# Town of Kittery Planning Board Meeting June 8, 2023 

ITEM 1 - Green Truck Farm/ 89 Route 236 Site Plan Modification and New Marijuana Business Review
Action: Hold public hearing; decide on application or continue review
Owners: Joshua Seymour, JD Investments LLC; josh@greentruckfarm.com; 207-432-6000
Agent: Mike Sudak, Attar Engineering; mike@attarengineering.com; 207-439-6023
Proposal: change use of portion of existing commercial building to adult-use marijuana business and extend sewer main to serve the subject property.
Property: 89 Route 236; Tax Map 28, Lot 14-2
Zoning: Commercial 2 (C-2)
Viewpoint application \#: PSPR-23-4

## Summary:

The applicant proposes to change an existing CBD retail business (NOT considered a cannabis business) to an adultuse marijuana business utilizing existing retail, office, and storage spaces at 89 Route 236. The subject property is developed with a commercial building which is also occupied by an "Aroma Joe's" coffee/ food service business. The site is accessed from Route 236 via an existing driveway, which also serves a storage facility located in the abutting property to the north. The applicant proposes to extend public sewer facilities northwestward along Route 236 from their current terminus at MacKenzie Lane to the subject property. A 1,357 square foot wetland lies near the street edge of the property. The new sewer main is proposed to be constructed within wetland buffer areas along the Route 236 road shoulder. Utilities may be constructed in wetlands where it is demonstrated that there is no alternative. The extended sewer facilities are intended to be made public after completion and therefore should remain located in public right-of-way.

A Traffic Impact Analysis prepared by Sewall indicates that the proposed use would generate approximately 57 additional PM weekday peak hour trips and 77 additional Saturday peak hour trips to the local street system. Improvements to Route 236 in the project vicinity including installation of center turn lanes are planned to be designed and constructed by Maine DoT with financial contribution from the Town of Kittery, in accordance with the recommendations of the Route 236 Traffic Study which was completed by the Town in 2019:
route_236_final_report.pdf (kitteryme.gov). The consultant recommends establishing a Traffic Impact Fee to be paid by the applicant to mitigate for the proposed incremental impacts to the local street system and to contribute a proportional share of the costs of the project. Town staff are currently working with DoT and SMPDC to determine a per-trip fee basis for this project and to establish a precedent for other applications in the vicinity.

Construction of additional parking facilities with lighting and landscaping is also proposed. These improvements were reviewed by the Planning Board via a Site Plan application that was approved on November 18, 2021. The Planning Board approved the original site plan for a 2,520 square foot building containing business offices and a showroom and a drive thru only restaurant at the subject property on January 14, 2016.
PROCESS SUMMARY

| REQ'D | ACTION | COMMENTS | STATUS |
| :---: | :--- | :--- | :--- |
| NO | Sketch Plan | Not required | Not submitted |
| NO | Site Visit | Site visit occurred May 22, 2023. Abutters notified, most Board members <br> present, No members of the public attended. M. Sudak and the applicant <br> showed the locations of parking and sewer improvements and proposed <br> renovations of building interior. No members of the public attended. | Completed 5/22/23 |


| YES | Site Plan Modification Review <br> Completeness/Acceptance | Modification to approved plan; full site plan submission not required. Board <br> should determine whether additional evidence is needed for review of <br> proposal or application is complete. | Completeness <br> determined 5/11/23 |
| :---: | :--- | :--- | :--- |
| YES | Public Hearing | A new marijuana business is a special exception use. Projects that require <br> special exception approval constitute major site plans per 16.7.5. A public <br> hearing is required for major site plans per 16.7.10. | Pending: Scheduled <br> $6 / 8 / 23$ |
| YES | Preliminary Site Plan Review <br> Approval | Final Site Plan Review <br> Approval | New adult use marijuana business requires completion of site plan review <br> process, including preliminary and final approval. |
| YES | Applicant: <br> planning and development practices. Only the PB makes final decisions on code compliance and approves, approves with conditions or denies final plans. <br> Prior to the signing of the approved Plan any Conditions of Approval related to the Findings of Fact along with waivers and variances (by the BOA) <br> must be placed on the Final Plan and, when applicable, recorded at the York County Registry of Deeds. PLACE THE MAP AND LOT NUMBER |  |  |
| IN 1/4" HIGH LETTERS AT LOWER RIGHT BORDER OF ALL PLAN SHEETS. As per Section 16.4.4.13 - Grading/Construction Final Plan |  |  |  |
| Required. - Grading or construction of roads, grading of land or lots, or construction of buildings is prohibited until the original copy of the approved final <br> plan endorsed has been duly recorded in the York County registry of deeds when applicable. |  |  |  |

## Discussion Items:

1. OCP application: Staff understand that Adult Use marijuana businesses are subject to a licensing and inspection process administered by Maine's Office of Cannabis Policy. These requirements may exceed Town standards for security, retail occupancy, etc. The Board may ask the applicant for information about state licensing requirements to inform the scope of Town board review.
2. Stormwater and erosion control for sewer expansion: Proposed site work was previously reviewed on the Town's behalf by CMA Engineers; project approval was conditioned accordingly. Is further peer review warranted for sewer expansion work? Do stormwater and erosion control and post-construction monitoring plans need to be amended?
3. Traffic Impact Study: The applicant submitted a Trip Generation Analysis memo that was prepared by Sewall consultants. This memo indicates that the proposed adult use cannabis store will add and estimated 57 weekday pm peak hour trips and approximately 77 Saturday peak hour trips to the local street system. The memo indicates that Sewall is performing additional traffic counts to inform a Traffic Impact Study. Applicant proposes payment of impact fee to mitigate for traffic impacts. How to determine basis for per-trip impact fee to ensure proportionality and consistency for current and future applications?

## Staff Review:

### 16.4.20 Commercial 2 (Route 236 Commercial Zone) Zoning Provisions

C.17: Marijuana business = Special Exception Use

Special exception is defined as "A use that would not be appropriate generally or without restriction throughout the zoning district, but which, if controlled as to number, area, location or relation to the neighborhood, would promote the public health, safety, welfare, morals, order, comfort, convenience, appearance, prosperity or general welfare."
D.2.f: impervious surfaces limited to no more than $40 \%$ of lot

According to the site plan, total impervious surfaces are proposed to comprise 20,874 square feet of the 60,402 square foot property, which complies with this standard. (20,874/60,402 $=34.5 \%$ impervious coverage). D.3.a Parking must be visually screened with landscaping, berms, or fencing; Parking stalls 19 X 9 feet

Parking stalls shown on plans at 9 X 19 size. New parking facilities screened by existing vegetated wetland and buffer areas; additional landscaping comprised of trees and shrubs in perimeter planters shown on plans.
D.3.e: Waste facilities must be enclosed and visually buffered

Trash enclosure located in rear portion of paved area and proposed to be enclosed with chain link fence. Existing vegetation in setback areas would screen this facility from nearby areas.
D.3.f: vehicle and parking circulation must comply with Design Handbook

Design Handbook encourages locating parking areas in side and rear yards and provision of continuous
walkways with clear markings for safe circulation. Snow storage and landscaping is required. Painted walking facilities are proposed to provide safe circulation between parking areas and the building. Snow storage is shown on (previously approved) plans. Additional painted walkways were added to plans in response to discussions which occurred during the site walk.

### 16.5.30 Wetland setbacks for special situations

E. Utilities within wetland. The applicant proposes to install a sewer force main within the buffer/ setback area of an existing on-site 1,357 -square foot wetland. Section 16.5 .30 states that utilities may be located within a wetland where it is demonstrated that there is no alternative. Table 16.5.30 does not include specific provisions for public sewer mains. Staff find that the proposed sewer extension should remain in public right of way and NOT under the roadway. Impacts to the on-site wetland may be unavoidable to extend the sewer main as proposed.

### 16.5.32 Marijuana business

B. Standards

1. May not locate within 1,000 feet of a school or a public recreation facility.

The site is not within 1,000 feet of any school or public recreation facility.
2. may not have any odor of marijuana detectable beyond the area controlled by the business. Odor controls may be necessary.
Cultivation of marijuana not proposed. Odor impacts not anticipated.
3. Marijuana grown by any marijuana business may be grown indoors only

N/A cultivation of marijuana not proposed.
4. Design must comply with Kittery Design Handbook

Existing building was approved by Kittery Planning Board in 2016 and parking lot improvements approved in 2021.
5. The area of any marijuana business accessible to customers must be no less than 400 nor more than 2,000 square feet.
Total retail area shown to be 1,680 square feet.
6. Parking must conform to $\S \underline{16.7 .11 F}$, Parking and loading. See 16.7.11 notes below.
7. Fire suppression and alarm systems must be provided to Fire Chief satisfaction and per building codes.

Building constructed in accordance with applicable building and fire codes. No concerns about this proposal were expressed by Kittery's Code Enforcement Officer or Fire Chief.
8. Electrical supply must be adequate for proposed business use.

Building constructed in accordance with applicable building and fire codes. No concerns about this proposal were expressed by Kittery's Code Enforcement Officer or Fire Chief.
9. Video surveillance must provide security for the site.
10. The licensed premises must have an approved wastewater discharge plan in accordance with this title and Title 13.

Applicant proposes to extend sewer main to serve the subject property. All sewer facility improvements would be designed and constructed in accordance with applicable standards and subject to a Special Entrance Permit from the Kittery Sewer Department.
11. The licensed premises must have exterior lighting that conforms with this title and the Town of Kittery's Design Handbook. The Planning Board, at its discretion, may require motion sensors covering the full perimeter of the building(s).
Lighting plans indicate installation of two 15 -foot tall pole lights with cutoff fixtures to illuminate new parking areas. Light spillage is shown to be limited to developed areas. Lighting plans generally comply with the lighting standards of 16.7.11.H.2.

### 16.7 General Development (Site Plan) Requirements

16.7.2 Applicability: Site plan approval is required prior to commencing Marijuana businesses (A.10)
16.7.5 Projects that require special exception approval constitute major site plans requiring planning board review
(vs. minor site plans which can be reviewed by staff).
16.7.11 Performance standards and approval criteria
F. Parking and Loading: 1 parking space is required per 175 square feet of gross floor area for retail uses. The site plan provided by the applicant indicates that 1,680 square feet of retail space is proposed, which requires 9.6 parking spaces. Combined with the office, restaurant, and storage uses of the building, 28.6 total parking spaces are shown to be needed for this site. With the approved (but unbuilt) parking lot expansion, a total of 29 parking spaces will be provided at the site. This standard appears to be met accordingly.

The Planning Board made Findings of Fact related to the development of the subject property in 2016 and again in 2021. The 2021 review was for the expansion of parking facilities that is shown in the site plans that are currently being reviewed. Staff find that the approved findings remain in effect, with proposed amendments to be voted on and read into the record during Final Plan review (underlined and highlighted in yellow) as follows:
F. Sewage Disposal Adequate:

## F. Sewage Disposal Adequate. <br> The proposed development will provide for adequate sewage waste disposal and will not cause an unreasonable burden on municipal services if they are utilized. <br> tocation of subsurface wastewater disposal system and a reserve system have been located on the plan and a completed HHE-200 application with test pit information has been submitted. The Board finds this standard has been met. The applicant proposes to extend the sewer force main which currently terminates near McKenzie Lane northwestward along Route 236 to serve the subject property. These facilities will be sized and located to serve nearby properties and will become public sewer facilities upon project completion. This standard will be met accordingly.

Vote of _in favor_ against _ abstaining

## M. Traffic Managed

## M. Traffic Managed.

The proposed development will:

1. Not cause unreasonable highway or public road congestion or unsafe conditions with respect to the use of the highways or public roads existing or proposed; and
2. Provide adequate traffic circulation, both on-site and off-site.

An analysis of the traffic generation has been completed and reviewed by CMA, and the Maine DOT who, after a meeting with the Town, CMA, the applicant and their agents, granted a Traffic Movement Permit for the proposed development. This includes a right-turn pocket on Rt. 236. CMA has some additional comments that are identified in their 1/4/2016 review letter that the applicant will be required to follow as part of Condition \#6., and Condition \# 4 as related to the parking requirements. The site is accessed from Route 236 via an existing driveway, which also serves a storage facility located in the abutting property to the north. A Traffic Impact Analysis prepared by Sewall indicates that the proposed use would generate approximately 57 additional PM weekday peak hour trips and 77 additional Saturday peak hour trips, which may not necessitate a new Traffic Movement Permit from Maine DoT but may require further review by Maine DoT per Condition C of the approved TMP for this project. Additionally, improvements to Route 236 are planned in the project vicinity to improve roadway capacity and safety. Since this proposal will have incremental impacts to local traffic, the applicant's consultant recommends mitigating for these impacts via payment of a Traffic Impact Fee which would be contributed toward the costs to the Town to design and construct those improvements. The exact fee amount should be set by the Board prior to Final plan approval and included in the Conditions of Approval for this project.
The proposed development conforms to Title 16.8.9 Parking, Loading and Traffic 16.7.11.E Vehicular traffic \& 16.7.11.F Parking and loading and, with payment of a Traffic Impact Fee as described in the

Conditions of Approval, will provide for adequate traffic circulation. This standard appears to be met.
Vote of _in favor__ against _ abstaining

## P. Developer Financially and Technically Capable

| P. Developer Financially and Technically Capable. |
| :--- |
| Developer is financially and technically capable to meet the standards of this section. |
| The developer will provide an inspection escrow in an amount suitable to cover the costs of on-site <br> inspection by the Peer Review Engineer to ensure the proposed development is constructed according to <br> the approved plan. The Board finds this standard has been met. The developer is also required to provide a <br> financial guarantee in the form of a Letter of Credit from a reputable financial institution or payment of <br> funds to be placed in a Town-held escrow account for the costs to construct the proposed sewer force main, |
| site improvements, and erosion control measures prior to start of construction. This standard appears to be <br> met. |

Vote of _in favor__ against _ abstaining

## Recommendation:

Staff find that the proposed sewer extension and change of use generally comply with applicable standards. The board may request additional information pertaining to security requirements or adult use marijuana business licensing procedures. Staff also find that, with center turn lanes planned for construction by Maine DoT, traffic from the proposed use is not likely to significantly impact the local or regional transportation system. However, the board may consider the impact fee payment that is proposed for mitigation of those impacts that are anticipated. Conditions of approval should be considered prior to final approval. A public hearing should be held during this meeting. Staff recommend approving this preliminary site plan/ site plan modification application at this time and advising the applicant to submit the Final Site Plan application.

## Suggested motion:

Move to approve the Preliminary Site Plan modification and new marijuana business application submitted on April 19, 2023 by Joshua Seymour to change use of portion of existing commercial building to adult-use marijuana business and extend sewer main to serve the property located at 89 Route 236 and identified as Tax Map 28, Lot 14-2, in the C-2 Route 236 Commercial zoning district.

The Planning Board may also continue review, request additional information from the applicant or staff, establish conditions of approval, or deny the application.

ATTAR
ENGINEERING, INC
CIVIL STRUCTURAL MARINE

Mr. Jason Garnham, Director of Planning and Development<br>May $25^{\text {th }}, 2023$<br>Mr. Maxim Zakian, Town Planner<br>Town of Kittery, Maine<br>200 Rogers Road<br>Kittery, Maine 03904<br>\section*{RE: Major Modification to an Approved Site Plan Application - Preliminary Revisions Green Truck Farm (Tax Map 28, Lot 14-2)<br><br>89 Route 236, Kittery, Maine}

Dear Mr. Garnham \& Mr. Zakian:
On behalf of GTF Kittery 8, LLC., I have enclosed for your review and consideration revised Plan Set sheets and associated attachments for the above-referenced project. Revisions have been made to satisfy comments from the May $22^{\text {nd }}$ Planning Board Site Walk, as well as to address additional information and reports that have become available since the last submission.

- As was discussed during the Site Walk, DigSafe had been contacted by the Applicant to field-verify the location of all existing underground utilities in the areas of the existing entrance of the mixed use building, the frontyard of the subject parcel, the roadside swale within the Route 236 right-of-way abutting the subject parcel, and the southbound shoulder of the Route 236 travelway.
- Utility-locating services contracted by DigSafe visited the site on May $23^{\text {rd }}$ and identified the location of the existing 8 " gas main that has been approximately identified in the Plan Set. Not previously identified was the additional 4" gas main which extends from the northwest and terminates near the existing entrance to the mixed use building. The installed location of the 2 " gas service line to the existing building was also identified. All identified underground utilities were survey-located by Attar Engineering on May $24^{\text {th }}$ and have been added to the Plan Set. General Note \#4 on Sheet 3 has also been added to summarize the above.
- In response to the updated existing utility locations, the Applicant is proposing a modification to the sewer force main that is to be extended southeasterly to tie into the municipal sewer system near the car wash. A directional drill shall be utilized for the first $\sim 220$ feet of the force main extension, which shall span from the grinder pump station to the southern edge of Fernald Road, notably going beneath and avoiding the entirety of the existing on-site wetland. This change will avoid any potential impacts to the wetland that could be incurred by construction trenching activity in the Route 236 southbound shoulder and swale.
- The full Traffic Impact Analysis (TIA) for this development, prepared by Diane Morabito of Sewall on May $10^{\text {th }}$, is attached. Additional correspondence between Ms. Morabito and Mr. Jason Garnham is also attached, which discusses a portion of the findings within the TIA. Traffic analysis performed when preparing the TIA showed that existing on-site conditions met the warrant threshold for a left-turn lane and given the increase in trip
generation from this application the developed condition met the warrant as well. Ongoing discussions have been taking place between Sewall and MDOT Region Engineers Steve Landry and Randy lIllian regarding this project as well as the upcoming improvements to this section of the Route 236 corridor based on findings from the Traffic \& Safety Study completed in 2019 by Gorrill Palmer. The current line of discussion is with consideration to having the Applicant pay an impact fee which is dedicated to the engineering design for improvements to the Route 236 corridor, which would include a shared left-hand turn lane through the span that abuts the subject parcel. The Town shall be kept informed as additional discussions and recommendations take place.

We look forward to discussing this project with the Planning Board at the June $8^{\text {th }}$ meeting and Public Hearing. Please contact me for any additional information or clarifications.

Sincerely;


Michael J. Sudak, E.I.
Staff Engineer
cc: GTF Kittery 8, LLC.
23028 Cover Rev 25May2023

|  |  | REQUEST \# |
| :---: | :---: | :---: |
|  |  | 20232013393 |
| FOR MEMBER |  |  |
| CMP / MR Status:MARKED |  |  |
| WORK SITE INFORMATION | REQUESTER |  |
| City : KITTERY Address : 89, ROUTE 236 Intersection 1: FERNALD RD Intersection 2: Type of work : PAVING, GRADING Work start date (d-m-y) : 5/23/2023 12:02:00 PM | Created on: <br> Contact : <br> Company: <br> Address : <br> Email : <br> Phone: <br> Cell : <br> Fax: <br> Paget: | 05/18/2023 12:02:00 SAM GODDARD <br> ATTAR ENGINEERING 1284 STATE RD sammie@attarengineering.com (207)-439-6023 ext. |
|  | ALTERNAT | E CONTACT |
| Priorité / Priority: STANDARD | Name Phone |  |
| REQUESTER ADDITIONAL INFO: |  |  |
| EXC TO INSTL <br> FORCE WTR MAIN <br> EXTENT OF WORK WEST SIDE OF PROPERTY TO STREET EXC TO INSTL FORCE WTR MAIN |  |  |
| GENERAL MESSAGE FROM MEMBERS : |  |  |
| $-C Z$ -K100 -MA -MN <br> 190-MR CENPOW   |  |  |

1- DEVON BERTRAND
2- DEVON BERTRAND
3- DEVON BERTRAND

CMP/MR Marked Units:1 05/22/2023 09:14:00 U:N Notes: No cmp underground, private line for lamp post
CCI/MA Marked Units:1 05/22/2023 09:14:00 U:N Notes: No cci underground COMCAST/CZ Marked Units:1 05/22/2023 09:14:00 U:N Notes: No cmct underground
(DIG SAFE SYSTEM, INC - MA) 05/18/2023 12:19:04
-CZ -K100 -MA 41-MN N.UTIL
-MR

TIME..12:19 DATE..05/18/2023
REQUEST NO... 20232013393

## IN REFERENCE TO REQUEST.. 20232013393 DATED.05/18/2023 FROM.DS STATE..MAINE MUNICIPALITY..KITTERY <br> CALLER NAME..SAM GODDARD PHONE\#..207-439-6023 89 ROUTE 236//PLSE NOTE CORRECTION TYPE OF WORK: EXC TO INSTL FORCE WTR MAIN \& AREA IS PREMARKED PER CALLER//THANKS

------- HISTORY SUMMARY -------
05/18/23 12:03:16: Ticket "20232013393" received.
05/18/23 12:03:16: Contract "MN" received.
05/18/23 12:03:16: Assigned to "McgrathS". Status updated to "Pending".
05/23/23 10:49:10: File "DigTix Ticket 20232013393 2023-05-23 10:49:09.640.jpg" attached. 05/23/23 10:49:29: File "DigTix Ticket 20232013393 2023-05-23 10:49:28.793.jpg" attached. 05/23/23 10:49:31: File "DigTix Ticket 20232013393 2023-05-23 10:49:30.995.jpg" attached. 05/23/23 10:49:32: File "DigTix Ticket 20232013393 2023-05-23 10:49:32.257.jpg" attached. 05/23/23 10:49:43: File "DigTix Ticket 20232013393 2023-05-23 10:49:43.396.jpg" attached. 05/23/23 10:49:48: File "DigTix Ticket 20232013393 2023-05-23 10:49:48.449.jpg" attached. 05/23/23 10:49:56: File "DigTix Ticket 20232013393 2023-05-23 10:49:56.292.jpg" attached. 05/23/23 10:50:15: File "DigTix Ticket 20232013393 2023-05-23 10:50:14.276.jpg" attached. 05/23/23 10:50:16: File "DigTix Ticket 20232013393 2023-05-23 10:50:15.688.jpg" attached. 05/23/23 10:50:28: File "DigTix Ticket 20232013393 2023-05-23 10:50:28.233.jpg" attached. 05/23/23 10:50:29: File "DigTix Ticket 20232013393 2023-05-23 10:50:29.293.jpg" attached. 05/23/23 10:52:19: Follow up "MEHR-20232013393-001" created.
05/23/23 10:55:08: CDC "MN" status updated to "Completed, Marked Unitil Gas". CDC "MN" notes updated to "There are two High pressure gas mains within 10-15' of pre marked area. Unitil must be notified prior to excavation day. Jeff Haskell 207-239-9890 or Steve McGrath 207-210-0775 Steve".

# TRAFFIC IMPACT STUDY PROPOSED MARIJUANA SALES FACILITY 

89 ROUTE 236, KITTERY, MAINE

May 8, 2023

Prepared For:


Green Truck 19 Buffum Road

North Berwick, ME 03906

Prepared by:

## INTRODUCTION

The purpose of this report is to summarize a traffic impact study performed by James W. Sewall Company (Sewall) for a proposed marijuana retail sales shop to be located at 89 Route 236 in Kittery, Maine. The site location is shown on the map in Figure 1. The marijuana sales facility will be located in an existing building that currently houses an 800 square foot (S.F.) Aroma Joe's coffee shop. The gross square footage (S.F.) of the space to be occupied by the marijuana sales facility is 2,700 S.F. A traffic movement permit (TMP) was obtained for the building, for the Aroma Joe's and 2,700 S.F. of office space in 2015. A copy of the TMP is provided in the appendix. Access to the site will be provided by the existing full-movement drive to Route 236. This drive is served by a right-turn lane on Route 236. Additionally, this drive is shared with an adjacent storage building for access management purposes.

This report details the traffic analysis which determines the expected number of new trips to be generated by the marijuana sales facility and any off-site impacts on level of service or safety for the local Town of Kittery approval process.

It is understood that the shop is expected to be renovated and fully occupied by late 2023. Hence, 2024 was utilized as the study year, to allow for a possible slip in occupancy date, for traffic analysis puposes.

## TRIP GENERATION ANALYSIS

The number of trips to be generated by the proposed marijuana sales facility was estimated utilizing the latest Institute of Transportation Engineers (ITE) "Trip Generation, $11^{\text {th }}$ edition". Land use code (LUC) 882 - Marijuana Dispensary was utilized on the basis of 2,700 gross S.F. Additionally, the number of trips generated by the former office use was calculated utilizing LUC 712 - Small Office Building so the increase in trips to the site could be shown. The results are summarized below:

| Time Period | ITE TRIP GENERATION (One-way Trip-ends) |  |  |
| :---: | :---: | :---: | :---: |
|  | Retail Sales | Former Office | New Trips |
| Weekday | 570 | 38 | 532 |
| AM Peak Hour - Adjacent Street | 28 | 5 | 23 |
| Entering | 15 | 4 | 11 |
| Exiting | 13 | 1 | 12 |
| AM Peak Hour - Generator | 45 | 7 | 38 |
| Entering | 24 | 4 | 20 |
| Exiting | 21 | 3 | 18 |


| Time Period | Retail Sales | Former Office | New Trips |
| :---: | :---: | :---: | :---: |
| PM Peak Hour - Adjacent Street | 51 | 6 | 45 |
| Entering | 26 | 2 | 24 |
| Exiting | 25 | 4 | 21 |
| PM Peak Hour - Generator | 66 | 9 | 57 |
| Entering | 33 | 4 | 29 |
| Exiting | 33 | 5 | 28 |
| Saturday Peak Hour - Generator | 78 | 1 | 77 |
| Entering | 39 | 1 | 38 |
| Exiting | 39 | 0 | 39 |

The preceding results show that the proposed marijuana shop is expected to generate from 23 to 77 new one-way trips in peak hours, over the former office use. Since new trip generation will be under 100 trips in all peak hours, a new or modified TMP is not required from MaineDOT. The highest peak hour trip generation will occur during the weekday PM and Saturday peak hour periods, typical of retail establishments. Hence, these were selected as the initial analysis periods for this study.

## TRAFFIC VOLUMES

Turning movement/classification counts were previously conducted by Sewall during the weekday PM peak hour (3:00-6:00) and the Saturday peak hour (11:00-2:00) periods at the signalized intersection of Route 236, Martin Road and Stevenson Road to determine existing volumes in December of 2021 for a Traffic Impact Study conducted by Sewall for another marijuana sales shop previously proposed at 41 Route 236. That study found that the weekday PM peak hour volumes are significantly higher for all intersection approaches as well as overall. The total weekday PM peak hour volumes were $42 \%$ higher than the Saturday peak hour.

Updated turning movement counts were conducted at the intersection of Route 236, Fernald Road and the site drive as follows:

| Count Period | Count Date |  | Peak Hour |
| :--- | :---: | :---: | :---: |
| Weekday PM - 3:00-6:00 PM |  |  |  |
| Saturday Mid-Day - 11:00 AM - 2:00 PM | $4 / 5 / 2023-4: 30$ |  |  |
|  | $4 / 8 / 2023$ |  | $12: 15-1: 15$ |

The above count results were reviewed and it was determined that the current PM peak hour counts were 25 \% higher than the Saturday peak hour. As a result, the weekday PM peak hour was determined to be the analysis period for this study.

An updated weekday PM peak hour turning movement count was obtained on April 12, 2023 at the intersection of Route 236, Stevenson Road and Martin Road. The PM peak hour occurred from 3:30 to 4:30 PM. All PM volumes were factored to peak summer conditions utilizing MaineDOT group mean factors. The 2023 results are shown in Figure 2.

Existing average annual daily traffic (AADT) data for the area was obtained from "Traffic Volume Counts, 2019 and 2014 Annual Reports", published by MaineDOT as well as the MaineDOT Interactive Traffic Map. This data is summarized below:

|  | Average Annual Daily Traffic |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Location Description | $\underline{2010}$ | $\underline{2013}$ | $\underline{2015}$ | $\underline{2016}$ | $\underline{2019}$ |
| Route 236, southeast of Stevenson Road | 18120 | 18630 | --- | 17760 | 17870 |
| Route 236, northwest of Martin Road | 17790 | 18660 | --- | 17780 | 17420 |
| Route 236, southeast of Bolt Hill Road | 17490 | 17630 | 18950 | 17460 | --- |

As seen above, traffic volumes have generally been declining along this section of Route 236 over the longer-term period 2010 to 2019.

