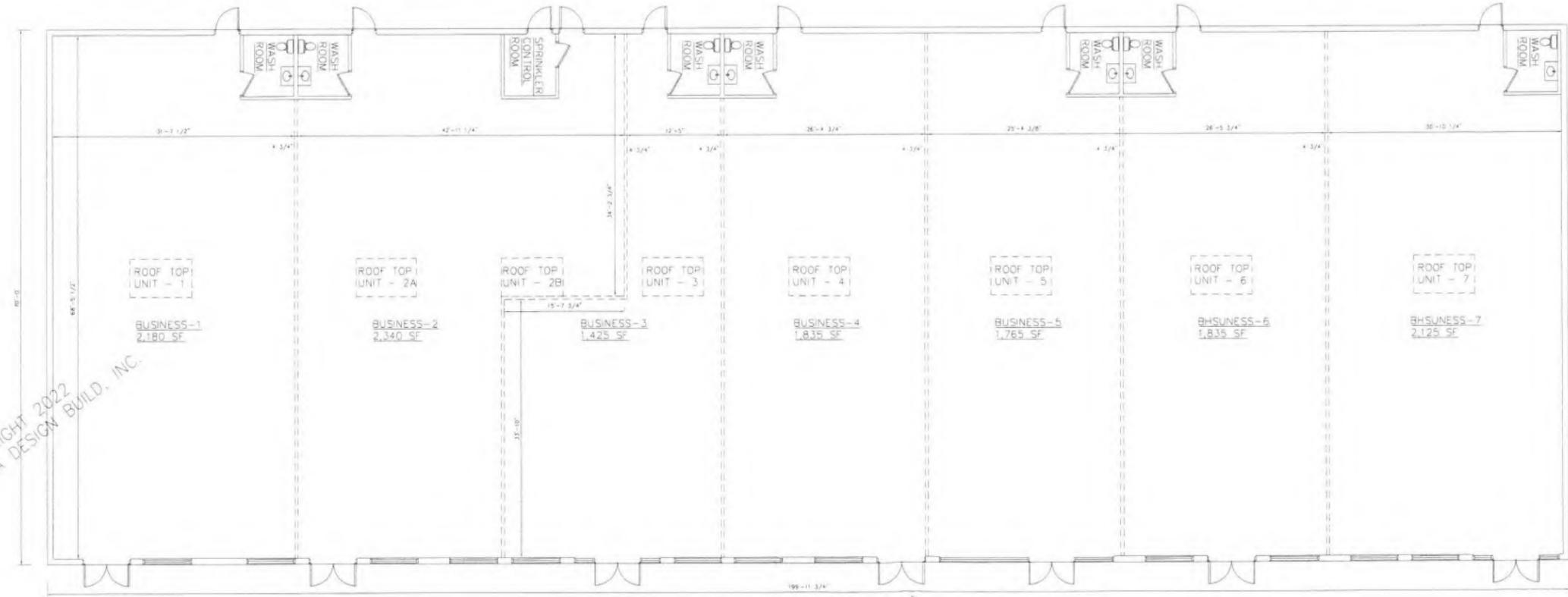
3 PROP. WEST ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR MATERIAL LEGEND

	METALLIC GREY METAL ELEMENTS
	BEIGE STONE MASONRY
	LIGHT GREY EIFS



4 PROP. NORTH ELEVATION
SCALE: 1/8" = 1'-0"



1 PROPOSED FLOOR PLAN
SCALE: 1/8" = 1'-0"

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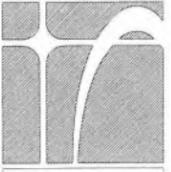
ROOF TOP UNIT - X
PRELIMINARY ROOF TOP UNIT LOCATION - SUBJECT TO CHANGE AS PER MECHANICAL ENGINEERING DESIGN

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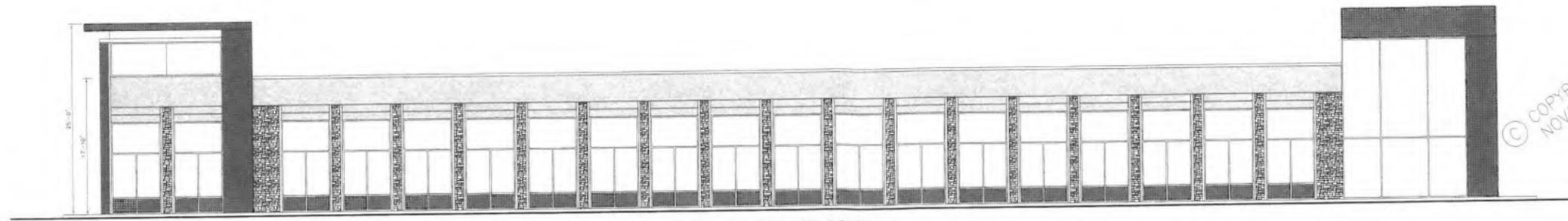
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DWG. TITLE: PROP. RETAIL BUILDING
PROP. EXTERIOR ELEVATIONS



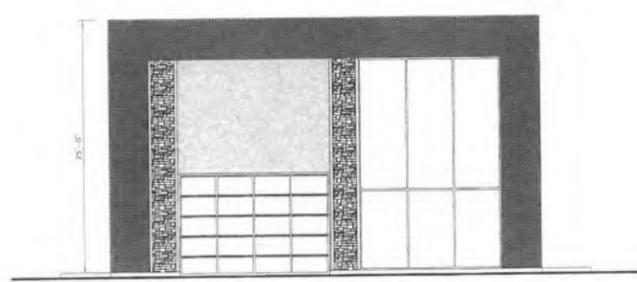
NOVA DESIGN BUILD, INC.
ARCHITECTS ENGINEERS
2044 TECHNY ROAD NORTHBROOK, IL 60062
PHONE NO. (847) 514 0704 EMAIL: njm@novadb.com

PROPOSED
PROMENADE OF BARTLETT
A MIXED-USE DEVELOPMENT
AT
OUTLOT 15 IN BARTLETT SUBDIVISION UNIT ONE-L,
BARTLETT IL 60103

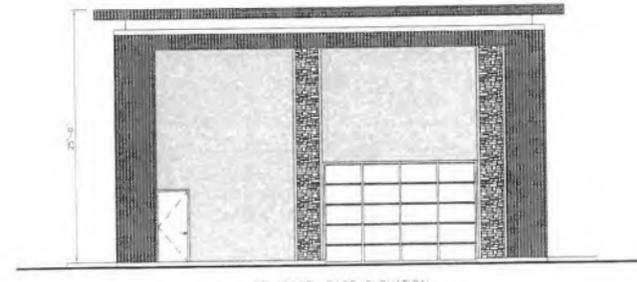
NO.	DATE	ISSUED FOR ZONING APPROVAL	REMARKS
1	12-14-22	ISSUED FOR ZONING APPROVAL	



1 PROP. NORTH ELEVATION
SCALE: 1/8" = 1'-0"



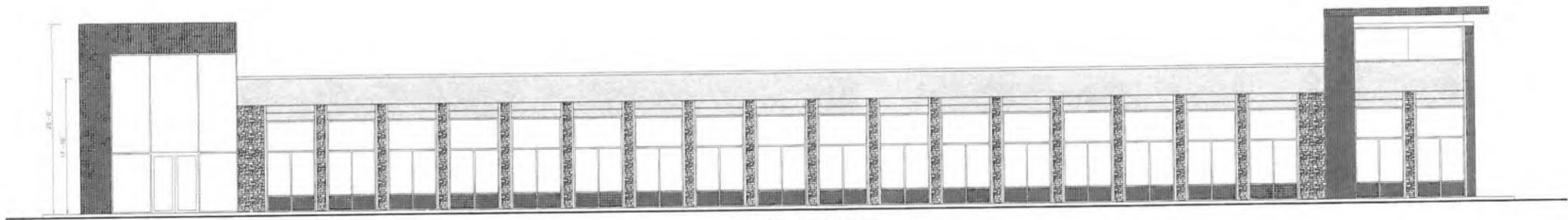
2 PROP. WEST ELEVATION
SCALE: 1/8" = 1'-0"



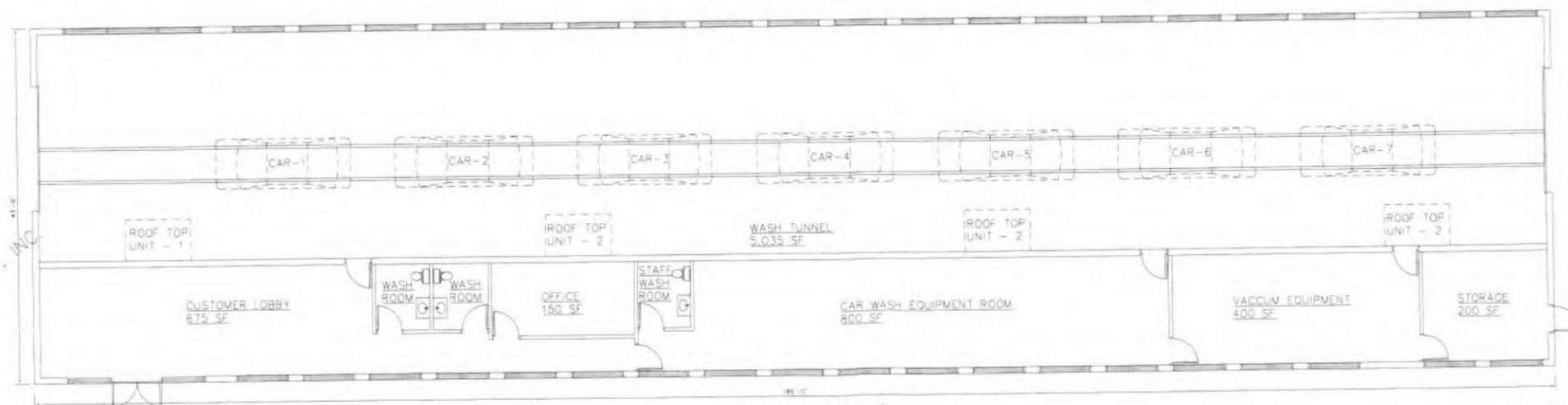
3 PROP. EAST ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR MATERIAL LEGEND

- METALLIC GREY METAL ELEMENTS
- BEIGE STONE MASONRY
- LIGHT GREY EIFS



4 PROP. SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



5 PROP. FLOOR PLAN
SCALE: 1/8" = 1'-0"

ROOF TOP UNIT - X
PRELIMINARY ROOF TOP UNIT LOCATION - SUBJECT TO CHANGE AS PER MECHANICAL ENGINEERING DESIGN

CAR - X
PRELIMINARY LAYOUT SUBJECT TO CHANGE AS PER THE FINAL SELECTION OF CAR WASH EQUIPMENT

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NOVA DESIGN BUILD, INC.
ARCHITECTS ENGINEERS
2044 TECHNY ROAD NORTHBROOK IL 60062
PHONE NO. (847) 514 0704 EMAIL: njnovad@icloud.com

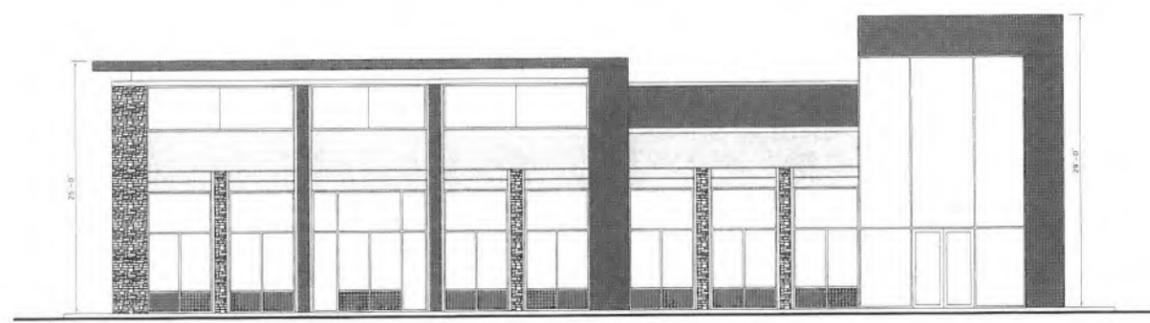
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PROPOSED
PROMENADE OF BARTLETT
A MIXED-USE DEVELOPMENT
AT
**OUTLOT 15 IN BARTLETT SUBDIVISION UNIT ONE-L,
BARTLETT IL 60103**

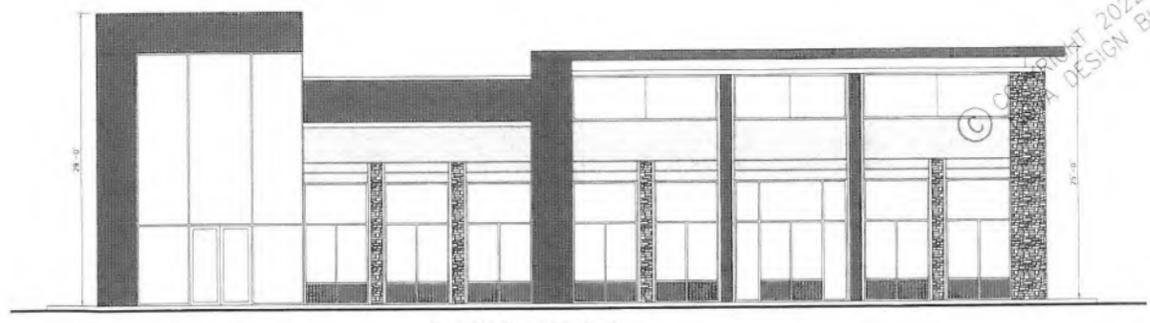
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DWG. TITLE	NO.	DATE	REMARKS
PROP. CAR WASH BUILDING PROP. EXTERIOR ELEVATIONS		12-14-22	ISSUED FOR ZONING APPROVAL

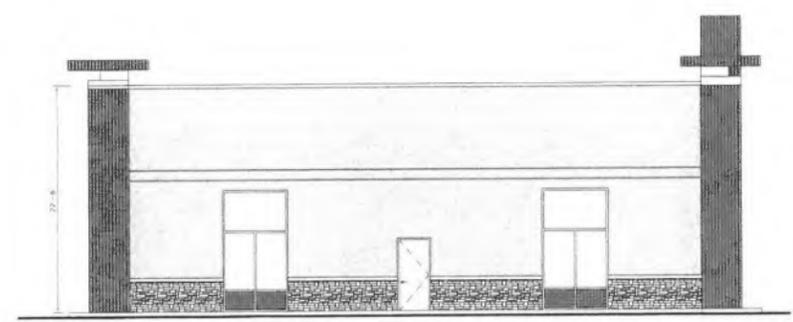
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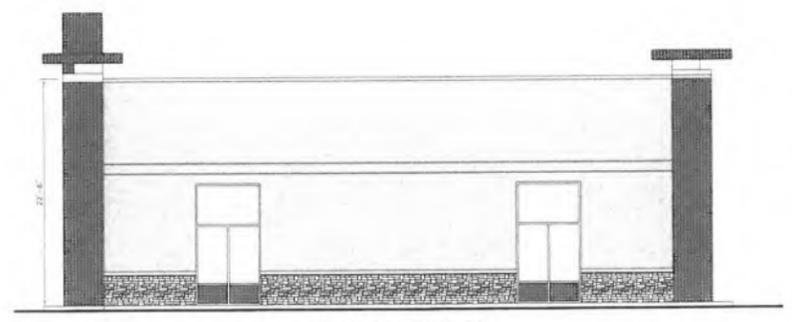
1 PROP. NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 PROP. SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



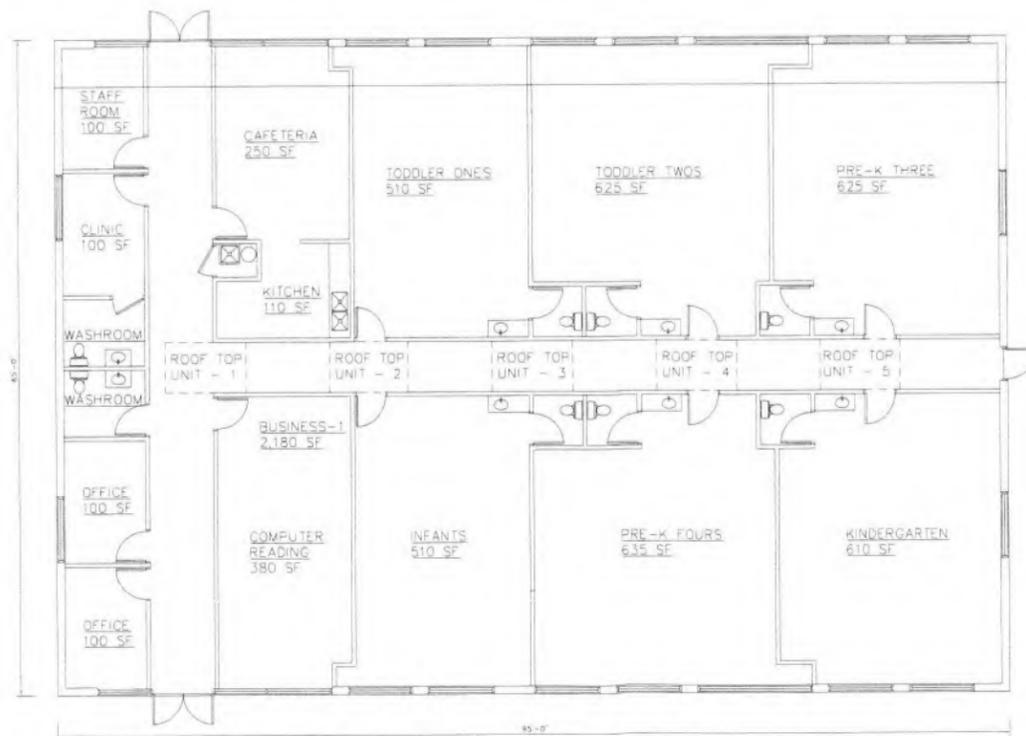
3 PROP. WEST ELEVATION
SCALE: 1/8" = 1'-0"



4 PROP. EAST ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR MATERIAL LEGEND

	METALLIC GREY METAL ELEMENTS
	BEIGE STONE MASONRY
	LIGHT GREY EIFS



1 PROPOSED FLOOR PLAN
SCALE: 1/8" = 1'-0"

(---) ROOF TOP UNIT - X
PRELIMINARY ROOF TOP UNIT LOCATION—SUBJECT TO CHANGE AS PER MECHANICAL ENGINEERING DESIGN

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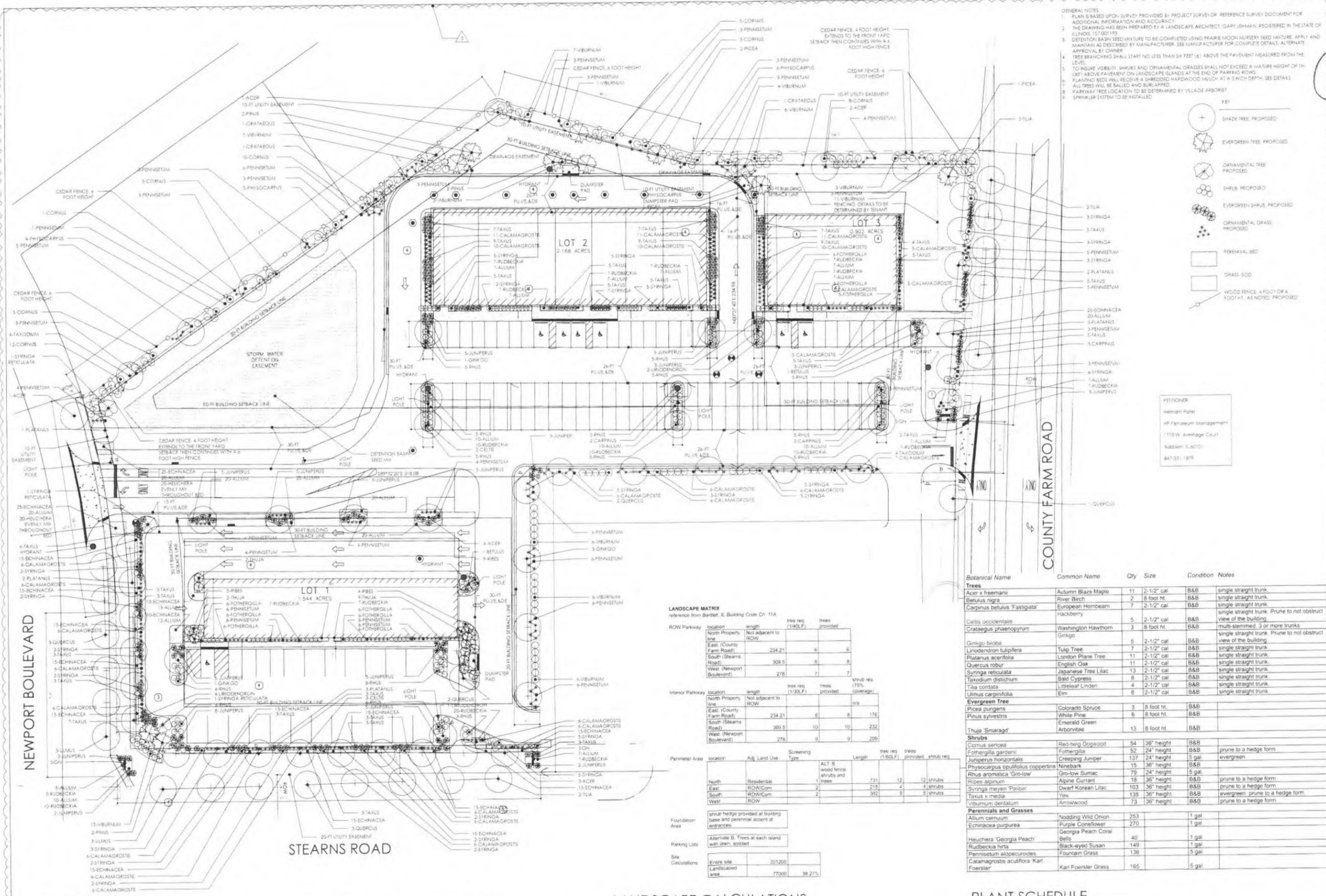
NOVA DESIGN BUILD, INC.
ARCHITECTS ENGINEERS
2044 TECHNY ROAD NORTHBROOK, IL 60062
PHONE NO. (847) 514 0704 EMAIL: njmcd@gmail.com

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PROPOSED
PROMENADE OF BARTLETT
A MIXED-USE DEVELOPMENT
AT
OUTLOT 15 IN BARTLETT SUBDIVISION UNIT ONE-L,
BARTLETT IL 60103

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DWG. TITLE	NO.	DATE	ISSUED FOR ZONING APPROVAL	REMARKS
PROP. DAY CARE BUILDING PROP. EXTERIOR ELEVATIONS		12-14-22		



GENERAL NOTES

1. PLAN IS BASED UPON SURVEY PROVIDED BY PROJECT SURVEYOR. REFERENCE SURVEY DOCUMENT FOR ADDITIONAL INFORMATION AND ACCURACY.
2. THE DRAWING HAS BEEN PREPARED BY A LANDSCAPE ARCHITECT (GARY LEHMAN, REGISTERED IN THE STATE OF ILLINOIS, 157-001193).
3. DETENTION BASIN SEED MIXTURE TO BE COMPLETED USING PRAIRIE MOON NURSERY SEED MIXTURE. APPLY AND MAINTAIN AS DESCRIBED BY MANUFACTURER. SEE MANUFACTURER FOR COMPLETE DETAILS. ALTERNATE APPROVAL BY OWNER.
4. TREE BRANCHING SHALL START NO LESS THAN SIX FEET (6') ABOVE THE PAVEMENT MEASURED FROM THE LEVEL.
5. TO INSURE VISIBILITY, SHRUBS AND ORNAMENTAL GRASSES SHALL NOT EXCEED A MATURE HEIGHT OF TEN (10') ABOVE PAVEMENT ON LANDSCAPE ISLANDS AT THE END OF PARKING ROWS.
6. PLANTING BEDS WILL RECEIVE A 3" SPREADDED HARDWOOD MULCH AT A 3" INCH DEPTH. SEE DETAILS.
7. ALL TREES WILL BE BALLED AND BURLAPPED.
8. PARKWAY TREE LOCATION TO BE DETERMINED BY YALLOE ARBORIST.
9. SPRINKLER SYSTEM TO BE INSTALLED.



REVISIONS

DATE	ISSUE	DESCRIPTION
11/15/2023	1	ISSUED FOR PERMITS
11/15/2023	2	ISSUED FOR PERMITS
11/15/2023	3	ISSUED FOR PERMITS
11/15/2023	4	ISSUED FOR PERMITS
11/15/2023	5	ISSUED FOR PERMITS
11/15/2023	6	ISSUED FOR PERMITS
11/15/2023	7	ISSUED FOR PERMITS
11/15/2023	8	ISSUED FOR PERMITS
11/15/2023	9	ISSUED FOR PERMITS
11/15/2023	10	ISSUED FOR PERMITS



PETITIONER
 Hamant Patel
 HP Petition Management
 110 W. Armitage Court
 Addison, IL 60101
 847-331-1878

Botanical Name	Common Name	Qty	Size	Condition	Notes
Trees					
Acer x freemanii	Autumn Blaze Maple	11	2-1/2" cal	B&B	single straight trunk
Betulus nigra	River Birch	2	8 foot ht.	B&B	single straight trunk
Carpinus betulus 'Fastigiata'	European Hornbeam	7	2-1/2" cal	B&B	single straight trunk. Prune to not obstruct view of the building.
Celtis occidentalis	Hackberry	5	2-1/2" cal	B&B	multi-stemmed, 3 or more trunks
Crataegus phaenopyrum	Washington Hawthorn	3	8 foot ht.	B&B	
Ginkgo biloba	Ginkgo	5	2-1/2" cal	B&B	single straight trunk. Prune to not obstruct view of the building.
Liriodendron tulipifera	Tulip Tree	7	2-1/2" cal	B&B	single straight trunk
Platanus acerifolia	London Plane Tree	11	2-1/2" cal	B&B	single straight trunk
Quercus robur	English Oak	11	2-1/2" cal	B&B	single straight trunk
Syringa reticulata	Japanese Tree Lilac	13	2-1/2" cal	B&B	single straight trunk
Taxodium distichum	Bald Cypress	8	2-1/2" cal	B&B	single straight trunk
Tilia cordata	Littleleaf Linden	4	2-1/2" cal	B&B	single straight trunk
Ulmus carpinifolia	Elm	6	2-1/2" cal	B&B	single straight trunk
Evergreen Tree					
Picea pungens	Colorado Spruce	3	8 foot ht.	B&B	
Pinus sylvestris	White Pine	6	8 foot ht.	B&B	
Thuja 'Smaragd'	Arborvitae	13	8 foot ht.	B&B	
Shrubs					
Cornus sericea	Red-twig Dogwood	54	36" height	B&B	
Fothergilla gardenii	Fothergilla	52	24" height	B&B	prune to a hedge form
Juniperus horizontalis	Creeping Juniper	137	24" height	5 gal	evergreen
Physocarpus opulifolius coccineus	Ninebark	15	36" height	B&B	
Rhus aromatica 'Gro-low'	Gro-low Sumac	79	24" height	5 gal	
Ribes alpinum	Alpine Currant	18	36" height	B&B	prune to a hedge form.
Syringa meyeri 'Palibin'	Dwarf Korean Lilac	103	36" height	B&B	prune to a hedge form.
Tenax v. media	Yew	135	36" height	B&B	evergreen, prune to a hedge form.
Viburnum dentatum	Arrowwood	73	36" height	B&B	prune to a hedge form.
Perennials and Grasses					
Allium cernuum	Nodding Wild Onion	253		1 gal	
Echinacea purpurea	Purple Coneflower	270		1 gal	
Heuchera 'Georgia Peach'	Bells	40		1 gal	
Rudbeckia hirta	Black-eyed Susan	149		1 gal	
Perennisetum alopecuroides	Fountain Grass	136		5 gal	
Calamagrostis acutiflora 'Karl Foerster'	Karl Foerster Grass	165		5 gal	

LANDSCAPE MATRIX
 reference from Bartlett, IL Building Code CA 11A

ROW Parkway	location	length	tree req (1140LF)	trees provided	shrub req (75% coverage)
North Property line	Not adjacent to ROW				
East (County Farm Road)		234.21	6	6	
South (Stearns Road)		309.5	8	8	
West (Newport Boulevard)		278	7	7	

Interior Parkway	location	length	tree req (1130LF)	trees provided	shrub req (75% coverage)
North Property line	Not adjacent to ROW				
East (County Farm Road)		234.21	8	8	176
South (Stearns Road)		309.5	10	10	232
West (Newport Boulevard)		278	9	9	209

Perimeter Area

location	Adj. Land Use	Screening Type	Length	tree req (1160LF)	trees provided	shrub req
North	Residential	ALT B wood fence shrubs and trees	731	12	12	shrubs
East	ROW/Com		216	4	4	shrubs
South	ROW/Com		302	5	5	shrubs
West	ROW					

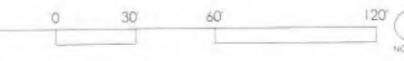
Foundation Area
 shrub hedge provided at building base and perimeter access at entrances.

Parking Lots
 Alternate B. Trees at each island with inner borders.

Site Calculations

Category	Value
Equip site	201200
Landscaped area	77000
	38.27%

LANDSCAPE PLAN
 SCALE: 1" = 30'-0"



LANDSCAPE CALCULATIONS

PLANT SCHEDULE

LANDSCAPE PLANS

PROMENADE OF BARTLETT
 OUTLET 15 BARTLETT SUB UNIT ONE-L
 BARTLETT, IL 60103

PROJECT NO. 20038
 ISSUE DATE: MAY 1, 2023
 SCALE: SEE DRAWING
 SHEET NUMBER
 L1

Traffic Impact Study Proposed Commercial Development

Bartlett, Illinois



Prepared For:



RECEIVED
PLANNING & DEVELOPMENT

MAR 20 2023

VILLAGE OF
BARTLETT



March 2, 2023

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed commercial development to be located in Bartlett, Illinois. The site, which is currently vacant, is located in the northeast quadrant of the intersection of Stearns Road with Newport Boulevard in Bartlett, Illinois. As proposed, the site will contain approximately 14,000 square feet of retail space, an approximate 6,175 square-foot daycare, and an approximate 7,955 square-foot tunnel car wash. Access to the development will be provided via three full-movement access drives off Newport Boulevard, Stearns Road, and County Farm Road.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate the traffic generated by the proposed commercial development.

Figure 1 shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed commercial development
- Directional distribution of the commercial development traffic
- Vehicle trip generation for the commercial development
- Future traffic conditions including access to the commercial development
- Traffic analyses for the weekday morning, weekday evening, and Saturday midday peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning, weekday evening, and Saturday midday peak hours for the following conditions:

1. Existing Conditions – Analyze the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.
2. No-Build Conditions – Analyze the capacity of the existing roadway system due to ambient traffic growth.
3. Projected Conditions – Analyze the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient traffic growth, and the traffic estimated to be generated by the full buildout of the proposed commercial development.



Site Location

Figure 1



Aerial View of Site

Figure 2

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which is currently vacant, is located in the northeast quadrant of the intersection of Newport Boulevard with Stearns Road. Land uses in the vicinity of the site include Dunkin', BP, and Hoeltherhoff's Nursery to the east, Walgreens and Oakwood Park to the south, and townhomes to the west and north.

The interchange of IL 390 (Elgin-O'Hare Tollway) with US 20 (Lake Street) is located approximately one mile from the site. This interchange is the focus of an improvement study that will determine if extending the interchange ramps to County Farm Road would address local traffic issues. These ramps would meet County Farm Road at a signalized intersection approximately 0.5 miles north of the site.

Existing Roadway System Characteristics

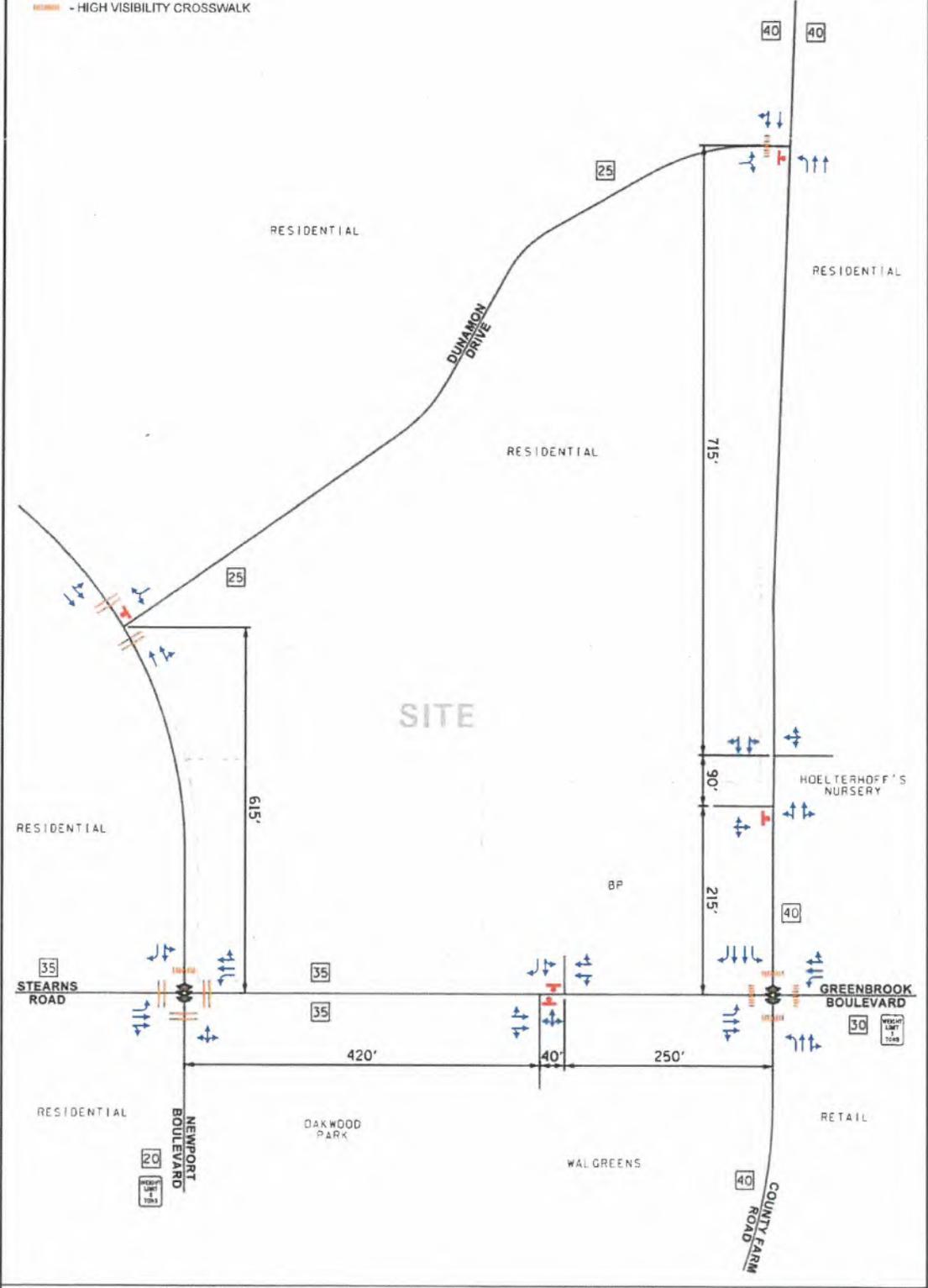
The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

County Farm Road is a north-south other principal arterial that in the vicinity of the site provides two through lanes in each direction. At its signalized intersection with Stearns Road/Greenbrook Boulevard, County Farm Road provides an exclusive left-turn lane, a through lane, and a combined through/right-turn lane on the northbound approach. The southbound approach provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane. County Farm Road provides high-visibility crosswalks on the north and south legs of its intersection with Stearns Road/Greenbrook Boulevard. At its unsignalized intersection with Dunamon Drive, County Farm Road provides an exclusive left-turn lane and two through lanes on the northbound approach. The southbound approach provides a combined through/right-turn lane and a through lane. County Farm Road is under the jurisdiction of the DuPage County Division of Transportation (DuDOT), carries an annual average daily traffic (AADT) volume of 19,400 vehicles (IDOT 2012) north of Stearns Road and 23,400 vehicles (IDOT 2016) south of Stearns Road, and has a posted limit of 40 miles per hour.

- LEGEND**
- - TRAVEL LANE
 - ⬇ - TRAFFIC SIGNAL
 - ⊕ - STOP SIGN
 - XX - SPEED LIMIT
 - - STANDARD CROSSWALK
 - - HIGH VISIBILITY CROSSWALK



NOT TO SCALE



COMMERCIAL
DEVELOPMENT
BARTLETT, ILLINOIS

EXISTING ROADWAY CHARACTERISTICS

KLOA
Kemp, Lindgren, O'Hara, Alcorn, Inc.
Job No: 19-135 Figure: 3

Stearns Road/Greenbrook Boulevard is an east-west other principal arterial that in the vicinity of the site provides two lanes in each direction. At its signalized intersection with County Farm Road, Stearns Road/Greenbrook Boulevard provides an exclusive left-turn lane, a through lane, and a combined through/right-turn lane on both approaches. Additionally, Stearns Road provides high-visibility crosswalks on the east and west legs of its intersection with County Farm Road. At its signalized intersection with Newport Boulevard, Stearns Road provides an exclusive left-turn lane, a through lane, and a combined through/right-turn lane on both approaches. Standard style crosswalks are provided on the east and west legs of the intersection. Stearns Road is under the jurisdiction of the City of Bartlett and Greenbrook Boulevard is under the jurisdiction of DuDOT. Stearns Road carries an AADT volume of 12,700 vehicles and Greenbrook Boulevard carries an AADT volume of 15,400 vehicles. Stearns Road/Greenbrook Boulevard has a posted speed limit of 30 miles per hour.

Newport Boulevard is a north-south major collector that provides two through lanes in the vicinity of the site in each direction. At its signalized intersection with Stearns Road, Newport Boulevard provides a combined left-turn/through/right-turn lane on the northbound approach. The southbound approach provides a combined through/left-turn lane and an exclusive right-turn lane. Additionally, Newport Boulevard provides a high-visibility crosswalk on the north leg and a standard style crosswalk on the south leg of its intersection with Stearns Road. At its unsignalized intersection with Dunamon Drive, Newport Boulevard provides a combined through/right-turn lane and a through lane on the northbound approach. The southbound approach provides a combined through/left-turn lane and a through lane. Additionally, Newport Boulevard provides standard crosswalks on the north and south legs of its intersection with Dunamon Drive. Newport Boulevard is under the jurisdiction of the City of Bartlett, carries an AADT volume of 4,850 vehicles (IDOT 2016), and has a posted speed limit of 35 miles per hour.

Dunamon Drive is an east-west local road that provides one through lane in each direction. At its unsignalized intersection with Newport Boulevard, Dunamon Drive provides a combined left-turn/right-turn lane on the westbound approach which is under stop sign control. At its unsignalized intersection with County Farm Road, Dunamon Drive provides a combined left-turn/right-turn lane on the eastbound approach which is under stop sign control. Dunamon Drive is under the jurisdiction of the City of Bartlett and has a posted speed limit of 25 miles per hour.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units on Thursday, May 30, 2019 during the weekday morning (6:30 to 9:00 A.M.) and evening (4:00 to 6:30 P.M.) peak periods and on Saturday, June 1, 2019 during the weekday midday (12:00 to 2:00 P.M.) peak period at the following intersections:

- County Farm Road with Stearns Road/Greenbrook Boulevard
- Stearns Road with Newport Boulevard
- Newport Boulevard with Dunamon Drive
- County Farm Road with Dunamon Drive
- Stearns Road with BP/Dunkin'/Walgreens access drive
- County Farm Road with BP/Dunkin'/Hoeltherhoff's Nursery access drives

It should be noted that this was the last week that nearby schools were in session before the summer recess. The results of the traffic counts indicated that the weekday morning peak hour of traffic occurs from 7:15 A.M. to 8:15 A.M., the weekday evening peak hour of traffic occurs from 4:45 P.M. to 5:45 P.M., and the Saturday midday peak hour of traffic occurs from 12:00 P.M. to 1:00 P.M. **Figure 4** illustrates the existing peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.

Crash Analysis

KLOA, Inc. obtained crash data¹ for the most recent available past five years (2016 to 2020) for the intersections of County Farm Road with Stearns Road, Stearns Road with Newport Boulevard, Newport Boulevard with Dunamon Drive, County Farm Road with Dunamon Drive, and County Farm Road with the BP/Dunkin' access drive. **Tables 1** through **4** summarize the crash data for the intersections within the study. Due to the proximity of the BP/Dunkin' access drives, their crash data is included in the County Farm Road/Stearns Road table. A review of the crash data indicated that no fatalities were reported at these intersections between 2016 and 2020.

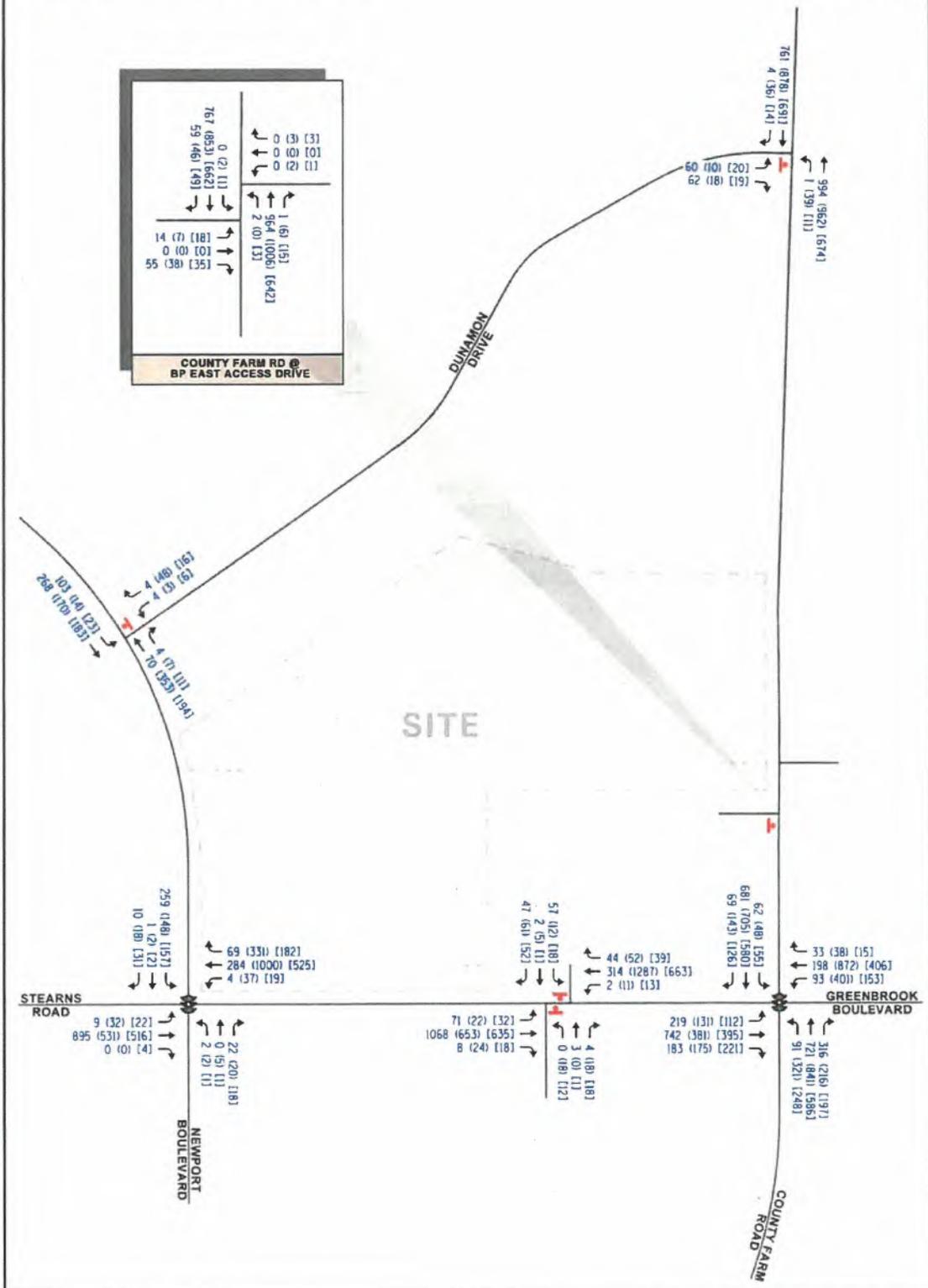
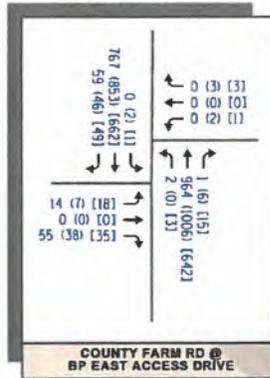
¹ IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in previous years since data prior to 2015 was physically located by bureau personnel.

LEGEND

- 00 - AM PEAK HOUR (7:15-8:15 AM)
- (00) - PM PEAK HOUR (4:45-5:45 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:00-1:00 PM)



NOT TO SCALE



COMMERCIAL
DEVELOPMENT
BARTLETT, ILLINOIS

EXISTING TRAFFIC VOLUMES

Table 1
 COUNTY FARM ROAD WITH STEARNS ROAD – CRASH SUMMARY

Year	Type of Crash Frequency						Total
	Angle	Object	Rear End	Sideswipe	Turning	Other	
2016	2	0	5	0	4	2	13
2017	1	0	1	0	3	0	5
2018	3	0	4	0	7	0	14
2019	4	1	1	1	3	0	10
2020	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>4</u>	<u>0</u>	<u>5</u>
Total	11	1	11	1	21	2	47
Average/Year	2.2	<1.0	2.2	<1.0	4.2	<1.0	9.4

Table 2
 NEWPORT BOULEVARD WITH STEARNS ROAD – CRASH SUMMARY

Year	Type of Crash Frequency						Total
	Angle	Object	Rear End	Sideswipe	Turning	Other	
2016	0	0	0	0	0	0	0
2017	0	0	1	0	1	0	2
2018	0	1	0	0	1	0	2
2019	0	0	1	0	1	0	2
2020	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	0	1	3	0	3	0	7
Average/Year	0.0	<1.0	<1.0	0.0	<1.0	0.0	1.4

Table 3
 NEWPORT BOULEVARD WITH DUNAMON DRIVE – CRASH SUMMARY

Year	Type of Crash Frequency						
	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2016	0	1	0	0	0	0	1
2017	0	0	0	0	1	0	1
2018	0	0	1	0	0	0	1
2019	0	0	0	0	0	0	0
2020	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	0	1	1	0	1	0	3
Average/Year	0.0	<1.0	<1.0	0.0	<1.0	0.0	<1.0

Table 4
 COUNTY FARM ROAD WITH DUNAMON DRIVE – CRASH SUMMARY

Year	Type of Crash Frequency						
	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2016	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0
2019	0	0	0	0	1	0	1
2020	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	0	0	0	0	1	0	1
Average/Year	0.0	0.0	0.0	0.0	<1.0	0.0	<1.0

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the site will be developed to contain the following uses:

- Approximately 14,000 square feet of retail space
- An approximate 6,175 square-foot daycare
- An approximate 7,955 square-foot automated single-lane car wash

Access to the development will be provided via the following access drives:

- A full-movement access drive off County Farm Road replacing the existing east BP access drive located approximately 70 feet to the south. This access drive will provide one inbound lane and one outbound lane. Outbound movements will be under stop sign control.
- A full-movement access drive off Newport Boulevard located approximately 280 feet north of Stearns Road. This access drive will provide one inbound lane and two outbound lanes. The outbound lanes will be striped to provide a left-turn lane and a right-turn lane. Outbound movements will be under stop sign control.
- Additional access will be provided through the existing south BP access drive. A cross-access will connect the proposed development with the existing BP fuel center just north of Stearns Road.

A site plan depicting the proposed development layout and access is included in the Appendix.

Directional Distribution

The directions from which patrons and employees will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the development-generated traffic.

Peak Hour Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). As previously indicated, the site will be developed with a car wash, retail, and a daycare.

ITE Land-Use Code 948 rate was used for the car wash. Trips were generated based on the number of tunnels to be provided (one). Use of the tunnels to generate trips is a typical standard application based on the reviewing public agencies such as IDOT and DuDOT. As ITE does not provide trip generation data for the weekday morning peak hour, previous data utilized by KLOA, Inc. was referenced for the weekday morning peak hour totals. ITE Land-Use Code 822 rate was used for the retail space. This land-use code is for retail uses totaling under 40,000 square feet. It is important to note that surveys conducted by ITE have shown that approximately 35 percent of trips made to retail uses are diverted from the existing traffic on the roadway system. This is particularly true during peak hours when traffic is diverted from home-to-work, work-to-home, and other trips. Such diverted trips are referred to as pass-by traffic. As such, this pass-by percentage was applied to the trips generated by the retail space. ITE Land-Use Code 565 was used for the daycare.

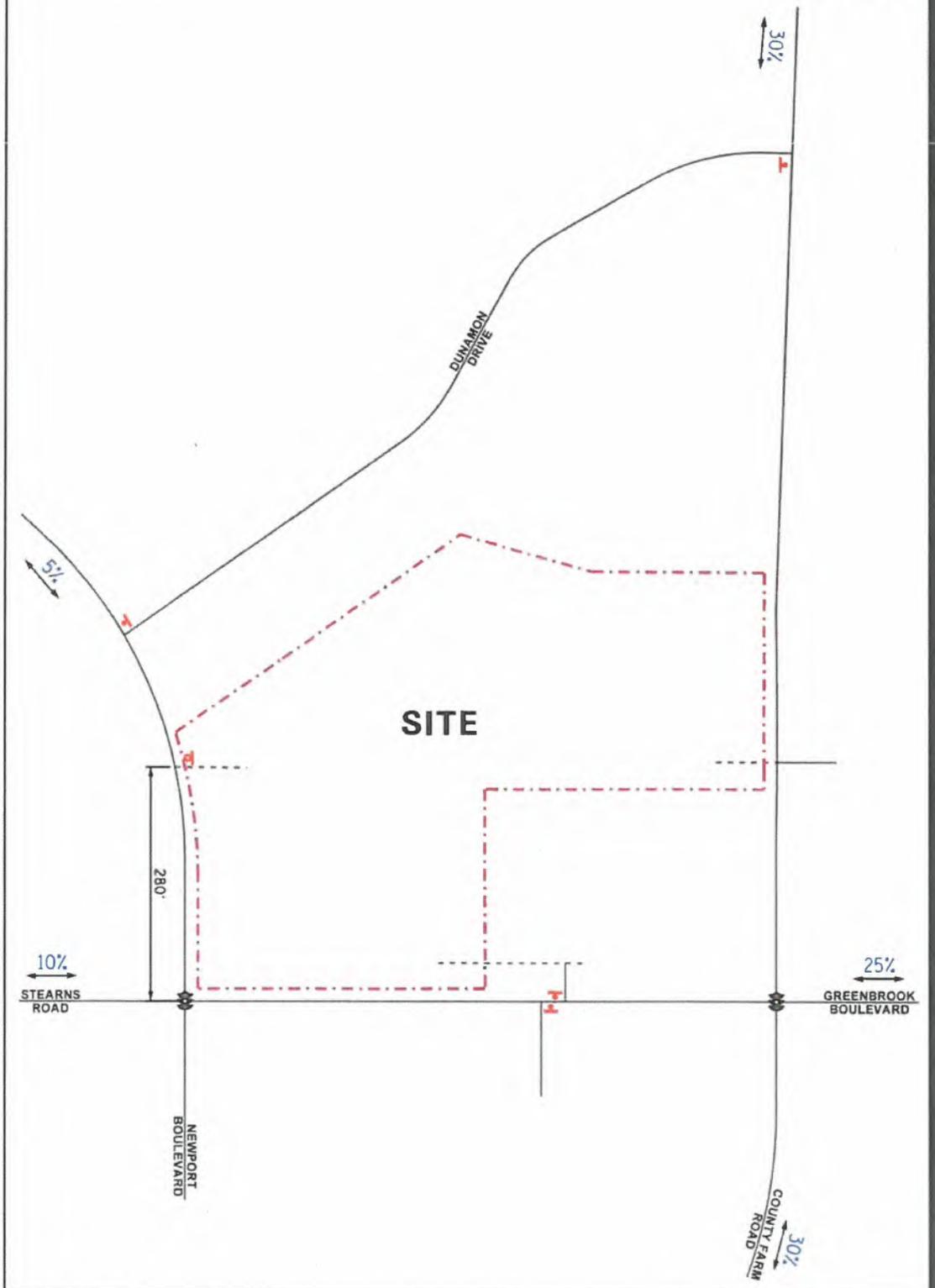
Table 3 summarizes the number of trips estimated to be generated by the proposed development.

LEGEND

- 00% - PERCENT DISTRIBUTION
- 00' - DISTANCE IN FEET
-  - PROPOSED STOP SIGN



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ESTIMATED DIRECTIONAL DISTRIBUTION

Table 3
ESTIMATED PEAK HOUR SITE-GENERATED TRAFFIC VOLUMES

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour			Daily Two-Way Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
948	Automated Car Wash (single tunnel)	10	10	20	39	39	78	19	22	41	233	233	466
822	Strip Retail Plaza (<40,000 s.f.) (14,000 s.f.)	20	13	33	46	46	92	47	45	92	410	410	820
565	Day Care Center (6,175 s.f.)	36	32	68	32	37	69	--	--	--	147	147	294
Total Vehicle Trips:		66	55	121	117	122	239	66	67	133	790	790	1,580
<i>Less Pass-By Trips (35%)¹:</i>		<i>-6</i>	<i>-6</i>	<i>-12</i>	<i>-17</i>	<i>-17</i>	<i>-34</i>	<i>-17</i>	<i>-17</i>	<i>-34</i>	<i>-144</i>	<i>-144</i>	<i>-288</i>
Total New Vehicle Trips:		60	49	109	100	105	205	49	50	99	646	646	1,292

1 - Pass-by reduction applied only to LUC 822

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning, weekday evening, and Saturday midday peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the traffic assignment of the new passenger vehicle trips and **Figure 7** illustrates the traffic assignment of the pass-by passenger vehicle trips.

Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Year 2050 Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes are projected to increase by an annual compounded growth rate of approximately 0.7 percent. As such, the existing traffic volumes were increased by a total of six percent to project Year 2028 traffic conditions. The Year 2028 no-build traffic volumes are illustrated in **Figure 8**. A copy of the CMAP projections letter is included in the Appendix.

