



**CITY OF SOUTHPORT
PLANNING BOARD
REGULAR MEETING AGENDA**

August 18, 2022
6:00 PM

Agenda

Please turn off all cell phones

Meetings are open to the public. Face masks and social distancing may be used at the discretion of each individual. Changes to this policy may occur, as needed to help prevent the spread of the Coronavirus.

The regular monthly meeting of the Planning Board will be held at 6:00 p.m. on the third Thursday of each month. All members are asked to attend.

- A. Call to Order**
- B. Invocation**
- C. Pledge of Allegiance**
- D. Oath for Reappointed Planning Board Member: Will Hewett**
- E. Approval of Minutes**
 - 1. 22-0721 Planning Board Minutes
- F. Approval of Agenda**
- G. Public Comment**
- H. Old Business**
 - 1. Zoning Text Amendment: Tree Preservation Changes (Article 3.18)
 - 2. Zoning Map Amendment: RZ 22-0701-01: 1403 N. Howe St, PUD to BD, submitted by RDK Investments
 - 3. Code of Ordinances Amendment: Chapter 4, Exterior Lighting
- I. New Business**
 - 1. Central Business District Committee: UDO Text Amendments
 - 2. Revised Conditional Rezoning Request: BD to HC-CZ, 14th and N. Howe St., submitted by Rhetson Companies
 - 3. UDO Review Process: PUD and Subdivision Standards/Text Review
- J. Other Business**

K. Planning Board Roster

1. August 2022

L. Announcements

M. Adjourn



**Planning Board Meeting Minutes
Southport Community Building
223 E. Bay Street
July 21, 2022
6:00 P.M.**

Members Present: Sue Hodgins, Will Hewett, Christopher Jones, Gustavo Mibelli, Fred Fiss, Mo Meehan, Scott Jones, and Dick Sloan

Members Absent: Donnie Joyner

Staff Present: Thomas Lloyd, Development Services Director
Tori Deviney, Permit Technician

Board of Aldermen Karen Mosteller and John Allen
Liaisons:

A. Chair Sue Hodgins called the meeting to order at 6:01 p.m.

B. Mr. Scott Jones gave the Invocation.

C. Chair Hodgins led the Pledge of Allegiance.

In the absence of Mr. Donnie Joyner, Alternate Member Mr. Fred Fiss was appointed as a voting member.

D. Motion to approve the June 16, 2022, meeting minutes by Mr. Scott Jones, and seconded by Mr. Dick Sloan. ***Unanimous vote; motion carried.***

E. Motion to approve the Meeting Agenda by Vice-Chair Hewett and seconded by Ms. Meehan. ***Unanimous vote; motion carried.***

F. Public Comment:

Vice-Chair Hewett motioned to enter Public Comment and was seconded by Mr. Mibelli. ***Unanimous vote; motion carried.***

1. Mr. Adam Steadman, 5968 Dutchman Creek Rd; has concerns about the traffic impacts from the proposed Indigo Phase 2 development. He recommended that connections should be directed further North to 11th or 12th Street. He also suggested facilitating roundabouts to keep the traffic flowing from the corridor at Indigo Plantation Dr. to Robert Ruark Dr.
2. Mr. Ray Martino, 6065 Sullivans Ridge Rd; is in favor of promoting sensible growth. He said that currently, local businesses are having staffing issues which make it difficult to manage their daily operations. He favors promoting affordable housing, senior living, and job growth.

3. Bob Lambert, 109 W. Nash St; lives directly behind the proposed project at 115 N. Howe St. (formerly Carr Insurance). He said that he is not against people making changes to their property, but there should be some compromise on how it will affect the surrounding neighbors.
4. Shirley Sullivan. 5003 Seaward Crt; stated that the Phase 2 Indigo Plantation Project does not have the demographics for a development like this. She said the Traffic Impact and Fiscal studies should reflect that the development would burden the City. She said the project does meet the requirements for the City's CAMA Land Use Plan, Comprehensive Core Land Use Plan, or the Future Land Use Plan. She implored the Board to vote against a recommendation for approval.

Since there were no other questions or comments from the public, Vice-Chair Hewett motioned to close out of Public Comment, seconded by Ms. Meehan.

Unanimous vote; motion carried.