The Town of Kittery Planner was contacted to determine if there are any other approved (but unbuilt) developments, expected to significantly impact future Route 236 volumes in the area, which should be considered in the traffic analysis. Only one project was identified that will impact future traffic volumes in this area, the Kittery car wash, which is currently under construction on the corner of Route 236 and Mackenzie Lane. This car wash will be an automated car wash facility with two wash bays. Based upon ITE data for LUC 949 -Car Wash and Detail Center, this car wash will generate 27 PM peak hour trips (13 entering and 14 exiting). These other trips were added to the existing 2023 volumes in Figure 3. Hence, the projected 2024 No Build volumes, allowing for annual traffic growth rate, and the other development trips, are shown in Figure 4.

The trip assignments for the retail shop were assigned using the travel patterns recorded during the counts. Based upon ITE data, approximately $34 \%$ of retail trips are pass-by during the PM peak hour period. A lesser $25 \%$ was assumed for this analysis, to be conservative. The resulting trip assignments for the PM peak hour of the adjacent street are shown in Figure 5. Based upon the trip assignments the shop is expected to have a minimal impact on off-site traffic operations.

Generally, a project won't have an impact on traffic operations unless it generates more than 25 lane hour trips. Based upon the trip assignments, the proposed marijuana sales
shop will generate a maximum of 15 lane hours during the PM peak hour analysis period. Given the trip assignments, the study area encompasses the site drive intersection, but it was extended to the nearby intersection of Martin and Stevenson Roads to evaluate offsite impact. Lastly, the projected Build 2024 volumes are shown in Figure 6.

## CAPACITY ANALYSIS

Traffic operations are evaluated in terms of level of service (LOS). Level of service is a qualitative measure that describes operations by letter designation. The levels range from A - very little delay to $F$ - extreme delays. Level of service " $D$ " is generally considered acceptable in urban locations while LOS " E " is generally considered the capacity of a facility and the minimum tolerable level. The level of service for signalized intersections is based upon the average control or signal delay per vehicle. These criteria are defined in the following table excerpted from the 2010 "Highway Capacity Manual":

Signalized Intersection Level of Service

| $\frac{\text { LOS }}{\text { A }}$ |  |
| :--- | :--- |
|  | Delay Range |
| B |  |
| C | $>10.0$ and $<=20.0$ |
| D | $>20.0$ and $<=35.0$ |
| E | $>35.0$ and $<=55.0$ |
| F | $>55.0$ and $<=80.0$ |
|  | $>80.0$ |

The level of service for unsignalized intersections is based upon average control delay per vehicle for each minor, opposed movement, as defined in the following table:

```
Unsignalized Intersection Level of Service
\begin{tabular}{|c|c|}
\hline \(\underline{\text { LOS }}\) & Delay Range \\
\hline A & < = 10.0 seconds \\
\hline B & \(>10.0\) and <= 15.0 \\
\hline C & \(>15.0\) and <= 25.0 \\
\hline D & \(>25.0\) and \(<=35.0\) \\
\hline E & \(>35.0\) and \(<=50.0\) \\
\hline F & 50 \\
\hline
\end{tabular}
```


## SIGNALIZED INTERSECTION ANALYSIS

The level of service (LOS) was determined for the nearby signalized intersection of Stevenson and Martin Road for 2024 No Build and Build conditions using Synchro 11 and SimTraffic (the average of five runs) to evaluate off-site impact. The results are provided in the appendix and are summarized in the following table:

|  | Route 236, Stevenson Road \& Martin Road <br> PM Peak Hour Level of Service |  |
| :--- | :---: | :---: |
| No Build | Build |  |
| Approach/Movement | $\underline{2024}$ | $\underline{2024}$ |
| Eastbound Route 236 Lefts | D (47.5) | D (48.4) |
| Eastbound Route 236 Thrus/Rights | A (9.7) | A (9.7) |
| Eastbound Route 236 Overall | B (11.8) | B (11.9) |
| Westbound Route 236 Lefts | D (45.0) | D (46.5) |
| Westbound Route 236 Thrus/Rights | C (32.0) | C (32.6) |
| Westbound Route 236 Overall | C (32.3) | C (32.9) |
| Northbound Martin Road Lefts/Thrus | D (43.6) | D (40.5) |
| Northbound Martin Road Rights | A (7.4) | A (9.3) |
| Northbound Martin Road Overall | C (30.6) | C (29.0) |
| Southbound Stevenson Road Lefts/Thrus | D (47.8) | D (47.6) |
| Southbound Stevenson Road Rights | C (23.9) | C (23.6) |
| Southbound Stevenson Road Overall | C (34.1) | C (33.8) |
| Intersection Overall | C (24.9) | C (25.1) |

As seen above, the nearby signalized intersection is projected to operate at LOS "C" overall in 2024 under both No Build and Build volumes, with all lanes at an acceptable LOS "D" or better. The new trips to Route 236 from the proposed shop will have no significant impact on operations or delays at this intersection as shown by the minimal 0.2 increase in overall delay, as expected given the limited off-site volumes.

## UNSIGNALIZED INTERSECTION ANALYSIS

Level of service was also calculated for the proposed site drive intersection to assess drive operations and determine the need for any improvements. The preliminary analysis showed a significant queue on Route 236 as a result of entering left-turns under existing conditions. Hence, left-turn lane warrant analysis was performed for Existing 2023 and proposed 2024 Build volumes. The results show that given the Route 236 volumes and
speed limit, a left-turn lane is currently warranted during the PM peak hour period by the existing Aroma Joe's volumes. This is primarily a function of the high Route 236 volumes. As a result, to improve safety and provide for additional entering lefts, a left-turn lane is recommended on Route 236 to store traffic entering the site. This will improve safety by giving left-turners a designated place to wait to enter the site and will reduce the potential for rear-end collisions. Based upon the projected PM volumes, a 50' left-turn lane was assumed for the following capacity analysis. The results, based upon the average of five SimTraffic runs, are as follows:

|  | No Build | Build |
| :--- | :---: | :---: |
| Approach/Movement | $\underline{2024}$ | $\underline{2024}$ |
| Eastbound Route 236 Lefts/Thrus | A (1.5) | A (1.6) |
| Eastbound Route 236 Rights | A (0.0) | A (0.0) |
| Eastbound Overall | A (1.5) | A (1.6) |
| Westbound Lefts | -- | A (4.5) |
| Westbound Throughs/Rights | -- | B (10.5) |
| Westbound Overall | B (10.8) | B (10.4) |
| Northbound Site Drive Lefts/Thrus | F (62.2) | F (79.0) |
| Northbound Site Drive Rights | A (7.3) | A (7.5) |
| Northbound Site Drive Overall | C (22.7) | D (31.0) |
| Southbound Fernald Road | F (139.5) | F (127.2) |
| Intersection Overall | A (9.6) | A (9.4) |

As seen above, the unsignalized site drive is projected to operate at an acceptable LOS " D " during the PM peak hour under 2024 Build volumes. During the PM peak hour, left-turns out of the site currently operate at LOS " F ". LOS " F " is not uncommon for left-turns out of drives and side streets onto busy arterials during peak summer conditions. Left-turns under projected Build volumes will operate at a similar LOS" F" with slightly longer delays. There are no additional improvements that can be implemented to improve the LOS for exiting left turns since dual exit lanes (separate left and right turn) are already provided at this drive.

Fernald Road also operates at LOS " $F$ " under current conditions. With the addition of the left-turn lane on Route 236 to serve the site the delays exiting Fernald Road are shown to lessen. Therefore, this project is not expected to have a negative impact on operations for Fernald Road movements. Additionally, the delay for the westbound Route 236 approach improves due to the addition of the left-turn lane.

## QUEUE ANALYSIS

Given the poor level of service for some movements at the site drive intersection, queues were also evaluated based upon the SimTraffic results. These results are summarized in the following table:

|  | Route 236, Fernald Road, and Site Drive <br> PM Peak Hour -95 |  |  |
| :--- | :---: | :---: | :---: |
|  | th <br> Percentile Queues |  |  |
| Available/ | No Build | Build |  |
| Approach/Movement | $\underline{\text { Proposed }}$ | $\underline{2024}$ | $\underline{2024}$ |
| Eastbound Route 236 Lefts/Thrus | -- | $24^{\prime}$ | $17^{\prime}$ |
| Eastbound Route 236 Rights | $65^{\prime}$ | $00^{\prime}$ | $0^{\prime}$ |
| Westbound Lefts | $50^{\prime}$ | -- | $38^{\prime}$ |
| Westbound Throughs/Rights | -- | $94^{\prime}$ | $16^{\prime}$ |
| Northbound Site Drive Lefts/Thrus | $60^{\prime}$ | $28^{\prime}$ | $52^{\prime}$ |
| Northbound Site Drive Rights | $60^{\prime}$ | $35^{\prime}$ | $50^{\prime}$ |
| Southbound Fernald Road | --- | $99^{\prime}$ | $100^{\prime}$ |

The above queue results show that the proposed 50 ' left-turn lane on Route 236 will be adequate for left-turns entering the drive during the PM peak hour period. Additionally, other storage lengths are also adequate to store the projected volumes. Given that Route 236 is a state highway, the design of the left turn lane will need to go through the MaineDOT developer review and approval process to gain construction authorization and be constructed according to MaineDOT procedures and specifications.

## SAFETY ANAYSIS

## ACCIDENT REVIEW

The Maine Department of Transportation uses two criteria to determine high crash locations (HCLs). The first is the critical rate factor (CRF), which is a measure of the accident rate. A CRF greater than one indicates a location which has a higher than expected crash rate. The expected rate is calculated as a statewide average of similar facilities.

The second criterion, which must also be met, is based upon the number of accidents that occur at a particular location. Eight or more accidents must occur over the threeyear study period for the location to be considered a high crash location.

Accident data was obtained from MaineDOT for Route 236 from the Eliot town line to the signalized intersection of Stevenson Road and Martin Road. The data is summarized below:

| Route 236 (Rogers Road) Location Description |  | \# of Crashes |  |
| :--- | :--- | :--- | :--- |
|  | CRF |  |  |
| Between Eliot-Kittery TL and Fernald Road |  |  | 0.86 |
| Westerly Intersection of Fernald Road | 2 | 0.36 |  |
| Between Fernald Road and Fernald Road | 1 | 0.10 |  |
| Between Fernald Road and Mackenzie Lane | 1 | 0.17 |  |
| Intersection of Mackenzie Lane | 3 | 0.50 |  |
| Between Mackenzie Lane and 0.33 miles east | 8 | 0.41 |  |
| Between Stevenson Road and 0.02 mi west | 1 | 0.43 |  |
| Intersection of Stevenson Road \& Martin Road | 3 | 0.14 |  |

As seen above, there are no high crash locations or locations approaching both crash criteria along this section of Route 236, so no further accident review or evaluation is necessary.

## DRIVEWAY SIGHT DISTANCE

Another important safety consideration is sight distance from the site drive. This drive meets MaineDOT sight distance standards based upon the recent issuance of a TMP for this drive. It is important that no new signage or landscaping be located within the drive sight triangles that could restrict or limit sight distance in the future.

## SUMMARY AND RECOMMENDATIONS

The proposed marijuana sales facility is expected to generate between 23 and 77 new oneway trips during peak hours based upon the most recent ITE data. Based upon the traffic count results, with consideration of the site's peak hours, the weekday PM peak hour of the adjacent street was selected for the traffic analysis. Based upon the trip assignments, the study area was defined as extending from the site through the site drive intersection, but it was extended to the nearby signalized intersection of Martin and Stevenson Roads to demonstrate off-site impact.

In terms of capacity, the signalized intersection of Martin and Stevenson Road is expected to operate at level of service "C" overall under 2024 No Build volumes during the weekday PM peak hour. Under projected Build volumes the LOS will remain at this level with no measurable increase in delay, demonstrating no capacity concerns and limited impact offsite.

The site drive is projected to operate at an acceptable LOS " $D$ " overall with left turns at LOS " F ", typical of drives onto busy arterials, under Build volumes. Given projected queuing on Route 236 due to left turns, left turn warrant analysis was performed. A left-turn lane is currently warranted by the existing left turn volumes entering Aroma Joe's, given the high Route 236 volumes. Given this result and to improve safety, a 50 ' left-turn lane is recommended on Route 236 to store left-turns entering the site. The left-turn lane design will need to go through the MaineDOT review and approval process. A Developer State Agreement will be required in order to gain construction authorization for this left-turn lane.

In terms of safety, there are no high crash locations within the vicinity of the site. Sight distance from the access drive is adequate but it is important that no landscaping or signage be added which could obstruct the drive sight triangles in the future.


Figure 1 Site Location Map 89 Route 236 Marijuana Sales Kittery, Maine ATliC compars


PM Peak Hour: 3:30-4:30


Figure 2


2023 Existing PM Peak Hour Volumes



Figure 4
2024 No Build PM Peak Hour Volumes



## APPENDIX

Existing Traffic Movement Permit Turning Movement Counts<br>Capacity Analysis<br>Accident Data

State of Mank
Department of Transportation
16 State HoUse Statron
Augusta, Mank 04333-0016

| Applicant: | Rockwell Homes, LLC <br> 1021 Goodwin Road |
| :--- | :--- |
|  | Eliot, ME 03903 |
| Project Location: | 89 Route 236, Kittery, Maine |
|  | Kittery Tax Map 028, Lot 14-2 |
| Project: | Aroma Joe's and Office Space |
| Identification \#: | Reg.01-00203-A-N |
| Permit Category: | 100-200 PCE's |
| Traffic Engineer: | Eaton Traffic Engineering |
|  | Attn: William C. Eaton, PE |
|  | 67 Winter Street, Suite I |
|  | Topsham, ME 04086 |
|  | (207) 725-9805 |

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the MaineDOT's Regulations, the Maine Department of Transportation has considered the application of Rockwell Homes, LLC with supportive data, agency review and other related materials on file.

## PROJECT DESCRIPTION

The project consists of a multi-use building housing an Aroma Joe's retail coffee business and 2,700 SF of office space. The project is estimated to generate 134 trips during the AM peak hour of travel. The site is proposed to be accessed via one existing full movement unsignalized entrance on Route 236.

## Findings

Based on a review of the files and related information, MaineDOT approves the Traffic Movement Permit Application of Rockwell Homes, LLC. subject to the following conditions:

## MITIGATION

The mitigation is intended to describe that conceptually shown on the following plan provided by Tidewater Engineering and Surveying, LLC. The plan is titled "Proposed Site Plan", dated August $27^{\text {th }}, 2015$.

If the descriptions contained herein conflict with the plan, these descriptions shall take precedence over the plan. Not all of the mitigation discussed herein maybe shown on that or any plan. The following mitigation shall be constructed or implemented to MaineDOT's satisfaction prior to the opening of the facility, unless otherwise approved by MaineDOT.

## General Requirements For All Entrances

The entrances shall provide overhead illumination, if not existing, to illuminate the intersections per MaineDOT standards at a minimum. Overhead lighting shall have an average of 0.6 to 1.0 foot candles, with the maximum to minimum lighting ratio of not more than $10: 1$ and an average to minimum light level of not more than $4: 1$.

Aroma Joe's and Office Space - Kittery
Reg.01-00203-A-N
Page 2 of 2

## Off-Site Mitigation

Site Entrance / Route 236
Construct a dedicated right-turn pocket on Route 236 to serve traffic turning right into the site entrance. The dedicated right-turn pocket shall meet MaineDOT design guide standards for a priority 1 arterial highway.

## Overall Requirements

A. Provide all necessary auxiliary signs, striping and pavement markings to implement the improvements described herein according to MaineDOT and/or National standards.
B. All plantings and signs (existing and/or proposed; permanent and/or temporary) shall be placed and maintained such that they do not block available sight distances and do not violate the State's "Installations and Obstructions" law. No signage, plantings or structures shall be allowed within the "clear zone" if they constitute a deadly fixed object as determined by MaineDOT. All signs shall meet MRSA Title 23, Chapter 21, Section 1914: "On-Premise Signs".
C. If any of the supporting data or representations for which this permit is based changes in any way or is found to be incorrect / inaccurate, the applicant shall request in writing from MaineDOT a decision of what impacts those changes will have on the permit. The applicant will then be required to submit those changes for review and approval and additional mitigation as a result of those changes may be required at the expense of the applicant.
D. Because the proposed project affects the State Highway and drainage systems and requires improvement to that system, the applicant must obtain approval of the design plans and coordinate work through MaineDOT's State Traffic Engineer or Assistant State Traffic Engineer, who can be reached at (207) 624-3620 in Augusta.

By:


State Traffic Engineer


## Sewall

14 York Street
Portland, ME 04101

TITLE: Rte 236, Fernald \& Aroma Joe's TOWN: Kittery COUNTER: J Mack WEATHER: Cloudy

File Name : KitteryRte236FernaldAJPM2023
Site Code : 00453261
Start Date : 4/5/2023
Page No : 1

Gr. I
Gr. I

Gr. I
Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

|  | Fernald Rd Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Aroma Joe's Shared Dr Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Toal | Right | Thru | Left | Peds | App. Toal | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Toal | Int. Total |
| 03:00 PM | 1 | 0 | 1 | 0 | 2 | 8 | 217 | 4 | 0 | 229 | 3 | 1 | 6 | 0 | 10 | 2 | 159 | 0 | 0 | 161 | 402 |
| 03:15 PM | 1 | 0 | 0 | 0 | 1 | 8 | 238 | 5 | 0 | 251 | 4 | 0 | 7 | 0 | 11 | 5 | 155 | 0 | 0 | 160 | 423 |
| 03:30 PM | 1 | 0 | 6 | 0 | 7 | 12 | 245 | 1 | 0 | 258 | 4 | 0 | 1 | 0 | 5 | 4 | 162 | 1 | 0 | 167 | 437 |
| 03:45 PM | 0 | 0 | 3 | 0 | 3 | 11 | 229 | 4 | 0 | 244 | 5 | 0 | 3 | 0 | 8 | 4 | 165 | 0 | 0 | 169 | 424 |
| Total | 3 | 0 | 10 | 0 | 13 | 39 | 929 | 14 | 0 | 982 | 16 | 1 | 17 | 0 | 34 | 15 | 641 | 1 | 0 | 657 | 1686 |
| 04:00 PM | 0 | 0 | 6 | 0 | 6 | 18 | 242 | 4 | 0 | 264 | 5 | 0 | 3 | 0 | 8 | 1 | 138 | 0 | 0 | 139 | 417 |
| 04:15 PM | 1 | 0 | 9 | 0 | 10 | 19 | 246 | 3 | 0 | 268 | 5 | 1 |  | 0 | 7 | 4 | 151 | 0 | 0 | 155 | 440 |
| 04:30 PM | 4 | 0 | 5 | 0 | 9 | 5 | 261 | 2 | 0 | 268 | 2 | 0 | 3 | 0 | 5 | 2 | 140 | 2 | 0 | 144 | 426 |
| 04:45 PM | 0 | 0 | 3 | 0 | 3 | 9 | 204 | 5 | 0 | 218 | 3 | 1 | 2 | 0 | 6 | 4 | 118 | 1 | 0 | 123 | 350 |
| Total | 5 | 0 | 23 | 0 | 28 | 51 | 953 | 14 | 0 | 1018 | 15 | 2 | 9 | 0 | 26 | 11 | 547 | 3 | 0 | 561 | 1633 |
| 05:00 PM | 3 | 0 | 6 | 0 | 9 | 13 | 177 | 2 | 0 | 192 | 3 | 0 | 4 | 0 | 7 | 2 | 128 | 2 | 0 | 132 | 340 |
| 05:15 PM | 1 | 0 | 9 | 0 | 10 | 11 | 184 | 0 | 0 | 195 | 2 | 0 | 0 | 0 | 2 | 4 | 130 | 2 | 0 | 136 | 343 |
| 05:30 PM | 0 | 0 | 5 | 0 | 5 | 6 | 162 | 0 | 0 | 168 | 5 | 0 | 3 | 0 | 8 | 4 | 140 | 0 | 0 | 144 | 325 |
| 05:45 PM | 2 | 0 | 2 | 0 | 4 | 12 | 148 | 1 | 0 | 161 | 0 | 0 | 1 | 0 | 1 | 0 | 123 | 1 | 0 | 124 | 290 |
| Total | 6 | 0 | 22 | 0 | 28 | 42 | 671 | 3 | 0 | 716 | 10 | 0 | 8 | 0 | 18 | 10 | 521 | 5 | 0 | 536 | 1298 |
| Grand Total | 14 | 0 | 55 | 0 | 69 | 132 | 2553 | 31 | 0 | 2716 | 41 | 3 | 34 | 0 | 78 | 36 | 1709 | 9 | 0 | 1754 | 4617 |
| Apprch \% | 20.3 | 0 | 79.7 | 0 |  | 4.9 | 94 | 1.1 | 0 |  | 52.6 | 3.8 | 43.6 | 0 |  | 2.1 | 97.4 | 0.5 | 0 |  |  |
| Total \% | 0.3 | 0 | 1.2 | 0 | 1.5 | 2.9 | 55.3 | 0.7 | 0 | 58.8 | 0.9 | 0.1 | 0.7 | 0 | 1.7 | 0.8 | 37 | 0.2 | 0 | 38 |  |
| Passenger venicics | 14 | 0 | 55 | 0 | 69 | 131 | 2467 | 31 | 0 | 2629 | 41 | 3 | 32 | 0 | 76 | 36 | 1659 | 9 | 0 | 1704 | 4478 |
| \% Passenenerevenicics | 100 | 0 | 100 | 0 | 100 | 99.2 | 96.6 | 100 | 0 | 96.8 | 100 | 100 | 94.1 | 0 | 97.4 | 100 | 97.1 | 100 | 0 | 97.1 | 97 |
| Light Trucks | 0 | 0 | 0 | 0 | 0 | 1 | 68 | 0 | 0 | 69 | 0 | 0 | 2 | 0 | 2 | 0 | 38 | 0 | 0 | 38 | 109 |
| \% Light Trucks | 0 | 0 | 0 | 0 | 0 | 0.8 | 2.7 | 0 | 0 | 2.5 | 0 | 0 | 5.9 | 0 | 2.6 | 0 | 2.2 | 0 | 0 | 2.2 | 2.4 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 | 30 |
| \% Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 0 | 0 | 0.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 0 | 0 | 0.7 | 0.6 |

## Sewall

14 York Street
Portland, ME 04101

TITLE: Rte 236, Fernald \& Aroma Joe's TOWN: Kittery COUNTER: J Mack WEATHER: Cloudy

File Name: KitteryRte236FernaldAJPM2023
Site Code : 00453261
Start Date : 4/5/2023
Page No :2

|  | Fernald Rd Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Aroma Joe's Shared Dr Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | $\begin{gathered} \mathrm{Rig} \\ \mathrm{ht} \\ \hline \end{gathered}$ | $\begin{array}{r} \hline \mathrm{Thr} \\ \mathrm{u} \end{array}$ | Left | $\begin{array}{r\|} \hline \mathrm{Ped} \\ \mathrm{~s} \end{array}$ | Apo. Toal | $\begin{gathered} \mathrm{Rig} \\ \mathrm{ht} \\ \hline \end{gathered}$ | $\begin{array}{r} \hline \text { Thr } \\ u \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | oal | $\begin{gathered} \mathrm{Rig} \\ \mathrm{ht} \\ \hline \end{gathered}$ | $\begin{array}{r} \text { Thr } \\ u \end{array}$ | Left | Ped | App. Toald | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{gathered} \mathrm{Thr} \\ \mathrm{u} \end{gathered}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | App. Toal | In. Toud |

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 03:30 PM

| 03:30 PM | 1 | 0 | 6 | 0 | 7 | 12 | 245 | 1 |  | 258 | 4 | 0 | 1 | 0 | 5 | 4 | 162 | 1 | 0 | 167 | 437 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 03:45 PM | 0 | 0 | 3 | 0 | 3 | 11 | 229 | 4 | 0 | 244 | 5 | 0 | 3 | 0 | 8 | 4 | 165 | 0 | 0 | 169 | 424 |
| 04:00 PM | 0 | 0 | 6 | 0 | 6 | 18 | 242 | 4 | 0 | 264 | 5 | 0 | 3 | 0 | 8 | 1 | 138 | 0 | 0 | 139 | 417 |
| 04:15 PM | 1 | 0 | 9 | 0 | 10 | 19 | 246 | 3 | 0 | 268 | 5 | 1 | 1 | 0 | 7 | 4 | 151 | 0 | 0 | 155 | 440 |
| Total Volume | 2 | 0 | 24 | 0 | 26 | 60 | 962 | 12 | 0 | 1034 | 19 | 1 | 8 | 0 | 28 | 13 | 616 | 1 | 0 | 630 | 1718 |
| \% App. Total | 7.7 | 0 | 92.3 | 0 |  | 5.8 | 93 | 1.2 | 0 |  | 67.9 | 3.6 | 28.6 | 0 |  | 2.1 | 97.8 | 0.2 | 0 |  |  |
| PHF | . 500 | . 000 | . 667 | . 000 | . 650 | . 789 | . 978 | . 750 | . 000 | 965 | . 950 | . 250 | . 667 | . 000 | . 875 | . 813 | . 933 | . 250 | . 000 | . 932 | . 976 |
| Passonger Venicices | 2 | 0 | 24 | 0 | 26 | 60 | 925 | 12 |  | 997 | 19 | 1 | 8 | 0 | 28 | 13 | 595 | 1 | 0 | 609 | 1660 |
| \% Passenger Venicics | 100 | 0 | 100 | 0 | 100 | 100 | 96.2 | 100 | 0 | 96.4 | 100 | 100 | 100 | 0 | 100 | 100 | 96.6 | 100 | 0 | 96.7 | 96.6 |
| Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 17 | 47 |
| \% Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 3.1 | 0 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 | 2.8 | 0 | 0 | 2.7 | 2.7 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 |  | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 11 |
| \% Heavy Trucks | ${ }_{2}$ | 0 | $\stackrel{0}{27}$ | 0 | 0 | 67 |  | 73 1 |  | 0.7 | ${ }^{0} 9$ | 1 | 8 | 0 | 0 | ${ }_{1}^{13}$ |  |  | 0 | 0.6 | 0.6 |

## Sewall

14 York Street
Portland, ME 04101

TITLE: Rte 236, Fernald \& Aroma Joe's TOWN: Kittery
COUNTER: J Mack WEATHER: Cloudy

File Name: KitteryRte236FernaldAJPM2023
Site Code : 00453261
Start Date : 4/5/2023
Page No : 3

|  | Fernald Rd Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Aroma Joe's Shared Dr Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | $\begin{array}{r} \text { Rig } \\ \text { ht } \end{array}$ | $\begin{array}{r} \mathrm{Thr} \\ \mathrm{u} \\ \hline \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | App. Toal | $\begin{gathered} \mathrm{Rig} \\ \mathrm{ht} \\ \hline \end{gathered}$ | $\begin{array}{r} \hline \text { Thr } \\ u \\ \hline \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | App. Toal | $\begin{gathered} \text { Rig } \\ \text { ht } \end{gathered}$ | $\begin{array}{r} \text { Thr } \\ \mathrm{u} \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | ap. Toal | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{gathered} \mathrm{Thr} \\ \mathrm{u} \end{gathered}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \\ \hline \end{array}$ | App. Toal | m. Touad |

