



I. Call to Order

II. Approval of Minutes

- a. March 5, 2024 Regular Meeting Minutes

III. Business

- a. **Re-zoning Request- 140, 144, 150, 160 Queens Creek Road**
Presenter: Rebecca Brehmer – Projects/Planning Coordinator, CFM, CZO

Emerald Coast, Inc., on behalf of themselves and other property owners have submitted a rezoning request for four parcels located on Queens Creek Road from O/I (Office and Institutional) to B-1 (Business). The areas are further identified as 140 Queens Creek Road containing 0.48 acres (tax parcel ID 1313-88), 144 Queens Creek Road containing one acre (tax parcel ID 1313-87), 150 Queens Creek Road containing 1.35 acres (tax parcel ID 1313-85), and 160 Queens Creek Road containing 5 acres (tax parcel ID 1313-85.1). The total acreage requested for rezoning is +/-7.83 acres.

Recommended Action: Motion to recommend or deny rezoning of 140, 144, 150, and 160 Queens Creek Road from O/I (Office and Institutional) to B-1 (Highway/Business) with the comprehensive plan consistency statement to the Board of Commissioners.

- b. **Text Amendment to Section § 152.179 Table of Permitted/Special Uses and § 152.212 Use Standards to enable Food, Beverage & Craft Processing and Production with Retail Sales**
Presenter: Andrea Correll, AICP – Town Planner

The purpose of this text amendment is to enable food, beverage, and craft processing and production with retail sales in the B2HDO and MI zoning districts.

Recommended Action: Motion to recommend approval of the Text Amendment to Section § 152.179 Table of Permitted/Special Uses and § 152.212 Use Standards to enable Food, Beverage & Craft Processing and Production with Retail Sales in the B2HDO and MI Zoning Districts with the comprehensive plan consistency statement to the Board of Commissioners.

- c. **Text Amendment to Section §152.009 (E) Maintenance of the Official Zoning Map**
Presenter: Andrea Correll, AICP – Town Planner

The purpose of text amendment is to enable the time that official zoning maps are posted to be changed from two weeks to sixty days of notification.

Recommended Action: Motion to recommend approval of the text amendment to Section §152.009 (E) Maintenance of the Official Zoning Map to amend the time of replacement of the official zoning map from within two weeks to sixty days of notification.

d. Text Amendment to Appendix III Historic District Design Standards, Section 3: Roofs
Presenter: Rebecca Brehmer – Projects/Planning Coordinator, CFM, CZO

The Historic Preservation Commission has recommended amendments to Appendix III Historic District Design Standards, Section 3: Roofs.

Recommended Action: Motion to recommend approval of the text amendment to Appendix III Historic District Design Standards, Section 3 Roofs with the comprehensive plan consistency statement to the Board of Commissioners.

e. Text Amendment to Appendix III Historic District Design Standards, Section 5: Windows and Doors
Presenter: Rebecca Brehmer – Projects/Planning Coordinator, CFM, CZO

The Historic Preservation Commission has recommended amendments to Appendix III Historic District Design Standards, Section 5: Windows and Doors

Recommended Action: Motion to recommend approval of the text amendment to Appendix III Historic District Design Standards, Section 5: Windows and Doors with the comprehensive plan consistency statement to the Board of Commissioners.

IV. Chairman/Board Thoughts/Staff Comments

V. Public Comments

VI. Adjournment

**Town of Swansboro
Planning Board
Regular Meeting Minutes
March 5, 2024**

Call to Order

The meeting was called to order at 5:33 pm. Board members in attendance were Christina Ramsey, Clara Abalos, Sherrie Hancock, Jerry Seddon, Tim Vannoy and Lauren Brown. There was one ETJ vacancy.

Minutes

On a motion by Mr. Vannoy, seconded by Mr. Seddon, the minutes for the January 10, 2024, Special meeting were approved unanimously.

On a motion by Mrs. Abalos, seconded by Mr. Seddon, the minutes for the February 6, 2024, Regular meeting were approved unanimously.

Business

Election of Chair and Vice Chair

In accordance with the Planning Board's General Rules, a Chairman and a Vice-Chairman shall be elected from within the membership by the members.

On a motion by Mr. Vannoy, seconded by Mrs. Abalos and approved unanimously, Christina Ramsey was appointed to serve as Chair.

On a motion by Mr. Vannoy, seconded by Mrs. Brown and approved unanimously, Jerry Seddon was appointed to serve as Vice-Chair.

***Zoning Map Amendment to rezone parcel on Swansboro Loop Road from RA to R20SF
Conditional Zoning***

Planner Correll reviewed that Sand Dollar Homes was seeking a conditional rezoning for 27.287 +/- acres on a parcel of land identified as Tax Parcel ID 019324, from RA (Agricultural Residential) to R-20SF CZ (Single Family Conditional Rezoning) to develop a cluster subdivision. The case was reviewed at the January 10, 2024, special meeting and tabled to the February 6, 2024, regular meeting. The case was again tabled to this meeting. Mrs. Correll shared that the Planning Board had a sixty-day deadline and action needed to be taken with a recommendation to move forward to the Board of Commissioners. If a recommendation was not made, staff would move forward without a recommendation. The legal opinion from the town attorney was provided and has been incorporated into the condition as #6 found below.

The following conditions were reviewed by Planner Correll:

1. A Traffic Impact Analysis meeting the Town's requirements must be completed and approved prior to the preliminary plat (construction drawings) and before the development is heard at the Planning Board.
2. Stormwater methods will be required to route the phase I development stormwater within the development not impacting the wetlands to reduce the amount of stormwater routed to Swansboro Loop Road. (modified)

Additional Conditions were added to address concerns expressed at the required community meetings January 4 and January 5 as well as the Planning Board meeting January 10th.

3. The twenty-five-foot required exterior buffer where there is a natural screen that cannot be seen through the vegetation will remain. Where there is an open field or no vegetation the area will be planted to screen the adjoining neighbors using the type A buffer standard.
4. An additional ten-foot-wide buffer will be required between the proposed 20-foot-wide fire road on the west side of the development adjacent to tax parcels 056584 and 002598. If there is natural screening that cannot be seen through the vegetation will remain, otherwise the type A buffer standard will be used.
5. Construct a 4-foot wooden privacy fence with gates surrounding the lift station with hardy fast-growing shrubs outside the fence to form a hedge meeting ONWASA requirements.
6. Any claim of a 3rd party regarding the applicant's title to the subject property, or the effect of such a claim, if any, on the requested rezoning, is a civil matter between private parties. This would include title conflicts between any existing easements and proposed public streets. The Planning Board's recommendation of approval has no bearing on claims of title to the property, such being outside the authority and jurisdiction of the Planning Board. The Board's recommendation should not be construed as having any effect on title to the property, claims against the property, or the validity of any such claims.

In response to inquiries from the board, the following was clarified by Planner Correll and Josh Johnson Stroud Project Engineer:

- Powell Bill funds are used primarily to resurface municipal maintained roads and Swansboro Loop was a NCDOT maintained road.
- If the traffic engineer determines that a turn lane is necessary, it would be located on Sand Dollars' property and not on the right of way across the street.
- Based on current estimates, Swansboro Loop Road received 4,000 trips within twenty-four hours.
- The ditches and culverts are NCDOT's property to maintain.
- The zoning must be approved before any design can be reviewed on the retention pond.
- The Stormwater permit would accommodate for Phase I and II
- There would not be any development on Lot 32 which contains wetlands to ensure the preservation and, CAMA had established provisions.
- There was no change in the delineation of the isolated wetlands.
- Sidewalks located outside the municipality cannot be improved or added by the town.

During discussion Mrs. Abalos recommended to amend #2 to incorporate phase II.

On a motion by Mr. Seddon and seconded by Mr. Vannoy, the zoning map amendment to rezone the parcel on Swansboro Loop Road from RA to R-20SF CZ was unanimously recommended with six conditions and to incorporate the recommended change to condition #2, as shown above for approval to the Board of Commissioners. The request was found consistent with the comprehensive plan.

Public Comments

Justine Hall of 151 Rooster Run Rd; Johnny Newby of 134 Rooster Run Rd; Stephen Simmons of 407 Tasha Terr all shared the following concerns and were not in favor of the rezoning request.

- Rooster Run being eliminated.
- Stormwater retention
- Traffic on Main Street Extension

Board Comments

Mrs. Ramsey described how pleased she was with Stroud Engineering's patience, open-mindedness, and willingness to work with the Town staff.

Adjournment

On a motion by Mr. Vannoy, seconded by Mr. Seddon, the meeting adjourned at 6:31pm.



Planning Board Meeting Agenda Item Submittal

Item To Be Considered: **Re-zoning Request- 140, 144, 150, 160 Queens Creek Road**

Board Meeting Date: **April 2, 2024**

Prepared By: **Rebecca Brehmer – Projects/Planning Coordinator, CFM, CZO**

Overview: Emerald Coast, Inc., on behalf of themselves and other property owners have submitted a rezoning request for four parcels located on Queens Creek Road from O/I (Office and Institutional) to B-1 (Business). The areas are further identified as 140 Queens Creek Road containing 0.48 acres (tax parcel ID 1313-88), 144 Queens Creek Road containing one acre (tax parcel ID 1313-87), 150 Queens Creek Road containing 1.35 acres (tax parcel ID 1313-85), and 160 Queens Creek Road containing 5 acres (tax parcel ID 1313-85.1). The total acreage requested for rezoning is +/-7.83 acres.

The applicant is interested in commercial/office/flex space/condos/townhouse. However, the applicant has not requested conditional rezoning and therefore, any uses permitted in the B-1 Zoning District would be applicable if approved.

History:

The applicant submitted similar applications in 2017 and 2019 for 3 parcels, and as of July 28, 2021, tax parcel ID 1313-85 has been further subdivided into 2 lots and an additional application for rezoning was submitted in 2022. Below is a summary of the history.

2017

- On August 7, 2017, the Planning Board unanimously recommended denial for B1 rezoning request because it was not consistent with the CAMA Land Use Plan (LUP) of 2009 because of the lack of infrastructure supporting it. The Board considered the density for a B1 (and O/I zoning) and the effect it would have on the traffic on Queens Creek Road.
- At the September 12, 2017, BOC Public Hearing, Planner Andrea Correll summarized excerpts from the CAMA LUP on street deficiencies and land suitability. It was noted that multiple improvements to Queens Creek Road were under review by NCDOT.

Action: _____

The following summarizes existing street deficiencies:

Excerpt for 2009 CAMA LUP (page 7)

Lack of access connecting subdivisions, business apartments, etc., without having to go back on Highway 24 through areas southeast of Highway 24; i.e., connector road from Old Hammock (SR 1512) to Shore Drive area; from Queens Creek Road (SR 1512) to Hammocks Beach Road (SR 1511).

In addition to the CAMA LUP, the Town of Swansboro commissioned a traffic study in November 2015. Over the five-year time span, the greatest number of reported accidents (42) occurred at the intersection of NC-24 (W Corbett Avenue) / Queens Creek Road / Swansboro Middle School Driveway.

There was also discussion/clarification that O/I zoning was no more/less restrictive than B1, Property owners were agreeable to O/I if B1 was not approved.

The Board of Commissioners voted 3 to 2 in favor of the O/I rezoning. However, the vote required a 2/3 approval (4) to pass on the first reading. A second reading was required at the next meeting and approval could then be granted with a simple majority vote.

- At the October 10, 2017, Board of Commissioners meeting where a second reading was to take place, no motion was made for O/I zoning therefore, the property zoning remained R20 (Single Family).

2019/2020

- On September 23, 2019 (Special Meeting), the Planning Board voted 4-1 recommending approval for the B1 rezoning request deeming it consistent with the 2019 CAMA Land Use Plan. As part of their recommendation, the Planning Board noted that there were potential negative traffic impacts of developing the proposed property and recommended renewed efforts by Swansboro officials to engage NCDOT regarding traffic improvement recommendations to NC 24 (W. Corbett Avenue/Queens Creek Road/Middle School driveway) contained in Section 6 of the Town of Swansboro's Traffic Impact Analysis from November 4, 2015.
- At their October 22, 2019, Public Hearing, the Board of Commissioners reviewed/discussed traffic issues along Queen Creek Road and the idea that O/I zoning may be a better zoning district. The vote was unanimous to table the request.
- Mr. Freeman subsequently withdrew his application and submitted a request to rezone the properties O/I - Office Institutional.
- At their December 2, 2019, regular meeting, the Planning Board voted unanimously to recommend approval for O/I zoning; stating that it was consistent with the approved Comprehensive Plan, specifically the CAMA Land Use Plan.

- At their January 13, 2020, Public Hearing, the Board of Commissioners voted unanimously to rezone parcels 1313-85, 1313-87 and 1313-88 located on Queens Creek Road from R-20SF to O/I.

Item III - a.

2022

- On their September 6, 2022, regular meeting, the Planning Board voted unanimously to recommend denial for B-1 rezoning request because it was not consistent with the Future Land Use Plan.
- After this recommendation, Mr. Freeman subsequently withdrew his application to rezone from O/I to B-1 before the Board of Commissioners could review.

(All meeting minutes for the Planning Board and Board of Commissioners above are available on the website if more in-depth review on discussions is needed. The history above is meant to simply show the actions taken.)

Additional Notes:

In conversation with the Town's Traffic Engineer Jeff Hochanadel, he shared that the traffic study conducted in 2019 would most likely not hold the same results today. However, there is no such requirement for a Traffic Impact Analysis when rezoning is requested. A TIA only applies when a *project* is proposed, and in some instances when a special use is requested.

It is also noted that some recent traffic movement improvements have been made along Queens Creek Road at the High School and NCDOT has installed a traffic light at the Swansboro High School/Queens Creek Elementary entrance.

Background Attachment(s):

1. Expanded Overview
2. Application
3. 2019 Timmons Traffic Analysis
4. Draft Ordinance
5. Consistency Statement

Recommended Action: Motion to recommend or deny rezoning of 140, 144, 150, and 160 Queens Creek Road from O/I (Office and Institutional) to B-1 (Highway/Business) with the comprehensive plan consistency statement to the Board of Commissioners.

Expanded Overview:

The four parcels of land requested for rezoning by Emerald Coast, Inc. are in the ETJ and currently zoned O/I (Office Institutional). *See figure 1.* The 2019 CAMA Land Use Plan depicts these parcels as Low Density /Suburban Neighborhood (LDSN) along the Gateway Corridor (GC). *See figure 2.* The tracts front on Queens Creek Road and are located approximately 966 feet from the intersection with NC Highway 24. They are surrounded by property zoned B-1. Across Queens Creek the property is Government/Education and contains Swansboro High School and Queens Creek Elementary School. Some recent NCDOT improvements have been made to the entrances at the schools as well as a traffic light added at the intersection. *See figure 3.* The allowable density according to the 2019 CAMA Land Use Plan is up to 5 dwellings per acre of any type of residential development.

Staff supports the property remaining O/I (office institutional) zoning as a buffer between the low-density residential zoning and the surrounding commercial area, as previously designated in the 2009 Future CAMA Land Use Map. Currently, the commercial B-1 rezoning request is not in keeping with the newer 2019 Future CAMA Land Use Map which now designates this area as a Low Density/Suburban Neighborhood.

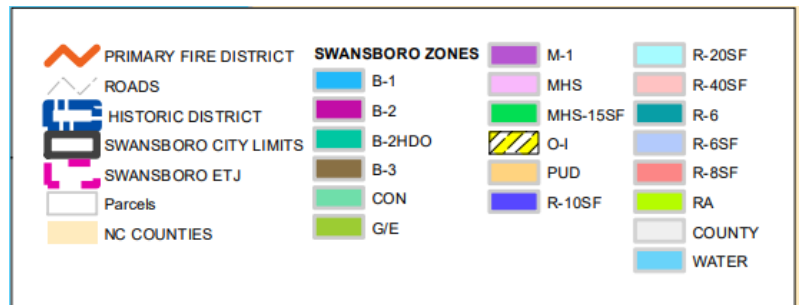
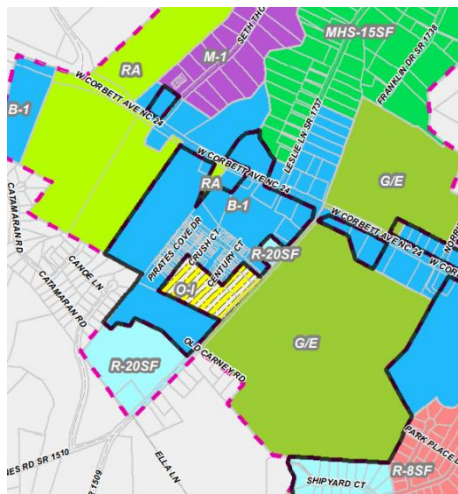


Figure 1- Town Limits Map

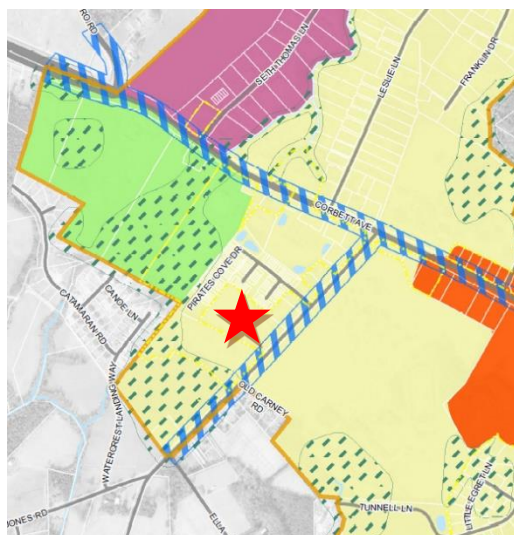


Figure 2- Future Land Use Map

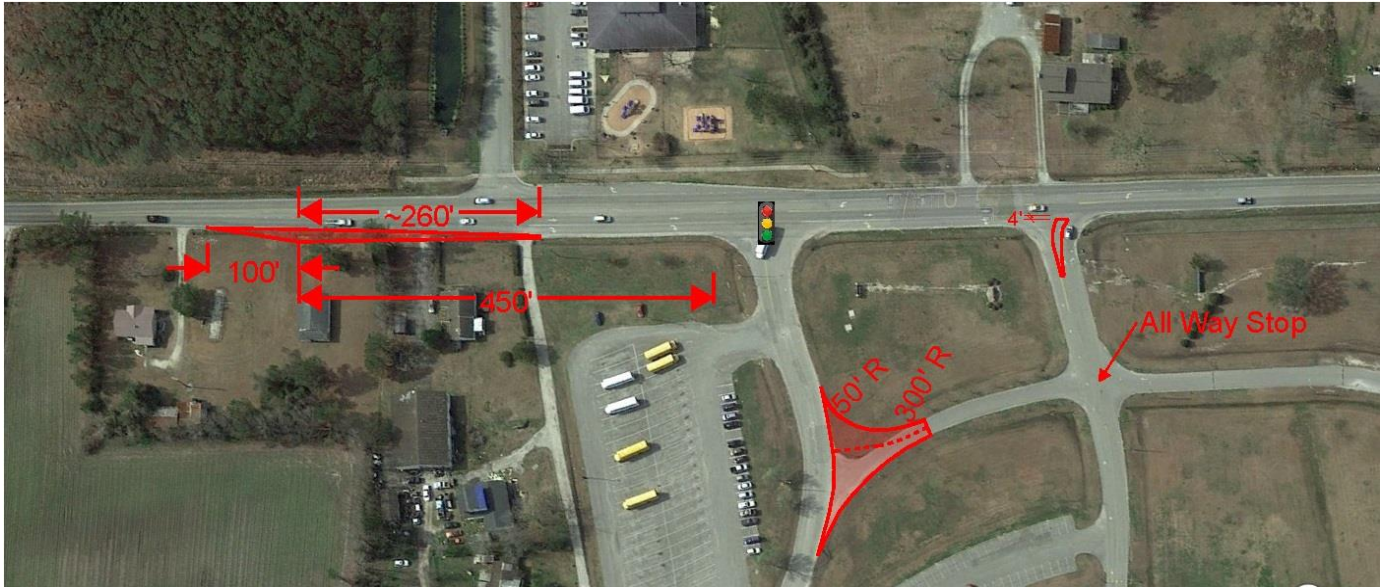


Figure 3- NCDOT Improvements

A recent conversation with the Town's Traffic Engineer, Jeff Hochanadel verified that the most recent bidirectional traffic count on Queens Creek Road was from 2019 and was 14,000 trips a day. A significant increase of 2,000 trips from the past count in 2015 which was 12,000 trips a day.