Total Projected Traffic Volumes

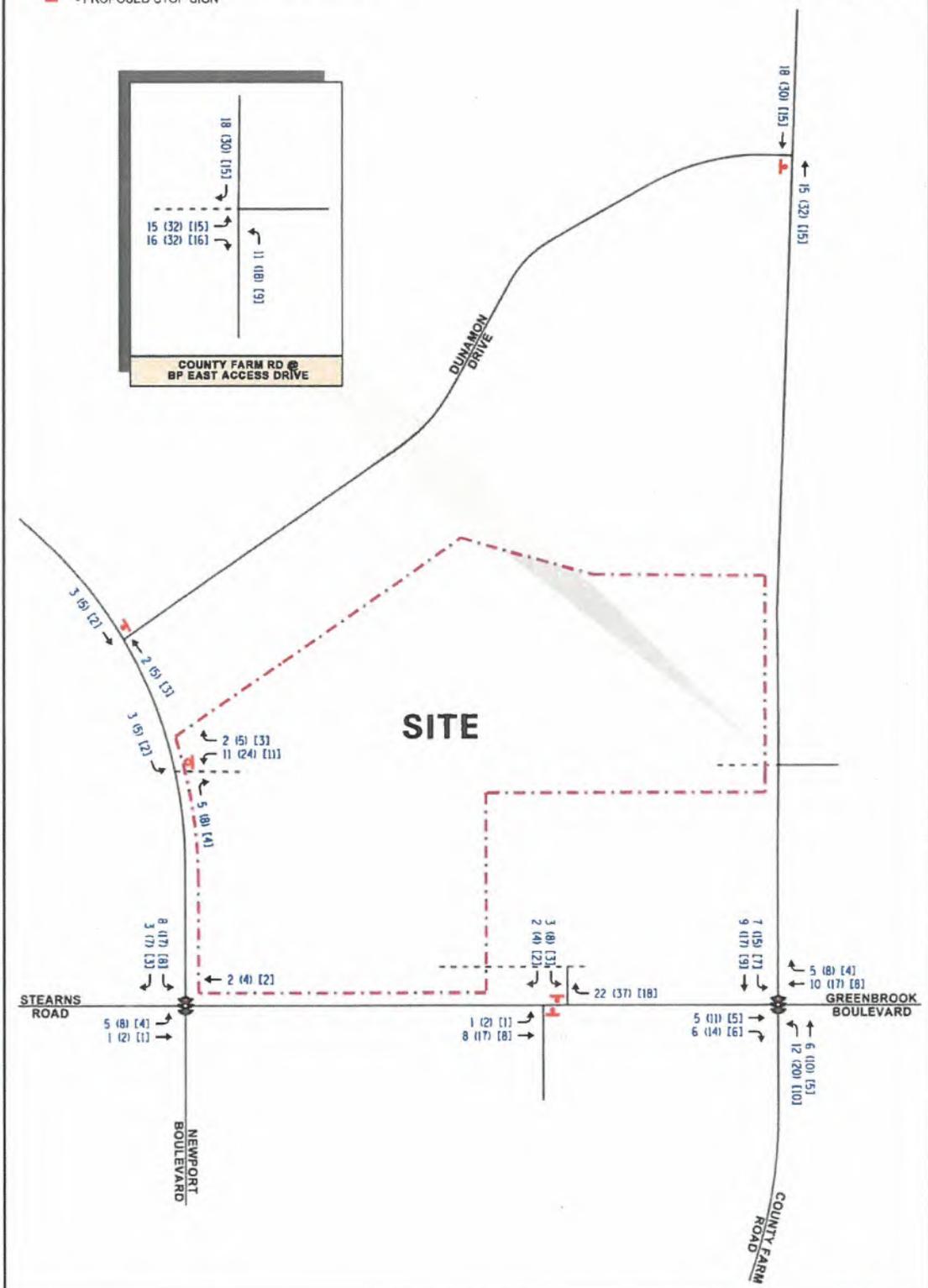
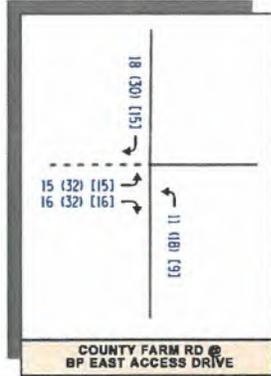
The new and pass-by development-generated traffic (Figures 6 and 7) was added to the existing traffic volumes taking into account background growth (Figure 8) to determine the Year 2028 total projected traffic volumes. **Figure 9** illustrates the Year 2028 total projected traffic volumes.

LEGEND

- 00 - AM PEAK HOUR (7:15-8:15 AM)
- (00) - PM PEAK HOUR (4:45-5:45 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:00-1:00 PM)
- 🚦 - PROPOSED STOP SIGN



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ESTIMATED NEW SITE-GENERATED TRAFFIC VOLUMES

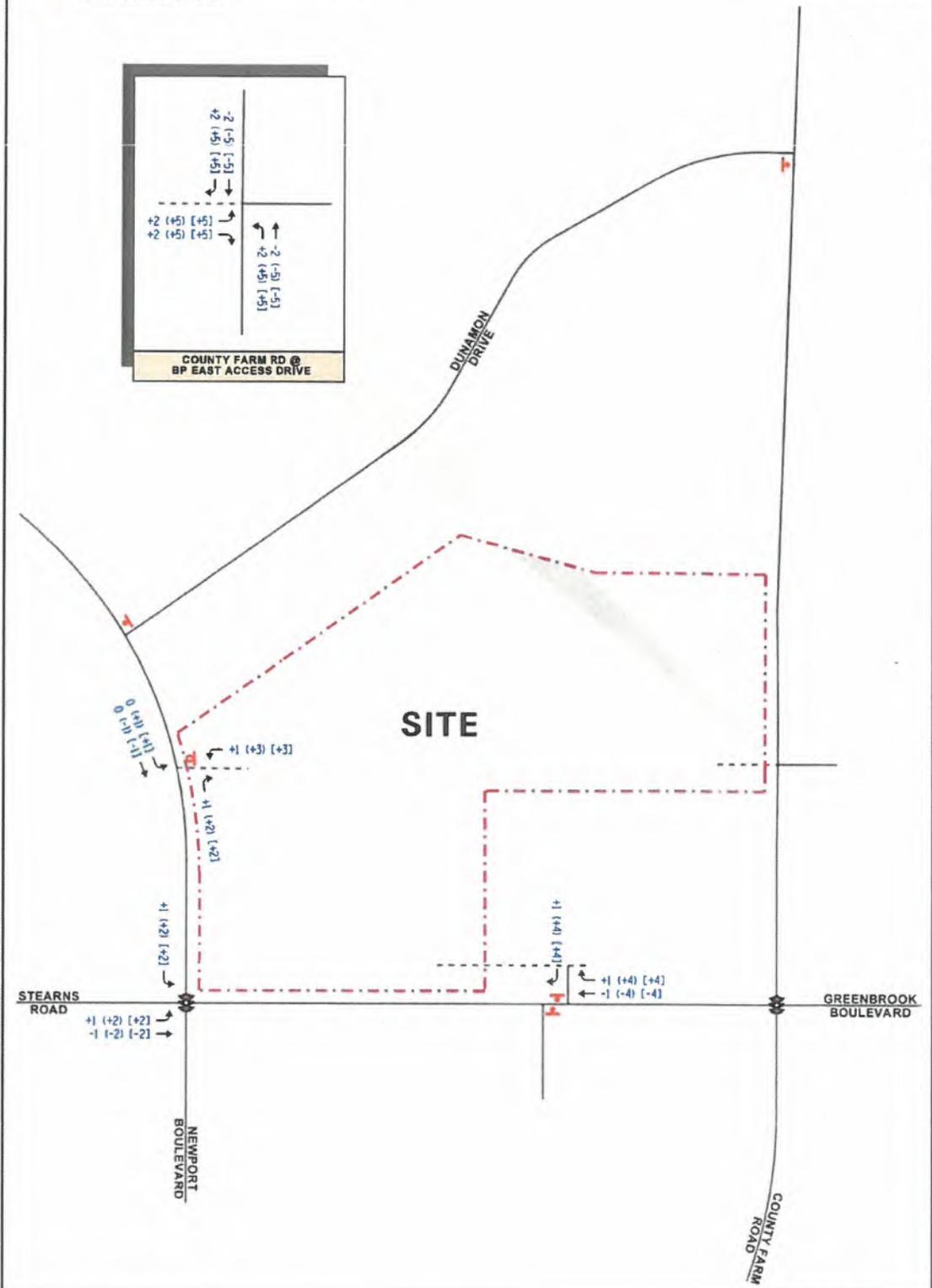
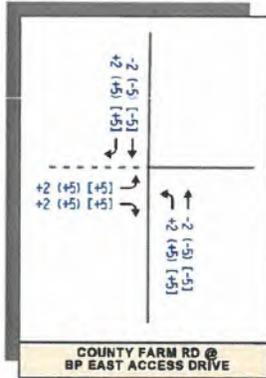
Job No: 19-135 Figure: 6

LEGEND

- 00 - AM PEAK HOUR (7:15-8:15 AM)
- (00) - PM PEAK HOUR (4:45-5:45 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:00-1:00 PM)
-  - PROPOSED STOP SIGN



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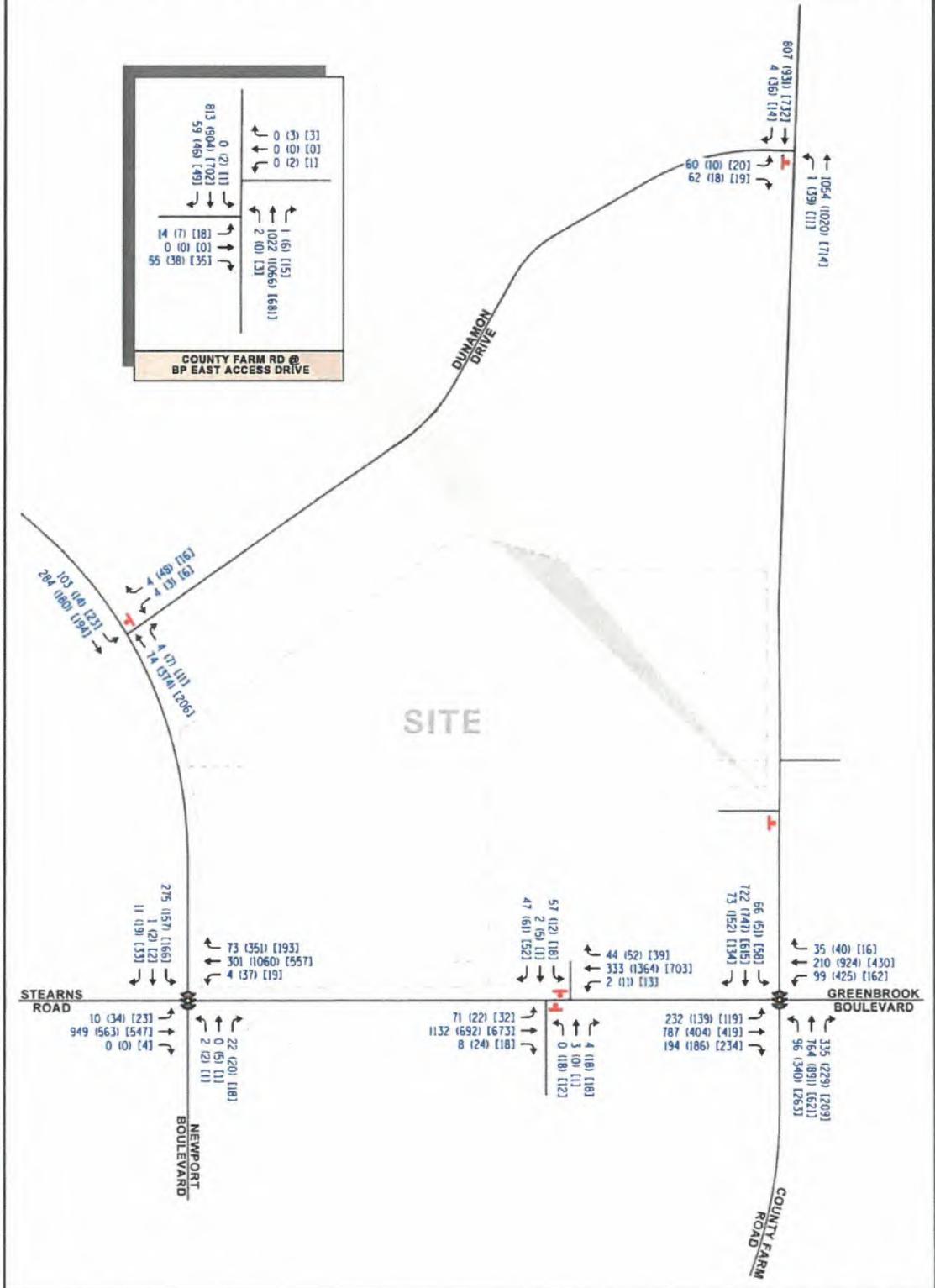
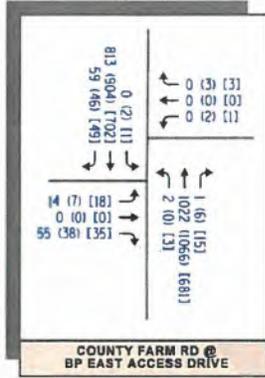


LEGEND

- 00 - AM PEAK HOUR (7:15-8:15 AM)
- (00) - PM PEAK HOUR (4:45-5:45 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:00-1:00 PM)



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YEAR 2028 NO-BUILD TRAFFIC VOLUMES

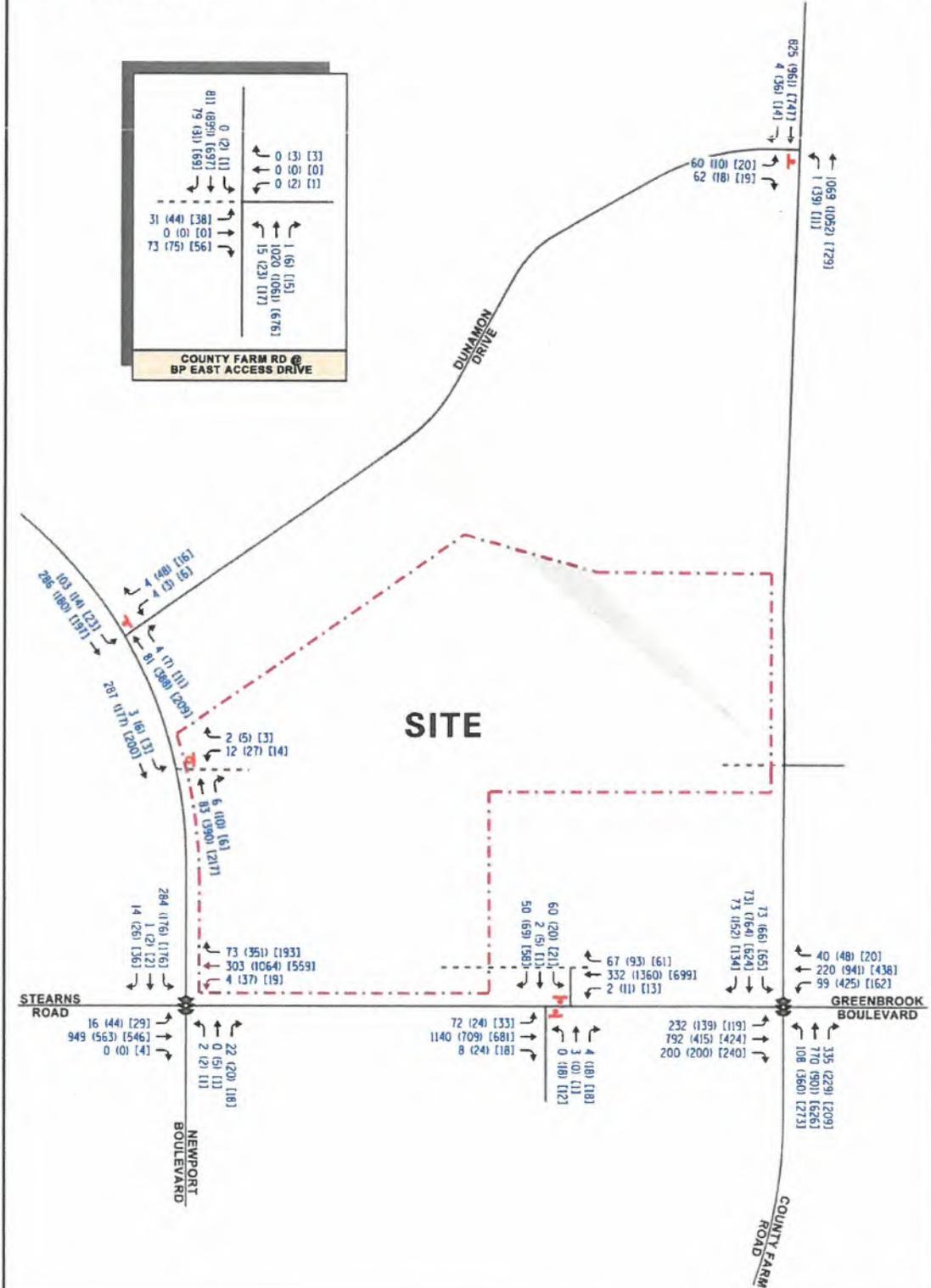
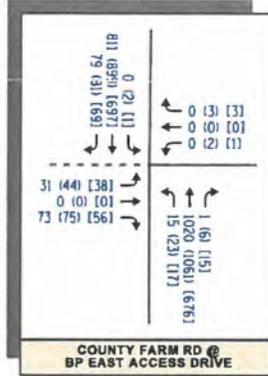
Job No: 19-135 Figure: 8

LEGEND

- 00 - AM PEAK HOUR (7:15-8:15 AM)
- (00) - PM PEAK HOUR (4:45-5:45 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:00-1:00 PM)
- ▲ - PROPOSED STOP SIGN



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YEAR 2028 TOTAL PROJECTED TRAFFIC VOLUMES



5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning, weekday evening, and Saturday midday peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday evening, and Saturday midday peak hours for the existing, no-build, and Year 2028 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using the Synchro/SimTraffic 11 software. The analysis for the traffic-signal controlled intersections were accomplished using actual cycle lengths, phasings, and offsets to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, no-build, and total projected conditions are presented in **Tables 4** through **8**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 4
CAPACITY ANALYSIS RESULTS – COUNTY FARM ROAD WITH STEARNS RD/GREENBROOK BLVD - SIGNALIZED

Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
	L	T/R	L	T	R	L	T	R	L	T	R		
Existing Conditions	Weekday Midday	C 21.6	D 41.8	C 23.3	C 27.6	C 27.6	B 17.7	D 39.7	B 18.5	C 29.4	A 3.1	C 34.1	
	Peak Hour	D – 38.0											
	Weekday Evening	C 30.7	D 52.0	F 99+	F 81.0	F 81.0	D 41.9	C 33.2	B 16.7	D 37.0	A 3.1	D 54.2	
Year 2028	Peak Hour	D – 48.0											
	Saturday Midday	C 27.1	C 26.9	D 39.8	C 28.5	C 28.5	C 31.6	C 24.4	B 13.7	C 21.3	A 3.0	C 25.3	
	Peak Hour	C – 27.0											
No-Build Conditions	Weekday Midday	C 21.3	D 44.9	C 23.9	C 27.9	C 27.9	B 18.9	D 46.2	B 18.8	C 31.1	A 3.4	D 37.2	
	Peak Hour	D – 40.4											
	Weekday Evening	C 32.1	E 58.3	F 99+	F 99+	F 99+	E 58.3	D 37.1	B 17.6	D 39.7	A 3.6	E 64.7	
Projected Conditions	Peak Hour	D – 53.3											
	Saturday Midday	C 26.3	C 26.2	D 48.8	C 28.6	C 28.6	D 38.7	C 25.5	B 14.0	C 21.5	A 3.0	C 26.4	
	Peak Hour	C – 26.2											
Year 2028	Weekday Midday	C 21.5	D 46.1	C 23.9	C 28.0	C 28.0	B 19.6	D 47.7	B 19.4	C 32.1	A 3.4	D 38.2	
	Peak Hour	D – 41.4											
	Weekday Evening	C 32.3	E 64.7	F 99+	F 99+	F 99+	E 72.3	D 37.9	B 18.0	D 40.8	A 3.6	E 69.2	
Year 2028	Peak Hour	E – 58.7											
	Saturday Midday	C 25.6	C 25.6	D 51.0	C 28.6	C 28.6	D 43.1	C 25.8	B 14.3	C 21.6	A 3.0	C 26.8	
	Peak Hour	C – 25.6											

Letter denotes Level of Service
Delay is measured in seconds.
L – Left Turn
T – Through
R – Right Turn



Table 5

CAPACITY ANALYSIS RESULTS – STEARNS ROAD WITH NEWPORT BOULEVARD - SIGNALIZED

Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
	L	T/R	R	L	T	R	L	T	R	L	T	R	
Existing Conditions	Weekday Midday	A 7.3	B 16.9	A 10.0	B 14.3					C-26.9	D 38.2	C 27.2	B 20.0
	Peak Hour	B-16.8			B-14.3						D-37.8		
	Weekday Evening Peak Hour	A 6.1	A 9.9	A 3.4	B 16.9					C-33.1	D 50.4	C 32.6	B 17.5
Year 2028 No-Build Conditions	Peak Hour	A-9.7			B-16.5						D-48.5		
	Saturday Midday	A 5.5	A 9.2	A 4.8	A 9.8					C-31.9	D 49.7	C 32.8	B 14.5
	Peak Hour	A-9.0			A-9.7						D-47.0		
Year 2028 Projected Conditions	Weekday Midday	A 7.2	B 17.5	B 10.2	B 15.3					C-27.2	D 39.6	C 27.6	C 20.8
	Peak Hour	B-17.4			B-15.3						D-39.2		
	Weekday Evening Peak Hour	A 6.6	B 10.3	A 3.6	B 18.8					C-32.5	D 51.0	C 32.1	B 18.8
Year 2028 Projected Conditions	Peak Hour	B-10.1			B-18.4						D-48.9		
	Saturday Midday	A 5.8	A 9.7	A 5.1	B 10.7					C-31.1	D 49.2	C 32.1	B 15.1
	Peak Hour	A-9.5			B-10.6						D-46.4		
Year 2028 Projected Conditions	Weekday Midday	A 7.6	B 17.5	A 10.0	B 16.2					C-27.2	D 40.5	C 27.4	C 21.2
	Peak Hour	C-17.3			B-16.1						D-39.9		
	Weekday Evening Peak Hour	A 7.6	B 10.8	A 4.2	B 19.6					C-31.3	D 51.9	C 31.4	B 19.7
Year 2028 Projected Conditions	Peak Hour	B-10.6			B-19.2						D-49.3		
	Saturday Midday	A 6.2	B 10.2	A 5.5	B 12.5					C-30.3	D 48.5	C 31.4	B 16.2
	Peak Hour	A-10.0			B-12.3						D-45.6		

Letter denotes Level of Service
Delay is measured in seconds.

R - Right Turn

L - Left Turn
T - Through



Table 6
 CAPACITY ANALYSIS RESULTS
 EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Stearns Road with BP/Dunkin'/Walgreens Access Drives						
• Northbound Approach	B	12.8	C	16.1	B	11.1
• Southbound Approach	B	10.6	C	17.9	B	10.3
• Eastbound Left Turn	A	7.6	A	9.5	A	8.0
• Westbound Left Turn	A	9.3	A	8.8	A	8.7
Newport Boulevard with Dunamon Drive						
• Westbound Approach	B	10.7	A	9.1	A	9.1
• Southbound Left Turn	A	7.6	A	7.6	A	7.4
County Farm Road with Dunamon Drive						
• Eastbound Approach	C	16.2	C	20.3	B	13.7
• Northbound Left Turn	A	9.4	B	10.8	A	9.2
County Farm Road with BP/Dunkin' Access Drive/Nursery South Access Drive						
• Eastbound Approach	B	14.4	C	15.2	B	13.0
• Westbound Approach	A	0.0	C	17.8	B	10.7
• Northbound Left Turn	A	9.8	A	0.0	A	9.1
• Southbound Left Turn	A	0.0	A	8.7	A	7.9
LOS = Level of Service Delay is measured in seconds.						

Table 7
 CAPACITY ANALYSIS RESULTS
 NO-BUILD CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Stearns Road with BP/Dunkin'/Walgreens Access Drives						
• Northbound Approach	B	13.9	C	18.1	B	11.5
• Southbound Approach	B	10.8	C	20.3	B	10.7
• Eastbound Left Turn	A	7.7	A	9.8	A	8.1
• Westbound Left Turn	A	9.3	A	8.9	A	8.8
Newport Boulevard with Dunamon Drive						
• Westbound Approach	B	10.8	A	9.1	A	9.1
• Southbound Left Turn	A	7.6	A	7.7	A	7.5
County Farm Road with Dunamon Drive						
• Eastbound Approach	C	17.1	C	22.4	B	14.0
• Northbound Left Turn	A	9.6	B	11.2	A	9.3
County Farm Road with BP/Dunkin' Access Drive/Nursery South Access Drive						
• Eastbound Approach	C	15.1	C	16.0	B	13.7
• Westbound Approach	A	0.0	C	19.6	B	11.1
• Northbound Left Turn	A	10.0	A	0.0	A	9.3
• Southbound Left Turn	A	0.0	A	8.8	A	8.0
LOS = Level of Service Delay is measured in seconds.						

Table 8
 CAPACITY ANALYSIS RESULTS
 PROJECTED CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Stearns Road with BP/Dunkin'/Walgreens Access Drives						
• Northbound Approach	B	13.4	C	17.0	B	12.0
• Southbound Approach	B	10.9	C	21.1	B	10.9
• Eastbound Left Turn	A	7.7	A	9.8	A	8.1
• Westbound Left Turn	A	9.4	A	8.8	A	8.9
Newport Boulevard with Dunamon Drive						
• Westbound Approach	B	10.8	A	9.1	A	9.1
• Southbound Left Turn	A	7.6	A	7.8	A	7.5
County Farm Road with Dunamon Drive						
• Eastbound Approach	C	18.0	C	23.2	B	14.4
• Northbound Left Turn	A	9.7	B	11.4	A	9.4
County Farm Road with BP/Dunkin' Access Drive/Nursery South Access Drive						
• Eastbound Approach	C	19.1	E	37.5	C	16.1
• Westbound Approach	A	0.0	C	24.0	B	11.4
• Northbound Left Turn	B	10.2	B	11.0	A	9.4
• Southbound Left Turn	A	0.0	A	8.7	A	7.9
Newport Boulevard with Proposed West Access Drive						
• Westbound Approach	A	9.8	B	10.1	A	9.5
• Southbound Left Turn	A	7.4	A	7.7	A	7.5
LOS = Level of Service Delay is measured in seconds.						

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

County Farm Road with Stearns Road/Greenbrook Boulevard

The results of the capacity analysis indicate that this intersection currently operates at Level of Service (LOS) C during the weekday morning and Saturday midday peak hours and at LOS D during the weekday evening peak hour. Under Year 2028 no-build conditions, the intersection is projected to operate at LOS D during the weekday morning peak hour, at LOS E during the weekday evening peak hour, and at LOS C during the Saturday midday peak hour.

Under Year 2028 total projected conditions, the intersection is projected to operate at the same levels of service as under no-build conditions during the peak hours with a maximum increase of approximately five seconds. The westbound approach currently operates at LOS F and is projected to continue to operate at LOS F under no-build and total projected conditions. As such, the approach level of service and the intersection level of service are not due to the proposed development.

Stearns Road with Newport Boulevard

The results of the capacity analysis indicate that this intersection currently operates at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours. Under Year 2028 no-build conditions, the intersection is projected to operate at LOS C during the weekday morning peak hour and at LOS B during the weekday evening and Saturday midday peak hours.

Under Year 2028 total projected conditions, the intersection is projected to operate at the same levels of service as under no-build conditions during the peak hours with a maximum increase of approximately one second. As such, the intersection has sufficient reserve capacity to accommodate the traffic generated by the proposed development and no roadway or traffic signal modifications will be needed.

Stearns Road with BP/Dunkin'/Walgreens Access Drives

The results of the capacity analysis indicate that the northbound and southbound approaches currently operate at LOS B during the weekday morning and Saturday midday peak hours and at LOS C during the weekday evening peak hour. The eastbound and westbound left turns currently operate at LOS A during the peak hours. Under Year 2028 no-build conditions, the approaches and critical movements are projected to continue operating at the current levels of service with increases in delay of approximately two seconds or less over existing conditions.

Under Year 2028 total projected conditions, the northbound and southbound approaches and eastbound and westbound left turns are projected to continue operating at their current levels of service during the peak hours with increases in delay of approximately one second or less over no-build conditions. As such, this intersection should continue to provide flexible and efficient access and no roadway or traffic control modifications are required in conjunction with the development.

Newport Boulevard with Dunamon Drive

The results of the capacity analysis indicate that the westbound approach currently operates at LOS B during the weekday morning peak hour and at LOS A during the weekday evening and Saturday midday peak hours. The southbound left-turn movement operates at LOS A during all three peak hours. Under Year 2028 no-build conditions, the approaches and critical movements are projected to continue operating at the current levels of service with increases in delay less than one second over existing conditions.

Under Year 2028 total projected conditions, the westbound approach and southbound left turn are projected to continue operating at LOS B or better during the peak hours with increases in delay of less than one second over no-build conditions. As such, this intersection has sufficient capacity for the traffic projected to be generated by the site and no roadway or traffic control improvements are necessary.

County Farm Road with Dunamon Drive

The results of the capacity analysis indicate that the eastbound approach currently operates at LOS C during the weekday morning and evening peak hours and at LOS B during the Saturday midday peak hour. The northbound left turn currently operates at LOS B or better during the peak hours. Under Year 2028 no-build conditions, the approaches and critical movements are projected to continue operating at their current levels of service with increases in delay of two seconds or less over existing conditions.

Under Year 2028 total projected conditions, the approaches and critical movements are projected to continue operating at the current levels of service of LOS C or better during the peak hours, with increases in delay of less than one second over the no-build conditions. As such, this intersection has sufficient capacity for the traffic projected to be generated by the site and no roadway or traffic control improvements are necessary.

County Farm Road with BP/Dunkin'/Hoeltherhoff Nursery South Access Drive

The results of the capacity analysis indicate that the eastbound approach currently operates at LOS B during the weekday morning and Saturday midday peak hours and at LOS C during the weekday evening peak hour. The westbound approach currently operates at LOS A during the weekday morning peak hour, at LOS C during the weekday evening peak hour, and at LOS B during the Saturday midday peak hour. The northbound and southbound left turns currently operate at LOS A during the peak hours. Under Year 2028 no-build conditions, the eastbound approach is projected to operate at LOS C during the weekday morning and evening peak hours and to continue operating at LOS B during the Saturday midday peak hour. The westbound approach and northbound and southbound left turns are projected to continue operating at their current levels of service. Delays are projected to increase approximately two seconds or less over existing conditions.

Under Year 2028 total projected conditions, the eastbound approach is projected to operate at LOS C during the weekday morning and Saturday midday peak hours and at LOS E during the weekday evening peak hour. 95th percentile queues during the weekday evening peak hour are projected to be three to four vehicles. The westbound approach and northbound and southbound left turns are projected to continue operating at the current levels of service. To alleviate delay, wayfinding improvements should be posted, as discussed below. Overall, the intersection is projected to provide flexible and efficient access to the site.

Newport Boulevard with Proposed West Access Drive

The results of the capacity analysis indicate that under Year 2028 total projected conditions, the westbound approach is projected to operate at LOS A during the weekday morning and Saturday midday peak hours and at LOS B during the weekday evening peak hour. The southbound left-turn movement is projected to operate at LOS A during all three peak hours. As such, the proposed west access drive will provide efficient and flexible access to the site. Southbound queues extending from the signalized intersection of Newport Boulevard with Stearns Road should be monitored for the potential to install “Do Not Block Driveway” signage and supplemental pavement markings. 95th percentile queues are currently not projected to extend to the proposed access drive.

Wayfinding Improvements

To alleviate the delays at the BP access drives, it is recommended to post wayfinding signage within the site to direct vehicles to exit at the signal should they wish to make an outbound left turn at either of the BP access drives. The BP access drives are relatively close to the queues for the signal at Stearns Road and County Farm Road, and these queues can make it difficult for vehicles to be able to make a left turn without the queue interfering. Wayfinding signage within the site should be simple and succinct in directing vehicles to the proposed west access drive at Newport Boulevard, which will lead to the signal at Newport Boulevard with Stearns Road, which has additional capacity to accommodate the site-generated traffic.

On-Site Circulation and Car Wash Stacking

On-site circulation is provided through two main drive aisles: one oriented east-west and one oriented north-south. The east-west drive aisle connects the proposed west access drive with Newport Boulevard to the relocated BP east access drive's intersection with County Farm Road. The north-south drive aisle connects the east-west drive aisle to the cross-access connection with the BP south access drive. Parking drive aisles are two-way, providing flexible access. A one-way counterclockwise drive aisle is provided around the rear of the retail space. A second drive loop is provided on the far south side of the car wash.

As proposed, the car wash will be located in the southwest corner of the site, bounded on the south by Stearns Road and on the west by Newport Boulevard. The car wash will be approximately 7,955 square feet and consist of one tunnel. 20 covered stalls for vacuuming/cleaning will be provided immediately south of the car wash building, separated by a two-way drive aisle. An additional five uncovered parking spaces will be provided adjacent to the southwest corner of the car wash building.

There will be three side-by-side queue lanes on the north side of the car wash building, oriented westbound, leading to three covered pay stations. After the pay stations, the lanes merge into a single lane that proceeds southbound and then eastbound to the entrance of the car wash tunnel. Vehicles exit the car wash on the east side of the building.

Based on a review of the site plan, up to 21 vehicles can queue from the pay stations without blocking the main north-south drive aisle connecting the retail and daycare to the connection to the south BP access drive. Up to an additional three cars are able to queue after the pay stations before entering the car wash tunnel.

Wayfinding signage should be provided to direct customers to the entrance of the car wash queue on the north side of the building. A stop sign facing west should be posted at the exit of the car wash. "Do Not Enter" signs should be posted at the exit of the car wash.

"Do Not Enter" signs should also be posted at the southwest corner of the retail building where the one-way drive aisle terminates southbound. This will minimize conflicts on the drive aisle and wrong-way travel.

Additional stop signs are recommended at the internal intersections. This includes the internal intersection where the east-west drive aisle connects with cross-access to the BP fuel center just west of County Farm Road, which should be placed under three-way stop control where the eastbound, northbound, and southbound approaches are under stop sign control. The westbound approach will be free-flow to allow traffic to enter the site without backing up onto County Farm Road. "Do Not Block Driveway" signs should also be installed to supplement the stop signs.

Additionally, the internal site intersection where the north-south drive aisle connects with cross-access to the BP fuel station just north of Stearns Road should be placed under three-way stop control. Stop signs on the eastbound and westbound approaches should be posted in addition to the existing southbound approach stop sign. The northbound approach will be free-flow to allow traffic to enter the site without backing up onto Stearns Road. Consideration should also be given to installing "Do Not Block Driveway" signs here to supplement the stop signs.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The volume of traffic estimated by the proposed commercial development will be reduced due to pass-by trips.
- The results of the capacity analyses indicate that the existing roadway system has adequate capacity to accommodate the traffic that will be generated by the proposed development.
- The multiple access drives will ensure that efficient and flexible access is provided to the proposed development.
- Providing cross-access between BP, Dunkin', and the proposed commercial development will provide site access flexibility and will allow for interaction between the existing and proposed uses.
- The site plan has been designed to provide adequate and efficient on-site circulation.
- The car wash will provide adequate stacking for approximately 24 vehicles without blocking the main drive aisle.

Appendix

Traffic Count Summary Sheets

Site Plan

CMAP 2050 Projection Letter

Level of Service Criteria

Capacity Analysis Summary Sheets

Traffic Count Summary Sheets



Kenig Lindgren O'Hara Abcoona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 epurquette@kloainc.com

Count Name: Stearns Rd and County Farm Rd
Site Code:
Start Date: 05/30/2019
Page No: 1

Turning Movement Data

Start Time	Stearns Rd Eastbound					Greatbrook Blvd Westbound					County Farm Rd Northbound					County Farm Rd Southbound																	
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
6:30 AM	0	22	146	55	0	223	0	23	54	0	0	0	0	0	0	77	0	14	106	49	0	166	49	0	169	0	10	145	15	0	170	639	
6:45 AM	0	27	173	47	0	247	0	19	34	4	1	57	0	26	135	70	0	26	135	70	0	231	0	0	231	0	10	136	14	0	160	695	
Hourly Total	0	49	319	102	0	470	0	42	88	4	1	134	0	40	241	119	0	40	241	119	0	400	0	0	400	0	20	281	29	0	330	1334	
7:00 AM	0	38	187	36	0	261	0	19	48	5	0	72	0	14	169	69	0	14	169	69	0	252	0	0	252	0	17	126	9	0	152	737	
7:15 AM	0	45	207	50	0	302	0	19	47	5	1	71	0	23	167	82	0	23	167	82	0	272	0	0	272	0	16	170	17	0	203	848	
7:30 AM	0	45	199	58	0	292	0	25	55	13	0	93	0	18	196	79	0	18	196	79	0	293	0	0	293	0	16	184	14	0	214	892	
7:45 AM	0	78	194	41	0	313	0	20	47	8	0	75	0	26	200	73	0	26	200	73	0	299	0	0	299	0	16	169	25	0	210	897	
Hourly Total	0	208	777	185	0	1168	0	83	197	31	1	311	0	81	732	303	0	81	732	303	0	1116	0	0	1116	0	65	649	65	0	779	3374	
8:00 AM	0	51	152	34	0	237	0	29	49	7	0	85	0	24	168	82	0	24	168	82	0	264	0	0	264	0	14	158	13	0	185	771	
8:15 AM	0	26	141	36	0	203	0	33	61	6	0	100	0	16	116	72	0	16	116	72	0	204	0	0	204	0	8	126	19	0	153	660	
8:30 AM	0	30	121	42	0	193	0	21	51	7	0	79	0	20	133	62	0	20	133	62	0	215	0	0	215	0	11	130	22	0	163	650	
8:45 AM	0	24	144	48	0	216	0	20	58	5	0	83	0	22	120	59	0	22	120	59	0	201	0	0	201	0	10	108	5	0	123	623	
Hourly Total	0	131	558	160	0	849	0	103	219	25	0	347	0	82	527	275	0	82	527	275	0	884	0	0	884	0	43	522	59	0	624	2704	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	24	79	35	0	136	0	71	164	3	0	238	0	70	191	42	0	70	191	42	0	303	0	0	303	0	5	151	33	0	189	868	
4:15 PM	0	32	72	46	0	150	0	65	207	5	0	267	0	51	184	54	0	51	184	54	0	289	0	0	289	0	12	148	53	0	213	949	
4:30 PM	0	34	66	35	0	135	0	86	191	4	0	281	0	73	182	28	0	73	182	28	0	283	0	0	283	0	7	175	38	0	220	919	
4:45 PM	0	43	103	47	0	193	0	97	199	11	0	307	0	91	202	49	1	91	202	49	1	342	0	0	342	0	12	148	39	0	199	1041	
Hourly Total	0	133	320	163	0	616	0	339	761	23	0	1123	0	285	799	173	1	285	799	173	1	1217	0	0	1217	0	36	622	163	0	821	3777	
5:00 PM	0	27	96	39	1	162	0	102	231	9	3	342	0	60	162	55	0	60	162	55	0	377	0	0	377	0	14	151	29	0	194	975	
5:15 PM	0	34	96	52	2	182	0	103	231	10	0	344	0	79	243	55	0	79	243	55	0	377	0	0	377	0	9	198	43	0	250	1153	
5:30 PM	0	27	86	37	2	150	0	99	211	8	0	318	0	91	234	57	4	91	234	57	4	382	0	0	382	0	13	208	32	0	253	1103	
5:45 PM	0	29	93	47	0	169	0	93	204	9	0	306	0	83	183	47	1	83	183	47	1	313	0	0	313	0	8	213	28	0	249	1037	
Hourly Total	0	117	371	175	5	663	0	397	877	36	3	1310	0	313	822	214	5	313	822	214	5	1349	0	0	1349	0	44	770	132	0	946	4268	
6:00 PM	0	29	80	45	0	154	0	81	169	7	1	257	0	61	148	33	1	61	148	33	1	242	0	0	242	0	10	187	28	0	225	878	
6:15 PM	0	25	68	41	3	134	0	57	144	11	0	212	0	62	126	37	0	62	126	37	0	225	0	0	225	0	12	184	42	5	238	809	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	54	148	86	3	288	0	138	313	18	1	469	0	123	274	70	1	123	274	70	1	467	0	0	467	0	22	371	70	5	463	1887	
12:00 PM	0	24	94	67	1	185	0	35	108	3	0	146	0	69	167	43	1	69	167	43	1	279	0	0	279	0	16	125	32	0	173	783	
12:15 PM	0	36	118	47	1	201	0	43	109	5	0	157	0	66	127	55	0	66	127	55	0	248	0	0	248	0	9	144	28	0	181	787	
12:30 PM	0	24	95	57	1	176	0	35	94	4	0	133	0	69	168	44	0	69	168	44	0	281	0	0	281	0	14	156	29	0	199	789	
12:45 PM	0	28	88	50	0	166	0	40	95	3	0	138	0	44	124	55	0	44	124	55	0	223	0	0	223	0	16	155	37	0	208	735	
Hourly Total	0	112	395	221	3	729	0	153	406	15	0	574	0	248	566	197	1	248	566	197	1	1031	0	0	1031	0	55	580	126	0	761	3094	
1:00 PM	0	29	107	46	0	182	0	27	69	6	0	102	0	69	125	44	0	69	125	44	0	238	0	0	238	0	9	139	25	0	173	695	
1:15 PM	0	35	78	51	1	164	0	45	101	6	0	152	0	51	145	38	1	51	145	38	1	234	0	0	234	0	8	144	26	0	179	728	
1:30 PM	0	33	89	49	0	171	0	52	115	5	0	172	0	55	119	38	0	55	119	38	0	210	0	0	210	0	13	163	27	0	203	756	
1:45 PM	0	39	96	49	0	184	0	40	94	7	1	141	0	67	133	40	0	67	133	40	0	240	0	0	240	0	7	140	32	0	179	744	



Kenig, Lindgren O'Hara Aboona, Inc.
957.5 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 eparguette@kloainc.com

Count Name: Stearns Rd and Newport Blvd
Site Code:
Start Date: 05/30/2019
Page No: 1

Turning Movement Data

Start Time	Stearns Rd Eastbound					Stearns Rd Westbound					Newport Blvd Northbound					Newport Blvd Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
6:30 AM	0	2	159	0	0	161	0	1	68	7	0	76	0	0	0	0	7	7	0	59	0	2	0	61	305
6:45 AM	0	1	199	0	0	200	0	0	58	17	0	75	0	0	0	6	6	6	0	41	0	3	0	44	325
Hourly Total	0	3	358	0	0	361	0	1	126	24	0	151	0	0	0	13	13	13	0	100	0	5	0	105	630
7:00 AM	0	0	218	0	0	218	0	2	61	6	0	69	0	1	0	2	3	3	0	54	0	1	0	55	345
7:15 AM	0	3	234	0	0	237	0	2	69	19	0	90	0	0	0	3	3	3	0	61	1	1	0	63	393
7:30 AM	0	1	242	0	0	243	0	1	80	12	0	93	0	0	0	6	6	6	0	83	0	2	0	85	427
7:45 AM	0	2	238	0	0	240	0	0	76	15	0	91	0	1	0	6	7	7	0	61	0	2	0	63	401
Hourly Total	0	6	932	0	0	938	0	5	286	52	0	343	0	2	0	17	19	19	0	259	1	6	0	266	1566
8:00 AM	0	3	181	0	2	184	0	1	59	23	0	83	0	1	0	7	8	8	0	54	0	5	0	59	384
8:15 AM	0	2	159	0	0	161	0	3	75	15	0	93	0	0	0	5	5	5	0	52	0	2	0	54	313
8:30 AM	0	1	151	0	0	152	0	0	75	22	0	97	0	0	0	1	1	1	0	44	1	2	0	47	297
8:45 AM	0	3	158	0	0	161	0	1	64	25	0	90	0	1	0	7	8	8	0	49	0	3	0	52	311
Hourly Total	0	9	649	0	2	658	0	5	273	85	0	363	0	2	0	20	22	22	0	199	1	12	0	212	1255
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	9	108	1	0	118	0	4	197	71	0	272	0	0	0	3	3	3	0	30	2	7	0	39	432
4:15 PM	0	7	124	0	0	131	0	6	259	55	1	320	0	0	1	4	5	5	0	35	0	4	0	39	495
4:30 PM	0	8	116	1	0	125	0	3	229	63	1	295	0	0	0	3	3	3	0	30	1	2	0	33	456
4:45 PM	0	9	140	0	0	149	0	8	244	76	1	328	0	0	1	3	4	4	0	37	1	4	0	42	523
Hourly Total	0	33	468	2	0	523	0	21	929	265	3	1215	0	0	2	13	15	15	0	132	4	17	0	153	1906
5:00 PM	0	2	135	0	0	137	0	10	242	80	0	332	0	0	1	3	4	4	0	33	1	5	0	39	512
5:15 PM	0	6	124	0	0	130	0	13	266	78	0	357	0	0	2	10	12	12	0	43	0	4	0	47	546
5:30 PM	0	15	132	0	0	147	0	6	248	97	0	351	0	2	1	4	7	7	0	35	0	5	0	40	545
5:45 PM	0	16	129	2	1	147	0	6	234	86	0	326	0	0	2	2	4	4	0	38	0	9	0	47	524
Hourly Total	0	39	520	2	1	561	0	35	960	341	0	1366	0	2	6	19	27	27	0	149	1	23	0	173	2127
6:00 PM	0	10	117	0	0	127	0	4	212	52	0	268	0	1	2	3	6	6	0	41	0	7	0	48	449
6:15 PM	0	7	107	1	0	115	0	5	187	48	0	240	0	0	0	4	4	4	0	30	1	6	0	37	396
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	17	224	1	0	242	0	9	399	100	0	508	0	1	2	7	10	10	0	71	1	13	0	85	845
12:00 PM	0	2	117	1	0	120	0	6	125	43	0	174	0	0	0	4	4	4	0	48	0	10	0	58	356
12:15 PM	0	5	130	2	0	137	0	5	126	52	0	183	0	0	0	8	8	8	0	42	1	8	0	51	379
12:30 PM	0	8	147	1	0	156	0	2	134	44	0	180	0	1	0	3	4	4	0	37	0	2	0	39	379
12:45 PM	0	7	122	0	0	129	0	6	140	43	1	189	0	0	1	3	4	4	0	30	1	11	0	42	364
Hourly Total	0	22	516	4	0	542	0	19	525	182	1	726	0	1	1	18	20	20	0	157	2	31	0	190	1478
1:00 PM	0	6	143	1	1	150	0	6	124	53	0	183	0	1	0	4	5	5	0	29	0	5	0	34	372
1:15 PM	0	7	123	0	0	130	0	2	102	41	0	145	0	0	2	2	4	4	0	33	2	4	0	39	318
1:30 PM	0	7	134	0	1	141	0	4	128	50	0	182	0	0	2	1	3	3	0	34	0	6	0	40	366
1:45 PM	0	2	117	2	1	121	0	4	145	54	0	203	0	0	1	6	7	7	0	43	1	6	0	50	381



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 eparguette@kloainc.com

Count Name: Dunamon Dr and County Farm Rd
Site Code:
Start Date: 05/30/2019
Page No.: 1

Turning Movement Data

Start Time	Dunamon Dr Eastbound				County Farm Rd Northbound				County Farm Rd Southbound							
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
6:30 AM	0	4	15	0	19	0	0	128	0	128	0	155	1	0	156	303
6:45 AM	0	5	10	0	15	0	0	171	0	171	0	150	0	0	150	336
Hourly Total	0	9	25	0	34	0	0	299	0	299	0	305	1	0	306	639
7:00 AM	0	10	13	0	23	0	1	217	0	218	0	137	0	0	137	378
7:15 AM	0	13	13	0	26	0	0	219	0	219	0	194	0	0	194	439
7:30 AM	0	16	21	0	37	0	1	257	0	258	0	198	0	0	198	493
7:45 AM	0	14	17	0	31	0	0	286	0	286	0	192	2	0	194	511
Hourly Total	0	53	64	0	117	0	2	979	0	981	0	721	2	0	723	1821
8:00 AM	1	16	11	0	28	0	0	232	0	232	0	177	2	0	179	439
8:15 AM	0	6	4	0	10	0	0	153	0	153	0	142	2	0	144	307
8:30 AM	0	3	7	0	10	0	0	174	0	174	0	164	1	0	165	349
8:45 AM	0	7	7	0	14	0	2	156	0	158	0	114	2	0	116	288
Hourly Total	1	32	29	0	62	0	2	715	0	717	0	597	7	0	604	1383
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	5	2	0	7	0	5	208	0	213	0	196	6	0	202	422
4:15 PM	0	0	6	0	6	0	5	202	0	207	0	210	1	0	211	424
4:30 PM	0	2	5	0	7	0	5	236	0	241	0	236	6	0	242	490
4:45 PM	0	1	2	0	3	0	8	246	0	254	0	191	10	0	201	468
Hourly Total	0	8	15	0	23	0	23	892	0	915	0	833	23	0	856	1794
5:00 PM	0	2	5	1	7	0	4	194	0	198	0	205	8	0	213	418
5:15 PM	0	3	4	0	7	0	9	285	0	294	0	251	13	0	264	565
5:30 PM	0	4	7	0	11	0	18	237	0	255	0	231	5	0	236	502
5:45 PM	0	3	3	0	6	0	9	221	0	230	0	268	10	0	278	514
Hourly Total	0	12	19	1	31	0	40	937	0	977	0	955	36	0	991	1999
6:00 PM	0	3	5	3	8	0	2	175	0	177	0	204	4	0	208	393
6:15 PM	0	3	6	1	9	0	5	164	0	169	0	242	8	0	250	428
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	6	11	4	17	0	7	339	0	346	0	446	12	0	458	821
12:00 PM	0	6	4	0	10	1	4	163	0	168	0	152	3	0	155	333
12:15 PM	0	3	4	0	7	0	1	171	0	172	0	178	5	0	183	362
12:30 PM	0	6	4	0	10	0	1	191	0	192	0	152	3	0	155	360
12:45 PM	0	5	7	0	12	0	4	149	0	153	0	206	3	0	209	374
Hourly Total	0	20	19	0	39	1	10	874	0	885	0	891	14	0	905	1429
1:00 PM	0	3	4	0	7	0	0	143	0	143	0	199	3	0	202	352
1:15 PM	0	4	3	0	7	0	0	160	0	160	0	135	2	0	137	304
1:30 PM	0	6	4	0	10	0	3	184	0	187	0	200	1	0	201	398
1:45 PM	0	5	9	0	14	0	6	166	0	172	0	163	4	0	167	353
Hourly Total	0	18	20	0	38	0	9	653	0	662	0	697	10	0	707	1407

	1	158	202	5	361	1	93	5488	0	5882	0	5245	105	0	5350	11253
Grand Total	1	158	202	5	361	1	93	5488	0	5882	0	5245	105	0	5350	11253
Approach %	0.3	43.8	56.0	-	-	0.0	1.7	98.3	-	-	0.0	98.0	2.0	-	-	-
Total %	0.0	1.4	1.6	-	3.2	0.0	0.8	48.6	-	49.4	0.0	46.4	0.9	-	47.4	-
Lights	1	159	200	-	359	1	92	5425	-	5119	0	5169	104	-	5273	11151
% Lights	100.0	100.0	99.0	-	99.4	100.0	98.9	98.9	-	98.9	-	98.6	99.0	-	98.6	98.7
Buses	0	0	0	-	0	0	0	10	-	10	0	13	0	-	13	23
% Buses	0.0	0.0	0.0	-	0.0	0.0	0.0	0.2	-	0.2	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	2	-	2	0	1	30	-	31	0	39	1	-	40	73
% Single-Unit Trucks	0.0	0.0	1.0	-	0.6	0.0	1.1	0.5	-	0.6	-	0.7	1.0	-	0.7	0.6
Articulated Trucks	0	0	0	-	0	0	0	22	-	22	0	24	0	-	24	46
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.4	-	0.4	-	0.5	0.0	-	0.4	0.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	5	-	-	-	-	0	-	-	-	-	-	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	0	-	-	-	-	-	-	-



Kerig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 epurquette@kloainc.com

Count Name: Dunamon Dr and Newport Blvd
Site Code:
Start Date: 05/30/2019
Page No: 1

Turning Movement Data

Start Time	Dunamon Dr Westbound					Newport Blvd Northbound					Newport Blvd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
6:30 AM	0	0	0	0	0	0	8	1	0	9	0	16	59	0	75	84
6:45 AM	0	1	1	0	2	0	17	0	0	17	0	11	45	0	56	75
Hourly Total	0	1	1	0	2	0	25	1	0	26	0	27	104	0	131	159
7:00 AM	0	0	0	0	0	0	6	0	0	6	0	17	55	0	72	78
7:15 AM	0	2	1	0	3	0	21	0	0	21	0	23	58	0	81	105
7:30 AM	0	0	2	0	2	0	14	1	0	15	0	35	85	0	120	137
7:45 AM	0	1	1	0	2	0	13	1	0	14	0	25	65	0	90	106
Hourly Total	0	3	4	0	7	0	54	2	0	56	0	100	263	0	363	426
8:00 AM	0	1	0	0	1	0	22	2	0	24	0	20	60	0	80	105
8:15 AM	0	1	0	0	1	0	19	0	0	19	0	8	51	0	59	79
8:30 AM	0	0	1	0	1	0	19	1	0	20	0	6	49	0	55	76
8:45 AM	0	0	3	0	3	0	27	1	0	28	0	11	53	0	64	95
Hourly Total	0	2	4	0	6	0	87	4	0	91	0	45	213	0	258	355
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	2	8	2	10	0	79	1	0	80	0	7	36	0	43	133
4:15 PM	0	0	2	2	2	0	69	2	0	71	0	2	37	0	39	112
4:30 PM	0	0	5	0	5	0	67	1	0	68	0	4	32	0	36	109
4:45 PM	0	0	6	0	6	0	90	0	0	90	0	0	45	0	45	141
Hourly Total	0	2	21	4	23	0	305	4	0	309	0	13	150	0	163	495
5:00 PM	0	2	8	0	10	0	78	2	0	80	0	3	36	1	39	129
5:15 PM	0	0	14	0	14	0	89	2	0	91	0	4	47	1	51	156
5:30 PM	0	1	20	0	21	0	96	3	0	99	0	7	42	0	49	169
5:45 PM	0	1	12	0	13	0	112	3	0	115	0	1	46	0	47	175
Hourly Total	0	4	54	0	58	0	375	10	0	385	0	15	171	2	186	659
6:00 PM	0	1	4	0	5	0	64	2	0	66	0	6	46	0	52	123
6:15 PM	0	0	7	0	7	0	52	1	0	53	0	6	35	0	41	101
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	11	0	12	0	116	3	0	119	0	12	81	0	93	224
12:00 PM	0	2	3	0	5	0	44	3	0	47	0	7	56	0	63	115
12:15 PM	0	1	4	0	5	0	56	1	0	57	0	2	47	0	49	111
12:30 PM	0	0	3	0	3	0	50	2	0	52	0	7	40	0	47	102
12:45 PM	0	3	6	0	9	0	44	5	0	49	0	7	40	0	47	105
Hourly Total	0	6	16	0	22	0	194	11	0	205	0	23	183	0	208	433
1:00 PM	0	2	1	0	3	0	56	2	0	60	0	4	32	0	36	99
1:15 PM	0	1	1	0	2	0	45	3	0	48	0	1	36	0	37	87
1:30 PM	0	1	3	0	4	0	63	1	0	64	0	9	36	0	47	115
1:45 PM	0	1	4	0	5	0	52	1	0	53	0	9	47	0	56	114
Hourly Total	0	5	9	0	14	0	218	7	0	225	0	23	153	0	176	415

Grand Total	0	24	120	1	144	0	1374	42	0	1416	0	258	1318	2	1576	3136
Approach %	0.0	16.7	83.3	-	-	0.0	97.0	3.0	-	-	0.0	16.4	83.6	-	-	-
Total %	0.0	0.8	3.8	-	4.6	0.0	43.8	1.3	-	45.2	0.0	8.2	42.0	-	50.3	-
Lights	0	24	118	-	142	0	1369	41	-	1410	0	258	1309	-	1567	3119
% Lights	-	100.0	98.3	-	98.6	-	99.6	97.6	-	99.6	-	100.0	99.3	-	99.4	99.5
Buses	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Buses	-	0.0	0.8	-	0.7	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	1	-	1	0	3	1	-	4	0	0	7	-	7	12
% Single-Unit Trucks	-	0.0	0.8	-	0.7	-	0.2	2.4	-	0.3	-	0.0	0.5	-	0.4	0.4
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	0	0	1	-	1	2
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.1	0.0	-	0.1	-	0.0	0.1	-	0.1	0.1
Bicycles on Road	0	0	0	-	0	0	1	0	-	1	0	0	1	-	1	2
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.1	0.0	-	0.1	-	0.0	0.1	-	0.1	0.1
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	0	-	-	-	-	100.0	-	-



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Count Name: Dunamon Dr and Newport Blvd
Site Code:
Start Date: 05/30/2019
Page No: 4

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Dunamon Dr Westbound				Newport Blvd Northbound				Newport Blvd Southbound							
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
4:45 PM	0	0	6	0	6	0	90	0	0	90	0	0	45	0	45	141
5:00 PM	0	2	8	0	10	0	78	2	0	80	0	3	36	1	39	129
5:15 PM	0	0	14	0	14	0	89	2	0	91	0	4	47	1	51	156
5:30 PM	0	1	20	0	21	0	96	3	0	99	0	7	42	0	49	169
Total	0	3	48	0	51	0	353	7	0	360	0	14	170	2	184	595
Approach %	0.0	5.9	94.1	-	-	0.0	95.1	1.9	-	-	0.0	7.6	92.4	-	-	-
Total %	0.0	0.5	8.1	-	8.6	0.0	59.3	1.2	-	60.5	0.0	2.4	28.6	-	30.9	-
PHF	0.000	0.375	0.600	-	0.607	0.000	0.919	0.563	-	0.909	0.000	0.500	0.904	-	0.902	0.880
Lights	0	3	48	-	51	0	353	6	-	359	0	14	169	-	183	593
% Lights	-	100.0	100.0	-	100.0	-	100.0	85.7	-	99.7	-	100.0	96.4	-	99.5	99.7
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
% Single-Unit Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	14.3	-	0.3	-	0.0	0.0	-	0.0	0.2
% Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.6	-	0.5	0.2
% Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-



Kentig Lindgren O'Hara Abcoma, Inc.
 Kentig, Lindgren, O'Hara, Abcoma, Inc.