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

|  | 04:15 PM |  |  |  |  | 03:45 PM |  |  |  |  | 03:00 PM |  |  |  |  | 03:00 PM |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| +0 mins. | 1 | 0 | 9 | 0 | 10 | 11 | 229 | 4 | 0 | 244 | 3 | 1 | 6 | 0 | 10 | 2 | 159 | 0 | 0 | 161 |
| +15 mins. | 4 | 0 | 5 | 0 | 9 | 18 | 242 | 4 | 0 | 264 | 4 | 0 | 7 | 0 | 11 | 5 | 155 | 0 | 0 | 160 |
| +30 mins. | 0 | 0 | 3 | 0 | 3 | 19 | 246 | 3 | 0 | 268 | 4 | 0 | 1 | 0 | 5 | 4 | 162 | 1 | 0 | 167 |
| +45 mins. | 3 | 0 | 6 | 0 | 9 | 5 | 261 | 2 | 0 | 268 | 5 | 0 | 3 | 0 | 8 | 4 | 165 | 0 | 0 | 169 |
| Total Volume | 8 | 0 | 23 | 0 | 31 | 53 | 978 | 13 | 0 | 1044 | 16 | 1 | 17 | 0 | 34 | 15 | 641 | 1 | 0 | 657 |
| \% App. Total | 25.8 | 0 | 74.2 | 0 |  | 5.1 | 93.7 | 1.2 | 0 |  | 47.1 | 2.9 | 50 | 0 |  | 2.3 | 97.6 | 0.2 | 0 |  |
| PHF | . 500 | . 000 | . 639 | . 000 | . 775 | . 697 | . 937 | . 813 | . 000 | . 974 | . 800 | . 250 | . 607 | . 000 | . 773 | . 750 | . 971 | . 250 | . 000 | . 972 |
| Passenger Vehicles | 8 | 0 | 23 | 0 | 31 | 53 | 938 | 13 | 0 | 1004 | 16 | 1 | 15 | 0 | 32 | 15 | 613 | 1 | 0 | 629 |
| \% Passenger Venicles | 100 | 0 | 100 | 0 | 100 | 100 | $\begin{array}{r} 95 . \\ 9 \end{array}$ | 100 | 0 | 96.2 | 100 | 100 | $\begin{array}{r} 88 . \\ 2 \end{array}$ | 0 | 94.1 | 100 | $\begin{array}{r} 95 . \\ 6 \end{array}$ | 100 | 0 | 95.7 |
| Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 34 | 0 | 0 | 2 | 0 | 2 | 0 | 20 | 0 | 0 | 20 |
| \% Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 3.5 | 0 | 0 | 3.3 | 0 | 0 | 11. | 0 | 5.9 | 0 | 3.1 | 0 | 0 | 3 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 |
| \% Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0 | - | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 1.2 | 0 | 0 | 1.2 |


|  |  |  |
| :---: | :---: | :---: |
|  | Peak Hour Data |  |
|  |  |  |

## Sewall

## 14 York Street

## Portland, ME 04101

TITLE: Route 236, Fernald Rd \& Aroma Joe
TOWN: Kittery COUNTER: JM WEATHER: Sunny

File Name : KittreyAromaJoesSiteSaturday2023
Site Code : 02481122
Start Date : 4/8/2023
Page No : 1

Gr. I
Gr. I
Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

|  | Fernald Road Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Aroma Joe's Shared Drive Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 11:00 AM | 0 | 0 | 1 | 0 | 1 | 3 | 120 | 5 | 0 | 128 | 4 | 0 | 5 | 0 | 9 | 4 | 141 | 0 | 0 | 145 | 283 |
| 11:15 AM | 0 | 0 | 1 | 0 | 1 | 4 | 127 | 6 | 0 | 137 | 2 | 0 | 4 | 0 | 6 | 5 | 164 | 0 | 0 | 169 | 313 |
| 11:30 AM | 0 | 0 | 1 | 0 | 1 | 5 | 146 | 5 | 0 | 156 | 9 | 1 | 2 | 0 | 12 | 2 | 176 | 0 | 0 | 178 | 347 |
| 11:45 AM | 0 | 0 | 2 | 0 | 2 | 1 | 135 | 9 | 0 | 145 | 9 | 0 | 1 | 0 | 10 | 6 | 188 | 0 | 0 | 194 | 351 |
| Total | 0 | 0 | 5 | 0 | 5 | 13 | 528 | 25 | 0 | 566 | 24 | 1 | 12 | 0 | 37 | 17 | 669 | 0 | 0 | 686 | 1294 |
| 12:00 PM | 1 | 0 | 6 | 0 | 7 | 9 | 147 | 3 | 0 | 159 | 8 | 0 | 5 | 0 | 13 | 3 | 144 | 0 | 0 | 147 | 326 |
| 12:15 PM | 0 | 0 | 1 | 0 | 1 | 5 | 164 | 9 | 0 | 178 | 5 | 0 | 1 | 0 | 6 | 4 | 147 | 0 | 0 | 151 | 336 |
| 12:30 PM | 0 | 0 | 2 | 0 | 2 | 6 | 127 | 4 | 0 | 137 | 8 | 0 | 3 | 0 | 11 | 3 | 202 | 0 | 0 | 205 | 355 |
| 12:45 PM | 0 | 1 | 1 | 1 | 3 | 6 | 156 | 5 | 0 | 167 | 5 | 1 | 5 | 0 | 11 | 0 | 175 | 0 | 0 | 175 | 356 |
| Total | 1 | 1 | 10 | 1 | 13 | 26 | 594 | 21 | 0 | 641 | 26 | 1 | 14 | 0 | 41 | 10 | 668 | 0 | 0 | 678 | 1373 |
| 01:00 PM | 0 | 0 | 2 | 0 | 2 | 6 | 158 | 9 | 0 | 173 | 6 | 0 | 1 | 0 | 7 | 4 | 145 | 0 | 0 | 149 | 331 |
| 01:15 PM | 0 | 0 | 5 | 0 | 5 | 2 | 161 | 3 | 0 | 166 | 4 | 0 | 3 | 0 | 7 | 3 | 151 | 0 | 0 | 154 | 332 |
| 01:30 PM | 0 | 0 | 2 | 0 | 2 | 4 | 157 | 2 | 0 | 163 | 9 | 0 | 1 | 0 | 10 | 4 | 159 | 0 | 0 | 163 | 338 |
| 01:45 PM | 0 | 0 | 4 | 0 | 4 | 5 | 138 | 3 | 0 | 146 | 4 | 0 | 1 | 0 | 5 | 2 | 146 | 0 | 0 | 148 | 303 |
| Total | 0 | 0 | 13 | 0 | 13 | 17 | 614 | 17 | 0 | 648 | 23 | 0 | 6 | 0 | 29 | 13 | 601 | 0 | 0 | 614 | 1304 |
| Grand Total | 1 | 1 | 28 | 1 | 31 | 56 | 1736 | 63 | 0 | 1855 | 73 | 2 | 32 | 0 | 107 | 40 | 1938 | 0 | 0 | 1978 | 3971 |
| Apprch \% | 3.2 | 3.2 | 90.3 | 3.2 |  | 3 | 93.6 | 3.4 | 0 |  | 68.2 | 1.9 | 29.9 | 0 |  | 2 | 98 | 0 | 0 |  |  |
| Total \% | 0 | 0 | 0.7 | 0 | 0.8 | 1.4 | 43.7 | 1.6 | 0 | 46.7 | 1.8 | 0.1 | 0.8 | 0 | 2.7 | 1 | 48.8 | 0 | 0 | 49.8 |  |
| Passenger Vehicles | 1 | 1 | 28 | 1 | 31 | 56 | 1700 | 63 | 0 | 1819 | 73 | 2 | 31 | 0 | 106 | 39 | 1914 | 0 | 0 | 1953 | 3909 |
| \% Passenger Venicles | 100 | 100 | 100 | 100 | 100 | 100 | 97.9 | 100 | 0 | 98.1 | 100 | 100 | 96.9 | 0 | 99.1 | 97.5 | 98.8 | 0 | 0 | 98.7 | 98.4 |
| Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 27 | 0 | 0 | 1 | 0 | 1 | 1 | 17 | 0 | 0 | 18 | 46 |
| \% Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 1.6 | 0 | 0 | 1.5 | 0 | 0 | 3.1 | 0 | 0.9 | 2.5 | 0.9 | 0 | 0 | 0.9 | 1.2 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 16 |
| \% Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0 | 0 | 0.4 | 0.4 |

## Sewall

14 York Street
Portland, ME 04101

TITLE: Route 236, Fernald Rd \& Aroma Joe
TOWN: Kittery COUNTER: JM WEATHER: Sunny

File Name : KittreyAromaJoesSiteSaturday2023
Site Code : 02481122
Start Date: 4/8/2023
Page No :2

Gr. I
Gr. I
Gr. I

|  | Fernald Road Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Aroma Joe's Shared Drive Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | $\begin{array}{r} \text { Rig } \\ \text { ht } \\ \hline \end{array}$ | $\begin{array}{r} \mathrm{Thr} \\ \mathrm{u} \\ \hline \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | Toal | $\begin{gathered} \mathrm{Rig} \\ \mathrm{ht} \\ \hline \end{gathered}$ | $\begin{array}{r} \text { Thr } \\ \mathrm{u} \\ \hline \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | App. Toal | $\begin{gathered} \text { Rig } \\ \text { ht } \end{gathered}$ | $\begin{array}{r} \text { Thr } \\ \mathrm{u} \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | App. Toal | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{gathered} \text { Thr } \\ \mathrm{u} \end{gathered}$ | Left | Ped s | App. Toal | \|m. Tood |

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 12:15 PM

| 12:15 PM | 0 | 0 | 1 | 0 | 1 | 5 | 164 | 9 | 0 | 178 | 5 | 0 | 1 | 0 | 6 | 4 | 147 | 0 | 0 | 151 | 336 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12:30 PM | 0 | 0 | 2 | 0 | 2 | 6 | 127 | 4 | 0 | 137 | 8 | 0 | 3 | 0 | 11 | 3 | 202 | 0 | 0 | 205 | 355 |
| 12:45 PM | 0 | 1 | 1 | 1 | 3 | 6 | 156 | 5 | 0 | 167 | 5 | 1 | 5 | 0 | 11 | 0 | 175 | 0 | 0 | 175 | 356 |
| 01:00 PM | 0 | 0 | 2 | 0 | 2 | 6 | 158 | 9 | 0 | 173 | 6 | 0 | 1 | 0 | 7 | 4 | 145 | 0 | 0 | 149 | 331 |
| Total Volume | 0 | 1 | 6 | 1 | 8 | 23 | 605 | 27 | 0 | 655 | 24 | 1 | 10 | 0 | 35 | 11 | 669 | 0 | 0 | 680 | 1378 |
| \% App. Total | 0 | 12.5 | 75 | 12.5 |  | 3.5 | 92.4 | 4.1 | 0 |  | 68.6 | 2.9 | 28.6 | 0 |  | 1.6 | 98.4 | 0 | 0 |  |  |
| PHF | . 000 | . 250 | . 750 | . 250 | . 667 | . 958 | . 922 | . 750 | . 000 | . 920 | . 750 | . 250 | . 500 | . 000 | . 795 | . 688 | . 828 | . 000 | . 000 | . 829 | . 968 |
| Passenger Vehicles | 0 | 1 | 6 | 1 | 8 | 23 | 592 | 27 | 0 | 642 | 24 | 1 | 9 | 0 | 34 | 10 | 661 | 0 | 0 | 671 | 1355 |
| \% Passenger Venicies | 0 | 100 | 100 | 100 | 100 | 100 | 97.9 | 100 | 0 | 98.0 | 100 | 100 | 90.0 | 0 | 97.1 | 90.9 | 98.8 | 0 | 0 | 98.7 | 98.3 |
| Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 1 | 0 | 1 | 1 | 4 | 0 | 0 | 5 | 16 |
| \% Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 1.7 | 0 | 0 | 1.5 | 0 | 0 | 10.0 | 0 | 2.9 | 9.1 | 0.6 | 0 | 0 | 0.7 | 1.2 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 7 |
| \% Heavy Trucks | $0^{0}$ | $1{ }^{0}$ | $\begin{aligned} & 0 \\ & 7 \end{aligned}$ | 0 | 0 | $26^{0}$ | $\begin{aligned} & 0.5 \\ & 675 \end{aligned}$ | $\begin{aligned} & 0 \\ & 27 \end{aligned}$ | 0 | 0.5 | 24 | $0$ | 10 | 0 | 0 | $10$ | $\stackrel{0.6}{746}$ | 0 | 0 | 0.6 | 0.5 |

## Sewall

14 York Street
Portland, ME 04101

TITLE: Route 236, Fernald Rd \& Aroma Joe
TOWN: Kittery COUNTER: JM WEATHER: Sunny

File Name : KittreyAromaJoesSiteSaturday2023
Site Code : 02481122
Start Date: 4/8/2023
Page No : 3

|  | Fernald Road Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Aroma Joe's Shared Drive Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Rig | $\begin{array}{r} \hline \text { Thr } \\ u \end{array}$ | Left | $\begin{array}{\|r\|} \hline \text { Ped } \\ \mathrm{s} \end{array}$ | Anp | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{array}{r} \hline \text { Thr } \\ u \\ \hline \end{array}$ | Left | $\begin{array}{r} \hline \text { Ped } \\ \mathrm{s} \end{array}$ | App. Toal | $\begin{gathered} \text { Rig } \\ \text { ht } \end{gathered}$ | $\begin{array}{r} \text { Thr } \\ u \end{array}$ | Left | Ped | App. Toal | $\underset{\mathrm{ht}}{\mathrm{Rig}}$ | Thr $u$ | Left | Ped s | App. Toal | m. T Tolal |

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

|  | 12:00 PM |  |  |  |  | 12:45 PM |  |  |  |  | 11:15 AM |  |  |  |  | 11:45 AM |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| +0 mins. | 1 | 0 | 6 | 0 | 7 | 6 | 156 | 5 | 0 | 167 | 2 | 0 | 4 | 0 | 6 | 6 | 188 | 0 | 0 | 194 |
| +15 mins. | 0 | 0 | 1 | 0 | 1 | 6 | 158 | 9 | 0 | 173 | 9 | 1 | 2 | 0 | 12 | 3 | 144 | 0 | 0 | 147 |
| +30 mins. | 0 | 0 | 2 | 0 | 2 | 2 | 161 | 3 | 0 | 166 | 9 | 0 | 1 | 0 | 10 | 4 | 147 | 0 | 0 | 151 |
| +45 mins. | 0 | 1 | 1 | 1 | 3 | 4 | 157 | 2 | 0 | 163 | 8 | 0 | 5 | 0 | 13 | 3 | 202 | 0 | 0 | 205 |
| Total Volume | 1 | 1 | 10 | 1 | 13 | 18 | 632 | 19 | 0 | 669 | 28 | 1 | 12 | 0 | 41 | 16 | 681 | 0 | 0 | 697 |
| \% App. Total | 7.7 | 7.7 | 76.9 | 7.7 |  | 2.7 | 94.5 | 2.8 | 0 |  | 68.3 | 2.4 | 29.3 | 0 |  | 2.3 | 97.7 | 0 | 0 |  |
| PHF | . 250 | . 250 | . 417 | . 250 | . 464 | . 750 | . 981 | . 528 | . 000 | . 967 | . 778 | . 250 | . 600 | . 000 | . 788 | . 667 | . 843 | . 000 | . 000 | . 850 |
| Passenger Vehicles | 1 | 1 | 10 | 1 | 13 | 18 | 619 | 19 | 0 | 656 | 28 | 1 | 12 | 0 | 41 | 16 | 673 | 0 | 0 | 689 |
| \% Passenger Venicles | 100 | 100 | 100 | 100 | 100 | 100 | $\begin{array}{r} 97 . \\ 9 \end{array}$ | 100 | 0 | 98.1 | 100 | 100 | 100 | 0 | 100 | 100 | $\begin{array}{r} 98 . \\ 8 \end{array}$ | 0 | 0 | 98.9 |
| Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| \% Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 1.7 | 0 | 0 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0 | 0 | 0.6 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| \% Heavy Trucks | 0 | 0 | ${ }_{1}$ | - | 0 | 0 | $0.3$ | ${ }^{0}$ | 0 | 0.3 | 0 | 0 | 0 | - | 0 | 0 | 0.6 | 0 | 0 | 0.6 |

Gr. $=0.97 / 0.87=1.115$

## Sewall

14 York Street
Portland, ME 04101

TITLE: Route 236, Martin \& Stevenson
TOWN: Kittery
COUNTER: JM WEATHER: Sunny

File Name : Rte236MartinStevensonPM2023
Site Code : 04122325
Start Date : 4/12/2023
Page No : 1

|  | Stevenson Road Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Martin Road Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 02:30 PM | 10 | 4 | 8 | 0 | 22 | 3 | 232 | 0 | 0 | 235 | 2 | 4 | 2 | 0 | 8 | 3 | 169 | 10 | 0 | 182 | 447 |
| 02:45 PM | 13 | 3 | 7 | 0 | 23 | 4 | 234 | 5 | 0 | 243 | 5 | 2 | 4 | 0 | 11 | 0 | 150 | 13 | 0 | 163 | 440 |
| Total | 23 | 7 | 15 | 0 | 45 | 7 | 466 | 5 | 0 | 478 | 7 | 6 | 6 | 0 | 19 | 3 | 319 | 23 | 0 | 345 | 887 |
| 03:00 PM | 16 | 0 | 14 | 0 | 30 | 4 | 239 | 4 | 0 | 247 | 6 | 0 | 5 | 0 | 11 | 0 | 151 | 6 | 0 | 157 | 445 |
| 03:15 PM | 17 | 3 | 10 | 0 | 30 | 2 | 254 | 2 | 0 | 258 | 1 | 5 | 4 | 0 | 10 | 2 | 152 | 6 | 0 | 160 | 458 |
| 03:30 PM | 13 | 5 | 7 | 0 | 25 | 0 | 260 | 3 | 0 | 263 | 7 | 1 | 9 | 0 | 17 | 2 | 174 | 12 | 0 | 188 | 493 |
| 03:45 PM | 19 | 6 | 10 | 0 | 35 | 5 | 240 | 7 | 0 | 252 | 3 | 4 | 6 | 0 | 13 | 3 | 148 | 14 | 0 | 165 | 465 |
| Total | 65 | 14 | 41 | 0 | 120 | 11 | 993 | 16 | 0 | 1020 | 17 | 10 | 24 | 0 | 51 | 7 | 625 | 38 | 0 | 670 | 1861 |
| 04:00 PM | 11 | 2 | 2 | 0 | 15 | 2 | 260 | 7 | 0 | 269 | 7 | 5 | 2 | 0 | 14 | 6 | 161 | 8 | 0 | 175 | 473 |
| 04:15 PM | 11 | 3 | 5 | 0 | 19 | 4 | 265 | 7 | 0 | 276 | 2 | 3 | 3 | 0 | 8 | 3 | 155 | 6 | 0 | 164 | 467 |
| 04:30 PM | 6 | 4 | 4 | 0 | 14 | 8 | 245 | 2 | 0 | 255 | 4 | 5 | 3 | 0 | 12 | 6 | 131 | 9 | 0 | 146 | 427 |
| 04:45 PM | 12 | 2 | 5 | 0 | 19 | 4 | 232 | 3 | 0 | 239 | 2 | 4 | 2 | 0 | 8 | 1 | 131 | 8 | 0 | 140 | 406 |
| Total | 40 | 11 | 16 | 0 | 67 | 18 | 1002 | 19 | 0 | 1039 | 15 | 17 | 10 | 0 | 42 | 16 | 578 | 31 | 0 | 625 | 1773 |
| 05:00 PM | 6 | 4 | 5 | 0 | 15 | 4 | 177 | 2 | 0 | 183 | 4 | 3 | 5 | 0 | 12 | 4 | 156 | 4 | 0 | 164 | 374 |
| 05:15 PM | 13 | 5 | 10 | 0 | 28 | 2 | 206 | 4 | 0 | 212 | 6 | 3 | 5 | 0 | 14 | 2 | 160 | 9 | 0 | 171 | 425 |
| Grand Total | 147 | 41 | 87 | 0 | 275 | 42 | 2844 | 46 | 0 | 2932 | 49 | 39 | 50 | 0 | 138 | 32 | 1838 | 105 | 0 | 1975 | 5320 |
| Apprch \% | 53.5 | 14.9 | 31.6 | 0 |  | 1.4 | 97 | 1.6 | 0 |  | 35.5 | 28.3 | 36.2 | 0 |  | 1.6 | 93.1 | 5.3 | 0 |  |  |
| Total \% | 2.8 | 0.8 | 1.6 | 0 | 5.2 | 0.8 | 53.5 | 0.9 | 0 | 55.1 | 0.9 | 0.7 | 0.9 | 0 | 2.6 | 0.6 | 34.5 | 2 | 0 | 37.1 |  |
| Passenger Vehicles | 143 | 41 | 87 | 0 | 271 | 42 | 2731 | 46 | 0 | 2819 | 48 | 38 | 49 | 0 | 135 | 31 | 1766 | 103 | 0 | 1900 | 5125 |
| \% Passenger Venicles | 97.3 | 100 | 100 | 0 | 98.5 | 100 | 96 | 100 | 0 | 96.1 | 98 | 97.4 | 98 | 0 | 97.8 | 96.9 | 96.1 | 98.1 | 0 | 96.2 | 96.3 |
| Light Trucks | 4 | 0 | 0 | 0 | 4 | 0 | 102 | 0 | 0 | 102 | 1 | 1 | 1 | 0 | 3 | 1 | 52 | 2 | 0 | 55 | 164 |
| \% Light Trucks | 2.7 | 0 | 0 | 0 | 1.5 | 0 | 3.6 | 0 | 0 | 3.5 | 2 | 2.6 | 2 | 0 | 2.2 | 3.1 | 2.8 | 1.9 | 0 | 2.8 | 3.1 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 20 | 31 |
| \% Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0 | 0 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0 | 1.1 | 0 | 0 | 1 | 0.6 |

## Sewall

14 York Street

## Portland, ME 04101

TITLE: Route 236, Martin \& Stevenson
TOWN: Kittery
COUNTER: JM WEATHER: Sunny

File Name : Rte236MartinStevensonPM2023
Site Code : 04122325
Start Date : 4/12/2023
Page No : 2

|  | Stevenson Road Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Martin Road Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{array}{r} \hline \text { Thr } \\ u \end{array}$ | Left | $\begin{array}{r\|} \hline \text { Ped } \\ \mathrm{s} \\ \hline \end{array}$ | ${ }^{\text {app. Toala }}$ | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{array}{r} \text { Thr } \\ u \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \end{array}$ | App. Toal | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{array}{r} \hline \text { Thr } \\ u \end{array}$ | Left | $\begin{array}{r} \hline \text { Ped } \\ \mathrm{s} \end{array}$ | App. Toas | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{array}{r} \text { Thr } \\ u \\ \hline \end{array}$ | Left | Ped s | App. Toad | \|m. Tood |

Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 03:30 PM

| 03:30 PM | 13 | 5 | 7 | 0 | 25 | 0 | 260 | 3 | 0 | 263 | 7 | 1 | 9 | 0 | 17 | 2 | 174 | 12 | 0 | 188 | 493 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 03:45 PM | 19 | 6 | 10 | 0 | 35 | 5 | 240 | 7 | 0 | 252 | 3 | 4 | 6 | 0 | 13 | 3 | 148 | 14 | 0 | 165 | 465 |
| 04:00 PM | 11 | 2 | 2 | 0 | 15 | 2 | 260 | 7 | 0 | 269 | 7 | 5 | 2 | 0 | 14 | 6 | 161 | 8 | 0 | 175 | 473 |
| 04:15 PM | 11 | 3 | 5 | 0 | 19 | 4 | 265 | 7 | 0 | 276 | 2 | 3 | 3 | 0 | 8 | 3 | 155 | 6 | 0 | 164 | 467 |
| Total Volume | 54 | 16 | 24 | 0 | 94 | 11 | 1025 | 24 | 0 | 1060 | 19 | 13 | 20 | 0 | 52 | 14 | 638 | 40 | 0 | 692 | 1898 |
| \% App. Total | 57.4 | 17 | 25.5 | 0 |  | 1 | 96.7 | 2.3 | 0 |  | 36.5 | 25 | 38.5 | 0 |  | 2 | 92.2 | 5.8 | 0 |  |  |
| PHF | . 711 | . 667 | . 600 | . 000 | . 671 | . 550 | . 967 | . 857 | . 000 | . 960 | . 679 | . 650 | . 556 | . 000 | . 765 | . 583 | . 917 | . 714 | . 000 | . 920 | 962 |
| Passenger Venicles | 53 | 16 | 24 | 0 | 93 | 11 | 976 | 24 | 0 | 1011 | 18 | 13 | 20 | 0 | 51 | 13 | 612 | 39 | 0 | 664 | 1819 |
| \% Passenerer venices | 98.1 | 100 | 100 | 0 | 98.9 | 100 | 95.2 | 100 | 0 | 95.4 | 94.7 | 100 | 100 | 0 | 98.1 | 92.9 | 95.9 | 97.5 | 0 | 96.0 | 95.8 |
| Light Trucks | 1 | 0 | 0 | 0 | 1 | 0 | 46 | 0 | 0 | 46 | 1 | 0 | 0 | 0 | 1 | 1 | 20 | 1 | 0 | 22 | 70 |
| \% Light Trucks | 1.9 | 0 | 0 | 0 | 1.1 | 0 | 4.5 | 0 | 0 | 4.3 | 5.3 | 0 | 0 | 0 | 1.9 | 7.1 | 3.1 | 2.5 | 0 | 3.2 | 3.7 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 9 |
| \% Heavy Trucks | $61^{\circ}$ |  | 27 | 0 | 0 | 12 | $1{ }^{03} 54$ |  | 0 | 0.3 | $21^{\circ}$ | 15 | 23 | 0 | 0 | $16^{\circ}$ | 719 | 45 | 0 | 9 | 0.5 |



## Sewall

14 York Street

## Portland, ME 04101

TITLE: Route 236, Martin \& Stevenson
TOWN: Kittery
COUNTER: JM WEATHER: Sunny

File Name: Rte236MartinStevensonPM2023
Site Code : 04122325
Start Date : 4/12/2023
Page No : 3

|  | Stevenson Road Southbound |  |  |  |  | Route 236 Westbound |  |  |  |  | Martin Road Northbound |  |  |  |  | Route 236 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | $\begin{array}{r} \mathrm{Rig} \\ \mathrm{ht} \\ \hline \end{array}$ | $\begin{array}{r} \mathrm{Thr} \\ \mathrm{u} \\ \hline \end{array}$ | Left | $\begin{array}{r\|} \hline \text { Ped } \\ \mathrm{s} \\ \hline \end{array}$ | App. Toal | $\begin{array}{r} \text { Rig } \\ \mathrm{ht} \end{array}$ | $\begin{array}{r} \text { Thr } \\ u \\ \hline \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \\ \hline \end{array}$ | oal | $\begin{gathered} \mathrm{Rig} \\ \mathrm{ht} \\ \hline \end{gathered}$ | $\begin{array}{r} \text { Thr } \\ \mathrm{u} \end{array}$ | Left | Ped | oral | $\begin{gathered} \text { Rig } \\ \mathrm{ht} \end{gathered}$ | $\begin{array}{r} \mathrm{Thr} \\ \mathrm{u} \\ \hline \end{array}$ | Left | $\begin{array}{r} \text { Ped } \\ \mathrm{s} \\ \hline \end{array}$ | App. Toal | mt. Tom |

Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

|  | 03:00 PM |  |  |  |  | 03:30 PM |  |  |  |  | 03:15 PM |  |  |  |  | 03:30 PM |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| +0 mins. | 16 | 0 | 14 | 0 | 30 | 0 | 260 | 3 | 0 | 263 | 1 | 5 | 4 | 0 | 10 | 2 | 174 | 12 | 0 | 188 |
| +15 mins. | 17 | 3 | 10 | 0 | 30 | 5 | 240 | 7 | 0 | 252 | 7 | 1 | 9 | 0 | 17 | 3 | 148 | 14 | 0 | 165 |
| +30 mins. | 13 | 5 | 7 | 0 | 25 | 2 | 260 | 7 | 0 | 269 | 3 | 4 | 6 | 0 | 13 | 6 | 161 | 8 | 0 | 175 |
| +45 mins. | 19 | 6 | 10 | 0 | 35 | 4 | 265 | 7 | 0 | 276 | 7 | 5 | 2 | 0 | 14 | 3 | 155 | 6 | 0 | 164 |
| Total Volume | 65 | 14 | 41 | 0 | 120 | 11 | 1025 | 24 | 0 | 1060 | 18 | 15 | 21 | 0 | 54 | 14 | 638 | 40 | 0 | 692 |
| \% App. Total | 54.2 | 11.7 | 34.2 | 0 |  | 1 | 96.7 | 2.3 | 0 |  | 33.3 | 27.8 | 38.9 | 0 |  | 2 | 92.2 | 5.8 | 0 |  |
| PHF | . 855 | . 583 | . 732 | . 000 | . 857 | . 550 | . 967 | . 857 | . 000 | . 960 | . 643 | . 750 | . 583 | . 000 | . 794 | . 583 | . 917 | . 714 | . 000 | . 920 |
| Passenger Vehicles | 62 | 14 | 41 | 0 | 117 | 11 | 976 | 24 | 0 | 1011 | 18 | 15 | 21 | 0 | 54 | 13 | 612 | 39 | 0 | 664 |
| \% Passenger Venicices | 95. | 100 | 100 | 0 | 97.5 | 100 | $\begin{array}{r} 95 . \\ 2 \end{array}$ | 100 | 0 | 95.4 | 100 | 100 | 100 | 0 | 100 | $\begin{array}{r} 92 . \\ 9 \end{array}$ | $\begin{array}{r} 95 . \\ 9 \end{array}$ | 97. | 0 | 96 |
| Light Trucks | 3 | 0 | 0 | 0 | 3 | 0 | 46 | 0 | 0 | 46 | 0 | 0 | 0 | 0 | 0 | 1 | 20 | 1 | 0 | 22 |
| \% Light Trucks | 4.6 | 0 | 0 | 0 | 2.5 | 0 | 4.5 | 0 | 0 | 4.3 | 0 | 0 | 0 | 0 | 0 | 7.1 | 3.1 | 2.5 | 0 | 3.2 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 |
| \% Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.9 | 0 | 0 | 0.9 |



Summary of All Intervals

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Run Number | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ |
| Start Time | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ |
| End Time | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Total Time (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Time Recorded (min) | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| \# of Intervals | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| \# of Recorded Intervals | 2215 | 2259 | 2073 | 2201 | 2128 | 2132 | 2149 |
| Vehs Entered | 2208 | 2270 | 2068 | 2165 | 2128 | 2146 | 2134 |
| Vehs Exited | 66 | 96 | 68 | 75 | 69 | 85 | 62 |
| Starting Vehs | 73 | 85 | 73 | 111 | 69 | 71 | 77 |
| Ending Vehs | 2105 | 2142 | 1948 | 2056 | 2022 | 2019 | 2038 |
| Travel Distance (mi) | 76.7 | 93.7 | 65.8 | 76.7 | 72.2 | 72.2 | 71.6 |
| Travel Time (hr) | 22.1 | 38.1 | 15.3 | 23.3 | 19.3 | 19.6 | 18.7 |
| Total Delay (hr) | 947 | 1868 | 738 | 1142 | 871 | 973 | 858 |
| Total Stops | 66.2 | 72.5 | 59.4 | 65.0 | 63.0 | 63.0 | 63.3 |
| Fuel Used (gal) |  |  |  |  |  | 6 |  |

Summary of All Intervals

|  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Run Number | 8 | 9 | 10 | Avg |
| Start Time | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ |
| End Time | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ |
| Total Time (min) | 70 | 70 | 70 | 70 |
| Time Recorded (min) | 60 | 60 | 60 | 60 |
| \# of Intervals | 2 | 2 | 2 | 2 |
| \# of Recorded Intervals | 1 | 1 | 1 | 1 |
| Vehs Entered | 2130 | 2261 | 2221 | 2178 |
| Vehs Exited | 2137 | 2211 | 2213 | 2168 |
| Starting Vehs | 66 | 71 | 74 | 71 |
| Ending Vehs | 59 | 121 | 82 | 78 |
| Travel Distance (mi) | 2022 | 2113 | 2096 | 2056 |
| Travel Time (hr) | 69.4 | 80.6 | 90.6 | 77.0 |
| Total Delay (hr) | 17.1 | 25.5 | 36.4 | 23.5 |
| Total Stops | 808 | 1203 | 1837 | 1126 |
| Fuel Used (gal) | 61.7 | 67.5 | 69.6 | 65.1 |

Interval \#O Information Seeding

| Start Time | $3: 50$ |
| :--- | ---: |
| End Time | $4: 00$ |
| Total Time (min) | 10 |
| Volumes adjusted by Growth Factors. |  |
| No data recorded this interval. |  |

SimTraffic Simulation Summary

Interval \#1 Information Recording

| Start Time | $4: 00$ |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| End Time | $5: 00$ |  |  |  |  |  |  |
| Total Time (min) | 60 |  |  |  |  |  |  |
| Volumes adjusted by Growth Factors. |  |  |  |  |  |  |  |
| Run Number | 1 | 2 | 3 | 5 | 6 | 7 |  |
| Vehs Entered | 2215 | 2259 | 2073 | 2201 | 2128 | 2132 | 2149 |
| Vehs Exited | 2208 | 2270 | 2068 | 2165 | 2128 | 2146 | 2134 |
| Starting Vehs | 66 | 96 | 68 | 75 | 69 | 85 | 62 |
| Ending Vehs | 73 | 85 | 73 | 111 | 69 | 71 | 77 |
| Travel Distance (mi) | 2105 | 2142 | 1948 | 2056 | 2022 | 2019 | 2038 |
| Travel Time (hr) | 76.7 | 93.7 | 65.8 | 76.7 | 72.2 | 72.2 | 71.6 |
| Total Delay (hr) | 22.1 | 38.1 | 15.3 | 23.3 | 19.3 | 19.6 | 18.7 |
| Total Stops | 947 | 1868 | 738 | 1142 | 871 | 973 | 858 |
| Fuel Used (gal) | 66.2 | 72.5 | 59.4 | 65.0 | 63.0 | 63.0 | 63.3 |

## Interval \#1 Information Recording

| Start Time | $4: 00$ |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| End Time | $5: 00$ |  |  |  |
| Total Time (min) | 60 |  |  |  |
| Volumes adjusted by Growth Factors. |  |  |  |  |
| Run Number | 8 | 9 | 10 | Avg |
| Vehs Entered | 2130 | 2261 | 2221 | 2178 |
| Vehs Exited | 2137 | 2211 | 2213 | 2168 |
| Starting Vehs | 66 | 71 | 74 | 71 |
| Ending Vehs | 59 | 121 | 82 | 78 |
| Travel Distance (mi) | 2022 | 2113 | 2096 | 2056 |
| Travel Time (hr) | 69.4 | 80.6 | 90.6 | 77.0 |
| Total Delay (hr) | 17.1 | 25.5 | 36.4 | 23.5 |
| Total Stops | 808 | 1203 | 1837 | 1126 |
| Fuel Used (gal) | 61.7 | 67.5 | 69.6 | 65.1 |

3: Martin Road/Stevenson Road \& Route 236 Performance by lane

| Lane | EB | EB | WB | WB | NB | NB | SB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: |
| Movements Served | L | TR | L | TR | LT | R | LT | R |  |
| Denied Del/Veh (s) |  |  |  |  |  |  |  |  | 1.5 |
| Total Del/Veh (s) | 47.5 | 9.7 | 45.0 | 32.0 | 43.6 | 7.4 | 47.8 | 23.9 | 24.9 |

8: Aroma Joe's/Site Drive/Fernald Road \& Route 236 Performance by lane

| Lane | EB | EB | WB | NB | NB | SB | All |
| :--- | :---: | ---: | :---: | :---: | :---: | :---: | :---: |
| Movements Served | LT | R | LTR | LT | R | LTR |  |
| Denied Del/Veh (s) |  |  |  |  |  |  | 0.3 |
| Total Del/Veh (s) | 1.5 | 0.0 | 10.8 | 62.2 | 7.3 | 139.5 | 9.6 |

Total Network Performance

|  |  |
| :--- | ---: |
| Denied Del/Veh (s) | 1.7 |
| Total Delveh (s) | 36.0 |

Intersection: 3: Martin Road/Stevenson Road \& Route 236

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | LT | R | LT | R |
| Maximum Queue (ft) | 116 | 286 | 146 | 950 | 84 | 58 | 135 | 75 |
| Average Queue (ft) | 37 | 103 | 28 | 428 | 29 | 17 | 45 | 44 |
| 95th Queue (ft) | 89 | 224 | 94 | 1068 | 69 | 47 | 101 | 80 |
| Link Distance (ft) |  | 2406 |  | 1535 | 642 |  | 972 |  |
| Upstream Blk Time (\%) |  |  |  | 1 |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 0 |  |  |  |  |
| Storage Bay Dist (ft) | 200 |  | 175 |  |  | 50 |  | 50 |
| Storage Blk Time (\%) |  | 1 |  | 14 | 8 | 0 | 10 | 12 |

Intersection: 8: Aroma Joe's/Site Drive/Fernald Road \& Route 236

| Movement | EB | WB | NB | NB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | LTR | LT | R | LTR |
| Maximum Queue (ft) | 31 | 187 | 35 | 41 | 111 |
| Average Queue (ft) | 1 | 19 | 7 | 12 | 41 |
| 95th Queue (ft) | 24 | 94 | 28 | 35 | 99 |
| Link Distance (ft) | 1343 | 2406 | 293 |  | 990 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 1 | 0 |  |
| Storage Blk Time (\%) | 0 |  | 0 | 0 |  |
| Queuing Penalty (veh) | 0 |  |  |  |  |

Network wide Queuing Penalty: 18

Intersection: 3: Martin Road/Stevenson Road \& Route 236

| Phase | 1 | 2 | 4 | 5 | 6 | 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Movement(s) Served | EBL | WBT | NBTL | WBL | EBT | SBTL |
| Maximum Green (s) | 8.0 | 59.0 | 21.0 | 8.0 | 59.0 | 21.0 |
| Minimum Green (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Recall | None | C-Max | None | None | C-Max | None |
| Avg. Green (s) | 7.6 | 79.2 | 11.0 | 7.1 | 81.5 | 11.0 |
| g/C Ratio | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (\%) | 29 | 3 | 6 | 47 | 3 | 6 |
| Cycles @ Minimum (\%) | 0 | 0 | 0 | 0 | 0 | 0 |
| Cycles Maxed Out (\%) | 0 | 97 | 3 | 0 | 97 | 3 |
| Cycles with Peds (\%) | 0 | 0 | 0 | 0 | 0 | 0 |
| Controller Summary |  |  |  |  |  |  |
| Average Cycle Length (s): NA |  |  |  |  |  |  |
| Number of Complete Cycles : 0 |  |  |  |  |  |  |

Summary of All Intervals

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Run Number | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ |
| Start Time | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ |
| End Time | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Total Time (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Time Recorded (min) | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| \# of Intervals | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| \# of Recorded Intervals | 2215 | 2259 | 2073 | 2201 | 2128 | 2132 | 2149 |
| Vehs Entered | 2208 | 2270 | 2068 | 2165 | 2128 | 2146 | 2134 |
| Vehs Exited | 66 | 96 | 68 | 75 | 69 | 85 | 62 |
| Starting Vehs | 73 | 85 | 73 | 111 | 69 | 71 | 77 |
| Ending Vehs | 2105 | 2142 | 1948 | 2056 | 2022 | 2019 | 2038 |
| Travel Distance (mi) | 76.7 | 93.7 | 65.8 | 76.7 | 72.2 | 72.2 | 71.6 |
| Travel Time (hr) | 22.1 | 38.1 | 15.3 | 23.3 | 19.3 | 19.6 | 18.7 |
| Total Delay (hr) | 947 | 1868 | 738 | 1142 | 871 | 973 | 858 |
| Total Stops | 66.2 | 72.5 | 59.4 | 65.0 | 63.0 | 63.0 | 63.3 |
| Fuel Used (gal) |  |  |  |  |  | 6 |  |

Summary of All Intervals

|  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Run Number | 8 | 9 | 10 | Avg |
| Start Time | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ |
| End Time | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ |
| Total Time (min) | 70 | 70 | 70 | 70 |
| Time Recorded (min) | 60 | 60 | 60 | 60 |
| \# of Intervals | 2 | 2 | 2 | 2 |
| \# of Recorded Intervals | 1 | 1 | 1 | 1 |
| Vehs Entered | 2130 | 2261 | 2221 | 2178 |
| Vehs Exited | 2137 | 2211 | 2213 | 2168 |
| Starting Vehs | 66 | 71 | 74 | 71 |
| Ending Vehs | 59 | 121 | 82 | 78 |
| Travel Distance (mi) | 2022 | 2113 | 2096 | 2056 |
| Travel Time (hr) | 69.4 | 80.6 | 90.6 | 77.0 |
| Total Delay (hr) | 17.1 | 25.5 | 36.4 | 23.5 |
| Total Stops | 808 | 1203 | 1837 | 1126 |
| Fuel Used (gal) | 61.7 | 67.5 | 69.6 | 65.1 |

Interval \#O Information Seeding

| Start Time | $3: 50$ |
| :--- | ---: |
| End Time | $4: 00$ |
| Total Time (min) | 10 |
| Volumes adjusted by Growth Factors. |  |
| No data recorded this interval. |  |

SimTraffic Simulation Summary

Interval \#1 Information Recording

| Start Time | $4: 00$ |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| End Time | $5: 00$ |  |  |  |  |  |  |
| Total Time (min) | 60 |  |  |  |  |  |  |
| Volumes adjusted by Growth Factors. |  |  |  |  |  |  |  |
| Run Number | 1 | 2 | 3 | 5 | 6 | 7 |  |
| Vehs Entered | 2215 | 2259 | 2073 | 2201 | 2128 | 2132 | 2149 |
| Vehs Exited | 2208 | 2270 | 2068 | 2165 | 2128 | 2146 | 2134 |
| Starting Vehs | 66 | 96 | 68 | 75 | 69 | 85 | 62 |
| Ending Vehs | 73 | 85 | 73 | 111 | 69 | 71 | 77 |
| Travel Distance (mi) | 2105 | 2142 | 1948 | 2056 | 2022 | 2019 | 2038 |
| Travel Time (hr) | 76.7 | 93.7 | 65.8 | 76.7 | 72.2 | 72.2 | 71.6 |
| Total Delay (hr) | 22.1 | 38.1 | 15.3 | 23.3 | 19.3 | 19.6 | 18.7 |
| Total Stops | 947 | 1868 | 738 | 1142 | 871 | 973 | 858 |
| Fuel Used (gal) | 66.2 | 72.5 | 59.4 | 65.0 | 63.0 | 63.0 | 63.3 |

## Interval \#1 Information Recording

| Start Time | $4: 00$ |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| End Time | $5: 00$ |  |  |  |
| Total Time (min) | 60 |  |  |  |
| Volumes adjusted by Growth Factors. |  |  |  |  |
| Run Number | 8 | 9 | 10 | Avg |
| Vehs Entered | 2130 | 2261 | 2221 | 2178 |
| Vehs Exited | 2137 | 2211 | 2213 | 2168 |
| Starting Vehs | 66 | 71 | 74 | 71 |
| Ending Vehs | 59 | 121 | 82 | 78 |
| Travel Distance (mi) | 2022 | 2113 | 2096 | 2056 |
| Travel Time (hr) | 69.4 | 80.6 | 90.6 | 77.0 |
| Total Delay (hr) | 17.1 | 25.5 | 36.4 | 23.5 |
| Total Stops | 808 | 1203 | 1837 | 1126 |
| Fuel Used (gal) | 61.7 | 67.5 | 69.6 | 65.1 |

3: Martin Road/Stevenson Road \& Route 236 Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 2.3 | 1.7 | 2.3 | 1.5 |
| Total Del/Veh (s) | 11.8 | 32.3 | 30.6 | 34.1 | 24.9 |

8: Aroma Joe's/Site Drive/Fernald Road \& Route 236 Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.7 | 0.0 | 3.1 | 0.1 | 0.3 |
| Total Del/Veh (s) | 1.5 | 10.8 | 22.7 | 139.5 | 9.6 |

## Total Network Performance

|  |  |
| :--- | :---: |
| Denied Del/Veh (s) | 1.7 |
| Total Del/Veh (s) | 36.0 |

Intersection: 3: Martin Road/Stevenson Road \& Route 236

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | LT | R | LT | R |
| Maximum Queue (ft) | 116 | 286 | 146 | 950 | 84 | 58 | 135 | 75 |
| Average Queue (ft) | 37 | 103 | 28 | 428 | 29 | 17 | 45 | 44 |
| 95th Queue (ft) | 89 | 224 | 94 | 1068 | 69 | 47 | 101 | 80 |
| Link Distance (ft) |  | 2406 |  | 1535 | 642 |  | 972 |  |
| Upstream Blk Time (\%) |  |  |  | 1 |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 0 |  |  |  |  |
| Storage Bay Dist (ft) | 200 |  | 175 |  |  | 50 |  | 50 |
| Storage Blk Time (\%) |  | 1 |  | 14 | 8 | 0 | 10 | 12 |

Intersection: 8: Aroma Joe's/Site Drive/Fernald Road \& Route 236

| Movement | EB | WB | NB | NB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | LTR | LT | R | LTR |
| Maximum Queue (ft) | 31 | 187 | 35 | 41 | 111 |
| Average Queue (ft) | 1 | 19 | 7 | 12 | 41 |
| 95th Queue (ft) | 24 | 94 | 28 | 35 | 99 |
| Link Distance (ft) | 1343 | 2406 | 293 |  | 990 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 1 | 0 |  |
| Storage Blk Time (\%) | 0 |  | 0 | 0 |  |
| Queuing Penalty (veh) | 0 |  |  |  |  |

Network wide Queuing Penalty: 18

Intersection: 3: Martin Road/Stevenson Road \& Route 236

| Phase | 1 | 2 | 4 | 5 | 6 | 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Movement(s) Served | EBL | WBT | NBTL | WBL | EBT | SBTL |
| Maximum Green (s) | 8.0 | 59.0 | 21.0 | 8.0 | 59.0 | 21.0 |
| Minimum Green (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Recall | None | C-Max | None | None | C-Max | None |
| Avg. Green (s) | 7.6 | 79.2 | 11.0 | 7.1 | 81.5 | 11.0 |
| g/C Ratio | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (\%) | 29 | 3 | 6 | 47 | 3 | 6 |
| Cycles @ Minimum (\%) | 0 | 0 | 0 | 0 | 0 | 0 |
| Cycles Maxed Out (\%) | 0 | 97 | 3 | 0 | 97 | 3 |
| Cycles with Peds (\%) | 0 | 0 | 0 | 0 | 0 | 0 |
| Controller Summary |  |  |  |  |  |  |
| Average Cycle Length (s): NA |  |  |  |  |  |  |
| Number of Complete Cycles : 0 |  |  |  |  |  |  |

Summary of All Intervals

| Run Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Start Time | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ |
| End Time | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ |
| Total Time (min) | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Time Recorded (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| \# of Intervals | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| \# of Recorded Intervals | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Vehs Entered | 2252 | 2314 | 2073 | 2242 | 2151 | 2206 | 2155 |
| Vehs Exited | 2235 | 2307 | 2071 | 2203 | 2163 | 2221 | 2155 |
| Starting Vehs | 66 | 95 | 67 | 73 | 75 | 92 | 58 |
| Ending Vehs | 83 | 102 | 69 | 112 | 63 | 77 | 58 |
| Travel Distance (mi) | 2116 | 2172 | 1941 | 2069 | 2028 | 2070 | 2028 |
| Travel Time (hr) | 79.3 | 99.7 | 65.0 | 79.9 | 71.7 | 73.4 | 71.1 |
| Total Delay (hr) | 24.3 | 43.3 | 14.5 | 26.1 | 18.5 | 19.4 | 18.3 |
| Total Stops | 1099 | 2042 | 743 | 1380 | 875 | 951 | 893 |
| Fuel Used (gal) | 67.6 | 75.2 | 59.2 | 66.7 | 63.0 | 64.5 | 63.2 |

Summary of All Intervals

| Run Number | 8 | 9 | 10 | Avg |
| :--- | ---: | ---: | ---: | ---: |
| Start Time | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ |
| End Time | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ |
| Total Time (min) | 70 | 70 | 70 | 70 |
| Time Recorded (min) | 60 | 60 | 60 | 60 |
| \# of Intervals | 2 | 2 | 2 | 2 |
| \# of Recorded Intervals | 1 | 1 | 1 | 1 |
| Vehs Entered | 2190 | 2258 | 2212 | 2206 |
| Vehs Exited | 2219 | 2230 | 2229 | 2204 |
| Starting Vehs | 90 | 71 | 80 | 74 |
| Ending Vehs | 61 | 99 | 63 | 76 |
| Travel Distance (mi) | 2073 | 2105 | 2079 | 2068 |
| Travel Time (hr) | 73.9 | 80.0 | 80.7 | 77.5 |
| Total Delay (hr) | 20.1 | 25.0 | 26.7 | 23.6 |
| Total Stops | 999 | 1125 | 1382 | 1148 |
| Fuel Used (gal) | 64.5 | 67.4 | 66.7 | 65.8 |

## Interval \#0 Information Seeding

| Start Time | $3: 50$ |
| :--- | ---: |
| End Time | $4: 00$ |
| Total Time (min) | 10 |

Volumes adjusted by Growth Factors.
No data recorded this interval.
Interval \#1 Information Recording

| Start Time | $4: 00$ |
| :--- | ---: |
| End Time | $5: 00$ |
| Total Time (min) | 60 |
| Volumes adjusted by Growth |  |

Volumes adjusted by Growth Factors.

| Run Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Vehs Entered | 2252 | 2314 | 2073 | 2242 | 2151 | 2206 | 2155 |
| Vehs Exited | 2235 | 2307 | 2071 | 2203 | 2163 | 2221 | 2155 |
| Starting Vehs | 66 | 95 | 67 | 73 | 75 | 92 | 58 |
| Ending Vehs | 83 | 102 | 69 | 112 | 63 | 77 | 58 |
| Travel Distance (mi) | 2116 | 2172 | 1941 | 2069 | 2028 | 2070 | 2028 |
| Travel Time (hr) | 79.3 | 99.7 | 65.0 | 79.9 | 71.7 | 73.4 | 71.1 |
| Total Delay (hr) | 24.3 | 43.3 | 14.5 | 26.1 | 18.5 | 19.4 | 18.3 |
| Total Stops | 1099 | 2042 | 743 | 1380 | 875 | 951 | 893 |
| Fuel Used (gal) | 67.6 | 75.2 | 59.2 | 66.7 | 63.0 | 64.5 | 63.2 |

Interval \#1 Information Recording

| Start Time | 4:00 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| End Time | 5:00 |  |  |  |
| Total Time (min) | 60 |  |  |  |
| Volumes adjusted by Growth Factors. |  |  |  |  |
| Run Number | 8 | 9 | 10 | Avg |
| Vehs Entered | 2190 | 2258 | 2212 | 2206 |
| Vehs Exited | 2219 | 2230 | 2229 | 2204 |
| Starting Vehs | 90 | 71 | 80 | 74 |
| Ending Vehs | 61 | 99 | 63 | 76 |
| Travel Distance (mi) | 2073 | 2105 | 2079 | 2068 |
| Travel Time (hr) | 73.9 | 80.0 | 80.7 | 77.5 |
| Total Delay (hr) | 20.1 | 25.0 | 26.7 | 23.6 |
| Total Stops | 999 | 1125 | 1382 | 1148 |
| Fuel Used (gal) | 64.5 | 67.4 | 66.7 | 65.8 |

## 3: Martin Road/Stevenson Road \& Route 236 Performance by lane

| Lane | EB | EB | WB | WB | NB | NB | SB | SB | All |
| :--- | :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Movements Served | L | TR | L | TR | LT | R | LT | R |  |
| Denied Del/Veh (s) |  |  |  |  |  |  |  |  | 1.4 |
| Total Del/Veh (s) | 48.4 | 9.7 | 46.5 | 32.6 | 40.5 | 9.3 | 47.6 | 23.6 | 25.1 |

8: Aroma Joe's/Site Drive/Fernald Road \& Route 236 Performance by lane

| Lane | EB | EB | WB | WB | NB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Movements Served | LT | R | L | TR | LT | R | LTR |  |
| Denied Del/Veh (s) |  |  |  |  |  |  |  | 0.3 |
| Total Del/Veh (s) | 1.6 | 0.0 | 4.5 | 10.5 | 79.0 | 7.5 | 127.2 | 9.4 |

Total Network Performance

|  |  |
| :--- | ---: |
| Denied Del/Veh (s) | 1.6 |
| Total Del/veh (s) | 35.7 |

Intersection: 3: Martin Road/Stevenson Road \& Route 236

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | LT | R | LT | R |
| Maximum Queue (ft) | 144 | 295 | 172 | 995 | 86 | 58 | 137 | 75 |
| Average Queue (ft) | 41 | 105 | 30 | 421 | 28 | 17 | 46 | 43 |
| 95th Queue (ft) | 104 | 230 | 98 | 986 | 69 | 46 | 105 | 79 |
| Link Distance (ft) |  | 2406 |  | 1535 | 642 |  | 972 |  |
| Upstream Blk Time (\%) |  |  |  | 0 |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 0 |  |  |  | 50 |
| Storage Bay Dist (ft) | 200 |  | 175 |  |  | 50 |  | 50 |
| Storage Blk Time (\%) |  | 1 |  | 15 | 7 | 0 | 11 | 11 |
| Queuing Penalty (veh) |  | 1 |  | 4 | 1 | 0 | 7 | 5 |

Intersection: 8: Aroma Joe's/Site Drive/Fernald Road \& Route 236

| Movement | EB | WB | WB | NB | NB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | L | TR | LT | R | LTR |
| Maximum Queue (ft) | 23 | 46 | 23 | 63 | 66 | 105 |
| Average Queue (ft) | 1 | 13 | 1 | 18 | 21 | 38 |
| 95th Queue (ft) | 17 | 38 | 16 | 52 | 50 | 100 |
| Link Distance (ft) | 1343 |  | 2406 | 293 |  | 990 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  |  | 50 |  |
| Storage Blk Time (\%) | 0 | 0 |  | 6 | 1 |  |
| Queuing Penalty (veh) | 0 | 3 |  | 2 | 0 |  |

## Network Summary

## Network wide Queuing Penalty: 24

Intersection: 3: Martin Road/Stevenson Road \& Route 236

| Phase | 1 | 2 | 4 | 5 | 6 | 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Movement(s) Served | EBL | WBT | NBTL | WBL | EBT | SBTL |
| Maximum Green (s) | 8.0 | 59.0 | 21.0 | 8.0 | 59.0 | 21.0 |
| Minimum Green (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Recall | None C-Max | None | None C-Max | None |  |  |
| Avg. Green (s) | 7.6 | 76.9 | 10.9 | 6.8 | 79.0 | 10.9 |
| g/C Ratio | -0.01 | NA | -0.01 | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (\%) | 31 | 0 | 6 | 46 | 3 | 6 |
| Cycles @ Minimum (\%) | 0 | 0 | 3 | 0 | 0 | 3 |
| Cycles Maxed Out (\%) | 0 | 100 | 3 | 0 | 97 | 3 |
| Cycles with Peds (\%) | 0 | 0 | 0 | 0 | 0 | 0 |