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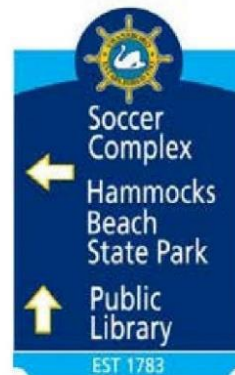
GATEWAY CORRIDOR (GC)

The area around and encompassing NC 24 is the foyer of the community: a place that welcomes travelers and residents alike. For some people, it may be the only part of Swansboro that they see, and the impression it leaves should be reflective of the community’s values: welcoming friendliness, coastal charm, and beauty. The appearance and function of this corridor are in need of attention, and updated and enhanced regulation were identified as important to the community. The Gateway Corridor is all lots within 100’ of and visible from, or with frontage on NC 24.

CHARACTER

The Gateway Corridor is a new designation intended to enhance the function and appearance of the NC 24 corridor, as well as other main entranceways to the town. Generally, the GC area encompasses properties that are directly adjacent to, visible from, and interact with NC 24, although any regulations developed

Character concepts for the GC district





Example of Gateway Corridor (GC)

may need to reduce or expand that definition to accomplish their goals. Recommendations from the Gateway Corridor Report (2013) as well as input from the public open house workshop should inform any regulations that will be developed for this area.

ACCESS AND CIRCULATION

This designation lies along the major thoroughfares in the Town. These high speed, NCDOT-owned roadways designed for local and through traffic. Pedestrian accommodations (likely built to NCDOT Complete Street standards), median beautification and additional landscaping, and reduced left-turn movements should be required and retrofitted. Additional right-of-way dedication or reservation will likely be required for new development or redevelopment, to accommodate anticipated or likely future widenings.

SETBACKS

Additional setbacks, and potentially right-of-way reservation or dedication, will likely be required along major thoroughfares, particularly state highways that are likely to be widened in the future.

MASSING AND BUILDING HEIGHTS

The underlying FLU may control the massing of buildings within the GC, but additional

requirements may also be necessary depending on the particulars of the desired outcome(s).

BLOCKS

As designated by the underlying FLU category, but potentially modified depending on access and traffic management concerns. Adding cross access and interconnectivity between parcels will be crucial to enhancing connectivity and function.

PARKING

Parking is governed by the underlying FLU designation but should also take into account visual impacts on the corridor. Generally, jurisdictions seek to minimize the visibility of parking areas along character enhancement corridors.

APPROPRIATE DENSITY / INTENSITY

As designated by the underlying FLU category, and potentially modified to create an area with enhanced functional and visual characteristics.

REPRESENTATIVE AREAS

This newly formed designation functions as an overlay designed to enhance the existing NC 24 corridor. Ideally, it will have associated zoning regulations that will regulate and enhance the function and appearance of the corridor.

5

LOW DENSITY / SUBURBAN NEIGHBORHOOD (LDSN)

This residential neighborhood type generally reflects recent development in Swansboro. Lots are a little larger and although the neighborhood is walkable, most people move into and out of the neighborhood by car. Although some small-scale non-residential or multi-family residential may occur at key intersections or near significant public resources (like parks), this area is primarily single family detached residential homes.

CHARACTER

Almost exclusively single family detached residential, although occasionally more intense development may be allowed near select town infrastructure, such as near large parks. Low intensity, low nuisance nonresidential uses may also be allowed at select crossroads or neighborhood activity centers. Lots are wider and regular.

ACCESS AND CIRCULATION

Streets are residential in character, with low speeds and occasional, informal on-street parallel parking. Street trees are present but may be separated from the edge of pavement by a ditch. Sidewalks are present but depending on density may not be on both sides of the street.

SETBACKS

Setbacks are generally more restrictive than in other residential districts, with significantly sized yards often present on all sides of a building.

MASSING AND BUILDING HEIGHTS

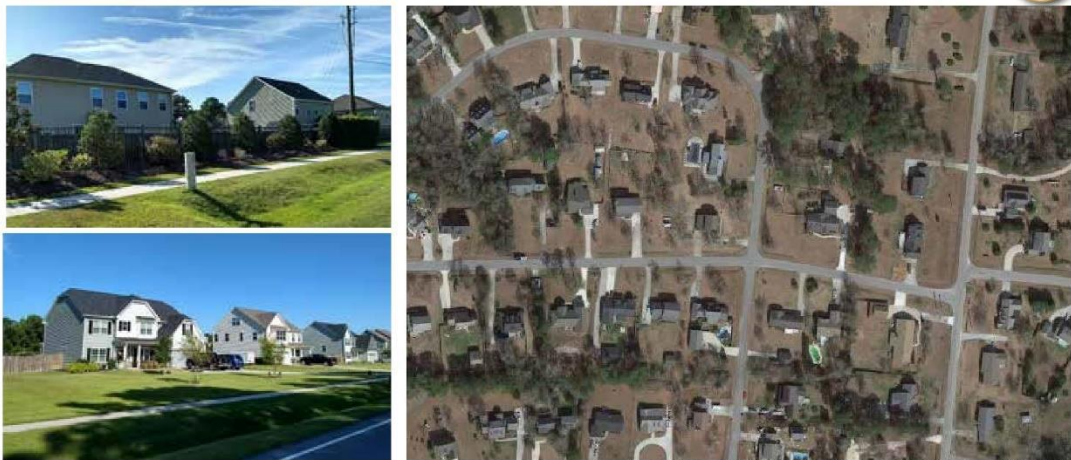
Lower height structures, that typically do not exceed two stories, with one-story structures also common. Buildings are separated from each other by relatively large side yards.

BLOCKS

Maximum block lengths must be similar to those of the CTN, regardless of density of development. This is especially relevant when connecting to existing roads which are or will be thoroughfares or collectors of any sort, including residential collectors. The appropriate block length will allow the neighborhood to evolve as the town grows and changes through time.



Forestbrook Neighborhood



Example of Low Density / Suburban Neighborhood (LDSN)

PARKING

Parking location is less restrictive than in CTN, and can be located on any side of a building, including in corner yards. The larger lots accommodate garages on the sides of buildings, which may be front- or side-loaded.

APPROPRIATE DENSITY

- » This low-density residential type will occupy most of the town's land area.
- » Up to 5 dwellings per acre of any type of residential within 1/2 mile walking distance of any Town Center area or within 1/4 mile walking distance of a Coastal Traditional Neighborhood area, whichever is greater (i.e. - allows increased density).
- » Up to 4 dwellings per acre of any type residential within 1/4 mile walking distance of a public park of 5 acres or more in size, if there is improved pedestrian access.
- » Up to 2 dwellings per acre in all other areas.

REPRESENTATIVE AREAS

- » The Forestbrook, Halls Creek, Halls Creek North, and River Reach neighborhoods, especially if there was greater connectivity or stub-outs to adjacent parcels.
- » The neighborhood surrounding Swansboro Hills Apartments

OTHER CONCERNS

Maintaining connectivity between subdivisions and neighborhoods is what creates a community. Blocks and street connections must be designed such that future connections and extensions are made that create a cohesive, regular, intuitive street pattern, to the greatest extent possible. This also ensures that as the area evolves, more intense uses can replace older uses through redevelopment.

The lower density of development in the outskirts of this FLU designation (2 du/acre) will quickly consume land and may inadvertently displace residential demand and development to just outside the town's ETJ. This may be exacerbated by the availability of water and sewer services, and potentially lower lot size requirements. The Town should coordinate with the County and ONWASA to avoid this outcome.

Additionally, a restriction on density within the town (i.e. - 2 dwellings per acre) which provides municipal services (i.e. - parks, streets, water, sewer, police, etc.) may consume a large amount of land and return a lower amount of revenue (property taxes) that is used to support those municipal services. Generally speaking, higher density lots will provide greater return on investment (property taxes) to support the services that the town provides.

Town of Swansboro
601 W. Corbett Avenue Swansboro, NC 28584
Phone (910) 326-4428 - Fax (910) 326-3101

APPLICATION FOR ZONING & ORDINANCE AMENDMENTS

Check the Appropriate Blank

- Add a Use to a Zoning District
- Remove a Use from a Zoning District
- Create a New Zoning District
- Future Land Use Map Amendment

Application No. _____

- Amend Code of Ordinances
- Amend Unified Development Ordinance
- Zoning District Designation Change

A complete application must be received with the fee by the third Friday prior to the month of review.

Property Owner Name 140 HARGETT, 150 MURCHISON, 144/160 EMERALD COAST, INC. Phone # 910-330-1650

Address of Zoning Request 140, Prcl# 113-88: 144, Prcl# 1313-87: 150, Prcl# 1313-85: 160, Prcl# 1616-85.1

Mailing Address Cecil Hargett Jr. 114 Leslie Dr. Hubert, Stuart Murchison 150 Queens Creek Rd, Emerald Coast Inc. PO 1649 Swansboro

Zoning Amendments

Attach a copy of the legal description of the property (including address if assigned) that is requested for a zoning change (i.e. metes and bounds). The application will not be scheduled for review until these items are received.

* Provide a list names and mailing address of adjacent property owner on the reverse side of this application. The application will not be scheduled for review until these items are received.

Present Zoning O-I Desired Zoning B-1

Probable Use of Property There are only a few Permitted and Special uses allowed in the O-I.

Reason for Zoning Change Request There is now a traffic light at the school entrance on Queens Creek Rd

Ordinance Amendments

Code Section to be amended _____

Print clearly the code section wordage to be amended _____

Print clearly the code section wordage as suggested _____

* PIRATES COVE TOWNHOME ASSOCIATION INC. 1612 MILITARY CUTOFF RD WILMINGTON NC 28403-5741

EXCEL QUEENS CREEK PROPERTIES LLC. PO BOX 12588 NEW BERN NC 28561

Reason for requested amendment _____

SCF RC FUNDING IV LLC. 902 CARNEGIE CTR STE 520 PRINCETON NJ 08540-6531

Signature [Handwritten Signature] Date March 3, 2024

Future Land Use Map Amendment

Present Future Land Use Category _____ Desired Future Land Use Category _____

Use of Property _____

Reason for Future Land Use Map Change Request _____

Town Hall Use Only

Fee Paid N/A Date Received 3/6/24 Date scheduled for Planning & Zoning Board review 3/2/24

Recommendation from Planning & Zoning Board _____

Public Hearing Run Dates _____ Date of Public Hearing _____

Effective Date of Change _____ Ordinance Number _____

[Handwritten Signature]
3/6/24

September 3, 2019

Paula W. Webb, MMC-NCCMC
Assistant Town Manager / Town Clerk
Town of Swansboro
601 W Corbett Avenue
Swansboro, NC 28584
pwebb@ci.swansboro.nc.us
910-326-4428

RE: Queens Creek Traffic Analysis

Dear Ms. Webb,

Timmons Group performed a cursory capacity analysis of the proposed 7-acre commercial development to be located off Queens Creek Road south of NC 24 (W Corbett Avenue). It was assumed, for purposes of analysis, that a 10,000 square foot (SF) general retail development will be constructed on the proposed 7-acre site*. The site generated traffic impacts were analyzed at the adjacent intersection of NC 24 (W Corbett Avenue) / Queens Creek Road / Middle School Driveway.

* Site specifics were not provided at the time of this capacity analysis. It is likely that a development larger than 10,000 SF could be constructed on the existing 7-acre site. 10,000 SF was chosen to represent a minimal build-out scenario. Building size(s) is dependent upon existing site conditions and constraints (availability of water/sewer, presence of wetlands/streams, etc).

The intersection of NC 24 (W Corbett Avenue) / Queens Creek Road / Middle School Driveway is a signalized intersection with split side street phasing. The northbound intersection approach includes exclusive left and right-turn lanes. The southbound middle school driveway approach includes an exclusive left-turn lane and a shared through / right-turn lane. The eastbound intersection approach includes two through lanes and an exclusive right-turn lane. The westbound intersection approach includes an exclusive left-turn lane and two through lanes. Eastbound left-turning, westbound right-turning, and northbound through movements are prohibited at this intersection.

Existing / Background Traffic Volumes

Figure 1 shows 2019 Existing traffic volumes and projected 2021[^] Background traffic volumes. Existing peak hour turning movement traffic volumes, collected in May 2019, were acquired from the NCDOT (and not collected by Timmons Group). 2021 Background traffic volumes were calculated using a 3% ambient growth rate grown exponentially over two years.

[^] It was assumed, for purposes of analysis, that the proposed development would be constructed by 2021.

Build Traffic Volumes

The site-generated trips shown in **Table 1** are based on trip generation information provided in the 10th Edition of the Institute of Transportation Engineer's (ITE's) *Trip Generation Manual*. Trip generation was calculated using the assumed commercial square footage (10,000 SF) as the independent variable, as well as the provided equation (per NCDOT guidelines).

Table 1 – Trip Generation Summary

ITE Land Use Code	Independent Variable	Daily	AM Peak Hour		PM Peak Hour			
		Total	In	Out	Total	In	Out	Total
Shopping Center (820)	10,000 SF	1,256	97	60	157	47	51	98
820 Pass-Bys (PM - 34%)		--	--	--	--	16	17	33
Total:		1,256	97	60	157	31	34	65

SOURCE: Institute of Transportation Engineers' *Trip Generation Manual* 10th Edition (2017)

AM peak hour trips generated totaled 97 incoming and 60 outgoing where PM peak hour trips totaled 47 incoming and 51 outgoing. For Land Use Code (LUC) 820, a pass-by percentage of 34% was assumed for PM peak hour trips (per NCDOT standards). Following these reductions, final PM peak hour trips totaled 31 incoming and 34 outgoing. Average daily traffic (ADT) volumes generated by the development totaled 1,256 vehicles per day. No reduction in trips were included due to internal capture.

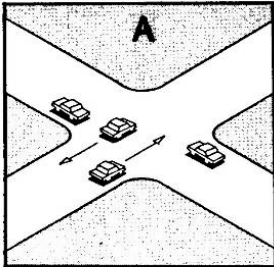
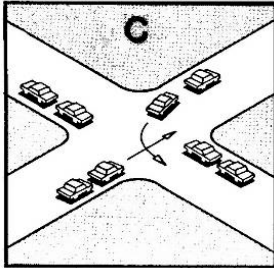
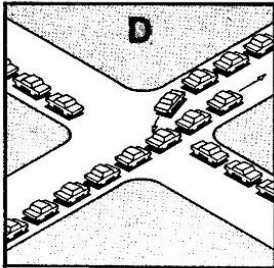
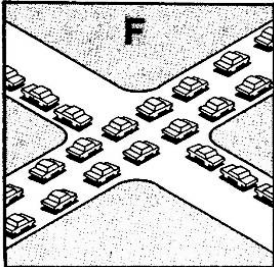
The directional traffic patterns, or trip distribution, of the site-generated traffic was assumed to be split equally between east and westbound NC 24 (W Corbett Avenue). The incoming / outgoing site trip percentages were routed, via shortest path, to and from the proposed commercial development. The distribution percentages were then applied to the generated trips to predict routes and project traffic volumes for the 2021 Build scenario. **Figure 2** shows the 2021 trip distribution percentages, trip distribution volumes, and 2021 Build traffic volumes. 2021 Build traffic volumes were then determined by applying the site trip distribution volumes to the Background traffic volumes (see **Figure 1**).

Traffic Capacity Analyses

Using field observations, aerial photography, and traffic count data, traffic operations were analyzed during 2019 (existing) and 2021 (without and with the proposed development site trips).

Capacity analysis allows traffic engineers to determine the impacts of traffic on the surrounding roadway network. The Transportation Research Board's (TRB) *Highway Capacity Manual* (HCM) methodologies govern how the capacity analyses are conducted and how the results are interpreted. There are six letter grades of Levels of Service (LOS) from A to F, with LOS A representing the best operating conditions and LOS F the worst operating conditions. At signalized intersections, an overall intersection LOS E is generally considered unacceptable. **Table 2** shows in detail how each of these levels of service are interpreted.