Rosemont, Illinois, United States 60018
 (847)518-9990 eparguette@kloainc.com

Count Name: Stearns Rd and BP Entrance
 Site Code: 05/30/2019
 Start Date: 05/30/2019
 Page No: 1

Turning Movement Data

Start Time	Stearns Rd Eastbound					Stearns Rd Westbound					Walgreens Entrance Northbound					BP Entrance Southbound					Int. Total				
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left		Thru	Right	Peds	App. Total
6:30 AM	0	15	213	0	0	228	0	0	69	12	0	81	0	0	0	0	0	0	0	9	0	6	0	17	326
6:45 AM	0	15	230	0	0	245	0	0	64	12	0	76	0	0	0	0	0	0	0	15	0	11	0	26	347
Hourly Total	0	30	443	0	0	473	0	0	133	24	0	157	0	0	0	0	0	0	0	24	0	19	0	43	673
7:00 AM	0	19	260	0	0	269	0	0	62	11	0	73	0	0	0	0	0	0	0	14	0	7	0	21	363
7:15 AM	0	21	279	1	0	301	0	0	74	13	0	87	0	0	1	0	0	0	0	14	1	15	0	30	419
7:30 AM	0	24	283	3	0	310	0	0	81	8	0	89	0	0	2	1	0	0	0	11	1	13	0	25	427
7:45 AM	0	18	283	2	0	303	0	0	84	11	0	95	0	0	0	0	0	0	0	18	0	9	0	27	425
Hourly Total	0	62	1055	6	0	1183	0	0	301	43	0	344	0	0	3	1	0	4	0	57	2	44	0	103	1634
8:00 AM	0	8	223	2	0	233	0	2	75	12	0	89	0	0	0	3	0	3	0	14	0	10	0	24	349
8:15 AM	0	12	195	3	0	210	0	1	83	10	0	94	0	1	0	0	1	1	0	9	0	9	0	18	323
8:30 AM	0	13	177	3	0	193	0	0	83	9	0	92	0	1	0	1	0	2	0	14	1	10	0	25	312
8:45 AM	0	17	194	4	0	215	0	0	82	6	0	88	0	3	1	2	0	6	0	15	0	6	0	21	330
Hourly Total	0	50	769	12	0	851	0	3	323	37	0	363	0	5	1	6	1	12	0	52	1	35	0	88	1314
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	5	158	7	0	150	0	3	255	13	0	271	0	3	1	8	1	12	0	5	1	13	0	20	453
4:15 PM	0	5	152	4	0	161	0	2	304	7	0	313	0	5	0	6	0	11	0	5	0	10	0	15	500
4:30 PM	0	5	129	3	0	137	0	1	278	13	0	292	0	4	0	8	0	12	0	9	2	14	0	25	466
4:45 PM	0	5	173	7	0	185	0	1	314	16	0	331	0	4	0	8	1	12	0	2	2	9	0	13	541
Hourly Total	0	20	592	21	0	633	0	7	1151	49	0	1207	0	16	1	30	2	47	0	21	5	46	0	73	1960
5:00 PM	0	7	157	7	0	171	0	1	306	10	0	317	0	4	0	4	5	8	0	3	0	19	0	22	518
5:15 PM	0	3	167	5	0	175	0	7	323	11	0	341	0	4	0	3	0	7	0	5	1	17	0	23	546
5:30 PM	0	7	156	5	0	168	0	2	344	15	0	361	0	6	0	3	0	9	0	2	2	16	0	20	558
5:45 PM	0	4	166	3	0	173	0	1	314	7	0	322	0	7	1	3	1	11	0	2	0	12	0	14	520
Hourly Total	0	21	646	20	0	687	0	11	1287	43	0	1341	0	21	1	13	6	35	0	12	3	64	0	79	2142
6:00 PM	0	11	141	8	0	160	0	2	255	7	0	264	0	3	0	5	0	8	0	8	2	10	0	18	450
6:15 PM	0	5	138	8	0	151	0	3	225	15	0	243	0	5	0	7	0	12	0	4	0	8	0	12	418
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	16	279	16	0	311	0	5	480	22	0	507	0	8	0	12	0	20	0	10	2	18	0	30	808
12:00 PM	0	6	163	4	0	173	0	2	163	13	0	178	0	1	0	5	0	6	0	5	0	12	0	17	374
12:15 PM	0	8	152	3	0	163	0	5	171	8	0	184	0	2	0	8	0	10	0	5	0	12	0	17	374
12:30 PM	0	6	172	8	0	186	0	2	167	10	0	179	0	4	0	3	0	7	0	4	0	9	0	13	387
12:45 PM	0	10	148	3	0	161	0	4	162	8	2	174	0	5	1	2	2	8	0	4	1	19	0	24	367
Hourly Total	0	32	635	18	0	685	0	13	663	39	2	715	0	12	1	16	2	31	0	18	1	52	0	71	1502
1:00 PM	0	4	158	9	0	171	0	5	168	9	0	182	0	2	0	6	0	8	0	8	0	12	0	20	381
1:15 PM	0	6	148	6	0	160	0	1	131	9	0	141	0	7	0	11	0	18	0	1	0	12	0	13	332
1:30 PM	0	7	149	7	0	163	0	3	168	10	0	181	0	5	1	2	0	8	0	7	0	12	0	19	371
1:45 PM	0	11	146	5	1	162	0	4	176	11	0	191	0	8	0	7	0	15	0	5	1	14	0	20	388



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(847)518-9990 epurguette@klobainc.com

Count Name: Stearns Rd and BP Entrance
Site Code:
Start Date: 05/30/2019
Page No: 4

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Stearns Rd Eastbound					Stearns Rd Westbound					Wagreens Entrance Northbound					BP Entrance Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:45 PM	0	5	173	7	0	185	0	1	314	16	0	331	0	4	0	8	1	12	0	2	2	9	0	13	541
5:00 PM	0	7	157	7	0	171	0	1	306	10	0	317	0	4	0	4	5	8	0	3	0	19	0	22	518
5:15 PM	0	3	187	5	0	195	0	7	323	11	0	341	0	4	0	3	0	7	0	5	1	17	0	23	546
5:30 PM	0	7	156	5	0	168	0	2	344	15	0	361	0	6	0	3	0	9	0	2	2	16	0	20	558
Total	0	22	653	24	0	699	0	11	1287	52	0	1350	0	18	0	18	6	36	0	12	5	61	0	78	2183
Approach %	0.0	3.1	93.4	3.4	-	-	0.0	0.8	95.3	3.9	-	-	0.0	50.0	0.0	50.0	-	-	0.0	15.4	6.4	78.2	-	-	-
Total %	0.0	1.0	30.2	1.1	-	32.3	0.0	0.5	59.5	2.4	-	62.4	0.0	0.8	0.0	0.8	-	1.7	0.0	0.6	0.2	2.8	-	3.6	-
PHF	0.000	0.786	0.944	0.957	-	0.945	0.000	0.393	0.935	0.813	-	0.935	0.000	0.750	0.000	0.563	-	0.750	0.000	0.600	0.625	0.803	-	0.848	0.989
Lights	0	22	647	24	-	693	0	11	1253	51	-	1345	0	18	0	18	-	36	0	12	5	61	-	78	2152
% Lights	-	100.0	98.1	100.0	-	98.1	-	100.0	98.7	98.1	-	98.6	-	100.0	-	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	99.5
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	5	0	-	5	0	0	4	1	-	5	0	0	0	0	-	0	0	0	0	0	-	0	10
% Single-Unit Trucks	-	0.0	0.8	0.0	-	0.7	-	0.0	0.3	1.9	-	0.4	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.5
Articulated Trucks	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	-	0.0	0.2	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	100.0	-	-	-	-	-	0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

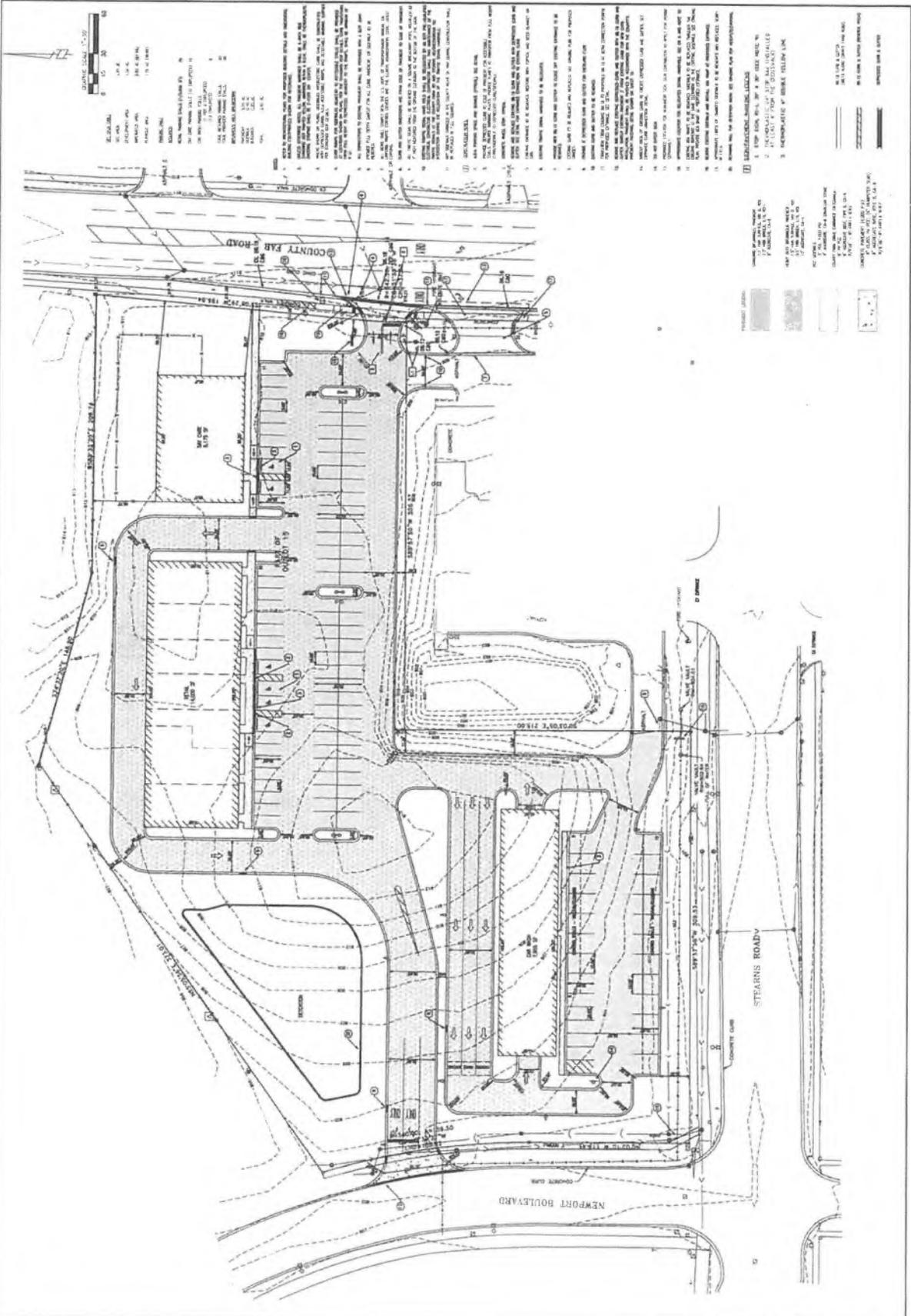
Rosemont, Illinois, United States 60018
(847)518-9990 eparguette@kloainc.com

Count Name: Stearns Rd and BP Entrance
Site Code:
Start Date: 05/30/2019
Page No.: 5

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Stearns Rd Eastbound					Stearns Rd Westbound					Walgreens Entrance Northbound					BP Entrance Southbound					Int. Total			
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds				
					App. Total					App. Total					App. Total					App. Total				
12:00 PM	0	6	163	4	0	173	0	2	163	13	0	176	0	1	0	5	0	5	0	12	0	17	374	
12:15 PM	0	8	152	3	0	163	0	5	171	8	0	184	0	2	0	8	0	5	0	12	0	17	374	
12:30 PM	0	8	172	8	0	188	0	2	167	10	0	179	0	4	0	3	0	4	0	9	0	13	387	
12:45 PM	0	10	148	3	0	161	0	4	162	8	2	174	0	5	1	2	2	0	4	1	19	0	24	367
Total	0	32	635	18	0	685	0	13	663	39	2	715	0	12	1	18	2	0	18	1	52	0	71	1502
Approach %	0.0	4.7	92.7	2.6	-	-	0.0	1.8	92.7	5.5	-	-	0.0	38.7	3.2	58.1	2	0.0	25.4	1.4	73.2	-	-	-
Total %	0.0	2.1	42.3	1.2	-	45.6	0.0	0.9	44.1	2.6	-	47.6	0.0	0.8	0.1	1.2	-	2.1	0.0	1.2	0.1	3.5	-	4.7
PHF	0.000	0.800	0.923	0.563	-	0.911	0.000	0.650	0.959	0.750	-	0.971	0.000	0.600	0.250	0.563	-	0.775	0.000	0.900	0.250	0.684	-	0.740
Lights	0	32	627	17	-	676	0	13	657	39	-	709	0	12	0	18	-	30	0	18	1	52	-	71
% Lights	-	100.0	96.7	94.4	-	98.7	-	100.0	99.1	100.0	-	99.2	-	100.0	0.0	100.0	-	96.8	-	100.0	100.0	100.0	-	100.0
% Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Pedestrians	0	0	7	0	-	7	0	0	6	0	-	6	0	0	0	0	-	0	0	0	0	0	-	0
% Single-Unit Trucks	-	0.0	1.1	0.0	-	1.0	-	0.0	0.9	0.0	-	0.8	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0
% Articulated Trucks	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0	0	0	1	-	0.1	0	0	0	0	-	0.0	0	0	0	0	-	0.0	0.0	0.0	0.0	0.0	-	0.0
% Bicycles on Road	-	0.0	0.0	5.6	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	100.0	0.0	-	3.2	-	0.0	0.0	0.0	-	0.0
% Pedestrians	-	-	-	-	0	-	-	-	-	2	-	2	-	-	-	-	-	2	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-

Site Plan



CMAP 2050 Projection Letter



Chicago Metropolitan Agency for Planning

433 West Van Buren Street
Suite 450
Chicago, IL 60607
312-454-0400
cmap.illinois.gov

January 18, 2022

Kelly Pachowicz
Consultant
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: Stearns Road @ Newport Boulevard
IDOT

Dear Ms. Pachowicz:

In response to a request made on your behalf and dated January 17, 2022, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Stearns Rd west of County Farm Rd	12,700	19,800
Greenbrook Rd east of County Farm Rd	15,400	20,500
County Farm Rd south of Stearns Rd	23,400	26,500
County Farm Rd north of Stearns Rd	19,400	20,500
Newport Blvd north of Stearns Rd	4,850	6,200

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2021 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
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Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0
Unsignalized Intersections		
Level of Service	Average Total Delay (SEC/VEH)	
A	0 - 10	
B	> 10 - 15	
C	> 15 - 25	
D	> 25 - 35	
E	> 35 - 50	
F	> 50	

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets
Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: County Farm Road & Stearns Road

03/01/2023

												
Lane Group	EEL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	742	183	93	198	33	91	721	316	62	681	69
Future Volume (vph)	219	742	183	93	198	33	91	721	316	62	681	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.970			0.978			0.954				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3467	0	1752	3371	0	1805	3387	0	1805	3725	1568
Flt Permitted	0.525			0.143			0.245			0.122		
Satd. Flow (perm)	978	3467	0	264	3371	0	466	3387	0	232	3725	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			18			72				82
Link Speed (mph)		30			30			40				40
Link Distance (ft)		301			701			478				350
Travel Time (s)		6.8			15.9			8.1				6.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	1%	3%	4%	9%	0%	2%	1%	0%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	231	974	0	98	243	0	96	1092	0	65	717	73
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	6 7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	9.5	36.0		9.5	33.0		9.5	38.0		9.5	38.0	
Total Split (s)	16.0	36.0		13.0	33.0		13.0	38.0		13.0	38.0	
Total Split (%)	16.0%	36.0%		13.0%	33.0%		13.0%	38.0%		13.0%	38.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	44.5	32.4		37.7	27.1		44.3	35.0		43.3	34.5	49.9
Actuated g/C Ratio	0.44	0.32		0.38	0.27		0.44	0.35		0.43	0.34	0.50

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023

	↖	→	↘	↙	←	↖	↙	↑	↘	↓	↙	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.44	0.85		0.45	0.26		0.31	0.89		0.30	0.56	0.09
Control Delay	21.6	41.8		23.3	27.6		17.7	39.7		18.5	29.4	3.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.6	41.8		23.3	27.6		17.7	39.7		18.5	29.4	3.1
LOS	C	D		C	C		B	D		B	C	A
Approach Delay		38.0			26.3			38.0			26.4	
Approach LOS		D			C			D			C	
Queue Length 50th (ft)	105	303		35	59		33	333		22	201	0
Queue Length 95th (ft)	178	#453		67	93		63	#488		46	264	20
Internal Link Dist (ft)		221			621			398			270	
Turn Bay Length (ft)				200			200			195		195
Base Capacity (vph)	530	1145		235	926		328	1233		244	1286	832
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.44	0.85		0.42	0.26		0.29	0.89		0.27	0.56	0.09

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 34.1 Intersection LOS: C
 Intersection Capacity Utilization 82.5% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: County Farm Road & Stearns Road



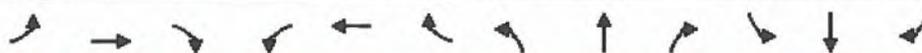
Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	SET	SBR
Lane Configurations												
Traffic Volume (vph)	9	895	0	4	284	69	2	0	22	259	1	10
Future Volume (vph)	9	895	0	4	284	69	2	0	22	259	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.971			0.875				0.850
Flt Protected	0.950			0.950				0.996			0.953	
Satd. Flow (prot)	1805	3574	0	1805	3390	0	0	1656	0	0	1811	1615
Flt Permitted	0.521			0.205				0.980			0.708	
Satd. Flow (perm)	990	3574	0	390	3390	0	0	1629	0	0	1345	1615
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20			35	
Link Distance (ft)		421			428			156			437	
Travel Time (s)		9.6			9.7			5.3			8.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	0%	4%	1%	0%	2%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	984	0	4	388	0	0	26	0	0	286	11
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	64.0		7.0	64.0		7.0	22.0		7.0	22.0	22.0
Total Split (%)	7.0%	64.0%		7.0%	64.0%		7.0%	22.0%		7.0%	22.0%	22.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5			6.5			6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effct Green (s)	54.7	51.6		54.7	51.6			34.0			34.0	34.0
Actuated g/C Ratio	0.55	0.52		0.55	0.52			0.34			0.34	0.34

Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023



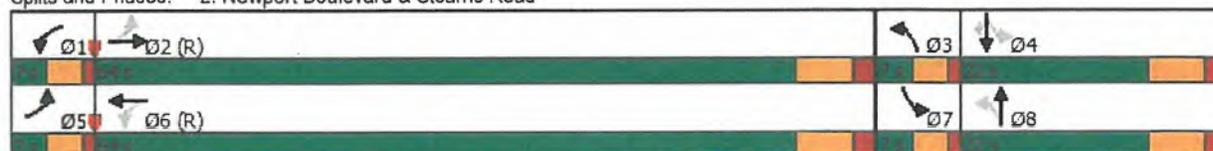
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.02	0.53		0.01	0.22			0.05			0.63	0.02
Control Delay	7.3	16.9		10.0	14.3			26.9			38.2	27.2
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	7.3	16.9		10.0	14.3			26.9			38.2	27.2
LOS	A	B		A	B			C			D	C
Approach Delay		16.8			14.3			26.9			37.8	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	3	198		2	81			11			154	5
Queue Length 95th (ft)	7	231		m6	109			35			#342	20
Internal Link Dist (ft)		341			348			76			357	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	578	2055		277	1949			553			457	548
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.02	0.48		0.01	0.20			0.05			0.63	0.02

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 20.0
 Intersection Capacity Utilization 56.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔↔			↔↔			↔			↔		
Traffic Vol, veh/h	71	1068	8	2	314	44	0	3	4	57	2	47
Future Vol, veh/h	71	1068	8	2	314	44	0	3	4	57	2	47
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	3	0	2	0	0	2	0	0
Mvmt Flow	75	1124	8	2	331	46	0	3	4	60	2	49

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	377	0	1132	0
Stage 1	-	-	-	1278
Stage 2	-	-	-	171
Critical Hdwy	4.1	-	5.3	-
Critical Hdwy Stg 1	-	-	-	7.34
Critical Hdwy Stg 2	-	-	-	6.54
Follow-up Hdwy	2.2	-	3.1	-
Pot Cap-1 Maneuver	*1480	-	*849	-
Stage 1	-	-	-	*618
Stage 2	-	-	-	*887
Platoon blocked, %	1	-	1	-
Mov Cap-1 Maneuver	*1480	-	*849	-
Stage 1	-	-	-	*512
Stage 2	-	-	-	*534

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.1	12.8	10.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	466	*1480	-	-	*849	-	-	580	986
HCM Lane V/C Ratio	0.016	0.05	-	-	0.002	-	-	0.107	0.05
HCM Control Delay (s)	12.8	7.6	0.3	-	9.3	0	-	12	8.8
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.4	0.2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection

Int Delay, s/veh 2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↕			↕↕
Traffic Vol, veh/h	4	4	70	4	103	268
Future Vol, veh/h	4	4	70	4	103	268
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	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	1
Mvmt Flow	5	5	84	5	124	323

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	497	45	0	0	89
Stage 1	87	-	-	-	-
Stage 2	410	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	517	1046	-	-	1535
Stage 1	948	-	-	-	-
Stage 2	644	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	467	1046	-	-	1535
Mov Cap-2 Maneuver	467	-	-	-	-
Stage 1	948	-	-	-	-
Stage 2	581	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	646	1535
HCM Lane V/C Ratio	-	-	0.015	0.081
HCM Control Delay (s)	-	-	10.7	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0.3

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘↗		↘	↑↑	↑↗	
Traffic Vol, veh/h	60	62	1	994	761	4
Future Vol, veh/h	60	62	1	994	761	4
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	65	67	1	1080	827	4

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1371	416	831	0	-	0
Stage 1	829	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	*365	591	810	-	-	-
Stage 1	*394	-	-	-	-	-
Stage 2	*643	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*365	591	810	-	-	-
Mov Cap-2 Maneuver	*365	-	-	-	-	-
Stage 1	*394	-	-	-	-	-
Stage 2	*643	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	810	-	453	-	-
HCM Lane V/C Ratio	0.001	-	0.293	-	-
HCM Control Delay (s)	9.4	-	16.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	1.2	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoeltherhoff Nursery South Access Drive 01/2023

Intersection

Int Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	14	0	55	0	0	0	2	964	1	0	767	59
Future Vol, veh/h	14	0	55	0	0	0	2	964	1	0	767	59
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	2	0	2	2	2	0	2	0	2	2	0
Mvmt Flow	15	0	60	0	0	0	2	1059	1	0	843	65

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1410	1940	454	1486	1972	530	908	0	0	1060	0	0
Stage 1	876	876	-	1064	1064	-	-	-	-	-	-	-
Stage 2	534	1064	-	422	908	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	*267	94	559	218	87	*709	758	-	-	1029	-	-
Stage 1	*314	365	-	632	562	-	-	-	-	-	-	-
Stage 2	*672	562	-	580	352	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1				1		
Mov Cap-1 Maneuver	*266	93	559	194	87	*709	758	-	-	1029	-	-
Mov Cap-2 Maneuver	*266	93	-	194	87	-	-	-	-	-	-	-
Stage 1	*312	365	-	629	558	-	-	-	-	-	-	-
Stage 2	*668	558	-	517	352	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.4	0	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	758	-	-	457	-	1029	-	-
HCM Lane V/C Ratio	0.003	-	-	0.166	-	-	-	-
HCM Control Delay (s)	9.8	0	-	14.4	0	0	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	-	0	-	-

Notes

--: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: County Farm Road & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	381	175	401	872	38	321	841	216	48	705	143
Future Volume (vph)	131	381	175	401	872	38	321	841	216	48	705	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.953			0.994			0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3394	0	1805	3588	0	1805	3463	0	1805	3725	1599
Flt Permitted	0.216			0.178			0.163			0.141		
Satd. Flow (perm)	406	3394	0	338	3588	0	310	3463	0	268	3725	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		65			4			35				169
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		301			701			478			350	
Travel Time (s)		6.8			15.9			8.1			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	0%	0%	0%	1%	1%	0%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	598	0	431	979	0	345	1136	0	52	758	154
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	67
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	67
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	14.0	
Minimum Split (s)	9.5	25.0		9.5	32.0		9.5	39.5		9.5	34.0	
Total Split (s)	13.0	25.0		20.0	32.0		21.0	42.0		13.0	34.0	
Total Split (%)	13.0%	25.0%		20.0%	32.0%		21.0%	42.0%		13.0%	34.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	29.6	18.5		41.0	25.9		51.0	39.4		37.8	28.4	41.0
Actuated g/C Ratio	0.30	0.18		0.41	0.26		0.51	0.39		0.38	0.28	0.41

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.59	0.88		1.16	1.05		0.86	0.82		0.25	0.72	0.20
Control Delay	30.7	52.0		122.1	81.0		41.9	33.2		16.7	37.0	3.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	30.7	52.0		122.1	81.0		41.9	33.2		16.7	37.0	3.1
LOS	C	D		F	F		D	C		B	D	A
Approach Delay		48.0			93.5			35.2			30.5	
Approach LOS		D			F			D			C	
Queue Length 50th (ft)	59	166		-269	-364		138	336		16	231	0
Queue Length 95th (ft)	112	#271		#461	#493		#287	#475		35	300	31
Internal Link Dist (ft)		221			621			398			270	
Turn Bay Length (ft)				200			200			195		195
Base Capacity (vph)	246	680		373	931		412	1386		244	1056	760
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.57	0.88		1.16	1.05		0.84	0.82		0.21	0.72	0.20

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.16

Intersection Signal Delay: 54.2 Intersection LOS: D

Intersection Capacity Utilization 92.1% ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	531	0	37	1000	331	2	5	20	148	2	18
Future Volume (vph)	32	531	0	37	1000	331	2	5	20	148	2	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.963			0.899				0.850
Flt Protected	0.950			0.950				0.996			0.953	
Satd. Flow (prot)	1805	3574	0	1752	3468	0	0	1701	0	0	1793	1524
Flt Permitted	0.134			0.440				0.979			0.708	
Satd. Flow (perm)	255	3574	0	812	3468	0	0	1672	0	0	1332	1524
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20			35	
Link Distance (ft)		421			428			156			437	
Travel Time (s)		9.6			9.7			5.3			8.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	3%	0%	1%	0%	0%	0%	1%	0%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	547	0	38	1372	0	0	28	0	0	155	19
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	57.0		7.0	57.0		7.0	29.0		7.0	29.0	29.0
Total Split (%)	7.0%	57.0%		7.0%	57.0%		7.0%	29.0%		7.0%	29.0%	29.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5			6.5			6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effect Green (s)	69.0	62.6		69.2	62.7			18.0			18.0	18.0
Actuated g/C Ratio	0.69	0.63		0.69	0.63			0.18			0.18	0.18

Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.12	0.24		0.06	0.63			0.09			0.65	0.07
Control Delay	6.1	9.9		3.4	16.9			33.1			50.4	32.6
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	6.1	9.9		3.4	16.9			33.1			50.4	32.6
LOS	A	A		A	B			C			D	C
Approach Delay		9.7			16.5			33.1			48.5	
Approach LOS		A			B			C			D	
Queue Length 50th (ft)	5	80		3	444			15			94	10
Queue Length 95th (ft)	17	133		m10	m479			37			150	28
Internal Link Dist (ft)		341			348			76			357	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	270	2237		619	2174			380			302	346
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.12	0.24		0.06	0.63			0.07			0.51	0.05

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 17.5
 Intersection LOS: B
 Intersection Capacity Utilization 79.5%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕↕			↕↔			↕				↕	↔
Traffic Vol, veh/h	22	653	24	11	1287	52	18	0	18	12	5	61
Future Vol, veh/h	22	653	24	11	1287	52	18	0	18	12	5	61
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	1	0	0	0	2	0	2	0	0	0	0
Mvmt Flow	23	673	25	11	1327	54	19	0	19	12	5	63

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1381	0	0	698	0	0	1420	2135	349	1691	2120	691
Stage 1	-	-	-	-	-	-	732	732	-	1376	1376	-
Stage 2	-	-	-	-	-	-	688	1403	-	315	744	-
Critical Hdwy	4.1	-	-	5.3	-	-	6.95	6.54	7.1	6.95	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.54	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.54	-	6.7	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.65	4.02	3.9	3.65	4	3.3
Pot Cap-1 Maneuver	*819	-	-	971	-	-	*299	*89	*781	*180	*93	*546
Stage 1	-	-	-	-	-	-	*771	*720	-	*493	*450	-
Stage 2	-	-	-	-	-	-	*493	*448	-	*835	*714	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*819	-	-	971	-	-	*234	*81	*781	*163	*85	*546
Mov Cap-2 Maneuver	-	-	-	-	-	-	*234	*81	-	*163	*85	-
Stage 1	-	-	-	-	-	-	*736	*687	-	*471	*428	-
Stage 2	-	-	-	-	-	-	*410	*426	-	*777	*681	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	16.1	17.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	360	*819	-	-	971	-	-	128	546
HCM Lane V/C Ratio	0.103	0.028	-	-	0.012	-	-	0.137	0.115
HCM Control Delay (s)	16.1	9.5	0.1	-	8.8	0.2	-	37.5	12.5
HCM Lane LOS	C	A	A	-	A	A	-	E	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.5	0.4

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection

Int Delay, s/veh 1

Movement

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔			↕↕
Traffic Vol, veh/h	3	48	353	7	14	170
Future Vol, veh/h	3	48	353	7	14	170
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	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	14	0	0
Mvmt Flow	3	55	401	8	16	193

Major/Minor

	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	534	205	0	0	409
Stage 1	405	-	-	-	-
Stage 2	129	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	687	*957	-	-	1377
Stage 1	856	-	-	-	-
Stage 2	889	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	678	*957	-	-	1377
Mov Cap-2 Maneuver	678	-	-	-	-
Stage 1	856	-	-	-	-
Stage 2	877	-	-	-	-

Approach

	WB	NB	SB
HCM Control Delay, s	9.1	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt

	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	934	1377
HCM Lane V/C Ratio	-	-	0.062	0.012
HCM Control Delay (s)	-	-	9.1	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘		↘	↑↑	↑↑	
Traffic Vol, veh/h	10	18	39	962	878	36
Future Vol, veh/h	10	18	39	962	878	36
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	6	0	1	1	0
Mvmt Flow	12	21	45	1119	1021	42

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1692	532	1063	0	0
Stage 1	1042	-	-	-	-
Stage 2	650	-	-	-	-
Critical Hdwy	6.8	7.02	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.36	2.2	-	-
Pot Cap-1 Maneuver	*158	482	663	-	-
Stage 1	*305	-	-	-	-
Stage 2	*672	-	-	-	-
Platoon blocked, %	1	-	-	-	-
Mov Cap-1 Maneuver	*148	482	663	-	-
Mov Cap-2 Maneuver	*148	-	-	-	-
Stage 1	*284	-	-	-	-
Stage 2	*672	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.3	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	663	-	267	-	-
HCM Lane V/C Ratio	0.068	-	0.122	-	-
HCM Control Delay (s)	10.8	-	20.3	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoeltherhoff Nursery South Access Dr 01/2023

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	7	0	38	2	0	3	0	1006	6	2	853	46
Future Vol, veh/h	7	0	38	2	0	3	0	1006	6	2	853	46
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	2	5	0	2	0	2	1	0	0	2	2
Mvmt Flow	8	0	43	2	0	3	0	1143	7	2	969	52

Major/Minor	Minor2		Minor1		Major1		Major2				
Conflicting Flow All	1571	2149	511	1636	2172	575	1021	0	1150	0	0
Stage 1	999	999	-	1147	1147	-	-	-	-	-	-
Stage 2	572	1150	-	489	1025	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	7	7.5	6.54	6.9	4.14	-	-	4.1	-
Critical Hdwy Stg 1	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.35	3.5	4.02	3.3	2.22	-	-	2.2	-
Pot Cap-1 Maneuver	*200	62	500	169	59	*682	675	-	-	985	-
Stage 1	*265	319	-	610	538	-	-	-	-	-	-
Stage 2	*643	536	-	534	311	-	-	-	-	-	-
Platoon blocked, %	1	1	-	1	1	1	1	-	-	1	-
Mov Cap-1 Maneuver	*199	62	500	153	59	*682	675	-	-	985	-
Mov Cap-2 Maneuver	*199	62	-	153	59	-	-	-	-	-	-
Stage 1	*265	317	-	610	538	-	-	-	-	-	-
Stage 2	*640	536	-	485	309	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.2	17.8	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	675	-	-	405	286	985	-	-
HCM Lane V/C Ratio	-	-	-	0.126	0.02	0.002	-	-
HCM Control Delay (s)	0	-	-	15.2	17.8	8.7	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Existing Saturday Midday Peak Hour

Lanes, Volumes, Timings
1: County Farm Road & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	395	221	153	406	15	248	586	197	55	580	126
Future Volume (vph)	112	395	221	153	406	15	248	586	197	55	580	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.946			0.995			0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3360	0	1787	3592	0	1770	3438	0	1805	3762	1599
Flt Permitted	0.442			0.285			0.381			0.238		
Satd. Flow (perm)	831	3360	0	536	3592	0	710	3438	0	452	3762	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		113			4			45				129
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		301			701			478			350	
Travel Time (s)		6.8			15.9			8.1			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	1%	1%	0%	0%	2%	1%	1%	0%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	629	0	156	429	0	253	799	0	56	592	129
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	6 7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	14.0	
Minimum Split (s)	9.5	25.0		9.5	32.0		9.5	39.5		9.5	34.0	
Total Split (s)	7.0	38.0		7.0	38.0		7.0	34.0		21.0	48.0	
Total Split (%)	7.0%	38.0%		7.0%	38.0%		7.0%	34.0%		21.0%	48.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	35.6	29.9		35.6	29.9		45.8	40.8		50.3	41.3	48.5
Actuated g/C Ratio	0.36	0.30		0.36	0.30		0.46	0.41		0.50	0.41	0.48

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.35	0.58		0.68	0.40		0.68	0.56		0.17	0.38	0.15
Control Delay	27.1	26.9		39.8	28.5		31.6	24.4		13.7	21.3	3.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.1	26.9		39.8	28.5		31.6	24.4		13.7	21.3	3.0
LOS	C	C		D	C		C	C		B	C	A
Approach Delay		27.0			31.6			26.2			17.7	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	31	118		63	110		88	201		17	134	0
Queue Length 95th (ft)	m93	208		#118	153		#174	273		37	179	29
Internal Link Dist (ft)		221			621			398			270	
Turn Bay Length (ft)				200			200			195		195
Base Capacity (vph)	326	1135		230	1134		374	1427		466	1561	825
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.35	0.55		0.68	0.38		0.68	0.56		0.12	0.38	0.16

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 25.3
 Intersection LOS: C
 Intersection Capacity Utilization 72.9%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: County Farm Road & Stearns Road



Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	516	4	19	525	182	1	1	18	157	2	31
Future Volume (vph)	22	516	4	19	525	182	1	1	18	157	2	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.961			0.878				0.850
Flt Protected	0.950			0.950				0.998			0.953	
Satd. Flow (prot)	1805	3565	0	1805	3444	0	0	1665	0	0	1793	1568
Flt Permitted	0.351			0.448				0.987			0.714	
Satd. Flow (perm)	667	3565	0	851	3444	0	0	1647	0	0	1343	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20			35	
Link Distance (ft)		421			428			156			437	
Travel Time (s)		9.6			9.7			5.3			8.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	24%	0%	1%	0%	0%	0%	0%	1%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	536	0	20	729	0	0	21	0	0	164	32
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	64.0		7.0	64.0		7.0	22.0		7.0	22.0	22.0
Total Split (%)	7.0%	64.0%		7.0%	64.0%		7.0%	22.0%		7.0%	22.0%	22.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effect Green (s)	69.2	64.2		69.2	64.1		18.7	18.7		18.7	18.7	18.7
Actuated g/C Ratio	0.69	0.64		0.69	0.64		0.19	0.19		0.19	0.19	0.19

Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.23		0.03	0.33			0.07			0.65	0.11
Control Delay	5.5	9.2		4.8	9.8			31.9			49.7	32.8
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	5.5	9.2		4.8	9.8			31.9			49.7	32.8
LOS	A	A		A	A			C			D	C
Approach Delay		9.0			9.7			31.9			47.0	
Approach LOS		A			A			C			D	
Queue Length 50th (ft)	4	58		3	72			11			98	17
Queue Length 95th (ft)	13	130		m6	234			30			157	40
Internal Link Dist (ft)		341			348			76			357	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	528	2334		644	2255			310			253	295
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.04	0.23		0.03	0.32			0.07			0.65	0.11

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 14.5

Intersection LOS: B

Intersection Capacity Utilization 61.6%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



HCM 6th TWSC

3: Walgreens Access Drive/BP/Dunkin' Access Drive & Stearns Road

03/01/2023

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑			↑↓			↑		
Traffic Vol, veh/h	32	634	18	13	663	39	12	0	18	18	1	52
Future Vol, veh/h	32	634	18	13	663	39	12	0	18	18	1	52
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	33	654	19	13	684	40	12	0	19	19	1	54

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	724	0	0	673	0	0	1099	1480	337	1058	1469	362
Stage 1	-	-	-	-	-	-	730	730	-	730	730	-
Stage 2	-	-	-	-	-	-	369	750	-	328	739	-
Critical Hdwy	4.1	-	-	5.3	-	-	6.95	6.5	7.1	6.95	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.7	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.65	4	3.9	3.65	4	3.3
Pot Cap-1 Maneuver	*1244	-	-	*983	-	-	*535	*276	*781	*576	*281	*828
Stage 1	-	-	-	-	-	-	*774	*726	-	*749	*684	-
Stage 2	-	-	-	-	-	-	*749	*684	-	*835	*719	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*1244	-	-	*983	-	-	*475	*259	*781	*535	*263	*828
Mov Cap-2 Maneuver	-	-	-	-	-	-	*475	*259	-	*535	*263	-
Stage 1	-	-	-	-	-	-	*741	*696	-	*718	*669	-
Stage 2	-	-	-	-	-	-	*684	*669	-	*781	*688	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.3	11.1	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	621	*1244	-	-	*983	-	-	507	828
HCM Lane V/C Ratio	0.05	0.027	-	-	0.014	-	-	0.039	0.065
HCM Control Delay (s)	11.1	8	0.1	-	8.7	0.1	-	12.4	9.6
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.1	0.2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↕		↕↕	
Traffic Vol, veh/h	6	16	194	11	23	183
Future Vol, veh/h	6	16	194	11	23	183
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	94	94	94	94	94	94
Heavy Vehicles, %	0	6	0	0	0	2
Mvmt Flow	6	17	206	12	24	195

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	358	109	0	0	218
Stage 1	212	-	-	-	-
Stage 2	146	-	-	-	-
Critical Hdwy	6.8	7.02	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.36	-	-	2.2
Pot Cap-1 Maneuver	750	*1002	-	-	1497
Stage 1	940	-	-	-	-
Stage 2	872	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	736	*1002	-	-	1497
Mov Cap-2 Maneuver	736	-	-	-	-
Stage 1	940	-	-	-	-
Stage 2	856	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	912	1497
HCM Lane V/C Ratio	-	-	0.026	0.016
HCM Control Delay (s)	-	-	9.1	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘↗		↘	↑↑	↑↔	
Traffic Vol, veh/h	20	19	11	674	691	14
Future Vol, veh/h	20	19	11	674	691	14
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	1	1	7
Mvmt Flow	21	20	12	709	727	15

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1114	371	742	0	0
Stage 1	735	-	-	-	-
Stage 2	379	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	*364	632	874	-	-
Stage 1	*440	-	-	-	-
Stage 2	*788	-	-	-	-
Platoon blocked, %	1	-	-	-	-
Mov Cap-1 Maneuver	*359	632	874	-	-
Mov Cap-2 Maneuver	*359	-	-	-	-
Stage 1	*434	-	-	-	-
Stage 2	*788	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EELn1	SBT	SBR
Capacity (veh/h)	874	-	455	-	-
HCM Lane V/C Ratio	0.013	-	0.09	-	-
HCM Control Delay (s)	9.2	-	13.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoelterhoff Nursery South Access Drive 12/1/2023

Intersection

Int Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	18	0	35	1	0	3	3	642	15	1	662	49
Future Vol, veh/h	18	0	35	1	0	3	3	642	15	1	662	49
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	2	0	0	1	0	0	1	0
Mvmt Flow	19	0	36	1	0	3	3	669	16	1	690	51

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1059	1409	371	1030	1426	343	741	0	0	685	0	0
Stage 1	718	718	-	683	683	-	-	-	-	-	-	-
Stage 2	341	691	-	347	743	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.5	6.54	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.5	4.02	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	*369	*205	632	*392	*199	*836	875	-	-	*1255	-	-
Stage 1	*391	*431	-	*788	*687	-	-	-	-	-	-	-
Stage 2	*788	*687	-	*648	*420	-	-	-	-	-	-	-
Platoon blocked, %	1	1	-	1	1	1	-	-	-	1	-	-
Mov Cap-1 Maneuver	*365	*204	632	*367	*197	*836	875	-	-	*1255	-	-
Mov Cap-2 Maneuver	*365	*204	-	*367	*197	-	-	-	-	-	-	-
Stage 1	*389	*431	-	*784	*683	-	-	-	-	-	-	-
Stage 2	*781	*683	-	*610	*420	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13	10.7	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	875	-	-	506	634	*1255	-	-
HCM Lane V/C Ratio	0.004	-	-	0.109	0.007	0.001	-	-
HCM Control Delay (s)	9.1	0	-	13	10.7	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Year 2027 No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	232	787	194	99	210	35	96	764	335	66	772	73
Future Volume (vph)	232	787	194	99	210	35	96	764	335	66	772	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.970			0.978			0.954				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3467	0	1752	3372	0	1805	3387	0	1805	3725	1568
Flt Permitted	0.518			0.144			0.191			0.122		
Satd. Flow (perm)	965	3467	0	266	3372	0	363	3387	0	232	3725	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			18			72				82
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		301			701			478			350	
Travel Time (s)		6.8			15.9			8.1			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	1%	3%	4%	9%	0%	2%	1%	0%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	244	1032	0	104	258	0	101	1157	0	69	813	77
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	67
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	67
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	9.5	36.0		9.5	33.0		9.5	38.0		9.5	38.0	
Total Split (s)	16.0	36.0		13.0	33.0		13.0	38.0		13.0	38.0	
Total Split (%)	16.0%	36.0%		13.0%	33.0%		13.0%	38.0%		13.0%	38.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	44.4	32.4		37.7	27.0		44.3	35.0		43.3	34.5	50.0
Actuated g/C Ratio	0.44	0.32		0.38	0.27		0.44	0.35		0.43	0.34	0.50

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.47	0.90		0.47	0.28		0.36	0.94		0.32	0.63	0.09
Control Delay	21.3	44.9		23.9	27.9		18.9	46.2		18.8	31.1	3.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.3	44.9		23.9	27.9		18.9	46.2		18.8	31.1	3.4
LOS	C	D		C	C		B	D		B	C	A
Approach Delay		40.4			26.8			44.0			28.0	
Approach LOS		D			C			D			C	
Queue Length 50th (ft)	116	335		38	63		35	365		23	236	0
Queue Length 95th (ft)	188	#497		70	98		65	#536		48	306	22
Internal Link Dist (ft)		221			621			398			270	
Turn Bay Length (ft)				200			200			195		195
Base Capacity (vph)	525	1142		235	922		291	1231		244	1283	831
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.46	0.90		0.44	0.28		0.35	0.94		0.28	0.63	0.09

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of 1st Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 37.2
 Intersection LOS: D
 Intersection Capacity Utilization 86.4%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: County Farm Road & Stearns Road



Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	949	0	4	301	73	2	0	22	275	1	11
Future Volume (vph)	10	949	0	4	301	73	2	0	22	275	1	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.971			0.875				0.850
Flt Protected	0.950			0.950				0.996			0.953	
Satd. Flow (prot)	1805	3574	0	1805	3390	0	0	1656	0	0	1811	1615
Flt Permitted	0.505			0.183				0.979			0.708	
Satd. Flow (perm)	960	3574	0	348	3390	0	0	1628	0	0	1345	1615
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20			35	
Link Distance (ft)		421			428			156			437	
Travel Time (s)		9.6			9.7			5.3			8.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	0%	4%	1%	0%	2%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1043	0	4	411	0	0	26	0	0	303	12
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	64.0		7.0	64.0		7.0	22.0		7.0	22.0	22.0
Total Split (%)	7.0%	64.0%		7.0%	64.0%		7.0%	22.0%		7.0%	22.0%	22.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5			6.5			6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effct Green (s)	54.6	51.5		54.6	51.5			34.1			34.1	34.1
Actuated g/C Ratio	0.55	0.52		0.55	0.52			0.34			0.34	0.34

Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.02	0.57		0.02	0.24			0.05			0.66	0.02
Control Delay	7.2	17.5		10.2	15.3			27.2			39.6	27.6
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	7.2	17.5		10.2	15.3			27.2			39.6	27.6
LOS	A	B		B	B			C			D	C
Approach Delay		17.4			15.3			27.2			39.2	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	3	220		2	90			11			163	5
Queue Length 95th (ft)	8	248		m5	115			35			#369	21
Internal Link Dist (ft)		341			348			76			357	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	549	2056		234	1950			555			459	551
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.02	0.51		0.02	0.21			0.05			0.66	0.02

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 20.8
 Intersection Capacity Utilization 59.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑			↔				↑	↑
Traffic Vol, veh/h	71	1132	8	2	333	44	0	3	4	57	2	47
Future Vol, veh/h	71	1132	8	2	333	44	0	3	4	57	2	47
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	3	0	2	0	0	2	0	0
Mvmt Flow	75	1192	8	2	351	46	0	3	4	60	2	49

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	397	0	0	1200
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.1	-	5.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.2	-	3.1	-
Pot Cap-1 Maneuver	*1433	-	*849	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	1	-	1	-
Mov Cap-1 Maneuver	*1433	-	*849	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	13.9	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	414	*1433	-	-	*849	-	-	565	954
HCM Lane V/C Ratio	0.018	0.052	-	-	0.002	-	-	0.11	0.052
HCM Control Delay (s)	13.9	7.7	0.3	-	9.3	0	-	12.2	9
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.4	0.2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗		↕↕			↕↕
Traffic Vol, veh/h	4	4	74	4	103	284
Future Vol, veh/h	4	4	74	4	103	284
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	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	1
Mvmt Flow	5	5	89	5	124	342

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	511	47	0	0	94
Stage 1	92	-	-	-	-
Stage 2	419	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	506	1043	-	-	1529
Stage 1	942	-	-	-	-
Stage 2	638	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	456	1043	-	-	1529
Mov Cap-2 Maneuver	456	-	-	-	-
Stage 1	942	-	-	-	-
Stage 2	574	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	635	1529
HCM Lane V/C Ratio	-	-	0.015	0.081
HCM Control Delay (s)	-	-	10.8	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0.3

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘		↘	↑↑	↑↑	
Traffic Vol, veh/h	60	62	1	1054	807	4
Future Vol, veh/h	60	62	1	1054	807	4
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	65	67	1	1146	877	4

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1454	441	881	0	0
Stage 1	879	-	-	-	-
Stage 2	575	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	*341	570	776	-	-
Stage 1	*371	-	-	-	-
Stage 2	*614	-	-	-	-
Platoon blocked, %	1	-	-	-	-
Mov Cap-1 Maneuver	*341	570	776	-	-
Mov Cap-2 Maneuver	*341	-	-	-	-
Stage 1	*371	-	-	-	-
Stage 2	*614	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	776	-	428	-	-
HCM Lane V/C Ratio	0.001	-	0.31	-	-
HCM Control Delay (s)	9.6	-	17.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	1.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoeltherhoff Nursery South Access Drive 01/2023

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	14	0	55	0	0	0	2	1022	1	0	813	59
Future Vol, veh/h	14	0	55	0	0	0	2	1022	1	0	813	59
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	2	0	2	2	2	0	2	0	2	2	0
Mvmt Flow	15	0	60	0	0	0	2	1123	1	0	893	65

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1492	2054	479	1575	2086	562	958	0	0	1124	0	0
Stage 1	926	926	-	1128	1128	-	-	-	-	-	-	-
Stage 2	566	1128	-	447	958	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	*246	77	538	195	71	*678	726	-	-	1011	-	-
Stage 1	*293	346	-	631	554	-	-	-	-	-	-	-
Stage 2	*643	554	-	560	334	-	-	-	-	-	-	-
Platoon blocked, %	1	1	-	1	1	1	-	-	-	1	-	-
Mov Cap-1 Maneuver	*245	77	538	173	71	*678	726	-	-	1011	-	-
Mov Cap-2 Maneuver	*245	77	-	173	71	-	-	-	-	-	-	-
Stage 1	*291	346	-	626	551	-	-	-	-	-	-	-
Stage 2	*639	551	-	497	334	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	0	0	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	726	-	-	433	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	-	0.175	-	-	-	-
HCM Control Delay (s)	10	0	-	15.1	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	-	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Year 2027 No-Build Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: County Farm Road & Stearns Road

03/01/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	404	186	425	924	40	340	891	229	61	747	152
Future Volume (vph)	139	404	186	425	924	40	340	891	229	61	747	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.953			0.994			0.969				0.850
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3394	0	1805	3588	0	1805	3463	0	1805	3725	1599
Fit Permitted	0.216			0.178			0.131			0.145		
Satd. Flow (perm)	406	3394	0	338	3588	0	249	3463	0	276	3725	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		66			4			35				169
Link Speed (mph)		30			30			40				40
Link Distance (ft)		301			701			478				350
Travel Time (s)		6.8			15.9			8.1				6.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	0%	0%	0%	1%	1%	0%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	149	634	0	457	1037	0	366	1204	0	66	803	163
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	14.0	
Minimum Split (s)	9.5	25.0		9.5	32.0		9.5	39.5		9.5	34.0	
Total Split (s)	13.0	25.0		20.0	32.0		21.0	42.0		13.0	34.0	
Total Split (%)	13.0%	25.0%		20.0%	32.0%		21.0%	42.0%		13.0%	34.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effect Green (s)	29.7	18.5		41.0	25.8		51.0	39.1		37.4	27.6	40.3
Actuated g/C Ratio	0.30	0.18		0.41	0.26		0.51	0.39		0.37	0.28	0.40

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.62	0.93		1.23	1.12		0.94	0.88		0.31	0.78	0.22
Control Delay	32.1	58.3		148.6	102.4		58.3	37.1		17.6	39.7	3.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	32.1	58.3		148.6	102.4		58.3	37.1		17.6	39.7	3.6
LOS	C	E		F	F		E	D		B	D	A
Approach Delay		53.3			116.6			42.0			32.6	
Approach LOS		D			F			D			C	
Queue Length 50th (ft)	63	179		-304	-406		172	370		20	248	0
Queue Length 95th (ft)	119	#299		#500	#537		#350	#531		42	321	36
Internal Link Dist (ft)		221			621			398			270	
Turn Bay Length (ft)				200			200			195		195
Base Capacity (vph)	246	681		373	929		391	1375		245	1028	749
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.61	0.93		1.23	1.12		0.94	0.88		0.27	0.78	0.22

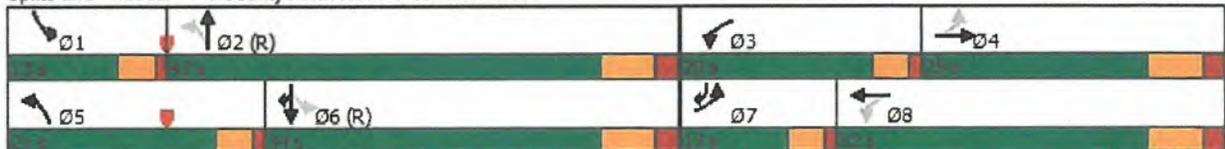
Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 64.7
 Intersection Capacity Utilization 96.6%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service F

- Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: County Farm Road & Stearns Road



Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	563	0	37	1060	351	2	5	20	157	2	19
Future Volume (vph)	34	563	0	37	1060	351	2	5	20	157	2	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt					0.963			0.899				0.850
Flt Protected	0.950			0.950				0.996			0.953	
Satd. Flow (prot)	1805	3574	0	1752	3468	0	0	1701	0	0	1793	1524
Flt Permitted	0.114			0.422				0.979			0.708	
Satd. Flow (perm)	217	3574	0	778	3468	0	0	1672	0	0	1332	1524
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20			35	
Link Distance (ft)		421			428			156			437	
Travel Time (s)		9.6			9.7			5.3			8.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	3%	0%	1%	0%	0%	0%	1%	0%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	580	0	38	1455	0	0	28	0	0	164	20
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	57.0		7.0	57.0		7.0	29.0		7.0	29.0	29.0
Total Split (%)	7.0%	57.0%		7.0%	57.0%		7.0%	29.0%		7.0%	29.0%	29.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5		6.5			6.5	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effct Green (s)	68.6	62.2		68.7	62.2		18.5			18.5	18.5	18.5
Actuated g/C Ratio	0.69	0.62		0.69	0.62		0.18			0.18	0.18	0.18

Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.14	0.26		0.06	0.67			0.09			0.67	0.07
Control Delay	6.6	10.3		3.6	18.6			32.5			51.0	32.1
Queue Delay	0.0	0.0		0.0	0.2			0.0			0.0	0.0
Total Delay	6.6	10.3		3.6	18.8			32.5			51.0	32.1
LOS	A	B		A	B			C			D	C
Approach Delay		10.1			18.4			32.5			48.9	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	5	87		3	487			15			99	11
Queue Length 95th (ft)	18	144		m10	m488			36			157	29
Internal Link Dist (ft)		341			348			76			357	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	246	2221		594	2157			383			304	348
Starvation Cap Reductn	0	0		0	128			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.14	0.26		0.06	0.72			0.07			0.54	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 18.8
 Intersection Capacity Utilization 81.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



HCM 6th TWSC

3: Walgreens Access Drive/BP/Dunkin' Access Drive & Stearns Road

03/01/2023

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕↕			↕↕			↕↕			↕ ↕		
Traffic Vol, veh/h	22	692	24	11	1364	52	18	0	18	12	5	61
Future Vol, veh/h	22	692	24	11	1364	52	18	0	18	12	5	61
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	1	0	0	0	2	0	2	0	0	0	0
Mvmt Flow	23	713	25	11	1406	54	19	0	19	12	5	63

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	1460	0	0	738	0	0	1500	2254	369	1786	2239	730
Stage 1	-	-	-	-	-	-	772	772	-	1455	1455	-
Stage 2	-	-	-	-	-	-	728	1482	-	331	784	-
Critical Hdwy	4.1	-	-	5.3	-	-	6.95	6.54	7.1	6.95	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.54	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.54	-	6.7	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.65	4.02	3.9	3.65	4	3.3
Pot Cap-1 Maneuver	*772	-	-	924	-	-	*258	*72	*781	*151	*76	*514
Stage 1	-	-	-	-	-	-	*717	*687	-	*465	*424	-
Stage 2	-	-	-	-	-	-	*465	*422	-	*835	*682	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*772	-	-	924	-	-	*195	*64	*781	*134	*67	*514
Mov Cap-2 Maneuver	-	-	-	-	-	-	*195	*64	-	*134	*67	-
Stage 1	-	-	-	-	-	-	*680	*652	-	*441	*397	-
Stage 2	-	-	-	-	-	-	*377	*395	-	*773	*647	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.4	18.1	20.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	312	*772	-	-	924	-	-	104	514
HCM Lane V/C Ratio	0.119	0.029	-	-	0.012	-	-	0.169	0.122
HCM Control Delay (s)	18.1	9.8	0.2	-	8.9	0.3	-	46.5	13
HCM Lane LOS	C	A	A	-	A	A	-	E	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.6	0.4

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection

Int Delay, s/veh 0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↕↕			↕↕
Traffic Vol, veh/h	3	48	374	7	14	180
Future Vol, veh/h	3	48	374	7	14	180
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	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	14	0	0
Mvmt Flow	3	55	425	8	16	205

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	564	217	0	0	433
Stage 1	429	-	-	-	-
Stage 2	135	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	654	*957	-	-	1345
Stage 1	830	-	-	-	-
Stage 2	883	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	646	*957	-	-	1345
Mov Cap-2 Maneuver	646	-	-	-	-
Stage 1	830	-	-	-	-
Stage 2	872	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	931	1345
HCM Lane V/C Ratio	-	-	0.062	0.012
HCM Control Delay (s)	-	-	9.1	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑↑	↑↑	
Traffic Vol, veh/h	10	18	39	1020	931	36
Future Vol, veh/h	10	18	39	1020	931	36
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	6	0	1	1	0
Mvmt Flow	12	21	45	1186	1083	42

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1787	563	1125	0	-	0
Stage 1	1104	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Critical Hdwy	6.8	7.02	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.36	2.2	-	-	-
Pot Cap-1 Maneuver	*138	460	628	-	-	-
Stage 1	*283	-	-	-	-	-
Stage 2	*643	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*128	460	628	-	-	-
Mov Cap-2 Maneuver	*128	-	-	-	-	-
Stage 1	*263	-	-	-	-	-
Stage 2	*643	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.4	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	628	-	239	-	-
HCM Lane V/C Ratio	0.072	-	0.136	-	-
HCM Control Delay (s)	11.2	-	22.4	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoeltherhoff Nursery South Access Drive 11/2023

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	7	0	38	2	0	3	0	1066	6	2	904	46
Future Vol, veh/h	7	0	38	2	0	3	0	1066	6	2	904	46
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	2	5	0	2	0	2	1	0	0	2	2
Mvmt Flow	8	0	43	2	0	3	0	1211	7	2	1027	52

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1663	2275	540	1733	2298	609	1079	0	0	1218	0	0
Stage 1	1057	1057	-	1215	1215	-	-	-	-	-	-	-
Stage 2	606	1218	-	518	1083	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	7	7.5	6.54	6.9	4.14	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.35	3.5	4.02	3.3	2.22	-	-	2.2	-	-
Pot Cap-1 Maneuver	*177	48	478	146	45	*651	642	-	-	962	-	-
Stage 1	*244	300	-	602	527	-	-	-	-	-	-	-
Stage 2	*614	525	-	514	292	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*175	48	478	132	45	*651	642	-	-	962	-	-
Mov Cap-2 Maneuver	*175	48	-	132	45	-	-	-	-	-	-	-
Stage 1	*244	299	-	602	527	-	-	-	-	-	-	-
Stage 2	*611	525	-	465	291	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16	19.6	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	642	-	-	377	253	962	-	-
HCM Lane V/C Ratio	-	-	-	0.136	0.022	0.002	-	-
HCM Control Delay (s)	0	-	-	16	19.6	8.8	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Year 2027 No-Build Saturday Midday Peak Hour

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	419	234	162	430	16	263	621	209	58	615	134
Future Volume (vph)	119	419	234	162	430	16	263	621	209	58	615	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.946			0.995			0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3360	0	1787	3592	0	1770	3438	0	1805	3762	1599
Flt Permitted	0.422			0.262			0.364			0.211		
Satd. Flow (perm)	794	3360	0	493	3592	0	678	3438	0	401	3762	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		112			4			45				137
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		301			701			478			350	
Travel Time (s)		6.8			15.9			8.1			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	1%	1%	0%	0%	2%	1%	1%	0%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	667	0	165	455	0	268	847	0	59	628	137
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	67
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	67
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	14.0	
Minimum Split (s)	9.5	25.0		9.5	32.0		9.5	39.5		9.5	34.0	
Total Split (s)	7.0	38.0		7.0	38.0		7.0	34.0		21.0	48.0	
Total Split (%)	7.0%	38.0%		7.0%	38.0%		7.0%	34.0%		21.0%	48.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effect Green (s)	35.9	30.4		35.9	30.4		45.3	40.4		50.6	41.5	48.5
Actuated g/C Ratio	0.36	0.30		0.36	0.30		0.45	0.40		0.51	0.42	0.48

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023

	↖	→	↘	↙	←	↖	↙	↑	↘	↓	↙	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.39	0.61		0.76	0.42		0.76	0.60		0.19	0.40	0.16
Control Delay	26.3	26.2		48.8	28.6		38.7	25.5		14.0	21.5	3.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	26.3	26.2		48.8	28.6		38.7	25.5		14.0	21.5	3.0
LOS	C	C		D	C		D	C		B	C	A
Approach Delay		26.2			33.9			28.6			17.9	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	34	130		67	117		94	218		18	144	0
Queue Length 95th (ft)	m95	203		#144	163		#207	295		39	191	30
Internal Link Dist (ft)		221			621			398			270	
Turn Bay Length (ft)				200			200			195		195
Base Capacity (vph)	314	1135		216	1134		351	1414		447	1561	846
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.39	0.59		0.76	0.40		0.76	0.60		0.13	0.40	0.16

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 26.4

Intersection LOS: C

Intersection Capacity Utilization 76.3%

ICU Level of Service D

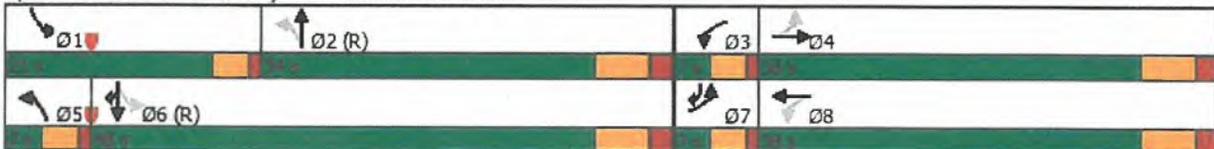
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: County Farm Road & Stearns Road



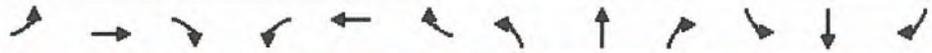
Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	547	4	19	557	193	1	1	18	166	2	33
Future Volume (vph)	23	547	4	19	557	193	1	1	18	166	2	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.961			0.878				0.850
Flt Protected	0.950			0.950				0.998			0.953	
Satd. Flow (prot)	1805	3565	0	1805	3444	0	0	1665	0	0	1793	1568
Flt Permitted	0.329			0.430				0.987			0.713	
Satd. Flow (perm)	625	3565	0	817	3444	0	0	1647	0	0	1341	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20			35	
Link Distance (ft)		421			428			156			437	
Travel Time (s)		9.6			9.7			5.3			8.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	24%	0%	1%	0%	0%	0%	0%	1%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	568	0	20	773	0	0	21	0	0	173	34
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	64.0		7.0	64.0		7.0	22.0		7.0	22.0	22.0
Total Split (%)	7.0%	64.0%		7.0%	64.0%		7.0%	22.0%		7.0%	22.0%	22.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5		6.5			6.5	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effct Green (s)	68.4	63.4		68.3	63.3		19.5			19.5	19.5	19.5
Actuated g/C Ratio	0.68	0.63		0.68	0.63		0.20			0.20	0.20	0.20

Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.25		0.03	0.35			0.07			0.66	0.11
Control Delay	5.8	9.7		5.1	10.7			31.1			49.2	32.1
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	5.8	9.7		5.1	10.7			31.1			49.2	32.1
LOS	A	A		A	B			C			D	C
Approach Delay		9.5			10.6			31.1			46.4	
Approach LOS		A			B			C			D	
Queue Length 50th (ft)	4	65		3	78			11			103	18
Queue Length 95th (ft)	14	140		m8	244			29			165	42
Internal Link Dist (ft)		341			348			76			357	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	498	2317		616	2239			323			263	307
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.05	0.25		0.03	0.35			0.07			0.66	0.11

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 15.1
 Intersection LOS: B
 Intersection Capacity Utilization 62.8%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕↕			↕↔			↕			↕ ↗		
Traffic Vol, veh/h	32	673	18	13	703	39	12	0	18	18	1	52
Future Vol, veh/h	32	673	18	13	703	39	12	0	18	18	1	52
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	33	694	19	13	725	40	12	0	19	19	1	54

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	765	0	0	713
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.1	-	-	5.3
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.2	-	-	3.1
Pot Cap-1 Maneuver	*1197	-	-	953
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	1	-	-	1
Mov Cap-1 Maneuver	*1197	-	-	953
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	11.5	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	583	*1197	-	-	953	-	-	455	797
HCM Lane V/C Ratio	0.053	0.028	-	-	0.014	-	-	0.043	0.067
HCM Control Delay (s)	11.5	8.1	0.1	-	8.8	0.1	-	13.3	9.8
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.1	0.2

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↕			↕↕
Traffic Vol, veh/h	6	16	206	11	23	194
Future Vol, veh/h	6	16	206	11	23	194
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	94	94	94	94	94	94
Heavy Vehicles, %	0	6	0	0	0	2
Mvmt Flow	6	17	219	12	24	206

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	376	116	0	0	231
Stage 1	225	-	-	-	-
Stage 2	151	-	-	-	-
Critical Hdwy	6.8	7.02	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.36	-	-	2.2
Pot Cap-1 Maneuver	729	*1002	-	-	1479
Stage 1	925	-	-	-	-
Stage 2	867	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	716	*1002	-	-	1479
Mov Cap-2 Maneuver	716	-	-	-	-
Stage 1	925	-	-	-	-
Stage 2	851	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	904	1479	-
HCM Lane V/C Ratio	-	-	0.026	0.017	-
HCM Control Delay (s)	-	-	9.1	7.5	0.1
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑↑	↑↑	
Traffic Vol, veh/h	20	19	11	714	732	14
Future Vol, veh/h	20	19	11	714	732	14
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	1	1	7
Mvmt Flow	21	20	12	752	771	15

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1179	393	786	0	0
Stage 1	779	-	-	-	-
Stage 2	400	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	*353	612	842	-	-
Stage 1	*418	-	-	-	-
Stage 2	*759	-	-	-	-
Platoon blocked, %	1	-	-	-	-
Mov Cap-1 Maneuver	*349	612	842	-	-
Mov Cap-2 Maneuver	*349	-	-	-	-
Stage 1	*412	-	-	-	-
Stage 2	*759	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	842	-	441	-	-
HCM Lane V/C Ratio	0.014	-	0.093	-	-
HCM Control Delay (s)	9.3	-	14	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoeltherhoff Nursery South Access Drive 10/11/2023

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕↔			↕↔		
Traffic Vol, veh/h	18	0	35	1	0	3	3	681	15	1	702	49
Future Vol, veh/h	18	0	35	1	0	3	3	681	15	1	702	49
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	2	0	0	1	0	0	1	0
Mvmt Flow	19	0	36	1	0	3	3	709	16	1	731	51

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1120	1490	391	1091	1507	363	782	0	0	725	0	0
Stage 1	759	759	-	723	723	-	-	-	-	-	-	-
Stage 2	361	731	-	368	784	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.5	6.54	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.5	4.02	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	*323	177	614	344	172	*836	845	-	-	1218	-	-
Stage 1	*369	413	-	755	665	-	-	-	-	-	-	-
Stage 2	*788	658	-	630	402	-	-	-	-	-	-	-
Platoon blocked, %	1	1	-	1	1	1	-	-	-	1	-	-
Mov Cap-1 Maneuver	*320	176	614	322	171	*836	845	-	-	1218	-	-
Mov Cap-2 Maneuver	*320	176	-	322	171	-	-	-	-	-	-	-
Stage 1	*367	413	-	750	661	-	-	-	-	-	-	-
Stage 2	*781	654	-	592	402	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.1	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	845	-	-	468	598	1218	-	-
HCM Lane V/C Ratio	0.004	-	-	0.118	0.007	0.001	-	-
HCM Control Delay (s)	9.3	0	-	13.7	11.1	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Year 2027 Total Projected Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: County Farm Road & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	232	792	200	99	220	40	108	770	335	73	731	73
Future Volume (vph)	232	792	200	99	220	40	108	770	335	73	731	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.970			0.977			0.955				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3467	0	1752	3367	0	1805	3390	0	1805	3725	1568
Flt Permitted	0.510			0.144			0.195			0.127		
Satd. Flow (perm)	950	3467	0	266	3367	0	370	3390	0	241	3725	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			20			71				82
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		301			701			478			350	
Travel Time (s)		6.8			15.9			8.1			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	1%	3%	4%	9%	0%	2%	1%	0%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	244	1045	0	104	274	0	114	1164	0	77	769	77
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	6 7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	9.5	36.0		9.5	33.0		9.5	38.0		9.5	38.0	
Total Split (s)	16.0	36.0		13.0	33.0		13.0	38.0		13.0	38.0	
Total Split (%)	16.0%	36.0%		13.0%	33.0%		13.0%	38.0%		13.0%	38.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	44.4	32.4		37.7	27.0		44.3	34.8		42.4	32.2	47.8
Actuated g/C Ratio	0.44	0.32		0.38	0.27		0.44	0.35		0.42	0.32	0.48

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

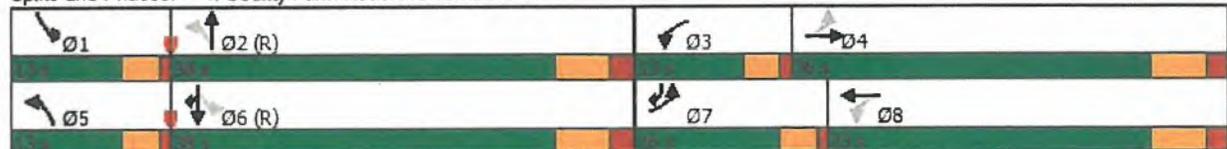
03/01/2023

	↖	→	↘	↙	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.47	0.91		0.47	0.30		0.40	0.95		0.35	0.64	0.10
Control Delay	21.5	46.1		23.9	28.0		19.6	47.7		19.4	32.1	3.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.5	46.1		23.9	28.0		19.6	47.7		19.4	32.1	3.4
LOS	C	D		C	C		B	D		B	C	A
Approach Delay		41.4			26.9			45.2			28.6	
Approach LOS		D			C			D			C	
Queue Length 50th (ft)	116	341		38	67		40	-375		26	221	0
Queue Length 95th (ft)	187	#507		70	103		72	#542		53	286	22
Internal Link Dist (ft)		221			621			398			270	
Turn Bay Length (ft)				200			200			195		195
Base Capacity (vph)	520	1143		235	922		294	1226		246	1201	798
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.47	0.91		0.44	0.30		0.39	0.95		0.31	0.64	0.10

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of 1st Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 38.2
 Intersection LOS: D
 Intersection Capacity Utilization 87.3%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: County Farm Road & Stearns Road



Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	949	0	4	303	73	2	0	22	284	1	14
Future Volume (vph)	16	949	0	4	303	73	2	0	22	284	1	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Fr _t					0.971			0.875				0.850
Fit Protected	0.950			0.950				0.996			0.953	
Satd. Flow (prot)	1805	3574	0	1805	3389	0	0	1656	0	0	1811	1615
Fit Permitted	0.496			0.184				0.979			0.708	
Satd. Flow (perm)	942	3574	0	350	3389	0	0	1628	0	0	1345	1615
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20			35	
Link Distance (ft)		421			428			156			287	
Travel Time (s)		9.6			9.7			5.3			5.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	0%	4%	1%	0%	2%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	1043	0	4	413	0	0	26	0	0	313	15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	64.0		7.0	64.0		7.0	22.0		7.0	22.0	22.0
Total Split (%)	7.0%	64.0%		7.0%	64.0%		7.0%	22.0%		7.0%	22.0%	22.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effect Green (s)	54.5	51.4		53.7	50.0		34.2	34.2		34.2	34.2	34.2
Actuated g/C Ratio	0.54	0.51		0.54	0.50		0.34	0.34		0.34	0.34	0.34

Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.57		0.02	0.24			0.05			0.68	0.03
Control Delay	7.6	17.5		10.0	16.2			27.2			40.5	27.4
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	7.6	17.5		10.0	16.2			27.2			40.5	27.4
LOS	A	B		A	B			C			D	C
Approach Delay		17.3			16.1			27.2			39.9	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	5	220		2	89			11			170	6
Queue Length 95th (ft)	10	248		m5	114			35			#384	25
Internal Link Dist (ft)		341			348			76			207	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	539	2056		231	1948			556			459	551
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.03	0.51		0.02	0.21			0.05			0.68	0.03

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 21.2
 Intersection Capacity Utilization 59.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕↕			↕↕			↕↕			↕		↕
Traffic Vol, veh/h	72	1140	8	2	332	67	0	3	4	60	2	50
Future Vol, veh/h	72	1140	8	2	332	67	0	3	4	60	2	50
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	3	0	2	0	0	2	0	0
Mvmt Flow	76	1200	8	2	349	71	0	3	4	63	2	53

Major/Minor	Major1		Major2		Minor1		Minor2				
Conflicting Flow All	420	0	0	1208	0	0	1536	1780	604	1023	210
Stage 1	-	-	-	-	-	-	1356	1356	-	389	389
Stage 2	-	-	-	-	-	-	180	424	-	634	1360
Critical Hdwy	4.1	-	-	5.3	-	-	6.99	6.5	7.1	6.99	6.5
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.5	-	6.54	5.5
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.5	-	6.74	5.5
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.67	4	3.9	3.67	4
Pot Cap-1 Maneuver	*1433	-	-	*815	-	-	*636	*365	*648	*647	*388
Stage 1	-	-	-	-	-	-	*661	*616	-	*859	*788
Stage 2	-	-	-	-	-	-	*859	*788	-	*689	*612
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1
Mov Cap-1 Maneuver	*1433	-	-	*815	-	-	*522	*305	*648	*557	*324
Mov Cap-2 Maneuver	-	-	-	-	-	-	*522	*305	-	*557	*324
Stage 1	-	-	-	-	-	-	*554	*516	-	*720	*785
Stage 2	-	-	-	-	-	-	*807	*785	-	*570	*513

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	13.4	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	437	*1433	-	-	*815	-	-	544	954
HCM Lane V/C Ratio	0.017	0.053	-	-	0.003	-	-	0.12	0.055
HCM Control Delay (s)	13.4	7.7	0.3	-	9.4	0	-	12.5	9
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.4	0.2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
 4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Vol, veh/h	4	4	81	4	103	286
Future Vol, veh/h	4	4	81	4	103	286
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	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	1
Mvmt Flow	5	5	98	5	124	345

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	522	52	0	0	103
Stage 1	101	-	-	-	-
Stage 2	421	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	498	1036	-	-	1517
Stage 1	933	-	-	-	-
Stage 2	636	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	448	1036	-	-	1517
Mov Cap-2 Maneuver	448	-	-	-	-
Stage 1	933	-	-	-	-
Stage 2	572	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	626	1517
HCM Lane V/C Ratio	-	-	0.015	0.082
HCM Control Delay (s)	-	-	10.8	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0.3

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑↑	↑↑	
Traffic Vol, veh/h	60	62	1	1069	825	4
Future Vol, veh/h	60	62	1	1069	825	4
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	65	67	1	1162	897	4

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1482	451	901	0	-
Stage 1	899	-	-	-	-
Stage 2	583	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	*319	561	763	-	-
Stage 1	*362	-	-	-	-
Stage 2	*614	-	-	-	-
Platoon blocked, %	1			-	-
Mov Cap-1 Maneuver	*319	561	763	-	-
Mov Cap-2 Maneuver	*319	-	-	-	-
Stage 1	*362	-	-	-	-
Stage 2	*614	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR
Capacity (veh/h)	763	-	409	-
HCM Lane V/C Ratio	0.001	-	0.324	-
HCM Control Delay (s)	9.7	-	18	-
HCM Lane LOS	A	-	C	-
HCM 95th %tile Q(veh)	0	-	1.4	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoeltherhoff Nursery South Access Drive 01/2023

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	31	0	73	0	0	0	15	1020	1	0	811	79
Future Vol, veh/h	31	0	73	0	0	0	15	1020	1	0	811	79
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	2	0	2	2	2	0	2	0	2	2	0
Mvmt Flow	34	0	80	0	0	0	16	1121	1	0	891	87

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1528	2089	489	1600	2132	561	978	0	0	1122	0	0
Stage 1	935	935	-	1154	1154	-	-	-	-	-	-	-
Stage 2	593	1154	-	446	978	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	*224	71	530	183	65	*678	714	-	-	1014	-	-
Stage 1	*289	342	-	597	533	-	-	-	-	-	-	-
Stage 2	*643	533	-	561	327	-	-	-	-	-	-	-
Platoon blocked, %	1	1	-	1	1	1	-	-	-	1	-	-
Mov Cap-1 Maneuver	*214	67	530	148	61	*678	714	-	-	1014	-	-
Mov Cap-2 Maneuver	*214	67	-	148	61	-	-	-	-	-	-	-
Stage 1	*272	342	-	561	501	-	-	-	-	-	-	-
Stage 2	*605	501	-	476	327	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.1	0	0.4	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	714	-	-	368	-	1014	-	-
HCM Lane V/C Ratio	0.023	-	-	0.311	-	-	-	-
HCM Control Delay (s)	10.2	0.3	-	19.1	0	0	-	-
HCM Lane LOS	B	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.3	-	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
 21: Newport Boulevard & Prop. West Access Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	T	T	T			T
Traffic Vol, veh/h	12	2	83	6	3	287
Future Vol, veh/h	12	2	83	6	3	287
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	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	2	87	6	3	302

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	247	47	0	0	93	0
Stage 1	90	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	736	1037	-	-	1515	-
Stage 1	939	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	734	1037	-	-	1515	-
Mov Cap-2 Maneuver	734	-	-	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	853	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	734	1037	1515	-
HCM Lane V/C Ratio	-	-	0.017	0.002	0.002	-
HCM Control Delay (s)	-	-	10	8.5	7.4	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Capacity Analysis Summary Sheets
Year 2027 Total Projected Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: County Farm Road & Stearns Road

03/01/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	415	200	425	941	48	360	901	229	66	764	152
Future Volume (vph)	139	415	200	425	941	48	360	901	229	66	764	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.951			0.993			0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3387	0	1805	3585	0	1805	3467	0	1805	3725	1599
Flt Permitted	0.216			0.178			0.127			0.145		
Satd. Flow (perm)	406	3387	0	338	3585	0	241	3467	0	276	3725	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			5			35				169
Link Speed (mph)		30			30			40				40
Link Distance (ft)		301			701			478				350
Travel Time (s)		6.8			15.9			8.1				6.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	0%	0%	0%	1%	1%	0%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	149	661	0	457	1064	0	387	1215	0	71	822	163
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	6 7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	14.0	
Minimum Split (s)	9.5	25.0		9.5	32.0		9.5	39.5		9.5	34.0	
Total Split (s)	13.0	25.0		20.0	32.0		21.0	42.0		13.0	34.0	
Total Split (%)	13.0%	25.0%		20.0%	32.0%		21.0%	42.0%		13.0%	34.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	29.7	18.5		41.0	25.8		51.0	39.0		37.4	27.5	40.2
Actuated g/C Ratio	0.30	0.18		0.41	0.26		0.51	0.39		0.37	0.28	0.40

Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	563	0	37	1064	351	2	5	20	176	2	26
Future Volume (vph)	44	563	0	37	1064	351	2	5	20	176	2	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.963			0.899				0.850
Flt Protected	0.950			0.950				0.996			0.953	
Satd. Flow (prot)	1805	3574	0	1752	3468	0	0	1701	0	0	1793	1524
Flt Permitted	0.109			0.422				0.979			0.708	
Satd. Flow (perm)	207	3574	0	778	3468	0	0	1672	0	0	1332	1524
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20				35
Link Distance (ft)		421			428			156				296
Travel Time (s)		9.6			9.7			5.3				5.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	3%	0%	1%	0%	0%	0%	1%	0%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	580	0	38	1459	0	0	28	0	0	183	27
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	57.0		7.0	57.0		7.0	29.0		7.0	29.0	29.0
Total Split (%)	7.0%	57.0%		7.0%	57.0%		7.0%	29.0%		7.0%	29.0%	29.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effect Green (s)	67.6	61.3		67.5	61.2		19.5	19.5		19.5	19.5	19.5
Actuated g/C Ratio	0.68	0.61		0.68	0.61		0.20	0.20		0.20	0.20	0.20

Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.19	0.26		0.07	0.69			0.09			0.71	0.09
Control Delay	7.6	10.8		4.2	19.4			31.3			51.9	31.4
Queue Delay	0.0	0.0		0.0	0.1			0.0			0.0	0.0
Total Delay	7.6	10.8		4.2	19.6			31.3			51.9	31.4
LOS	A	B		A	B			C			D	C
Approach Delay		10.6			19.2			31.3			49.3	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	8	91		4	492			15			111	14
Queue Length 95th (ft)	23	147		m11	m476			36			171	35
Internal Link Dist (ft)		341			348			76			216	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	238	2190		584	2122			388			309	353
Starvation Cap Reductn	0	0		0	102			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.19	0.26		0.07	0.72			0.07			0.59	0.08

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 19.7
 Intersection LOS: B
 Intersection Capacity Utilization 81.9%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



HCM 6th TWSC

3: Walgreens Access Drive/BP/Dunkin' Access Drive & Stearns Road

03/01/2023

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑			↑↓			↑		
Traffic Vol, veh/h	24	709	24	11	1360	93	18	0	18	20	5	69
Future Vol, veh/h	24	709	24	11	1360	93	18	0	18	20	5	69
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	1	0	0	0	2	0	2	0	0	0	0
Mvmt Flow	25	731	25	11	1402	96	19	0	19	21	5	71

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1498	0	0	756	0	0	1520	2314	378	1814	2278	749
Stage 1	-	-	-	-	-	-	794	794	-	1472	1472	-
Stage 2	-	-	-	-	-	-	726	1520	-	342	806	-
Critical Hdwy	4.1	-	-	5.3	-	-	6.95	6.54	7.1	6.95	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.54	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.54	-	6.7	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.65	4.02	3.9	3.65	4	3.3
Pot Cap-1 Maneuver	*772	-	-	*949	-	-	*293	*72	*755	*167	*79	*514
Stage 1	-	-	-	-	-	-	*806	*733	-	*465	*424	-
Stage 2	-	-	-	-	-	-	*465	*422	-	*806	*736	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*772	-	-	*949	-	-	*216	*63	*755	*147	*69	*514
Mov Cap-2 Maneuver	-	-	-	-	-	-	*216	*63	-	*147	*69	-
Stage 1	-	-	-	-	-	-	*761	*692	-	*439	*393	-
Stage 2	-	-	-	-	-	-	*366	*391	-	*742	*695	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.3	17	21.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	336	*772	-	-	*949	-	-	120	514
HCM Lane V/C Ratio	0.11	0.032	-	-	0.012	-	-	0.215	0.138
HCM Control Delay (s)	17	9.8	0.2	-	8.8	0.3	-	43	13.1
HCM Lane LOS	C	A	A	-	A	A	-	E	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.8	0.5

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Vol, veh/h	3	48	391	7	14	182
Future Vol, veh/h	3	48	391	7	14	182
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	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	14	0	0
Mvmt Flow	3	55	444	8	16	207

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	584	226	0	0	452
Stage 1	448	-	-	-	-
Stage 2	136	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	633	*957	-	-	1321
Stage 1	810	-	-	-	-
Stage 2	882	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	624	*957	-	-	1321
Mov Cap-2 Maneuver	624	-	-	-	-
Stage 1	810	-	-	-	-
Stage 2	870	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	928	1321
HCM Lane V/C Ratio	-	-	0.062	0.012
HCM Control Delay (s)	-	-	9.1	7.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑↑	↑↑	
Traffic Vol, veh/h	10	18	39	1052	961	36
Future Vol, veh/h	10	18	39	1052	961	36
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	6	0	1	1	0
Mvmt Flow	12	21	45	1223	1117	42

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1840	580	1159	0	0
Stage 1	1138	-	-	-	-
Stage 2	702	-	-	-	-
Critical Hdwy	6.8	7.02	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.36	2.2	-	-
Pot Cap-1 Maneuver	*133	448	610	-	-
Stage 1	*272	-	-	-	-
Stage 2	*614	-	-	-	-
Platoon blocked, %	1	-	-	-	-
Mov Cap-1 Maneuver	*123	448	610	-	-
Mov Cap-2 Maneuver	*123	-	-	-	-
Stage 1	*252	-	-	-	-
Stage 2	*614	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.2	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLr1	SBT	SBR
Capacity (veh/h)	610	-	230	-	-
HCM Lane V/C Ratio	0.074	-	0.142	-	-
HCM Control Delay (s)	11.4	-	23.2	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoeltherhoff Nursery South Access Drive 12/20/2023

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕↔			↕↔		
Traffic Vol, veh/h	44	0	75	2	0	3	23	1061	6	2	899	81
Future Vol, veh/h	44	0	75	2	0	3	23	1061	6	2	899	81
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	2	5	0	2	0	2	1	0	0	2	2
Mvmt Flow	50	0	85	2	0	3	26	1206	7	2	1022	92

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1727	2337	557	1777	2380	607	1114	0	0	1213	0	0
Stage 1	1072	1072	-	1262	1262	-	-	-	-	-	-	-
Stage 2	655	1265	-	515	1118	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	7	7.5	6.54	6.9	4.14	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.35	3.5	4.02	3.3	2.22	-	-	2.2	-	-
Pot Cap-1 Maneuver	*148	41	466	129	37	*651	623	-	-	969	-	-
Stage 1	*239	295	-	543	488	-	-	-	-	-	-	-
Stage 2	*614	486	-	516	281	-	-	-	-	-	-	-
Platoon blocked, %	1	1	-	1	1	1	-	-	-	1	-	-
Mov Cap-1 Maneuver	*132	36	466	95	32	*651	623	-	-	969	-	-
Mov Cap-2 Maneuver	*132	36	-	95	32	-	-	-	-	-	-	-
Stage 1	*208	293	-	473	426	-	-	-	-	-	-	-
Stage 2	*533	424	-	419	279	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.5	24	0.9	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	623	-	-	241	195	969	-	-
HCM Lane V/C Ratio	0.042	-	-	0.561	0.029	0.002	-	-
HCM Control Delay (s)	11	0.7	-	37.5	24	8.7	0	-
HCM Lane LOS	B	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.1	0.1	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

21: Newport Boulevard & Prop. West Access Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↕	↕	↕
Traffic Vol, veh/h	24	5	392	8	5	180
Future Vol, veh/h	24	5	392	8	5	180
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	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	5	413	8	5	189

Major/Minor	Minor1	Major1	Major2	Major3	Major4	Major5
Conflicting Flow All	522	211	0	0	421	0
Stage 1	417	-	-	-	-	-
Stage 2	105	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	695	*952	-	-	1348	-
Stage 1	838	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	693	*952	-	-	1348	-
Mov Cap-2 Maneuver	693	-	-	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	904	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBL1	WBL2	SBL	SBT
Capacity (veh/h)	-	-	693	952	1348	-
HCM Lane V/C Ratio	-	-	0.036	0.006	0.004	-
HCM Control Delay (s)	-	-	10.4	8.8	7.7	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Year 2027 Total Projected Saturday Midday Peak Hour

Lanes, Volumes, Timings
1: County Farm Road & Stearns Road

03/01/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	424	240	162	438	20	273	626	209	65	624	134
Future Volume (vph)	119	424	240	162	438	20	273	626	209	65	624	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	200		0	200		0	195		195
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	200			175			175			165		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.946			0.994			0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3360	0	1787	3588	0	1770	3438	0	1805	3762	1599
Flt Permitted	0.412			0.255			0.360			0.206		
Satd. Flow (perm)	775	3360	0	480	3588	0	671	3438	0	391	3762	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			5			45				137
Link Speed (mph)		30			30			40				40
Link Distance (ft)		301			701			478				350
Travel Time (s)		6.8			15.9			8.1				6.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	1%	1%	0%	0%	2%	1%	1%	0%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	678	0	165	467	0	279	852	0	66	637	137
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6.7
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	6.7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	14.0	
Minimum Split (s)	9.5	25.0		9.5	32.0		9.5	39.5		9.5	34.0	
Total Split (s)	7.0	38.0		7.0	38.0		7.0	34.0		21.0	48.0	
Total Split (%)	7.0%	38.0%		7.0%	38.0%		7.0%	34.0%		21.0%	48.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effect Green (s)	35.9	30.4		35.9	30.4		45.0	40.1		50.6	41.5	48.5
Actuated g/C Ratio	0.36	0.30		0.36	0.30		0.45	0.40		0.51	0.42	0.48

Lanes, Volumes, Timings
 1: County Farm Road & Stearns Road

03/01/2023

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.39	0.61		0.78	0.43		0.81	0.61		0.22	0.41	0.16
Control Delay	25.6	25.6		51.0	28.6		43.1	25.8		14.3	21.6	3.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.6	25.6		51.0	28.6		43.1	25.8		14.3	21.6	3.0
LOS	C	C		D	C		D	C		B	C	A
Approach Delay		25.6			34.5			30.0			18.0	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	36	122		67	121		99	221		20	147	0
Queue Length 95th (ft)	m93	203		#147	166		#228	298		42	194	30
Internal Link Dist (ft)		221			621			398			270	
Turn Bay Length (ft)				200			200			195		195
Base Capacity (vph)	309	1137		211	1133		346	1406		443	1561	846
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.39	0.60		0.78	0.41		0.81	0.61		0.15	0.41	0.16

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 26.8
 Intersection LOS: C
 Intersection Capacity Utilization 77.4%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: County Farm Road & Stearns Road



Lanes, Volumes, Timings
2: Newport Boulevard & Stearns Road

03/01/2023

												
Lane Group	EFL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	546	4	19	559	193	1	1	18	176	2	36
Future Volume (vph)	29	546	4	19	559	193	1	1	18	176	2	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	145		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Friction		0.999			0.961			0.878				0.850
Flt Protected	0.950			0.950				0.998			0.953	
Satd. Flow (prot)	1805	3565	0	1805	3444	0	0	1665	0	0	1793	1568
Flt Permitted	0.316			0.439				0.988			0.713	
Satd. Flow (perm)	600	3565	0	834	3444	0	0	1648	0	0	1341	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			20			35	
Link Distance (ft)		421			428			156			301	
Travel Time (s)		9.6			9.7			5.3			5.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	24%	0%	1%	0%	0%	0%	0%	1%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	567	0	20	775	0	0	21	0	0	183	37
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	7.0	26.5		7.0	33.5		7.0	21.5		7.0	21.5	21.5
Total Split (s)	7.0	64.0		7.0	64.0		7.0	22.0		7.0	22.0	22.0
Total Split (%)	7.0%	64.0%		7.0%	64.0%		7.0%	22.0%		7.0%	22.0%	22.0%
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	6.5		4.0	6.5			6.5			6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effect Green (s)	67.6	62.4		66.5	60.3			20.4			20.4	20.4
Actuated g/C Ratio	0.68	0.62		0.66	0.60			0.20			0.20	0.20

Lanes, Volumes, Timings
 2: Newport Boulevard & Stearns Road

03/01/2023



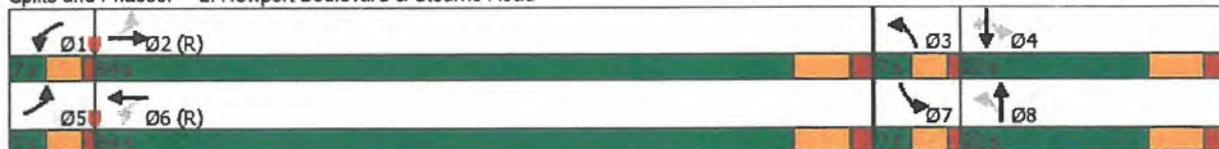
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.25		0.03	0.37			0.06			0.67	0.12
Control Delay	6.2	10.2		5.5	12.5			30.3			48.5	31.4
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	6.2	10.2		5.5	12.5			30.3			48.5	31.4
LOS	A	B		A	B			C			D	C
Approach Delay		10.0			12.3			30.3			45.6	
Approach LOS		A			B			C			D	
Queue Length 50th (ft)	5	68		3	134			11			108	19
Queue Length 95th (ft)	17	143		m9	244			29			172	44
Internal Link Dist (ft)		341			348			76			221	
Turn Bay Length (ft)	120			145								
Base Capacity (vph)	479	2299		612	2161			338			275	321
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.06	0.25		0.03	0.36			0.06			0.67	0.12

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 16.2
 Intersection Capacity Utilization 62.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Newport Boulevard & Stearns Road



Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕↕			↕↕			↕↕			↕ ↕		
Traffic Vol, veh/h	33	681	18	13	699	61	12	1	18	21	1	58
Future Vol, veh/h	33	681	18	13	699	61	12	1	18	21	1	58
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	34	702	19	13	721	63	12	1	19	22	1	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	784	0	0	721	0	0	1167	1590	361	1128	1568	392
Stage 1	-	-	-	-	-	-	780	780	-	779	779	-
Stage 2	-	-	-	-	-	-	387	810	-	349	789	-
Critical Hdwy	4.1	-	-	5.3	-	-	6.95	6.5	7.1	6.95	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.7	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.65	4	3.9	3.65	4	3.3
Pot Cap-1 Maneuver	*1197	-	-	944	-	-	*473	*230	*781	*508	*239	*797
Stage 1	-	-	-	-	-	-	*707	*685	-	*721	*658	-
Stage 2	-	-	-	-	-	-	*721	*658	-	*835	*678	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*1197	-	-	944	-	-	*412	*214	*781	*467	*222	*797
Mov Cap-2 Maneuver	-	-	-	-	-	-	*412	*214	-	*467	*222	-
Stage 1	-	-	-	-	-	-	*673	*652	-	*686	*641	-
Stage 2	-	-	-	-	-	-	*649	*641	-	*774	*645	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	12	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	545	*1197	-	-	944	-	-	445	797
HCM Lane V/C Ratio	0.059	0.028	-	-	0.014	-	-	0.051	0.075
HCM Control Delay (s)	12	8.1	0.1	-	8.9	0.1	-	13.5	9.9
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2	0.2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

4: Newport Boulevard & Dunamon Drive

03/01/2023

Intersection

Int Delay, s/veh 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Vol, veh/h	6	16	222	11	23	199
Future Vol, veh/h	6	16	222	11	23	199
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	94	94	94	94	94	94
Heavy Vehicles, %	0	6	0	0	0	2
Mvmt Flow	6	17	236	12	24	212

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	396	124	0	0	248
Stage 1	242	-	-	-	-
Stage 2	154	-	-	-	-
Critical Hdwy	6.8	7.02	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.36	-	-	2.2
Pot Cap-1 Maneuver	708	*1002	-	-	1457
Stage 1	906	-	-	-	-
Stage 2	864	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	694	*1002	-	-	1457
Mov Cap-2 Maneuver	694	-	-	-	-
Stage 1	906	-	-	-	-
Stage 2	848	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1457
HCM Lane V/C Ratio	-	-	0.026	0.017
HCM Control Delay (s)	-	-	9.1	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: County Farm Road & Dunamon Drive

03/01/2023

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗		↖	↕↕	↕↔	
Traffic Vol, veh/h	20	19	11	729	747	14
Future Vol, veh/h	20	19	11	729	747	14
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	1	1	7
Mvmt Flow	21	20	12	767	786	15

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1202	401	801	0	0
Stage 1	794	-	-	-	-
Stage 2	408	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	*338	604	831	-	-
Stage 1	*411	-	-	-	-
Stage 2	*759	-	-	-	-
Platoon blocked, %	1	-	-	-	-
Mov Cap-1 Maneuver	*333	604	831	-	-
Mov Cap-2 Maneuver	*333	-	-	-	-
Stage 1	*405	-	-	-	-
Stage 2	*759	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	831	-	426	-	-
HCM Lane V/C Ratio	0.014	-	0.096	-	-
HCM Control Delay (s)	9.4	-	14.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

8: County Farm Road & BP/Dunkin' Access Drive/Hoelterhoff Nursery South Access Drive 01/2023

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↕↕			↕↕		
Traffic Vol, veh/h	38	0	56	1	0	3	17	676	15	1	697	69
Future Vol, veh/h	38	0	56	1	0	3	17	676	15	1	697	69
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	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	2	0	0	1	0	0	1	0
Mvmt Flow	40	0	58	1	0	3	18	704	16	1	726	72
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1152	1520	399	1113	1548	360	798	0	0	720	0	0
Stage 1	764	764	-	748	748	-	-	-	-	-	-	-
Stage 2	388	756	-	365	800	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.5	6.54	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.5	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.5	4.02	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	*302	168	606	329	160	*836	833	-	-	1225	-	-
Stage 1	*367	411	-	723	644	-	-	-	-	-	-	-
Stage 2	*788	637	-	632	395	-	-	-	-	-	-	-
Platoon blocked, %	1	1	-	1	1	1	-	-	-	1	-	-
Mov Cap-1 Maneuver	*292	162	606	289	154	*836	833	-	-	1225	-	-
Mov Cap-2 Maneuver	*292	162	-	289	154	-	-	-	-	-	-	-
Stage 1	*354	411	-	697	621	-	-	-	-	-	-	-
Stage 2	*757	614	-	571	395	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	16.1		11.4			0.4			0			
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	833	-	-	422	567	1225	-	-				
HCM Lane V/C Ratio	0.021	-	-	0.232	0.007	0.001	-	-				
HCM Control Delay (s)	9.4	0.2	-	16.1	11.4	7.9	0	-				
HCM Lane LOS	A	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0	0	-	-				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

HCM 6th TWSC

21: Newport Boulevard & Prop. West Access Drive

03/01/2023

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↕			↕
Traffic Vol, veh/h	11	3	219	4	2	203
Future Vol, veh/h	11	3	219	4	2	203
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	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	3	231	4	2	214

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	344	118	0	0	235
Stage 1	233	-	-	-	-
Stage 2	111	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	760	*1014	-	-	1460
Stage 1	911	-	-	-	-
Stage 2	901	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	759	*1014	-	-	1460
Mov Cap-2 Maneuver	759	-	-	-	-
Stage 1	911	-	-	-	-
Stage 2	899	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	759	1014	1460	-
HCM Lane V/C Ratio	-	-	0.015	0.003	0.001	-
HCM Control Delay (s)	-	-	9.8	8.6	7.5	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PLANNING & DEVELOPMENT SERVICES MEMORANDUM

23-35

DATE: June 9, 2023
TO: Paula Schumacher, Village Administrator
FROM: Kristy Stone, PDS Director *KS*
RE: **(#23-02) Hawk Hollow Middle School**

PETITIONER

Patricia Waldau on behalf of School District U-46

SUBJECT SITE

235 Jacaranda Drive

REQUESTS

Amendment to the Future Land Use Plan
Rezoning from SR-2 PUD to P-1
Plat of Consolidation
Site Plan

SURROUNDING LAND USES

Subject Site	Land Use	Comprehensive Plan	Zoning
	Vacant single-family lots, Municipal/Institutional & Public School	Suburban Residential	P-1 & SR-2 PUD
North	Single Family	Suburban Residential	SR-2
South	Single Family	Suburban Residential	SR-2 PUD
East	Single Family	Suburban Residential / Open Space	PD
West	Single Family	Suburban Residential	ER-1

ZONING HISTORY

- 1986 – Subject property was annexed to the Village by Ordinance #1986-47 and automatically zoned ER-1 (Estate Residence) upon annexation.
- 1998 – An application for the Jacaranda Estates Subdivision consisting of 49 single family lots and the rezoning of the subject property from ER-1 to SR-3 (8,100 sq. ft. lots) was denied by the Village Board by Ordinance #1998-52 (An Ordinance Denying William H. Brown’s Request for Rezoning and Preliminary Plat Approval).

- May 16, 2000 – Property owner William H. Brown and the Village enter into a Consent Decree to settle a lawsuit filed by the Owner against the Village. Resolution #2000-55R (A Resolution Approving Consent Decree Settling the William H. Brown V. Bartlett Lawsuit)
- May 16, 2000 – The subject property was rezoned from ER-1 to the SR-2 PUD Zoning District, a Preliminary Plat of Subdivision was approved for 43 single family lots and a Special Use Permit was granted to allow for the Planned Unit Development by Ordinance #2000-56 (An Ordinance Granting a Special Use Permit for an SR-2 Planned Unit Development and Preliminary Subdivision Plat Approval for the Jacaranda Subdivision).
- July 5, 2001 - School District U-46 purchased the Subject Property from the Brown Trust and petitioned the Village for Site Plan approval for a proposed Elementary School. The Site Plan, which included the construction of Jacaranda Drive, was approved by Ordinance #2001-88 (An Ordinance Approving the Site Plan for The Gerber Road Elementary School).
- October 2, 2001 – School District U-46 filed a Final Plat of Subdivision for the Jacaranda Subdivision (15 single family lots) and a Special Use Permit for wetlands on the Subject Property which was approved by Ordinance #2001-126 (An Ordinance Approving the Final Plat and Special Use for Wetlands for the Jacaranda Subdivision).
- 2017 - The Bartlett Subdivision and PUD Ordinance provides (1) that a Preliminary PUD plan shall be effective for one year or such time extended by the Board for a Final PUD plan to be approved; otherwise, the Preliminary PUD plan must be resubmitted for review and approval; and (2) construction in accordance with a Final PUD plan must commence within one year from when the plan is approved, unless an extension is granted by the Board; otherwise, the Final PUD plan approval becomes null and void. The Preliminary PUD plan was approved in 2000, and the Final PUD Plan was approved in 2001. No extensions were requested or granted, but the Preliminary/Final PUD plan under consideration for approval is almost identical to the Final PUD plan approved by the Village in 2003.
- 2018 – A preliminary/Final PUD Plan and a Final Plat of Subdivision for a 15-lot single family development on 20.23 acres including the existing 8.1-acre Hawk Hollow Elementary School site was approved. The PUD required the approval of a Special Use Permit to allow for modifications from the SR-2 bulk requirements to accommodate the proposed 15-lot single family development. The proposal included a rezoning of the school site property from SR-2 PUD to P-1 Zoning District. An 80' right-of-way for a future extension of Fair Oaks Road was also included as this extension and would follow the Village's Future Land Use Plan and Thoroughfare Plan road alignment.

CURRENT DISCUSSION

1. The petitioner is proposing to vacate the rights of way, abrogate the easements and consolidate the existing 21 lots established by the Jacaranda Subdivision, and is requesting a **Plat of Consolidation** to create a single lot for the conversion of Hawk Hollow Elementary School into a middle school.
2. The petitioner is also requesting to **rezone** the new 19.9-acre parcel to the P-1 Public Lands zoning district upon consolidation.
3. The **Site Plan** for the proposed school facility expansion includes a two-story addition as well as two parking lots providing a total 236 parking spaces. The proposed facility will have a total building area of 150,362 square feet and will have a maximum height of 34-feet. The building addition will consist of masonry utility brick veneers with finished aluminum curtain walls. U-46 anticipates a total of 27 classrooms and a maximum enrollment of 750 students upon completion of the expansion. The majority of the expansion is devoted to flex/lab space, library expansion and a new gymnasium.
4. The only vehicular access to the school will be from Gerber Road via two curbcuts. The northern curbcut will be utilized by staff and parents for student drop-off/pick-up, and the southern curbcut (currently Jacaranda Drive) will be utilized by buses only. The bus loop will be able to accommodate 21 queued school buses at a time. The parent drop-off/pick up lane will have approximately 2,080 feet of queuing space and will be able to accommodate 84 queued vehicles at a time. *(Please see figure 9 of the Sam Schwartz Traffic Impact Study in the attachments)*

U-46 has provided staff with vehicle circulation plans for the three largest middle schools in the district showing similarly separated bus and parent drop-off/pick up lanes. *(Please see in the attachments) Village staff consulted with traffic enforcement entities from South Elgin, Streamwood and Bartlett and all entities reported no significant traffic impact on public streets adjoining these schools.*

Middle Schools	Enrollment	Bus Stacking	Car Stacking
Hawk Hollow	Projected 750 Students	21 Buses	84 Cars
Tefft Middle	898 Students	15 Buses	20 Cars
Kenyon Woods	806 Students	17 Buses	28 Cars
Eastview	695 Students	15 Buses	14 Cars

Stacking estimates based on lane distances provided by U-46 and assuming 25 feet per car and 46 feet per bus.

U-46 also reported that drop-off operations in the morning typically generate less traffic congestion and queuing demand than pick-up lines in the

afternoon. The parent drop-off/pick up lane has a morning and afternoon configuration in order to best meet the different demands from each time period. The afternoon pick lane configuration serpentine through the parking area to allow for more car stacking. U-46 assumes a total of 10 minutes before the school day and 15-20 minutes surrounding the dismissal bell to be the peak traffic periods at the middle schools and Bartlett High School. Traffic is generally cleared 10 minutes after school ends. *(Please see figure 9 of the Sam Schwartz Traffic Impact Study in the attachments)*

Current middle school entry bells are at 8:50AM with first period beginning at 9:00AM. Eighth period end times vary from school to school, ranging from 3:21PM to 3:28PM. Bartlett High School's first warning bell is at 7:30AM with first period beginning at 7:40AM. Eighth period ends at 2:55PM.

5. As recommended in the petitioner's traffic study *(please see the Sam Schwartz Traffic Impact Study in the attachments)* off-site improvements will be made to Gerber Road. A new southbound left-turn lane into the new north drive will be striped providing 115 feet of storage and approximately 50 feet of taper. The existing southbound left-turn lane (currently Jacaranda Drive) will be reduced due to the location of proposed north access. The turn lane will provide 115 feet of storage and approximately 100 feet of taper. This turn lane will be for bus use only.
6. The Village's traffic consultant has reviewed and approved the traffic study and the proposed roadway striping improvements. Roadway striping improvements on Gerber Road will be completed by U-46 per the attached letter written on May 5th 2023.
7. Stormwater detention will be located at the northwest corner of the site along Gerber Road between the two access drives.
8. The existing sidewalks and bike paths will also be extended and relocated where necessary to better connect the school site to the surrounding residential areas.
9. The Village's Future Land Use Plan designates the property as Suburban Residential and Municipal/Institutional. The petitioner is also requesting an **amendment to Future Land Use Plan** to remove the Fair Oaks Road and Winston Lane extensions and designate the entire property as Municipal/Institutional.
10. All plans are currently being reviewed by Staff.