## Controller Summary

## Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

| Run Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Start Time | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ |
| End Time | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ |
| Total Time (min) | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Time Recorded (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| \# of Intervals | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| \# of Recorded Intervals | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Vehs Entered | 2252 | 2314 | 2073 | 2242 | 2151 | 2206 | 2155 |
| Vehs Exited | 2235 | 2307 | 2071 | 2203 | 2163 | 2221 | 2155 |
| Starting Vehs | 66 | 95 | 67 | 73 | 75 | 92 | 58 |
| Ending Vehs | 83 | 102 | 69 | 112 | 63 | 77 | 58 |
| Travel Distance (mi) | 2116 | 2172 | 1941 | 2069 | 2028 | 2070 | 2028 |
| Travel Time (hr) | 79.3 | 99.7 | 65.0 | 79.9 | 71.7 | 73.4 | 71.1 |
| Total Delay (hr) | 24.3 | 43.3 | 14.5 | 26.1 | 18.5 | 19.4 | 18.3 |
| Total Stops | 1099 | 2042 | 743 | 1380 | 875 | 951 | 893 |
| Fuel Used (gal) | 67.6 | 75.2 | 59.2 | 66.7 | 63.0 | 64.5 | 63.2 |

Summary of All Intervals

| Run Number | 8 | 9 | 10 | Avg |
| :--- | ---: | ---: | ---: | ---: |
| Start Time | $3: 50$ | $3: 50$ | $3: 50$ | $3: 50$ |
| End Time | $5: 00$ | $5: 00$ | $5: 00$ | $5: 00$ |
| Total Time (min) | 70 | 70 | 70 | 70 |
| Time Recorded (min) | 60 | 60 | 60 | 60 |
| \# of Intervals | 2 | 2 | 2 | 2 |
| \# of Recorded Intervals | 1 | 1 | 1 | 1 |
| Vehs Entered | 2190 | 2258 | 2212 | 2206 |
| Vehs Exited | 2219 | 2230 | 2229 | 2204 |
| Starting Vehs | 90 | 71 | 80 | 74 |
| Ending Vehs | 61 | 99 | 63 | 76 |
| Travel Distance (mi) | 2073 | 2105 | 2079 | 2068 |
| Travel Time (hr) | 73.9 | 80.0 | 80.7 | 77.5 |
| Total Delay (hr) | 20.1 | 25.0 | 26.7 | 23.6 |
| Total Stops | 999 | 1125 | 1382 | 1148 |
| Fuel Used (gal) | 64.5 | 67.4 | 66.7 | 65.8 |

## Interval \#0 Information Seeding

| Start Time | $3: 50$ |
| :--- | ---: |
| End Time | $4: 00$ |
| Total Time (min) | 10 |

Volumes adjusted by Growth Factors.
No data recorded this interval.
Interval \#1 Information Recording

| Start Time | $4: 00$ |
| :--- | ---: |
| End Time | $5: 00$ |
| Total Time (min) | 60 |
| Volumes adjusted by Growth |  |

Volumes adjusted by Growth Factors.

| Run Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Vehs Entered | 2252 | 2314 | 2073 | 2242 | 2151 | 2206 | 2155 |
| Vehs Exited | 2235 | 2307 | 2071 | 2203 | 2163 | 2221 | 2155 |
| Starting Vehs | 66 | 95 | 67 | 73 | 75 | 92 | 58 |
| Ending Vehs | 83 | 102 | 69 | 112 | 63 | 77 | 58 |
| Travel Distance (mi) | 2116 | 2172 | 1941 | 2069 | 2028 | 2070 | 2028 |
| Travel Time (hr) | 79.3 | 99.7 | 65.0 | 79.9 | 71.7 | 73.4 | 71.1 |
| Total Delay (hr) | 24.3 | 43.3 | 14.5 | 26.1 | 18.5 | 19.4 | 18.3 |
| Total Stops | 1099 | 2042 | 743 | 1380 | 875 | 951 | 893 |
| Fuel Used (gal) | 67.6 | 75.2 | 59.2 | 66.7 | 63.0 | 64.5 | 63.2 |

Interval \#1 Information Recording

| Start Time | 4:00 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| End Time | 5:00 |  |  |  |
| Total Time (min) | 60 |  |  |  |
| Volumes adjusted by Growth Factors. |  |  |  |  |
| Run Number | 8 | 9 | 10 | Avg |
| Vehs Entered | 2190 | 2258 | 2212 | 2206 |
| Vehs Exited | 2219 | 2230 | 2229 | 2204 |
| Starting Vehs | 90 | 71 | 80 | 74 |
| Ending Vehs | 61 | 99 | 63 | 76 |
| Travel Distance (mi) | 2073 | 2105 | 2079 | 2068 |
| Travel Time (hr) | 73.9 | 80.0 | 80.7 | 77.5 |
| Total Delay (hr) | 20.1 | 25.0 | 26.7 | 23.6 |
| Total Stops | 999 | 1125 | 1382 | 1148 |
| Fuel Used (gal) | 64.5 | 67.4 | 66.7 | 65.8 |

## : Martin Road/Stevenson Road \& Route 236 Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 2.1 | 1.7 | 2.3 | 1.4 |
| Total Del/Veh (s) | 11.9 | 32.9 | 29.0 | 33.8 | 25.1 |

8: Aroma Joe's/Site Drive/Fernald Road \& Route 236 Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.7 | 0.0 | 2.9 | 0.1 | 0.3 |
| Total Del/Veh (s) | 1.6 | 10.4 | 31.0 | 127.2 | 9.4 |

Total Network Performance

|  |  |
| :--- | ---: |
| Denied Del/Veh (s) | 1.6 |
| Total Del/Veh (s) | 35.7 |

Intersection: 3: Martin Road/Stevenson Road \& Route 236

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | LT | R | LT | R |
| Maximum Queue (ft) | 144 | 295 | 172 | 995 | 86 | 58 | 137 | 75 |
| Average Queue (ft) | 41 | 105 | 30 | 421 | 28 | 17 | 46 | 43 |
| 95th Queue (ft) | 104 | 230 | 98 | 986 | 69 | 46 | 105 | 79 |
| Link Distance (ft) |  | 2406 |  | 1535 | 642 |  | 972 |  |
| Upstream Blk Time (\%) |  |  |  | 0 |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 0 |  |  |  | 50 |
| Storage Bay Dist (ft) | 200 |  | 175 |  |  | 50 |  | 50 |
| Storage Blk Time (\%) |  | 1 |  | 15 | 7 | 0 | 11 | 11 |
| Queuing Penalty (veh) |  | 1 |  | 4 | 1 | 0 | 7 | 5 |

Intersection: 8: Aroma Joe's/Site Drive/Fernald Road \& Route 236

| Movement | EB | WB | WB | NB | NB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | L | TR | LT | R | LTR |
| Maximum Queue (ft) | 23 | 46 | 23 | 63 | 66 | 105 |
| Average Queue (ft) | 1 | 13 | 1 | 18 | 21 | 38 |
| 95th Queue (ft) | 17 | 38 | 16 | 52 | 50 | 100 |
| Link Distance (ft) | 1343 |  | 2406 | 293 |  | 990 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  |  | 50 |  |
| Storage Blk Time (\%) | 0 | 0 |  | 6 | 1 |  |
| Queuing Penalty (veh) | 0 | 3 |  | 2 | 0 |  |

## Network Summary

## Network wide Queuing Penalty: 24

Intersection: 3: Martin Road/Stevenson Road \& Route 236

| Phase | 1 | 2 | 4 | 5 | 6 | 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Movement(s) Served | EBL | WBT | NBTL | WBL | EBT | SBTL |
| Maximum Green (s) | 8.0 | 59.0 | 21.0 | 8.0 | 59.0 | 21.0 |
| Minimum Green (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Recall | None C-Max | None | None C-Max | None |  |  |
| Avg. Green (s) | 7.6 | 76.9 | 10.9 | 6.8 | 79.0 | 10.9 |
| g/C Ratio | -0.01 | NA | -0.01 | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (\%) | 31 | 0 | 6 | 46 | 3 | 6 |
| Cycles @ Minimum (\%) | 0 | 0 | 3 | 0 | 0 | 3 |
| Cycles Maxed Out (\%) | 0 | 100 | 3 | 0 | 97 | 3 |
| Cycles with Peds (\%) | 0 | 0 | 0 | 0 | 0 | 0 |

## Controller Summary

## Average Cycle Length (s): NA

Number of Complete Cycles : 0

|  | 4 |  | $\checkmark$ | 1 |  |  | $4$ | 4 | 7 |  | $\ddagger$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | $\hat{\beta}$ |  | ${ }^{7}$ | 个 |  |  | $\uparrow$ | 「 |  | $\uparrow$ | F |
| Traffic Volume (vph) | 45 | 731 | 16 | 27 | 1168 | 12 | 23 | 15 | 21 | 27 | 18 | 61 |
| Future Volume (vph) | 45 | 731 | 16 | 27 | 1168 | 12 | 23 | 15 | 21 | 27 | 18 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 |  | 0 | 175 |  | 0 | 0 |  | 50 | 0 |  | 50 |
| Storage Lanes | 1 |  | 0 | 1 |  | 0 | 0 |  | 1 | 0 |  | 1 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  | 0.997 |  |  | 0.998 |  |  |  | 0.850 |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  |  | 0.971 |  |  | 0.971 |  |
| Satd. Flow (prot) | 1736 | 1821 | 0 | 1719 | 1806 | 0 | 0 | 1809 | 1583 | 0 | 1809 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.950 |  |  |  | 0.777 |  |  | 0.788 |  |
| Satd. Flow (perm) | 1736 | 1821 | 0 | 1719 | 1806 | 0 | 0 | 1447 | 1583 | 0 | 1468 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  | 2 |  |  | 1 |  |  |  | 55 |  |  | 91 |
| Link Speed (mph) |  | 40 |  |  | 40 |  |  | 25 |  |  | 25 |  |
| Link Distance (ft) |  | 2489 |  |  | 1577 |  |  | 678 |  |  | 1006 |  |
| Travel Time (s) |  | 42.4 |  |  | 26.9 |  |  | 18.5 |  |  | 27.4 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.96 | 0.96 | 0.96 | 0.76 | 0.76 | 0.76 | 0.67 | 0.67 | 0.67 |
| Heavy Vehicles (\%) | 4\% | 4\% | 4\% | 5\% | 5\% | 5\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% |
| Adj. Flow (vph) | 49 | 795 | 17 | 28 | 1217 | 13 | 30 | 20 | 28 | 40 | 27 | 91 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 49 | 812 | 0 | 28 | 1230 | 0 | 0 | 50 | 28 | 0 | 67 | 91 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) |  | 12 |  |  | 12 |  |  | 0 |  |  | 0 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(ft) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 |  | 20 | 100 |  | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 |  | 20 | 6 |  | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex |  | Cl+Ex | Cl+Ex |  | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Prot | NA |  | Prot | NA |  | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 1 | 6 |  | 5 | 2 |  |  | 4 |  |  | 8 |  |


|  | 4 |  |  | 4 |  |  | $4$ | $\dagger$ | $p$ |  | $\dagger$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Permitted Phases |  |  |  |  |  |  | 4 |  | 4 | 8 |  | 8 |
| Detector Phase | 1 | 6 |  | 5 | 2 |  | 4 | 4 | 4 | 8 | 8 | 8 |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 24.0 |  | 11.0 | 24.0 |  | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 12.0 | 63.0 |  | 12.0 | 63.0 |  | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Total Split (\%) | 12.0\% | 63.0\% |  | 12.0\% | 63.0\% |  | 25.0\% | 25.0\% | 25.0\% | 25.0\% | 25.0\% | 25.0\% |
| Maximum Green (s) | 8.0 | 59.0 |  | 8.0 | 59.0 |  | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Yellow Time (s) | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 1.0 | 1.0 |  | 1.0 | 1.0 |  | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 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 | 4.0 |  | 4.0 | 4.0 |  |  | 4.0 | 4.0 |  | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag |  | Lead | Lag |  |  |  |  |  |  |  |
| Lead-Lag Optimize? | Yes | Yes |  | Yes | Yes |  |  |  |  |  |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max |  | None | C-Max |  | None | None | None | None | None | None |
| Walk Time (s) |  | 7.0 |  |  | 7.0 |  | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Flash Dont Walk (s) |  | 11.0 |  |  | 11.0 |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 |  |  | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 8.3 | 77.8 |  | 7.2 | 74.7 |  |  | 9.6 | 9.6 |  | 9.7 | 9.7 |
| Actuated g/C Ratio | 0.08 | 0.78 |  | 0.07 | 0.75 |  |  | 0.10 | 0.10 |  | 0.10 | 0.10 |
| v/c Ratio | 0.34 | 0.57 |  | 0.23 | 0.91 |  |  | 0.36 | 0.14 |  | 0.47 | 0.39 |
| Control Delay | 49.1 | 9.3 |  | 47.6 | 26.8 |  |  | 48.3 | 4.9 |  | 52.8 | 13.7 |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 |  |  | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Total Delay | 49.1 | 9.3 |  | 47.6 | 26.8 |  |  | 48.3 | 4.9 |  | 52.8 | 13.7 |
| LOS | D | A |  | D | C |  |  | D | A |  | D | B |
| Approach Delay |  | 11.5 |  |  | 27.2 |  |  | 32.7 |  |  | 30.3 |  |
| Approach LOS |  | B |  |  | C |  |  | C |  |  | C |  |
| 90th \%ile Green (s) | 11.2 | 65.0 |  | 9.3 | 63.1 |  | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 |
| 90th \%ile Term Code | Gap | Coord |  | Gap | Coord |  | Hold | Hold | Hold | Gap | Gap | Gap |
| 70th \%ile Green (s) | 9.4 | 68.7 |  | 8.0 | 67.3 |  | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 |
| 70th \%ile Term Code | Gap | Coord |  | Gap | Coord |  | Hold | Hold | Hold | Gap | Gap | Gap |
| 50th \%ile Green (s) | 8.2 | 71.3 |  | 7.0 | 70.1 |  | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 |
| 50th \%ile Term Code | Gap | Coord |  | Gap | Coord |  | Hold | Hold | Hold | Gap | Gap | Gap |
| 30th \%ile Green (s) | 7.0 | 84.0 |  | 0.0 | 73.0 |  | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| 30th \%ile Term Code | Gap | Coord |  | Skip | Coord |  | Hold | Hold | Hold | Gap | Gap | Gap |
| 10th \%ile Green (s) | 0.0 | 96.0 |  | 0.0 | 96.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10th \%ile Term Code | Skip | Coord |  | Skip | Coord |  | Skip | Skip | Skip | Skip | Skip | Skip |
| Queue Length 50th (ft) | 30 | 231 |  | 17 | 641 |  |  | 30 | 0 |  | 41 | 0 |
| Queue Length 95th (ft) | 65 | 431 |  | 44 | \#1139 |  |  | 54 | 3 |  | 59 | 19 |
| Internal Link Dist (ft) |  | 2409 |  |  | 1497 |  |  | 598 |  |  | 926 |  |
| Turn Bay Length (ft) | 200 |  |  | 175 |  |  |  |  | 50 |  |  | 50 |
| Base Capacity (vph) | 155 | 1417 |  | 141 | 1349 |  |  | 303 | 375 |  | 308 | 404 |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 |  |  | 0 | 0 |  | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 |  |  | 0 | 0 |  | 0 | 0 |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 |  |  | 0 | 0 |  | 0 | 0 |
| Reduced v/c Ratio | 0.32 | 0.57 |  | 0.20 | 0.91 |  |  | 0.17 | 0.07 |  | 0.22 | 0.23 |
| Intersection Summary |  |  |  |  |  |  |  |  |  |  |  |  |

```
Area Type: Other
```

Cycle Length: 100
Actuated Cycle Length: 100
Offset: $0(0 \%)$, Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91

| Intersection Signal Delay: 21.9 | Intersection LOS: C |
| :--- | :--- |
| Intersection Capacity Utilization 80.5\% | 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.
Splits and Phases: 3: Martin Road/Stevenson Road \& Route 236


|  | 4 |  |  | 7 | 4 |  |  | $\dagger$ |  |  | $\downarrow$ | $\checkmark$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | $\uparrow$ | 「 |  | \$ |  |  | $\uparrow$ | F |  | $\uparrow$ |  |
| Traffic Volume (vph) | 1 | 696 | 13 | 12 | 1084 | 67 | 8 | 1 | 19 | 27 | 0 | 2 |
| Future Volume (vph) | 1 | 696 | 13 | 12 | 1084 | 67 | 8 | 1 | 19 | 27 | 0 | 2 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (t) | 0 |  | 65 | 0 |  | 0 | 0 |  | 50 | 0 |  | 0 |
| Storage Lanes | 0 |  | 1 | 0 |  | 0 | 0 |  | 1 | 0 |  | 0 |
| Taper Length (t) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Utill. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  | 0.992 |  |  |  | 0.850 |  | 0.991 |  |
| Flt Protected |  |  |  |  | 0.999 |  |  | 0.957 |  |  | 0.955 |  |
| Satd. Flow (prot) | 0 | 1827 | 1553 | 0 | 1810 | 0 | 0 | 1800 | 1599 | 0 | 1780 | 0 |
| Flt Permitted |  |  |  |  | 0.999 |  |  | 0.957 |  |  | 0.955 |  |
| Satd. Flow (perm) | 0 | 1827 | 1553 | 0 | 1810 | 0 | 0 | 1800 | 1599 | 0 | 1780 | 0 |
| Link Speed (mph) |  | 40 |  |  | 40 |  |  | 30 |  |  | 30 |  |
| Link Distance (ft) |  | 1383 |  |  | 2489 |  |  | 338 |  |  | 1035 |  |
| Travel Time (s) |  | 23.6 |  |  | 42.4 |  |  | 7.7 |  |  | 23.5 |  |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.96 | 0.87 | 0.87 | 0.87 | 0.65 | 0.65 | 0.65 |
| Heavy Vehicles (\%) | 4\% | 4\% | 4\% | 4\% | 4\% | 4\% | 1\% | 1\% | 1\% | 1\% | 1\% | 1\% |
| Adj. Flow (vph) | 1 | 748 | 14 | 13 | 1129 | 70 | 9 | 1 | 22 | 42 | 0 | 3 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 0 | 749 | 14 | 0 | 1212 | 0 | 0 | 10 | 22 | 0 | 45 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 12 |  |  | 12 |  |  | 0 |  |  | 0 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tt) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Sign Control |  | Free |  |  | Free |  |  | Stop |  |  | Stop |  |

## Intersection Summary

```
Area Type:
                                Other
```

Control Type: Unsignalized
Intersection Capacity Utilization 85.7\%
ICU Level of Service E
Analysis Period (min) 15

|  | 4 |  |  | 7 |  |  | 4 | $\dagger$ | $p$ |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | $\uparrow$ |  | \% | $\uparrow$ |  |  | $\uparrow$ | F |  | $\uparrow$ | F |
| Traffic Volume (vph) | 46 | 745 | 16 | 27 | 1177 | 12 | 23 | 15 | 21 | 27 | 18 | 62 |
| Future Volume (vph) | 46 | 745 | 16 | 27 | 1177 | 12 | 23 | 15 | 21 | 27 | 18 | 62 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (t) | 200 |  | 0 | 175 |  | 0 | 0 |  | 50 | 0 |  | 50 |
| Storage Lanes | 1 |  | 0 | 1 |  | 0 | 0 |  | 1 | 0 |  | 1 |
| Taper Length (t) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fit |  | 0.997 |  |  | 0.998 |  |  |  | 0.850 |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  |  | 0.971 |  |  | 0.971 |  |
| Satd. Flow (prot) | 1736 | 1821 | 0 | 1719 | 1806 | 0 | 0 | 1809 | 1583 | 0 | 1809 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.950 |  |  |  | 0.777 |  |  | 0.788 |  |
| Satd. Flow (perm) | 1736 | 1821 | 0 | 1719 | 1806 | 0 | 0 | 1447 | 1583 | 0 | 1468 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  | 2 |  |  | 1 |  |  |  | 55 |  |  | 93 |
| Link Speed (mph) |  | 40 |  |  | 40 |  |  | 25 |  |  | 25 |  |
| Link Distance (t) |  | 2489 |  |  | 1577 |  |  | 678 |  |  | 1006 |  |
| Travel Time (s) |  | 42.4 |  |  | 26.9 |  |  | 18.5 |  |  | 27.4 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.96 | 0.96 | 0.96 | 0.76 | 0.76 | 0.76 | 0.67 | 0.67 | 0.67 |
| Heavy Vehicles (\%) | 4\% | 4\% | 4\% | 5\% | 5\% | 5\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% |
| Adj. Flow (vph) | 50 | 810 | 17 | 28 | 1226 | 13 | 30 | 20 | 28 | 40 | 27 | 93 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 50 | 827 | 0 | 28 | 1239 | 0 | 0 | 50 | 28 | 0 | 67 | 93 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(tt) |  | 12 |  |  | 12 |  |  | 0 |  |  | 0 |  |
| Link Offset(tt) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(t) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 |  | 20 | 100 |  | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector ( t ) | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(tt) | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(tt) | 20 | 6 |  | 20 | 6 |  | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex |  | Cl+Ex | Cl+Ex |  | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(tt) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(tt) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Prot | NA |  | Prot | NA |  | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 1 | 6 |  | 5 | 2 |  |  | 4 |  |  | 8 |  |


|  | 4 |  | $\geqslant$ |  |  |  |  | $\dagger$ | 7 |  |  | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Permitted Phases |  |  |  |  |  |  | 4 |  | 4 | 8 |  | 8 |
| Detector Phase | 1 | 6 |  | 5 | 2 |  | 4 | 4 | 4 | 8 | 8 | 8 |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 24.0 |  | 11.0 | 24.0 |  | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 12.0 | 63.0 |  | 12.0 | 63.0 |  | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Total Split (\%) | 12.0\% | 63.0\% |  | 12.0\% | 63.0\% |  | 25.0\% | 25.0\% | 25.0\% | 25.0\% | 25.0\% | 25.0\% |
| Maximum Green (s) | 8.0 | 59.0 |  | 8.0 | 59.0 |  | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Yellow Time (s) | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 1.0 | 1.0 |  | 1.0 | 1.0 |  | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 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 | 4.0 |  | 4.0 | 4.0 |  |  | 4.0 | 4.0 |  | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag |  | Lead | Lag |  |  |  |  |  |  |  |
| Lead-Lag Optimize? | Yes | Yes |  | Yes | Yes |  |  |  |  |  |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max |  | None | C-Max |  | None | None | None | None | None | None |
| Walk Time (s) |  | 7.0 |  |  | 7.0 |  | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Flash Dont Walk (s) |  | 11.0 |  |  | 11.0 |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 |  |  | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 8.3 | 77.8 |  | 7.2 | 74.7 |  |  | 9.6 | 9.6 |  | 9.7 | 9.7 |
| Actuated g/C Ratio | 0.08 | 0.78 |  | 0.07 | 0.75 |  |  | 0.10 | 0.10 |  | 0.10 | 0.10 |
| v/c Ratio | 0.35 | 0.58 |  | 0.23 | 0.92 |  |  | 0.36 | 0.14 |  | 0.47 | 0.39 |
| Control Delay | 49.2 | 9.5 |  | 47.6 | 27.6 |  |  | 48.3 | 4.9 |  | 52.8 | 13.7 |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 |  |  | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Total Delay | 49.2 | 9.5 |  | 47.6 | 27.6 |  |  | 48.3 | 4.9 |  | 52.8 | 13.7 |
| LOS | D | A |  | D | C |  |  | D | A |  | D | B |
| Approach Delay |  | 11.7 |  |  | 28.0 |  |  | 32.7 |  |  | 30.1 |  |
| Approach LOS |  | B |  |  | C |  |  | C |  |  | C |  |
| 90th \%ile Green (s) | 11.2 | 65.0 |  | 9.3 | 63.1 |  | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 |
| 90th \%ile Term Code | Gap | Coord |  | Gap | Coord |  | Hold | Hold | Hold | Gap | Gap | Gap |
| 70th \%ile Green (s) | 9.5 | 68.7 |  | 8.0 | 67.2 |  | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 |
| 70th \%ile Term Code | Gap | Coord |  | Gap | Coord |  | Hold | Hold | Hold | Gap | Gap | Gap |
| 50th \%ile Green (s) | 8.2 | 71.3 |  | 7.0 | 70.1 |  | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 |
| 50th \%ile Term Code | Gap | Coord |  | Gap | Coord |  | Hold | Hold | Hold | Gap | Gap | Gap |
| 30th \%ile Green (s) | 7.0 | 84.0 |  | 0.0 | 73.0 |  | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| 30th \%ile Term Code | Gap | Coord |  | Skip | Coord |  | Hold | Hold | Hold | Gap | Gap | Gap |
| 10th \%ile Green (s) | 0.0 | 96.0 |  | 0.0 | 96.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10th \%ile Term Code | Skip | Coord |  | Skip | Coord |  | Skip | Skip | Skip | Skip | Skip | Skip |
| Queue Length 50th (ft) | 31 | 239 |  | 17 | 654 |  |  | 30 | 0 |  | 41 | 0 |
| Queue Length 95th (ft) | 66 | 446 |  | 44 | \#1151 |  |  | 54 | 3 |  | 59 | 19 |
| Internal Link Dist (ft) |  | 2409 |  |  | 1497 |  |  | 598 |  |  | 926 |  |
| Turn Bay Length (ft) | 200 |  |  | 175 |  |  |  |  | 50 |  |  | 50 |
| Base Capacity (vph) | 155 | 1417 |  | 141 | 1348 |  |  | 303 | 375 |  | 308 | 405 |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 |  |  | 0 | 0 |  | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 |  |  | 0 | 0 |  | 0 | 0 |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 |  |  | 0 | 0 |  | 0 | 0 |
| Reduced v/c Ratio | 0.32 | 0.58 |  | 0.20 | 0.92 |  |  | 0.17 | 0.07 |  | 0.22 | 0.23 |
| Intersection Summary |  |  |  |  |  |  |  |  |  |  |  |  |

```
Area Type: Other
```

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 ( $0 \%$ ), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92

| Intersection Signal Delay: 22.3 | Intersection LOS: C |
| :--- | :--- |
| Intersection Capacity Utilization 81.0\% | 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.
Splits and Phases: 3: Martin Road/Stevenson Road \& Route 236


|  | 4 |  |  |  | 4 |  |  | $\dagger$ |  |  | $\downarrow$ | $\checkmark$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | $\uparrow$ | 「 | \% | F |  |  | $\uparrow$ | F |  | $\uparrow$ |  |
| Traffic Volume (vph) | 1 | 694 | 21 | 25 | 1081 | 67 | 15 | 1 | 36 | 27 | 0 | 2 |
| Future Volume (vph) | 1 | 694 | 21 | 25 | 1081 | 67 | 15 | 1 | 36 | 27 | 0 | 2 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (t) | 0 |  | 65 | 50 |  | 0 | 0 |  | 50 | 0 |  | 0 |
| Storage Lanes | 0 |  | 1 | 1 |  | 0 | 0 |  | 1 | 0 |  | 0 |
| Taper Length (t) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Utill. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  | 0.991 |  |  |  | 0.850 |  | 0.991 |  |
| Flt Protected |  |  |  | 0.950 |  |  |  | 0.955 |  |  | 0.955 |  |
| Satd. Flow (prot) | 0 | 1827 | 1553 | 1736 | 1810 | 0 | 0 | 1797 | 1599 | 0 | 1780 | 0 |
| Flt Permitted |  |  |  | 0.950 |  |  |  | 0.955 |  |  | 0.955 |  |
| Satd. Flow (perm) | 0 | 1827 | 1553 | 1736 | 1810 | 0 | 0 | 1797 | 1599 | 0 | 1780 | 0 |
| Link Speed (mph) |  | 40 |  |  | 40 |  |  | 30 |  |  | 30 |  |
| Link Distance (ft) |  | 1383 |  |  | 2489 |  |  | 338 |  |  | 1035 |  |
| Travel Time (s) |  | 23.6 |  |  | 42.4 |  |  | 7.7 |  |  | 23.5 |  |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.96 | 0.87 | 0.87 | 0.87 | 0.65 | 0.65 | 0.65 |
| Heavy Vehicles (\%) | 4\% | 4\% | 4\% | 4\% | 4\% | 4\% | 1\% | 1\% | 1\% | 1\% | 1\% | 1\% |
| Adj. Flow (vph) | 1 | 746 | 23 | 26 | 1126 | 70 | 17 | 1 | 41 | 42 | 0 | 3 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 0 | 747 | 23 | 26 | 1196 | 0 | 0 | 18 | 41 | 0 | 45 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 12 |  |  | 12 |  |  | 0 |  |  | 0 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tt) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | , | 15 |  | 9 | 15 |  | 9 |
| Sign Control |  | Free |  |  | Free |  |  | Stop |  |  | Stop |  |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized
Intersection Capacity Utilization 77.6\%
ICU Level of Service D
Analysis Period (min) 15