Table 2: Level of Service Definitions

Level of Service	Roadway Segments or Controlled Access Highways	Intersections	
A	Free flow, low traffic density.	No vehicle waits longer than one signal indication.	
B	Delay is not unreasonable, stable traffic flow.	On a rare occasion motorists wait through more than one signal indication.	
C	Stable condition, movements somewhat restricted due to higher volumes, but not objectionable for motorists.	Intermittently drivers wait through more than one signal indication, and occasionally backups may develop behind left turning vehicles, traffic flow still stable and acceptable.	
D	Movements more restricted, queues and delays may occur during short peaks, but lower demands occur often enough to permit clearing, thus preventing excessive backups.	Delays at intersections may become extensive with some, especially left-turning vehicles waiting two or more signal indications, but enough cycles with lower demand occur to permit periodic clearance, thus preventing excessive backups.	
E	Actual capacity of the roadway involves delay to all motorists due to congestion.	Very long queues may create lengthy delays, especially for left-turning vehicles.	
F	Forced flow with demand volumes greater than capacity resulting in complete congestion. Volumes drop to zero in extreme cases.	Backups from locations downstream restrict or prevent movement of vehicles out of approach creating a storage area during part or all of an hour.	

SOURCE: "A Policy on Design of Design of Urban Highways and Arterial Streets" - AASHTO, 1973 based upon material published in "Highway Capacity Manual", National Academy of Sciences, 1965.

For signalized and unsignalized intersections, level of service is defined in terms of **delay**, a measure of driver discomfort, frustration, fuel consumption and lost travel time. **Table 3** summarizes the delay associated with each LOS category:

Table 3: Signalized and Unsignalized Intersection Level of Service Criteria

Signalized Intersections		Unsignalized Intersections	
Level of Service	Control Delay per Vehicle (sec/veh)	Level of Service	Average Control Delay (sec/veh)
A	≤ 10	A	0 to 10
B	> 10 to ≤ 20	B	> 10 to ≤ 15
C	> 20 to ≤ 35	C	> 15 to ≤ 25
D	> 35 to ≤ 55	D	> 25 to ≤ 35
E	> 55 to ≤ 80	E	> 35 to ≤ 50
F	> 80	F	> 50

Source: Exhibit 16-2 and Exhibit 17-2 from TRB's "Highway Capacity Manual 2000"

Capacity analyses were performed to assess operational conditions. Study area intersections were analyzed using SYNCHRO Version 9.2 based on Highway Capacity Manual (HCM) methodologies with the following assumptions:

- Existing grades;
- 12-foot lane widths;
- No parking activity, bus stops, or pedestrians;
- Existing AM peak hour factor (PHFs)**;
- PM PHF of 0.90;
- Heavy vehicle percentages 2%; and
- Timing values found in the provided traffic signal plans.

** Existing PHFs were used due to the existing middle school traffic.

Table 4 – Level of Service and Delay (sec/veh) Results – Study Area Intersection

Intersection	2019 Existing Traffic Volumes		2021 Background Traffic Volumes		2021 Build Traffic Volumes	
	AM	PM	AM	PM	AM	PM
Queens Creek Road at NC 24 (W Corbett Ave)	E (75.7)	E (56.1)	F (89.3)	E (70.7)	F (99.0)	E (74.6)

Per **Table 4**, the signalized intersection of NC 24 (W Corbett Avenue) / Queens Creek Road is currently operating at a LOS E during the 2019 Existing AM and PM peak hours. The intersection is projected to operate at a LOS F during the 2021 Background AM peak hour and LOS E during the 2021 PM peak hour. Following the addition of site trip volumes, the

intersection is projected to continue to operate at a LOS F during the 2021 Build AM peak hour and LOS E during the 2021 PM peak hour. Additionally, as shown in the attached Synchro analysis outputs, significant 95th percentile northbound queuing is projected to occur along Queens Creek Road during both analyzed peak hours (greater than 275-feet for left-turn queue lengths and 575-feet for right-turning queue lengths). Existing queue storage is inadequate to handle projected queue lengths for the northbound intersection approach.

Conclusions

Based on the subject analyses, the construction of a commercial development along Queens Creek Road will require the construction of offsite improvements at the intersection of NC 24 (W Corbett Avenue) / Queens Creek Road to meet guidelines provided in the Town's Unified Development Ordinance. Existing intersection capacity is inadequate to handle existing / future traffic volumes. The addition of ambient traffic growth and proposed commercial site trips will cause intersection conditions to further degrade in future conditions.

Should you have any questions regarding this memorandum, please do not hesitate to contact me.

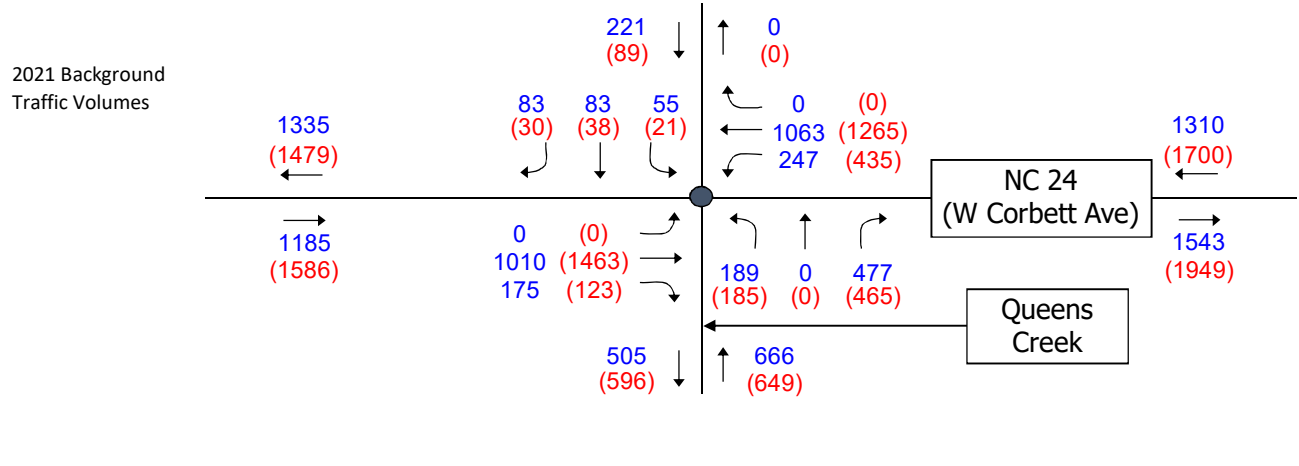
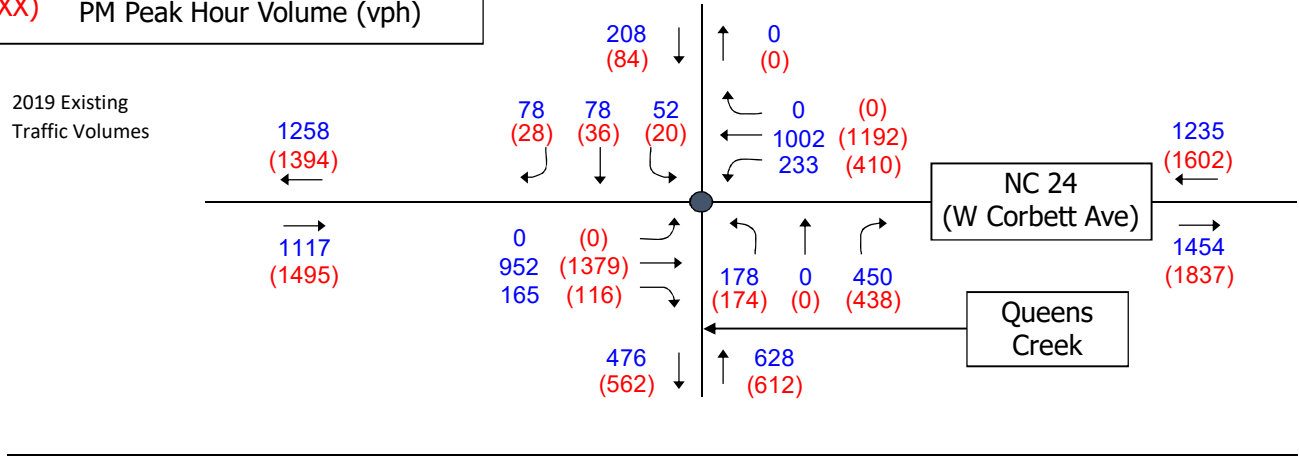
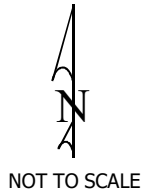
Sincerely,

Jeffrey P. Hochanadel, PE, PTOE
Senior Project Manager, Transportation

(Attachments)

LEGEND:

- Existing Road
- - - Proposed Road
- XX AM Peak Hour Volume (vph)
- (XX) PM Peak Hour Volume (vph)



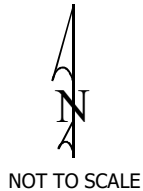
Queens Creek Traffic Analysis

Existing/Background Traffic Volumes

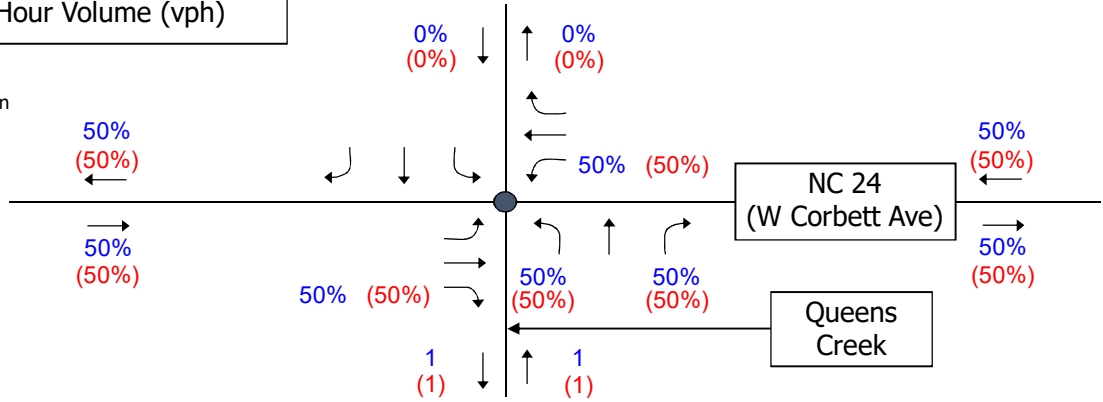
Figure 1

LEGEND:

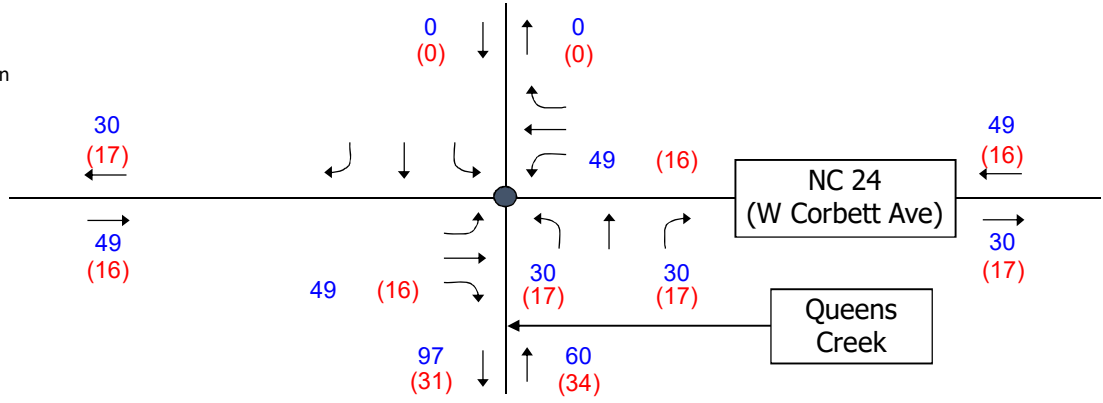
- Existing Road
- - - Proposed Road
- XX AM Peak Hour Volume (vph)
- (XX) PM Peak Hour Volume (vph)



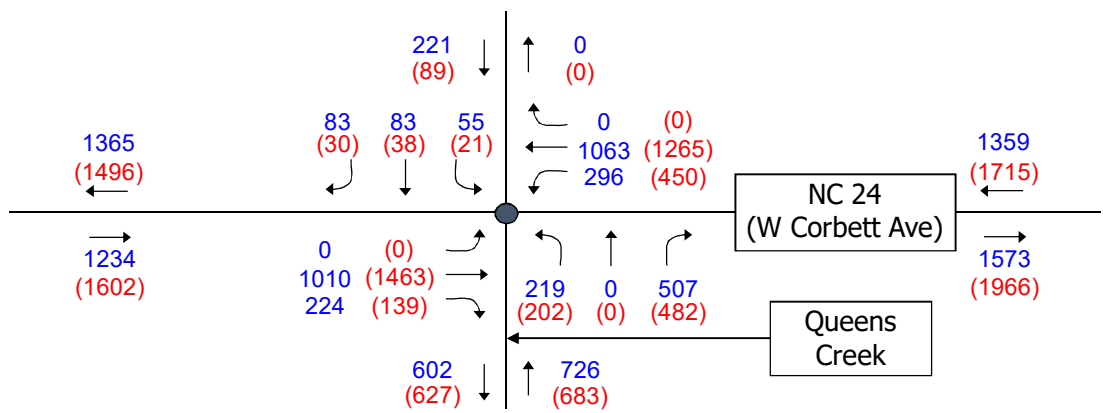
2021 Trip Distribution Percentages



2021 Trip Distribution Volumes



2021 Build Traffic Volumes



Queens Creek Traffic Analysis Build Traffic Volumes

Figure 2

Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

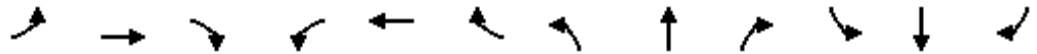


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑		↖		↗	↖	↗	
Traffic Volume (vph)	0	952	165	233	1002	0	178	0	450	52	78	78
Future Volume (vph)	0	952	165	233	1002	0	178	0	450	52	78	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		415	125		0	190		0	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.850						0.850		0.925	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	3471	1553	1752	3505	0	1752	0	1568	1641	1598	0
Flt Permitted				0.080			0.950			0.950		
Satd. Flow (perm)	0	3471	1553	148	3505	0	1752	0	1568	1641	1598	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			45			25	
Link Distance (ft)		1048			745			1037			256	
Travel Time (s)		20.4			14.5			15.7			7.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.76	0.76	0.76	0.75	0.75	0.75	0.64	0.64	0.64	0.50	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	10%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1253	217	311	1336	0	278	0	703	104	156	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1253	217	311	1336	0	278	0	703	104	312	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(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
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
Turn Type		NA	pm+ov	D.P+P	NA		Prot		pm+ov	Split	NA	
Protected Phases		2	4	1	6		4		1	3	3	
Permitted Phases			2	2					4			
Detector Phase		2	4	1	6		4		1	3	3	
Switch Phase												
Minimum Initial (s)		10.0	7.0	7.0	10.0		7.0		7.0	7.0	7.0	
Minimum Split (s)		23.8	33.0	12.9	23.9		33.0		12.9	20.0	20.0	
Total Split (s)		55.0	33.0	32.0	87.0		33.0		32.0	30.0	30.0	
Total Split (%)		36.7%	22.0%	21.3%	58.0%		22.0%		21.3%	20.0%	20.0%	

Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)		49.1	27.4	26.1	81.1		27.4		26.1	24.2	24.2	
Yellow Time (s)		3.8	3.0	3.0	3.8		3.0		3.0	3.2	3.2	
All-Red Time (s)		2.1	2.6	2.9	2.1		2.6		2.9	2.6	2.6	
Lost Time Adjust (s)		-0.9	-0.6	-0.9	-0.9		-0.6		-0.9	-0.8	-0.8	
Total Lost Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	
Lead/Lag		Lag	Lag	Lead			Lag		Lead	Lead	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes			Yes		Yes	Yes	Yes	
Vehicle Extension (s)		6.0	2.0	2.0	6.0		2.0		2.0	2.0	2.0	
Minimum Gap (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Time Before Reduce (s)		15.0	0.0	0.0	15.0		0.0		0.0	0.0	0.0	
Time To Reduce (s)		30.0	0.0	0.0	30.0		0.0		0.0	0.0	0.0	
Recall Mode		Min	Min	None	None		Min		None	None	None	
Walk Time (s)			7.0				7.0					
Flash Dont Walk (s)			20.0				20.0					
Pedestrian Calls (#/hr)			0				0					
Act Effect Green (s)		50.0	76.1	77.0	82.0		26.0		58.1	25.0	25.0	
Actuated g/C Ratio		0.34	0.51	0.52	0.55		0.18		0.39	0.17	0.17	
v/c Ratio		1.07	0.27	0.84	0.69		0.90		1.14	0.38	1.16	
Control Delay		93.1	11.1	62.7	26.4		91.3		123.9	59.7	157.0	
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Delay		93.1	11.1	62.7	26.4		91.3		123.9	59.7	157.0	
LOS		F	B	E	C		F		F	E	F	
Approach Delay		81.0			33.3			114.7				132.7
Approach LOS		F			C			F				F
Queue Length 50th (ft)		~720	54	245	489		266		~790	92	~363	
Queue Length 95th (ft)		#615	66	279	425		250		547	81	219	
Internal Link Dist (ft)		968			665			957				176
Turn Bay Length (ft)			415	125			190					
Base Capacity (vph)		1172	818	369	1941		331		614	277	269	
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		1.07	0.27	0.84	0.69		0.84		1.14	0.38	1.16	

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	148.1
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.16
Intersection Signal Delay:	75.7
Intersection LOS:	E
Intersection Capacity Utilization:	73.8%
ICU Level of Service:	D
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

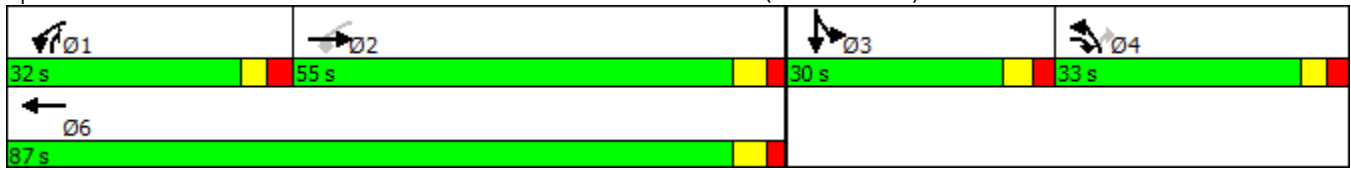
Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

Item III - a.