G. Old Business

1. **Planned Unit Development Master Development Plan: Indigo Plantation Phase 2 submitted by East West Partners Management Co. Inc. and Bald Head Island Limited, LLC.**
2. **RZ-21-1104-01: Indigo Plantation Phase 2: 346.57 acres; R-20 to PUD; submitted by East West Partners Management Co. Inc. and Bald Head Island Limited, LLC**

Chair Hodgins came to the podium and reviewed the Indigo Phase 2 Development. She reiterated that the 375-acre property is currently zoned as R-20 district and can be developed even if it is not annexed into the City's corporate limits. However, the UDO will apply to the property located within the ETJ. She stated that even though the property will in all likelihood be developed, it would be beneficial to see that it is constructed in a way that is for the betterment of Southport and in a respectful manner to the existing neighborhoods and the environment. She said the property owners, the Mitchells, had selected their buyer and developer as East West Partners. She said that though some of the Mitchells may be involved as investors, neither they nor Bald Head Island Limited would be directly involved in the tract's development.

She said the PUD and RZ request application was formally submitted in March 2022. The Planning Board's responsibility was to examine the submission's applicability to the UDO and to determine what is in the best interest of Southport. The one thing that the Planning Board did not use as a form of measurement was the increased tax base for the City. She said this discussion had been held up many times in presentations as a means of attraction for the rezoning request and the potential for annexation. She stated that this consideration is not the Planning Board's charge.

Chair Hodgins stated that the Planning Board formed a Hub Committee for oversight as soon as the applications were submitted. This Committee broke into four subcommittees to review the most vital areas for consideration: Traffic Impacts, Infrastructure Issues, Character and Design, and Environmental Issues. The public was able to submit questions and comments on the City's online survey for review and response. The meetings were noticed and open to the public. Questions and concerns were addressed either online or at the full Board meetings. Because the Fiscal and Infrastructure Impact studies were not received by the June deadline, the applicant and the City agreed to a one-month extension.

Since the studies were not received until very recently the Board and the City requested another extension but the applicant opposed the request. The consensus of the Planning Board was that there was limited information in the studies to affect their summarization and recommendation. She said the Planning Board will leave the detailed review of those studies to the Board of Aldermen before they make their final decision. She thanked the Board for their hard work and dedication throughout this process.

There was a summarization of each subcommittee.

Traffic Impacts: Subcommittee: Vice-Chair Hewett, Ms. Meehan, and Mr. Chris Jones

Major Concerns and Discussions:

- The potential for 3K more cars on 9th Street, Robert Ruark Drive, and adjacent Streets.
- The Traffic Study used by East West Partners did not consider the amount of usage on 9th street by a school.
- Traffic Subcommittee Recommendations: IF the submission is approved, as a part of any Development Agreement executed:
 - The developer would be required to develop and fund a 3rd access point to the project on 11th St.
 - The developer establishes non-vehicle connectivity for pedestrians, bikes, and/or electrical vehicles separate from vehicular traffic.
 - The DOT proposed traffic signal be moved from 13th/Howe St. to 11th/Howe St.

Environmental Issues: Subcommittee: Ms. Meehan, Mr. Mibelli, Mr. Scott Jones

- Wetland Protection (specifically in the Carolina Bay area on the East side of the property)
- Stormwater Management. Storm inundation maps show this area has potential for high levels of inundation, especially during slow-moving storms.
- Conservation of Habitat. Although the clustered lots are intended to preserve the habitat, it will increase the impervious coverage on each lot.
- Open Space allocation and Density for each neighborhood (specifically in the Marina area). With the proposed 20 dwelling units per acre, marina, restaurant, retail spaces, and parking requirements it appears that there will not be enough land to accommodate these uses and the open space requirement.

Infrastructure Issues: Subcommittee: Mr. Fiss, Mr. Sloan, Mr. Chris Jones, Mr. Joyner, Mr. Mibelli.

- Provision of water and sewer will be provided and serviced by the County.
- The City does not have the electrical capacity for a PUD. The City would have to partner with the developer to share approximately \$3M of the cost for a new substation/feeder.
- The developer suggested adding additional fees to buyers' tap fees to mediate electric and water expenses.
- Concluded that the City will be "upside down in the math" in projected expense to revenue.