## Crash Summary Report

## Report Selections and Input Parameters

REPORT SELECTIONS

| $\checkmark$ Crash Summary I | $\square$ Section Detail | $\checkmark$ Crash Summary II | $\square 1320$ Public | $\square 1320$ Private | $\square 1320$ Summary |
| :---: | :---: | :---: | :---: | :---: | :---: |
| REPORT DESCRIPTION |  |  |  |  |  |
| Kittery <br> Rte. 236/Rogers Rd. from Stevenson/Martin Rd. to Eliot TL |  |  |  |  |  |
| REPORT PARAMETERS |  |  |  |  |  |
| Year 2019, Start Month 1 through Year 2021 End Month: 12 |  |  |  |  |  |
| Route: 0236X | Start Node: 56675 <br> End Node: 56677 | Start Offset: 0 <br> End Offset: 0 |  | $\square$ Exclude First Exclude Last |  |

Crash Summary I

| Nodes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Node | Route - MP | Node Description | U/R | Total Crashes | Injury Crashes |  |  |  | Percent Annual M Crash Rate |  |  |  | Critical Rate | CRF |
| 56675 | 0236X-2.03 | Int of MARTIN ROGERS RD STEVENSON RD | 9 | 3 | 0 | 0 | 0 | 2 | 1 | 66.7 | $6.439$ | $\begin{gathered} 0.16 \\ \text { tewide Crash Rate: } \end{gathered}$ | $\begin{aligned} & 1.12 \\ & 0.67 \end{aligned}$ | 0.000 .14 |
| 58074 | 0236X-2.38 | Int of MACKENZIE LN ROGERS RD | 2 | 3 | 0 | 0 | 0 | 1 | 2 | 33.3 | $5.858$ | $0.17$ <br> ewide Crash Rate: | $\begin{aligned} & 0.34 \\ & \text { e: } \quad 0.14 \end{aligned}$ | 0.000 .5 |
| 56676 | 0236X-2.47 | Int of FERNALD RD ROGERS RD | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | $6.246$ | $0.00$ <br> tewide Crash Rate: | $0.28$ | 0.00 |
| 54447 | 0236X-2.51 | Int of FERNALD RD ROGERS RD | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 50.0 | $6.750$ | $0.10$ <br> ewide Crash Rate: | $\text { e: } 0.11$ | 0.000 .36 |
| 56677 | 0236X-2.67 | TL Eliot Kittery | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | $6.639$ | $0.00$ <br> ewide Crash Rate: | $0.11$ | 0.00 |
| Study Y | ears: 3.00 | NOD |  | 8 | 0 | 0 | 0 | 4 | 4 | 50.0 | 31.932 | 0.08 | 0.35 | 0.24 |

Maine Department Of Transportation - Office of Safety, Crash Records Section
Crash Summary I


Maine Department Of Transportation - Office of Safety, Crash Records Section
Crash Summary

| Section Details |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start <br> Node | End Node | Element | Offset Begin - End | Route - MP | Total Crashes | K | Inj A | y C | C | PD | Crash Report | Crash Date | Crash Mile Point | Injury <br> Degree |
| 56675 | 58074 | 3114298 | 0-0.33 | 0236X-2.03 | 8 | 0 | 0 | 0 | 5 | 3 | 2019-3731 | 02/01/2019 | 2.07 | C |
|  |  |  |  |  |  |  |  |  |  |  | 2020-31725 | 12/09/2020 | 2.09 | PD |
|  |  |  |  |  |  |  |  |  |  |  | 2019-51830 | 05/11/2019 | 2.13 | PD |
|  |  |  |  |  |  |  |  |  |  |  | 2019-56566 | 07/01/2019 | 2.28 | C |
|  |  |  |  |  |  |  |  |  |  |  | 2019-53559 | 05/23/2019 | 2.28 | C |
|  |  |  |  |  |  |  |  |  |  |  | 2019-53557 | 05/22/2019 | 2.28 | C |
|  |  |  |  |  |  |  |  |  |  |  | 2020-6460 | 02/26/2020 | 2.31 | C |
|  |  |  |  |  |  |  |  |  |  |  | 2019-47940 | 04/01/2019 | 2.31 | PD |
| 56675 | 58074 | 3114298 | 0.33-0.35 | 0236X-2.03 | 1 | 0 | 0 | 0 | 1 | 0 | 2021-26953 | 10/06/2021 | 2.37 | C |
| 56676 | 58074 | 3118372 | 0-0.09 | 0236X - 2.38 | 1 | 0 | 0 | 0 | 1 | 0 | 2019-50718 | 04/30/2019 | 2.39 | C |
| 54447 | 56676 | 3121322 | 0-0.04 | 0236X-2.47 | 3 | 0 | 0 | 0 | 1 | 2 | 2020-30020 | 12/02/2020 | 2.49 | PD |
|  |  |  |  |  |  |  |  |  |  |  | 2020-20269 | 08/21/2020 | 2.50 | C |
|  |  |  |  |  |  |  |  |  |  |  | 2020-7066 | 03/02/2020 | 2.50 | PD |
| 54447 | 56677 | 3114951 | 0-0.16 | 0236X-2.51 | 1 | 0 | 0 | 0 | 0 | 1 | 2021-22446 | 08/19/2021 | 2.66 | PD |
|  |  |  |  | Tota | 14 | 0 | 0 | 0 | 8 | 6 |  |  |  |  |

Crash Summary II - Characteristics


Crash Summary II - Characteristics

| Crashes by Driver Action at Time of Crash |  |  |  |  |  |  |  | Crashes by Apparent Physical Condition And Driver |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Driver Action at Time of Crash | Dr 1 | Dr 2 | Dr 3 | Dr 4 | Dr 5 | Other | Total | Apparen Condition | hysical |  | Dr 1 | Dr 2 | Dr 3 | Dr 4 | Dr 5 | Other | Total |
|  |  |  |  |  |  |  |  | Apparently | rmal |  | 19 | 17 | 4 | 1 | 0 | 0 | 41 |
| No Contributing Action | 6 | 15 | 2 | 1 | 0 | 0 | 24 | Physically | aired |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ran Off Roadway | 1 | 0 | 0 | 0 | 0 | 0 | 1 | Emotional Disturbed, | ressed, Angry, |  | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Failed to Yield Right-of-Way | 3 | 1 | 0 | 0 | 0 | 0 | 4 | III (Sick) |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Ran Red Light | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Asleep or | gued |  | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Ran Stop Sign | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Under the Medicatio | uence of rugs/Alcohol |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Disregarded Other Traffic Sign | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Other |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Disregarded Other Road Markings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Total |  |  | 22 | 17 | 4 | 1 | 0 | 0 | 44 |
| Exceeded Posted Speed Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |
| Drove Too Fast For Conditions | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |
| Improper Turn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Driver Age by Unit Type |  |  |  |  |  |  |  |  |  |
| Improper Backing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Age | Driver | Bicycle | Snown | Obile | Pedestr |  | ATV |  | Total |
| Improper Passing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 09-Under | 0 | 0 |  |  | 0 |  | 0 |  | 0 |
| Wrong Way | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10-14 | 0 | 0 | 0 |  | 0 |  | 0 |  | 0 |
| Followed Too Closely | 7 | 1 | 2 | 0 | 0 | 0 | 10 | 15-19 | 7 | 0 | 0 |  | 0 |  | 0 |  | 7 |
| Failed to Keep in Proper Lane | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20-24 | 1 | 0 | 0 |  | 0 |  | 0 |  | 1 |
| Operated Motor Vehicle in Erratic, | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25-29 | 5 | 0 | 0 |  | 0 |  | 0 |  | 5 |
| Reckless, Careless, Negligent or Aggressive Manner |  |  |  |  |  |  |  | 30-39 | 5 | 0 | 0 |  | 0 |  | 0 |  | 5 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40-49 | 9 | 0 | 0 |  | 0 |  | 0 |  | 9 |
| Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway |  |  |  |  |  |  |  | 50-59 | 6 | 0 |  |  | 0 |  | 0 |  | 6 |
|  |  |  |  |  |  |  |  | 60-69 | 8 | 0 | 0 |  | 0 |  | 0 |  | 8 |
| Over-Correcting/Over-Steering | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70-79 | 0 | 0 | 0 |  | 0 |  | 0 |  | 0 |
| Other Contributing Action | 5 | 0 | 0 | 0 | 0 | 0 | 5 | $80-\mathrm{Over}$ | 3 | 0 | 0 |  | 0 |  | 0 |  | 3 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Unknown | 0 | 0 | 0 |  | 0 |  | 0 |  | 0 |
| Total | 22 | 17 | 4 | 1 | 0 | 0 | 44 | Total | 44 | 0 | 0 |  | 0 |  | 0 |  | 44 |

## Crash Summary II - Characteristics

| Most Harmful Event |  |  |  | Injury Data |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Most Harmful Event | Total | Most Harmful Event | Total | Severity Code Injury Crashes | Number Of |
| 1-Overturn / Rollover | 1 | 38-Other Fixed Object (wall, building, tunnel, etc.) | 0 | Severity Code Injury Crashes | Injuries |
| 2-Fire / Explosion | 0 | 39-Unknown | 14 | K 0 | 0 |
| 3-Immersion | 0 | 40-Gate or Cable | 0 | A 0 | 0 |
| 4-Jackknife | 0 | 41-Pressure Ridge | 0 | B 0 | 0 |
| 5-Cargo / Equipment Loss Or Shift | 0 | Total | 44 | C 12 | 15 |
| 6-Fell / Jumped from Motor Vehicle | 0 |  |  | PD 10 | 0 |
| 7-Thrown or Falling Object | 0 |  |  |  |  |
| 8-Other Non-Collision | 0 |  |  | Total 22 | 15 |
| 9-Pedestrian | 0 |  |  |  |  |
| 10-Pedalcycle | 0 |  |  | Road Charac |  |
| 11-Railway Vehicle - Train, Engine | 0 |  |  | Road Grade | Total |
| 12-Animal | 0 |  |  | 1-Level | 22 |
| 13-Motor Vehicle in Transport | 27 |  |  | 2-On Grade | 0 |
| 14-Parked Motor Vehicle | 0 |  |  | 3-Top of Hill | 0 |
| 15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle | 0 | Traffic Control Devices |  | 4-Bottom of Hill 5-Other | 0 |
| 16-Work Zone / Maintenance Equipment | 0 | Traffic Control Device | Total |  |  |
| 17-Other Non-Fixed Object | 0 | 1-Traffic Signals (Stop \& Go) | 4 | Total | 22 |
| 18-Impact Attenuator / Crash Cushion | 0 | 2-Traffic Signals (Flashing) | 0 |  |  |
| 19-Bridge Overhead Structure | 0 | 3-Advisory/Warning Sign | 0 |  |  |
| 20-Bridge Pier or Support | 0 | 4-Stop Signs - All Approaches | 0 |  |  |
| 21-Bridge Rail | 0 | 5-Stop Signs - Other | 2 | Light |  |
| 22-Cable Barrier | 0 | 6-Yield Sign | 0 | 1-Daylight Light Condition | Total |
| 23-Culvert | 0 | 7-Curve Warning Sign | 0 | 1-Daylight | 19 0 |
| 24-Curb | 0 | 8-Officer, Flagman, School Patrol | 0 | 3-Dusk | 0 |
| 25-Ditch | 0 | 9-School Bus Stop Arm | 0 | 4-Dark - Lighted | 2 |
| 26-Embankment | 0 | 10-School Zone Sign | 0 | 4-Dark - Lighted | 0 |
| 27-Guardrail Face | 0 | 11-R.R. Crossing Device | 0 | 5-Dark - Not Lighted <br> 6-Dark - Unknown Lighting | 0 |
| 28-Guardrail End | 0 | 12-No Passing Zone | 0 | 6-Dark - Unknown Lighting | 0 |
| 29-Concrete Traffic Barrier | 0 | 13-None | 16 | 7-Unknown | 0 |
| 30-Other Traffic Barrier | 0 | 14-Other | 0 | Total | 22 |
| 31-Tree (Standing) | 1 |  |  |  |  |
| 32-Utility Pole / Light Support | 0 | Total | 22 |  |  |
| 33-Traffic Sign Support | 0 |  |  |  |  |
| 34-Traffic Signal Support | 0 |  |  |  |  |
| 35-Fence | 0 |  |  |  |  |
| 36-Mailbox | 0 |  |  |  |  |
| 37-Other Post, Pole, or Support | 1 |  |  |  |  |


| Month | 2019 | 2020 | 2021 | Total |
| :---: | :---: | :---: | :---: | :---: |
| JANUARY | 0 | 0 | 1 | 1 |
| FEBRUARY | 1 | 1 | 0 | 2 |
| MARCH | 0 | 2 | 0 | 2 |
| APRIL | 2 | 0 | 0 | 2 |
| MAY | 3 | 0 | 0 | 3 |
| JUNE | 0 | 0 | 1 | 1 |
| JULY | 1 | 0 | 2 | 3 |
| AUGUST | 2 | 1 | 1 | 4 |
| SEPTEMBER | 0 | 0 | 0 | 0 |
| OCTOBER | 0 | 0 | 1 | 1 |
| NOVEMBER | 0 | 1 | 0 | 1 |
| DECEMBER | 0 | 2 | 0 | 2 |
| Total | 9 | 7 | 6 | 22 |

# Crash Summary II - Characteristics 

| Crashes by Crash Type and Type of Location |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Crash Type | Straight Road | Curved Road | Three Leg Intersection | Four Leg Intersection | Five or More Leg Intersection | Driveways | Bridges | Interchanges | Other | Parking Lot | Private Way | Cross Over | Railroad Crossing | Traffic CircleRoundabout | Total |
| Object in Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rear End - Sideswipe | 8 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Head-on-Sideswipe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Intersection Movement | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Pedestrians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Train | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Went Off Road | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| All Other Animal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bicycle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jackknife | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rollover | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Submersion | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Thrown or Falling Object | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bear | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Deer | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Moose | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Turkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Crash Summary II - Characteristics
Crashes by Weather, Light Condition and Road Surface

| Crashes by Weather, Light Condition and Road Surface |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weather Light | Dry | Ice/Frost | Mud, Dirt, Gravel | Oil | Other | Sand | Slush | Snow | Unknown | Water (Standing, Moving) | Wet | Total |
| Blowing Sand, Soil, Dirt |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Blowing Snow |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Clear |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cloudy |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Dusk | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Crash Summary II - Characteristics
Crashes by Weather, Light Condition and Road Surface

| Weather Light | Dry | Ice/Frost | Mud, Dirt, Gravel | Oil | Other | Sand | Slush | Snow | Unknown | Water (Standing, Moving) | Wet | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fog, Smog, Smoke |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rain |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Severe Crosswinds |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

| Weather Light | Dry | Ice/Frost | Mud, Dirt, Gravel | Oil | Other | Sand | Slush | Snow | Unknown | Water (Standing, Moving) | Wet | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sleet, Hail (Freezing Rain or Drizzle) |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snow |  |  |  |  |  |  |  |  |  |  |  |  |
| Dark - Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Not Lighted | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark - Unknown Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dawn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daylight | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dusk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 22 |



| From: | $\underline{\text { Diane Morabito }}$ |
| :--- | :--- |
| To: | "Illian, Randy" |
| Cc: | Ken Wood; 系 |
| Subject: | FW: 89 Route 236 - Retail Sales |
| Date: | Wednesday, May 24, 2023 12:48:27 PM |
| Attachments: | $\underline{\text { image001.png }}$ |

Hi Randy,

I have been talking with Jason Garnham in Kittery about a potential impact fee for the retail shop in the existing Aroma Joe's building. He sent me the link below to the Route 236 Study, which has been completed. That study recommends a center two-way left-turn through this portion of the 236 corridor so it seems logical that the shop would pay a fee towards that project, rather than construct a small piece. I checked the work plan and there is a $\$ 400,000$ project for PE for design of improvements to the 236 corridor. Maybe the impact fee could go towards the PE project since no construction funding has been dedicated yet?

Just keeping you in the loop and keeping the conversation going.

Diane

Diane W. Morabito, PE, PTOE
Vice President Traffic Engineering
T: +1. 207.817.5440 | F: +1. 207.827.3641 | E: diane.morabito@sewall.com
14 York Street | Portland, Maine 04101 | www.sewall.com

##  <br> The evolution of expertise

From: Jason Garnham [JGarnham@kitteryme.org](mailto:JGarnham@kitteryme.org)
Sent: Wednesday, May 24, 2023 11:14 AM
To: Diane Morabito [mordi@sewall.com](mailto:mordi@sewall.com)
Subject: RE: 89 Route 236 - Retail Sales

Hi Diane,
Thanks for explaining this situation and offering a potentially workable solution. I know the board will look closely at the traffic study for this application.
The Route 236 study is complete and available at: route_236_final_report.pdf (kitteryme.gov) Of course this preceded my arrival in Maine so I'm not deeply familiar with it. I understand that DoT is paving or installing some improvements in the 236 corridor this summer but I'm also unsure of the details pertaining to that.

I think my best next step will be to discuss your question/ recommendation with public works (and possibly DoT) staff to find out what is planned or desired in the corridor. This may take a little time. If you need to prepare a recommendation for your client and Kittery's planning board in the meantime
then I might suggest summarizing a few options for the board and the Town to consider, based on your professional judgment @ study recommendations that would have the best nexus to the relative impacts from the proposed use.

I'll followup with you after I connect with PW. I already left a message with the director. Please let me know if anything else comes up in the meantime. Regards, -Jason

From: Diane Morabito [mordi@sewall.com](mailto:mordi@sewall.com)
Sent: Wednesday, May 24, 2023 9:04 AM
To: Jason Garnham < JGarnham@kitteryme.org>
Cc: 'Ken Wood' [ken@attarengineering.com](mailto:ken@attarengineering.com); Josh Seymour [josh@greentruckfarm.com](mailto:josh@greentruckfarm.com); Mike Sudak [mike@attarengineering.com](mailto:mike@attarengineering.com); 'Illian, Randy' [randy.illian@maine.gov](mailto:randy.illian@maine.gov)
Subject: 89 Route 236 -Retail Sales

Hi Jason,
I left you a voice mail regarding the 89 Route 236 project. The traffic analysis we did showed that the existing Aroma Joe's volumes met the left-turn lane warrant during the PM peak hour that MaineDOT is using now. While it is a small number of left turns, the high Route 236 volumes cause the warrant to be met for anything more than $0 \%$ left-turns. I was at a conference with Steve Landry, the MaineDOT Traffic Engineer two weeks ago, and explained to him how this was a dilemma when we are warranting turn lanes on projects that don't require TMPS. He asked where the project was and he said that Kittery was looking to and or was already involved in a Route 236 study. He suggested that a better approach and solution would be to have this project pay an impact fee to that study or to future improvements projects identified by it. I have spoken to the Region Traffic Engineer who believes an impact fee could be tied to an Entrance Permit since the project is outside the urban compact. But, obviously, the State wants town buy in.

Where are you with a Route 236 study? Does an impact fee make sense to you versus this project building a short- turn lane out there given other projects are to come?

Please give me a call to discuss further when you get a minute.

Thanks,
Diane

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## Town of Kittery

## Planning Board Meeting

November 18, 2021

## ITEM 9-89 Route 236-Final Site Plan Review

Action: Accept or deny application as complete, continue to a subsequent meeting, approve or deny final plan. Pursuant to Commercial (C-1, C-2, C-3, §16.8 Design and Performance Standards for Built Environment and Article VII Final Plan Review and Decision of $\S 16.10$ Development Plan Application of the Town of Kittery Land Use and Development Code, the Planning Board shall consider a final site plan application from applicant/owner JD Investment Inc. and agent Jones \& Beach Engineers, Inc. requesting final approval to expand the existing parking lot by 11 spaces totaling 3,400-sf. of additional impervious surface with appurtenant stormwater infrastructure on real property with an address of 89 Route 236 (Tax Map 28, Lot 14-2) located in the Commercial-2 (C2) Zone.

## PROJECT TRACKING

| REQ'D | ACTION | COMMENTS | STATUS |
| :---: | :--- | :--- | :---: |
| No | Sketch Plan | Not Pursued | N/A |
| YES | Site Visit | September 30, 2021 | HELD |
| YES | Preliminary Plan Review <br> Completeness/Acceptance | September 9, 2021 | ACCEPTED |
| YES | Public Hearing | October 14, 2021 | HELD |
| YES | Preliminary Plan Approval | October 14, 2021 | APPROVED |
| YES | Final Plan Review and <br> Decision | May occur on November 18, 2021 | PENDING |

Applicant: Prior to the signing of the approved Plan any Conditions of Approval related to the Findings of Fact along with waivers and variances (by the BOA) must be placed on the Final Plan and, when applicable, recorded at the York County Registry of Deeds. PLACE THE MAP AND LOT NUMBER IN 1/4" HIGH LETTERS AT LOWER RIGHT BORDER OF ALL PLAN SHEETS. As per Section 16.4.4.13-Grading/Construction Final Plan Required. - Grading or construction of roads, grading of land or lots, or construction of buildings is prohibited until the original copy of the approved final plan endorsed has been duly recorded in the York County registry of deeds when applicable.

## Project Introduction

The application before the Planning Board ("Board") is a site plan development that seeks to construct a 3,400-sf expansion of an existing parking lot in order to accommodate an increase of the amount visitors the various businesses are experiencing. Currently, there is an engineering firm, CBD retail store (not a marijuana business) and an Aroma Joes drive-thru coffee shop.

The proposed development seeks approval to create 11 additional parking spaces. To accommodate the expansion, the application proposes to add new stormwater infrastructure, updated operation and maintenance plan, landscaping, lighting fixtures and appropriate signage. Separate from this application, but a component of the overall development is the installation of two new septic systems. It was identified earlier this year that the subsurface wastewater systems were failing and were of need of replacement as soon as possible. The replacement systems fall under a separate application process under the local plumbing inspector; however, are depicted on the site plan so as to show the extent of all the elements of the proposed development. Given the uncertainty expressed by the Board over the new systems, Brady Frick, Licensed Site Evaluator, of Albert Frick Associates, Inc. penned an opinion and small analysis on why the original system failed and the new system will be appropriate with an anticipated longer longevity.

CMA Engineering Inc. has reviewed the site plan and stormwater management plan and they found a few minor issues with the plan, but generally agree that the application complies with the relevant standards..

The task before the Board at this juncture is to review the application for completeness, determine if additional information is required; and if not, vote on the final plan.

Final Plan Review

| §16.2.2 Definitions |  |
| :---: | :---: |
| Standard | Comment |
| Drainage Ditch <br> A man-made, regularly maintained channel, trench or swale for conducting water that has a direction of flow to remove surface water or groundwater from land by means of gravity. For the purposes of this title, any new activity that reroutes a streambed or dredges a wetland is not considered to be a "drainage ditch." Where a drainage ditch widens out into a larger wetland, a route no more than 12 feet in width can be considered to be the drainage ditch. The remainder is considered wetlands unless it is demonstrated that the originally developed drainage ditch was designed to be greater than 12 feet in width. | The Planning Board needs to apply this definition to the water body to the rear of the lot and make a determination whether or not it is a wetland or drainage ditch for stormwater purposes. |
| Wetland <br> Areas that under normal circumstances have hydrophytic vegetation, hydric soils and wetland hydrology, as determined in the Corps of Engineers Wetlands Delineation Manual Waterways Experiment Station Technical Report Y-87-1, January 1987" (1987 manual). This definition of wetland is based on the 1987 manual and is not subject to further revisions and/or amendments. | Similar to the definition above, this definition and that of a drainage ditch needs to be taken together and applied to the water body that abuts the existing parking lot to the rear of the site. |


| Code Ref. | $\S 16.3 .2 .11 . \mathrm{D}(2)$ |  |
| :--- | :--- | :--- |
|  | Standard | Comment |
| $\S 16.3 .2 .11 . \mathrm{D}(2)(\mathrm{a})$ | Minimum lot size: $40,000-$ sf. | It appears that this standard is satisfied. |
| $\S 16.3 .2 .11 . \mathrm{D}(2)(\mathrm{b})$ | Minimum street frontage: $150-\mathrm{ft}$. | It appears that this standard is satisfied. |
| $\S 16.3 .2 .11 . \mathrm{D}(2)(\mathrm{c})$ | Minimum front setback: 50-ft. | It appears that this standard is satisfied. |
| $\S 16.3 .2 .11 . \mathrm{D}(2)(\mathrm{d})$ | Minimum rear and side setbacks: $30-\mathrm{ft}$., except as matisfied. be required by the <br> buffer provisions of this title, and where the side and/or rear yards of the <br> proposed nonresidential use abut a residential zone or use; in which case a <br> minimum of 40 feet is required. |  |
| $\S 16.3 .2 .11 . \mathrm{D}(2)(\mathrm{e})$ | Maximum building height: 40-ft. | It appears that this standard is satisfied. |
| 16.3.2.11.D(2)(f)[4] | For all uses in the C-2 Zone, building and outdoor material coverage must <br> not exceed 40\%. |  |
| 16.3.2.11.D(2)(h) | Minimum setback from streams, water bodies and wetlands: in accordance <br> with Table 16.9, § 16.3.2.17 and Appendix A, Fee Schedules. | It appears that this standard is satisfied. |
| 16.3.2.11.D(2)(k) | Underground utilities required. The Planning Board may allow an <br> alternative, but it is incumbent upon the applicant to demonstrate why such <br> a modification request should be granted. | It appears that this standard is satisfied. |


| Code Ref, | §16.3.2.11.D(5) C-2 Zone Standards |  |
| :---: | :---: | :---: |
|  | Standard | Comment |
| §16.3.2.11.D(5)(a) | All new or revised parking must be visually screened through the use of landscaping, earthen berms and/or fencing from adjacent public streets or residential properties. (See the Design Handbook for appropriate examples.) | There appears to be adequate screening of the new and existing parking lot, as there is a woodland buffer along the side and rear sections of the property. Moreover, the applicant has identified and flagged trees of significance to be preserved during the construction of the parking lot. Planning Board may want to consider adding a condition of approval that stipulates the replanting of any trees that die during construction with a species of similar quality. |
| §16.3.2.11.D(5)(b)[1] | New buildings should meet the general design principles set forth in the Design Handbook. In general, buildings should be oriented to the street with the front of the building facing the street. The front or street facade must be designed as the front of the building. The front elevation must contain one or more of the following elements: <br> [a] A "front door," although other provisions for access to the building may be provided; <br> [b] Windows; or <br> [c] Display cases. | This standard is not applicable. |
| §16.3.2.11.D(5)(b)[2] | A building's prominent roofs must be pitched a minimum of 4:12 unless demonstrated to the Planning Board's satisfaction that this is not practicable. Acceptable roof styles are gabled, gambrel and hipped roofs. Flat roofs, shed roofs and roof facades (such as "stuck on" mansards) are not acceptable as prominent roof forms except as provided above. (See Design Handbook for examples of acceptable designs.) | This standard is not applicable. |
| §16.3.2.11.D(5)(c)[1] | Landscape planter strip. A vegetated landscape planter strip must be provided a minimum of 20 feet in depth adjacent to the right-of-way of all public roads and include the following landscape elements: <br> [a] Ground cover. The entire landscape planter strip must be vegetated except for approved driveways, walkways, bikeways and screened utility equipment <br> [b] Street-side trees. A minimum of one street tree must be planted for each 50 feet of street frontage. The trees may be spaced along the frontage or grouped or clustered to enhance the visual quality of the site. (See Design Handbook for examples.) The trees must be a minimum two-and-one-half-inch caliper and be at least 12 feet high at the time of planting. The species should be selected from the list of recommended street trees in the Design Handbook. Existing large healthy trees must be preserved if practical and will count toward this requirement. | These standards appear to be satisfied. |