Splits and Phases: 257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)



Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

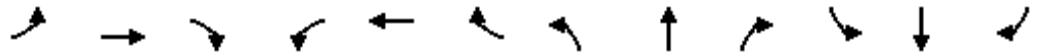


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (vph)	0	1379	116	410	1192	0	174	0	438	20	36	28
Future Volume (vph)	0	1379	116	410	1192	0	174	0	438	20	36	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		415	125		0	190		0	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.850						0.850		0.935	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	3471	1553	1752	3505	0	1752	0	1568	1641	1615	0
Flt Permitted				0.079			0.950			0.950		
Satd. Flow (perm)	0	3471	1553	146	3505	0	1752	0	1568	1641	1615	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			45			25	
Link Distance (ft)		1048			745			1037			256	
Travel Time (s)		20.4			14.5			15.7			7.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	10%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1532	129	456	1324	0	193	0	487	22	40	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1532	129	456	1324	0	193	0	487	22	71	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(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
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
Turn Type		NA	pm+ov	D.P+P	NA		Prot		pm+ov	Split	NA	
Protected Phases		2	4	1	6		4		1	3	3	
Permitted Phases			2	2					4			
Detector Phase		2	4	1	6		4		1	3	3	
Switch Phase												
Minimum Initial (s)		10.0	7.0	7.0	10.0		7.0		7.0	7.0	7.0	
Minimum Split (s)		23.8	33.0	12.9	23.9		33.0		12.9	20.0	20.0	
Total Split (s)		55.0	33.0	32.0	87.0		33.0		32.0	30.0	30.0	
Total Split (%)		36.7%	22.0%	21.3%	58.0%		22.0%		21.3%	20.0%	20.0%	

Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)		49.1	27.4	26.1	81.1		27.4		26.1	24.2	24.2	
Yellow Time (s)		3.8	3.0	3.0	3.8		3.0		3.0	3.2	3.2	
All-Red Time (s)		2.1	2.6	2.9	2.1		2.6		2.9	2.6	2.6	
Lost Time Adjust (s)		-0.9	-0.6	-0.9	-0.9		-0.6		-0.9	-0.8	-0.8	
Total Lost Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	
Lead/Lag		Lag	Lag	Lead			Lag		Lead	Lead	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes			Yes		Yes	Yes	Yes	
Vehicle Extension (s)		6.0	2.0	2.0	6.0		2.0		2.0	2.0	2.0	
Minimum Gap (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Time Before Reduce (s)		15.0	0.0	0.0	15.0		0.0		0.0	0.0	0.0	
Time To Reduce (s)		30.0	0.0	0.0	30.0		0.0		0.0	0.0	0.0	
Recall Mode		Min	Min	None	None		Min		None	None	None	
Walk Time (s)			7.0				7.0					
Flash Dont Walk (s)			20.0				20.0					
Pedestrian Calls (#/hr)			0				0					
Act Effect Green (s)		50.5	70.4	77.8	82.9		18.7		51.0	11.1	11.1	
Actuated g/C Ratio		0.40	0.56	0.62	0.66		0.15		0.41	0.09	0.09	
v/c Ratio		1.09	0.15	1.03	0.57		0.74		0.76	0.15	0.50	
Control Delay		88.6	8.3	89.5	14.5		68.5		41.5	57.5	68.7	
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Delay		88.6	8.3	89.5	14.5		68.5		41.5	57.5	68.7	
LOS		F	A	F	B		E		D	E	E	
Approach Delay		82.3			33.7			49.2			66.1	
Approach LOS		F			C			D			E	
Queue Length 50th (ft)		~758	30	~359	300		153		342	17	57	
Queue Length 95th (ft)		#1046	50	#665	478		245		511	47	113	
Internal Link Dist (ft)		968			665			957			176	
Turn Bay Length (ft)			415	125			190					
Base Capacity (vph)		1406	997	442	2329		397		641	332	327	
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		1.09	0.13	1.03	0.57		0.49		0.76	0.07	0.22	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 124.7
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 56.1
 Intersection LOS: E
 Intersection Capacity Utilization 88.8%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

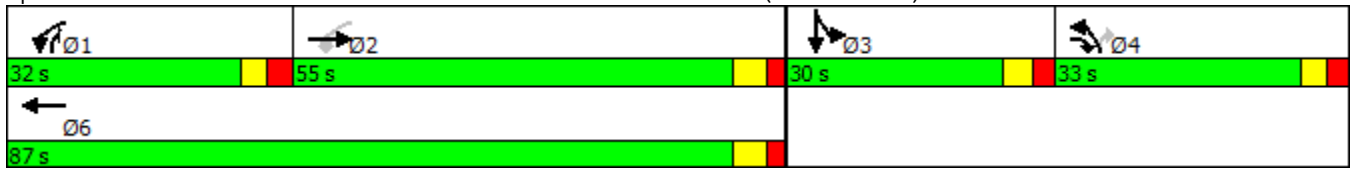
Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

Item III - a.

Splits and Phases: 257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)



Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑		↖		↗	↖	↗	
Traffic Volume (vph)	0	1010	175	247	1063	0	189	0	477	55	83	83
Future Volume (vph)	0	1010	175	247	1063	0	189	0	477	55	83	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%				0%
Storage Length (ft)	0		415	125		0	190		0	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850		0.925	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	3471	1553	1752	3505	0	1752	0	1568	1641	1598	0
Flt Permitted				0.080			0.950			0.950		
Satd. Flow (perm)	0	3471	1553	148	3505	0	1752	0	1568	1641	1598	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			45				25
Link Distance (ft)		1048			745			1037				256
Travel Time (s)		20.4			14.5			15.7				7.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.76	0.76	0.76	0.75	0.75	0.75	0.64	0.64	0.64	0.50	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	10%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	0	1329	230	329	1417	0	295	0	745	110	166	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1329	230	329	1417	0	295	0	745	110	332	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(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes			Yes				
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
Turn Type		NA	pm+ov	D.P+P	NA		Prot		pm+ov	Split	NA	
Protected Phases		2	4	1	6		4		1	3	3	
Permitted Phases			2	2					4			
Detector Phase		2	4	1	6		4		1	3	3	
Switch Phase												
Minimum Initial (s)		10.0	7.0	7.0	10.0		7.0		7.0	7.0	7.0	
Minimum Split (s)		23.8	33.0	12.9	23.9		33.0		12.9	20.0	20.0	
Total Split (s)		55.0	33.0	32.0	87.0		33.0		32.0	30.0	30.0	
Total Split (%)		36.7%	22.0%	21.3%	58.0%		22.0%		21.3%	20.0%	20.0%	

Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)		49.1	27.4	26.1	81.1		27.4		26.1	24.2	24.2	
Yellow Time (s)		3.8	3.0	3.0	3.8		3.0		3.0	3.2	3.2	
All-Red Time (s)		2.1	2.6	2.9	2.1		2.6		2.9	2.6	2.6	
Lost Time Adjust (s)		-0.9	-0.6	-0.9	-0.9		-0.6		-0.9	-0.8	-0.8	
Total Lost Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	
Lead/Lag		Lag	Lag	Lead			Lag		Lead	Lead	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes			Yes		Yes	Yes	Yes	
Vehicle Extension (s)		6.0	2.0	2.0	6.0		2.0		2.0	2.0	2.0	
Minimum Gap (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Time Before Reduce (s)		15.0	0.0	0.0	15.0		0.0		0.0	0.0	0.0	
Time To Reduce (s)		30.0	0.0	0.0	30.0		0.0		0.0	0.0	0.0	
Recall Mode		Min	Min	None	None		Min		None	None	None	
Walk Time (s)			7.0				7.0					
Flash Dont Walk (s)			20.0				20.0					
Pedestrian Calls (#/hr)			0				0					
Act Effect Green (s)		50.0	77.0	77.0	82.0		26.9		59.0	25.0	25.0	
Actuated g/C Ratio		0.34	0.52	0.52	0.55		0.18		0.40	0.17	0.17	
v/c Ratio		1.14	0.29	0.90	0.73		0.93		1.20	0.40	1.24	
Control Delay		118.4	11.2	70.9	28.3		95.5		144.9	60.6	184.9	
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Delay		118.4	11.2	70.9	28.3		95.5		144.9	60.6	184.9	
LOS		F	B	E	C		F		F	E	F	
Approach Delay		102.5			36.3			130.9				154.0
Approach LOS		F			D			F				F
Queue Length 50th (ft)		-801	58	266	539		286		-875	97	-403	
Queue Length 95th (ft)		#698	70	299	462		265		595	86	233	
Internal Link Dist (ft)		968			665			957				176
Turn Bay Length (ft)			415	125			190					
Base Capacity (vph)		1165	813	367	1930		329		620	275	268	
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		1.14	0.28	0.90	0.73		0.90		1.20	0.40	1.24	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 149
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.24
 Intersection Signal Delay: 89.3
 Intersection LOS: F
 Intersection Capacity Utilization 77.4%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

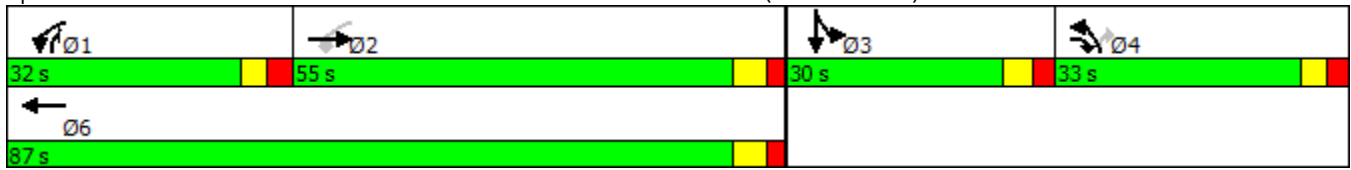
Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

Item III - a.

Splits and Phases: 257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)



Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

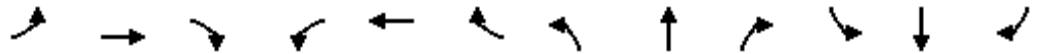


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑		↘		↗	↘	↗	
Traffic Volume (vph)	0	1463	123	435	1265	0	185	0	465	21	38	30
Future Volume (vph)	0	1463	123	435	1265	0	185	0	465	21	38	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		415	125		0	190		0	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.850						0.850		0.934	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	3471	1553	1752	3505	0	1752	0	1568	1641	1613	0
Flt Permitted				0.079			0.950			0.950		
Satd. Flow (perm)	0	3471	1553	146	3505	0	1752	0	1568	1641	1613	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			45			25	
Link Distance (ft)		1048			745			1037			256	
Travel Time (s)		20.4			14.5			15.7			7.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	10%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1626	137	483	1406	0	206	0	517	23	42	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1626	137	483	1406	0	206	0	517	23	75	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(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
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
Turn Type		NA	pm+ov	D.P+P	NA		Prot		pm+ov	Split	NA	
Protected Phases		2	4	1	6		4		1	3	3	
Permitted Phases			2	2					4			
Detector Phase		2	4	1	6		4		1	3	3	
Switch Phase												
Minimum Initial (s)		10.0	7.0	7.0	10.0		7.0		7.0	7.0	7.0	
Minimum Split (s)		23.8	33.0	12.9	23.9		33.0		12.9	20.0	20.0	
Total Split (s)		55.0	33.0	32.0	87.0		33.0		32.0	30.0	30.0	
Total Split (%)		36.7%	22.0%	21.3%	58.0%		22.0%		21.3%	20.0%	20.0%	

Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)		49.1	27.4	26.1	81.1		27.4		26.1	24.2	24.2	
Yellow Time (s)		3.8	3.0	3.0	3.8		3.0		3.0	3.2	3.2	
All-Red Time (s)		2.1	2.6	2.9	2.1		2.6		2.9	2.6	2.6	
Lost Time Adjust (s)		-0.9	-0.6	-0.9	-0.9		-0.6		-0.9	-0.8	-0.8	
Total Lost Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	
Lead/Lag		Lag	Lag	Lead			Lag		Lead	Lead	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes			Yes		Yes	Yes	Yes	
Vehicle Extension (s)		6.0	2.0	2.0	6.0		2.0		2.0	2.0	2.0	
Minimum Gap (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Time Before Reduce (s)		15.0	0.0	0.0	15.0		0.0		0.0	0.0	0.0	
Time To Reduce (s)		30.0	0.0	0.0	30.0		0.0		0.0	0.0	0.0	
Recall Mode		Min	Min	None	None		Min		None	None	None	
Walk Time (s)			7.0				7.0					
Flash Dont Walk (s)			20.0				20.0					
Pedestrian Calls (#/hr)			0				0					
Act Effect Green (s)		50.5	71.6	77.8	82.9		19.8		52.2	11.4	11.4	
Actuated g/C Ratio		0.40	0.57	0.62	0.66		0.16		0.41	0.09	0.09	
v/c Ratio		1.17	0.16	1.11	0.61		0.75		0.80	0.16	0.51	
Control Delay		120.0	8.3	112.2	15.9		68.9		44.0	57.9	69.8	
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Delay		120.0	8.3	112.2	15.9		68.9		44.0	57.9	69.8	
LOS		F	A	F	B		E		D	E	E	
Approach Delay		111.3			40.6			51.1				67.0
Approach LOS		F			D			D				E
Queue Length 50th (ft)		-861	32	-416	344		166		376	18	61	
Queue Length 95th (ft)		#1156	53	#730	539		262		559	49	119	
Internal Link Dist (ft)		968			665			957				176
Turn Bay Length (ft)			415	125			190					
Base Capacity (vph)		1389	984	437	2301		392		648	328	322	
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		1.17	0.14	1.11	0.61		0.53		0.80	0.07	0.23	

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	126.2
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.17
Intersection Signal Delay:	70.7
Intersection LOS:	E
Intersection Capacity Utilization:	93.1%
ICU Level of Service:	F
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

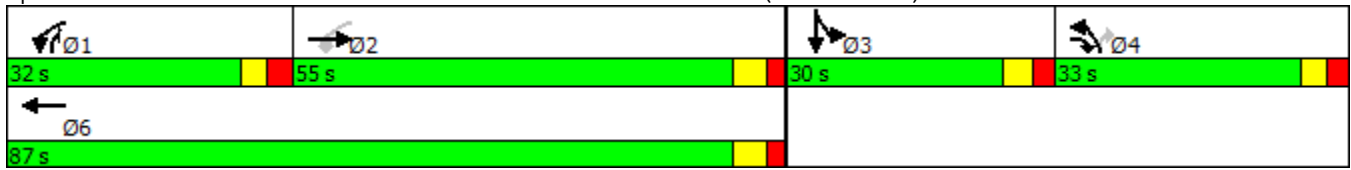
Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

Item III - a.

Splits and Phases: 257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)



Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑		↖		↗	↖	↗	
Traffic Volume (vph)	0	1010	224	296	1063	0	219	0	507	55	83	83
Future Volume (vph)	0	1010	224	296	1063	0	219	0	507	55	83	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%				0%
Storage Length (ft)	0		415	125		0	190		0	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850		0.925	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	3471	1553	1752	3505	0	1752	0	1568	1641	1598	0
Flt Permitted				0.080			0.950			0.950		
Satd. Flow (perm)	0	3471	1553	148	3505	0	1752	0	1568	1641	1598	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			45				25
Link Distance (ft)		1048			745			1037				256
Travel Time (s)		20.4			14.5			15.7				7.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.76	0.76	0.76	0.75	0.75	0.75	0.64	0.64	0.64	0.50	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	10%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	0	1329	295	395	1417	0	342	0	792	110	166	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1329	295	395	1417	0	342	0	792	110	332	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(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes			Yes				
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
Turn Type		NA	pm+ov	D.P+P	NA		Prot		pm+ov	Split	NA	
Protected Phases		2	4	1	6		4		1	3	3	
Permitted Phases			2	2					4			
Detector Phase		2	4	1	6		4		1	3	3	
Switch Phase												
Minimum Initial (s)		10.0	7.0	7.0	10.0		7.0		7.0	7.0	7.0	
Minimum Split (s)		23.8	33.0	12.9	23.9		33.0		12.9	20.0	20.0	
Total Split (s)		55.0	33.0	32.0	87.0		33.0		32.0	30.0	30.0	
Total Split (%)		36.7%	22.0%	21.3%	58.0%		22.0%		21.3%	20.0%	20.0%	

Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)		49.1	27.4	26.1	81.1		27.4		26.1	24.2	24.2	
Yellow Time (s)		3.8	3.0	3.0	3.8		3.0		3.0	3.2	3.2	
All-Red Time (s)		2.1	2.6	2.9	2.1		2.6		2.9	2.6	2.6	
Lost Time Adjust (s)		-0.9	-0.6	-0.9	-0.9		-0.6		-0.9	-0.8	-0.8	
Total Lost Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	
Lead/Lag		Lag	Lag	Lead			Lag		Lead	Lead	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes			Yes		Yes	Yes	Yes	
Vehicle Extension (s)		6.0	2.0	2.0	6.0		2.0		2.0	2.0	2.0	
Minimum Gap (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Time Before Reduce (s)		15.0	0.0	0.0	15.0		0.0		0.0	0.0	0.0	
Time To Reduce (s)		30.0	0.0	0.0	30.0		0.0		0.0	0.0	0.0	
Recall Mode		Min	Min	None	None		Min		None	None	None	
Walk Time (s)			7.0				7.0					
Flash Dont Walk (s)			20.0				20.0					
Pedestrian Calls (#/hr)			0				0					
Act Effect Green (s)		50.0	78.0	77.0	82.0		28.0		60.0	25.0	25.0	
Actuated g/C Ratio		0.33	0.52	0.51	0.55		0.19		0.40	0.17	0.17	
v/c Ratio		1.15	0.37	1.09	0.74		1.05		1.26	0.40	1.25	
Control Delay		121.9	12.1	115.6	28.9		119.7		168.9	60.9	188.4	
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Delay		121.9	12.1	115.6	28.9		119.7		168.9	60.9	188.4	
LOS		F	B	F	C		F		F	E	F	
Approach Delay		101.9			47.8			154.1				156.6
Approach LOS		F			D			F				F
Queue Length 50th (ft)		-801	78	-381	539		-362		-970	97	-403	
Queue Length 95th (ft)		#698	90	#424	462		308		#686	86	233	
Internal Link Dist (ft)		968			665			957				176
Turn Bay Length (ft)			415	125			190					
Base Capacity (vph)		1157	807	364	1916		327		627	273	266	
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		1.15	0.37	1.09	0.74		1.05		1.26	0.40	1.25	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.26
 Intersection Signal Delay: 99.0
 Intersection Capacity Utilization 81.7%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service D

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

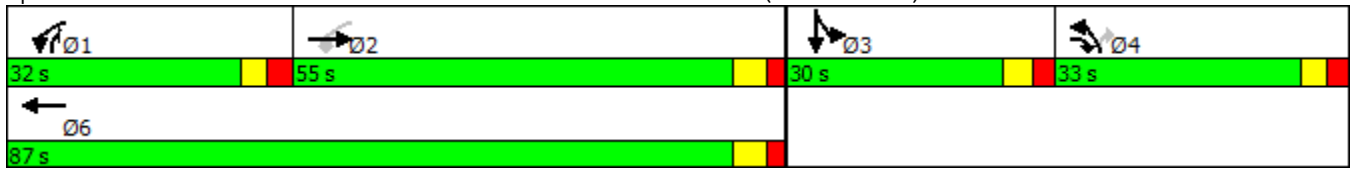
Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

Item III - a.