RECOMMENDATION

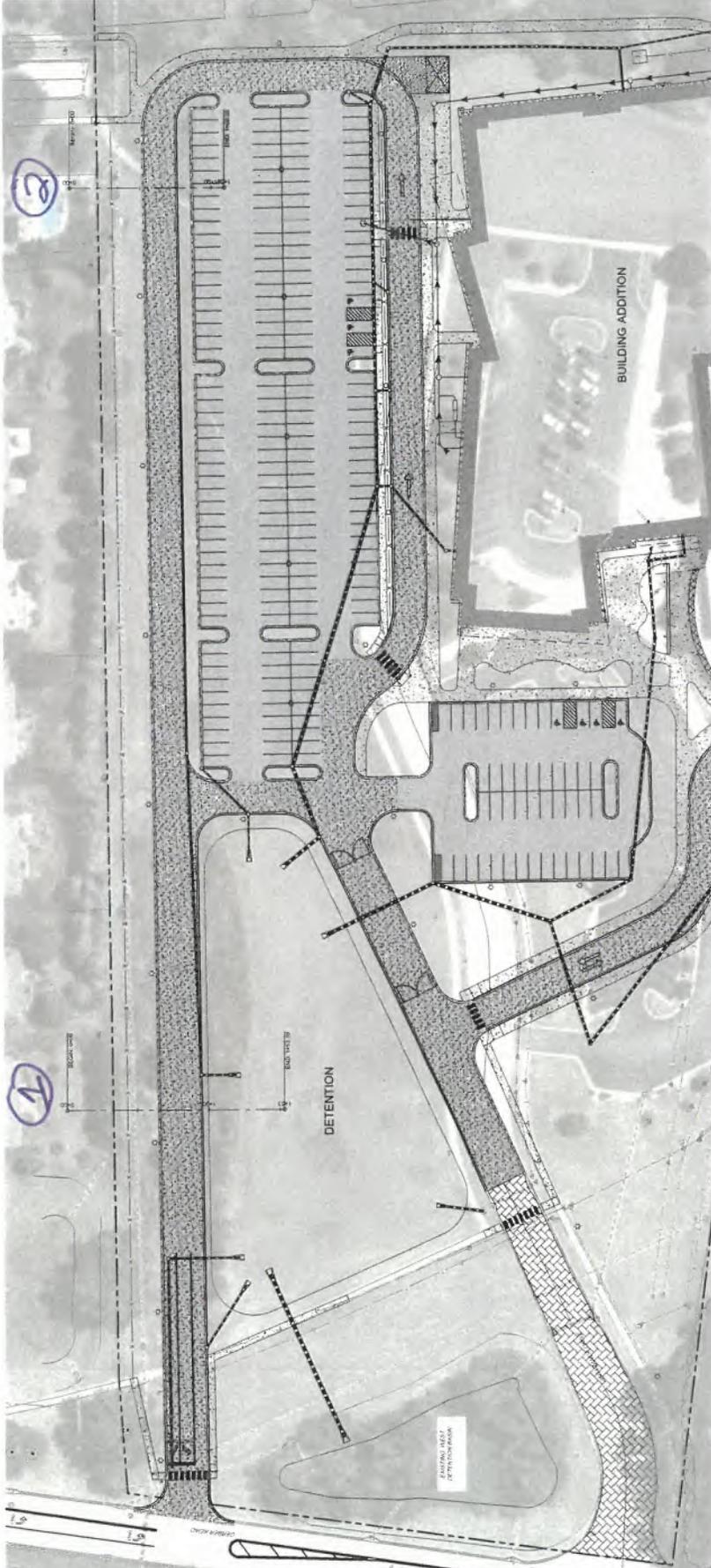
1. The Staff recommends **approval** of the petitioner's requests amending the Future Land Use Plan, Rezoning from SR-2 PUD to P-1, the Plat of Consolidation and the Site Plan, subject to the following conditions and findings of fact:

- A. The Plat of Abrogation, the Plat of Vacation and The Plat of Consolidation shall be recorded prior to the issuance of any building permit;
- B. Village Engineer approval of the engineering plans;
- C. Building permits shall be required for all construction activities;
- D. Planning and Development Services approval of the landscape and photometric plan;
- E. 8-ft. wide sidewalk and bike paths shall be installed in accordance with the site plan;
- F. Landscaping must be installed within one year of the issuance of a building permit;
- G. If landscaping cannot be installed at the time of construction, a landscape estimate shall be submitted to the Planning & Development Services department for review and approval by the village forester and a bond posted in the approved amount for its future installation;
- H. All proposed signage shall require permits and approval from the Planning & Development Services Department prior to installation;
- I. The dumpster shall be located behind a solid gate;
- J. Any required Public Improvement Completion Agreement and associated bonds shall be submitted for review and approval by the Village Attorney.
- K. Findings of Fact (Amendment to the Future Land Use Plan):
 - i. That there has been a change in assumptions regarding the availability of public-school facilities from those on which the comprehensive plan is based;
 - ii. That new issues or needs have presented themselves to the village that are not adequately addressed in the comprehensive plan; and
 - iii. That the amendment will not adversely affect the character of the area in which the proposed development is to be located.
- L. Findings of Face (Zoning Change – SR-2 PUD to P-1):
 - i. That the proposed rezoning from SR-2 PUD to P-1 is compatible with existing uses of property within the general area of the property in question.
 - ii. That the proposed rezoning from SR-2 PUD to P-1 is compatible with the zoning classifications of property within the general area of the property in question.
 - iii. That the proposed school expansion is compatible to the uses permitted under the existing zoning classification.
 - iv. That the proposed rezoning would have no depreciatory impact upon surrounding properties in the general area of the property in question.
 - v. That the proposed zoning change is in compliance with the Bartlett Comprehensive Plan or its amendments.
- M. Findings of Fact (Site Plan):
 - i. That the proposed school expansion on the Subject Property is a permitted use in the proposed P-1 Zoning District;
 - ii. That the proposed school expansion on the Subject Property and the proposed improvements, off-street parking, access, lighting, landscaping, and drainage is compatible with adjacent land uses;

- iii. That the vehicular ingress and egress to and from the site and circulation within the site provides for safe, efficient and convenient movement of traffic not only within the site but on adjacent roadways as well;
 - iv. That the site plan provides for the safe movement of pedestrians within the site;
 - v. That there is a sufficient mixture of grass, trees, and shrubs within the interior and perimeter (including public right-of-way) of the site so that the proposed development will be in harmony with adjacent land uses. Any part of the site plan area not used for buildings, structures, parking, or access ways shall be landscaped with a mixture of grass, trees, and shrubs.
2. The Planning and Zoning Commission held the required public hearing, reviewed the petitioner's request and **recommended approval** at their meeting on June 1, 2023 with the following additional conditions:
 - N. The Village shall closely monitor the intersection of Schick Road and Gerber Road;
 - O. The petitioner shall study the proposed north fence regarding grades and height;
 - P. The petitioner shall add screening at the end of Winston Lane to the end of the fence as far east as possible;
 - Q. The petitioner shall provide a safety monitor (crossing guard) at the proposed north entrance.
3. After the P & Z Commission meeting, the applicant has agreed to having safety monitor (crossing guard) at the north entrance and has submitted the following which are attached:
 - i. Fence section exhibit EX1 in which the fence has been moved further south and is now eight (8) feet from north property line (previously 5 feet);
 - ii. Landscape Plan L2.0 which includes the addition of seven (7) Black Hill Spruce trees at the south end of Winston Drive to provide additional screening of the parking lot
3. The fence section exhibit, revised landscape plan, minutes of the P & Z Commission meeting, plans and additional background information are attached for your review.

dh/attachments

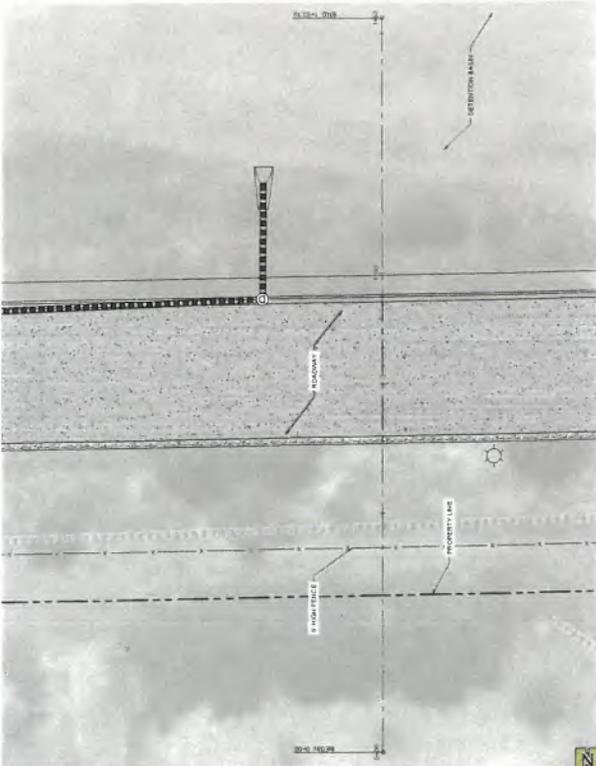
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REVISIONS	No.	Date

Project Number
 221004
 Issue DATE
 MAY 26, 2023
 Drawn by
 LLS
 Sheet Title
 FENCE SECTIONS
 Sheet Number

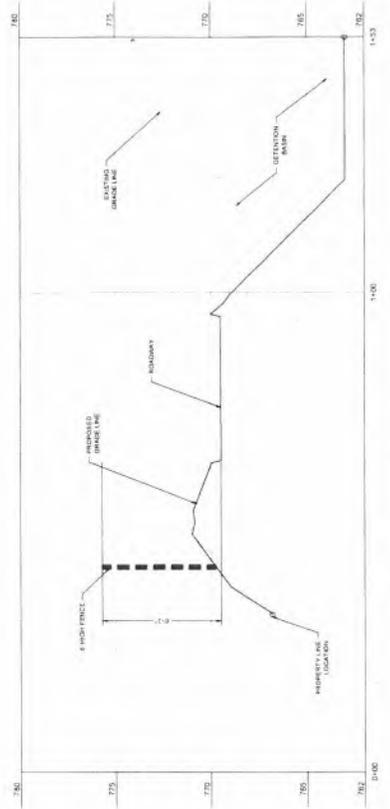
EX1



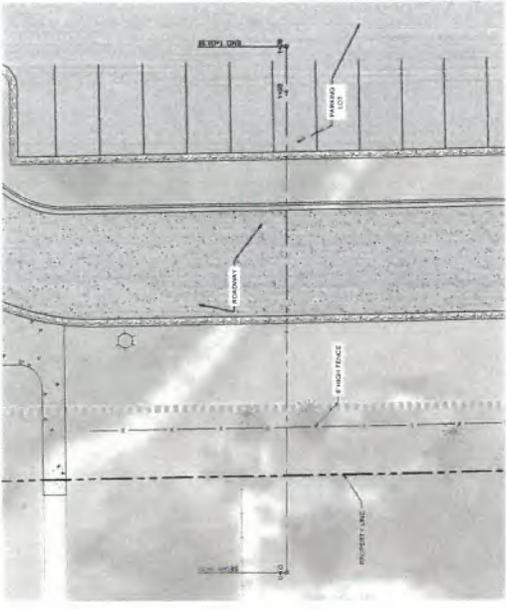
WESTERN FENCE SECTION - PLAN VIEW
 STA 0+00 TO 1+53



(1)

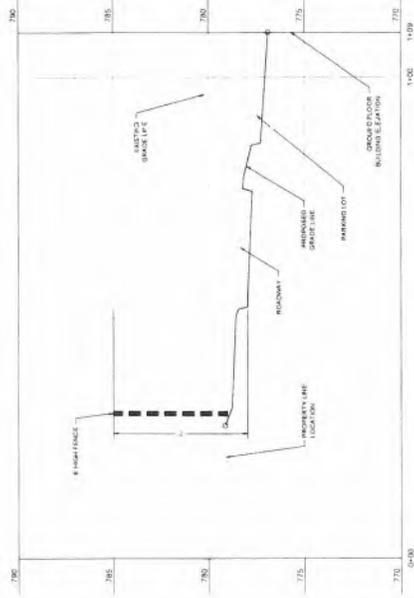


WESTERN FENCE SECTION - PROFILE VIEW
 STA 0+00 TO 1+53



EASTERN FENCE SECTION - PLAN VIEW
 STA 0+00 TO 1+09

(2)



EASTERN FENCE SECTION - PROFILE VIEW
 STA 0+00 TO 1+09

REVISIONS	No.	Date

Project Number: 220000000
 Issue Date: MAY 26, 2023
 Drawn By: JES
 Sheet Title: FENCE SECTIONS
 Sheet Number: EX2



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Planning and Zoning Commission
June 1, 2023

(#23-02) Hawk Hollow Middle School

Plat of Consolidation

Rezoning from SR-2 PUD to P-1

Site Plan

Amendment to the Future Land Use Plan

PUBLIC HEARING

The following exhibits were presented:

Exhibit A – Picture of Sign

Exhibit B – Mail Affidavit

Exhibit C – Notification of Publication

The petitioners **Brian Lindholm**, Chief of Staff, School District U-46 **Patricia Waldau**, Director of Plant Operations, School District U-46, **Dr. Suzanne Johnson**, Interim Superintendent, School District U-46, **Dr. Ann Williams**, Deputy Superintendent of Operations, School District U-46, **Mark Moore**, Assistant Superintendent of Human Resources, School District U-46 and **Richard Bosch**, School Safety Coordinator, School District U-46, 1460 Sheldon Drive, Elgin IL, **Claudia Welp**, Project Manager, Cage Engineering 2200 Cabot Dr, Suite 325, Lisle IL **Kelly Conolly**, Sam Schwartz Engineering, 200 S Wacker Drive, Chicago IL **Jeff Huck**, Arcon Associates, 2050 S Finley Road, Lombard IL came forward and were sworn in by **M. Werden**. **B. Lindholm** stated that Hawk Hollow Elementary School will be converted to a middle school for the 2025-2026 school year. Looking ahead 5 years at capacity utilization of each of our buildings shows that in Bartlett, there are several elementary schools that are running at 50-60% capacity and Hawk Hollow was one of those schools as well as Prairie View Elementary. This is how we reach the decision that we had plenty of elementary capacity with almost no middle school capacity in this area of the district. Students in the area are traveling several miles to go to East View Middle School at the northern end of Bartlett or Kenyon Woods Middle School in South Elgin. Combined with the fact that Hawk Hollow is on a very large plat of land compared to other elementary schools in the district and that will give us enough space to do a sizable addition, green space, parking and athletic fields that a middle school requires. We have not yet finalized the boundaries for what students would attend this new school. There are a lot of moving pieces because another part of this plan is to move all of the 6th grade students out of elementary schools and into middle schools, which is another reason why we needed another middle school in the district. When we open this school in this area that will have a ripple effect on the other schools throughout the district and we will be redistricting the entire area to make sure that we are running all of the middle schools at capacity. **C. Welp** stated that the current zoning is SR-2 PUD. We are rezoning that to P-1 to be one lot. The existing Jacaranda Drive on the south is being maintained and we are adding an additional drive on Gerber Road to the north. The south drive will be for bus traffic only with gates to make sure it is closed to other traffic. The buses will loop around and exit Jacaranda Drive. The parent drop-off will be to the north. There will be a dedicated right turn, left turn and entrance. There will also be a fence 5' off of the property line that will be a 6' high Trex composite fence with landscaping. There will be a sidewalk along the west and north side of the building to access the building from any direction. **J. Kapadoukakis** will students be walking on those paths from the neighborhood? **C. Welp** yes. There is a paved pathway. **J. Kapadoukakis** are you adding trees? **C. Welp** yes, we are adding trees. The landscape plan includes shade trees, shrubs and ornamental grasses throughout the entire site and the pond is going to be



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planted with native detention seeding. **J. Kapadoukakis** at the Gerber Road entrance pedestrian walkway, what will the visibility be like at the new entrance? I am concerned about the close proximity from that main road. **K. Conolly** we recommended that the crossing is at an intersection because you are expecting a crossing at an intersection. Otherwise, you are cutting through the queue of cars. The cars will be queued at a stop sign that exists on the proposed access at Gerber Road. Cars exiting the site will be under stop control. Those cars will be queued internally heading out bond from the site. We do not want students cutting across. We are also recommending that this intersection is monitored to help students cross and also to make sure that the queued cars are exiting efficiently onto Gerber Road. **M. Hopkins** when does the parking lot lighting turn off? **P. Waldau** the parking lot lighting will be tied in with the building's automated systems. The lights will turn on automatically at about 5 am and are timed to go off at 9 pm. **M. Hopkins** how are the lights controlled with regard to lighting spilling onto adjacent property? **C. Welp** the lights are designed to shine south. There will not be excessive light shining to the north. **M. Hopkins** what is the criteria for the photometrics that will be reviewed by staff? **D. Harper** typically, we want to keep light from exceeding a 0.2 candle foot. The petitioner has provided a photometric plan that I have reviewed and we do not see any light spillage over 0.2 because of the LED directional lamps that are proposed for the northern property line. Another helpful aid is the screening fence and the existing trees on the neighboring property to prevent light spillage onto the residential homes. **M. Hopkins** with regard to the separation between the new access drive and the north property line, what is the distance between the edge of the pavement and the north property lines? **C. Welp** that is about 25 feet. **M. Hopkins** there is a retaining wall on part of that property line for the residences. What is the height differential between the 2 grades and top of the fence? **C. Welp** we can look at that. We left at 25-foot buffer to try to give as much space as possible between the residence, but we can move the fence if that becomes an issue. **M. Hopkins** I would like you to look at that and make sure it is operating all the way across the property line.

J. Huck the existing Hawk Hollow building will remain as part of the new middle school. The addition will double the size of the existing building. Since we are converting this school from an elementary school to a middle school, we need to add a number of things appropriate for that grade level including competition spaces, a large cafeteria, and a music wing. You can see on the elevations that the top of the building is very close in height to the existing building. We are going to match the existing bricks. We are not proposing anything that is out of character to the look of the existing building.

K. Conolly I would like to walk through how we conducted the traffic study and what our findings were from that study. Our process starts with existing traffic data collection. We did observations at the school as well as camera traffic counts that give us information about volume of traffic on the roadways. Those counts were conducted in March on a typical school day from 7 am to 9 am and from 2 pm to 6 pm, the peak hours of traffic at Gerber Road and Hawk Hollow Drive and Jacaranda Drive and Gerber Road. During those observations, as is typical with schools, there is more traffic during the morning arrival periods, but it is more spread out over a longer period of time. There is less traffic during the dismissal periods, but longer queues because those parents are arriving earlier and waiting in a pick-up line for a longer period of time. We then determine the volume of the new site generated traffic using engineering standards. We use published information from across the country at similar sites. We do a selection of sites of middle schools that have similar characteristics to the site we are



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studying and project based on the number of students and staff how much traffic that site will generate. We then assign that traffic to our intersections based on a directional distribution. The distribution that we use is heavily based on the boundary areas of a school. There are some small differences that may come about based on what the final boundary area is. We assume 60% will come from the north and 40% from the south, which is a similar distribution as the existing Hawk Hollow Elementary School. We also add background growth to account for other area development to year 2030 to look at what the impacts are. We do traffic analysis and queueing analysis at our study intersections. We give recommendations based on those standards as well as site plan commentary. Some of the recommendations that came out of the study are new striping on Gerber Road for the southbound left turn lanes. The capacity analysis indicates that the length of storage on Gerber Road will accommodate the projected queues. We also made a traffic management plan to accommodate traffic during peak arrival and dismissal periods. We do not need as much queue space for the peak morning arrival so there is less intervention that needs to occur in the morning. Traffic will enter the north drive and follow the in-bound route using a typical drop-off area along the north side of the building. For dismissal periods, we expect more of a queue. For that operation, we will implement a more robust traffic management plan. That traffic will need to circle through the parking and picking up along the north side of the building. We are recommending traffic control personnel for that to monitor queues occurring outbound. The out-bound traffic will be under stop control. There are 2 out-bound lanes with barricades that the school will set up prior to dismissal. One lane will be striped as a right turn lane and one will be striped as a left turn lane that provides about 450 feet each to accommodate outbound queues with additional queueing space around the parking lot without interfering with the inbound circulation. In bound bus activity will be exclusively on Jacaranda Drive, which is an improvement on the current conditions. This area can accommodate up to 21 buses at any one time without spilling onto the roadway. The school district is expecting approximately 16 buses based on their projections and those buses will be staggered. We are proposing 236 parking spaces to meet Village code. About 70 to 90 of those spaces will be used on a typical day by staff. There is a significant amount of excess parking on a typical day. The extra parking will accommodate a large event. **B. Bucaro** our Village traffic consultant recommended that a plan should be considered for events when there is higher than typical attendance (400 or more persons) is anticipated. **K. Conolly** I have worked with the Village traffic consultant and we looked at vehicle occupancy and attendance levels at the other middle school events and that is included in our study. It is typically 200 to 300 persons with an occupancy of 2 to 3 persons per vehicle so that is still way below the 230 spaces. Also, the area for buses not used during off peak hours so the width of that area can actually be used for additional on-street parking because there is no need for all that space for buses during those events. **J. Kapadoukakis** I am concerned about the walkway at the front entrance along Gerber Road. The students will have quite a bit of a walk to get to the school entrance. Is there a way to reroute the students to the back of the property? **K. Conolly** we can look at that. We do want to keep a sidewalk along Gerber Road for the public also. That sidewalk cuts through the property and continues. Having a crossing there for the public is important too. **K. Stone** there is a connection currently on the east side and that is going to continue. **J. Kapadoukakis** I assume most of the students will be coming from that neighbor and could use that entrance. **D. Harper** there are 2 existing sidewalks and those will be connected to the Hawk Hollow subdivision. **B. Bucaro** has the school district accepted your recommendation to have traffic control personnel at Gerber Road and how will that personnel protect those students? **K. Conolly** yes, they have and that personnel would also monitor



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the outbound traffic and radio back if operations need to change. We are also recommending staffing the area to help with loading. There will be a crossing guard. **J. Kapadoukakis** could there be more traffic control with the Bartlett Police Department also? **C. Welp** it is my understanding that if it is on Village property, we would work with the Village to see what those options would be and if it is on school district property, the school district would have staff handle that. Our school safety office would work closely with the Village on that as needed. **M. Hopkins** this traffic study only looks at traffic up to Hawk Hollow, but the intersection at Schick Road is going to take 60% of these cars, does it warrant a traffic light? How do you take that into consideration? **K. Conolly** we worked with the Village to determine what the scope of our study should be. This school was originally built for close to 600 students. Based on the difference in enrollment, we determined that we only needed to study what was in close proximity. **M. Hopkins** I see that the numbers are low in terms of the number of trips per day even anticipated into the future, but at peak times, how will that operate? **K. Stone** our traffic consultant is here and can answer questions about that. **Lynn Means, BLA Inc**, Senior Transportation Engineer 333 Peirce Rd, Suite 200, Itasca, IL stated we were asked by the Village Board to look at how the operations are currently at Schick Road and Gerber Road. We pulled historical data as well as Village traffic volume data to look at how that intersection currently operates. We also reviewed historical DuPage County data, IDOT data as well as the current traffic counts that were performed along Gerber Road. Based on the current and projected volumes during the school morning and afternoon peak hours, that currently does not warrant a traffic signal. We did look at the pm peak hour and those counts did go up until 6 pm and during those higher evening peak hours when Schick Road volume is higher, which is very close to satisfying a traffic control at that intersection. We looked at crash data and there is not a significant history. There were 9 crashes at that intersection over a 5-year period. We did that during the higher timeframe when Schick Road is at the higher volumes, school traffic is relatively low during that time period with about 15 vehicles coming out during that time frame, which is less than 10% of that traffic. The school traffic even as it contributes to higher time periods, the peak is at around 2 pm to 3 pm when the adjacent street traffic along Schick Road operates at about 70% of what the peak timeframe is so that even with this additional traffic from the school it does not warrant a traffic control signal. **B. Bucaro** who would make the decision about when a traffic light is needed there? **K. Stone** the Village would make the decision and the Village is committed to monitoring that intersection. Once it meets the warrants for a traffic signal that is when it would be installed. **G. Koziol** Gerber Road and Schick Road concern me. I travel it often and find that intersection to be dangerous. The traffic on Gerber Road does not give you a break. You are saying that intersection does not warrant a light today. I have had experience with other traffic lights and traffic signs. The statement is often made that it is not warranted and we have to live with it. If a light cannot be placed there, what about a 4-way stop? **K. Conolly** those have specific warrants too and it is often much less efficient. There are higher delays that you have to balance with additional gaps in traffic. There would have to be a study conducted for placing that intersection under an all-ways stop. **G. Koziol** will it take a major accident there to warrant an improvement? **K. Conolly** no it would not, it is volume based. **K. Stone** that is just one thing that a study would look at. The study would look at the traffic count, turning movements and delays. There is a lot that goes into those studies. It is not just a single factor. The Village Board did discuss this concern. It is the Village's jurisdiction and the Village would be in control of when that light would go in. Again, the school peak traffic is not at the same time as the peak traffic at that intersection. That is why the petitioner is not looking at intersection improvements as part of this project. **J. Batterman** in your report, for the southbound



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turning, you recommended that the turn lane is extended. Is there a possibility that the turn lane would fill up and cars would be in the lane of traffic and block flow? **K. Conolly** that was part of the capacity analysis that takes into account the volume of traffic turning and the volume of traffic opposing that turn (northbound Gerber Road). We are providing about 115 feet of storage, which is approximately 4 to 5 cars. The max queues there from the capacity analysis are about 2 cars. **M. Werden** you have addressed things internally very well, but I am concerned about the regional issues. Gerber Road has a slight slant to it and we have addressed that, but at the other end there is a very narrow intersection at Army Trail Road with a sharp decline. There is a vision problem at Army Trail Road and with school buses leaving and blocking traffic. My problem with this plan is vacating Fair Oaks Road. This was an issue years ago. The planners wanted to connect Fair Oaks Road with Gerber Road because of the intersection at Army Trail Road. The Oak Trail Professional Center at the north side of Army Trail Road at Fair Oaks Road where there is a dedicated right-of-way was only supposed to be a temporary entrance, which was going to be vacated once Fair Oaks Road went through. We are inviting more problems by vacating that at the shopping center and at the Gerber Road and Army Trail Road intersection. I feel that is going to be a problem in the future especially with Gerber Road lined up with traffic at the north and south. We will need a light eventually at Schick Road. **K. Conolly** one of the things that the Village can look at is traffic signal timing. **M. Werden** I just wanted to bring up the point that I do not like vacating Fair Oaks Road.

M. Werden opened the public hearing portion of the meeting.

DeWayne Burris 5N151 Gerber Road, Bartlett IL came forward and stated my property is adjacent to property that is being developed. I have no issues with the proposed u-46 project. I am in favor of vacating the Fair Oaks thoroughfare. Originally that was supposed to only take place if there was a grade crossing at Struckman Boulevard and a temporary light at Army Trail Road. This does impact my property a great deal and my wife and I have been dealing with this for over 23 years. I have been a resident for 40 years and with that being on the map it makes a big impact on my property value. With this proposal, I do not see the need to have the Fair Oaks thoroughfare on the map and through my property. **Kathy Andeway** 233 Hawk Hollow Drive, Bartlett IL stated when we bought our homes on Hawk Hollow Drive, we were told that the property behind us was zoned for residential homes and not a parking lot or a 3-lane road. Our main concern is the safety of our residents from any type of accident from moving vehicles directly behind our houses. In addition, there will be car fumes, noise from vehicles, parking lot lights, street lights and vehicle headlights shining in our backyards. To keep our residence safe, reduce lighting glaring into our homes and buffer the noise, it is requested that an 8' fence, not a 6' fence is installed with a row of tall shrubs or evergreens. We are also requesting that the home owners of Hawk Hollow have input on the style of the fence. We see parents rushing in the park lot now and we are going to have twice as many cars and that 3-lane road is going to be right behind our property lines. That scares me. **Kevin Andeway** 233 Hawk Hollow Drive, Bartlett IL stated that my concern is that since you are building a 200-car parking lot, where will the water drain? Will the water drain into our back yards? Is the retention pond going to be able to handle the volume of water? That was not talk about at the Village Board meeting last week so I have no idea what that plans are for the water drainage. Also, you talked about the traffic earlier. I leave every morning and it takes me about 10 minutes to pull out of my street on Hawk Hollow because cars are going 45 miles an hour down the street and I cannot get out. There are cars trying to pull into Hawk Hollow that



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cannot make the left turn because cars are coming one after another. You are going to have 6 to 8 buses coming now and waiting to turn in. How will that be controlled for people who want to pull out and go left or right? You are going to have stoppage. No one is going to go anywhere. No traffic control. No safety control person. Cars are going to be jamming out and cutting cars off. Take into consideration for that. **D. Harper** the Engineer did review the petitioner's engineering plan. All rainwater will shed toward the 2 rainwater retention ponds and would be sufficient to handle the added impervious surface of the new parking lot. **K. Stone** the detention area is located in the large area between the 2 access roads. **K. Andeway** if you are making a road 3 lanes wide so cars will exit out 1 line and pull in, what is controlling the people that want to turn left on Gerber Road when cars are coming the opposite direction? **K. Stone** it is as stop sign just like it is on your street. **K. Andeway** what about Gerber Road? Those cars are going to be backed up and waiting to pull out especially if there are 700 students and 500 are bused. You are going to have the same problem with the buses. The buses are going to be trying to pull out too. This is not a good idea. I would redesign that. **Caroline Hausl** 241 Hawk Hollow, Bartlett IL asked, what is the distance from our property line to where the fence will be, not from the back of the homes to the fence, from our property lines? **D. Harper** that is 5 feet. **C. Hausl** what will be the hours of the school? **C. Welp** school starts at 9 am and we will have support staff and access before 9 am. **C. Hausl** we are also concerned that if there is not adequate parking at the school during events that will negatively impact parking on Hawk Hollow Drive because of the proximity to the school. The traffic signal at Army Trail Road and Gerber Road is very long. We can sit there for 3 minutes and if you have buses and parents in the morning trying to turn left onto Army Trail Road that will stack up. How many cars will stack up there to turn left? That is going to be an issue for everybody at least twice a day. Also, where will the garbage be located? **D. Harper** there is a screened enclosure on the plans with solid gates. **Steve Jiskra** 254 Hawk Hollow Drive, Bartlett IL stated that in the planning documents is states that the lighting is used for safety and will be placed as such to not disturb adjacent properties and it was stated that the lights will be facing south and will not impact us to the north on Hawk Hollow. **M. Werden** yes, that is correct. **S. Jiskra** it was stated that the fence line will stop before the end of the last house and there will be 1 tree planted on the northeast corner. I would request that several bushes and trees are planted there since myself and my neighbors will be looking at the parking lot and there is nothing that will block our view. **M. Werden** how close is the proposed fence to the path that goes into the neighborhood? **C. Welp** a few feet **S. Jiskra** right now, the northeast corner where Winston ends, people dump shrubbery there, which I assume will be cleared out because it looks like the parking lot will extend east of that road. I assume the school will own that property. Myself and several of my neighbors are asking that landscaping is added to that area because there will not be a fence there. **M. Hopkins** will there be a staff report tonight? **D. Harper** the petitioner is requesting an amendment to the future land use plan, rezoning the property to P-1 (public lands) and a plat of consolidation and site plan. On the location map, you can see the existing lots and the existing right of ways for Fair Oaks Road. The proposed site plan includes 2 parking lots with a total of 236 parking spaces. The proposed school facility expansion includes a two-story addition as well as two parking lots providing a total 236 parking spaces. The proposed facility will have a total building area of 150,362 square feet and will have a maximum height of 34-feet. The building's addition will consist of masonry utility brick veneers with a finished aluminum curtain wall for the canopies. U-46 anticipates a total of 27 classrooms and a maximum enrollment of 750 students upon completion of the expansion. The majority of the expansion is devoted to flex/lab space, library expansion and a new gymnasium. The final plat of consolidation would create a single lot for the conversion of Hawk Hollow



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Elementary School into a middle school. The proposal is to change the designation on the future land use plat to public lands and to remove the right of ways that are being vacated by the plat of consolidation and to rezone the entire property to public lands. There will be trail connections as part of the pedestrian infrastructure with a sidewalk that will come out to Gerber Road to provide visibility for students and any other pedestrians that are crossing. That crossing provides visibility for drivers on Gerber Road and there is a stop sign on the school drive that will stop traffic from that direction that will be monitored by a crossing guard. That sidewalk continues to an existing trail south of the property. On the east side of the property there is an existing trail system that will be connected and repaved. There will be an 8' wide sidewalk connecting to the existing residential subdivisions. There is proposed 6' fence 5' from the property line with landscaping. The western entrance would be the main entrance for guests and staff. **J. Kapadoukakis** is there anything that could be considered for landscaping where the fence ends to provide more screening for the residence? **K. Stone** you could add a condition for that. **M. Werden** I want to thank everyone for the comments. I was vehemently opposed to vacating Fair Oaks Road, but I think a lot of the other issues have been addressed and as **D. Burris** stated, it has been a drain on his property value and he would benefit from vacating because if not, access would go onto the corner of his property and take out his barn if it ever went through.

M. Hopkins made a motion to pass along **a positive recommendation** to the Village Board to approve case **(#23-02) Hawk Hollow Middle School** for the Plat of Consolidation, rezoning from SR-2 PUD to P-1, the site plan, and an amendment to the future land use plan subject to the findings of fact outlined in the staff report and these conditions:

The Village will closely monitor the intersection at Schick Road and Gerber Road, the petitioner will study the proposed north fence regarding grades and height, the petitioner will add screening landscaping at the end of Winston Lane to the end of the fence as far east as possible, and for the petitioner will provide safety monitoring of the proposed new north entrance.

Motioned by: M. Hopkins
Seconded by: J. Miaso

M. Werden closed the public hearing portion of the meeting.

Roll Call

Ayes: B. Bucaro, C. Deveaux, M. Hopkins, J. Kapadoukakis, G. Koziol, J. Miaso, J. Battermann, M. Werden
Nays: None

The motion carried.



Dr. Suzanne Johnson, Interim Superintendent

www.u-46.org

May 22, 2023

Daniel Harper, AICP
Village Planner, Planning & Development Services
228 S. Main Street
Bartlett, IL 60103

Daniel,

In response to your request for clarification on topics raised during the May 16th, 2023 Committee of the Whole meeting, please see below:

Vehicle stacking numbers for all elementary and middle schools in the district.

Many of our existing middle schools are older and the contemplation of stacking was not necessarily considered during construction, mainly because the modes of transportation to school were busing or walking, as opposed to parents driving to and from school. As such, this information is not tracked by the district. The proposed stacking for the middle school renovations and addition corrects that with approximately 2,080 feet of queuing space provided on-site for the pick-up line, as well as separating bus circulation and providing additional spaces for buses to queue. The traffic management plan outlined in the traffic study on Figure 9 calls for active traffic management during afternoon dismissal which we are committed to providing.

Enrollment numbers for all elementary and middles schools in the district.

Table with 2 columns: Number of Students, School Building. Rows include Tefft Middle School (898), Kenyon Woods Middle School (806), Eastview Middle School (695), Otter Creek Elementary School (660), Sycamore Trails Elementary School (613), Larsen Middle School (598), Ellis Middle School (595), Coleman Elementary School (580), Kimball Middle School (580), Lords Park Elementary School (575), Highland Elementary School (572), Nature Ridge Elementary School (561), Liberty Elementary School (548), and Abbott Middle School (537).



School District U-46

Plant Operations
 Patricia Waldau, Director
 1460 Sheldon Drive, Elgin, IL 60120
 Tel: 847.888.5000 x5060
 Fax: 847.888.7177

Dr. Suzanne Johnson, Interim Superintendent

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526	Centennial Elementary School
523	Illinois Park Elementary School
503	Horizon Elementary School
498	Huff Elementary School
491	Clinton Elementary School
488	Glenbrook Elementary School
488	Hilltop Elementary School
480	Creekside Elementary School
464	Ronald D. O’Neal Elementary School
461	Lincoln Elementary School
461	Ridge Circle Elementary School
436	Century Oaks Elementary School
433	Fox Meadow Elementary School
433	Hillcrest Elementary School
432	Bartlett Elementary School
417	Ontarioville Elementary School
416	Canton Middle School
414	Heritage Elementary School
405	Prairieview Elementary School
392	Harriet Gifford Elementary School
388	Oakhill Elementary School
376	Laurel Hill Elementary School
372	Hanover Countryside Elementary School
368	Channing Elementary School
361	Spring Trail Elementary School
357	Lowrie Elementary School
354	Washington Elementary School
353	Timber Trails Elementary School
342	McKinley Elementary School
336	Wayne Elementary School
326	Sunnydale Elementary School
290	Hawk Hollow Elementary School
283	Parkwood Elementary School
268	Garfield Elementary School
235	Willard Elementary School

Transportation mode share for students (% arriving/ leaving by car, bus, walk/bike)

Approximately 46% of current Hawk Hollow Elementary School students are bused and 54% do not qualify for busing, arriving by either car, foot, or bike.

Dr. Suzanne Johnson, Interim Superintendent

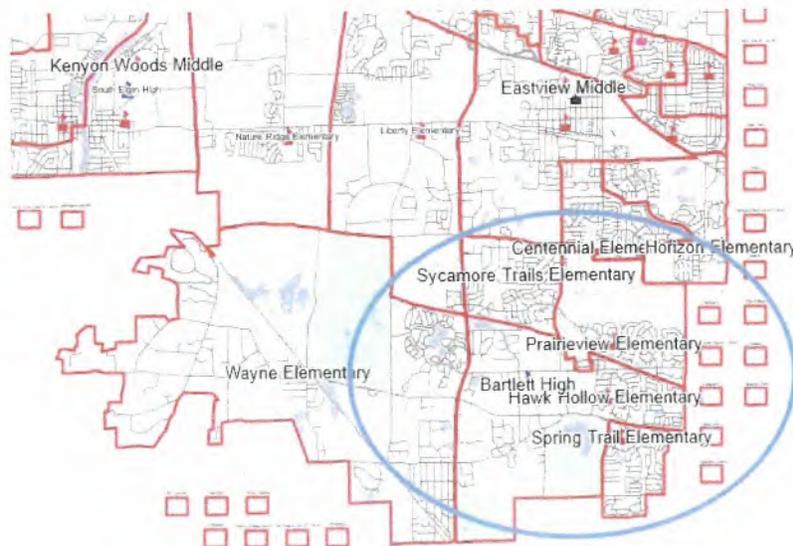
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Peak traffic hours for the middle school and Bartlett HS

Drop-off operations in the morning typically generate more dispersed traffic and less queuing demand than pick-up lines in the afternoon. We could assume a total of 10 minutes before the school day and 15-20 minutes surrounding the dismissal bell to be the peak traffic periods at our middle schools and Bartlett High School. Traffic is generally cleared 10 minutes after school ends. Current middle school entry bells are at 8:50AM with first period beginning at 9:00AM. Eighth period end times vary from school to school, but range from 3:21PM to 3:28PM. Bartlett High School's first warning bell is at 7:30AM with first period beginning at 7:40AM. Eighth period ends at 2:55PM.

What is U-46's estimated boundary area for enrollment for Hawk Hollow MS and what is the bus boundary.

The district administrative team is working through several different boundary scenarios to support the shift of 6th grade from our elementary to middle schools for the 2025-2026 school year and expects it will be several months before we have something more specific to share. The boundary will extend beyond the current Hawk Hollow Elementary boundary area to also include at least portions of neighboring elementary school attendance areas (Spring Trail, Prairieview, Sycamore Trails, Wayne). See below for a representative example of what the boundary area may include, though it is not fully representative of what the boundaries could be. We will certainly keep you updated as we finalize the new middle school boundaries over the coming months, but the estimated likely number of students to attend the new middle school would be 750.





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Bus boundaries are dictated by Article 29 of the Illinois School Code (105 ILCS 5/29-3), which states that the distance shall be measured from the exit of the residence property to the point where pupils are normally unloaded at the school attended by determining the shortest distance on normally traveled roads or streets. Pupils can also be required to walk up to one and one-half miles from their residence to a pick-up point regardless of the distance traveled by bus. Pending the determination of boundaries, the District will determine potential hazards which may allow additional students to qualify for busing.

Eastview Middle School Vehicle Circulation Routes



Eastview Parent = 343 FT



Eastview Bus = 678 FT

Kenyon Wood Middle School Vehicle Circulation Routes



Kenyon Wood Parent = 688 FT



Kenyon Wood Bus = 794 FT

Tefft Middle School Vehicle Circulation Routes



Tefft Parent = 512 FT



Tefft Bus = 676 FT



Traffic Study for Hawk Hollow Expansion - Bartlett, Illinois

Submitted to:



Traffic Impact Study

April 21, 2023 // Original

Submitted by:

**Sam
Schwartz**

A TYLin Company

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1. Introduction

Sam Schwartz Consulting, LLC, (Sam Schwartz) was retained by School District U-46 to conduct a traffic study for a planned expansion of Hawk Hollow Elementary School in Bartlett, Illinois. The existing elementary school, located at 235 Jacaranda Drive, is currently accessed by three site driveways along the south side of Jacaranda Drive. An aerial view of the study area can be seen on **Figure 1**.

Hawk Hollow Elementary has a current enrollment of approximately 293 students and has a building footprint of approximately 57,000 square feet. Under the proposed plan, a 93,000 square-foot building addition and associated parking would be constructed immediately north of the current building, replacing the existing parking lot configuration. The middle school campus is expected to have capacity for an enrollment of approximately 750 students. Primary vehicle access to the school would be relocated to a new access driveway to Gerber Road proposed approximately 315 feet north of Jacaranda Drive, referred to for the purposes of this study as Proposed Access. The site's Jacaranda Drive access to Gerber Road would remain and is expected to be used exclusively by buses during typical conditions, with gate barriers separating the circulation of buses and passenger vehicles. Jacaranda Drive may be used for secondary passenger vehicle access during after-school special events. Parking for 236 vehicles is proposed per the concept site plan (attached in the Appendix). Sidewalk and crosswalk locations are also shown on the concept plan connecting to Gerber Road and the adjacent neighborhoods.

The following report documents Sam Schwartz's methodology regarding data collection, traffic forecasting, and analyses performed. Recommended improvements are documented to mitigate anticipated traffic-related impacts and to improve the functionality of the local transportation system.



2. Existing Conditions

Sam Schwartz conducted a field visit to collect relevant information pertaining to the school, the surrounding street network, traffic volumes, traffic controls, lane geometry, and infrastructure at the study intersections. Based on these characteristics, existing intersection capacity was evaluated to establish existing operational conditions for the study area, as described in the following sections.

2.1. Area Land Uses & Connectivity

Hawk Hollow Elementary School is located on the east side of Gerber Road between Hawk Hollow Drive and Norway Drive. Jacaranda Drive is located approximately one quarter mile to the south of Schick Road and to the north of Army Trail Road. Each roadway provides local and regional connectivity to the east and west, including access to Illinois Route 59 (IL 59) approximately 1.5 miles west of Gerber Road. Land uses in the areas surrounding the site are generally residential.

2.2. Existing Street Characteristics

Field data collection was performed along the primary study roadways of Gerber Road, Hawk Hollow Drive, and Jacaranda Drive. Descriptions of these roadways are provided below.

Gerber Road is a north-south Major Collector roadway that provides a three-lane cross section with left-turn lanes at intersections. At its unsignalized intersections with Hawk Hollow Drive and Jacaranda Drive, the southbound approaches provide an exclusive left-turn lane and one through lane and the northbound approaches provide one through/right-turn lane. Gerber Road is under the jurisdiction of the Village of Bartlett and has a posted speed limit of 35 MPH. Between Hawk Hollow Drive and Jacaranda Drive, there is a school zone where the posted speed limit is 20 MPH on school days when children are present.

Hawk Hollow Drive and **Jacaranda Drive** are east-west local roadways that extend east of Gerber Road and provide one lane of travel in each direction. At their unsignalized T-intersections with Gerber Road, the westbound approaches of Hawk Hollow Drive and Jacaranda Drive each provide one shared left-turn/right-turn lane with a single receiving lane. Both roadways are under the jurisdiction of the Village of Bartlett and do not have posted speed limits. For the purposes of this study, each roadway was assumed to operate with a speed limit of 25 MPH. Hawk Hollow Drive and Jacaranda Drive are located approximately 955 and 1,490 feet south of Schick Road, respectively.

2.3. Arrival/Dismissal Observations

As a part of the field visit, observations were performed during typical weekday arrival and dismissal periods, as noted below. Both periods were observed on clear, dry days with typical attendance.

Arrival Period

Arrival observations were conducted prior to the school's scheduled start time of 8:30 AM. During observations, student drop-offs were seen as early as 8:00 AM, with early students waiting to be admitted under supervision near the school's doorways. Inbound drop-off vehicles exclusively utilized the East Lot, either parking in marked spaces or utilizing curbside space fronting the school. Bus activity occurred in the West Lot, separate from personal vehicle drop-off.

Personal vehicle queuing along the curbside space was observed to reach a maximum of approximately 10 to 12 passenger vehicles, extending along the perimeter of the East Lot but not extending outside the parking lot onto Jacaranda Drive. Outbound queues at Jacaranda Drive and Gerber Road were observed at a maximum of approximately 8 to 10 vehicles, including passenger vehicles and buses, and quickly dissipated. Heaviest queuing occurred at approximately 8:28 AM just prior to the first bell. Inbound queues for the southbound left-turn lane on Gerber Road at Jacaranda Drive were generally observed to be minimal.

Dismissal Period

In the afternoon, Hawk Hollow Elementary typically dismisses class at 2:30 PM. Beginning at approximately 1:45 PM, personal vehicles were observed queuing in front of the school in the East Lot. At its longest, this queue spilled back out of the East Lot onto Jacaranda Drive, extending westward. This queue was observed to extend past the westernmost school access driveway, but did not extend to Gerber Road, and was comprised of approximately 42 passenger vehicles. Incoming buses utilized the West Lot and were observed to arrive before the West Lot driveway was blocked by queues.

In the minutes directly following dismissal, outbound queues on Jacaranda Drive at Gerber Road were observed extending approximately 700 feet east of Gerber Road, blocking outbound maneuvers from the two westernmost school access driveways, which both serve the West Lot used by buses and staff. This queue was observed to include passenger vehicles and buses and dissipated quickly; at approximately 2:40 PM (ten minutes after start of dismissal) the East Lot was substantially empty.

2.4. Existing Traffic Volumes

Sam Schwartz conducted intersection turning movement counts (TMCs) in March 2023 at the following locations, as agreed upon with representatives of the Village:

- Gerber Road and Hawk Hollow Drive
- Gerber Road and Jacaranda Drive

Counts were performed during weekday morning and afternoon periods (7:00-9:00AM and 2:00-6:00PM) to coincide with the peak activity of the school and on the area roadway network. Based on the resulting count data, peak hours occurred from 7:30-8:30AM and from 2:30-3:30PM during the weekday morning and afternoon peak periods, respectively. As noted in the preceding section, Hawk Hollow Elementary's existing dismissal time is 2:30PM. As such, the network afternoon peak hour of 2:30-3:30PM does not capture inbound trips associated with dismissal, which were generally observed to occur between 2:00-2:30PM. As such, the 2:00-3:00PM hour was selected for analysis in order to most effectively model dismissal operations.

The resulting traffic volumes were summarized and balanced where applicable throughout the study area for the morning and afternoon peak hours, establishing an Existing Year 2023 volume network. The resulting traffic volumes at each intersection during the weekday morning and afternoon peak hours are illustrated on **Figure 2**. Summaries of the raw TMC counts are contained in the Appendix.

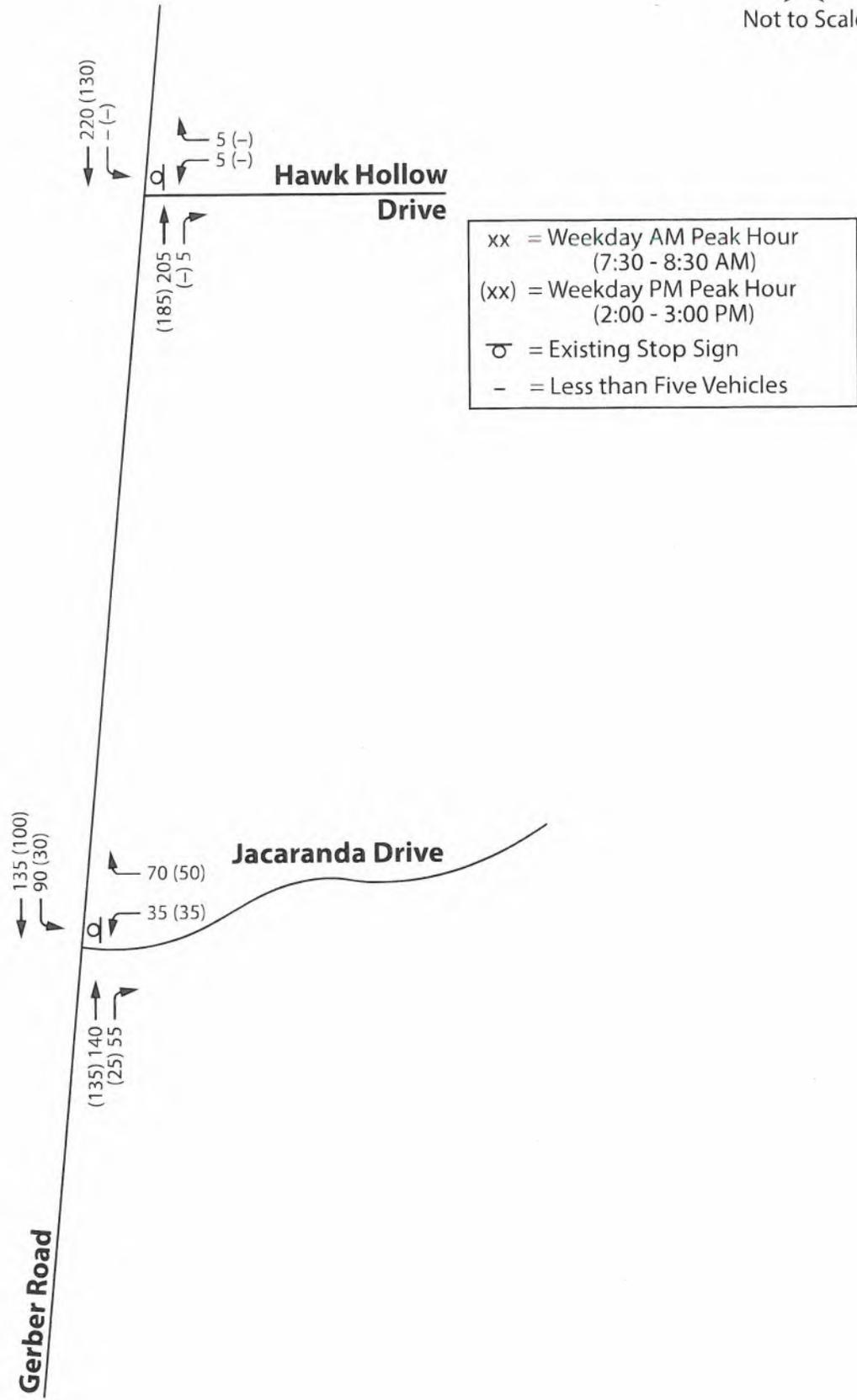


Figure 2
Existing (2023) Traffic Volumes

2.5. Existing Intersection Operations

The operational effectiveness of transportation facilities is measured in terms of Level of Service (LOS). LOS ranges from LOS A to LOS F, with LOS A reflecting the lowest level of vehicular delay and LOS F being the highest. LOS A represents free-flow conditions where motorists experience a high level of comfort and convenience. LOS E represents saturated or at-capacity conditions, and LOS F represents oversaturated conditions.

For unsignalized intersections, total delay (measured in seconds per vehicle) is defined as the total elapsed time from the moment a vehicle stops at the back of the queue until the vehicle departs from the stop bar on the stop-sign controlled approach. This includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The LOS criteria for unsignalized intersections, as defined in the HCM, are summarized in **Table 1**.

Table 1. LOS Criteria for Unsignalized Intersections

Level of Service (LOS) ¹	Average Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 15.0 seconds
C	> 15.0 and ≤ 25.0 seconds
D	> 25.0 and ≤ 35.0 seconds
E	> 35.0 and ≤ 50.0 seconds
F	> 50.0 seconds

¹Transportation Research Board, Highway Capacity Manual, Sixth Edition.
¹LOS grades assume volume-to-capacity (v/c) ratio < 1. LOS F is triggered when v/c ≥ 1

Capacity analysis was performed to evaluate the study intersections for the weekday peak hours using Synchro 11 capacity analysis software. The HCM 6th Edition report was referenced for unsignalized study intersections. The results for each study intersection under existing conditions are summarized in **Table 2**.

Table 2. Existing (Year 2023) Levels of Service

Intersection	Weekday Morning Peak		Weekday Afternoon Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Gerber Road & Hawk Hollow Drive¹				
Westbound	12.1	B	11.3	B
Southbound (Left Turn)	8.0	A	7.9	A
Gerber Road & Jacaranda Drive¹				
Westbound	38.4	E	14.3	B
Southbound (Left Turn)	8.6	A	8.0	A

¹Two-Way Stop-Controlled Intersection

As shown above, most intersection movements in the study area currently operate at acceptable LOS B or better. In the morning peak hour, the outbound approach of Jacaranda Drive at Gerber Road is shown to operate at LOS E. As noted in the preceding section, some outbound delay on this approach was observed during a field visit, but any notable queuing was limited to a very brief period immediately prior to and following the morning school bell. Similarly, high delay and lengthy queues were observed on this same approach over a short period of time during the afternoon dismissal peak.

2.6. Crash Analysis

At the request of the Village of Bartlett, historical crash data for the two study intersections over the most recent five years was requested from the Bartlett Police Department. Based on this data, no crashes were reported at either intersection during the subject time period.

3. Future Conditions

In order to evaluate future intersection operations after the completion of school expansion, traffic volumes were forecasted for a “build-plus-five” design year. With the School District indicating that the proposed school construction would be completed by Year 2025, a Year 2030 design year was utilized to account for a gradual increase in student population to full capacity. Future traffic forecasting was based on a combination of background traffic growth and new trips generated by the subject development. Based on the resulting projections, capacity analyses were prepared to evaluate future operational conditions. The findings and resulting recommendations are discussed in this section of the report.

3.1. Area Improvement Plans

Based on a review of the Village of Bartlett's *Capital Improvements Program 2021-2025*, there are no planned improvements affecting the study area intersections. As such, no improvements other than those recommended as a part of this study are included in Future Year 2030 conditions.

3.2. Site Development Plan

The concept site plan shows two full-access driveways to the proposed middle school. Jacaranda Drive would remain and be vacated as a public street. It would connect to a new circular drive built along the west side of the existing building and would be utilized exclusively by buses during arrival and dismissal periods. Cross-access to the remainder of the site would be restricted by swinging gates. A new driveway, referred to as Proposed Access, would be provided approximately 315 feet north of Jacaranda Drive and 230 feet south of Gerber Road's intersection with Hawk Hollow Drive. Primary passenger vehicle access to the site would be provided by the new Proposed Access which would connect with two new parking lots and a semi-circular drive for student pick-up/drop-off activity.

3.3. Trip Generation

As noted previously, after completion of the proposed expansion plan, the building would be used as a middle school with approximately 65 employees and capacity for an enrollment of approximately 750 students. Based on conversations with the design team, it is expected that this student body would be comprised entirely of students from a new school boundary area, and that the current elementary school students would be relocated to different sites. As such, Sam Schwartz estimated the total future increase in site traffic by projecting trips for the middle school use and later deducting existing trips counted at the current elementary school's access.

Using the Institute of Transportation Engineers (ITE) manual [Trip Generation, 11th Edition](#), trip generation data was referenced for ITE Land Use Code (LUC) LUC 522 – Middle School/Junior High School. Trip generation rates for a peak hour between the hours of 7:00-9:00AM and 4:00-6:00PM (peak hours of adjacent street) and the two highest hours of site-generated traffic during the AM and PM periods (peak hours of generator) were referenced. The corresponding trip generation data from [Trip Generation](#) is shown below in **Table 3**. Excerpted trip generation data from ITE is included in the Appendix.