| §16.3.2.11.D(5)(c)[1][c][i] | Expansions of less than 2,000 square feet to existing uses are exempt from the landscaping standard of this subsection. | This standard is not applicable. |
| :---: | :---: | :---: |
| §16.3.2.11.D(5)(c)[1][c][ii] | Depth of landscape planter strip. In instances where the required minimum depth of the landscape planter strip is legally utilized, in accordance with previous permits or approvals for parking, display, storage, building or necessary vehicle circulation, the depth may be narrowed by the Planning Board to the minimum extent necessary to achieve the objective of the proposed project, provided that the required shrubs and perennials are planted along the street frontage to soften the appearance of the development from the public street. | This standard is not applicable. |
| §16.3.2.11.D(5)(c)[1][c][iii] | Additions and changes in use. For additions to existing buildings and changes of residential structures to a nonresidential use, one street-side tree (see list of recommended street trees in Design Handbook) is required to be planted for every 1,000 square feet of additional gross floor area added or converted to nonresidential use. In instances where parking, display area, storage, building or necessary vehicle circulation exists at the time of enactment of this section, the required trees may be clustered and/or relocated away from the road as is necessary to be practicable. The preservation of existing large trees is encouraged; therefore, the Planning Board may permit the preservation of existing healthy, large, mature trees within the landscape planter strip or other developed areas of the site to be substituted for the planting of new trees. | This standard is not applicable. |
| §16.3.2.11.D(5)(c)[1][c][iv] | Residences. Residential additions to existing single- and two-family dwellings and proposed single and duplex family dwellings are exempt from the landscaping standards of this subsection. | This standard is not applicable. |
| §16.3.2.11.D(5)(c)[2] | Outdoor service and storage areas. No areas for the storage of raw materials, equipment or finished products other than small areas for the display of samples of products available for sale or rent may be located between the front property line and the front facade of the building. Display areas may not be located within the required landscape planter strip. Facilities for waste storage such as dumpsters must be located within an enclosure and be visually buffered by fencing, landscaping and/or other treatments. (See Design Handbook for examples of appropriate buffering.) | This standard appears to be satisfied as a fence is proposed to screed the dumpsters. |
| §16.3.2.11.D(5)(d) | Vehicular and pedestrian circulation must meet the general provisions of the Design Handbook | The Planning Board may want toconsider having theapplicant <br> incorporate pedestrian access <br> (crosswalks) ways from the parking lot <br> to the building in order to create a safe <br> area for people to use to travel to and <br> from the parking lot. . |


| Code Ref. | $\S 16.8$ Article IV Streets and Pedestrian/Sidewalks Site Design Standards |  |
| :--- | :--- | :--- | :--- |
|  | Standard | Comment |
| §16.8.4.5.A | Vehicular access to the development must be arranged to avoid traffic use <br> of local residential streets. | This standard appears to be satisfied. |
| §16.8.4.5.B | Where a lot has frontage on two or more streets, the access to the lot must <br> be provided to the lot across the frontage and to the street where there is <br> lesser potential for traffic congestion and for hazards to traffic and <br> pedestrians. | This standard appears to be satisfied. |
| §16.8.4.5.C | The street giving access to the lot and neighboring streets which can be <br> expected to carry traffic to and from the development must have traffic- <br> carrying capacity and be suitably improved to accommodate the amount <br> and types of traffic generated by the proposed use. No development may <br> increase the volume/capacity ratio of any street above 0.8 nor reduce any <br> intersection or link level of service to "D" or below. | This standard appears to be satisfied has <br> the access way that will be used to <br> service the lot is a state highway. <br> Moreover, there is no proposed use <br> change appended with the parking lot <br> expansion. If a use change were to <br> occur, the |
| §16.8.4.5.D | Where necessary to safeguard against hazards to traffic and pedestrians <br> and/or to avoid traffic congestion, provision must be made for turning |  |
| lanes, traffic directional islands, frontage roads, driveways and traffic |  |  |
| controls within public streets. |  |  |$\quad$| This standard appears to be satisfied. |
| :--- |


|  |  |  |
| :---: | :---: | :---: |
| §16.8.4.5.E | Accessways must be of a design and have sufficient capacity to avoid hazardous queuing of entering vehicles on any street. | This standard appears to be satisfied. |
| §16.8.4.5.F | Where topographic and other conditions allow, provision must be made for circulation driveway connections to adjoining lots of similar existing or potential use: <br> (1) When such driveway connection will facilitate fire protection services as approved by the Fire Chief; or <br> (2) When such driveway will enable the public to travel between two existing or potential uses, generally open to the public, without need to travel upon a street. | This standard is not applicable. |
| §16.8.4.13.A | Where required, sidewalks must be installed to meet minimum requirements as specified in Table 1 of this chapter | This standard is not applicable. |
| Code Ref. | §16.8 Article VI Water Supply |  |
| §16.8.6.1.A | A public water supply system with fire hydrants must be installed and approved in writing by the servicing water department. | This standard is not applicable. |
| Code Ref. | §16.8 Article VII Sewage Disposal |  |
| §16.8.7.2.C | Replacement of subsurface wastewater disposal systems (SWDS) for existing legal uses: <br> (1) Where no expansion is proposed, the SWDS must comply with § 16.8.7.2 and Table 16.9 to the extent practicable and otherwise are allowed per the Maine Subsurface Wastewater Disposal Rules; or <br> (2) Where expansion is proposed, the SWDS must comply with § 16.8.7.2 and Table 16.9 in addition to the Maine Subsurface Wastewater Disposal Rules. <br> NOTE: For the purposes of this subsection, "expansion" is as defined in Section 9 of the Maine Subsurface Wastewater Disposal Rules. | This standard appears to be satisfied, as the proposed parking lot will not be within any wetland setbacks. |
| Code Ref. | §16.8 Article VIII Surface Drainage |  |
| §16.8.8.1 \& §16.8.8.2 |  | The applicant has filed a stormwater management report, which will be peer reviewed by CMA Engineers Inc. to determine compliance. Comments have yet to be received from CMA. |
| Code Ref. | §16.8 Article IX Parking, Loading and Traffic |  |
| 16.8.9.1.A | All development, special exceptions and changes in use must comply with the performance standards herein and, where applicable, those contained in Article V of this chapter. The Planning Board may impose additional reasonable requirements, which may include off-site improvements, based on the following considerations: <br> (1) Sight distances along public rights-of-way; <br> (2) The existence and impact upon adjacent access points and intersections; <br> (3) Turning movements of vehicles entering and leaving the public streets; <br> (4) Snow removal; and <br> (5) General condition and capacity of public streets serving the facility. | Planning Board may want the applicant to revise the plan notes to state that in the instance the lot reaches it capacity for snow storage, all excess snow will be carried off site. |
| §16.8.9.1.E | All traffic flow in parking areas is to be clearly marked with signs and/or surface directions at all times. | This standard appears to be satisfied. |
| §16.8.9.1.F | Off-street parking must be constructed in accordance with Table 2 of this chapter, set out at the end of Article IX, Parking Loading and Traffic. | This standard appears to be satisfied. |


| §16.8.9.4.F | A parking area must meet the wetland and water body setback requirements for structures for the district in which such areas are located, per Table 16.9, Minimum Setback from Wetlands and Water Bodies; except, in the Commercial Fisheries/Maritime Uses Overlay Zone, parking area must be set back at least 25 feet from the normal high-water line or the upland edge of a wetland. The setback requirement for a parking area serving public boat-launching facilities, in zones other than the Commercial, BusinessLocal, Residential-Urban Zones, and the Commercial Fisheries/Maritime Uses Overlay Zone, may be reduced to no less than 50 feet from the normal high-water line or upland edge of a wetland if the Planning Board finds no other reasonable alternative exists. | This standard appears to be satisfied. |
| :---: | :---: | :---: |
| §16.8.9.4.G | Parking landscaping is required for parking areas containing 10 or more parking spaces and must have at least one tree per eight spaces. Such trees are to be located either within the lot or within five feet of it. Such trees are to be at least $11 / 2$ inches in diameter, with no less than 25 square feet of unpaved soil or permeable surface area per tree. At least $10 \%$ of the interior of any parking area having 25 or more spaces is to be maintained with landscaping, including trees, in plots of at least five feet in width. | This standard appears to be satisfied. |
| §16.8.9.4.I | If parking spaces are provided for employees, customers or visitors, then accessible parking spaces must be included in each such parking area in conformance with the following table: (see table) <br> (1) Each accessible parking space must contain a rectangular area at least 19 feet long and eight feet wide with access to a designated and marked five-foot-wide aisle. All required accessible parking spaces are to be identified by a vertical sign displaying the international symbol of accessibility; pavement marking alone is not adequate to identify accessible parking spaces. <br> (2) The total number of accessible parking spaces is to be distributed to serve the various accessible entrances as well as possible. <br> (3) At least one accessible route is to connect from each accessible parking space to the accessible building entrance. | This standard appears to be satisfied. |
| §16.8.9.4.K | Where off-street parking for more than six vehicles is required or provided, the following construction requirements apply: <br> (1) Appropriate driveways from streets or alleys, as well as maneuvering areas, must be provided. Location and width of approaches over public sidewalk are to be approved by the Commissioner of Public Works. When access to parking areas is available from more than one street, the location of points of ingress and egress are to have the approval of the Planning Board. <br> (2) The surface of driveways, maneuvering areas and parking areas must be uniformly graded with a subgrade consisting of gravel or equivalent materials at least six inches in depth, well-compacted and with a wearing surface equivalent in qualities of compaction and durability to fine gravel. <br> (3) A system of surface drainage must be provided in such a way that the water runoff does not run over or across any public sidewalk or street or adjacent property. Where catch basins are required, oil traps are to be provided. <br> (4) Where artificial lighting is provided, it must be shaded or screened so that no light source is visible from outside the area and its access driveways. <br> (5) Where surface water drainage utilizes a municipal drainage system, the parking or driveway area may be required to have a bituminous asphalt surface or other approved equivalent. | These standard appear to be satisfied or not applicable. |
| Code Ref. | §16.8 Article XVII Utilities |  |
| §16.8.17.2 | Utilities, where feasible, are to be installed underground. The Board must require the developer to adopt a prudent avoidance approach when aboveground electrical installations are approved. | It is unclear on the site plan where the electrical lines to connect with the proposed parking lot light pole will be located. Planning Board should have the applicant update the site plan to incorporate this element and determine whether or not relief is needed. |


| Code Ref. | §16.8 Article XVIII Landscaping |  |
| :---: | :---: | :---: |
| §16.8.18.1 | Street trees, esplanades and open green spaces may be required, at the Board's discretion. Where such improvements are required, they are to be incorporated in the plan and executed as construction progresses. Said improvements must be maintained throughout the life of the development. A "life maintenance" note is to be included on the plan. | These standards generally appear to be satisfied. |
| Code Ref. | §16.8 Article XXIV Exterior Lighting |  |
| §16.8.24.2.A | Lighting fixtures mounted on masts or poles must be cutoff fixtures except for period or historical fixtures meeting the provisions of Subsection G of this section. | These standards generally appear to be satisfied. |
| §16.8.24.2.B | Floodlighting or other directional lighting may be used for supplemental illumination of sales or storage areas, provided that the floodlights are installed no higher than 12 feet above ground level, are aimed to avoid the source of the light being seen from adjacent streets or properties, and utilize lamps with an initial lumen rating not exceeding 39,000 lumens. The Town has the right to inspect the completed lighting installation and, if floodlights are used, to require that the floodlights be re-aimed or fitted with face louvers if necessary to control direct brightness or glare. | This standard is not applicable. |
| §16.8.24.2.C | Except for ornamental lighting fixtures that utilize lamps with initial lumen ratings of 8,500 lumens or less, wall-mounted building lights must include full-face shielding consisting of either a solid panel or full-face louvers. Exposed lamps, reflectors or refractors may not be visible from any part of the fixture except the bottom light-emitting surface. | This standard is not applicable. |
| §16.8.24.2.D | Light fixtures located on or within canopies must be recessed into the ceiling of the canopy so that the lamp, reflector and lens are not visible from public streets. Fixtures must limit the direction of light as required for a cutoff fixture. Refractors or diffusing panels that are dropped below the canopy ceiling surface are not permitted. | This standard is not applicable. |
| §16.8.24.2.E | Light fixtures must be mounted at the lowest level that allows reasonable compliance with IESNA-recommended practices and the provisions of this article. | This standard is not applicable. |
| §16.8.24.2.E(1) | In approving new or modified lighting, the Planning Board may permit a maximum light fixture height for pole-mounted or mast-mounted light fixtures located between the building and the front lot line of not more than 15 feet, unless the applicant demonstrates that a higher height is necessary to allow reasonable compliance with the lighting standards and the Planning Board finds that no practicable alternative for lighting of the site exists. | It is unclear how tall the light pole will be. Applicant should provide a detail depicting its proposed height. |
| §16.8.24.2.E(2) | The Planning Board may permit a maximum light fixture height for polemounted or mast-mounted light fixtures for other areas of the site of not more than 20 feet, unless the applicant demonstrates that a higher height is necessary to allow reasonable compliance with the lighting standards and the Planning Board finds that no practicable alternative for lighting of that area of the site exists. | At the Planning Board discretion. |
| §16.8.24.2.E(3) | The maximum light fixture height for building-mounted light fixtures is the equivalent of that allowed for a pole-mounted light illuminating the same area. See the Design Handbook for examples of acceptable lighting installations. | This standard is not applicable. |
| §16.8.24.2.F | Lamps in exterior light fixtures must be incandescent, metal halide, highpressure sodium, compact fluorescent or light-emitting diode (LED). This provision does not prohibit the use of fluorescent lamps in internally lighted signs where such signs are otherwise permitted, provided such signs meet the requirements of this article. See the Design Handbook for appropriate examples of signs. With the use of LED lighting, the applicant is required to demonstrate that standards within this article are met and/or meet comparable accepted standards for LED exterior lighting. Required photometric test reports for LED lighting must be based on the IESNA LM-79-08 test procedure. | This standard appears to be satisfied. |


|  | Period or historical fixtures that do not meet the requirements of this <br> section may be used as an alternative to cutoff fixtures, provided the <br> maximum initial lumens generated by each fixture does not exceed 2,000. <br> The maximum initial lumens for metal halide lamps may be increased to <br> 8,500 if the lamp is internally recessed within the fixture or is shielded by <br> internal louvers or refractors. The mounting height of period or historical <br> fixtures may not exceed 12 feet above the adjacent ground. See the Design <br> Handbook for examples. | This standard is not applicable. |
| :--- | :--- | :--- |
| §16.8.24.2.H | State and national flags that are flown on flagpoles may be illuminated by <br> ground-mounted lighting that shines vertically as long as exposed lamps, <br> reflectors or refractors are not visible from any public street. | This standard is not applicable. |
| §16.8.24.3.A | The illumination of access drives must provide for a uniformity ratio of <br> not more than 4:1 (ratio of average to minimum luminance). The <br> illumination of parking lots and outdoor sales and service areas must <br> provide for a uniformity ratio of not more than 20:1 (ratio of maximum to <br> minimum luminance). | Applicant should confirm the ratio to <br> determine if this standard has been <br> met. |
| §16.8.24.3.B | The maximum illumination level within access drives, parking lots and <br> sales and service areas may not exceed eight footcandles measured at the <br> ground surface. | This standard appears to be satisfied. |
| §16.8.24.3.C | The maximum illumination level at the property line of a nonresidential or <br> multifamily housing use with abutting properties in a residential district <br> may not exceed 0.1 footcandle. | This standard appears to be satisfied. |
| Thes. | Areas directly under canopies must be illuminated so that the uniformity <br> ratio (ratio of average to minimum luminance) will be not greater than 3:1 <br> with an average illumination level at ground level of not more than 30 <br> footcandles. Areas of access drives, parking lots, sales display areas, etc., <br> which are adjacent to canopies must taper down in illumination level from <br> the illumination level permitted under the canopy to the maximum <br> illumination level permitted in Subsection B of this section for the access <br> drive, parking lot or sales display area adjacent to the canopy within a <br> horizontal distance equivalent to the height of the canopy. | This standard is not applicable. |


| Code Ref. | §16.10 Article VII Final Plan Review and Decision |  |
| :--- | :--- | :--- |
|  | Standard | Comment |
| §16.10.7.2.A | Preliminary plan information, including vicinity map and any <br> amendments thereto suggested or required by the Planning Board or other <br> required reviewing agency. | This standard appears to be satisfied. |
| §16.10.7.2.B | Street names and lines, pedestrian ways, lots, easements and areas to be <br> reserved for or dedicated to public use. | This standard appears to be satisfied. |
| §16.10.7.2.C | Street length of all straight lines, the deflection angles, radii, lengths of <br> curves and central angles of all curves, tangent distances and tangent <br> bearings | This standard appears to be satisfied. |
| §16.10.7.2.D | Lots and blocks within a subdivision, numbered in accordance with local <br> practice. | This standard is not applicable. |
| §16.10.7.2.E | Markers/permanent reference monuments: Their location, source <br> references and, where required, constructed in accordance with <br> specifications herein. | This standard appears to be satisfied. |
| §16.10.7.2.F | Structures: their location and description, including signs, to be placed on <br> the site, floor plans and elevations of principal structures as well as detail <br> of all structures, showing building materials and colors, and accesses <br> located within 100 feet of the property line. | This standard appears to be satisfied. |
| §16.10.7.2.G | Outdoor lighting and signage plan if the application involves the <br> construction of more than 5,000 square feet of nonresidential floor area; or <br> the creation of more than 20,000 square feet of impervious area; or the <br> creation of three or more dwelling units in a building - prepared by a <br> qualified lighting professional, showing at least the following at the same <br> scale as the site plan: | These standards appear to be satisfied. |


|  | (1) All buildings, parking areas, driveways, service areas, pedestrian areas, landscaping and proposed exterior lighting fixtures; <br> (2) All proposed lighting fixture specifications and illustrations, including photometric data, designation as "cutoff" fixtures, color rendering index (CRI) of all lamps (bulbs), and other descriptive information on the fixtures; <br> (3) Mounting height of all exterior lighting fixtures; <br> (4) Lighting analyses and luminance level diagrams or photometric point-by-point diagrams on a twenty-foot grid, showing that the proposed installation conforms to the lighting level standards of the ordinance codified in this section together with statistical summaries documenting the average luminance, maximum luminance, minimum luminance, average-to-minimum uniformity ratio, and maximum-to-minimum uniformity ratio for each parking area, drive, canopy and sales or storage area; <br> (5) Drawings of all relevant building elevations, showing the fixtures, the portions of the walls to be illuminated, the luminance levels of the walls, and the aiming points for any remote light fixtures; and <br> (6) A narrative that describes the hierarchy of site lighting and how the lighting will be used to provides safety, security and aesthetic effects. |  |
| :---: | :---: | :---: |
| §16.10.7.2.H | Machinery in permanently installed locations likely to cause appreciable noise at the lot lines. | This standard appears to be satisfied. |
| §16.10.7.2.I | Materials (raw, finished or waste) storage areas, their types and location, and any stored toxic or hazardous materials, their types and locations. | This standard appears to be satisfied. |
| §16.10.7.2.J | Fences, retaining walls and other artificial features locations and dimensions proposed. | This standard appears to be satisfied. |
| §16.10.7.2.K | Landscaping plan, including location, size and type of plant material. | This standard appears to be satisfied. |
| §16.10.7.2.L | Municipal impact analysis of the relationship of the revenues to the Town from the development and the costs of additional publicly funded resources, including: <br> (1) Review for impacts. A list of the construction items that will be completed by the developer prior to the sale of lots. <br> (2) Municipal construction and maintenance items. A list of construction and maintenance items that must be borne by the municipality, which must include, but not be limited to: <br> (a) Schools, including busing; <br> (b) Road maintenance and snow removal; <br> (c) Police and fire protection; <br> (d) Solid waste disposal; <br> (e) Recreation facilities; <br> (f) Runoff water disposal drainageways and/or storm sewer enlargement with sediment traps. <br> (3) Municipal costs and revenues. Cost estimates to the Town for the above services and the expected tax revenue of the development. | This standard is not applicable. |
| §16.10.7.2.M | Open space land cession offers. Written offers of cession to the municipality of all public open space shown on the plan, and copies of agreements or other documents showing the manner in which space(s), title to which is reserved by the subdivider, are to be maintained. | This standard is not applicable. |
| §16.10.7.2.N | Open space land cession offers acknowledgement by Town. Written evidence that the municipal officers are satisfied with the legal sufficiency of the documents referred to in § 16.10.7.2M. Such written evidence does not constitute an acceptance by the municipality of any public open space referred to in § 16.10.7.2M. | This standards are not applicable. |
| §16.10.7.2.O | Performance guaranty and Town acceptance to secure completion of all improvements required by the Planning Board, and written evidence the Town Manager is satisfied with the sufficiency of such guaranty. <br> (1) Where improvements for the common use of lessees or the general public have been approved, the Planning Board must require a performance guaranty of amount sufficient to pay for said improvements as a part of the agreement. | These standards are not applicable. |


|  | (2) Process. Prior to the issue of a building permit, the applicant must, in <br> an amount and form acceptable to the Town Manager, file with the <br> Municipal Treasurer an instrument to cover the full cost of the required <br> improvements. A period of one year (or such other period as the Planning <br> Board may determine appropriate, not to exceed three years) is the <br> guaranty time within which required improvements must be completed. <br> The performance guaranty must include an amount required for recreation <br> land or improvements, as specified. |  |
| :--- | :--- | :--- |
| §16.10.7.2.P | Maintenance plan and agreement defining maintenance responsibilities, <br> responsible parties, shared costs and schedule. Where applicable, a <br> maintenance agreement must be included in the document of covenants, <br> homeowners' documents and/or as riders to the individual deed. | This standard appears to be satisfied. |

## Next Steps

Overall, the site plan appears to conform with the standards outlined in $\S 16.3, \S 16.8$ and $\S 16.9$ with minor issues as stated above. Planning Board should decide how to proceed based on the events of the meeting.

## Recommended Motions

Below are recommended motions for the Board's use and consideration:

## Motion to continue final plan application

Move to continue a preliminary site plan application from applicant/owner JD Investment Inc. and agent Jones \& Beach Engineers, Inc. requesting preliminary approval to expand the existing parking lot by 11 spaces totaling 3,400 -sf. of additional impervious surface with appurtenant stormwater infrastructure on real property with an address of 89 Route 236 (Tax Map 28, Lot 14-2) located in the Commercial-2 (C2) Zone.

## Motion to approve final plan application

Move to approve a preliminary site plan application from applicant/owner JD Investment Inc. and agent Jones \& Beach Engineers, Inc. requesting preliminary approval to expand the existing parking lot by 11 spaces totaling 3,400 -sf. of additional impervious surface with appurtenant stormwater infrastructure on real property with an address of 89 Route 236 (Tax Map 28, Lot 14-2) located in the Commercial-2 (C2) Zone.

Kittery Planning Board
Findings of Fact
For 89 Route 236
Final Site Plan Review

Note: This approval by the Planning Board constitutes an agreement between the Town and the Developer incorporating the Development plan and supporting documentation, the Findings of Fact, and all waivers and/or conditions approved and required by the Planning Board.

WHEREAS: applicant/owner JD Investment Inc. and agent Jones \& Beach Engineers, Inc. requesting final approval to expand the existing parking lot by 11 spaces totaling 3,400 -sf. of additional impervious surface with appurtenant stormwater infrastructure on real property with an address of 89 Route 236 (Tax Map 28, Lot 14-2) located in the Commercial-2 (C2) Zone.

Hereinafter the "Development".
Pursuant to the Plan Review meetings conducted by the Planning Board as noted in the Plan Review Notes dated 11/18/2021;

| Sketch Plan | Not Pursued | N/A |
| :--- | :--- | :--- |
| Site Visit | September 30, 2021 | HELD |
| Preliminary Plan Review <br> Completeness/Acceptance | September 9, 2021 | ACCEPTED |
| Public Hearing | October 14, 2021 | HELD |
| Preliminary Plan Approval | October 14, 2021 | APPROVED |
| Final Plan Review and <br> Decision | May occur on November 18, 2021 | TBD |

and pursuant to the Project Application and Plan and other documents considered to be a part of the approval by the Planning Board in this finding consist of the following and as noted in the Plan Review Notes dated 11/18/2021 (Hereinafter the "Plan").

1. Final Plan Review Site Plan, Jones \& Beach Engineering, Inc., dated $8 / 21 / 2021$, last revised 10/27/21
2. Stormwater Management Operation and Maintenance Manual, dated 8/19/2021
3. CMA Review Letter, dated 10/25/2021
4. Email from Brady Frick, Licensed Site Evaluator, dated 10/22/2021
5. Jones \& Beach Engineering, Inc response letter, dated 10/27/21

NOW THEREFORE, based on the entire record before the Planning Board as and pursuant to the applicable standards in the Land Use and Development Code, the Planning Board makes the following factual findings as required by Section §16.10.8.3.D. and as recorded below:

## FINDINGS OF FACT

Action by the Board shall be based upon findings of fact which certify or waive compliance with all the required standards of this title, and which certify that the development satisfies the following requirements:

## A. Development Conforms to Local Ordinances.

Standard: The proposed development conforms to a duly adopted comprehensive plan as per adopted provisions in the Town Code, zoning ordinance, subdivision regulation or ordinance, development plan or land use plan, if any. In making this determination, the municipal reviewing authority may interpret these ordinances and plans.

Finding: The proposed development conforms to Title 16,
Conclusion: This standard appears to be met.
Vote of __ in favor __ against _ abstaining

## B. Freshwater Wetlands Identified.

Standard: All freshwater wetlands within the project area have been identified on any maps submitted as part of the application, regardless of the size of these wetlands.

Finding: The wetlands boundaries have been delineated/flagged by Michael Cuomo, Maine Certified Soil Scientist and depicted on the site plan. No wetlands will be impacted by the development.

Conclusion: This standard is appears to be met.

| C. River, Stream or Brook Identified. |
| :--- |
| Sote of __ in favor __ against __ abstaining |
| Standard: Any river, stream or brook within or abutting the proposed project area has been identified on any maps <br> submitted as part of the application. For purposes of this section, "river, stream or brook" has the same meaning as in <br> 38 M.R.S. $\S 480-B, ~ S u b s e c t i o n ~ 9 . ~$ |

Finding: There is a creek that abuts the property to the southeast.
Conclusion: This standard appears to be met.

| D. Water Supply Sufficient. $\{$ and $\}$ | Vote of __ in favor _ against _ abstaining |
| :--- | :--- |

The proposed development has sufficient water available for the reasonably foreseeable needs of the development.

## E. Municipal Water Supply Available.

Standard The proposed development will not cause an unreasonable burden on an existing water supply, if one is to be used.

Finding: The proposed parking lot expansion does not incorporate additional Kittery Water District connections.
Conclusion: This standard appears to not be applicable.
Vote of __ in favor __ against __ abstaining

## F. Sewage Disposal Adequate.

Standard: The proposed development will provide for adequate sewage waste disposal and will not cause an unreasonable burden on municipal services if they are utilized.

Finding: The proposed development is to replace a failing subsurface wastewater system , which is designed to handle heavy usage from the proposed commercial building.