Splits and Phases: 257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)



Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

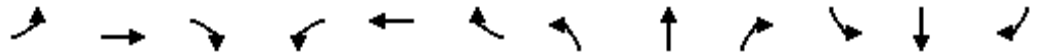


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑		↖		↗	↖	↗	
Traffic Volume (vph)	0	1463	139	450	1265	0	202	0	482	21	38	30
Future Volume (vph)	0	1463	139	450	1265	0	202	0	482	21	38	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		415	125		0	190		0	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.850						0.850		0.934	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	3471	1553	1752	3505	0	1752	0	1568	1641	1613	0
Flt Permitted				0.079			0.950			0.950		
Satd. Flow (perm)	0	3471	1553	146	3505	0	1752	0	1568	1641	1613	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			45			25	
Link Distance (ft)		1048			745			1037			256	
Travel Time (s)		20.4			14.5			15.7			7.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	10%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1626	154	500	1406	0	224	0	536	23	42	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1626	154	500	1406	0	224	0	536	23	75	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(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
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
Turn Type		NA	pm+ov	D.P+P	NA		Prot		pm+ov	Split	NA	
Protected Phases		2	4	1	6		4		1	3	3	
Permitted Phases			2	2					4			
Detector Phase		2	4	1	6		4		1	3	3	
Switch Phase												
Minimum Initial (s)		10.0	7.0	7.0	10.0		7.0		7.0	7.0	7.0	
Minimum Split (s)		23.8	33.0	12.9	23.9		33.0		12.9	20.0	20.0	
Total Split (s)		55.0	33.0	32.0	87.0		33.0		32.0	30.0	30.0	
Total Split (%)		36.7%	22.0%	21.3%	58.0%		22.0%		21.3%	20.0%	20.0%	

Queens Creek Analysis

257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)		49.1	27.4	26.1	81.1		27.4		26.1	24.2	24.2	
Yellow Time (s)		3.8	3.0	3.0	3.8		3.0		3.0	3.2	3.2	
All-Red Time (s)		2.1	2.6	2.9	2.1		2.6		2.9	2.6	2.6	
Lost Time Adjust (s)		-0.9	-0.6	-0.9	-0.9		-0.6		-0.9	-0.8	-0.8	
Total Lost Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	
Lead/Lag		Lag	Lag	Lead			Lag		Lead	Lead	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes			Yes		Yes	Yes	Yes	
Vehicle Extension (s)		6.0	2.0	2.0	6.0		2.0		2.0	2.0	2.0	
Minimum Gap (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Time Before Reduce (s)		15.0	0.0	0.0	15.0		0.0		0.0	0.0	0.0	
Time To Reduce (s)		30.0	0.0	0.0	30.0		0.0		0.0	0.0	0.0	
Recall Mode		Min	Min	None	None		Min		None	None	None	
Walk Time (s)			7.0				7.0					
Flash Dont Walk (s)			20.0				20.0					
Pedestrian Calls (#/hr)			0				0					
Act Effect Green (s)		50.5	72.6	77.8	82.8		20.9		53.3	11.5	11.5	
Actuated g/C Ratio		0.40	0.57	0.61	0.65		0.16		0.42	0.09	0.09	
v/c Ratio		1.18	0.17	1.15	0.62		0.78		0.82	0.16	0.52	
Control Delay		124.8	8.4	129.6	16.5		70.6		45.3	58.4	70.4	
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Delay		124.8	8.4	129.6	16.5		70.6		45.3	58.4	70.4	
LOS		F	A	F	B		E		D	E	E	
Approach Delay		114.7			46.2			52.8			67.6	
Approach LOS		F			D			D			E	
Queue Length 50th (ft)		-879	37	-457	358		182		398	18	61	
Queue Length 95th (ft)		#1156	59	#765	539		284		589	49	119	
Internal Link Dist (ft)		968			665			957			176	
Turn Bay Length (ft)			415	125			190					
Base Capacity (vph)		1376	975	433	2280		389		656	325	319	
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		1.18	0.16	1.15	0.62		0.58		0.82	0.07	0.24	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 127.3
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.18
 Intersection Signal Delay: 74.6
 Intersection LOS: E
 Intersection Capacity Utilization 94.9%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

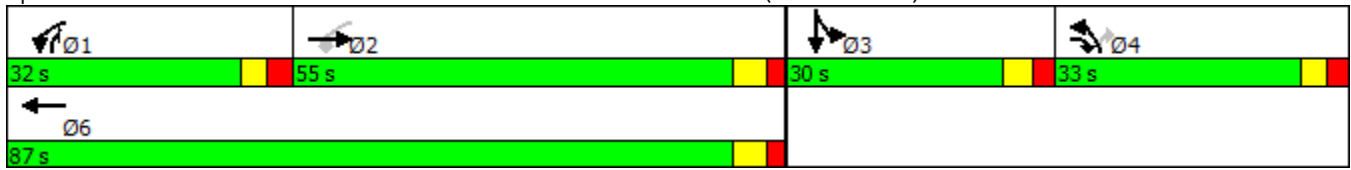
Queens Creek Analysis

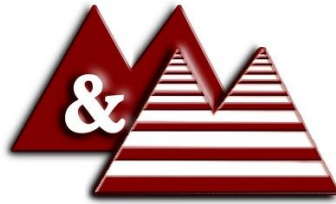
257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)

09/03/2019

Item III - a.

Splits and Phases: 257: Queens Creek Road/Middle School Drive & NC-24 (W Corbett Ave)





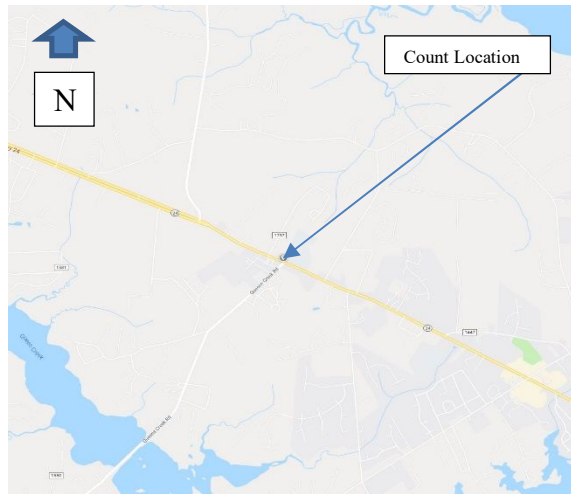
Morton & Morton
Design Services, PLLC

Count Number: 1997
NCDOT Division Number: 3
County: Onslow
City: Swansboro
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 35,760

Intersection: NC 24 (Corbett Ave) and Queens Creek Rd & Middle School Exit			
Count Date	Count Time	Weather Conditions	Precipitation
5/21/2019	2:15pm to 7pm	62-86° Clear	5%
5/22/2019	6am to 2:15pm	63-89° Clear	5%

Comments:

Counted by: Don Morton
 Data Processor: Chase Arthur
 Method Used: Jamar Countboard/Video
 Equipment Operating: Yes
 School in Session: Yes
 Break Times: N/A
 Area Lighting Present: No
 Traffic Control: Traffic Signal
 Signal Cabinet Number: 03-0257
 Disabled Pedestrians: No
 Construction: No
 Traffic Flow Disruption: No

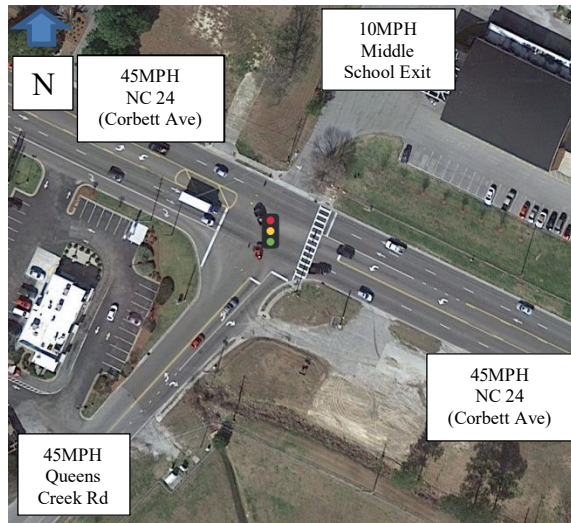


Northbound Approach: Queens Creek Rd
 Stop sign within 300 feet: No
 Signal within 300 feet: No
 Railroad within 200 feet: No If Yes: ___feet

Southbound Approach: Middle School Exit
 Stop sign within 300 feet: No
 Signal within 300 feet: No
 Railroad within 200 feet: No If Yes: ___feet

Westbound Approach: NC 24 (Corbett Ave)
 Stop sign within 300 feet: No
 Signal within 300 feet: No
 Railroad within 200 feet: No If Yes: ___feet

Eastbound Approach: NC 24 (Corbett Ave)
 Stop sign within 300 feet: No
 Signal within 300 feet: No
 Railroad within 200 feet: No If Yes: ___feet





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Count Number: 1997
NCDOT Division Number: 3
County: Onslow
City: Swansboro
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 35,760



Middle School Exit looking north away from NC 24 (Corbett Ave).



Middle School Exit looking south towards NC 24 (Corbett Ave).



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Design Services, PLLC

Count Number: 1997
NCDOT Division Number: 3
County: Onslow
City: Swansboro
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 35,760



NC 24 (Corbett Ave) looking east away from Queens Creek Rd & Middle School Exit.



NC 24 (Corbett Ave) looking west towards Queens Creek Rd & Middle School Exit.



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Count Number: 1997
NCDOT Division Number: 3
County: Onslow
City: Swansboro
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 35,760



Queens Creek Rd looking south away from NC 24 (Corbett Ave).



Queens Creek Rd looking north towards NC 24 (Corbett Ave).



Morton & Morton
Design Services, PLLC

Count Number: 1997
NCDOT Division Number: 3
County: Onslow
City: Swansboro
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 35,760



NC 24 (Corbett Ave) looking west away from Queens Creek Rd & Middle School Exit.



NC 24 (Corbett Ave) looking east towards Queens Creek Rd & Middle School Exit.



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Count Number: 1997
NCDOT Division Number: 3
County: Onslow
City: Swansboro
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 35,760



Signal Cabinet.



Morton & Morton Design Services, PLLC

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Raleigh, North Carolina 27609

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Item III - a.

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File Name : 1997

Site Code : 1997

Start Date : 5/22/2019

Page No : 3

Groups Printed- Passenger Vehicles - School Buses - Trucks 3+ Axles - Transit Buses - Bicycles

Table with columns for Start Time, Middle School Exit Southbound, NC 24 (Corbett Ave) Westbound, Queens Creek Rd Northbound, NC 24 (Corbett Ave) Eastbound, and summary columns (Exclu. Total, Inclu. Total, Int. Total). Rows list times from 02:00 PM to 05:55 PM with associated counts.



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File Name : 1997

Site Code : 1997

Start Date : 5/22/2019

Page No : 4

Groups Printed- Passenger Vehicles - School Buses - Trucks 3+ Axles - Transit Buses - Bicycles

Start Time	Middle School Exit Southbound					NC 24 (Corbett Ave) Westbound					Queens Creek Rd Northbound					NC 24 (Corbett Ave) Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total				
06:00 PM	0	1	0	0	1	50	124	0	0	174	9	0	29	0	38	0	82	7	0	89	0	0	302	302
06:05 PM	0	0	0	0	0	41	83	0	0	124	8	0	21	0	29	0	70	12	0	82	0	0	235	235
06:10 PM	0	0	0	0	0	39	77	0	0	116	9	0	36	0	45	0	49	9	0	58	0	0	219	219
06:15 PM	0	0	0	0	0	28	90	0	0	118	17	0	28	0	45	0	70	9	0	79	0	0	242	242
06:20 PM	0	0	0	0	0	29	78	0	0	107	3	0	31	0	34	0	62	14	0	76	0	0	217	217
06:25 PM	0	1	0	0	1	29	57	0	0	86	5	0	23	0	28	0	58	14	0	72	0	0	187	187
06:30 PM	0	0	0	0	0	35	65	0	0	100	11	0	51	0	62	0	62	11	0	73	0	0	235	235
06:35 PM	0	0	1	0	1	38	55	0	0	93	23	0	54	0	77	0	64	12	0	76	0	0	247	247
06:40 PM	0	0	0	0	0	42	74	0	0	116	10	0	28	0	38	0	43	10	0	53	0	0	207	207
06:45 PM	0	0	0	0	0	25	61	0	0	86	5	0	25	0	30	0	67	9	0	76	0	0	192	192
06:50 PM	0	0	0	0	0	46	44	0	0	90	3	0	13	0	16	0	43	9	0	52	0	0	158	158
06:55 PM	0	0	0	0	0	41	36	0	0	77	5	0	24	0	29	0	43	6	0	49	0	0	155	155
Total	0	2	1	0	3	443	844	0	0	1287	108	0	363	0	471	0	713	122	0	835	0	0	2596	2596
Grand Total	169	217	214	9	600	4109	11183	0	6	15292	1722	0	4703	0	6425	0	11981	1462	0	13443	15	0	35760	35775
Apprch %	28.2	36.2	35.7			26.9	73.1	0			26.8	0	73.2			0	89.1	10.9						
Total %	0.5	0.6	0.6		1.7	11.5	31.3	0		42.8	4.8	0	13.2		18	0	33.5	4.1		37.6	0	0	100	
Passenger Vehicles	163	198	195		565	4050	10854	0		14910	1670	0	4622		6292	0	11634	1404		13038	0	0	34805	
% Passenger Vehicles	96.4	91.2	91.1	100	92.8	98.6	97.1	0	100	97.5	97	0	98.3	0	97.9	0	97.1	96	0	97	0	0	97.3	
School Buses	6	19	18		43	37	12	0		49	28	0	57		85	0	35	34		69	0	0	246	
% School Buses	3.6	8.8	8.4	0	7.1	0.9	0.1	0	0	0.3	1.6	0	1.2	0	1.3	0	0.3	2.3	0	0.5	0	0	0.7	
Trucks 3+ Axles	0	0	1		1	21	316	0		337	24	0	23		47	0	306	24		330	0	0	715	
% Trucks 3+ Axles	0	0	0.5	0	0.2	0.5	2.8	0	0	2.2	1.4	0	0.5	0	0.7	0	2.6	1.6	0	2.5	0	0	2	
Transit Buses	0	0	0		0	0	0	0		0	0	0	0		0	0	4	0		4	0	0	4	
% Transit Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0		0	1	1	0		2	0	0	1		1	0	2	0		2	0	0	5	
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