Table 3. ITE Trip Generation Data

Land Use	Daily	Weekday AM Peak		Weekday PM Peak	
		of Adjacent	of Generator	of Adjacent	of Generator
Middle School/ Junior High School (LUC 522)	$\ln(T) = 0.97\ln(X) + 0.95$ 50% in / 50% out	$T = 0.67(X)$ 54% in / 46% out	$T = 0.74(X)$ 55% in / 45% out	$T = 0.15(X)$ 48% in / 52% out	$T = 0.33(X) + 29.58$ 46% in / 54% out

T = Trips generated
 X = Students

The middle school use is expected to generate highest peak hour traffic during the peak hour of generator for each peak period. Since school start times generally occur during the 7:00-9:00AM time period, peak school traffic often overlaps with the general morning rush hour. As such, trip projections for the proposed site were based on peak of adjacent rates in the morning peak hour. Alternatively, school dismissal periods tend to occur earlier in the afternoon and do not overlap with the 4:00-6:00PM evening peak period. As such, trip projections for the PM peak hour were based on peak of generator rates.

Total vehicle trips were calculated using the preceding equations. **Table 4** summarizes the incoming and outgoing trips associated with the proposed use during the weekday morning and weekday afternoon peak hours. Based on information provided by the school district, up to 16 buses are expected during each arrival/dismissal period at full occupancy of the middle school. As such, Sam Schwartz assumed 15 inbound and outbound bus trips per peak hour (vehicles were rounded to the nearest multiple of five for the purposes of this study). The number of expected passenger cars were calculated by deducting bus trips from the total projected trips. It should be noted that no deductions in vehicle projections were incorporated to account for the implementation of any new Travel Demand Management (TDM) strategies such as encouraging carpooling or non-vehicular modes of travel (walking or biking).

Table 4. Site-Generated Trip Projections

Land Use	Size	Vehicle Type	Daily	Morning Peak Hour ¹			Afternoon Peak Hour ²		
				In	Out	Total	In	Out	Total
Middle School/ Junior High School (LUC 522)	750 Students	Passenger Cars	1,530	260	215	475	110	135	245
		Buses	60	15	15	30	15	15	30
		Total	1,590	275	230	505	125	150	275

¹Peak of adjacent street
²Peak of generator

As shown, the proposed middle school is projected to generate approximately 1,590 daily trips, 505 trips in the morning peak hour, and 275 trips in the afternoon peak hour. Based on these projections, site traffic during the morning and afternoon peak hours is expected to increase by approximately 255 and 135 trips, respectively. Existing school traffic (measured by total trips at the Gerber Road and Jacaranda Drive intersection) totaled 250 and 140 trips during the morning and afternoon peak hours. As such, these increases would represent approximately twice as much traffic relative to the existing condition, compared to an increase in enrollment by a factor of 2.5.

3.4. Site Trip Assignments

The directional distribution of site-generated traffic is a function of several variables, including existing travel patterns, characteristics of the area street network and traffic control, and peak hour congestion within the study area, as well as the school boundary area. The assumed trip distribution percentages are a best estimate using engineering judgement, familiarity with the area, and logical travel paths to likely origins and destinations for site users. Based on existing traffic counts at the intersection of Gerber Road and Jacaranda Drive, approximately 60 percent of all Jacaranda Drive traffic accesses the site from the north. While the specific school boundary for the proposed middle school is still in development according to school district officials, it was confirmed that it was reasonable to assume school traffic would continue to be distributed similar to existing conditions. As such, for the purposes of this study, Sam Schwartz assumed that future site traffic would access the site using the same distribution as the existing school. As previously noted, all bus traffic was assumed to access the site via Jacaranda Drive, while all passenger car traffic was assumed to utilize Proposed Access. The anticipated directional distribution for passenger vehicles and buses to and from the site is shown on *Figure 3*.

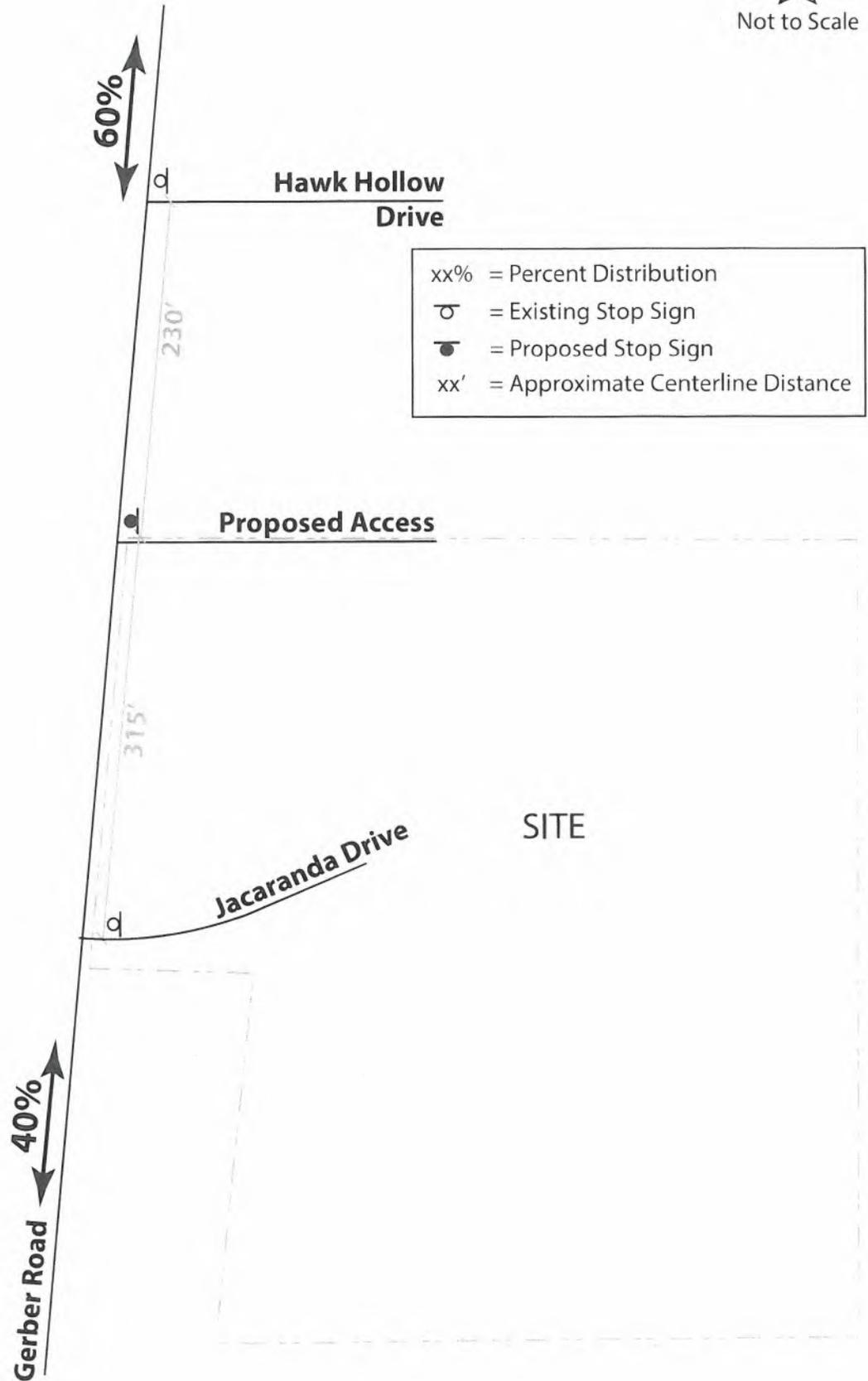


Figure 3
Directional Distribution

Using the distributions and routing patterns shown on Figure 3, site-generated trips were assigned to the study intersections. **Figure 4** and **Figure 5** show total site-generated passenger car trips and bus trips, respectively.

3.5. Future Traffic Projections

In order to estimate future background traffic for the Year 2030 design horizon, Year 2050 Average Daily Traffic (ADT) projections were obtained from the Chicago Metropolitan Agency for Planning (CMAP) for the roadways within the study area. Based on the projections provided, a compounded annual growth rate of 0.66 percent was derived for Gerber Road. This growth rate was applied to through movements on Gerber Road. No growth was applied to Hawk Hollow Road or Jacaranda Drive based on the assumption that background growth would not occur in these areas.

The resulting expected increases in background volumes were balanced across the study intersections and are shown on **Figure 6**. As noted previously, all existing traffic associated with the elementary school (turning movements onto and off of Jacaranda Drive) were removed from the study network as shown on **Figure 7**. These volume additions and subtractions and the site-generated trips shown in Figure 4 and Figure 5 were added to the existing volumes, resulting in Year 2030 Future Build traffic projections shown in **Figure 8**.



Figure 4
Site-Generated Trip Assignment (Passenger Cars)

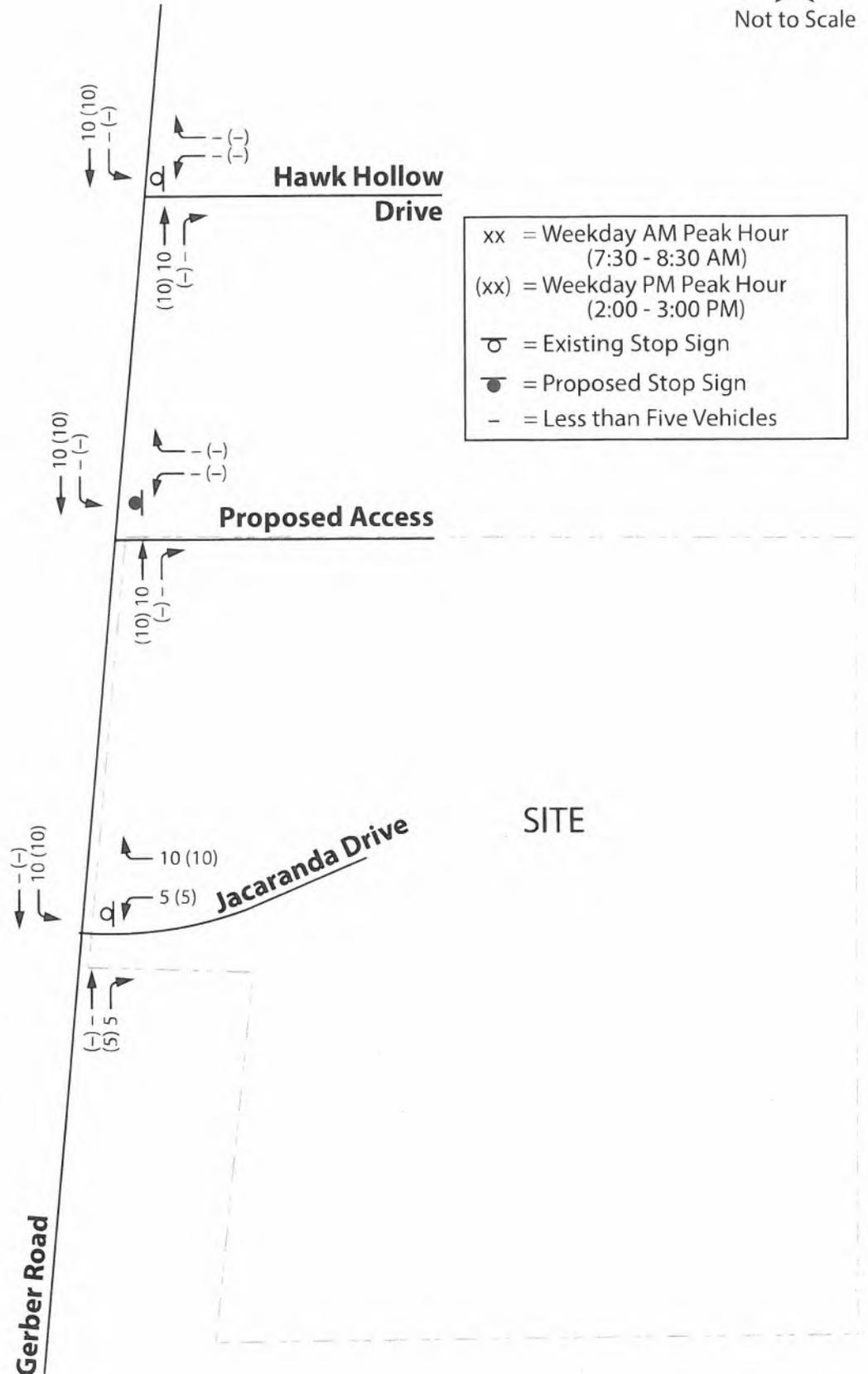


Figure 5
Site-Generated Trip Assignment (Buses)

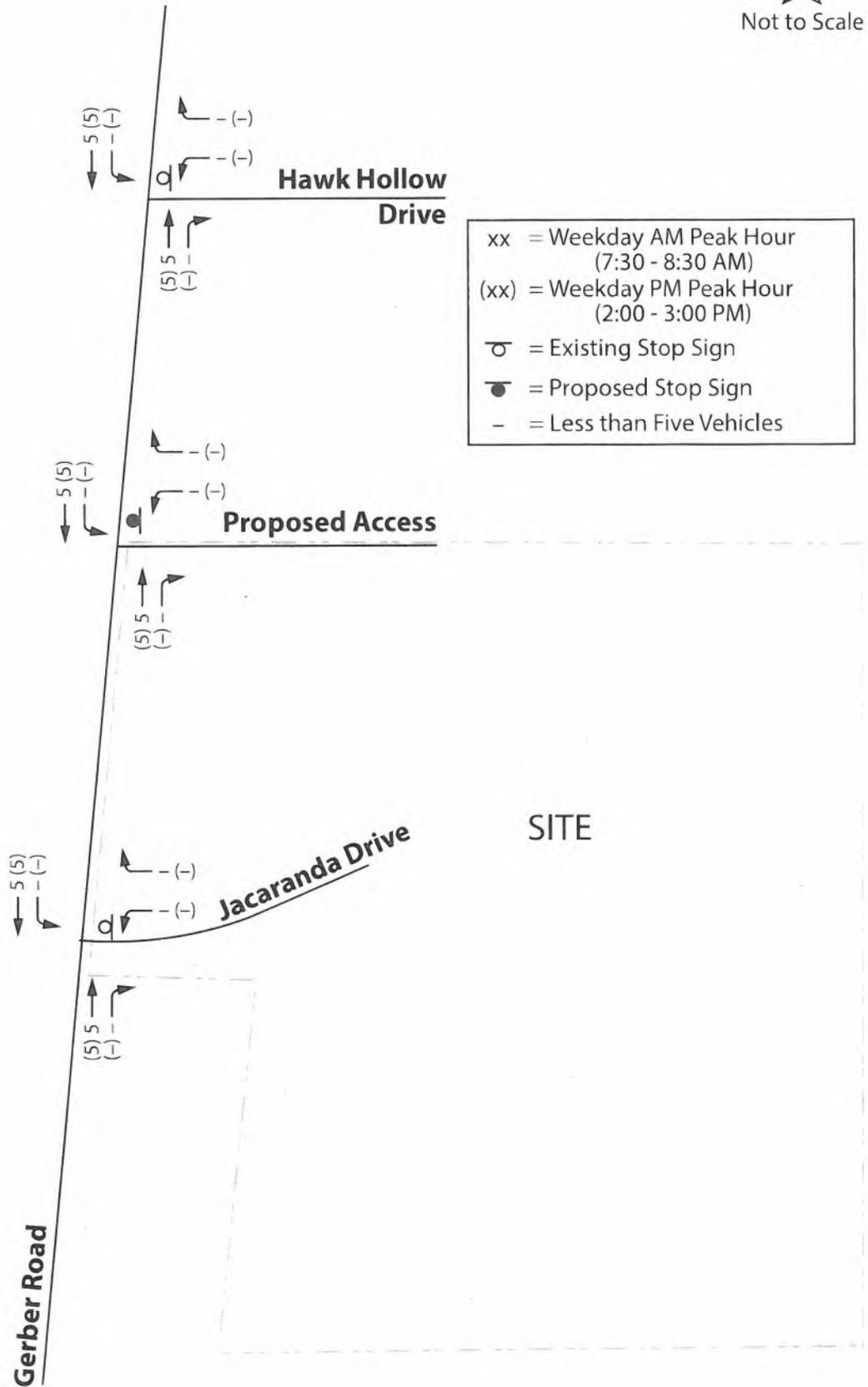
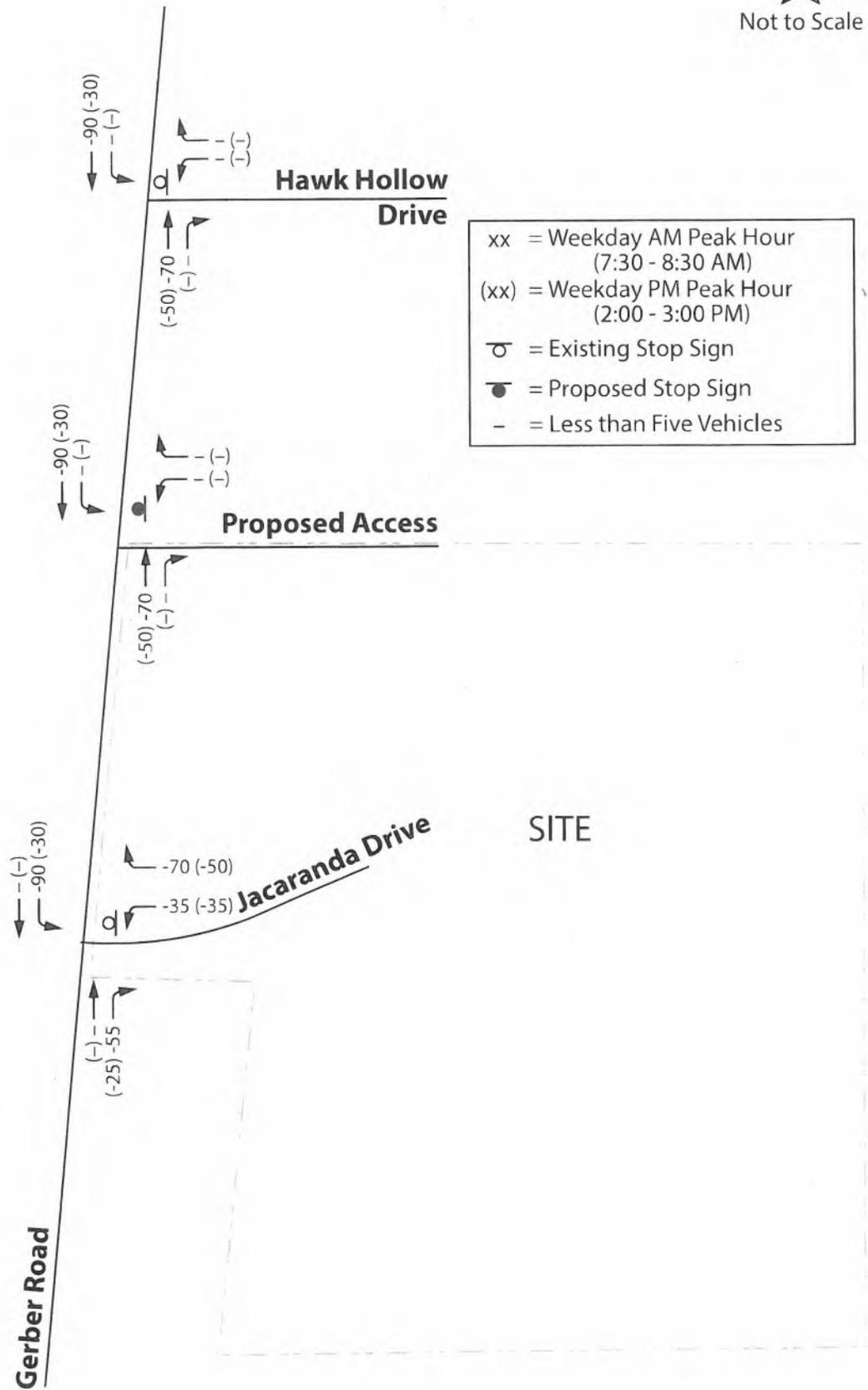


Figure 6
Future (2030) Background Growth Projections



xx = Weekday AM Peak Hour
(7:30 - 8:30 AM)
(xx) = Weekday PM Peak Hour
(2:00 - 3:00 PM)
○ = Existing Stop Sign
● = Proposed Stop Sign
- = Less than Five Vehicles

Figure 7
Existing Jacaranda Drive Traffic Removal

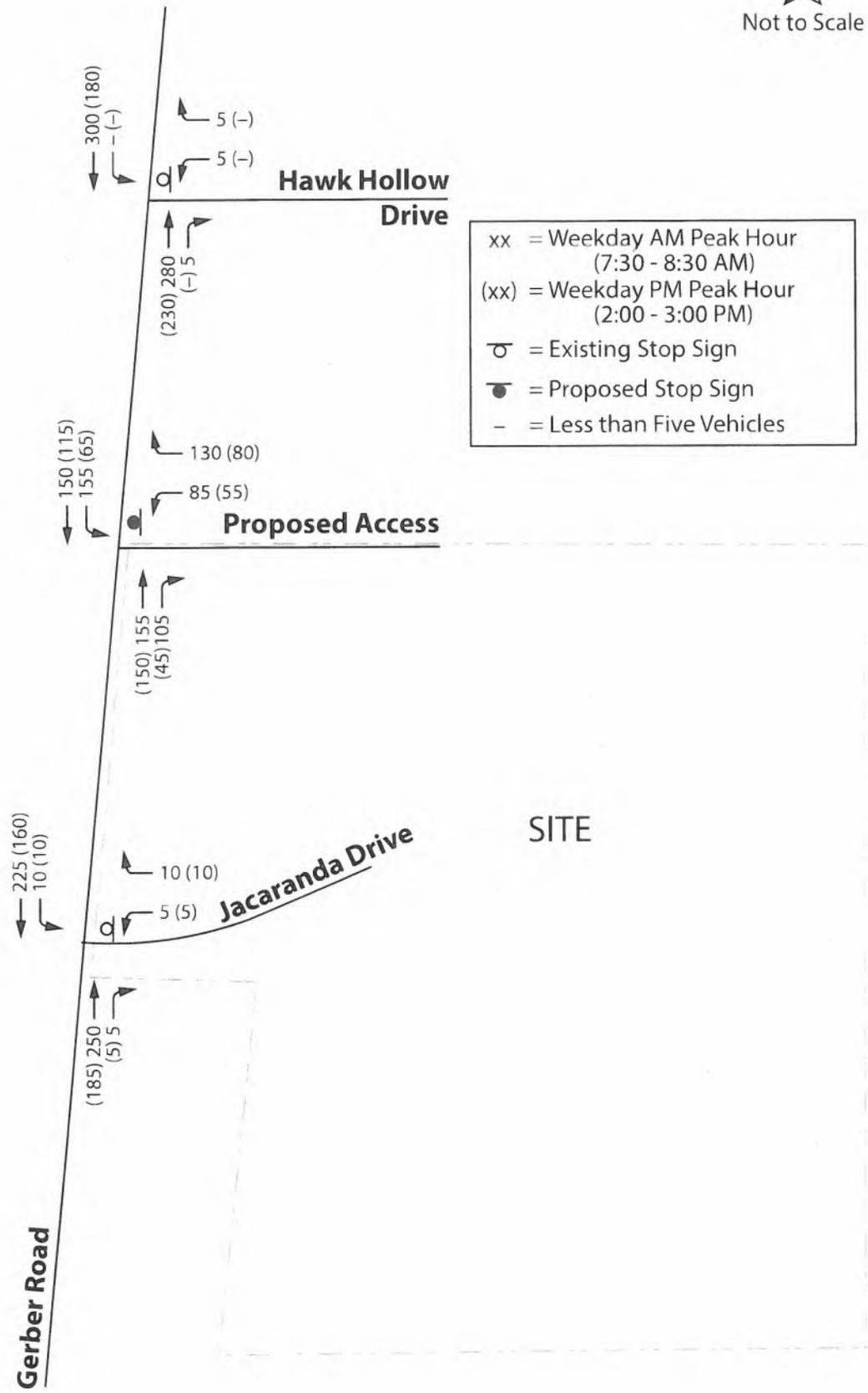


Figure 8
Future (2030) Build Traffic Projections

3.6. Future Intersection Operations

To assess the impact of the proposed expansion on traffic operations within the study area, capacity analyses were performed for the Year 2030 Build conditions. As outlined in Section 3.1 (Area Improvement Plans), no background improvements are expected in the study area within the horizon year of 2030. However, based on a review of projected area traffic operations in the study area, several improvement measures were identified to accommodate site traffic. These improvements entail the following:

- At the intersection of Gerber Road and Proposed Access:
 - The new westbound approach, which is approximately 30 feet wide, should provide two outbound lanes striped as a dedicated left-turn lane and a dedicated right-turn lane and should operate under minor-leg stop control. Based on the site plan and available space within the site, two 10-foot outbound lanes can accommodate approximately 450 feet of storage each without blocking internal intersections.
 - A southbound left-turn lane should be restriped within the existing median. Based on minimum storage length guidance in the Illinois Department of Transportation's (IDOT) Bureau of Local Roads & Street (BLR) Section 34-3.02(b), it is recommended that the turn lane provide 115 feet of storage. The remaining available space between the Proposed Access and Hawk Hollow Drive, estimated to be 50 feet, should accommodate the taper.
 - Continuous sidewalk should be constructed across the driveway.
 - Stop bars should be striped in advance of the sidewalk so that drivers will come to a full stop before encroaching on the sidewalk.
- At the intersection of Gerber Road and Jacaranda Drive:
 - The dimensions of the existing southbound left-turn lane will need to be reduced based on the location of Proposed Access. Based on minimum storage length guidance in the IDOT BLR (34-3.02(b)), it is recommended that the turn lane provide 115 feet of storage. The remaining available space between Jacaranda Drive and Proposed Access, estimated to be 100 feet, should accommodate the taper.
 - Signage should be posted indicating Buses Only 7AM-4PM.

Based on the above assumptions, the capacity analysis results for Year 2030 Build conditions are presented in **Table 5**.

Table 5. Future (Year 2030) Levels of Service

Intersection	Weekday Morning Peak		Weekday Afternoon Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Gerber Road & Hawk Hollow Drive¹				
Westbound	14.4	B	12.4	B
Southbound (Left Turn)	8.3	A	8.1	A
Gerber Road & Proposed Access¹				
Westbound	>120	F	15.4	C
Southbound (Left Turn)	10.0	B	8.0	A
Gerber Road & Jacaranda Drive¹				
Westbound	14.6	B	12.6	B
Southbound (Left Turn)	9.3	A	9.0	A

¹Two-Way Stop-Controlled Intersection

As shown, most intersection approaches are projected to operate at LOS C or better during the weekday morning and afternoon peak hours after the completion of the proposed school expansion. The exception would be the westbound approach of Proposed Access, which is expected to operate at LOS F during the morning peak hour with a 95th percentile queue of approximately 29 vehicles. This high level of delay is attributable to the condensed period of traffic activity, as well as the high volume of inbound left-turns expected at this driveway, to which outbound traffic must yield. In the afternoon peak hour, 95th percentile outbound queues are projected at approximately two vehicles, which would be significantly shorter than those observed during the existing dismissal period. This result is likely attributable to the limitations of Synchro 11, which analyzes the busiest 15 minutes of a peak hour, and therefore may not accurately reflect highly concentrated demand that is isolated to shorter time periods. As such, traffic management measures are based on observed queues at the existing school and their expected proportional increases.

It should be noted that based on observations conducted at the existing school, outbound delay and queuing are expected to be experienced over a short period directly adjacent to arrival and dismissal times. As the school grows towards maximum enrollment, this access should be monitored to determine the need for additional traffic control personnel and/or turn restrictions during peak periods. Inbound turns are expected to operate well with a 95th percentile queue of up to two vehicles. These queues would be expected to be accommodated within the recommended 115 feet of storage for the inbound turn lane.

At Jacaranda Drive, outbound queues are projected at one vehicle or fewer based on capacity analysis, though it can be expected that multiple outbound buses would be adequately accommodated on this approach during arrival and dismissal peaks if a concentration of activity resulted in additional outbound buses.

3.7. Traffic Management

Drop-off and pick-up demand internal to the site was reviewed to determine traffic management efforts required to promote efficient operations. As previously noted, the maximum internal queue observed at the existing school was approximately 42 passenger vehicles during the afternoon peak hour. Based on the estimate that school traffic is projected to double after the proposed expansion, it could be expected that the future pick-up line would also double in length to approximately 84 passenger vehicles. To maximize on-site queue storage, it is recommended that the easternmost parking lot be actively managed such that pick-up traffic utilizes parking area drive aisles for queue storage.

A traffic management plan is shown on **Figure 9** that avoids intersecting traffic routes and maximizes on-site queue storage for both pick-up activity and outbound maneuvers to Gerber Road. Based on this concept, approximately 2,080 feet of queuing space would be provided on-site for the pick-up line which could accommodate the projected queue of 84 passenger vehicles assuming each vehicle occupies 24-25 feet on average, from front of vehicle to front of vehicle. To achieve this spacing, it is recommended that traffic control personnel be stationed to encourage line progression and minimize gaps between vehicles. It is also recommended that the doors on the northern side of the building be used for student egress during dismissal periods to provide convenient access to the pick-up line, and that Do Not Enter signage be posted at the egress of the one-way pick-up/drop-off area.

In general, dwell times (the amount of time a vehicle parks) for pick-ups are longer than for drop-offs. As such, drop-off operations in the morning were observed to generate less queuing demand than pick-up lines in the afternoon, which is expected to continue. Passenger vehicle queuing in the morning can be expected to reach approximately 24 vehicles or 600 feet based on roughly doubling the existing observed queue. A queue of this length would be expected to be accommodated on site without temporary traffic control and/or barricades.

Per the concept site plan, Jacaranda Drive would connect to a new circular drive built along the west side of the existing building and would be utilized exclusively by buses during arrival and dismissal periods. Cross-access to the remainder of the site would be restricted by swinging gate barriers, separating buses from passenger vehicles. According to a drawing prepared by CAGE Engineering, Inc., enough storage space would be provided on this portion of the site to accommodate approximately 21 queued buses simultaneously, and more if the bus arrivals and departures were staggered by a few minutes. As noted previously, up to 16 buses are expected during each arrival/dismissal period at full occupancy of the middle school. As such, it is anticipated that on-site bus queuing would be adequately accommodated on-site. Separation of the buses from passenger vehicle activity is a best-practice strategy to improve safety and disperse traffic demands. Additionally, Do Not Enter signage should be posted at the egress of the bus-only circular drive. A diagram showing queued buses is included in the Appendix.

As noted in Section 3.3 (Trip Generation), no deductions to total projected traffic were incorporated to account for additional Traffic Demand Management (TDM) efforts that could reduce vehicular demand. To encourage reduced vehicular traffic during peak periods, the school should explore implementing programs or educational materials to encourage the use of school buses, carpooling, and/or non-automotive means of travel such as walking or biking.

-  = Inbound Drop-Off Vehicles (Morning)
-  = School Bus Circulation
-  = Inbound Pick-Up Vehicles (Afternoon)
-  = Temporary (Dismissal) Barricade
-  = Outbound Pick-Up/Drop-Off Vehicles
-  = Traffic Control Personnel (Arrival & Dismissal)

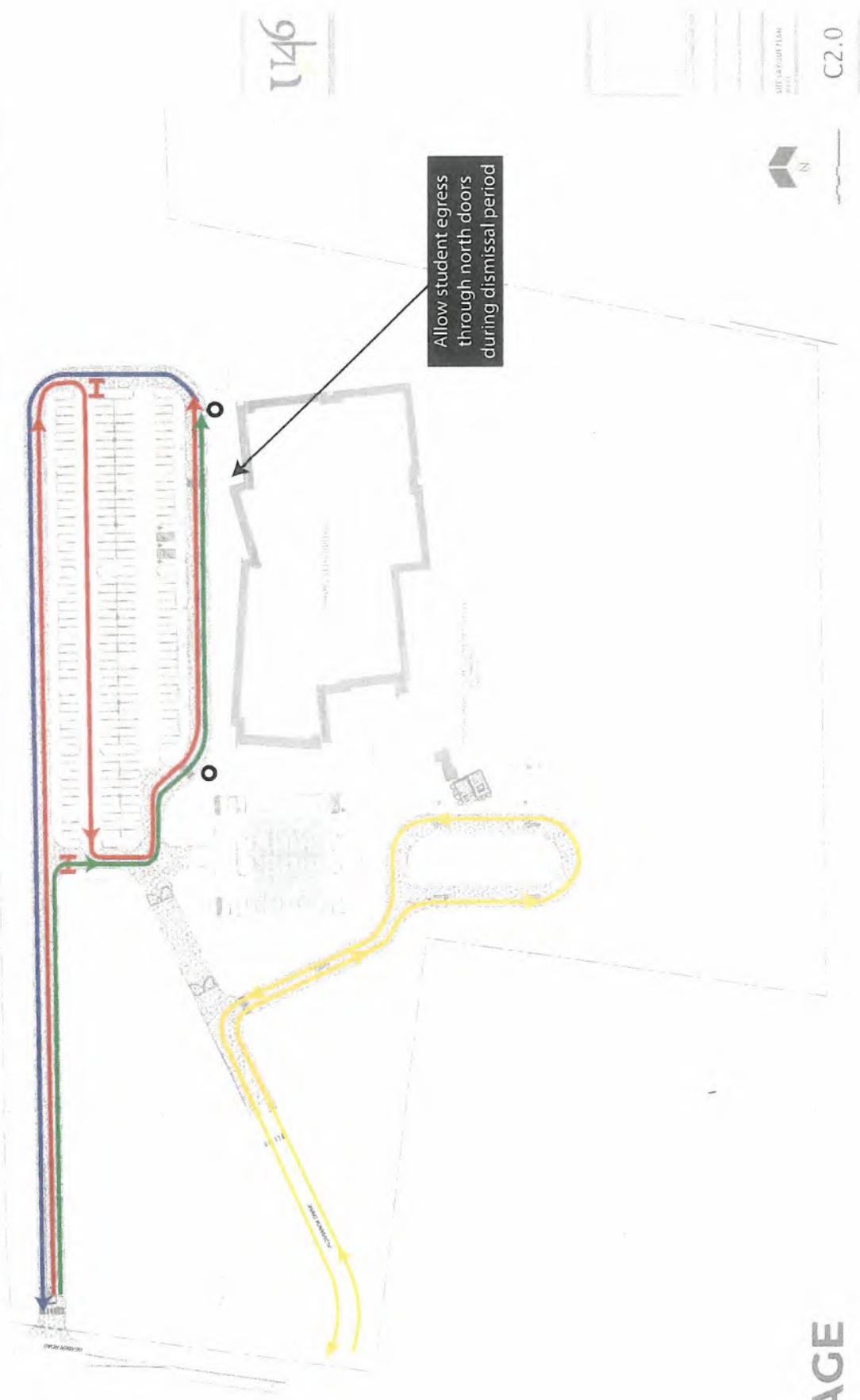


Figure 9
Traffic Management Plan

3.8. Parking Projections

Parking for 236 vehicles is proposed on site per the concept site plan to meet the Village's requirement of one space per 30 percent of the seats in the auditorium. Sam Schwartz estimated the projected future peak parking demand using the ITE manual Parking Generation, 5th Edition and referenced ITE LUC 522 – Middle School/Junior High School. According to the ITE rates, peak parking demand on a typical school day is projected to be between 73 and 91 vehicles, which would be expected to occur in the period between 10:00 AM-2:00 PM. As such, the parking lot is expected to be only approximately 39 percent occupied during the school day at its peak.

In addition to a standard class schedule, it is anticipated that the proposed middle school will occasionally host various after-school events such as band/orchestra performances or sporting events. Based on information provided by the school district, typical attendance at such events would likely have a maximum of 200 to 300 attendees. Assuming an average vehicle occupancy in the range of 2.0-2.5 people, which would account for family attendance, a parking demand of approximately 120-150 spaces could be expected at after-school events. Based on the 236 spaces available, the lot would provide more than enough parking spaces to accommodate typical event demands.

3.9. Pedestrian and Bicycle Access

As shown in the attached concept site plan, off-site pedestrian access to the proposed middle school would be provided to and from Gerber Road to the west, Winston Lane to the north, and the existing sidewalk to the south. The existing sidewalk to the northwest of the school would be extended to cross the Proposed Access at its intersection with Gerber Road and connect to the existing sidewalk on the east side of Gerber Road. It is recommended that a continuous sidewalk be constructed across the Proposed Access. A new high-visibility crosswalk would be installed at the existing pedestrian crosswalk on Jacaranda Drive.

On site, new eight-foot-wide sidewalk would be provided fronting the bus circulation area, the visitor parking lot, and the drop-off/pick-up space on the north side of the school, with cross-access connections between these areas. As in the existing condition, it is anticipated that primary access for students would be on the west side of the school, with secondary and event entrances located on the north side. As previously mentioned, it is recommended that the doors on the northern side of the building be used for student egress during dismissal operations.

The four existing bike racks would remain in their current locations on the west and south sides of the school. These racks are currently located in an asphalt-paved area and would be accessible via the sidewalk network. The school should monitor bike rack usage and consider expanding the number and location of racks, as needed.

4. Recommendations and Conclusions

Based on the analyses detailed in this report, the following recommendations were identified to accommodate site traffic within the study area.

- At the intersection of Gerber Road and Proposed Access:
 - The new westbound approach should provide two outbound lanes striped as a dedicated left-turn lane and a dedicated right-turn lane and operate under minor-leg stop control. Striping should define the turn lanes from the stop bar and can accommodate approximately 450 feet of storage each without blocking internal intersections.
 - A southbound left-turn lane should be restriped within the existing median providing 115 feet of storage and approximately 50 feet of taper.
 - As the proposed middle school grows towards enrollment capacity, operations at this intersection should be monitored for the need to assign traffic control personnel during peak hours and/or implement turn restrictions.
 - Continuous sidewalk should be constructed across the driveway.
 - Stop bars should be striped in advance of the sidewalk so that drivers will come to a full stop before encroaching on the sidewalk.
- At the intersection of Gerber Road and Jacaranda Drive:
 - The dimensions of the existing southbound left-turn lane will need to be reduced based on the location of Proposed Access. The turn lane should provide 115 feet of storage and approximately 100 feet of taper.
 - Signage should be posted indicating Buses Only 7AM-4PM.
- Do Not Enter signage should be placed on-site at the egress of the one-way pick-up/drop-off area and at the egress of the bus only circular drive.
- Within the site, the easternmost parking lot should be actively managed with temporary traffic control and personnel such that pick-up traffic utilizes parking area drive aisles for queue storage, as outlined on **Figure 9**.
- The school should consider implementing TDM programs to encourage reduced vehicular demand during peak hours. Education focuses could include school bus usage, carpooling, walking, and biking.
- The school should monitor bike rack usage and consider expanding the number and location of racks, as needed.

As with many school sites, some delay and queuing internal to the site is expected due to the condensed nature of school-related traffic patterns. However, with these improvements in place, traffic operations within the site and on the surrounding roadways are expected to be adequately accommodated and limited to the few minutes directly adjacent to arrival and dismissal peaks at the school.

APPENDIX

Concept Site Plan

2050 CMAP Traffic Projections

ITE Trip Generation Excerpts

Bus Queuing Diagram

Capacity Analysis Results

Raw Traffic Data

Concept Site Plan

2050 CMAP Projections



Chicago Metropolitan Agency for Planning

433 West Van Buren Street
Suite 450
Chicago IL 60607

312-454-0400
cmap.illinois.gov

March 16, 2023

Jessica Keung
Engineer I
Sam Schwartz Engineering
200 South Wacker Drive
Suite 1400
Chicago, IL 60606

Subject: Gerber Road between Jacaranda Drive and Hawk Hollow Drive
IDOT

Dear Ms. Keung:

In response to a request made on your behalf and dated March 16, 2023, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Previous ADT / Post 2020 ADT	2020 ADT	Year 2050 ADT
Gerber Road	4,300 (2005)	2,100	5,200
Army Trail Road e/o Gerber Road	23,100 (2015) 23,200 (2022)	15,000	29,500
Schick Road	12,700 (2014)	11,400	16,200

Traffic projections are developed using existing ADT data provided in the request letter and the results from the October 2022 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
2023_TrafficForecasts\Bartlett\du-17-23\du-17-23.docx

ITE Trip Generation Excerpts

Middle School/Junior High School (522)

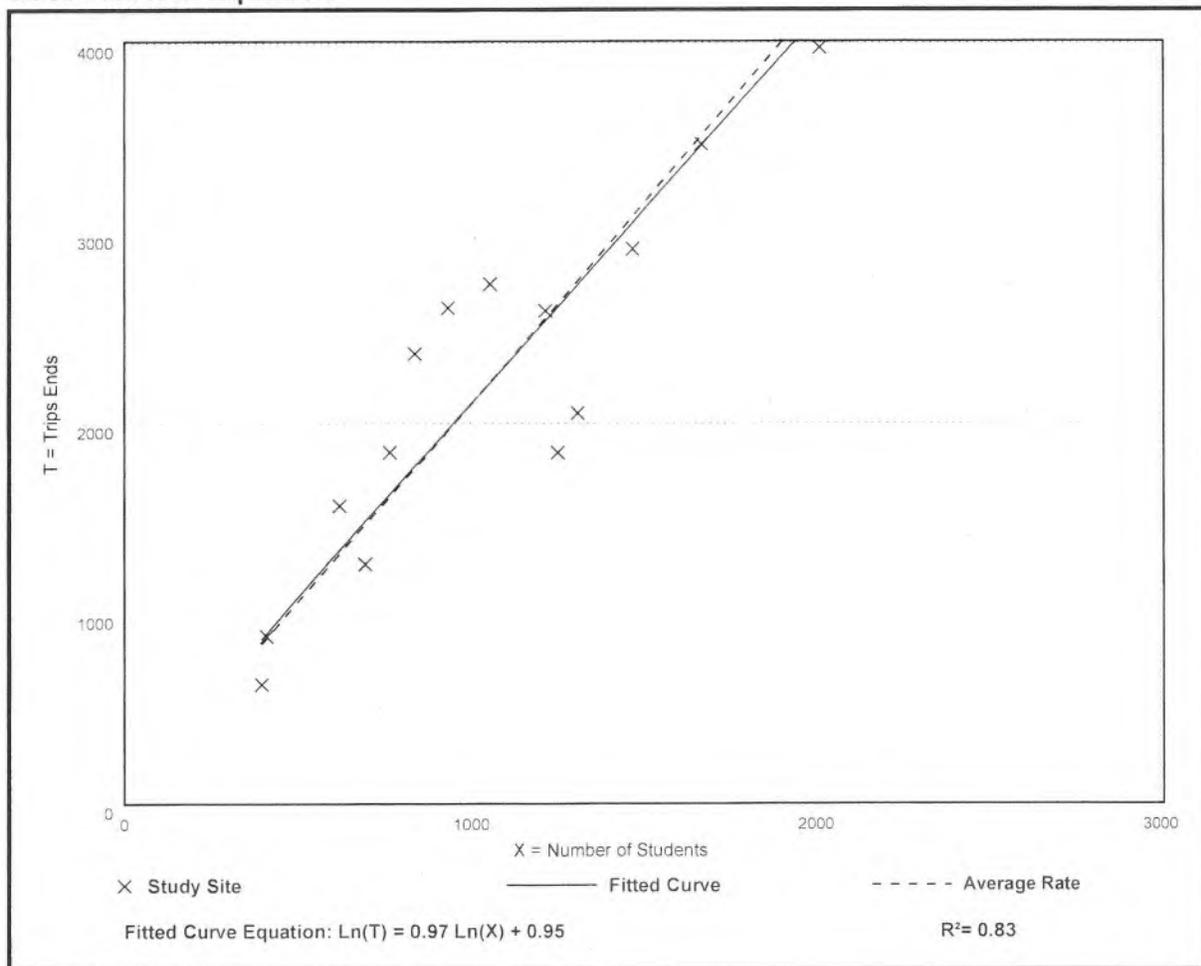
Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. Num. of Students: 1048
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
2.10	1.48 - 2.81	0.42

Data Plot and Equation



Middle School/Junior High School (522)

Vehicle Trip Ends vs: Students

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 23

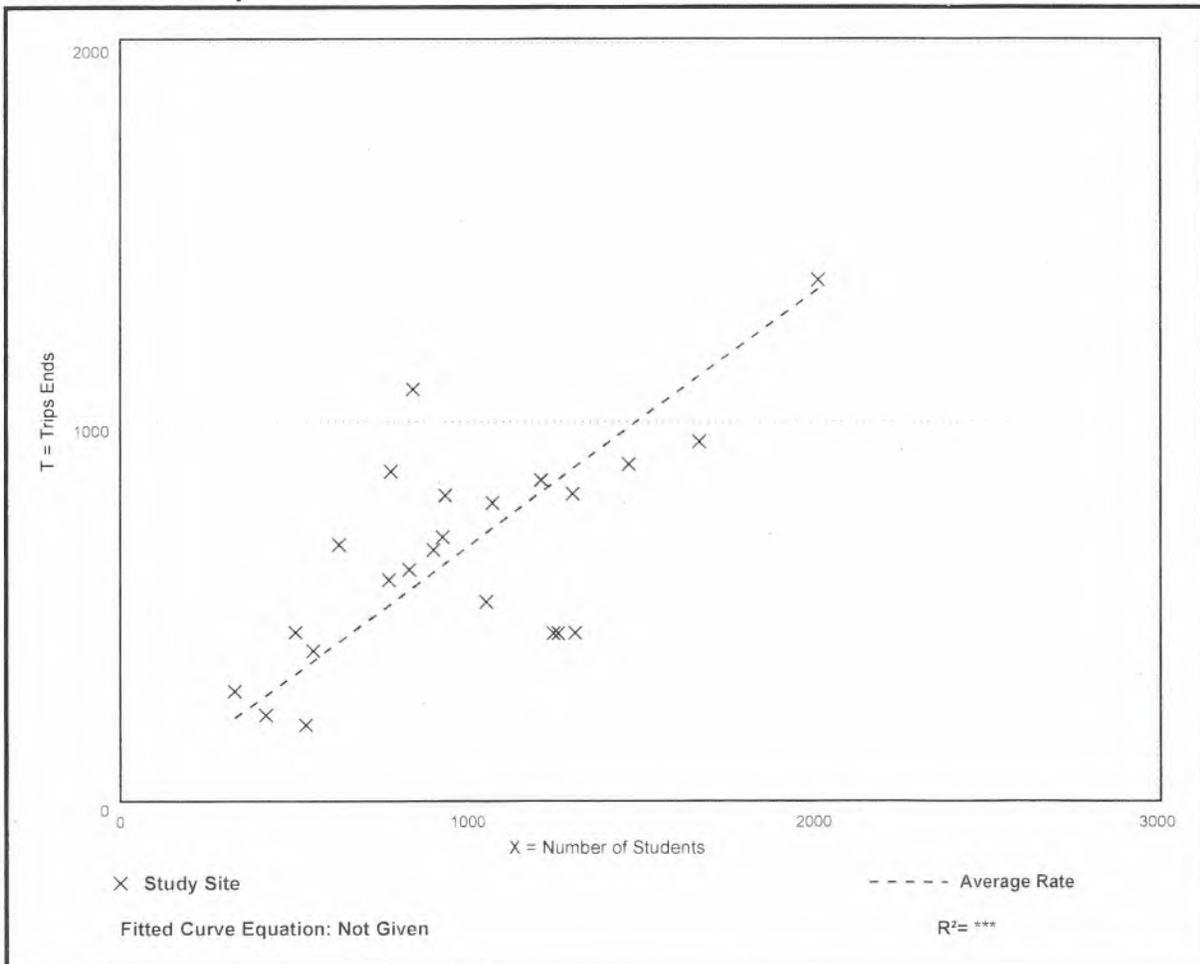
Avg. Num. of Students: 981

Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.67	0.34 - 1.29	0.24

Data Plot and Equation



Middle School/Junior High School (522)

Vehicle Trip Ends vs: Students

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 21

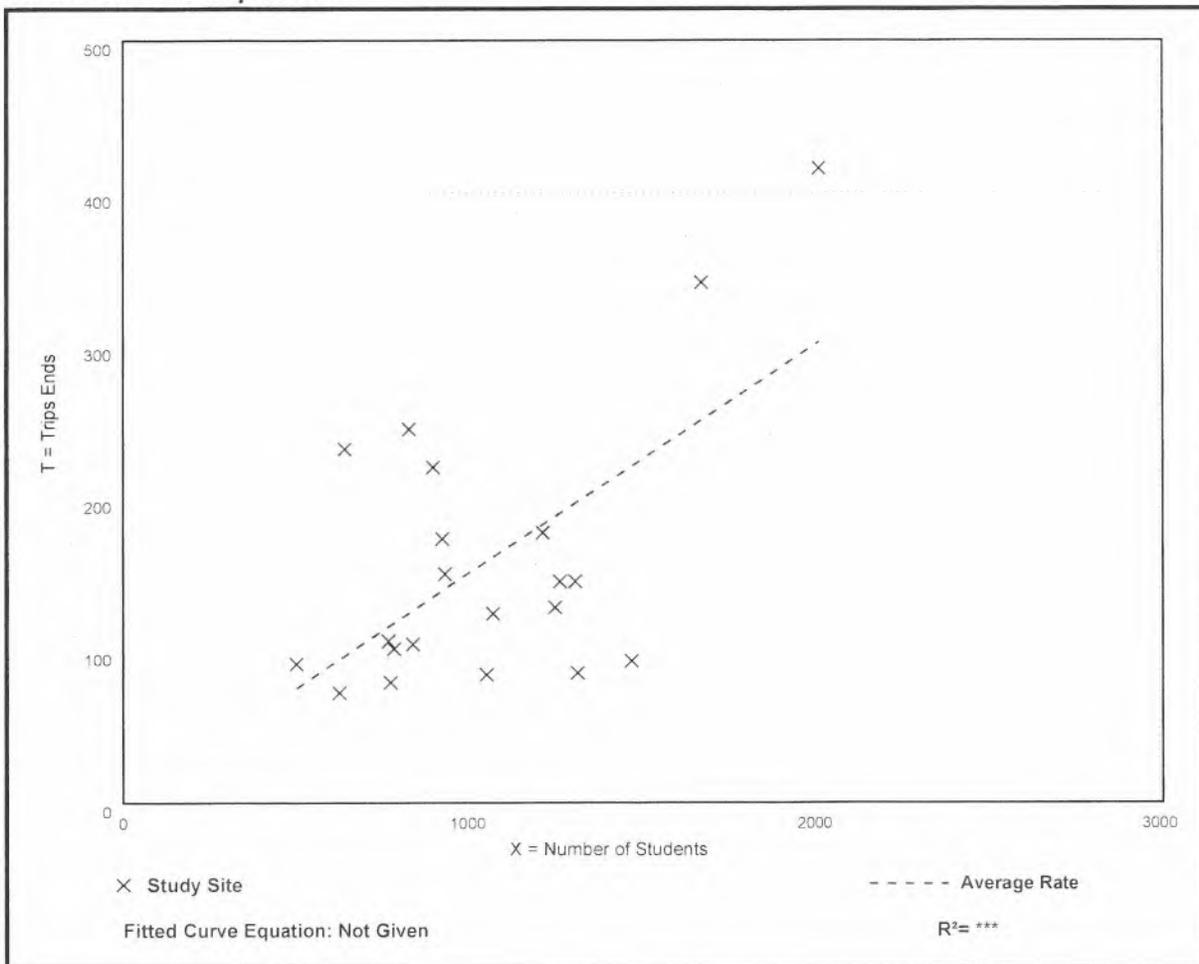
Avg. Num. of Students: 1056

Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.15	0.06 - 0.36	0.07

Data Plot and Equation



Middle School/Junior High School (522)

Vehicle Trip Ends vs: Students

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 25

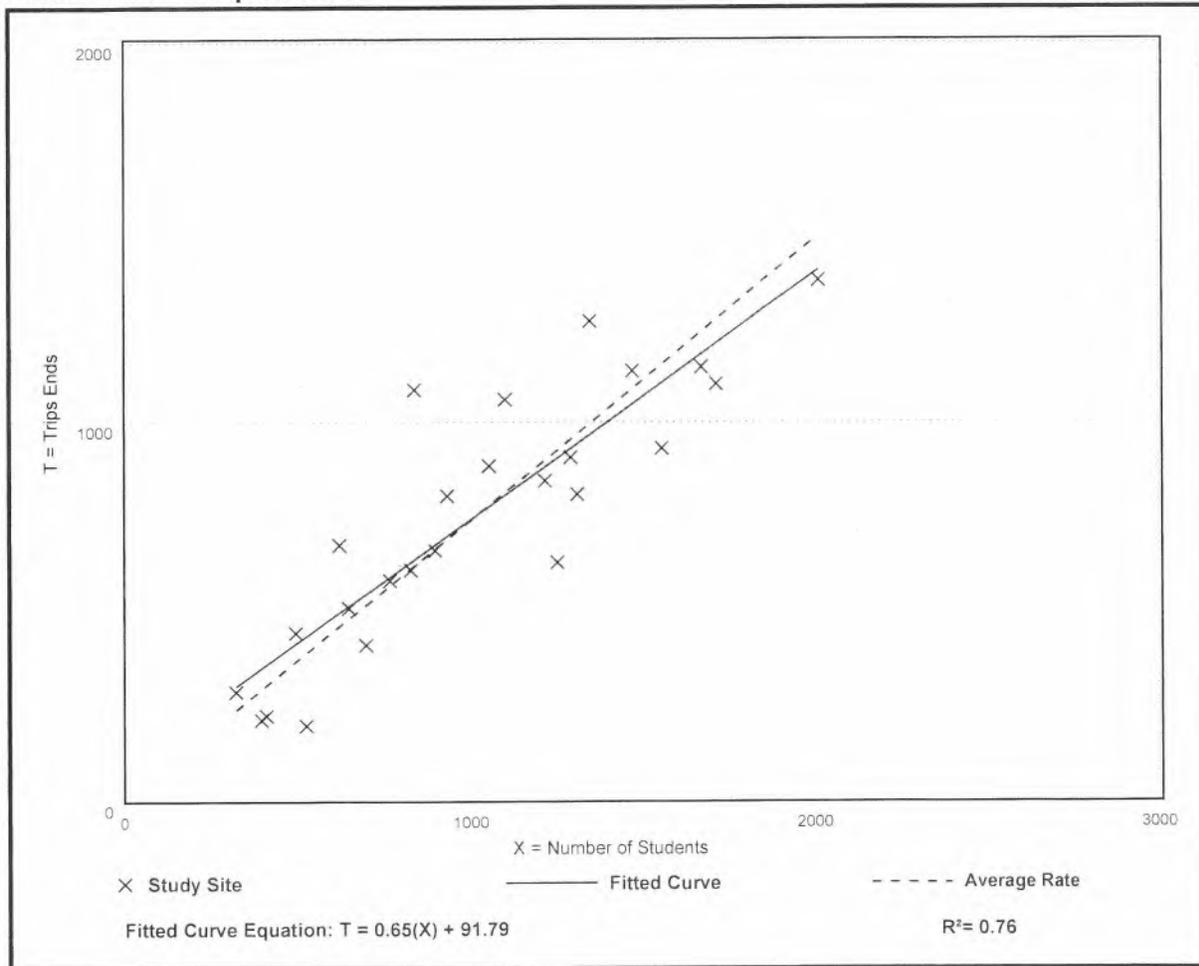
Avg. Num. of Students: 1017

Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.74	0.38 - 1.29	0.18

Data Plot and Equation



Middle School/Junior High School (522)