Conclusion: This standard appears to be met.

|  | Vote of ___in favor__against__abstaining |
| :--- | :--- |
| G. Municipal Solid Waste Disposal Available. |  |
| Standard: The proposed development will not cause an unreasonable burden on the municipality's ability to dispose of <br> solid waste, if municipal services are to be used. |  |

Finding: The proposed development doesn't not require any changes to municipal solid waste services.
Conclusion: This standard appears to be met.

| H. Water Body Quality and Shoreline Protected. |
| :--- |
| Standard: Whene of __ in favor __ against __ abstaining <br> development will not adversely affect the quality of that body of water or unreasonably affect the shoreline of that body <br> of water. |

Finding: The proposed development appears to be designed not to negatively impact any wetlands
Conclusion: This standard appears to be met.

| I. Groundwater Protected. | Vote of ___ in favor__ against __ abstaining |
| :--- | :--- |
| Standard: The proposed development will not, alone or in conjunction with existing activities, adversely affect the quality <br> or quantity of groundwater. |  |
| Finding: The proposed development is to replace a failing subsurface wastewater system ,which is designed to handle <br> heavy usage from the proposed commercial building. The new design will facilitate the attenuation wastewater <br> reentering the environment. <br> Conclusion: This standard appears to be met. |  |

## J. Flood Areas Identified and Development Conditioned.

Standard: All flood-prone areas within the project area have been identified on maps submitted as part of the application based on the Federal Emergency Management Agency's Flood Boundary and Floodway Maps and Flood Insurance Rate Maps, and information presented by the applicant. If the proposed development, or any part of it, is in such an area, the applicant must determine the one hundred (100) year flood elevation and flood hazard boundaries within the project area. The proposed plan must include a condition of plan approval requiring that principal structures in the development will be constructed with their lowest floor, including the basement, at least one foot above the one hundred (100) year flood elevation.

Finding: No flood hazard zones were identified to be located on the property.
Conclusion: This standard appears to be met.

| K. Stormwater Managed. | Vote of __ in favor _ against _ abstaining |
| :--- | :--- |

Standard: Stormwater Managed. The proposed development will provide for adequate stormwater management
Finding: The design was prepared by Jones \& Beach Engineers, Inc. and reviewed by CMA Engineers, Inc. Town peerreview engineer. CMA reported that the applicant has prepared a complete stormwater design and associated analysis and the proposed development meets the requirements of the Title 16., with the need of slight revisions.

Stormwater from impervious and disturbed areas on the site will be treated by the use of stormwater BMPs designed to remove fine particulates and suspended sediments. A grassed underdrain soil filter, wooded buffers, grass swales, level spreaders and riprap are utilized to obtain the required stormwater treatment. A comprehensive review of the stormwater management plan will be performed by MDEP to which no comments were issued.

Conclusion: This standard appears to be met.
Vote of __ in favor _ against _ abstaining

## L. Erosion Controlled.

Standard: The proposed development will not cause unreasonable soil erosion or a reduction in the land's capacity to hold water so that a dangerous or unhealthy condition results.

The Contractor shall follow MDEP best management practices for erosion and sediment control (silt fencing, silt sacks, etc.), and CMA Engineers will be notified to observe application during construction.

Finding: Runoff is primarily maintained as sheet flow and minimized concentrated flow. Other best management practices include the use of undisturbed wooded buffers, grass swales, ponds, riprap protection, stabilized construction exit and silt barriers. Best management practices for erosion control will be reviewed as part of the MDEP Stormwater Law License permit.

Conclusion: This standard appears to be met.
Vote of __ in favor _ against _ abstaining

## M. Traffic Managed.

Standard: The proposed development will:

1. Not cause unreasonable highway or public road congestion or unsafe conditions with respect to the use of the highways or public roads existing or proposed; and
2. Provide adequate traffic circulation, both on-site and off-site.

Finding: The applicant is not changing any of the uses within the property, rather adding extra spaces to the lot in order to accommodate existing businesses.

Conclusion: This standard appears to be met.
Vote of __ in favor __ against _ abstaining

## N. Water and Air Pollution Minimized.

Standard: The proposed development will not result in undue water or air pollution. In making this determination, the following must be considered:

1. Elevation of the land above sea level and its relation to the floodplains;
2. Nature of soils and sub-soils and their ability to adequately support waste disposal;
3. Slope of the land and its effect on effluents;
4. Availability of streams for disposal of effluents;
5. Applicable state and local health and water resource rules and regulations; and
6. Safe transportation, disposal and storage of hazardous materials.

## Finding:

1. No filling or development is proposed within the 100-year floodplain.
2. It appears with the new subsurface waste water system, the soils underneath should be able to accommodate the rate of discharge.
3. Not applicable.
4. Not applicable.
5. The applicant has applied for a MDEP review.
6. Not applicable

Conclusion: This standard appears to be met.


NOW THEREFORE the Kittery Planning Board adopts each of the foregoing Findings of Fact and based on these Findings determines the proposed Development will have no significant detrimental impact, and the Kittery Planning Board hereby grants final approval for the Development at the above referenced property, including any waivers granted or conditions as noted.

Conditions of Approval (to be included as notes on the final plan in addition to the existing notes):

1. No changes, erasures, modifications or revisions may be made to any Planning Board approved final plan. (Title 16.10.9.1.2)
2. Applicant/contractor will follow Maine DEP Best Management Practices for all work associated with site and building construction to ensure adequate erosion control and slope stabilization.
3. Prior to the commencement of grading and/or construction within a building envelope, as shown on the Plan, the owner and/or developer must stake all corners of the envelope. These markers must remain in place until the Code Enforcement Officer determines construction is completed and there is no danger of damage to areas that are, per Planning Board approval, to remain undisturbed.
4. All Notices to Applicant contained in the Findings of Fact (dated: $11 / 18 / 2021$ ).

## Conditions of Approval (Not to be included as notes on the final plan):

1. Incorporate any plan revisions on the final plan as recommended by Staff, Planning Board, or Peer Review Engineer, and submit for Staff review prior to presentation of final plan for endorsement. .

Notices to Applicant: (not to be included on the final plan)

1. Prior to the release of the signed plans, the applicant must pay all outstanding fees associated with review, including, but not limited to, Town Attorney fees, peer review, newspaper advertisements and abutter notification.
2. State law requires all subdivision and shoreland development plans, and any plans receiving waivers or variances, be recorded at the York County Registry of Deeds within 90 days of the final approval.
3. Three (3) paper copies of the final recorded plan and any and all related state/federal permits or legal documents that may be required, must be submitted to the Town Planning Department. Date of Planning Board approval shall be included on the final plan in the Signature Block.
4. This approval by the Town Planning Board constitutes an agreement between the Town and the Developer, incorporating the Plan and supporting documentation, the Findings of Fact, and any Conditions of Approval.

The Planning Board authorizes the Planning Board Chair, or Vice Chair, to sign the Final Plan and the Findings of Fact upon confirmation of compliance with any conditions of approval.

> Vote of _in favor_against_ abstaining

APPROVED BY THE KITTERY PLANNING BOARD ON November 18, 2021

Dutch Dunkelberger, Planning Board Chair

[^1]
## PARKING LOT EXPANSION

TAX MAP 28, LOT 14-2


89 ROUTE 236, KITTERY, MAINE


SHEET INDEX
cs cover sheet
E1 EXISTING CONDITIONS PLAN
SITE PLAN
grading and drainage plan
4 UTLITY OVERVIEW PLAN
1 Landscape and lighting plan
D1-D2 Detall sheets
E1 ERosion and sediment control detalls








NOT TO SCALE



 4.

STANDARD DUTY
ASPHALT PAVEMENT SECTION Not To SCALE



 EWER TRENCH NOT TO SCALE

VEGETATED STORM WATER BASIN
Not to Scale

nets.
 -NOTCH OUTLETE ENOS of ountet srruvine wio soi siops. Not To SCALE

TAX MAP 28, LOT 14-2



| Plan Name: | DETAIL SHEET |
| :--- | :---: |
| Project: | PARKING LOT EXPANSON |
| Owner of Record: | 89 ROUE 236, KITTERS, MAINE |D1





# JONES\&BEACH <br> 85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885 603.772.4746 - JonesandBeach.com 

October 26, 2021
Kittery Planning Department
Attn. Bart McDonough, Town Planner
200 Rogers Road
Kittery, ME 03094

## RE: Response Letter <br> 89 Route 236, Kittery, Maine <br> Tax Map 28, Lot 14-2 <br> JBE Project No. 21076

Dear Mr. McDonough,
We are in receipt of comments from Jodie Bray Strickland from CMA Engineers, Inc. dated October 25, 2021, and comments from the October $14^{\text {th }}, 2021$ Planning Board. Review comments are listed below with our responses in bold.

## CMA COMMENTS:

1. 16.8.8.2.C.4.a.3-The stormwater management operation and maintenance manual should specify annual reporting, on or by July 1, to Kittery Code Enforcement office.
RESPONSE: The stormwater management operation and maintenance manual has been revised to specify annual reporting, on or by July 1, to Kittery Code Enforcement office. This is depicted in Section B, Item 3 of the report.
2. The applicant should provide details for the stormwater basin and outlet structure. Leaders on Sheet C3 reference detail Sheet DI, but this was not included in the plan set.
RESPONSE: The details in question are included on Sheet D1. This Sheet has been included in the updated plan set included with this letter.
3. Following the site walk the Town of Kittery requested additional information with respect to the classification of existing pond on site. Gove Environmental Services, Inc. provided a response letter and characterization of the stormwater feature as a detention pond and not a wetland. Their assessment includes discussion of a DEP Stormwater/Site Law permit for maintenance requirements. Does the applicant have this permit? A copy should be submitted to the Town for the project record.
RESPONSE: A Permit by Rule Application was submitted to Maine DEP on August 27 ${ }^{\text {th }}$, 2021. Our receipt email from Maine DEP has been attached to this letter for review. The Permit by Rule is active for the site as Maine DEP did not contact us following the $\mathbf{1 4}$ day waiting period after submission.

## PLANNING BOARD COMMENTS:

- The following comments are from notes taken during the meeting, and does not represent verbatim statements from members of the board.

4. Confirm soils on site to ensure they are suitable for a proposed replacement septic system. RESPONSE: Note 15 on Sheet C1 is included in the plans indicating the soil survey was conducted by a licensed soil scientist. Ken Gardner (License No. CSS\#61) is reviewing the test pit logs from the septic design. His findings will be provided to the town as soon as they are received.
5. Description of the proposed septic system to ensure it is suitable to the uses on site, and is not in danger of failure in the near future. Does the system utilize pretreatment?
RESPONSE: A system description narrative prepared by the project septic designer has been provided with this response letter. Soilair blower units are proposed as part of the design to provide pretreatment for the septic system.
6. Provide a snow removal note on the plans for excess snow to be trucked off site. RESPONSE: Note 21 on Sheet C2 has been added stating this requirement.

## ADDITIONAL ITEMS:

- The power for the proposed light pole will be pulled from the existing light pole adjacent to the dumpster pad. The conduit is depicted on the Site Plan (Sheet C2).
- The test pits, which were dug in preparation for the replacement septic system, have been added to the plans (Sheets C1\& C4).
- A proposed cross walk has been added to provide safe pedestrian access to the proposed parking field. This cross walk is depicted on the plans.

If you have any questions, please feel free to contact our office. Thank you for your time.

Very truly yours,
JONES \& BEACH ENGINEERS, INC.


Erik Poulin, P.E
Project Manager
cc: Davis Drolet, JD Investments, LLC (letter and plans via email) Jodie Bray Strickland, CMA Engineers, Inc. (letter and plans via email)

October 25, 2021

Bart McDonough, Town Planner
Town of Kittery
200 Rogers Road
Kittery, Maine 03904

## RE: Town of Kittery, Planning Board Services <br> Site Plan Application Stormwater Review <br> JD Investments, LLC <br> 89 Route 236, Tax Map 28, Lot 14-2 <br> CMA \#591.140

Dear Bart:

CMA Engineers has received the following information for Assignment \#140, review of the stormwater analysis associated with the Site Plan Application (Tax Map 28, Lot 14-2):

1) Site Plan Review Application for JD Investments, LLC, Tax Map 28 Lot 14-2 prepared by Jones \& Beach Engineers, Inc. dated August 19, 2021.
2) Plans titled Parking Lot Expansion, 89 Route 236 Kittery, Maine for JD Investments, LLC, prepared by Jones \& Beach Engineers, Inc. dated August 17, 2021.
3) Drainage Analysis, Erosion and Sediment Control Plan, Parking Lot Expansion, Ta Map 28, Lot 14-2, 89 Route 236, Kittery, ME 03904, prepared for JD Investments, LLC, 19 Buffam Road, North Berwick, ME, 03906 by Jones \& Beach Engineers, Inc. dated August 19, 2021.
4) Response letter from Jones \& Beach Engineers, Inc. dated October 11, 2021.
5) Tree Photo Log from Jones \& Beach Engineers, Inc. Not dated.
6) Letter from Gove Environmental Services, Inc., dated October 11, 2021.

We have reviewed the information submitted with respect to stormwater for conformance with the Kittery Land Use and Development Code (LUDC) and general engineering practices and offer the comments below that correspond directly to the Town's Ordinances.

The proposed project is a parking addition and associated stormwater improvements at the existing building with a drive through restaurant, first floor retail and second floor office use.

### 16.8 Design and Performance Standards-Built Environment

## Article VIII. Surface Drainage

The proposed plan for stormwater management includes the use of the existing stormwater basin (With some grading and sizing modifications) for storage of peak stormwater flows with controlled release of stormwater to an outlet structure which discharges to an overflow spillway and eventually a wooded buffer.

The design limits post construction flows to levels below those at pre-construction.
16.8.8.2.C.4.a.3. The stormwater management operation and maintenance manual should specify annual reporting, on or by July 1, to Kittery Code Enforcement office.

The applicant should provide details for the stormwater basin and outlet structure. Leaders on Sheet C3 reference detail sheet D1, but this was not included in the plan set.

Following the site walk the Town of Kittery requested additional information with respect to the classification of existing pond on site. Gove Environmental Services, Inc. provided a response letter and characterization of the stormwater feature as a detention pond and not a wetland. Their assessment includes discussion of a DEP Stormwater/Site Law permit for maintenance requirements. Does the applicant have this permit? A copy should be submitted to the Town for the project record.

Should you have any questions, please do not hesitate to call.

Very truly yours,
CMA ENGINEERS, INC.


Jodie Bray Strickland, P.E.
Senior Project Engineer
cc: Erik Poulin, P.E., Jones \& Beach Engineers, Inc.

From: Brady Frick [brady@albertfrick.com](mailto:brady@albertfrick.com)<br>Sent: Friday, October 22, 2021 12:44 PM<br>To: Erik Poulin<br>Subject: RE: 21076-89 Route 236

## Good afternoon Erik

You had inquired about why the first septic system failed so quickly and what is different about the new replacement design. Wastewater from coffee shops are "hard" on leach fields. The effluent discharge has a higher wastewater strength than typical residential wastewater. The Maine Subsurface Wastewater Disposal Rules allocates design flows for commercial facilities. In some facilities such as restaurants the state requires larger systems or added features (filters, larger tanks, pretreatment) to offset the increased wastewater strength. However for coffee shops the state does not require any design adjustments. It appears that the previous site evaluator designed the system per the plumbing code, therefore the system failed prematurely.

## Advanced Wastewater Treatment

To address coffee in the wastewater, the design has to incorporate pretreatment. The issue is most advanced wastewater treatment units rely upon growing bacteria in a pretreatment tank. Coffee increases the PH in the wastewater, which creates an environment where bacteria cannot grow. The coffee essentially makes most pretreatment units useless unless you constantly adjust the PH levels in the waste stream.

My design uses SoilAir pretreatment blowers, which treats the wastewater directly in the leach field. In this application the PH doesn't matter. It also pressurizes the leach field so the effluent will not pond in the stone trenches. I have proposed 2 pods/leach fields. One pod will accept wastewater while the other pod is offline. The system will alternate flow to each pond most likely on a weekly or monthly basis depending one use. By alternating disposal areas there will always be a dry/fresh leach field ready to accept wastewater. If there is no ponding in the leach field there will be no failure.

## Leach Field

There are various leach field products. The old system was an Eljen GSF system, which I use quite often, however they are not the best in commercial applications. Eljen's were most likely used because they require a small foot print.

The new design will incorporate GST stone trenches, which is a new take on an old trusted system. Conventional stone beds or stone trenches require a large area ( $75 \%$ more than Eljen or GST). Crushed stone is an excellent option for leach fields, but is impractical due to the sizing requirements. GST is a proprietary form that has more surface area than a conventional stone trench, therefore the sizing for this product is considerably smaller. We have had great success with the GST leaching system on some very difficult sites.

I have worked on various Circle Ks, Cumberland Farms, and Aroma Joes stores throughout Maine who have had the same problem with premature septic system failure. Some systems failing in 2 years, so this problem is not unique to this facility. Although there are no guarantees on how long a septic system will last due to numerous variables ( design, use, maintenance and installation), I am confident that the replacement system will function properly into the future. No corners have been cut on the proposed replacement design. We have two leach fields, oversized septic tanks and we are using SoilAir. In my opinion this is the best option for this facility to have a long term functioning septic system.

Please feel free to contact met If anyone has any questions regarding the proposed design or products that will be used.

Thank you

Have a great day

Brady Frick<br>President<br>Licensed Site Evaluator

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Confidentiality Statement:
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Note: PDF files, if attached, will be slightly off-scale when printed. However, by requesting a mailed paper copy perfectly scaled plans can be assured, if that is important.

| From: | DEP, PBR Notification [DEP.PBRNotification@maine.gov](mailto:DEP.PBRNotification@maine.gov) |
| :--- | :--- |
| Sent: | Friday, August 27, 2021 12:06 PM |
| To: | Erik Poulin |
| Subject: | Automatic reply: Portland South Maine Regional Office - Kittery - JD Investments LLC - Stormwater |
|  | PBR - Part 2 of 2 |

We have received your email sent to DEP.PBRNotification@maine.gov.

The Department uses this email account solely for receiving Natural Resources Protection Act (NRPA) and Stormwater Permit-by-Rule notifications and Maine Construction General Permit notice of intent forms.

You should not expect to hear further from the Department unless the Department has questions about your submission or administrative staff contact you to collect the application fee if that has not been paid at the time of filing.

NRPA and Stormwater Permits-by Rule (PBRs), as well as coverage under the Maine Construction General Permit (MCGP), become effective 14 days after the Department receives both the notification form with the required attachments and the application fee, unless the Department accepts or deems your application deficient prior to that date.

The Department will not mail or email approval of PBRs or notice of coverage under the MCGP. If you do not hear from the Department within this 14-day period, your submission is approved. Thank you for submitting your notice by email.

Maine DEP

EXTERNAL SENDER: Use caution when following links or opening attachments.

# STORMWATER MANAGEMENT OPERATION AND MAINTENANCE MANUAL 

Parking Lot Expansion<br>Tax Map 28, Lot 14-2<br>89 Route 236<br>Kittery, ME 03904

Prepared for:
JD Investments, LLC
19 Buffum Road
North Berwick, ME 03906

Prepared by:
Jones \& Beach Engineers, Inc.
85 Portsmouth Avenue
P.O. Box 219

Stratham, NH 03885
(603) 772-4746

August 19, 2021
JBE Project No. 21076

## Inspection and Maintenance of Facilities and Property

## A. Maintenance of Common Facilities or Property

1. The Project Developer JD Investments LLC is responsible for maintenance of all stormwater infrastructure associated with this site. This includes all temporary and permanent stormwater and erosion control facilities both during and after construction.

## B. General Inspection and Maintenance Requirements

1. The Owner shall perform all inspections and maintenance with greater than annual frequency as required by this report.
2. Inspection reports must be provided to the DEP upon request.
3. An annual report shall be provided to the town of Kittery Code Enforcement Office on or by July $1^{\text {st }}$.
4. Permanent stormwater and sediment and erosion control facilities to be maintained on the site include, but are not limited to, the following:
a. Culverts
b. Erosion
c. Vegetation and landscaping
d. Riprap inlet and outlet protection aprons
e. Vegetative Stormwater Basin
5. Maintenance of permanent measures shall follow the following schedule:
a. Culverts: Inspection of culvert inlets and outlets at least once per month during the rainy season (March to November). Any debris is to be removed and disposed of properly.
b. Erosion: Annual inspection of the site for erosion, destabilization, settling, and sloughing. Any needed repairs are to be conducted immediately.
c. Vegetation and Landscaping: Annual inspection of site's vegetation and landscaping. Any areas that are bare shall be reseeded and mulched with hay or, if the case is extreme, loamed and seeded or sodded to ensure adequate vegetative cover. Landscape specimens shall be replaced in kind, if they are found to be dead or dying.
d. Riprap: Rock riprap should be inspected annually and after every major storm event in order to ensure that it has not been displaced, undermined, or otherwise damaged. Displaced rock should be replaced, or additional rock added in order to maintain the structure(s) in their undamaged state. Woody vegetation should not be allowed to become established in riprap areas, and/or any debris removed from the void spaces between the rocks. If the riprap is adjacent to a stream or other waterbody, the water should be kept clear of obstructions, debris, and sediment deposits.
e. Vegetative Storm water Basin: The bottoms, interior and exterior side slopes, and crest of earthen detention basins should be mowed, and the vegetation maintained in healthy condition, as appropriate to the function of the facility and type of vegetation.

Vegetated embankments that serve as "berms" or "dams" that impound water should be mowed at least once annually to prevent the establishment of woody vegetation.

Embankments should be inspected at least annually by a qualified professional for settlement, erosion, seepage, animal burrows, woody vegetation, and other conditions that could degrade the embankment and reduce its stability for impounding water. Immediate corrective action should be implemented if any such conditions are found.

Inlet and outlet pipes, inlet and outlet structures, energy dissipation structures or practices, and other structural appurtenances should be inspected at least annually by a qualified professional, and corrective action implemented (e.g., maintenance, repairs, or replacement) as indicated by such inspection;

Trash and debris should be removed from the basin and any inlet or outlet structures whenever observed by inspection;

Accumulated sediment should be removed when it significantly affects basin capacity.

See attached sample forms as a guideline.
Any inquiries in regards to the design, function, and/or maintenance of any one of the above mentioned facilities or tasks shall be directed to the project engineer:

Jones \& Beach Engineers, Inc.
85 Portsmouth Avenue
P.O. Box 219

Stratham, NH 03885
T\#: (603) 772-4746
F\#: (603) 772-0227

| Stormwater <br> Component | Inspection <br> Period | Inspection Criteria/Methods |  |  |
| :--- | :--- | :--- | :---: | :---: |
| Culverts | Once per month | Inspect inlet/outlet. Remove debris. |  |  |
| Erosion | Annually | Repair site erosion. |  |  |
| Vegetation | Annually | Repair bare unvegetated areas. |  |  |
|  | Annually | Relocate displaced rocks, remove woody vegetation and debris. |  |  |
| Riprap |  |  |  |  |
|  |  |  |  |  |
|  | Bi-annually | Inspect for sediment/debris collection, inspect inlets/outlets, inspection for <br> erosion. |  |  |
|  |  |  |  |  |
| Vegetative <br> Stormwater Basin |  |  |  |  |

Tax Map 28 Lots 14-2
Parking Lot Expansion
Kittery, ME

| Yearly Inspection Form |  |  |  |
| :--- | :--- | :--- | :--- |
| Inspected <br> Component | Date of <br> Inspection | Inspector |  |
| Culverts |  |  |  |
|  |  |  |  |
| Erosion |  |  |  |
|  |  |  |  |
| Vegetation |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Riprap Detected / Action Taken |  |  |  |
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| Segetative |  |  |  |
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| From: | town comments |
| :--- | :--- |
| Sent: | Monday, May 22, 2023 12:25 PM |
| To: | Jason Garnham |
| Subject: | Fw: Adult Use Retail in C-2 Zone and School Setbacks |
| Attachments: | image003.jpg |

Hi Jason,
It's Jillian. I was about to post this as public comment for tonight's Town Council meeting but this is something the Planning Board would have decided on right?

From: James Folan [james@eccannabis.com](mailto:james@eccannabis.com)
Sent: Thursday, May 11, 2023 5:43 PM
To: town comments
Subject: Adult Use Retail in C-2 Zone and School Setbacks

Hello,

My name is James Folan. I am a resident of Kittery. It is my understanding that this Council is considering an application for a cannabis retail store at 89 ME-236, Kittery, Maine. As outlined in more detail below, because of the proposed cannabis stores proximity to an educational facility that serves prekindergarten aged children, the Council is prohibited by law from approving the application.

Under state law, municipalities are prohibited from approving cannabis establishment that is within 1,000 feet of the property line of a preexisting public or private school. 28 MRS 402(2)(A). For purposes of determining whether the setback requirement precludes a town from approving a cannabis establishment, the term "school" includes a public school, as defined in Title 20-A, section 1, subsection 24, a private school, as defined in Title 20-A, section 1, subsection 22, a public preschool program, as defined in Title 20-A, section 1, subsection 23-A or any other educational facility that serves children from prekindergarten to grade 12. Under state law, "Kindergarten" means a one-year or 2-year childhood education program, for children at least 5 years of age, immediately prior to grade one. Prekindergarten is an "early education program for students who are at least 4 years of age on October 15th of the school year." That is, the state setback applies to any other educational facility serving children who are at least 4 years of age on October $4^{\text {th }}$ of the school year.

There is a reason for this. In adopting this setback, the legislature considered including daycares. However, after much debate, they decided to draw the line at preschools and other educational facilities serving prekindergarten aged students. They reasoned that the purpose of the setback was to protect children from normalization of recreational cannabis use. Children ages $0-3$ seeing a cannabis store would not result in normalization because of where they were developmentally. However, older children, starting at age 4, would be susceptible to normalization of cannabis use from regular exposure to a cannabis retail store. Accordingly, the legislature determined that the setback should apply to educational facilities serving children in this age group: public preschools and educational facilities serving prekindergarten students, but not daycares that just served younger children.

While towns must comply with state law, they can interpret school more broadly than state law. Kittery's ordinance provides that Marijuana Businesses may not locate within 1,000 feet of a public or private school . . . measured from the exterior wall of the Marijuana Business in a straight line to the property line of the protected use. Kittery's ordinance broadly defines public or private school as "[a] building or buildings and its associated grounds which is principally used to conduct educational classes including public and private elementary schools and nursery schools, including school post-secondary schools, but not including commercial schools. Under Kittery's ordinance, a commercial school is trade school or school of art, beauty, business, etc. and it does not include a private nursery school or prekindergarten educational program.

Great Beginnings Nursery School, Inc., which is located at 76 Dow Hwy, Eliot, ME 03903, is within 1000 feet of 89 ME-236, Kittery, the proposed location for a marijuana retail store. Great Beginnings Nursery School, as an educational facility serving prekindergarten students, falls under the catch all in state law, intended to protect children ages 4-5 attending regular educational program from exposure to cannabis retails stores. According to its Facebook page, Great Beginnings Nursery School provides educational services to children ages 4-5. Attached are some examples of the themed educational programming Great Beginnings Nursery School provides, including instruction in literacy, math, science, and art. Further, Great Beginnings Nursery School, as is a nursery school, falls within the definition of public and private school in Kittery's ordinance.

Based on the foregoing, the town is prohibited under state law from approving Green Truck's application.

> x



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Thank you for your consideration on this matter.

Regards, James Folan


[^0]:    Diane W. Morabito, PE, PTOE
    Vice President Traffic Engineering
    T: +1.207.817.5440 | F: +1. 207.827.3641 | E: diane.morabito@sewall.com
    14 York Street | Portland, Maine 04101 | www.sewall.com

[^1]:    Appeal:
    Per Title 16.6.2.A - An aggrieved party with legal standing may appeal a final decision of the Planning Board to the York County Superior Court in accordance with Maine Rules of Civil Procedures Section 80B, within forty-five (45) days from the date the decision by the Planning Board was rendered.