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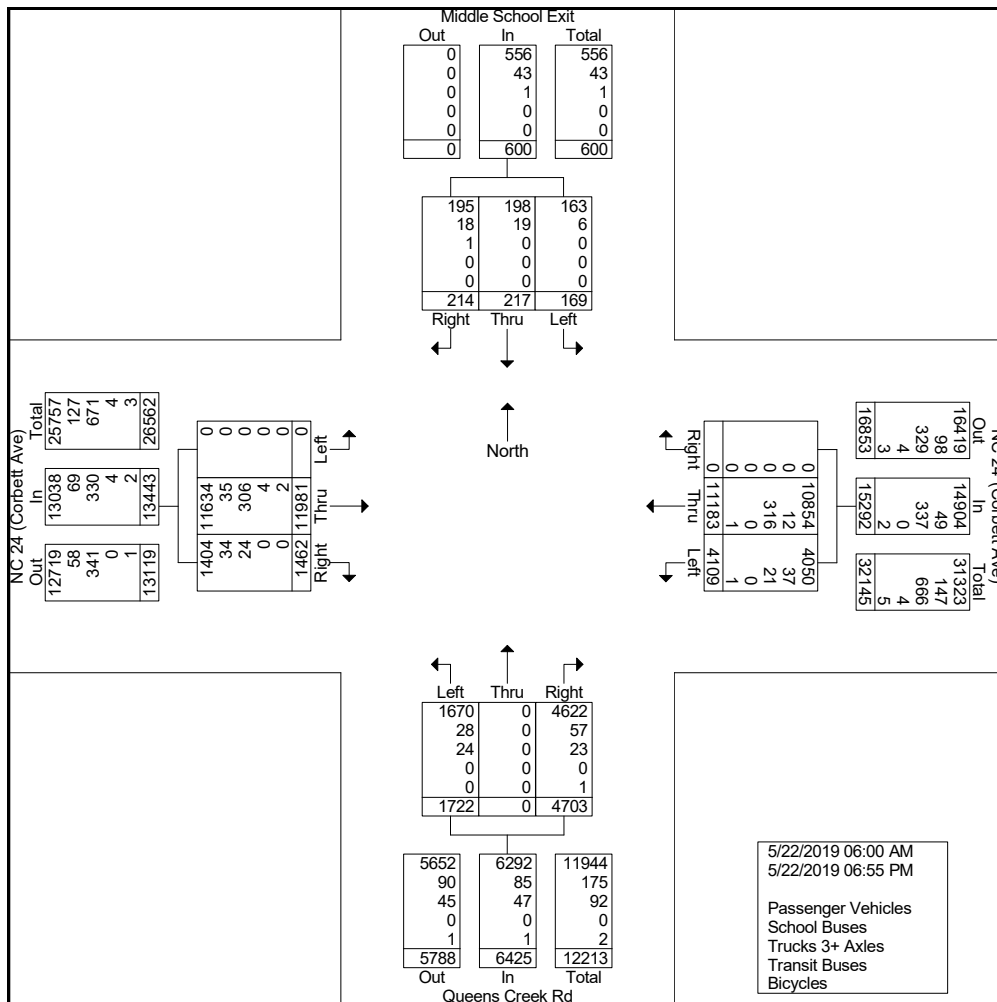
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File Name : 1997
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 Start Date : 5/22/2019
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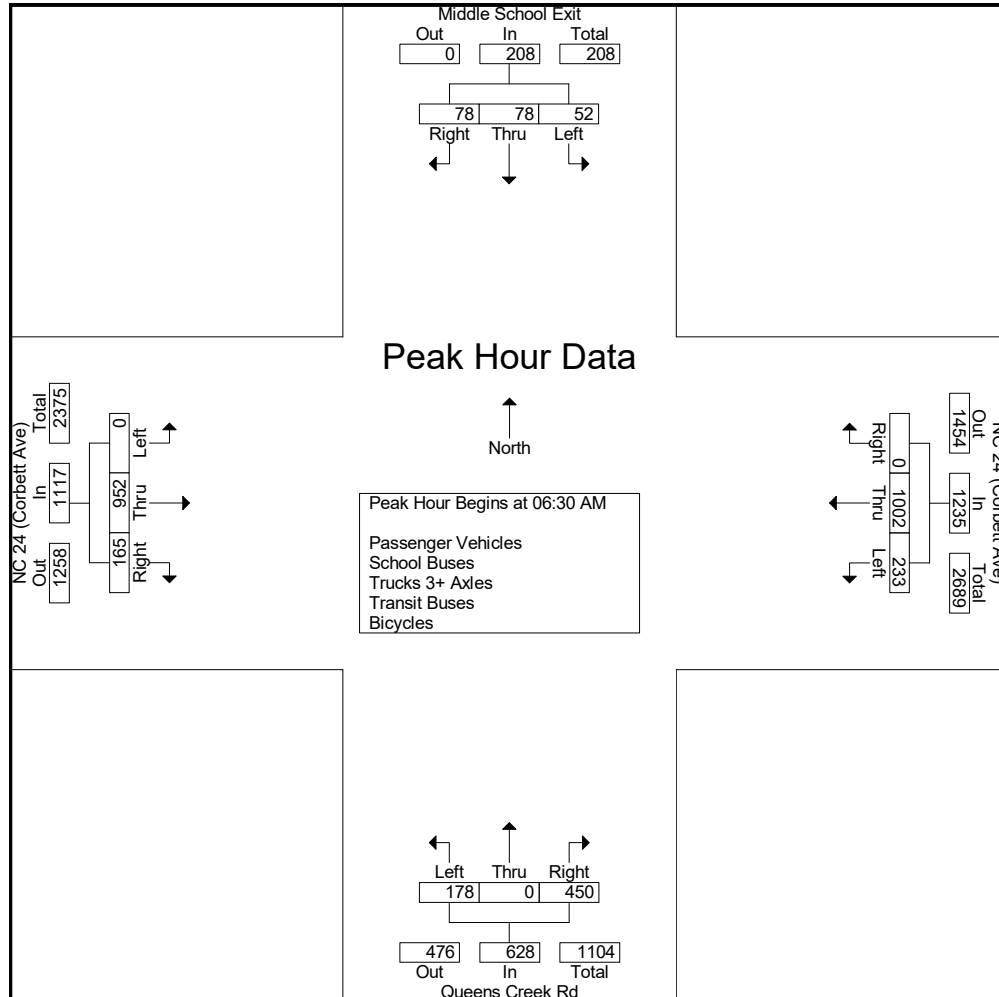
File Name : 1997

Site Code : 1997

Start Date : 5/22/2019

Page No : 6

Start Time	Middle School Exit Southbound				NC 24 (Corbett Ave) Westbound				Queens Creek Rd Northbound				NC 24 (Corbett Ave) Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 AM to 11:55 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:30 AM																	
06:30 AM	4	3	0	7	14	74	0	88	11	0	35	46	0	74	18	92	233
06:35 AM	5	10	5	20	30	74	0	104	9	0	34	43	0	65	19	84	251
06:40 AM	5	12	9	26	37	67	0	104	7	0	47	54	0	66	23	89	273
06:45 AM	3	13	15	31	25	55	0	80	21	0	40	61	0	83	23	106	278
06:50 AM	7	7	4	18	35	104	0	139	15	0	41	56	0	95	26	121	334
06:55 AM	11	10	21	42	8	78	0	86	17	0	46	63	0	83	13	96	287
07:00 AM	7	4	6	17	11	107	0	118	15	0	52	67	0	93	6	99	301
07:05 AM	7	9	12	28	8	102	0	110	11	0	29	40	0	75	7	82	260
07:10 AM	1	2	4	7	18	97	0	115	9	0	30	39	0	81	3	84	245
07:15 AM	1	3	0	4	26	70	0	96	12	0	23	35	0	57	12	69	204
07:20 AM	0	4	0	4	12	78	0	90	14	0	28	42	0	106	8	114	250
07:25 AM	1	1	2	4	9	96	0	105	37	0	45	82	0	74	7	81	272
Total Volume	52	78	78	208	233	1002	0	1235	178	0	450	628	0	952	165	1117	3188
% App. Total	25	37.5	37.5		18.9	81.1	0		28.3	0	71.7		0	85.2	14.8		
PHF	.394	.500	.310	.413	.525	.780	.000	.740	.401	.000	.721	.638	.000	.748	.529	.769	.795





Morton & Morton Design Services, PLLC

4700 Homewood Ct, Suite 200

Raleigh, North Carolina 27609

Ph. (919) 882-6066

Item III - a.

www.mortonmorton.com

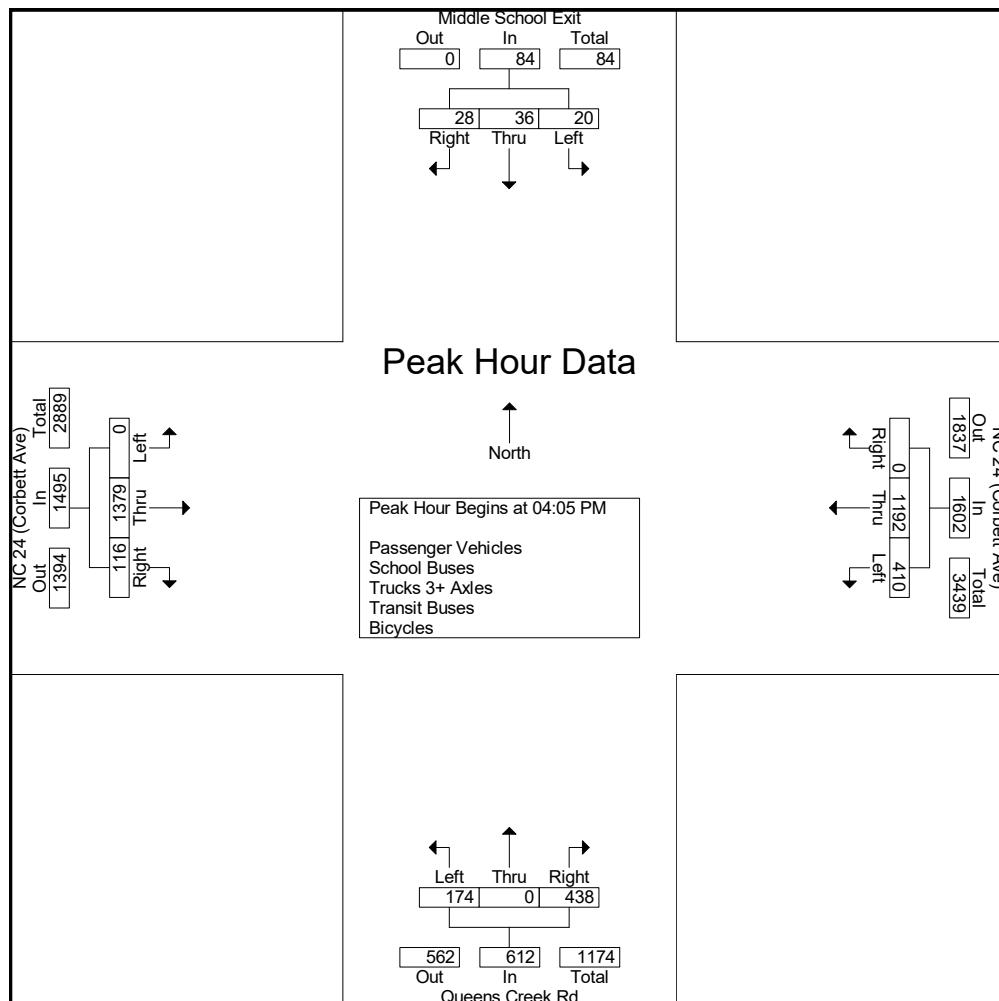
File Name : 1997

Site Code : 1997

Start Date : 5/22/2019

Page No : 7

Start Time	Middle School Exit Southbound				NC 24 (Corbett Ave) Westbound				Queens Creek Rd Northbound				NC 24 (Corbett Ave) Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 PM to 06:55 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:05 PM																	
04:05 PM	11	14	12	37	22	94	0	116	15	0	26	41	0	125	6	131	325
04:10 PM	2	9	6	17	39	99	0	138	20	0	51	71	0	59	8	67	293
04:15 PM	4	5	1	10	20	87	0	107	19	0	41	60	0	149	4	153	330
04:20 PM	0	0	2	2	35	123	0	158	9	0	25	34	0	114	5	119	313
04:25 PM	0	2	2	4	39	126	0	165	20	0	51	71	0	98	13	111	351
04:30 PM	1	2	3	6	24	87	0	111	9	0	19	28	0	129	5	134	279
04:35 PM	0	0	1	1	35	85	0	120	15	0	38	53	0	113	15	128	302
04:40 PM	0	0	0	0	38	89	0	127	8	0	32	40	0	111	8	119	286
04:45 PM	0	0	1	1	41	91	0	132	20	0	46	66	0	129	10	139	338
04:50 PM	2	1	0	3	40	94	0	134	21	0	32	53	0	96	14	110	300
04:55 PM	0	3	0	3	38	113	0	151	7	0	31	38	0	126	16	142	334
05:00 PM	0	0	0	0	39	104	0	143	11	0	46	57	0	130	12	142	342
Total Volume	20	36	28	84	410	1192	0	1602	174	0	438	612	0	1379	116	1495	3793
% App. Total	23.8	42.9	33.3		25.6	74.4	0		28.4	0	71.6		0	92.2	7.8		
PHF	.152	.214	.194	.189	.833	.788	.000	.809	.690	.000	.716	.718	.000	.771	.604	.814	.901



DRAFT ORDINANCE

WHEREAS North Carolina General Statute 160d-605 and 160D-701 requires that zoning regulations shall be made in accordance with a Comprehensive Plan; and

WHEREAS NCGS 160D-604 also states that when adopting or rejecting any zoning amendment, the governing board shall approve a statement describing whether its action is consistent with an adopted Comprehensive Plan and any other officially adopted plan that is applicable, and briefly explain why the board considers the action taken to be reasonable and in the public interest; and

WHEREAS the Board of Commissioners finds that the proposed re-zoning of PARID Numbers: 07581, 18749, 25956, 170265 located off of Queens Creek Road, is reasonable and in the public interest because the conversion of approximately 7.84 acres from O\I (Office Institutional) zoning designation to B-1(Business) zoning designation is consistent with the Comprehensive Plan, specifically the Land Use Plan, and the property is identified as appropriate for office and institutional land use.

NOW BE IT ORDAINED by the Town of Swansboro Board of Commissioners that the Town Zoning Map be amended by converting PARID Numbers: 07581, 18749, 25956, 170265 from O\I (Office\Institutional) zoning designation to B-1(Business) zoning designation.

This Ordinance shall be effective upon adoption.

Adopted by the Board of Commissioners in regular session, ____, 2024.

Attest:

Alissa Fender, Town Clerk

John Davis, Mayor

**TOWN OF SWANSBORO PLANNING AND ZONING BOARD
STATEMENT OF CONSISTENCY**

On April 2, 2024, the Planning Board heard the requested rezoning of four parcels located on Queens Creek Road from O/I (Office and Institutional) to B-1 (Business). The areas are further identified as 140 Queens Creek Road containing 0.48 acres (tax parcel ID 1313-88), 144 Queens Creek Road containing one acre (tax parcel ID 1313-87), 150 Queens Creek Road containing 1.35 acres (tax parcel ID 1313-85), and 160 Queens Creek Road containing 5 acres (tax parcel ID 1313-85.1). The total acreage requested for rezoning is +/-7.83 acres. The proposed change from O/I (Office/Institutional) to B-1 (Business) is not consistent with the Comprehensive Plan, specifically the Future Land Use Map, and has not been recommended for approval by the Planning Board because of the low-density land use designation identified on the site and development patterns in the area. Additionally, due to safety concerns identified in the 2019 Traffic Impact Analysis.

This statement reflects the recommendation of the Town of Swansboro Planning Board, the 2nd day of April 2024.

Planning Board Chair

Town Planner



Planning Board Meeting Agenda Item Submittal

Item To Be Considered: **Text Amendment to Section § 152.179 Table of Permitted/Special Uses and § 152.212 Use Standards to enable Food, Beverage & Craft Processing and Production with Retail Sales**

Board Meeting Date: **April 2, 2024**

Prepared By: **Andrea Correll, AICP – Town Planner**

Overview: The purpose of this text amendment is to enable food, beverage, and craft processing and production with retail sales in the B2HDO and MI zoning districts.

Processing and production shall be limited to less than 50% of the subject property in the B2HDO zoning district. Retail sales in the MI zoning district shall occupy no more than 50% of the total square footage devoted to the operation. This use standard is intended for a larger brewery with tap room. The attached use standards would enable breweries, wineries, and specialty foods such as chocolates.

The use is consistent with the descriptions found in Chapter 5 of the 2019 CAMA Land Use Plan Update.

Background Attachment(s):

1. Text Amendment Application
2. CAMA Land Use Plan References
3. Draft Ordinance
4. Comprehensive Plan Consistency Statement

Recommended Action: Motion to recommend approval of the Text Amendment to Section § 152.179 Table of Permitted/Special Uses and § 152.212 Use Standards to enable Food, Beverage & Craft Processing and Production with Retail Sales in the B2HDO and MI Zoning Districts with the comprehensive plan consistency statement to the Board of Commissioners.

Action: _____

Town of Swansboro
601 W. Corbett Avenue Swansboro, NC 28584
Phone (910) 326-4428 - Fax (910) 326-3101

APPLICATION FOR ZONING & ORDINANCE AMENDMENTS

Check the Appropriate Blank

- Add a Use to a Zoning District
- Remove a Use from a Zoning District
- Create a New Zoning District
- Future Land Use Map Amendment

Application No. _____

- Amend Code of Ordinances
- Amend Unified Development Ordinance
- Zoning District Designation Change

A complete application must be received with the fee by the third Friday prior to the month of review.

Property Owner Name Harold Lee Ship Jr Phone # 252-241-4496

Address of Zoning Request 208 Main Street, Swansboro, NC 28584

Mailing Address 228 Elm Street, Swansboro, NC, 28584

Zoning Amendments

Attach a copy of the legal description of the property (including address if assigned) that is requested for a zoning change (i.e. metes and bounds). The application will not be scheduled for review until these items are received.

Provide a list names and mailing address of adjacent property owner on the reverse side of this application. The application will not be scheduled for review until these items are received.

Present Zoning B2HDO Desired Zoning _____

Probable Use of Property _____

Reason for Zoning Change Request _____

Ordinance Amendments

Code Section to be amended Section 152.179

Print clearly the code section wordage to be amended See attached.

Print clearly the code section wordage as suggested See attached.

Reason for requested amendment To have the ability to brew @ craft beer onsite.

Signature [Signature] Date 3/7/2024

Future Land Use Map Amendment

Present Future Land Use Category _____ Desired Future Land Use Category _____

Use of Property _____

Reason for Future Land Use Map Change Request _____

Town Hall Use Only

Fee Paid 3/13/24 Date Received 3/7/24 Date scheduled for Planning & Zoning Board review 4/2/24

Recommendation from Planning & Zoning Board _____

Public Hearing Run Dates _____ Date of Public Hearing _____

Effective Date of Change _____ Ordinance Number _____

larger brewing- questions in yellow

Andrea Correll <acorrell@ci.swansboro.nc.us> Mon, Jan 8, 2024 at 4:41 PM
 To: "tyler.d.skipper@gmail.com" <tyler.d.skipper@gmail.com>
 Cc: "maryskipperhomes@gmail.com" <maryskipperhomes@gmail.com>, Rebecca Brehmer <rbrehmer@ci.swansboro.nc.us>

Tyler,

If you are still interested in the old post office at 208 Main Street. Please let me know so we can work on the text amendment prior to Planning Board submittal date.

The next deadline is Friday January 19th, and we close at 1 pm. The Planning Board would hear the text amendment on Feb . 6th and the Town Board in March.

Find below the ordinance amendment draft for Swansboro. Please fill in the underlined yellow highlights to meet your needs. The property you interested in is zoned B2HDO but I wanted to give you room to grow into light industrial if it took off or if special foods or wineries were looking for a place.

§ 152.212 USE STANDARDS

(N) Use- Food, Beverage, & Craft Processing and Production with Retail Sales

Food, Beverage, & Craft Processing and Production with Retail Sales. (B2HDO, M-1) These types of establishments include processing and manufacturing facilities for one type or group of merchandise sold at retail, and possibly wholesale, on-site. Permitted uses include, but are not limited to, breweries, wineries and specialty foods. Processing and manufacturing uses shall be limited to no more __,000 square feet of the subject property in the B2HDO zoning district. Retail sales in the M-1 zoning district shall occupy no more than 50% of the total square footage devoted to the operation. This use standard is intended for a larger brewery with tap room.

Section

PERMITTED/ SPECIAL USES	CON	RA	R6	R6SF	R8SF	R10SF	R15SF	R20SF	R40SF	PUD _b	MHP	MHS	MHS- 15SF	MHS- O _c	O/I	G/E	B1 _d	B2 _e	B3 _f	B2HDO _g	Mh _h		
Food, Beverage & Craft Processing with Production with Retail Sales																					-	US	US

The text amendment application is the section in the middle of the page titled Ordinance Amendment.

The reference to put on the forms (Code section to amended) would be Section 152.179 Table of Permitted Uses adding Food, Beverage & Craft Processing with Production with Retail Sales and Section 152.212 Use Standard for Food, Beverage & Craft Processing with Production with Retail Sales.