Vehicle Trip Ends vs: Students

On a: **Weekday,**

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 29

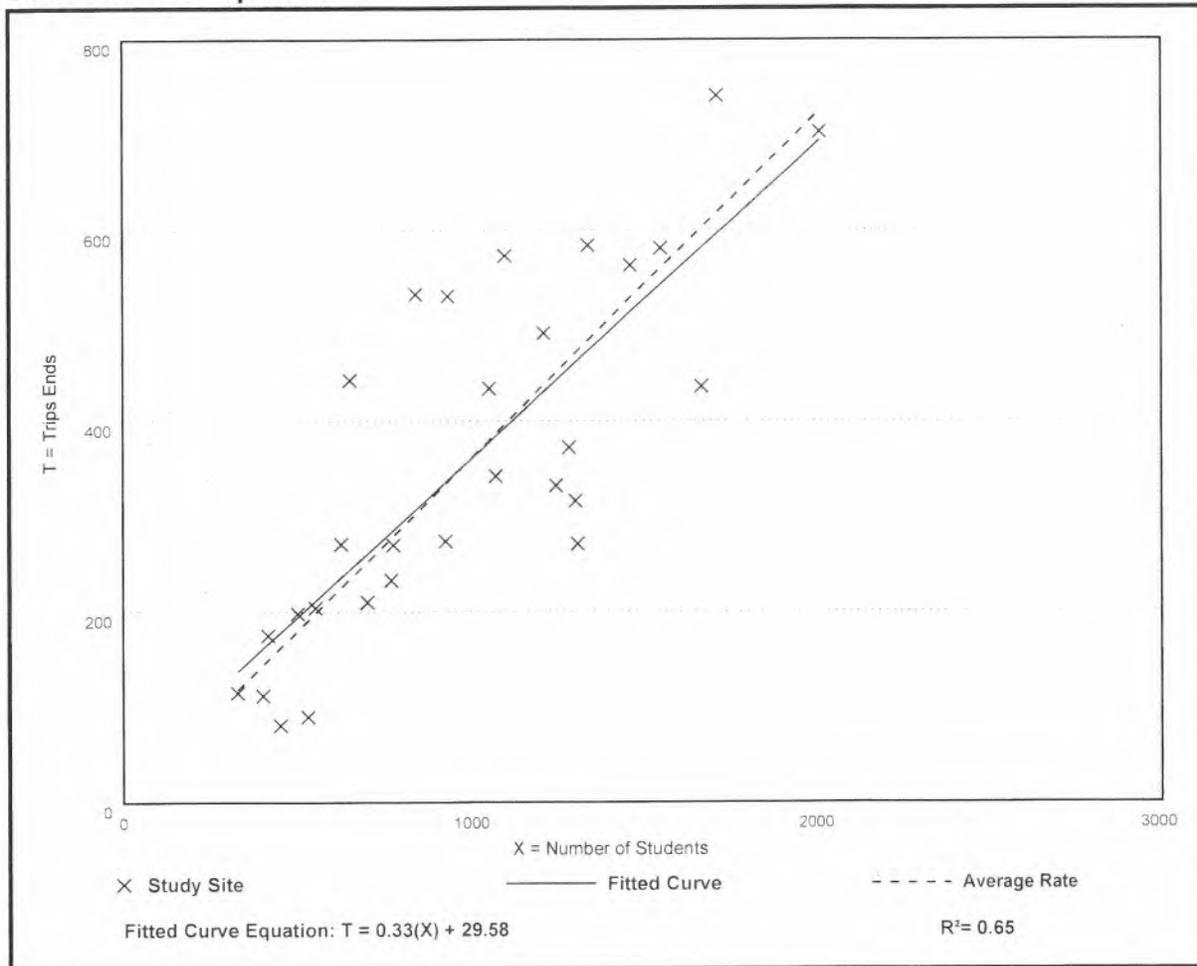
Avg. Num. of Students: 993

Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.36	0.17 - 0.68	0.11

Data Plot and Equation



Bus Queuing Diagram

Capacity Analysis Results

HCM 6th TWSC
 1: Gerber Road & Hawk Hollow Drive

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T		T	T
Traffic Vol, veh/h	5	5	205	5	1	220
Future Vol, veh/h	5	5	205	5	1	220
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	60	38	25	68
Heavy Vehicles, %	0	0	8	0	0	6
Mvmt Flow	9	9	342	13	4	324

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	681	349	0	0	355	0
Stage 1	349	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	419	699	-	-	1215	-
Stage 1	719	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	418	699	-	-	1215	-
Mov Cap-2 Maneuver	418	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	729	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	523	1215
HCM Lane V/C Ratio	-	-	0.033	0.003
HCM Control Delay (s)	-	-	12.1	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
 2: Gerber Road & Jacaranda Drive

Intersection						
Int Delay, s/veh	14.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗		↘	↗
Traffic Vol, veh/h	35	70	140	55	90	135
Future Vol, veh/h	35	70	140	55	90	135
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	29	33	86	45	35	72
Heavy Vehicles, %	6	9	7	2	8	4
Mvmt Flow	121	212	163	122	257	188
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	926	224	0	0	285	0
Stage 1	224	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Critical Hdwy	6.46	6.29	-	-	4.18	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.381	-	-	2.272	-
Pot Cap-1 Maneuver	293	798	-	-	1244	-
Stage 1	804	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	232	798	-	-	1244	-
Mov Cap-2 Maneuver	232	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	38.4	0		5		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	423	1244	-	
HCM Lane V/C Ratio	-	-	0.787	0.207	-	
HCM Control Delay (s)	-	-	38.4	8.6	-	
HCM Lane LOS	-	-	E	A	-	
HCM 95th %tile Q(veh)	-	-	6.9	0.8	-	

HCM 6th TWSC
 1: Gerber Road & Hawk Hollow Drive

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗		↘	↗
Traffic Vol, veh/h	1	1	185	2	1	130
Future Vol, veh/h	1	1	185	2	1	130
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	68	57	50	25	85
Heavy Vehicles, %	0	0	3	0	0	5
Mvmt Flow	4	1	325	4	4	153

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	488	327	0	0	329
Stage 1	327	-	-	-	-
Stage 2	161	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	543	719	-	-	1242
Stage 1	735	-	-	-	-
Stage 2	873	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	541	719	-	-	1242
Mov Cap-2 Maneuver	541	-	-	-	-
Stage 1	735	-	-	-	-
Stage 2	870	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	580	1242
HCM Lane V/C Ratio	-	-	0.009	0.003
HCM Control Delay (s)	-	-	11.3	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
 2: Gerber Road & Jacaranda Drive

Intersection

Int Delay, s/veh 6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗		↘	↗
Traffic Vol, veh/h	35	50	135	25	30	100
Future Vol, veh/h	35	50	135	25	30	100
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	27	29	84	57	57	80
Heavy Vehicles, %	15	6	2	12	19	1
Mvmt Flow	130	172	161	44	53	125

Major/Minor

	Minor1	Major1	Major2		
Conflicting Flow All	414	183	0	0	205
Stage 1	183	-	-	-	-
Stage 2	231	-	-	-	-
Critical Hdwy	6.55	6.26	-	-	4.29
Critical Hdwy Stg 1	5.55	-	-	-	-
Critical Hdwy Stg 2	5.55	-	-	-	-
Follow-up Hdwy	3.635	3.354	-	-	2.371
Pot Cap-1 Maneuver	571	849	-	-	1271
Stage 1	818	-	-	-	-
Stage 2	778	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	547	849	-	-	1271
Mov Cap-2 Maneuver	547	-	-	-	-
Stage 1	818	-	-	-	-
Stage 2	745	-	-	-	-

Approach

	WB	NB	SB
HCM Control Delay, s	14.3	0	2.4
HCM LOS	B		

Minor Lane/Major Mvmt

	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	686	1271
HCM Lane V/C Ratio	-	-	0.44	0.041
HCM Control Delay (s)	-	-	14.3	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	2.3	0.1

HCM 6th TWSC
 1: Gerber Road & Hawk Hollow Drive

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↗		↖	↗
Traffic Vol, veh/h	5	5	280	5	1	300
Future Vol, veh/h	5	5	280	5	1	300
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	60	38	25	68
Heavy Vehicles, %	0	0	9	0	0	8
Mvmt Flow	9	9	467	13	4	441

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	923	474	0	0	480
Stage 1	474	-	-	-	-
Stage 2	449	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	302	595	-	-	1093
Stage 1	630	-	-	-	-
Stage 2	647	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	301	595	-	-	1093
Mov Cap-2 Maneuver	301	-	-	-	-
Stage 1	630	-	-	-	-
Stage 2	644	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	400	1093
HCM Lane V/C Ratio	-	-	0.043	0.004
HCM Control Delay (s)	-	-	14.4	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
 2: Gerber Road & Jacaranda Drive

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↗		↖	↗
Traffic Vol, veh/h	5	10	250	5	10	225
Future Vol, veh/h	5	10	250	5	10	225
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	-	-	-	115	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	29	33	86	45	35	72
Heavy Vehicles, %	100	100	4	100	100	2
Mvmt Flow	17	30	291	11	29	313

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	668	297	0	0	302
Stage 1	297	-	-	-	-
Stage 2	371	-	-	-	-
Critical Hdwy	7.4	7.2	-	-	5.1
Critical Hdwy Stg 1	6.4	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-
Follow-up Hdwy	4.4	4.2	-	-	3.1
Pot Cap-1 Maneuver	303	560	-	-	860
Stage 1	575	-	-	-	-
Stage 2	526	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	293	560	-	-	860
Mov Cap-2 Maneuver	293	-	-	-	-
Stage 1	575	-	-	-	-
Stage 2	508	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	421	860
HCM Lane V/C Ratio	-	-	0.113	0.033
HCM Control Delay (s)	-	-	14.6	9.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1

HCM 6th TWSC
 3: Gerber Road & Proposed Driveway

Intersection						
Int Delay, s/veh	174					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↕		↖	↗
Traffic Vol, veh/h	85	130	155	105	155	150
Future Vol, veh/h	85	130	155	105	155	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	450	-	-	-	115	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	29	33	86	45	35	72
Heavy Vehicles, %	0	0	16	0	0	14
Mvmt Flow	293	394	180	233	443	208

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1391	297	0	0	413	0
Stage 1	297	-	-	-	-	-
Stage 2	1094	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 158	747	-	-	1157	-
Stage 1	758	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 97	747	-	-	1157	-
Mov Cap-2 Maneuver	~ 97	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	~ 200	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	437.1	0	6.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	97	747	1157	-
HCM Lane V/C Ratio	-	-	3.022	0.527	0.383	-
HCM Control Delay (s)	-	-	\$ 1004.3	15.1	10	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	28.4	3.1	1.8	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
 1: Gerber Road & Hawk Hollow Drive

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗		↘	↗
Traffic Vol, veh/h	1	1	230	2	1	180
Future Vol, veh/h	1	1	230	2	1	180
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	68	57	50	25	85
Heavy Vehicles, %	0	0	7	0	0	9
Mvmt Flow	4	1	404	4	4	212

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	626	406	0	0	408
Stage 1	406	-	-	-	-
Stage 2	220	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	451	649	-	-	1162
Stage 1	677	-	-	-	-
Stage 2	821	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	450	649	-	-	1162
Mov Cap-2 Maneuver	450	-	-	-	-
Stage 1	677	-	-	-	-
Stage 2	819	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	490	1162
HCM Lane V/C Ratio	-	-	0.011	0.003
HCM Control Delay (s)	-	-	12.4	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
 2: Gerber Road & Jacaranda Drive

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y	-	↑		↑	↑
Traffic Vol, veh/h	5	10	185	5	10	160
Future Vol, veh/h	5	10	185	5	10	160
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	-	-	-	115	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	27	29	84	57	57	80
Heavy Vehicles, %	100	100	2	100	100	1
Mvmt Flow	19	34	220	9	18	200

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	461	225	0	0	229	0
Stage 1	225	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	7.4	7.2	-	-	5.1	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	4.2	-	-	3.1	-
Pot Cap-1 Maneuver	415	621	-	-	925	-
Stage 1	627	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	407	621	-	-	925	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	525	925
HCM Lane V/C Ratio	-	-	0.101	0.019
HCM Control Delay (s)	-	-	12.6	9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

HCM 6th TWSC

3: Gerber Road & Proposed Driveway

Intersection						
Int Delay, s/veh	8.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↔		↖	↗
Traffic Vol, veh/h	55	80	150	45	65	115
Future Vol, veh/h	55	80	150	45	65	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	450	-	-	-	115	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	27	29	84	57	57	80
Heavy Vehicles, %	0	0	10	0	0	14
Mvmt Flow	204	276	179	79	114	144
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	591	219	0	0	258	0
Stage 1	219	-	-	-	-	-
Stage 2	372	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	473	826	-	-	1318	-
Stage 1	822	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	432	826	-	-	1318	-
Mov Cap-2 Maneuver	432	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	15.4	0	3.5			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT	
Capacity (veh/h)	-	-	432	826	1318	-
HCM Lane V/C Ratio	-	-	0.472	0.334	0.087	-
HCM Control Delay (s)	-	-	20.6	11.5	8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	2.5	1.5	0.3	-

Raw Traffic Data

Sam Schwartz

Sam Schwartz
200 S. Wacker Dr.
14th Floor
Chicago, Illinois, United States 60606
773.305.0800 kyle.sant@samschwartz.com

Count Name: Gerber Rd @Hawk Hollow Dr.
Site Code
Start Date: 03/14/2023
Page No: 1

Turning Movement Data

Start Time	Gerber Rd Southbound				Hawk Hollow Dr Westbound				Gerber Rd Northbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
7:00 AM	35	0	0	35	1	1	0	2	0	27	0	27	64
7:15 AM	63	0	0	63	1	2	0	3	0	30	0	30	96
7:30 AM	46	0	0	46	0	1	0	1	0	42	0	42	89
7:45 AM	45	1	0	46	3	1	0	4	1	38	0	39	89
Hourly Total	189	1	0	190	5	5	0	10	1	137	0	138	338
8:00 AM	48	0	0	48	1	2	0	3	0	39	0	39	90
8:15 AM	81	0	0	81	3	3	0	6	2	84	0	86	173
8:30 AM	27	1	0	28	0	1	0	1	0	50	0	50	79
8:45 AM	23	0	0	23	2	1	0	3	1	21	0	22	48
Hourly Total	179	1	0	180	6	7	0	13	3	194	0	197	390
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	25	0	0	25	0	0	0	0	1	20	0	21	46
2:15 PM	39	1	0	40	0	0	0	0	1	34	0	35	75
2:30 PM	36	0	0	36	0	1	0	1	0	80	0	80	117
2:45 PM	32	0	0	32	0	0	0	0	0	47	0	47	79
Hourly Total	132	1	0	133	0	1	0	1	2	181	0	183	317
3:00 PM	36	2	0	38	1	0	0	1	1	48	0	49	88
3:15 PM	34	0	0	34	1	0	0	1	0	50	0	50	85
3:30 PM	44	1	0	45	0	1	0	1	0	42	0	42	88
3:45 PM	25	0	0	25	1	0	0	1	0	34	0	34	60
Hourly Total	139	3	0	142	3	1	0	4	1	174	0	175	321
4:00 PM	43	0	0	43	0	1	0	1	1	30	0	31	75
4:15 PM	40	0	0	40	0	0	0	0	2	63	0	65	105
4:30 PM	31	0	0	31	1	0	0	1	2	36	0	38	70
4:45 PM	33	2	0	35	2	1	0	3	0	41	0	41	79
Hourly Total	147	2	0	149	3	2	0	5	5	170	0	175	329
5:00 PM	36	0	0	36	0	0	0	0	1	58	0	59	95
5:15 PM	41	3	0	44	0	0	0	0	1	38	0	39	83
5:30 PM	38	1	0	39	2	0	0	2	1	45	0	46	87
5:45 PM	25	0	0	25	1	0	0	1	1	41	0	42	68
Hourly Total	140	4	0	144	3	0	0	3	4	182	0	186	333
Grand Total	926	12	0	938	20	16	0	36	16	1038	0	1054	2028
Approach %	98.7	1.3	0.0	-	55.6	44.4	0.0	-	1.5	98.5	0.0	-	-
Total %	45.7	0.6	0.0	46.3	1.0	0.8	0.0	1.8	0.8	51.2	0.0	52.0	-

Sam Schwartz

Sam Schwartz
 200 S. Wacker Dr.
 14th Floor
 Chicago, Illinois, United States 60606
 773.305.0800 kyle.santi@samschwartz.com

Count Name: Gerber Rd @Jacaranda Dr.
 Site Code:
 Start Date: 03/14/2023
 Page No: 1

Turning Movement Data

Start Time	Gerber Rd Southbound				Jacaranda Dr Westbound				Gerber Rd Northbound					
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	29	4	0	33	0	2	0	2	4	27	0	0	31	66
7:15 AM	61	5	0	66	1	0	0	1	2	29	0	0	31	98
7:30 AM	47	2	0	49	2	1	0	3	2	41	0	0	43	95
7:45 AM	40	5	0	45	3	0	0	3	6	35	0	0	41	89
Hourly Total	177	16	0	193	6	3	0	9	14	132	0	0	146	348
8:00 AM	30	20	0	50	11	4	0	15	16	28	0	0	44	109
8:15 AM	18	65	0	83	52	29	0	81	30	37	0	0	67	231
8:30 AM	23	6	0	29	23	7	0	30	0	25	0	0	25	84
8:45 AM	22	2	0	24	2	0	0	2	1	19	0	0	20	46
Hourly Total	93	93	0	186	88	40	0	128	47	109	0	0	156	470
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	19	5	0	24	0	0	0	0	3	21	0	0	24	48
2:15 PM	25	13	0	38	1	0	0	1	11	35	0	0	46	85
2:30 PM	24	14	0	38	41	32	0	73	10	39	0	0	49	160
2:45 PM	31	0	0	31	6	2	0	8	1	40	0	0	41	80
Hourly Total	99	32	0	131	48	34	0	82	25	135	0	0	160	373
3:00 PM	33	4	0	37	9	2	0	11	2	41	0	0	43	91
3:15 PM	30	0	0	30	4	1	0	5	0	45	0	0	45	89
3:30 PM	46	0	0	46	3	0	0	3	1	39	0	0	40	80
3:45 PM	25	1	0	26	2	2	0	4	1	32	0	0	33	63
Hourly Total	134	5	0	139	18	5	0	23	4	157	0	0	161	323
4:00 PM	41	3	0	44	2	2	0	4	1	29	0	0	30	78
4:15 PM	38	1	0	39	6	0	0	6	0	60	0	0	60	105
4:30 PM	29	1	0	30	2	1	0	3	0	36	0	0	36	69
4:45 PM	33	2	0	35	4	1	0	5	3	38	0	0	41	81
Hourly Total	141	7	0	148	14	4	0	18	4	163	0	0	167	333
5:00 PM	34	1	0	35	1	0	0	1	0	57	0	0	57	93
5:15 PM	37	4	0	41	2	1	0	3	2	37	0	0	39	83
5:30 PM	38	0	0	38	1	2	0	3	2	45	0	0	47	88
5:45 PM	24	1	0	25	2	4	0	6	1	40	0	0	41	72
Hourly Total	133	6	0	139	6	7	0	13	5	179	0	0	184	336
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	777	159	0	936	180	93	0	273	99	875	0	0	974	2163
Approach %	83.0	17.0	0.0	-	65.9	34.1	0.0	-	10.2	89.8	0.0	0.0	-	-



**Sam
Schwartz**
A TYLin Company

200 S. Wacker Drive, Suite 1400
Chicago, IL 60606
773.305.0800
samschwartz.com

Date: April 28, 2023

To: Ms. Kristy Stone, AICP
Planning and Development Services Director, Village of Bartlett

From: Lynn M. Means, P.E., PTOE, RSP1
Senior Transportation Engineer

Re: Hawk Hollow Elementary School - Redevelopment
235 Jacaranda Drive
Bartlett, Illinois

BLA, Inc. (BLA) is in receipt of the following documentation for the referenced project:

- Traffic Study prepared by Sam Schwartz Consulting, LLC (Sam Schwartz), dated April 21, 2023.
- Response to Comments Letter, prepared by Sam Schwartz, dated April 21, 2023.
- Site Layout Plan prepared by Cage Civil Engineering, dated April 21, 2023.

We have reviewed the documentation provided pertaining to traffic, parking and on-site circulation. Conclusions of this effort and recommendations are presented below:

1. BLA has found the documentation and/or responses provided, in general, to adequately address the comments made and concerns raised in our previous review, dated February 20, 2023. *An updated Traffic Study is not required.*
2. We concur with the study's on- and off-site recommendations and traffic demand management strategies to adequately accommodate the proposed redevelopment traffic, improve site circulation, separate users, reduce vehicle traffic and to minimize conflicts both on- and off-site for all modes of travel (passenger vehicles, buses and pedestrians/bicyclists).
3. As previously noted, school operations should be reviewed after the completion of the addition / site improvements to determine if changes and/or modifications are needed.
4. BLA concurs that the proposed parking supply is adequate to accommodate the typical school day and typical attended school events (attendance at 250-300 persons). It is recommended that measures should be considered for planned school events when higher than typical attendance (400 or more persons) is anticipated, i.e., offer multiple sessions with staggered start/end times, provide off-site parking/shuttle, etc., to minimize potential impacts on the adjacent roadways and neighborhood.
5. Consideration should be given to assigning traffic control personnel and/or implementing turn restrictions at the intersection of Gerber Road and the site access during higher than typical attended events.

Please do not hesitate to contact BLA, Inc. at 630-438-6400 should you have any questions.



School District U-46

Plant Operations
Patricia Waldau, Director
1460 Sheldon Drive, Elgin, IL 60120
Tel: 847.888.5000 x5060
Fax: 847.888.7177

Dr. Suzanne Johnson, Interim Superintendent

www.u-46.org

May 5, 2023

Ms. Kristy Stone, AICP
Planning and Development Services Director
Village of Bartlett
228 South Main Street

**RE: PROPOSED HAWK HOLLOW ADDITIONS & RENOVATIONS
OFFSITE ROADWAY IMPROVEMENTS**

Dear Ms. Stone,

Per our previous discussions, School District U-46 is currently in the design process for additions and renovations at Hawk Hollow school that will convert the facility from an elementary to middle school. As requested by the Village, the District commissioned a traffic impact study which was completed by Sam Schwartz.

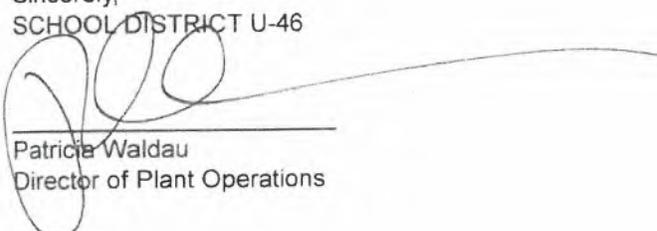
Upon completion of the traffic study, the following offsite improvements were recommended for Gerber Road:

1. At the proposed northern access to Gerber Road, a southbound left-turn lane should be restriped within the existing median providing 115 feet of storage and a 50-foot taper.
2. At the intersection of Gerber Road and Jacaranda Drive, the dimensions of the existing southbound left-turn lane will need to be reduced based on the location of the proposed northern access. The turn lane should be re-striped to provide 115 feet of storage and approximately 100 feet of taper.
3. At the intersection of Gerber Road and Jacaranda Drive, signage should be posted indicating Buses Only 7AM-4PM.

The District will complete the above recommended offsite improvements for re-striping of Gerber Road in conjunction with the proposed onsite improvements.

Should you have any questions, please do not hesitate to contact the District at (847) 888-5000.

Sincerely,
SCHOOL DISTRICT U-46



Patricia Waldau
Director of Plant Operations



March 20, 2023

President and Board of Trustees
228 S. Main Street
Bartlett, IL 60103

RE: HAWK HOLLOW SCHOOL ADDITIONS AND RENOVATIONS
SCHOOL DISTRICT U46

Dear President and Board of Trustees,

As a part of the additions and renovations at Bartlett Elementary School, School District 46 is currently proposing the vacation of Jacaranda Road, Winston Lane and Fair Oaks Road. Along with the vacation request, the District is vacating the ROW and easements related to these roads and consolidating. This area would allow for the construction of the school addition and required parking, while increasing the overall safety from local traffic.

Currently, two lots (lots 16 and 22) are currently zoned P-1 and the rest of the lots are currently zoned SR-2 PUD. The School District is proposing to rezone the entire lot to P-1.

Improvements include a building addition to upgrade the school to a Middle School. Site upgrades include increased parking to meet Village requirements, separate parent and bus drop off loops, separate parent and bus entrance/exits to the site, and associated pavement, utility and stormwater upgrades.

It should be noted that the proposed vacation, lot consolidation and re-zoning was discussed with Village staff during several different meetings, and it was decided that the proposed approach is the most efficient way to redevelop the District property while creating a safe, functional and improved educational facility for District and surrounding community.

Sincerely,
CAGE ENGINEERING

Claudia Welp
Project Manager



VILLAGE OF BARTLETT DEVELOPMENT APPLICATION

For Office Use Only
Case # 23-02
RECEIVED
JAN 16 2023
PLANNING & DEVELOPMENT
VILLAGE OF
BARTLETT

PROJECT NAME Hawk Hollow Additions and Renovations

PETITIONER INFORMATION (PRIMARY CONTACT)

Name: School District U-46

Street Address: 355 East Chicago Street

City, State: Elgin, Illinois

Zip Code: 60120

Email Address: patriciawaldau@u-46.org

Phone Number: 847-888-5000

Preferred Method to be contacted: Email

PROPERTY OWNER INFORMATION

Name: School District U-46 - Attn: Patricia Waldau

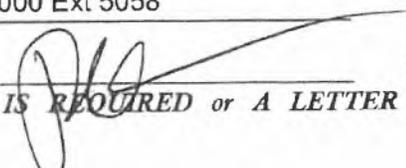
Street Address: 355 E. Chicago St.

City, State: Elgin, IL

Zip Code: 60120

Phone Number: 847-888-5000 Ext 5058

JAN 12 2023

OWNER'S SIGNATURE:  **Date:** _____
(OWNER'S SIGNATURE IS REQUIRED or A LETTER AUTHORIZING THE PETITION SUBMITTAL.)

ACTION REQUESTED (Please check all that apply)

- Annexation
 - PUD (preliminary)
 - PUD (final)
 - Subdivision (preliminary)
 - Subdivision (final)
 - Site Plan (please describe use: commercial, industrial, square footage): Institutional, addition
 - Unified Business Center Sign Plan
 - Other (please describe) Plat of Vacation, Plat of Abrogation, Plat of Consolidation
- Text Amendment
 - Rezoning SR-2 PUD to P-1
 - Special Use for: _____
 - Variation: _____

SIGN PLAN REQUIRED? No

(Note: A Unified Business Center Sign Plan is required for four or more individual offices or businesses sharing a common building entrance or private parking lot.)

PROPERTY INFORMATION

Common Address/General Location of Property: 235 Jacaranda Drive

Property Index Number ("Tax PIN"/"Parcel ID"): SEE ATTACHED

Zoning: Existing: SR-2 PUD **Land Use:** Existing: Institutional/Municipal
(Refer to Official Zoning Map)
Proposed: P-1 Proposed: Institutional/Municipal

Comprehensive Plan Designation for this Property: Municipal/Institutional
(Refer to Future Land Use Map)

Acreage: 19.354

For PUD's and Subdivisions:

No. of Lots/Units: _____
Minimum Lot: Area _____ Width _____ Depth _____
Average Lot: Area _____ Width _____ Depth _____

APPLICANT'S EXPERTS (If applicable, including name, address, phone and email)

Attorney _____

Engineer CAGE Engineering (Claudia Welp)
2200 Cabot Dr. Suite 325 Lisle IL 60532
815-757-0140 cwelp@cagecivil.com

Other Architect: ARCON Associates (Bryan Walsh)
2050 South Finley Road, Suite 40 Lombard, IL 60148
708-204-3675 bwwalsh@arconassoc.com

FINDINGS OF FACT FOR SITE PLANS

Both the Plan Commission and Village Board must decide if the requested Site Plan meets the standards established by the Village of Bartlett Zoning Ordinance.

The Plan Commission shall make findings based upon evidence presented on the following standards: **(Please respond to each of these standards in writing below as it relates to your case. It is important that you write legibly or type your responses as this application will be included with the staff report for the Plan Commission and Village Board to review.)**

1. The proposed use is a permitted use in the district in which the property is located.

The current property and a portion of the property is to be rezoned to P-1 which is the Public Land District. The existing use and proposed use is for the U46 School District which is a permitted use in this district.

2. The proposed arrangement of buildings, off-street parking, access, lighting, landscaping, and drainage is compatible with adjacent land uses.

The proposed building addition maintains appropriate setbacks from the adjacent properties. The proposed driveway and parking lot will be screened from adjacent properties. The access to existing walking paths to and from the adjacent properties will be expanded and maintained for public use. Lighting is utilized for safety and will be placed as such to not disturb adjacent properties. Proposed drainage will maintain existing patterns and will follow local regulations to ensure there are no negative impacts to adjacent properties.

3. The vehicular ingress and egress to and from the site and circulation within the site provides for safe, efficient and convenient movement of traffic not only within the site but on adjacent roadways as well.

There are two separate ingress/egress from the site to promote efficient circulation. Parents and visitors will access the site from the northern access drive off of Gerber Road. Buses will access the site from the southern access drive off of Gerber Road. The use of two distinct entrances allows for separate parent and bus drop off areas. This will help alleviate vehicle congestion and will improve safety by separating vehicle types. The separate entrances will provide clear and direct drop off areas for students/pedestrians as they approaching the building.

4. The site plan provides for the safe movement of pedestrians within the site.

The Vacation of Jacaranda Dr through the site has improved pedestrian safety. There are designated cross walks from the parking to the north of the school and fencing in between to help reduce pedestrian traffic outside of the designated cross walks. Ample sidewalks are provided within the site as well as pedestrian walking paths from the adjacent neighborhoods.

5. There is sufficient mixture of grass, trees and shrubs within the interior and perimeter (including public right-of-way) of the site so that the proposed development will be in harmony with adjacent land uses and will provide a pleasing appearance to the public. Any part of the site plan area not used for buildings, structures, parking or accessways shall be landscaped with a mixture of grass, trees and shrubs. (All landscape improvements shall be in compliance with Chapter 10-11A, Landscape Requirements)

There is a sufficient mixture of landscape throughout the site. A landscape plan is provided by a Professional Landscape Architect. The landscape is in compliance with Chapter 10-11A.

6. All outdoor storage areas are screened and are in accordance with standards specified by this Ordinance.

The outdoor trash enclosure is screened per the standards for this district.

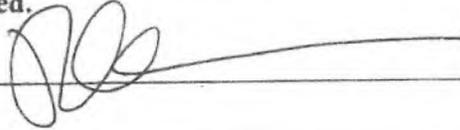
ACKNOWLEDGEMENT

I understand that by signing this form, that the property in question may be visited by village staff and Board/Commission members throughout the petition process and that the petitioner listed above will be the primary contact for all correspondence issued by the village.

I certify that the information and exhibits submitted are true and correct to the best of my knowledge and that I am to file this application and act on behalf of the above signatures.

Any late, incomplete or non-conforming application submittal will not be processed until ALL materials and fees have been submitted.

SIGNATURE OF PETITIONER: _____



PRINT NAME: Patricia Waldau

DATE: 01/16/2023

REIMBURSEMENT OF CONSULTANT FEES AGREEMENT

The undersigned hereby acknowledges his/her obligation to reimburse the Village of Bartlett for all necessary and reasonable expenses incurred by the Village for review and processing of the application. Further, the undersigned acknowledges that he/she understands that these expenses will be billed on an ongoing basis as they are incurred and will be due within thirty days. All reviews of the petition will be discontinued if the expenses have not been paid within that period. Such expenses may include, but are not limited to: attorney's fees, engineer fees, public advertising expenses, and recording fees. Please complete the information below and sign.

NAME OF PERSON TO BE BILLED: School District U-46 - Attn: Patricia Waldau

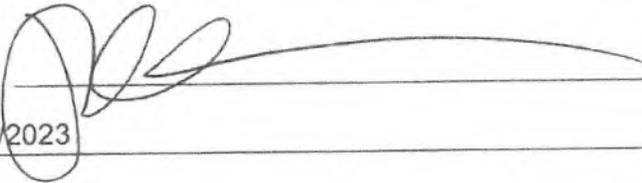
ADDRESS: 355 E. Chicago St.

Elgin, IL. 60120

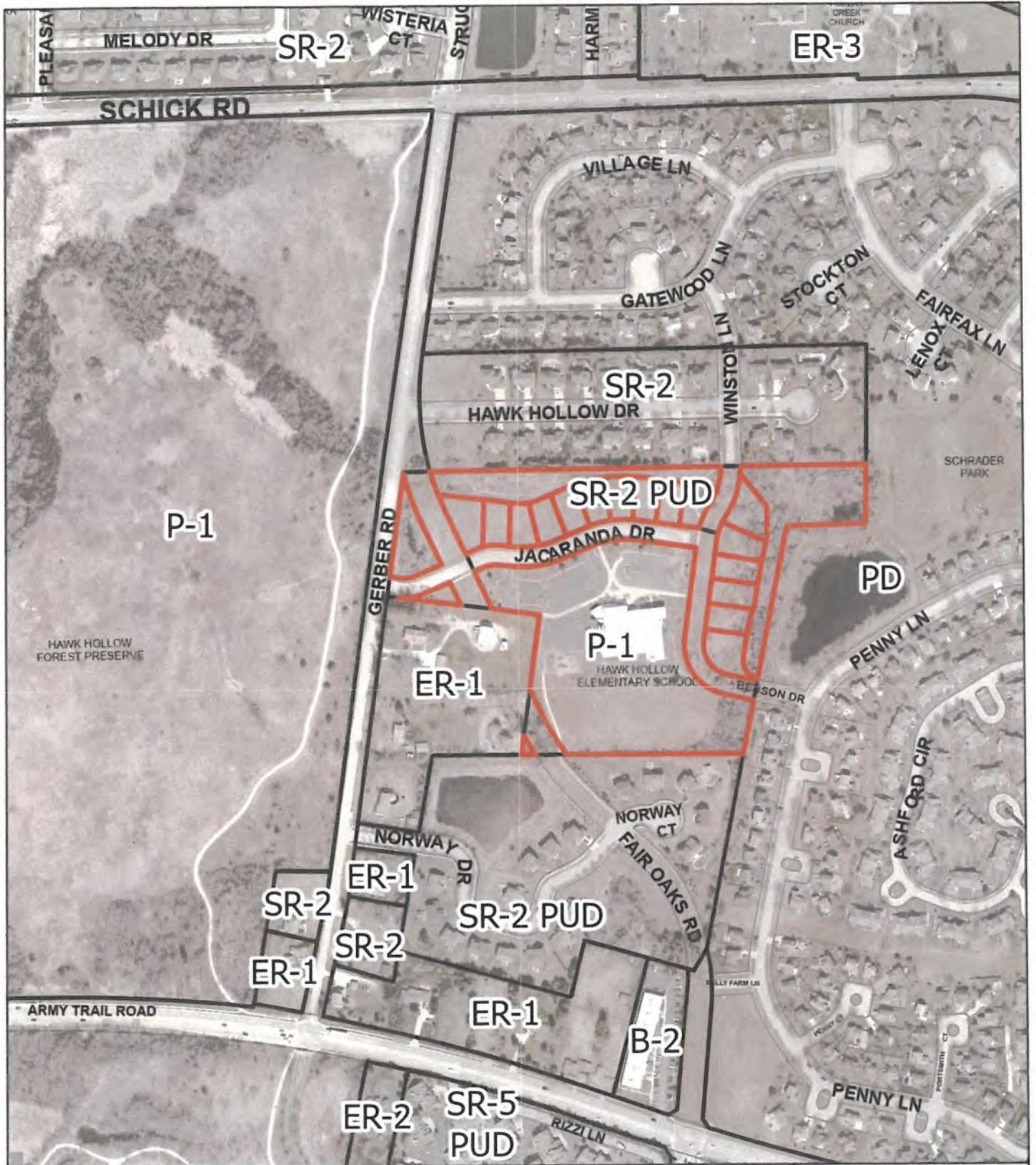
PHONE NUMBER: 847-888-5000 Ext 5058

EMAIL: patriciawaldau@u-46.org

SIGNATURE: _____



DATE: 01/16/2023



Zoning/Location Map

#2023-02
Hawk Hollow Middle School

2023



0 100 200 400 US Feet



**HAWK HOLLOW
MIDDLE SCHOOL**
235 ACARBANDA DRIVE
BARTLETT, IL 60105

PETITIONER INFORMATION:
SCHOOL DISTRICT UWA
333 EAST CHICAGO STREET
ELGIN, ILLINOIS 60120
PRIMARY CONTACT:
PATRICIA J. WU
P. 815.882.5008
E. patricia.wu@uwa-46.org

for the
BOARD OF EDUCATION
235 E. Chicago St.
Elgin, IL 60120



**ISSUED FOR PERMIT -
NOT FOR CONSTRUCTION**

REVISIONS
No. Date

Project Number:
23004
Issue Date:
MARCH 20, 2023
Drawn by:
awh
Sheet Title:
WEST ELEVATION
Sheet Number:
Z004



1 WEST ELEVATION
1/8" = 1'-0"





ARCON
 COMMERCIAL BUILDINGS
 1000 N. MICHIGAN
 SUITE 1000
 CHICAGO, IL 60611
 TEL: 312.467.1000
 WWW.ARCON.COM

**HAWK HOLLOW
 MIDDLE SCHOOL**
 235 JACARANDA DRIVE
 BARTLETT, IL 60110

**FOR THE
 BOARD OF EDUCATION**
 School District U. 44
 325 E. Chicago St.
 Elgin, IL 60120

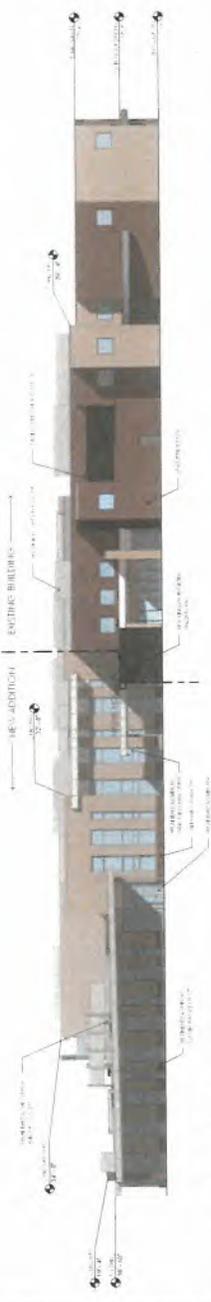
1746

**ISSUED FOR PERMIT -
 NOT FOR CONSTRUCTION**

REVISIONS	No.	Date

Project Number:
 23004
 Issue Date:
 MARCH 20, 2023
 Drawn by:
 Author:
 Sheet Title:
 exterior elevations

Sheet Number
Z003



1 WEST ELEVATION
 1/8" = 1'-0"



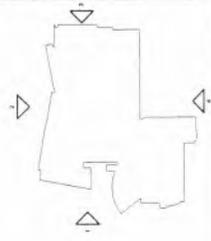
2 NORTH ELEVATION
 1/8" = 1'-0"



3 EAST ELEVATION
 1/8" = 1'-0"



4 SOUTH ELEVATION
 1/8" = 1'-0"



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PLANNING & DEVELOPMENT SERVICES MEMORANDUM

23-36

DATE: June 8, 2023

TO: Kristy Stone, PDS Director

FROM: Daniel Harper, Village Planner *DH*

RE: **Gerber & Schick Road Intersection Analysis**

At the Committee of the Whole's initial review of the Hawk Hollow Middle School proposal at their May 16, 2023 meeting, concerns were raised with the Gerber Road and Schick Road intersection. The intersection was outside the study area for Hawk Hollow's traffic report therefore the intersection's functionality was not included.

The Village's traffic consultant, Lynn Means of BLA, Inc. was asked to analyze the intersection of Schick Road and Geber Road. Based on the analysis of the existing data available, a traffic signal is not warranted in the morning or afternoon school peak hours but may be warranted in the evening peak hour.

BLA, Inc. recommends that the intersection continue to be monitored which would include the collection of updated traffic counts prior to making a determination for the installation of a traffic control signal and/or alternative traffic control measures.

dh/attachments

x:\comdev\memos 2023\036_Gerber_&_Schick_Road_Intersection_Analysis_vbc.docx

Date: June 9, 2023

To: Ms. Kristy Stone, AICP
Interim Director of Planning and Development Services, Village of Bartlett

From: Lynn M. Means, P.E., PTOE, RSP1
Senior Transportation Engineer

Re: Supplemental Traffic Analysis
Hawk Hollow Elementary School Redevelopment
Bartlett, Illinois

BLA, Inc. (BLA) has reviewed the traffic volumes, operations and available crash history at the intersection of Schick Road and Gerber Road in Bartlett, Illinois.

Based on our analyses, the existing intersection geometrics are adequate to accommodate both existing and future traffic conditions (with general background growth and planned development within the study area). *It is recommended that the intersection of Schick Road and Gerber Road be monitored for traffic control installation. This should include the collection of updated traffic counts at this intersection prior to making a determination for traffic control signal installation and/or if alternative traffic control measures should be implemented.*

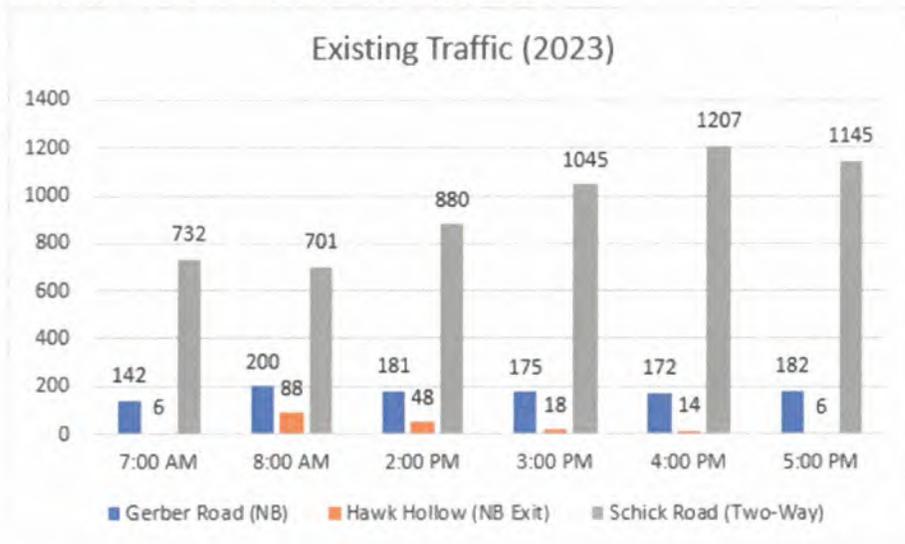
The following summarizes our findings:

Existing Conditions

- Existing available data was collected related to the Schick Road and Gerber Road intersection and surrounding area. These included observations of existing traffic conditions, roadway characteristics and traffic control on the surrounding roadway network.
- Vegetation (trees and shrubs) at the southeast corner of the Schick Road and Gerber Road intersection appeared to be overgrown. *These should be trimmed to not inhibit the available sight lines (looking east on Schick Road).*
- Daily and peak hour traffic counts along the study area roadways were obtained from the Illinois Department of Transportation (IDOT), DuPage County Division of Transportation (DuDOT), as available, as well as peak hour traffic counts and Chicago Metropolitan Agency for Planning (CMAP) 2050 traffic volume projections from recent traffic studies performed by other traffic consultants in 2023. *No new intersection traffic counts were performed at the Schick Road and Gerber Road intersection as part of this evaluation.*
- The existing traffic volumes at the intersection of Schick Road (two-way volume, in gray) and Gerber Road (northbound volume, in blue) during the morning and afternoon peak hours are illustrated in **Exhibit 1**. Also included on the chart is the existing Hawk Hollow Elementary School Traffic (exiting to the north, in orange) during the peak hours, which is also included as part of the Gerber Road northbound totals.



Looking east on Gerber Rd., south of Schick Rd.

Exhibit 1: Existing Traffic Volumes


- As shown in *Exhibit 1*, the intersection’s highest hour of traffic occurs between 4:00 and 5:00 PM. During this timeframe, the Hawk Hollow school traffic on the Gerber Road northbound approach is less than 15 vehicles (approximately 8% of the approach volume). During the afternoon school peak hour (2:00 to 3:00 PM), the traffic volume along Schick Road are approximately 25% lower than the PM street peak, with the Hawk Hollow school representing approximately 25% of the Gerber Road northbound approach volumes at Schick Road. During the morning school peak hour (8:00 to 9:00 AM), traffic volumes along Schick Road are approximately 40% lower than the PM street peak, with the Hawk Hollow school representing approximately 45% of the Gerber Road northbound approach volumes at Schick Road.

Crash Analysis

To evaluate and address potential safety issues at the study area intersections (see *Exhibit 2*), crash data was obtained from the IDOT Division of Transportation Safety for the last five calendar years available, 2018 through 2022. A summary of the crash data is provided in *Table 1*.

- There was a total of 26 crashes that occurred at the study area intersections (4) over the five-year analysis period (2018-2022).
- Approximately two-thirds (17 of 26) of the crashes occurred at the signalized intersection of Army Trail Road at Gerber Road / DuPage Forest Preserve. The majority, approximately 76 percent (13 of 17) involved property damage only or type c (potential) injury crashes. There were 6 crashes (approximately 35%) that occurred during wet or icy conditions. There was no distinct pattern amongst the crashes. One (1) crash at this intersection involved a pedestrian, occurring when a northbound vehicle (from the Forest Preserve) collided with a pedestrian (cyclist).
- Nine (9) crashes occurred at the Schick Road and Gerber Road intersection over the 5-year analysis period, with approximately 89% involving property damage only/type c (potential) injury. One crash occurred during wet/icy roadway conditions. There was one crash that occurred during the school peak periods, involving a northbound right-turning vehicle and an eastbound through vehicle. There was no distinct pattern amongst the crashes (3 involved a southbound and eastbound vehicle, 2 a northbound and eastbound vehicle, 3 a northbound and westbound vehicle, and 1 northbound to northbound vehicle). The frequency and types of crashes do not warrant corrective measures, i.e., installation of a traffic control signal or an eastbound right-turn lane.
- There were no reported crashes at the Gerber Road intersections with Hawk Hollow Drive or Jacaranda Drive during the five-year analysis period.

Exhibit 2: Study Intersection Map

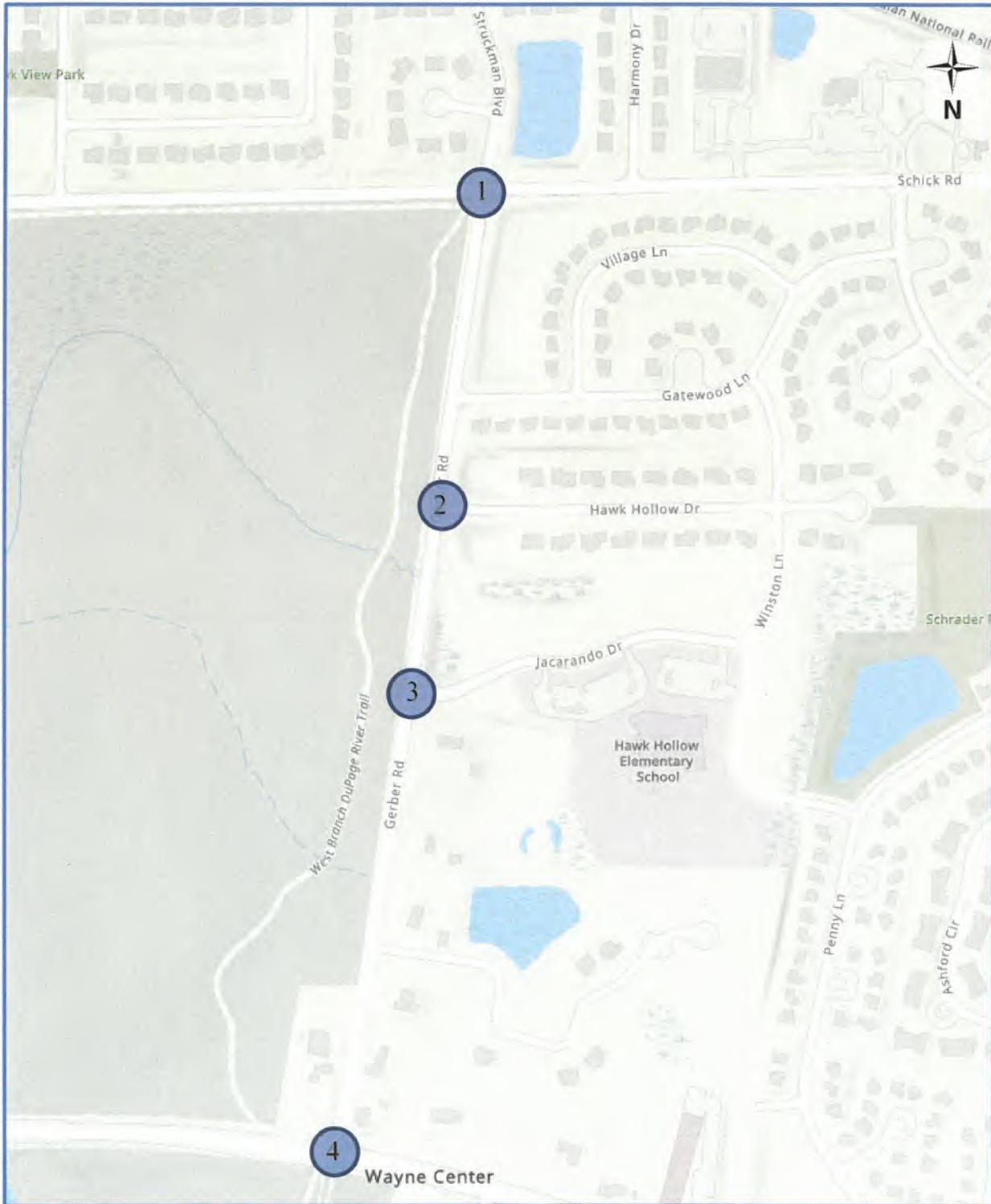




Table 1: Crash Summary (2018-22)

Location / Year	No. of Crashes	Severity ^A					Crash Type ^C							Percent During Wet/Icy Conditions	Percent During AM/PM School Peak Hours ^D
		PI ^B			F	CM	RE	SS	FO	HO	Ped				
		PD	A	B								C			
Intersections (Crashes within 250' of Intersection)															
1. Schick Road and Gerber Road															
2018	2	1	--	--	1	--	1	1	--	--	--	--	--	0%	
2019	2	1	--	--	1	--	2	--	--	--	--	--	0%		
2020	--	--	--	--	--	--	--	--	--	--	--	--	--		
2021	4	2	--	1	1	--	4	--	--	--	--	--	0%		
2022	1	1	--	--	--	--	1	--	--	--	--	--	0%		
Total	9	5	0	1	3	0	8	1	0	0	0	0	11%		
2. Gerber Road and Hawk Hollow Drive															
Total	0	0	0	0	0	0	0	0	0	0	0	0	0		
3. Gerber Road and Jacaranda Drive															
Total	0	0	0	0	0	0	0	0	0	0	0	0	0		
4. Army Trail Road and Gerber Road															
2018	3	1	--	1	1	--	--	1	--	1	--	--	1	0%	
2019	5	2	--	1	2	--	1	3	--	1	--	--	--	20%	
2020	3	1	--	--	2	--	3	--	--	--	--	--	--	0%	
2021	2	--	--	1	1	--	1	--	--	1	--	--	--	0%	
2022	4	1	--	1	2	--	2	2	--	--	--	--	--	25%	
Total	17	5	0	4	8	0	7	6	0	3	0	1	35%		
Total (2018-22)	26	10	0	5	11	0	15	7	0	3	0	1	27%		

^A PD = property damage only; PI = personal injury; F = fatality.

^B Type A (incapacitating injury); Type B (non-incapacitating injury); Type C (possible injury).

^C CM = cross movement/angle; RE = rear end; SS = Sideswipe; FO = fixed object/parked car; HO = head on; Ped = pedestrian/bicyclist.

^D Weekday AM Peak Hour (7:30-8:30 AM) and weekday PM School Peak Hour (2:00-3:00 PM), while school is in session.

Signal Warrant Analysis

A traffic signal warrant analysis was conducted for the intersection of Schick Road and Gerber Road under Existing and Future (year 2030 with the proposed school expansion and conversion to a middle school). The analysis was based on the Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration criteria for installation of a traffic control signal.

The warrant analysis considers hourly traffic volumes and makes comparison to minimum volume thresholds to determine if the installation of a traffic signal should be considered. The MUTCD is the standard reference application of traffic signals and contains nine different warrant types for the justification of traffic signals. It is stated that if one or more of the warrants are satisfied, a traffic signal is justified and could be installed. However, several factors are involved in determining if traffic signal control should be installed, including intersection operations, safety, and engineering judgment.

The intersection was analyzed using the MUTCD Warrant 3 – Peak Hour (see *Exhibit 3*).

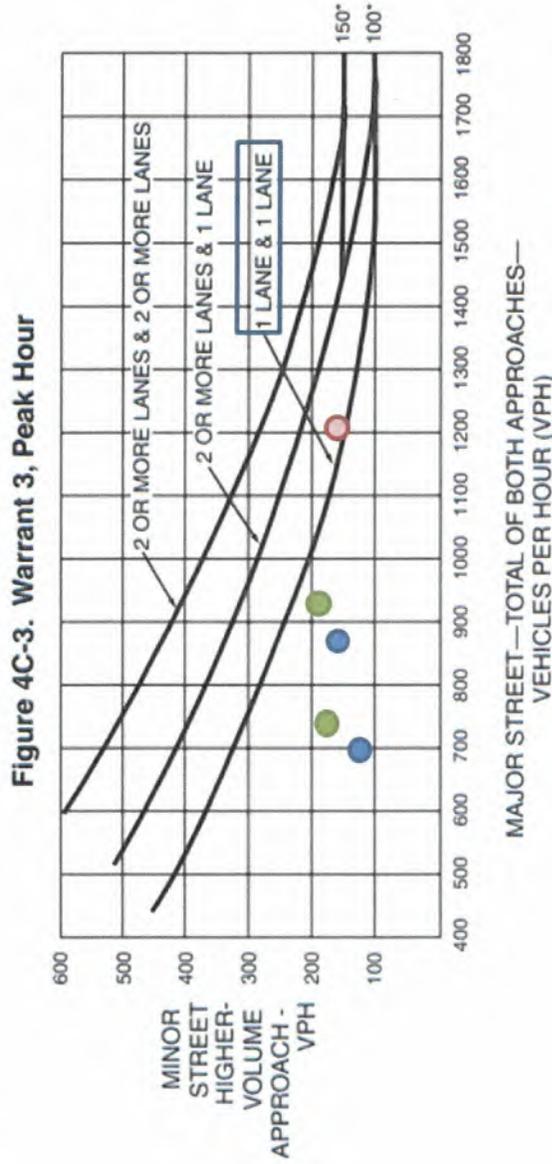
Based on this analysis, a traffic signal is *not* currently warranted during the school morning or afternoon peak periods, nor is anticipated to be warranted based on future school projections during these timeframes. However, it appears that a signal may be warranted based on the evening street peak hour volumes under existing conditions (without the school expansion). Of note, and as previously described, during this timeframe, the Hawk Hollow School traffic represents less than 10% of the Gerber Road approach volume at Schick Road. Also, when school traffic may suggest the need for traffic control installation, which is often during a very short duration (approximately 20-30 minutes in the morning and afternoon), in lieu of traffic control installation, it is often recommended to have police personnel facilitate the traffic movements during this timeframe. *Accordingly, this intersection should be monitored for future traffic control installation.*

Supplemental Signage

At the Gerber Road and Hawk Hollow Drive unsignalized “T” intersection, based on the analysis and recommendations, including the traffic management plan, contained within the Sam Schwartz Traffic Study prepared for the Hawk Hollow expansion and conversion to a middle school, the vehicle queues for drop-off/pick-up are anticipated to be contained on-site (not spill back onto Gerber Road), with the turning volumes contained within the proposed storage lanes – therefore, we would not anticipate the need for “Do Not Block Intersection” signage or pavement markings at this location.



Exhibit 3: MUTD Warrant 3 – Peak Hour, Schick Road and Gerber Road



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Alternative / Timeframe	Major Street (Combined)	Minor Street (NB Approach) ¹	Satisfied?
2023 Existing Traffic			
AM Peak (7:30 - 8:30 AM)	700	120	No
PM School Peak (2:00 - 3:00 PM)	880	150	No
PM Street Peak (4:00 - 5:00 PM)	1205	150 ²	Yes
2030 Total Traffic			
AM Peak	735	185	No
PM School Peak	920	195	No

¹ Includes RTOR reduction factor (Pagones' Theorem); assumed one lane approach to be conservative.

² Hawk Hollow Elementary School volume is only 14 vehicles (less than 10% of this approach) during the PM Street Peak.



Agenda Item Executive Summary

Item Name Bartlett Liquors and Wine

Committee or
Board Committee

BUDGET IMPACT

Amount: N/A

Budgeted N/A

List what fund N/A

EXECUTIVE SUMMARY

The petitioner is requesting a **Special Use Permit** to sell beer, wine, and liquor in a packaged liquor store located at 1072 Army Trail Road in the Galleria of Bartlett shopping center. The property is zoned in B-3 (Neighborhood Shopping) Zoning District.

The Planning and Zoning Commission held the required public hearing, reviewed the petitioner's request and **recommended approval** subject to the conditions and findings of fact at their meeting on June 2, 2023.

ATTACHMENTS (PLEASE LIST)

PDS Memo, minutes of the P&Z Commission meeting, cover letter, application, location map, Site Plan, Floor Plan.

ACTION REQUESTED

- For Discussion Only - *To review and forward to the Village Board for a final vote*
- Resolution
- Ordinance
- Motion

Staff: Kristy Stone, PDS Director

Date: June 8, 2023

PLANNING AND DEVELOPMENT SERVICES MEMORANDUM

23-33

DATE: June 2, 2023
TO: Paula Schumacher, Village Administrator
FROM: Kristy Stone, PDS Director *KS*
RE: **(#23-05) Bartlett Liquors and Wine**

PETITIONER

Narinder Sohi

SUBJECT SITE

1072 Army Trail Road (Galleria of Bartlett)

REQUESTS

Special Use Permit to sell package liquor (beer, wine, and liquor)

SURROUNDING LAND USES

	<u>Land Use</u>	<u>Comprehensive Plan</u>	<u>Zoning</u>
Subject Site	Commercial	Mixed-Use Business Park /Estate Residential	B-3
North	Single-Family	Estate Residential	ER-3 PUD
South	Commercial	Mixed-Use Business Park	B-3 / B-3 PUD
East	Undeveloped	Mixed-Use Business Park /Estate Residential	R-1*
West	Commercial	Commercial	B-3 PUD

* Single Family – Unincorporated DuPage County

ZONING HISTORY

- **July 2018** - The property now known as the Galleria of Bartlett was annexed by the Village in July of 2018. The property was zoned B-3 and was granted Special Use Permits to allow a drive-thru establishment, to serve alcohol and to allow outdoor seating. Variations were also granted to allow for parking in the front, rear and side yards.

DISCUSSION

1. The petitioner is requesting a **Special Use Permit** to sell beer, wine, and liquor in a packaged liquor store in the B-3 (Neighborhood Shopping) Zoning District.
2. The proposed liquor store will also sell tobacco products and limited food items.
3. The proposed liquor store will occupy the unit of the Galleria of Bartlett that was the former location of 2x20 Fitness between Beef Shack and Smoke & Vape Exclusive.
4. The Zoning Ordinance requires 7 parking spaces for this use, there are currently 78 spaces in the Galleria parking lot. The parking lot can accommodate the parking requirements of the proposed liquor store and all existing tenants.
5. The proposed hours of operation will be in accordance with the Class C Extended liquor license; 10:00 AM to 10:00 PM Sunday through Thursday and 10:00 AM to 12:00 AM (midnight) on Friday and Saturday.

RECOMMENDATION

1. The Staff recommends **approval** of the petitioner's request for a special use permit subject to the following conditions and findings of fact:
 - A. Approval of a Class C Extended liquor license;
 - B. The sale of liquor shall be limited to the hours of 8:00 AM to 12:00 Midnight Sunday through Thursday and 8:00 AM to 1:00 AM on Friday and Saturday, in accordance with the liquor license;
 - C. Findings of fact (special use permit):
 - i. The proposed liquor store is desirable to provide a use which is in the interest of public convenience and will contribute to the general welfare of the community;
 - ii. That the proposed liquor store will not under the circumstances of the particular case be detrimental to the health, safety, morals or general welfare of persons residing or working in the vicinity or be injurious to property value or improvement in the vicinity.
 - iii. That the special use shall conform to the regulations and conditions specified in the Bartlett Zoning Ordinance for such use and with the stipulations and conditions made a part of the authorization granted by the Village Board of Trustees.
2. The Planning and Zoning Commission held the required public hearing, reviewed the petitioner's request and **recommended approval** at their meeting on June 2, 2023.

PDS 23-33
June 2, 202
Page 3

3. The minutes of the P & Z Commission meeting, plans and additional background information are attached for your review.

dh/attachments
x:\comdev\memos 2023\033_liquor store_1072_army_trail_vbc2.docx



Village of Bartlett
Planning and Zoning Commission
June 1, 2023

(#23-05) Bartlett Liquors and Wine

Special Use Permit to sell package liquor

PUBLIC HEARING

The following exhibits were presented:

Exhibit A – Picture of Sign

Exhibit B – Mail Affidavit

Exhibit C – Notification of Publication

The petitioner, **Narinder Sohi** 974 Woodhill Drive, Carol Stream IL came forward and was sworn in by **M. Werden**. **N. Sohi** stated I am requesting a special use permit for a liquor store. I have extensive experience in the liquor industry and will maintain compliance with all applicable laws and regulations. **M. Hopkins** what are the hours of operation? **N. Sohi** Monday through Thursday 10 am to 10 pm and Friday and Saturday 10 am to 12 am. **M. Hopkins** could that staff report be changed accordingly? **D. Harper** our staff report was in conformance with Class C of the extended liquor license. I will change those hours to reflect the proposed business hours. However, in the recommendation, we will have the maximum hours that are in the Class C as well.

M. Werden opened the public hearing portion of the meeting.

Nilesh Patel 985 Reading Drive, Bartlett IL came forward and stated I have 2 liquor stores in town and would like to ask how many liquor stores do we need in Bartlett? People are losing all businesses. I had Mr. Quick-Ezz for almost 23 years and I am closing next month because I am losing money. **C. Deveaux** you are competing with the Jewel across the street and they have a larger package ability than you have. This petitioner is interested in opening another liquor store that is farther away. That question should be brought up to the Village Board and not this committee. **N. Patel** I just want to know how many liquor stores do we need? **B. Bucaro** one could say the same about gaming cafes. There are a lot of gaming cafes in the Village and there has been criticism that are too many. **N. Patel** I am just asking, how many liquor stores do we need in town? **M. Hopkins** that is a good comment and we hear it often. However, that is outside of the purview of this committee. We do not review nor comment on such things. We review the technical adequacy of a submittal with regard to planning and zoning. You are asking about a policy decision and that is not for this committee. **N. Patel** I just wanted to ask. **M. Werden** you may ask that at the Village Board meeting during the public forum. **N. Patel** I am just asking, how many do we need in town? **M. Hopkins** it would be wrong of this committee to vote no because of economics or competition within the Village. We are restricted to tight regulations. **N. Patel** I just want to know. **G. Koziol** we do not control the number of businesses in the Village Bartlett. If someone wants to open a business that meets all of the requirements, they have the right to open that business and either succeed or fail. **N. Patel** I am just asking the Village, how many do we need in town? That is my only point. **M. Hopkins** point taken.

G. Koziol made a motion to pass along a **positive recommendation** to the Village Board to approve case **(#23-05) Bartlett Liquors and Wine** Special Use Permit to sell package liquor subject to the findings of fact outlined in the staff report.



Village of Bartlett
Planning and Zoning Commission
June 1, 2023

Motioned by: G. Koziol
Seconded by: C. Deveaux

M. Werden closed the public hearing portion of the meeting.

Roll Call

Ayes: B. Bucaro, C. Deveaux, M. Hopkins, J. Kapadoukakis, G. Koziol, J. Miaso, J. Battermann, M. Werden

Nays: None

The motion carried.

NARINDER SOHI

974 WOODHILL DRIVE, CAROL STREAM IL-60188.(NARINDERSOHI27@GMAIL.COM)

DATE :

VILLAGE OF BARTLETT -Liquor Licensing Authority

Dear village President and Board of trustees,

I am writing to express my keen interest in obtaining a special use liquor store license for BARTLETT LIQUORS AND WINE INC. As a passionate entrepreneur with a deep understanding of the liquor industry, I believe that this special use liquor store will fill a gap in the market and provide a valuable service to the community.

I have carefully researched the requirements for obtaining a special use liquor store license, and I am confident that I meet all the necessary qualifications. I have a solid business plan in place, outlining my strategies for maintaining compliance with all applicable laws and regulations, including responsible alcohol sales practices and age verification protocols.

Furthermore, I have extensive experience in the liquor industry, having worked in various capacities in the past. I possess a thorough knowledge of different types of alcoholic beverages, their production processes, and their sales and distribution dynamics. I am also well-versed in local and state liquor laws, and I am committed to upholding them at all times.

In addition to my industry expertise, I am also deeply committed to the responsible sale and consumption of alcohol. I will implement strict policies and procedures to prevent sales to minors or intoxicated individuals, and I will promote responsible drinking through signage, training programs for employees, and community outreach initiatives.

Furthermore, I have taken all necessary steps to ensure the safety and security of the liquor store premises, including installing surveillance cameras, implementing effective inventory control measures, and training staff in emergency response procedures.

I am excited about the opportunity to operate a special use liquor store, and I am confident that my experience, knowledge, and dedication to responsible alcohol sales will make me a suitable candidate for a special use liquor store license. I would welcome the opportunity to discuss my business plan and qualifications with you in more detail.

Thank you for considering my application. I look forward to your positive response.

Sincerely,

Narinder sohi .

Ph – 630-544-1982



VILLAGE OF BARTLETT SPECIAL USE PERMIT APPLICATION

For Office Use Only
Case # 23-05
RECEIVED
APR 25 2023
PLANNING & DEVELOPMENT
VILLAGE OF
BARTLETT

PROJECT NAME BARTLETT LIQUORS AND WINE INC

PETITIONER INFORMATION (PRIMARY CONTACT)

Name: NARINDER SOHI

Street Address: 974 WOOD HILL DRIVE

City, State: CAROL STREAM

Zip Code: 60188

Email Address: [REDACTED]

Phone Number: [REDACTED]

Preferred method to be contacted: [REDACTED]

PROPERTY OWNER INFORMATION

Name: ~~ALEC DEROSA~~ 59TH & ARMY TRAIL, LLC

Street Address: [REDACTED]

City, State: [REDACTED]

Zip Code: [REDACTED]

Phone Number: [REDACTED]

OWNER'S SIGNATURE: [Signature] Date: 4/24/23

(OWNER'S SIGNATURE IS REQUIRED or A LETTER AUTHORIZING THE PETITION SUBMITTAL.)

SPECIAL USE PERMIT REQUESTED (Please describe i.e. liquor sales, outdoor seating, etc.)

PACKAGE LIQUOR SALES

PROPERTY INFORMATION

Common Address/General Location of Property: 1072 ARMY TRAIL RD ,BARTLETT IL 60103

Property Index Number ("Tax PIN"/"Parcel ID"): 0116401015

Acreage: 1.6 ACRES

Zoning: B-3
(Refer to Official Zoning Map)

Land Use: COMMERCIAL

Comprehensive Plan Designation for this Property: MIXED-USE BUSINESS PARK
(Refer to Future Land Use Map)

APPLICANT'S EXPERTS (If applicable, including name, address, phone and email)

Attorney _____

Engineer _____

Other _____

FINDINGS OF FACT FOR SPECIAL PERMIT

Both the Planning & Zoning Commission and Village Board must decide if the requested Special Use meets the standards established by the Village of Bartlett Zoning Ordinance. The Planning & Zoning Commission shall make findings based upon evidence presented on the following standards:

(Please respond to each of these standards in writing below as it relates to your case. It is important that you write legibly or type your responses as this application will be included with the staff report for the Planning & Zoning Commission and Village Board to review.)

1. That the proposed use at that particular location requested is necessary or desirable to provide a service or a facility which is in the interest of public convenience and will contribute to the general welfare of the neighborhood or community.

Convenience for the Public: location is in an area where there are limited options for purchasing alcoholic beverages, our store could provide a convenient and accessible option for residents to purchase such products.
Community Need: market research or surveys shows that there is a need for the service or facility that the liquor store would provide, and it would benefit the local residents or businesses.
My commitment is to being a responsible member of the community by engaging in outreach efforts, such as meeting with local residents and business owners, community meetings, and collaborating with local law enforcement to ensure compliance with regulations.

2. That such use will not under the circumstances of the particular case be detrimental to the health, safety, morals, or general welfare of persons residing or working in the vicinity or be injurious to property value or improvement in the vicinity.

I assure that the intended use of the license will not result in any detrimental effects on the well-being of the community by implementing security measures, soundproofing, and limiting operating hours as needed.

Staff training: Our staff will be trained in responsible alcohol service practices, including checking for identification, preventing over-serving, and managing intoxicated patrons to minimize the risk of incidents that could lead to crime or disturbances. I will make sure this store will not have a negative impact on the surrounding community with the help of Security measures to prevent and address any potential issues related to increased crime, will install surveillance cameras, will hire trained security personnel, and implement ID checks and age verification protocols to prevent underage drinking.

3. That the special use shall conform to the regulations and conditions specified in this Title for such use and with the stipulation and conditions made a part of the authorization granted by the Village Board of Trustees.

I will compliance with local laws and regulations related to the sale of alcoholic beverages, such as age restrictions, hours of operation, signage, and security measures and will also include requirements for accessibility, fire safety, and other building code regulations. I will also include requirements related to noise control, parking, lighting, landscaping, or other considerations to ensure that the special use of package liquor sales is conducted in a manner that is compatible with the surrounding community and meets the Village's standards and regulations.

Please refer to Chapter 13 for additional Findings of Fact for Proposed Cannabis Uses.

ACKNOWLEDGEMENT

I understand that by signing this form, that the property in question may be visited by village staff and Board/Commission members throughout the petition process and that the petitioner listed above will be the primary contact for all correspondence issued by the village.

I certify that the information and exhibits submitted are true and correct to the best of my knowledge and that I am to file this application and act on behalf of the above signatures.

Any late, incomplete or non-conforming application submittal will not be processed until ALL materials and fees have been submitted.

SIGNATURE OF PETITIONER: _____
(Handwritten signature)

PRINT NAME: _____
MARINDER K. Sahi

DATE: _____
4/24/2023

REIMBURSEMENT OF CONSULTANT FEES AGREEMENT

The undersigned hereby acknowledges his/her obligation to reimburse the Village of Bartlett for all necessary and reasonable expenses incurred by the Village for review and processing of the application. Further, the undersigned acknowledges that he/she understands that these expenses will be billed on an ongoing basis as they are incurred and will be due within thirty days. All reviews of the petition will be discontinued if the expenses have not been paid within that period. Such expenses may include, but are not limited to: attorney's fees, engineer fees, public advertising expenses, and recording fees. Please complete the information below and sign.

NAME OF PERSON TO BE BILLED: _____

ADDRESS: _____

PHONE NUMBER: _____

EMAIL: _____

SIGNATURE: _____
(Handwritten signature)

DATE: _____
4/24/2023



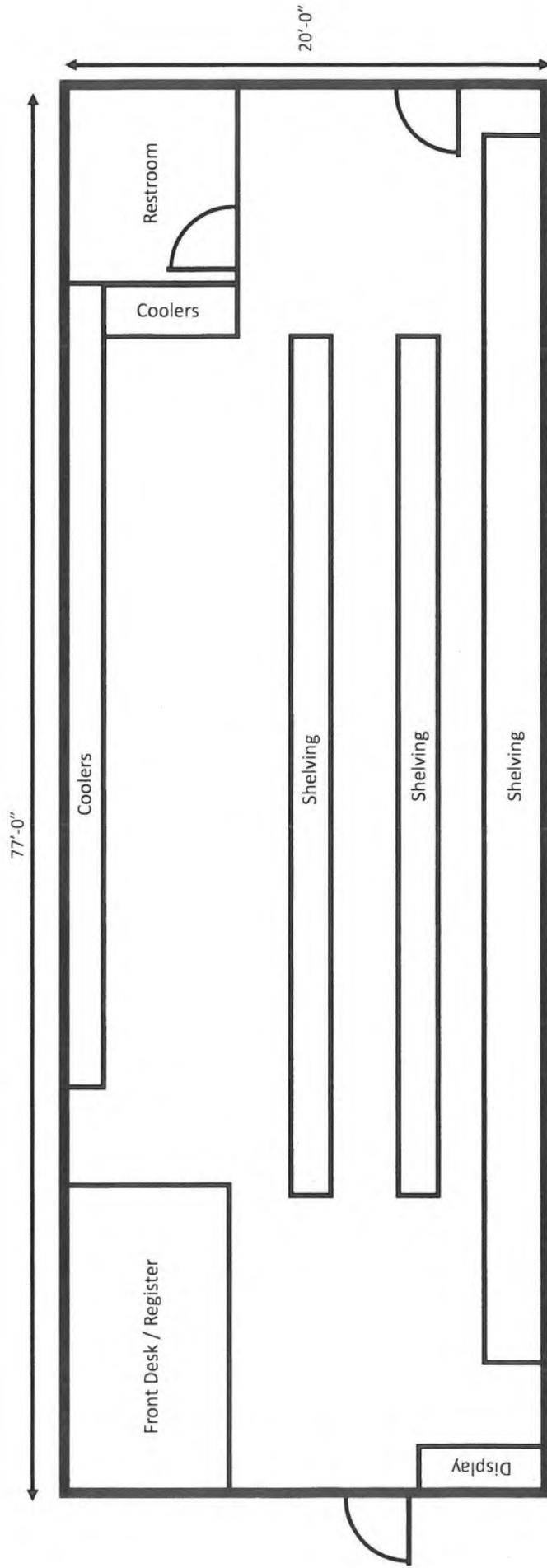
LOCATION MAP

#23-05 Bartlett Liquors and Wine
 1072 Army Trail Rd

2023



Bartlett Liquors and Wine
Proposed Floor Plan





Agenda Item Executive Summary

Item Name Orchards Gaming

Committee or
Board Committee

BUDGET IMPACT

Amount: N/A

Budgeted N/A

List what fund N/A

EXECUTIVE SUMMARY

The petitioner is requesting a **Special Use Permit** to serve beer and wine at a gaming café at 978 S. Bartlett Road in the Bartlett Orchard Plaza shopping center.

The Planning and Zoning Commission held the required public hearing, reviewed the petitioner's request and **recommended approval** subject to the conditions and findings of fact at their meeting on June 2, 2023.

ATTACHMENTS (PLEASE LIST)

PDS Memo, minutes of the P& Z Commission meeting, cover letter, application, location map, Site Plan, Floor Plan.

ACTION REQUESTED

- For Discussion Only - *To review and forward to the Village Board for a final vote*
- Resolution
- Ordinance
- Motion

Staff: Kristy Stone, PDS Director

Date: June 8, 2023

PLANNING AND DEVELOPMENT SERVICES MEMORANDUM

23-32

DATE: June 2, 2023
TO: Paula Schumacher, Village Administrator
FROM: Kristy Stone, PDS Director *KS*
RE: **(#23-04) Orchards Gaming**

PETITIONER

Nilesh Patel

SUBJECT SITE

978 S. Bartlett Road (Bartlett Orchard Plaza)

REQUESTS

Special Use Permit to serve beer and wine

SURROUNDING LAND USES

Subject Site	<u>Land Use</u> Commercial	<u>Comprehensive Plan</u> Commercial	<u>Zoning</u> B-2 PUD
North	Commercial	Commercial	B-2
South	Residential	Suburban Residential	SR-3 PUD
East	Commercial	Commercial	B-3 PUD
West	Residential	Suburban Residential	SR-3 PUD

ZONING HISTORY

- **February 1973** – The subject parcel was annexed to the Village under an annexation agreement granting the owner the right to develop single family, town house and other multi-family residential uses.
- **January 1986** - The property now known as Bartlett Orchard Plaza was zoned B-2 Local Convenience Shopping District as part of Area 1B-1 of the Bartlett Orchards Planned Unit Development.
- **June 1987** – A special permit was granted approving the PUD plan for the development of the shopping center.

DISCUSSION

1. The petitioner is requesting a **Special Use Permit** to serve beer and wine at a gaming cafe.
2. The petitioner is proposing to open a cafe with video gaming that will provide a limited dining menu. This will be a 21 and older only establishment.
3. The approximately 1,600 square foot establishment would include a lounge and bar area with 12 seats, as well as a gaming area with six (6) gaming stations. A draft floor plan is attached for reference.
4. The State Law requires that establishments operating video gaming machines have a valid liquor license. The petitioner is proposing to offer beer and wine only for their patrons and proposes to operate from Sunday to Thursday 8:00 a.m. to 10:00 p.m. and Friday to Saturday 8:00 a.m. to 12:00 a.m. Once a liquor license is issued, the petitioner will be able to apply for the state video gaming license.
5. Orchards at Bartlett currently has 98 parking spaces on site. This use would require 24 parking spaces. The shopping center would be able to accommodate the parking demand for this use. The Bartlett Orchard Plaza site plan is attached for reference.

RECOMMENDATION

1. The Staff recommends **approval** of the petitioner's request for a special use permit subject to the following conditions and findings of fact:
 - A. Approval of a Class B liquor license;
 - B. The sale of alcohol shall be limited to the hours of 8:00 A.M. to 1:00 A.M. Sunday through Thursday and 8:00 AM to 2:00 AM on Friday and Saturday, in accordance with the Class B liquor license;
 - C. Approval a Video Game License by the State of Illinois.
 - D. Findings of fact (special use permit):
 - i. The proposed gaming cafe is desirable to provide a use which is in the interest of public convenience and will contribute to the general welfare of the community;
 - ii. That the proposed gaming cafe will not under the circumstances of the particular case be detrimental to the health, safety, morals or general welfare of persons residing or working in the vicinity or be injurious to property value or improvement in the vicinity.
 - iii. That the gaming cafe shall conform to the regulations and conditions specified in the Bartlett Zoning Ordinance for such use

and with the stipulations and conditions made a part of the authorization granted by the Village Board of Trustees.

2. The Planning and Zoning Commission held the required public hearing, reviewed the petitioner's request and **recommended approval** at their meeting on June 2, 2023.
3. The minutes of the P & Z Commission meeting, plans and additional background information are attached for your review.

dh/attachments

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Village of Bartlett
Planning and Zoning Commission
June 1, 2023

(#23-04) Orchards Gaming

Special Use Permit to serve beer and wine

PUBLIC HEARING

The following exhibits were presented:

Exhibit A – Picture of Sign

Exhibit B – Mail Affidavit

Exhibit C – Notification of Publication

The petitioner, **Nilesh Patel** 985 Reading Drive, Bartlett IL came forward and was sworn in by **M. Werden**. **N. Patel** stated I am requesting a special use permit to serve alcohol and to obtain a gaming license to establish a gaming room at my property. I have had businesses in town for 23 years and I have 2 liquor stores already. **M. Werden** asked staff, have you received any calls or emails regarding this? **D. Harper** no, we have not. **M. Hopkins** asked, could you clarify the hours of operation? **N. Patel** the hours will be Sunday through Thursday 8 am to 10 pm and Friday and Saturday 8 am to 12 am. **M. Hopkins** is that consistent with the staff report? **D. Harper** we will update those hours.

M. Werden opened the public hearing portion of the meeting. No one from the public came forward.

M. Hopkins made a motion to pass along **a positive recommendation** to the Village Board to approve case **(#23-04) Orchards Gaming** for a Special Use Permit to serve beer and wine subject to the findings of fact outlined in the staff report.

Motioned by: J. Miaso

Seconded by: M. Hopkins

M. Werden closed the public hearing portion of the meeting.

Roll Call

Ayes: B. Bucaro, C. Deveaux, M. Hopkins, J. Kapadoukakis, G. Koziol, J. Miaso, J. Battermann,

M. Werden

Nays: None

The motion carried.

Nilesh Patel

978 South Bartlett Road
Bartlett, IL 60103
(847)-630-9313
nilesh1918@yahoo.com

President and Board of Trustees

Village of Bartlett
228 South Main Street
Bartlett, IL 60103

Dear President and Board of Trustees,

I, Nilesh Patel, would like to submit a formal request for a permit to serve alcohol at my allocated property site. The alcohol permitted would be limited to an assortment of beers and wines. Alongside this permit, I would like to obtain a gaming license in order to establish a gaming room in my allocated property. I request that this process be completed smoothly and successfully. I assure you that I will be able to provide all the documentation and requirements needed to obtain the required materials to start this new business plan successfully. Presented below are the resources and hours needed to inaugurate the facility:

- Hours of Operation
 - **Sunday-Thursday: 10:00 A.M. to 10:00 P.M.**
 - **Friday-Saturday: 10:00 A.M. to 12:00 A.M.**
- Number of Proposed Gaming Machines: **6**
- Leasing Space Address
 - 978 South Bartlett Road, Bartlett, IL 60103
- Allocated Space
 - 1,604 square feet

Sincerely,

Nilesh Patel



VILLAGE OF BARTLETT
SPECIAL USE PERMIT APPLICATION

For Office Use Only
Case # 23-04
RECEIVED
APR 11 2023
PLANNING & DEVELOPMENT
VILLAGE OF
BARTLETT

PROJECT NAME Restaur Beer & wine only

PETITIONER INFORMATION (PRIMARY CONTACT)

Name: Nilesh PATEL

Street Address: 985 READING DR

City, State: BARTLETT, IL Zip Code: 60103

Email Address: [REDACTED] Phone Number: [REDACTED]

Preferred method to be contacted: [REDACTED]

PROPERTY OWNER INFORMATION

Name: Bartlett Orchard Plaza

Street Address: [REDACTED]

City, State: [REDACTED] Zip Code: [REDACTED]

Phone Number: [REDACTED]

OWNER'S SIGNATURE: Georgia Stathopoulos Date: 3-6-23
(OWNER'S SIGNATURE IS REQUIRED or A LETTER AUTHORIZING THE PETITION SUBMITTAL.)

SPECIAL USE PERMIT REQUESTED (Please describe i.e. liquor sales, outdoor seating, etc.)

Restaur Beer & wine only

PROPERTY INFORMATION

Common Address/General Location of Property: 978 S. BARTLETT RD ^{Bartlett} ₁₁₆₀₁₀₃

Property Index Number ("Tax PIN"/"Parcel ID"): 01-10-206-018

Acreage: 2.12

Zoning: B-2 PUD
(Refer to Official Zoning Map)

Land Use: LOCAL CONVENIENCE SHOPPING

Comprehensive Plan Designation for this Property: COMMERCIAL
(Refer to Future Land Use Map)

APPLICANT'S EXPERTS (If applicable, including name, address, phone and email)

Attorney _____

Engineer _____

Other _____

FINDINGS OF FACT FOR SPECIAL PERMIT

Both the Planning & Zoning Commission and Village Board must decide if the requested Special Use meets the standards established by the Village of Bartlett Zoning Ordinance. The Planning & Zoning Commission shall make findings based upon evidence presented on the following standards:

(Please respond to each of these standards in writing below as it relates to your case. It is important that you write legibly or type your responses as this application will be included with the staff report for the Planning & Zoning Commission and Village Board to review.)

1. That the proposed use at that particular location requested is necessary or desirable to provide a service or a facility which is in the interest of public convenience and will contribute to the general welfare of the neighborhood or community.

yes I am

2. That such use will not under the circumstances of the particular case be detrimental to the health, safety, morals, or general welfare of persons residing or working in the vicinity or be injurious to property value or improvement in the vicinity.

yes ALL safety

3. That the special use shall conform to the regulations and conditions specified in this Title for such use and with the stipulation and conditions made a part of the authorization granted by the Village Board of Trustees.

yes

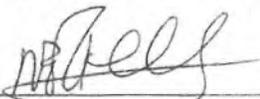
Please refer to Chapter 13 for additional Findings of Fact for Proposed Cannabis Uses.

ACKNOWLEDGEMENT

I understand that by signing this form, that the property in question may be visited by village staff and Board/Commission members throughout the petition process and that the petitioner listed above will be the primary contact for all correspondence issued by the village.

I certify that the information and exhibits submitted are true and correct to the best of my knowledge and that I am to file this application and act on behalf of the above signatures.

Any late, incomplete or non-conforming application submittal will not be processed until ALL materials and fees have been submitted.

SIGNATURE OF PETITIONER: 

PRINT NAME: Niles B. PATEL

DATE: 3/10/23

REIMBURSEMENT OF CONSULTANT FEES AGREEMENT

The undersigned hereby acknowledges his/her obligation to reimburse the Village of Bartlett for all necessary and reasonable expenses incurred by the Village for review and processing of the application. Further, the undersigned acknowledges that he/she understands that these expenses will be billed on an ongoing basis as they are incurred and will be due within thirty days. All reviews of the petition will be discontinued if the expenses have not been paid within that period. Such expenses may include, but are not limited to: attorney's fees, engineer fees, public advertising expenses, and recording fees. Please complete the information below and sign.

NAME OF PERSON TO BE BILLED: Niles B. PATEL

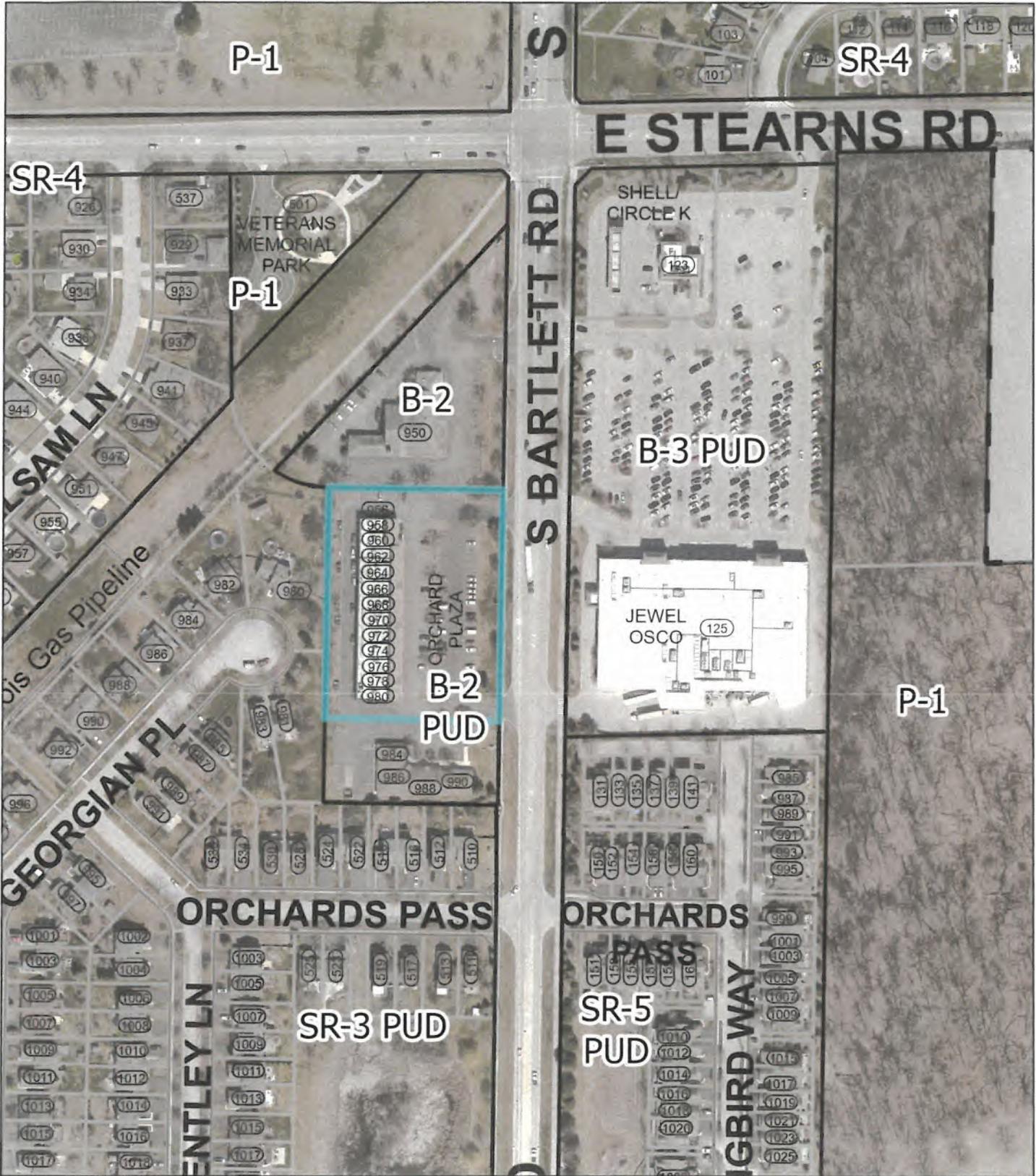
ADDRESS: BARTLETT IL- 60103

PHONE NUMBER: _____

EMAIL: _____

SIGNATURE: 

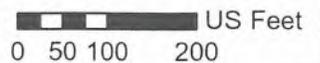
DATE: 3/10/23



Location Map

#23-04 Orchards Gaming
978 S. Bartlett Rd.

2023



ECONOMIC DEVELOPMENT MEMORANDUM

DATE: June 12, 2023
TO: Paula Schumacher, Village Administrator
FROM: Tony Fradin, Economic Development Coordinator *TF*
RE: Yummy Poke BEDA Application

APPLICANT: MMR10, Inc., d/b/a Yummy Poke

BACKGROUND: This BEDA application is from Manny Rafidia, the owner of the fully rehabilitated and reoccupied Streets of Bartlett shopping center, formerly known as Bartlett Plaza.

This particular application is for converting the sole vacant space, formerly a dentist office at 134 Bartlett Plaza, into a sales tax generating use – a restaurant called Yummy Poke. The business plan describes the new restaurant as a place where customers can select from a variety of sushi or vegetarian poke bowls with many options regarding the base, selection of vegetables, sushi, chicken, and other toppings.

There is not a comparable restaurant in the village, and this would make a nice addition to the shopping center, which already features a great variety of eating and drinking establishments.

There is a brief summary detailing the proposed expenditures for this project as well as the number of employees (4), hours of operation, and projected food, liquor, and gaming terminal revenues.

BEDA APPLICATION:

The attached application details \$167,730 worth of expenditures associated with converting this former office space into a modern, Code-compliant eating and drinking establishment.

Because architectural fees (\$3,000), demolition (\$14,800), and inventory (\$10,000) are not BEDA-eligible expenses, staff has determined that the eligible amount for all other costs including plumbing, electrical, equipment, signage, and more amounts to \$145,670.

This includes:

- \$38,800 in eligible costs to 1st Home Improvement for framing, drywall, painting, and flooring
- \$28,200 to mck construction for electrical work
- \$25,200 to Hall and One for plumbing
- \$5,000 to Neon Art sign company
- \$9,900 to Limestone Innovations Corp. for countertops

- \$5,100 to Daly Fire Protection for sprinkler upgrades
- \$33,470 to Webstaurant for equipment

RECOMMENDATION:

Staff is recommending a BEDA grant in the amount of **\$35,000**, or 24% of the build-out costs for this new restaurant.

This amount is comparable to two prior similar projects, the buildout of a former office space into Indian Express restaurant (21%) and the buildout of the Bartlett Tap (26%). Staff is also accounting for additional BEDA projects that we anticipate in the new fiscal year.

APRIL 10 EDC MEETING:

The BEDA application for Yummy Poke was presented to the Economic Development Commission at its meeting on April 10, 2023.

Following a brief presentation, the EDC unanimously recommended in favor of awarding a \$35,000 BEDA grant, following completion of all work to Village Code.

Staff will verify that a Certificate of Occupancy and valid business license is obtained prior to disbursement.

Please note that this application has been processed prior to any updates being made to the BEDA program.

REQUEST:

Staff requests to forward this item to the following Village Board meeting for a final vote.

Summary of Business Operations
Yummy Poke
164 Bartlett Plz, Bartlett, IL 60103

This business operation concept is to serve healthy and nourishing food options, where the consumer can choose from a variety of sushi or vegetarian poke bowls or customize their own. There is a choice of rice or salad for the base, large selection fresh vegetables, assortment of sushi, chicken and/or tofu with multiple toppings. This is a great food option for lunch or dinner with the sale of beer and wine offered to the adult community.

There will be a separate section of the establishment that will have video gaming terminals that will allow patrons 21 years of age or older access to provide entertainment for the adult community. The access to this area will be constantly monitored by the staff, as the location for entry is in direct view from the serving/cashier area. One staff member will be in this area at all times. This separate section shall be monitored 24 hours a day, 7 days a week by video cameras. There will be specific cameras on the gaming terminals and cash machine, with DVR and motion detection camera alarms for the gaming area.

We will be spending approximately \$168,000 in build-out expenses for this establishment, which will have a modern and fresh appearance.

This location would have (4) employees. The hours of operation would be Monday through Thursday 11:00 am – 9:00 pm, Friday and Saturday 11:00 am – 10:00 pm and Sunday 12:00 pm – 8:00 pm.

We are projecting the annual food sales to be \$1,000,000, annual liquor sales to be \$100,000 and annual NTI (Net Terminal Income) to be \$200,000.

Village of Bartlett Economic Development Assistance Application

Applicant Information:

Applicant(s) Name MMR10, Inc., d/b/a Yummy Poke

Applicant(s) Address: 134 Bartlett Plz, Bartlett, IL 60103

E-Mail Address: @gmail.com

Primary Contact for Project: Manny Rafidia

Cell Phone Number and/or Home Number: 847-

Applicant is or will be (check all that apply) Tenant Property Owner

Number of Years in Business: 40+ Number of Years in Bartlett: 5

Contact Name and Information for Applicant's Agent or Architect (if any):

Studio 23 Architects Mark Siwk (630) 817-5822

(Note: if applicant is a tenant, attach a letter from the property owner granting permission for project)

Property Information:

Project Property Location/Address: 164 Bartlett Plz, Bartlett, IL 60103

This Property is (check all that apply): Retail Restaurant Office

Other (explain)

Number of Businesses on Site: Property Owner & Mila's @ 128 Bartlett Plz

Names of Other Businesses on Site: Property Owner MMAJ, LLC & Mila's

Size of Building (dimensions or total square feet) Property 86,174 SF/164 space 1,200 SF

Stories in building: 1 Parking spaces on property: 530

Last Real Estate Taxes Paid: 2021

Property Tax Index Number(s) (PIN): 06-35-317-042-0000 & 06-35-318-047-0000

County: Cook DuPage Kane

Project Information:

Total Anticipated Project Cost: \$ 167,730

Project Scope: Describe and identify all exterior/interior improvements proposed (Use additional paper if necessary to fully describe proposed project)

Demo existing conditions, construct 2 new ADA compliant restrooms, kitchen, dining area, new equipment, separated gaming area, per permit drawings dated 2/27/23. New facade signage.

If approved, estimated project completion date: May 2023

Business Plan: For new business ventures, please include a two- to five-page business plan. Contact Tony Fradin with questions about the seven elements of a strong plan.

Please Attach: Contractor Estimates, Receipts; Copies of both sides of cancelled checks, credit card statements or bank accounts from which materials were purchased and contractors paid; Waivers of Lien

Application Statement (Read and Sign Below)

I hereby make application to participate in the Bartlett Economic Development Assistance (BEDA) program. In making this application I understand that the purpose of BEDA is to help encourage and leverage private investment in the Village's business community and help my business bring an underperforming property into more productive use.

I understand that prior to commencing any work, the Village must first approve both my participation and proposed scope of work for the project. Applicants must meet with Economic Development staff prior to paying for improvements in order to review how much, if any, the Village may reimburse for the project.

I understand that all improvements made through the help of BEDA must be in accordance with all Village plans and codes. Moreover, as a condition of approval, I understand the Village may require changes to the scope of work I am proposing. I further understand that any work started or completed prior to approval of the project and my participation in the BEDA program is not eligible for reimbursement.

In making this application, I understand that the BEDA program is competitive, funds are limited and selection for participation is at the sole discretion of the Village of Bartlett. I understand that the Village will review my application and at the Village's discretion may reject or approve my participation in the program. I recognize that a project that enhances the Village's business climate by returning an underutilized property into economic productivity, increases local employment opportunities and includes a larger percentage of private investment than public stands a greater chance of being funded by the Village.

I also understand that if selected for this program, the Village will establish a maximum grant award for the project

I further acknowledge that BEDA operates as a rebate program and, therefore, if selected for participation, Village funds will be disbursed to me at the conclusion of the work, after submittals by me of copies of all bills and satisfactory evidence of their payment, either by lien waivers or bills stamped "Paid" by all contractors. I understand that the actual rebate amount will be calculated at some percentage as recommended by staff in relation to the documented actual costs by me for eligible expenses to complete the agreed upon improvements, up to the maximum grant amount awarded by the Village for the project.

By signing this application, I hereby acknowledge that I have read the above statement and understand these important features about the BEDA Program.



Applicant Signature

March 15, 2023

Date



Return this completed application with attachments to:
Tony Fradin, Economic Development Coordinator
Village of Bartlett
228 S. Main Street
Bartlett, IL 60103

Build-Out Expenses for Yummy Poke
164 Bartlett Plz, Bartlett, IL 60103

<u>Description</u>	<u>Amount</u>
Architectural Fees	3,000
Demolition	14,800
Framing/Drywall	12,300
Plumbing (labor/fixtures)	25,200
Electrical	18,400
Ceiling & Lighting	9,800
Flooring & Finishes	10,500
Painting	7,000
Counters/Granite	9,900
Sprinkler	5,100
Signage	5,000
Equipment Purchases	33,730
Seating (tables/chairs)	3,000
Initial Inventory	10,000
Total	167,730



First Home Improvement Inc.
d/b/a: 1st Home Improvement
357 W. Northwest Hwy
Palatine, IL 60067
Office: 847-496-5530
Fax: 847-221-8551
Email: info@FHIGC.com
IL Lic #: 104.017796

March 23, 2023

Yummy Poke
164 Bartlet Plaza
Bartlet IL 60103

Description of Work:

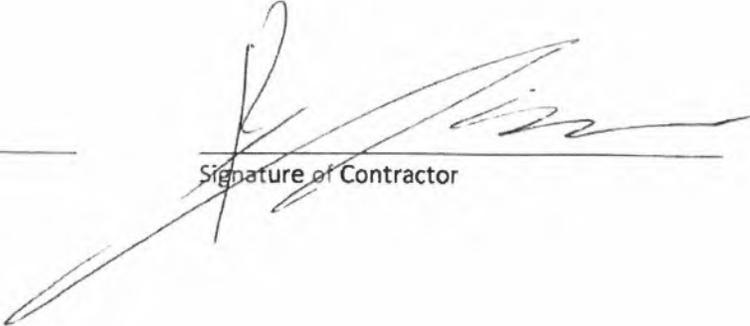
We propose to complete the following work at the above address including labor & Material:

1.) Demolition the Interior space & hauling away	\$14,800
2.) Framing & drywall – 50 drywall boards 4'x8'	\$12,300
3.) Tapping drywall & painting	\$17,500
4.) Commercial Vinyl Flooring	\$ 9,000

	\$53,600

All work will be completed in a professional workmanship.

Signature of Owner



Signature of Contractor

Follow us @facebook.com/firsthomeimprovementinc

Website: www.FHIGC.com

6641 Valley View Rd
Hanover Park, IL, 60133
224-735-1986
mckconstructionllc@gmail.com

mck construction

Estimate

For: Yummy Poke
crmadison@gmail.com
164 Bartlett Plz
Bartlett, IL, 60103-4234
(847) 921-9200

Estimate No: 19
Date: 03/31/2023

Description	Quantity	Rate	Amount
electrical work furnish labor and materialfor the electrical work -rough electrical include labor and material -exit and em's included labor and material - ceiling lights included light fixtures -low voltage pipes not include the wires (wires by others) - finish trim (receptacles, switches, covers) included labor and material note1: all the electrical work will do following the approved blue print by the Bartlett village	1	\$28,200.00	\$28,200.00
	Subtotal		\$28,200.00
	TAX 0%		\$0.00
	Total		\$28,200.00
Total			\$28,200.00



MMAJ, LLC

Proposal for Services

P.O. Box 338
Itasca, IL 60143

March 31, 2023

Attn: Manny

PH: 847-921-9200

Job: Yummy Poke
164 Bartlett Plz
Bartlett, IL 60103

Hall and One Services, agrees to furnish materials and supply labor for the following:

1. Underground plumbing
2. 35-gallon grease trap
3. 65-gallon hot water heater
4. 2 restroom toilet sinks and 1 urinal
5. 2 hand washing sinks
6. 2 triple compartment sinks
7. All necessary final trimming for kitchen restaurant

Total Project Cost: \$25,200.00

Thank You

Patrick Hall



3-31-2023

Yummy Gourmet (streets of Bartlett Plaza) Signage proposal

1. Led Channel (front-lit) w/ UV print on wireway (UL) installed and one year warranty
2. Interior neon sign
3. Storefront vinyl hours
4. Storefront signage permit

Total package cost \$5000



NEONARTCHICAGO@GMAIL.COM
WWW.NEONARTCHICAGO.COM



(847)508-9907
(773)588-5883



4752 N AVERS AVE
CHICAGO, IL 60625

Limestone Innovations, Corp.
5738 W. 26th St.
Cicero IL 60804
(630) 313-0467

Proposal

PROPOSAL NO: 21853
DATE: March 29, 2023

Proposal Submitted To:

Yummy Poke
cramadison@gmail.com

Cell: (847) 921-9200

Project Location:

164 Bartlett
Bartlett IL 60103

DESCRIPTION OF WORK:
We will furnish and install all granite for kitchen and restroom countertops, per the permit drawings.

We hereby propose to furnish labor and materials – complete in accordance with the above specifications, for the sum of:

Nine Thousand Nine Hundred Dollars (\$9,900.00) with payment to be made as follows:

50% to be paid upon acceptance of Proposal. Balance to be paid upon completion.

Work to be completed within 30 days after execution of the acceptance of the Proposal.

All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra work, will be executed only upon extra orders, and will become an extra charge over and above the estimate.



Daly Fire Protection 

Daly Fire Protection LLC
12519 E. Navajo Drive
Palos Heights, IL 60463
P: 312-619-3790

To: Manny Rafidia
MMAJ
PO Box 315
Itasca, IL 60143

Service Address: 164 Bartlett
Bartlett, IL
Yummy Poke

We propose to furnish and install necessary sprinkler modifications required per the working drawings approved by the Village of Bartlett.

Replace 15 sprinkler heads and switch from recessed to up-right position.

We propose to complete the work for the sum of \$5,100.00 with down payment due upon commencing work of fifty percent.

Dan Daly

Shipping & Billing

Review & Payment

Order Confirmation

Review & Payment

Important Information about your Delivery!

Your order will be delivered curbside on a full size 18 wheeler.

[View Details & Options](#)

 **You are responsible for:** Bringing the shipment into your location and noting damaged or missing items on the carrier's delivery receipt

Enter payment info to complete your order

[Enter Card >](#)

Billing Address

M. Rafidia
Munir Rafidia

United States
(847) 921-9200

[Edit Billing Address](#)

Shipping Address

MANNY RAFIDIA
PIZZA PAVIA
6 N. ELMHURST ROAD
SUITE A
Prospect Heights, IL 60070-1558
United States
(847) 921-9200

[Edit Shipping Address](#)

Ship to Multiple Addresses

Note: Shipping to multiple addresses will duplicate your order.

[Ship to multiple addresses](#)



Lancaster Table & Seating 30" Square Antique Walnut Solid Wood Live Edge Bar Height Table with 4 Bar Chairs

QTY:

Qty:5
\$819.00



Avantco A-49R-HC 54" Solid Door Reach-In Refrigerator

plus Free Shipping [Ships via Common Carrier](#)

QTY:
Qty:2
\$2,299.00



Hamilton Beach 990176701 Replacement Non-Stick Pot for 37590 90 Cup Rice Cooker

plus [Special Order](#)

QTY:
Qty:2
\$196.49



Regency 70" 16-Gauge Stainless Steel Three Compartment Commercial Sink with Stainless Steel Legs, Cross Bracing, and 2 Drainboards - 14" x 16" x 12" Bowls

[Ships via Common Carrier](#)

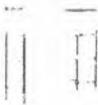
QTY:
Qty:1
\$729.00



Avantco A-49F-HC 54" Solid Door Reach-In Freezer

plus Free Shipping [Ships via Common Carrier](#)

QTY:
Qty:2
\$2,549.00



Regency 24" x 72" NSF Chrome 4-Shelf Kit with 74" Posts

plus

QTY:
Qty:3
\$188.49



Regency Replacement 5" Polyurethane Shelving Stem Caster with Brake

plus

QTY:
Qty:12
\$10.49



Avantco GDC-23-HC 28 3/8" Black Swing Glass Door Merchandiser Refrigerator with LED Lighting

plus Free Shipping [Ships via Common Carrier](#)

QTY:
Qty:1
\$1,349.00



Regency 17" x 15" Wall Mounted Hand Sink with Gooseneck Faucet and Side Splash

plus Free Shipping

QTY:
Qty: 2
\$116.99



Avantco APT-71-HC 71" 3 Door Refrigerated Sandwich Prep Table

plus Free Shipping Ships via Common Carrier

QTY:
Qty: 1
\$2,199.00



Avantco UBB-72G-HC 73" Black Counter Height Narrow Glass Door Back Bar Refrigerator with LED Lighting

plus Free Shipping Ships via Common Carrier

QTY:
Qty: 1
\$2,199.00



Beverage-Air SPE72HC-30-S 72" Stainless Steel Refrigerated Salad Bar / Cold Food Table

plus Free Shipping Ships via Common Carrier

QTY:
Qty: 2
\$5,534.00



Hamilton Beach 37590 90 Cup (45 Cup Raw) Rice Cooker - 240V

plus Free Shipping

QTY:
Qty: 2
\$408.49



Save \$375.92 on shipping today with our new WebstaurantPlus shipping subscription!

First month free
\$99.00 value

Subtotal	\$33,470.29
Shipping & Handling	\$1,079.15: Common Carrier w/ Liftgate
FREE Call Before Delivery	<input type="checkbox"/>
Tax	\$3,282.20

Using a Freight Forwarder? 



Total (USD)

\$37,831.64

Payment Method

[Change Payment Method](#)

Credit Card

Use Saved Credit Card

Add Card

By placing your order, you agree to WebstaurantStore's [conditions of use](#)

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Use this number when contacting
customer service about cart issues:

Your Cart ID: **RW66YM**



VILLAGE OF BARTLETT
ECONOMIC DEVELOPMENT COMMISSION MINUTES
April 10, 2023

6. YUMMY POKE BEDA APPLICATION

Mr. Fradin stated this BEDA application is from Manny Rafidia, the owner of the fully rehabilitated and reoccupied Streets of Bartlett shopping center, formerly known as Bartlett Plaza.

This particular application is for converting the sole vacant space, formerly a dentist office at 134 Bartlett Plaza, into a sales tax generating use – a restaurant called Yummy Poke. The business plan describes the new restaurant as a place where customers can select from a variety of sushi or vegetarian poke bowls with many options regarding the base, selection of vegetables, sushi, chicken, and other toppings.

There is not a comparable restaurant in the village, and this would make a nice addition to the shopping center, which already features a great variety of eating and drinking establishments.

There is a brief summary detailing the proposed expenditures for this project as well as the number of employees (4), hours of operation, and projected food, liquor, and gaming terminal revenues.

The attached application details \$167,730 worth of expenditures associated with converting this former office space into a modern, code-compliant eating and drinking establishment.

Because architectural fees (\$3,000), demolition (\$14,800), and inventory (\$10,000) are not BEDA-eligible expenses, staff has determined that the eligible amount for all other costs including plumbing, electrical, equipment, signage, and more amounts to \$145,670.

This includes:

- \$38,800 in eligible costs to 1st Home Improvement for framing, drywall, painting, and flooring
- \$28,200 to mck construction for electrical work
- \$25,200 to Hall and One for plumbing
- \$5,000 to Neon Art sign company
- \$9,900 to Limestone Innovations Corp. for countertops
- \$5,100 to Daly Fire Protection for sprinkler upgrades
- \$33,470 to Webstaurant for equipment

Staff is recommending a BEDA grant in the amount of \$35,000, or 24% of the build-out costs for this new restaurant.

This amount is comparable to two prior similar projects, the buildout of a former office into Indian Express restaurant (21%) and the buildout of the Bartlett Tap (26%). Staff is also accounting for other BEDA projects that we anticipate in the new fiscal year.



VILLAGE OF BARTLETT
ECONOMIC DEVELOPMENT COMMISSION MINUTES
April 10, 2023

Commissioner Erickson asked how many gaming terminals will they have. Also, will the net income of \$200,000 estimated be on par with other establishments?

Mr. Fradin stated the state maximum of 6.

Mr. Dienberg stated that he can check those numbers and get back to them.

Commissioner Gorski asked about the vendor selection for the project.

Mr. Rafidia stated he has been doing construction for over 40 years and currently he owns and operates about 12 shopping centers with 300 or more tenants. I am always making deals with these vendors and contractors and I am always working to get the best deal possible.

Commissioner Erickson asked the timeframe until the business is open.

Mr. Rafidia stated he's hoping 2 months or less, but it depends on the IGB's inspection. He also welcomed new Commissioner Densford, stating he is one of his tenants in the Streets of Bartlett.

Commissioner Suffern stated that at an Easter gathering yesterday, that people who have moved out of Bartlett were complimenting Mr. Rafidia's shopping center, as well as More Brewing.

Mr. Rafidia stated he does what he has done in his other shopping centers, and he always wants the centers 100% filled.

Commissioner Erickson moved to recommend a BEDA grant in the amount of \$35,000, or 24% of the build-out costs for this new restaurant. Seconded by Commissioner Suffern.

AYES: Commissioners Erickson, Gorski, Ohlson, Kubaszko, Lewensky, Suffern
NAYS: None
ABSTAIN: Commissioner Densford
ABSENT: Commissioner Perri

Mr. Skrycki took a moment to thank Mr. Rafidia for his part in landing the Aldi deal. It takes a lot of partners, both public and private, and Manny has been one of those private partners, and the village appreciates that.