Thanks

Andrea

Andrea Correll, AICP

Planner

Town of Swansboro

601 W. Corbett Avenue

Swansboro, NC 28584

(910) 326-4428 phone



FUTURE LAND USE DESIGNATIONS

The Future Land Use Map (FLUM) and associated future land use (FLU) designations will be used to guide rezoning, investment, and land use decisions in the town. Just as the goals and objectives have generated recommendations, the FLU designations are associated with specific character descriptions and criteria. These FLUs and the FLUM are a guideline and reference point for the community, and will inform, but not necessarily definitively predetermine, the outcome of land use decisions and policies by the town.

The mixing of non-residential and residential uses is viewed positively in Swansboro, because of mixed development in the downtown historic district that demonstrates different uses can coexist peacefully. As such, the mixed use FLU designations generally function as overlays that show where additional uses or density can be added to or mixed with the underlying residential uses. Where mixed use FLUs overlap other FLUs, the criteria associated with each must be considered.


Residential FLUs are the underlying character within which the mixed use and non-residential overlap at more intense nodes of activity. Appropriate density is determined in part by a property's position within or proximity to the activity nodes. This allows a stepping down of density and intensity with distance from mixed use activity centers. It also allows the positioning of people next to the goods and services that they need for daily life, and this increased connectivity was a common thread in the community conversation.


5


FUTURE LAND USE DESIGNATIONS

- 

TRADITIONAL TOWN CENTER (TTC)
 This designation is characterized by a mix of residential, commercial, and civic uses in the historic downtown central business district or TTC node. Redevelopment or new development should be compatible with and embody the desired heart of “Swansboro” character.
- 

SUBURBAN TOWN CENTER (STC)
 The highway commercial designation contains medium to high intensity uses on the NC 24 corridor. A mix of uses including multi-family with managed access is encouraged.
- 

EMPLOYMENT / LIGHT INDUSTRIAL (ELI)
 This designation includes office, light industrial or assembly, and flex-tenant spaces. Site layout should allow for truck circulation, buffers between dissimilar uses, and quality architecture adjacent to the highway.
- 

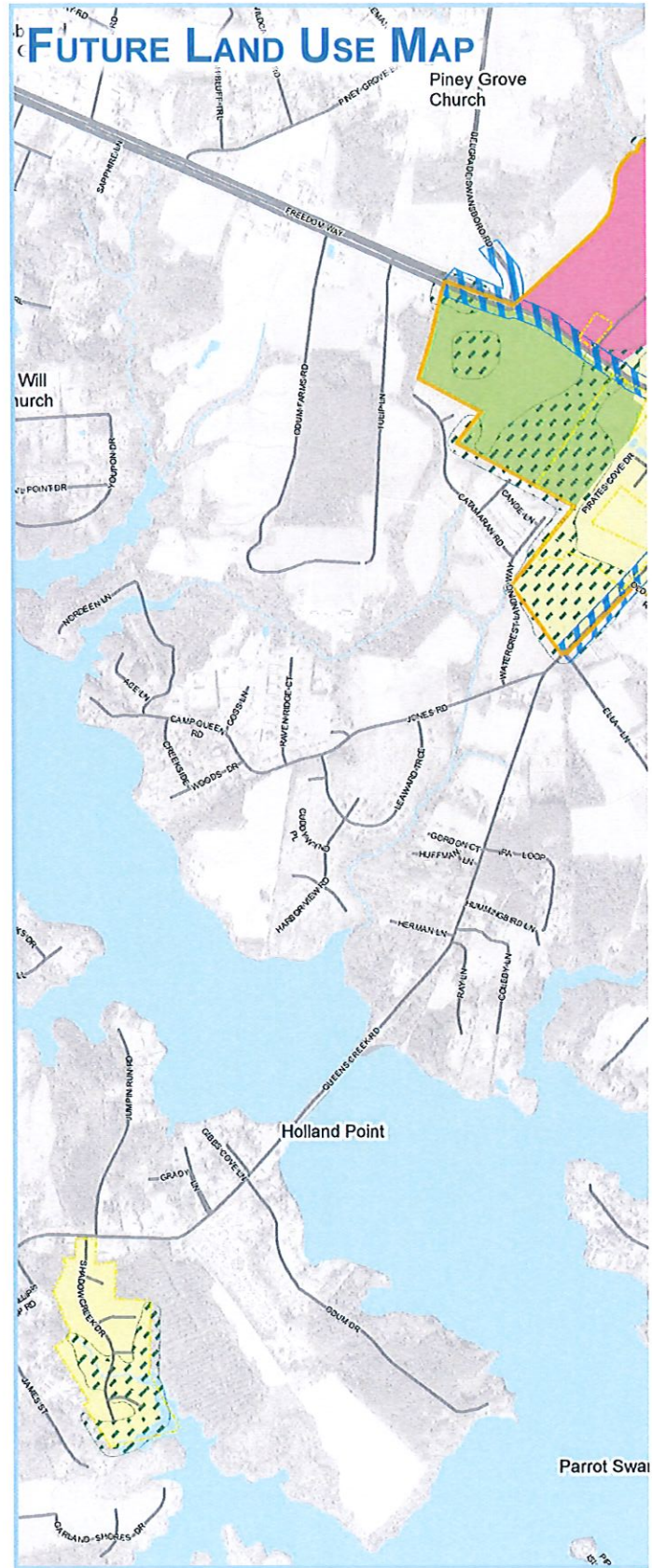
GATEWAY CORRIDOR (GC)
 State-owned NC 24 and the adjacent development make the first impression of the town. Signage, lighting, sidewalks, landscaping, architectural design along the roadway should reflect the unique features and values of Swansboro.
- 

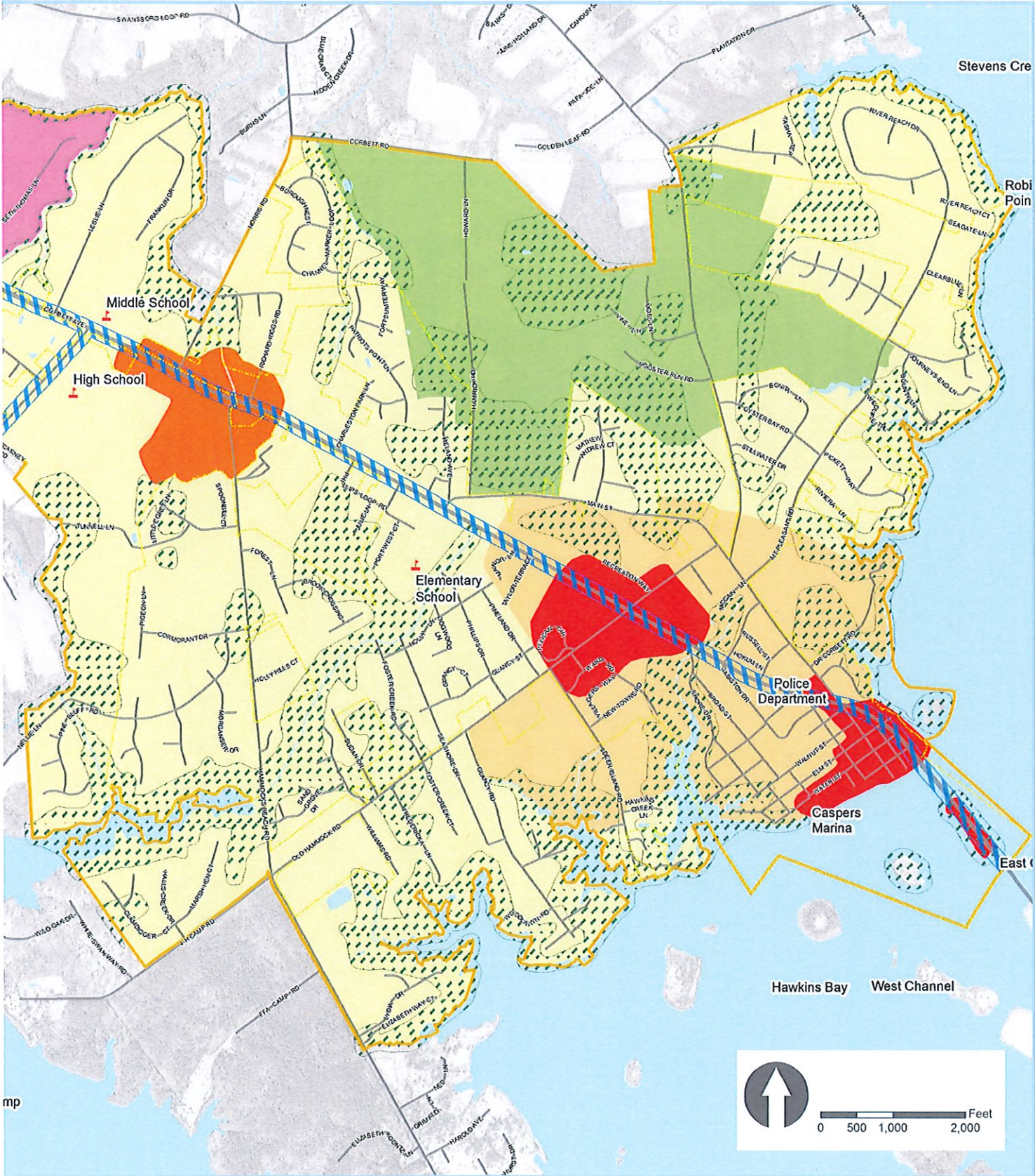
CONSERVATION PRIORITY AREA (CPA)
 The CPA designation includes lands influenced by the natural environment containing features including but not limited to wetlands, woodland, shoreline, pocosins, open space, vistas that are worth conserving and that define Swansboro.
- 

COASTAL TRADITIONAL NEIGHBORHOOD (CTN)
 This is a walkable, compact, residential district laid out based on traditional neighborhood development patterns. It generally surrounds the TTC and contains single and two-family residential with small-scale multi-family and neighborhood commercial.
- 

LOW DENSITY / SUBURBAN NEIGHBORHOOD (LDSN)
 This designation characterizes the majority of new subdivision development. It is auto-oriented and should be connected to water and sewer infrastructure, and contain sidewalks and streets that connect to parks, educational, or religious uses.
- 

RURAL / AGRICULTURAL (RA)
 Agricultural land generally occurs outside the town limits but is within the town’s ETJ. Though there are working farms, rural residential and agritourism activities may occur here. Water and sewer infrastructure are typically not available.





Adopted: January 22, 2019

Future Land Use | 39

5

TRADITIONAL TOWN CENTER (TTC)

When most people talk about Swansboro, they are talking about the historic district, businesses on Front Street and surrounding “old town” residential neighborhood. Homes and businesses stand side-by-side in a historical development pattern and complement, rather than detract from each other. Many older residential homes have been converted into businesses, with second -story residential, with a working marina directly adjacent. This is an area where uses are mixed both vertically and horizontally.

This active, vibrant part of the community is both a window into the past and provides character that defines the community. Using traditional pattern and character to influence future development of small-lot single family homes in other parts of Swansboro, fulfills a strong desire by many in the community to connect people to destinations, especially by non-motorized means.

CHARACTER

A traditional town center district translated to other areas of Swansboro should incorporate the following characteristics to the extent possible. These areas would be mixed use pedestrian-oriented districts with a mixture of small to mid-size retail, restaurants and multifamily residences intertwined with civic and institutional spaces. Upper story residential uses are encouraged. Pedestrians would be prioritized, and automobiles are accommodated.

ACCESS AND CIRCULATION

The rights-of-way within these districts may be narrower than typical local streets of Swansboro with two-way traffic and on-street parking but will not be as narrow as those in the historic downtown. These roads are meant to handle slow speed traffic and serve a similar purpose as a parking aisle so that people can park-and-walk to their destinations. Sidewalks flank the roads and buildings built up to or within a few feet of the right-of-way line.



Historic downtown Swansboro

SETBACKS

Typical of a downtown district, buildings are set close enough to interact with the street. Minimal setbacks accommodate a greater density and intensity of uses and promote social interaction.

MASSING AND BUILDING HEIGHTS

Buildings are "human-scaled," meaning not more than three stories tall, but also should be a minimum of two stories to create a street presence.



Example of Traditional Town Center (TTC)

BLOCKS

Block length of no more than 400 feet further promote walkability and discourage automobile use for short trips. Crosswalks and mid-block pedestrian connections should be used throughout.

PARKING

Off-street parking requirements for nonresidential uses may be lessened due to the walkable district and availability of on-street, shared or lots for parking. Front-loaded parking is discouraged.

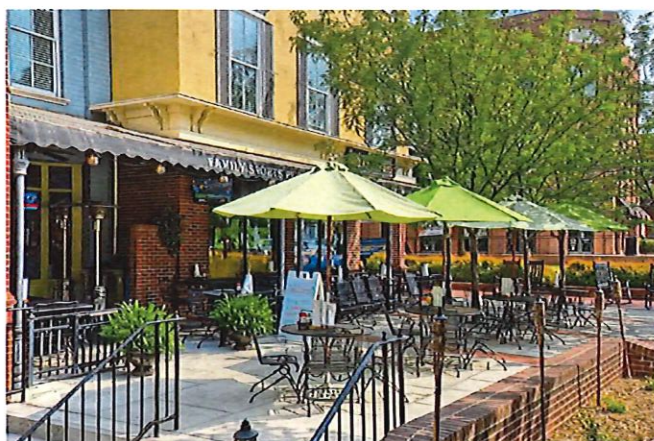
APPROPRIATE DENSITY / INTENSITY

This district should replicate the densities and intensities of those in downtown to provide an alternative to other housing and retail experiences in Swansboro. The norm should be:

- » Compact residential - Up to eight dwellings per acre single family or 12 for multi-family.
- » Ground floor retail is encouraged but lobbies and entrances would be allowed.
- » Development of this intensity should employ stormwater control measures with extensive Low Impact Design



Example of downtown development.



Example of downtown development.

5

EMPLOYMENT / LIGHT INDUSTRIAL (ELI)

This land use designation primarily occurs off of NC 24 on the western end of Swansboro, including the existing development on Seth Thomas Lane. The light industrial uses involve automotive or vehicular work, storage of goods, and limited manufacturing, which occurs entirely indoors and not likely to be nuisance to neighbors. The expansion of this district provides a prime location for economic development opportunities that could also include warehousing, distribution, office, research and development, tech-flex. The ELI district is distinguished by the look and feel of an industrial park with circulation for trucks but should include amenities for employees and customers.

CHARACTER

Light industrial and manufacturing, office, and tech-flex uses are encouraged in the ELI. Work occurs almost exclusively indoors, with only storage of vehicles or goods potentially allowed outdoors. With buffers and screens, these areas can be made somewhat compatible with mixed use or adjacent higher density residential development. Water and sewer utilities should be available.



Flex-tenant/ light industrial site



Light industrial manufacturing site



Example of Employment / Light Industrial (ELI)

ACCESS AND CIRCULATION

Streets are designed to accommodate larger vehicles and trucks that are used in deliveries goods and bulk products. Sidewalks should be considered at a minimum on one side of the street to accommodate employee/pedestrian traffic. Businesses should be accessed by way of an internal road that connects to the thoroughfare and a cross access to the adjacent similar development. Landscaping should be placed to buffer dissimilar uses.

SETBACKS

Setbacks are greater and are partially intended to create space for landscaping screen operations and buffer adjacent dissimilar development from potential nuisance from the light industrial / employment use, whether visual, sound, smell, or vibration.

MASSING AND BUILDING HEIGHTS

Buildings are designed to facilitate their intended purpose although some may be spec'd as "flex" industrial space. How the structures interact with the main highway is less important, though the placement of these sort of uses close to the gateway of town begs attention to the quality of the viewshed (signage, lighting, landscaping). High quality architecture and materials should be used on sides that are adjacent to or highly visible from NC 24.

BLOCKS

- » 600 feet maximum block length, with up to 800 feet allowed only if necessary to avoid floodplains, creeks, or other environmentally sensitive areas, or to accommodate structures of significant size that cannot otherwise be reconfigured.
- » Adequate loop and loading area circulation or turnaround, especially for trucks and delivery vehicles.

PARKING

Parking is primarily accommodated in private lots for each business or building.

APPROPRIATE INTENSITY

- » Intensity of development is regulated by the zoning district.
- » Business activities are generally conducted inside of a building, although outdoor storage may be allowed.
- » Residential units are not allowed in this area.
- » Site layout needs to respect the probably need for truck and delivery circulation.
- » Loading and service areas should be screened from the public right-of-way.

ORDINANCE 2024-
AN AMENDMENT TO THE UNIFIED DEVELOPMENT ORDINANCE
§ 152.179 TABLE OF PERMITTED/SPECIAL USES, AND § 152.212 USE STANDARDS TO
ENABLE FOOD, BEVERAGE, & CRAFT PROCESSING AND PRODUCTION WITH RETAIL
SALES (B2HDO, M-I)

WHEREAS North Carolina General Statute 160D-605 and 160D-701 requires that zoning regulations shall be made in accordance with a Comprehensive Plan; and

WHEREAS the Board of Commissioners finds that the proposed text amendments to the Unified Development Ordinance regarding referenced above to be consistent with the Town of Swansboro CAMA LAND USE Plan updated January 22, 2019, and amended August 28, 2023.

NOW BE IT ORDAINED by the Town of Swansboro Board of Commissioners that the Town Unified Development Ordinance be amended.

Minor alphabetical, clerical and numerical changes may occur after the fact in an ordinance of this size.

TITLE XV: LAND USAGE
CHAPTER 152: UNIFIED DEVELOPMENT ORDINANCE
§ 152.179 TABLE OF PERMITTED/SPECIAL USES.

PERMITTED/ SPECIAL USES	B2HDO*	MI ^b
<u>Food, Beverage & Craft Processing Production with retail sales</u>	<u>US</u>	<u>US</u>

§ 152.212 USE STANDARDS

(Y) Use - Food, Beverage, & Craft Processing and Production with Retail Sales (B2HDO, MI) These types of establishments include processing and manufacturing facilities for one type or group of merchandise sold at retail, and possibly wholesale, on-site. Permitted uses include, but are not limited to, breweries, wineries, and specialty foods. Processing and production shall be limited to less than fifty of the subject property in the B2HDO zoning district. Retail sales in the MI zoning district shall occupy no more than 50% of the total square footage devoted to the operation. This use standard is intended for a larger brewery with tap room.

- (1) Requirements:
 - (a) Minimum lot area: based on zoning classification lot standards.
- (2) Plans are required and must show:
 - (a) Size and location of all outdoor areas used for principal use.
 - (b) Topography: on new construction, well drained site with adequate storm drainage facilities (including retention pond facilities, when applicable).
 - (c) Structures: location of signs, entrance, and buildings must be shown on the plan.
 - (d) Circulation: proposed points for access and egress and a parking layout.

- (e) Buffering: as specified in §§ 152.528 of this chapter unless the property abuts residentially used or zoned property in which case a Type C buffer is required.
- (f) Sign size and location as specified §§ 152.265-152.277 of this chapter.
- (g) Lighting plan which must include wattage and illumination. The use of full cut-off luminaries is required.
- (h) List of all services to be provided.
- (i) Security/management plan
- (j) Hours of operation (refer to Town noise ordinance §§92.01- 92.06)
- (k) Landscaping Requirements, §§ 152.525- 152.544
- (l) Parking: shall conform to §§ 152.290 through 152.296, Off-Street Parking and Loading Requirements.

This Ordinance shall be effective upon adoption.

Adopted by the Board of Commissioners in regular session, _____, 2024.

John Davis, Mayor

Attest:

Alissa Fender, Town Clerk

**TOWN OF SWANSBORO PLANNING AND ZONING BOARD
STATEMENT OF CONSISTENCY**

On April 2, 2024, the Planning Board heard the requested text amendment and recommended unanimous approval of the text amendment to the Town Unified Development Ordinance as followed: §152.179 Table of Permitted/Special Use and §152.212 Use Standards to Enable Food, Beverage, & Craft Processing and Production with Retail Sales (B2HDO, M-I

The Town’s Planning Board finds that the proposed text amendment is consistent with the current Comprehensive Plan and other applicable plans and policies and considers the action taken to be reasonable and in the public interest because it provides the structure, for Town staff to proactively address issues related to impacts caused by development in order to protect the health, safety, and welfare of the Town’s residents.

Planning Board Chair

Town Planner



Planning Board Meeting Agenda Item Submittal

Item To Be Considered: **Text Amendment to Section §152.009 (E) Maintenance of the Official Zoning Map**

Board Meeting Date: **April 2, 2024**

Prepared By: **Andrea Correll, AICP – Town Planner**

Overview: The purpose of text amendment is to enable the time that official zoning maps are posted to be changed from two weeks to sixty days of notification.

The Town currently uses the County GIS Department to produce our official maps. The codified reference in Section 152.009 (E) needs to be changed.

Background Attachment(s):

1. Draft Ordinance
2. Comprehensive Plan Consistency Statement

Recommended Action: Motion to recommend approval of the text amendment to Section §152.009 (E) Maintenance of the Official Zoning Map to amend the time of replacement of the official zoning map from within two weeks to sixty days of notification.

Action: _____

**ORDINANCE 2024-
AN AMENDMENT TO THE UNIFIED DEVELOPMENT ORDINANCE
§ 152.009 (E) OFFICIAL ZONING MAP.**

WHEREAS North Carolina General Statute 160D-605 and 160D-701 requires that zoning regulations shall be made in accordance with a Comprehensive Plan; and

WHEREAS the Board of Commissioners finds that the proposed text amendments to the Unified Development Ordinance regarding referenced above to be consistent with the Town of Swansboro CAMA LAND USE Plan updated January 22, 2019, and amended August 28, 2023.

NOW BE IT ORDAINED by the Town of Swansboro Board of Commissioners that the Town Unified Development Ordinance be amended.

***TITLE XV: LAND USAGE
CHAPTER 152: UNIFIED DEVELOPMENT ORDINANCE
§ 152.009 OFFICIAL ZONING MAP.***

(E) Maintenance of the Official Zoning Map. The Administrator shall be responsible for the maintenance and revision of the Official Zoning Map. Upon notification by the Town Clerk that a zoning change has been made, the Administrator shall make the necessary changes on the Official Zoning Map within ~~two weeks~~ **sixty days** of notification. (Ord. 2005-O3, passed 3-15-2005)

This Ordinance shall be effective upon adoption.

Adopted by the Board of Commissioners in regular session, _____, 2024.

John Davis, Mayor

Attest:

Alissa Fender, Town Clerk

**TOWN OF SWANSBORO PLANNING AND ZONING BOARD
STATEMENT OF CONSISTENCY**

On April 2, 2024, the Planning Board heard the requested text amendment and recommended unanimous approval of the text amendment to the Town Unified Development Ordinance as followed: § 152.009 (E)OFFICIAL ZONING MAP.

The Town’s Planning Board finds that the proposed text amendment is consistent with the current Comprehensive Plan and other applicable plans and policies and considers the action taken to be reasonable and in the public interest because it provides the structure, for Town staff to proactively address issues related to impacts caused by development in order to protect the health, safety, and welfare of the Town’s residents.

Planning Board Chair

Town Planner



Planning Board Meeting Agenda Item Submittal

Item To Be Considered: **Text Amendment to Appendix III Historic District Design Standards, Section 3: Roofs**

Board Meeting Date: **April 2, 2024**

Prepared By: **Rebecca Brehmer – Projects/Planning Coordinator, CFM, CZO**

Overview: The Historic Preservation Commission has recommended amendments to Appendix III Historic District Design Standards, Section 3: Roofs.

Background: At the February 20, 2024, Swansboro Historic Preservation Commission meeting, the historic board made a motion to appoint a subcommittee consisting of town staff, Elaine Justice, Lauren Brown, and Kim Kingrey to review and draft a text amendment to Section: 3 Roofs found in our Historic District Design Standards. This draft was reviewed by the historic board at the March 19, 2024, and was passed along for the planning boards review.

Overall, the amendments to Section 3: Roofs was to add more standards on the best practices and materials to continue preserving the historic roofs in our historic district as well as ensure new roofing material is historically accurate and consistent. Details about terne or double lock roof forms were added as well as appropriate material and color options for new or replacement roofs. We had a roof expert come to the March 7, 2024, subcommittee meeting as well as the March 19, 2024, historic board meeting and he provided valuable input and technical terminology.

Background Attachment(s):

1. Draft Ordinance
2. Consistency Statement

Recommended Action: Motion to recommend approval of the text amendment to Appendix III Historic District Design Standards, Section 3 Roofs with the comprehensive plan consistency statement to the Board of Commissioners.

Action: _____

DRAFT ORDINANCE

WHEREAS North Carolina General Statute 160D-605 and 160D-701 requires that zoning regulations shall be made in accordance with a Comprehensive Plan; and

WHEREAS the Board of Commissioners finds that the proposed text amendment to the Unified Development Ordinance regarding a revision to Section 3: Roofs to be consistent with the Town of Swansboro CAMA LAND USE Plan updated January 22, 2019, and amended August 28, 2023.

NOW BE IT ORDAINED by the Town of Swansboro Board of Commissioners that the Town Unified Development Ordinance be amended.

Appendix III

HISTORIC DISTRICT DESIGN STANDARDS

SECTION 3 Roofs

3.1 Roofs - Standards

(Text highlighted in yellow are amendments that need to be added to the Unified Development Ordinance.)

- 1) Preserve or restore original and significant **later terne or double lock** roof forms, shapes, and major roof architectural elements such as dormers, gables, chimneys, and eave overhangs. It is not appropriate to make alterations to the front or other primary portions of the roof of a contributing structure if that roof slope can be seen from the public view.
- 2) Preserve, maintain, and repair historic roofing details and materials such as slate, standing-seam metal, and tile wherever possible. Replace in-kind only if necessary due to deterioration or damage. **Rust and holes that can be repaired are not an appropriate reason for replacement, please schedule consultation with town staff or SHPC to review preservation methods.**

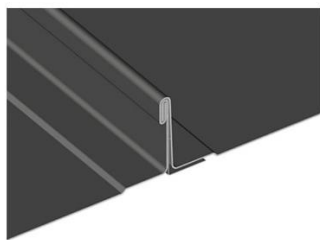
Figure Appendix III Section 3.1.1 depicts example of original terne roof that could be repaired by available mastic product.



3.1.1 Original Terne Roof

- 3) New **metal or aluminum** roofing materials should be compatible with **either the existing or** original roofing material. The new material **should must** match the historic material as closely as possible in color, shape, size, and texture. **Asphalt or fiberglass asphalt shingles are acceptable substitutes for standing-seam tin, wood shingles, or metal shingles, provided the new replacement shingles are of a darker solid color.** **Appropriate colors are shades of white, gray, or silver. Appropriate panel width is 16” with max of 20” and rib or seam must be 1.5” or under. The material between the seams must be flat. Please see examples in color palette of appropriate colors.** Barn tin (also known as “five-vee” tin) or coated steel may be used to replace a standing-seam tin roof in new construction.

Figure Appendix III Section 3.1.2, 3.1.3, 3.1.4, and 3.1.5 depicts accurate and inaccurate examples of new terne or double lock roofs.



PROFILE OPTIONS



3.1.2 Accurate Double Lock Profile

3.1.3 Accurate Snap Lock Profile



3.1.4 Inaccurate Metal Roof Example



3.1.5 Inaccurate Metal Roof Example

4) Unpainted or unstained cedar shake shingles are an appropriate roofing material if there is documentation that it was the original material or of the era of the home.

4) 5) Asphalt or fiberglass asphalt shingles are acceptable for new construction or replacement of asphalt shingles already present. New construction or total replacement shingles must be a variation of black or grey to keep in character of what’s found in the district. Please see examples of appropriate colors in the color palette. Shingle repair under 25% of total roof square footage can be replaced in kind.

~~5) 6)~~ Retain historic roof-top features such as ornamental eaves, cornices, rake-boards, dormers, gables, chimneys, finials, cresting, steeples, belfries, cupolas, and railings. These elements all add much to the overall architectural character of a structure. All such original and significant later features **should shall** be preserved and restored, rather than removed **or covered.**

~~6) 7)~~ Contemporary or non-historic roof features **should shall** be installed on areas of the roof not seen from the public view or on other secondary roofs. Included are skylights, roof-mounted vents, dormers, chimneys, **and** antennas. **and solar collectors.** In certain instances, new dormers may be permitted on side or rear elevations if their design is compatible with the building **style and era** and the roofline.

~~7) 8)~~ Install new gutters without damaging or obscuring architectural features. Gutters of all materials except copper shall have a painted finish. Half-round gutters are appropriate for most contributing properties. Gutters are usually reviewed as a “minor works” item. If installed on a contributing building, the SHPC must review application at SHPC meeting.

~~8) 9)~~ **Ridge vents, where needed, should will be of the low profile type, not to exceed width and 1.5” in height. Other vents, such as gable vents and roof-mounted vents, should be installed so as not to be visible from the public view where possible. In the event that they must be visible, they should be installed to respect the architectural details and character of the subject building. Ridge vent for metal roofs must be hidden and vented through Z trim under ridge cap and should not diminish the original design of the roof or destroy any character-defining architectural details.**

10) Accessory structures may be shingle or metal but must meet the color standards of this section.

This Ordinance shall be effective upon adoption.

Adopted by the Board of Commissioners in regular session, _____, 2024.

Attest:

Alissa Fender, Town Clerk

John Davis, Mayor

**TOWN OF SWANSBORO PLANNING AND ZONING BOARD
STATEMENT OF CONSISTENCY**

On April 2, 2024, the Planning Board heard the requested text amendment and recommended unanimous approval of the text amendment to the Town Unified Development Ordinance as followed: Appendix III Historic District Design Standards, Section 3: Roofs.

The Town’s Planning Board finds that the proposed text amendment is consistent with the current Comprehensive Plan and other applicable plans and policies and considers the action taken to be reasonable and in the public interest because it provides the structure, for Town staff to proactively address issues related to impacts caused by development in order to protect the health, safety, and welfare of the Town’s residents.

Planning Board Chair

Town Planner



Planning Board Meeting Agenda Item Submittal

Item To Be Considered: **Text Amendment to Appendix III Historic District Design Standards, Section 5: Windows and Doors**

Board Meeting Date: **April 2, 2024**

Prepared By: **Rebecca Brehmer, Projects/Planning Coordinator, CFM, CZO**

Overview: The Historic Preservation Commission has recommended amendments to Appendix III Historic District Design Standards, Section 5: Windows and Doors

Background: At the February 20, 2024, Swansboro Historic Preservation Commission meeting, the historic board made a motion to appoint a subcommittee consisting of town staff, Elaine Justice, Lauren Brown, and Kim Kingrey to review and draft a text amendment to Section: 5 Windows and Doors found in our Historic District Design Standards. This draft was reviewed by the historic board at the March 19, 2024, meeting and was passed along for the planning boards review.

Overall, the amendments to Section 5: Windows and Doors was to put more of an emphasis on maintaining and preserving the original crafted wood windows and doors in our district and give more detailed standards on replacement options. The goal is always to make sure materials are historically accurate and consistent with the historic district as well as educate homeowners on resources such architectural salvage companies that are available for replacement options.

Background Attachment(s):

1. Draft Ordinance
2. Consistency Statement

Recommended Action: Motion to recommend approval of the text amendment to Appendix III Historic District Design Standards, Section 5: Windows and Doors with the comprehensive plan consistency statement to the Board of Commissioners.

Action: _____

DRAFT ORDINANCE

WHEREAS North Carolina General Statute 160D-605 and 160D-701 requires that zoning regulations shall be made in accordance with a Comprehensive Plan; and

WHEREAS the Board of Commissioners finds that the proposed text amendment to the Unified Development Ordinance regarding a revision to Section 5: Windows and Doors to be consistent with the Town of Swansboro CAMA LAND USE Plan updated January 22, 2019, and amended August 28, 2023.

NOW BE IT ORDAINED by the Town of Swansboro Board of Commissioners that the Town Unified Development Ordinance be amended.

Appendix III

HISTORIC DISTRICT DESIGN STANDARDS

SECTION 5: Windows and Doors

5.1 Windows and Doors - Standards

(Text highlighted in yellow are amendments that need to be added to the Unified Development Ordinance.)

- 1) Retain and preserve historic windows and doors, including all significant related elements such as frames, sashes, shutters, hardware, old glass, sills, and moldings.
- 2) Repair existing historic windows and doors **where possible**, rather than replacing entire window or door units. Use techniques such as wood epoxies and wood patches to repair and strengthen deteriorated wood elements. Replace only those elements that cannot be repaired. **If replacement is needed and authorized by following § 152.479 CERTIFICATE OF APPROPRIATENESS LIST, appropriate materials can be sourced from architectural salvage companies. Existing original frames should be retained and reused with the addition of new siding tracks to hold the replacement sashes.**
- 3) Use replacement windows and doors that match the existing historic elements as closely as possible. If replacement windows or doors are required, consider first replacing only the deteriorated element, such as a single sash or door, rather than the entire frame or unit. Any new replacements shall match the original in all dimensions and detailing as closely as possible.
- 4) Use storm windows to improve energy efficiency where needed. New storm units should have a baked-on paint finish compatible with the color of the house. Unpainted aluminum is not appropriate. Storm windows for double-hung sashes shall have horizontal dividers that are in alignment with the horizontal meeting rails or the original upper and lower sashes. **Storm windows are usually a “minor works” item. Interior storm windows are also available.**
- 5) Replacement of historic windows and doors for the sole purpose of improved thermal performance is not appropriate. Storm windows and doors should be used.

6) Tinted glass is not appropriate in the historic district in any area visible from the public view. Energy-saving or “low-E” glass may be used only if it is not tinted.

7) **False muntins or snap-in grilles are not appropriate for windows visible from public view. New thermal-pane windows must match the original windows in overall size and opening area. New windows should have either true divided lights or three-dimensional grilles on both the interior and exterior of the window. Standard thermal-pane windows will be permitted on the rear or other areas not visible from the public view. Existing original frames should be retained and reused with the addition of new siding tracks to hold the replacement sashes (this sentence was moved to bullet 2):**

Replacement windows shall be wooden, or wood clad on historic non-contributing structures (75 years and older) and contributing structures.

8) Use storm doors to improve energy efficiency where needed. New storm doors should be compatible with the original exterior doors and with the style and period of the structure. Wood storm doors of the full-view or large single-pane type are most appropriate because they do not obscure the original door. Louvered wood doors are also appropriate. Metal storm doors should be the full-view type and have a baked-on enamel paint finish in a color that is compatible with the colors of the structure. Standard or non-historic storm doors are appropriate only on the rear or other areas not visible from public view. Screen doors **should shall** be appropriate for the period and style of the structure.

9) Preserve and repair original or historic shutters or replace them in-kind. It is appropriate to add louvered shutters to a historic structure if there is evidence that it once had **blinds shutters**. All new shutters shall be of wood, and installed so that they will fit the window frame opening when closed and shall be of the correct proportions for each window. New **blinds shutters** shall be provided with operable hardware, consisting of hinges, pintles, and holdbacks located in the appropriate position. Shutters made of synthetic or substitute materials, such as vinyl, are not appropriate.

10) Original or historic windows or doors and their related frames and trim shall not be altered or removed on the main facades visible from the public view unless this action is part of a documented restoration to an earlier appearance.

11) New windows and doors should not be added to the primary facades or front elevation and are usually not appropriate on any other area seen from the public view. New window and door openings shall not alter the historic character of the building nor cause damage to historic materials or other significant architectural features. They must be detailed and sized to be compatible with the existing structure.

12) If new doors are necessary, source from architectural salvage company or have one built in-kind.

13) For projects involving painting doors, please reference the approved color palette.

This Ordinance shall be effective upon adoption.

Adopted by the Board of Commissioners in regular session, _____, 2024.

Attest:

Alissa Fender, Town Clerk

John Davis, Mayor

**TOWN OF SWANSBORO PLANNING AND ZONING BOARD
STATEMENT OF CONSISTENCY**

On April 2, 2024, the Planning Board heard the requested text amendment and recommended unanimous approval of the text amendment to the Town Unified Development Ordinance as followed: Appendix III Historic District Design Standards, Section 5: Windows and Doors.

The Town’s Planning Board finds that the proposed text amendment is consistent with the current Comprehensive Plan and other applicable plans and policies and considers the action taken to be reasonable and in the public interest because it provides the structure, for Town staff to proactively address issues related to impacts caused by development in order to protect the health, safety, and welfare of the Town’s residents.

Planning Board Chair

Town Planner