Design and Character: Subcommittee: Mr. Mibelli, Mr. Sloan, Mr. Fiss, Mr. Joyner

- Lack of Consistency with the UDO (existing zoning district)
- Lack of Consistency with the CAMA Land Use Plan
- The development goes beyond the stipulated density limits which will cause heavy stress on traffic, infrastructure, environment, health services, and businesses.
- Development presents a contrast in character for the city of Southport
- The Marina area incorporated as part of the proposal was originally zoned as Planned Residential District which was later renamed and designated Planned Unit Development. The approved and implemented use for this tract is for long-term parking, not multi-family dwellings. As a consequence, there are no vested rights for high-density development.
- Applicability for PUD in accordance with the UDO is land to be planned and developed as a unit. In the ETJ it must be 25 acres or more on one or more continuous parcels. The only exception is for parcels on both sides of the street. The Indigo Phase 2 project comprises two distinct and separated parcels of land and as such does not qualify for a PUD.
- The UDO mandates that a project that surpasses the 100-unit threshold shall have two direct points of direct ingress and egress onto a major or minor thoroughfare. The Marina Village which is proposed to have 188 dwellings does not meet these criteria. This would require an additional ingress and egress point.
- The Subcommittee concluded that the materials submitted do not suffice to solidify and determine the characteristics of development and the dimensional standards.

Chair Hodgins stated that approval for a project of this magnitude using incomplete information signifies a considerable risk for Southport. With the Subcommittee's findings and citations of inconsistencies applicable to the City Ordinance, the Planning Board has determined that the Indigo Plantation Phase 2 Project "in the big picture" does not add overall value to the health, safety, and welfare of Southport and its citizenry. The Planning Board would not be opposed to the evaluation of a resubmission that takes into equal consideration the developer's desire for maximum profits alongside the City's allegiance to preserving its historic character and small neighborhood feel – a resubmission that is realistic to what our City can live with. The Planning Board's recommendation to the Board of Aldermen is that approval for the Indigo Plantation Phase 2 PUD and the associated rezoning request as submitted be denied.

Mr. Chad Paul with Bald Island Limited thanked the Board and the Subcommittees for their hard work and thorough review of the project. He thought it was a great process for addressing questions and concerns from both the Board and the public. He stated that the application for the Planned Unit Development Plan and Rezoning was formally submitted in March 2020, prior to the updated UDO that was adopted by the Board on September 9, 2020. He said the submitted applications were complete and they agreed to wait until after the completion of the UDO to start review. He questioned whether the outcome of the assessment of the project would be different if the process for approval would have started before the 2020 update of the UDO.

The Statement of Plan Consistency and Zoning Recommendation was read by Ms. Meehan that recommended the denial of the submitted application and zoning map amendment to the Board of Aldermen.

A motion was made by Ms. Meehan to adopt the Statement of Plan Consistency and Zoning Recommendation that recommended denial of the Indigo Phase 2

development plan and zoning map amendment to the Board of Aldermen, seconded by Mr. Chris Jones. ***Unanimous vote; motion carried.***

3. Zoning Map Amendment: RZ-22-0512-01; 300,302,304 W. 11th St; MF to R-10; submitted by Coastline Homes.

Development Services Director Thomas Lloyd gave an overview of the proposed amendment. He explained that the application is for a .478 acre (20,821 sf) tract in the Corporate limits on W. 11th St. owned by Coastline Homes. It is currently zoned in MF and the applicant would like to rezone the property to R-10. The property consists of 3 existing lots in the historic Smith and Weeks Subdivision. The lots in the subdivision are 42 ft by 165 ft. Rezoning to R-10 would allow this lot to be developed for single-family residential uses using the nonconforming R-10 lot provisions found in the Ordinance.

A Review Committee consisting of Vice-Chair Hewett, Christopher Jones, and Scott Jones and met on July 12th to review the proposed amendment. The committee went over the existing zoning and future land use map of the area. The future land use map shows this area as medium-density residential rather than multifamily. The Committee found that rezoning this to R-10 would be consistent with the adjacent uses since it is single-family residential to the east, west, and south. It was the consensus of the Review Committee to recommend approval.

Vice-Chair Hewett read the Statement of Plan and Consistency and Zoning Recommendation that recommended approval to the Board of Aldermen.

A motion was made to adopt the Statement of Plan and Consistency and Zoning recommending approval by Vice-Chair Hewett and seconded by Scott Jones. ***Unanimous vote; motion carried.***

4. Zoning Map Amendment; RZ-22-0609-01: 1208 N. Caswell; BD to R-10, submitted by Heidi Paiva.

Mr. Lloyd explained that the Zoning Map Amendment application is for a .141 acre (6,138 sf) tract in the ETJ owned by Heidi Paiva at 1208 N. Caswell St. It is currently zoned BD, and the applicant would like to rezone the property to R-10. The property is one existing lot in the historic Southport Heights Subdivision. The lots in this Subdivision are 50 ft by 123 ft. The rezoning would be consistent with the two previous rezonings that the Planning Board recommended at the May 19th meeting. This Zoning Map Amendment would bring this property in line with those directly north and south.

A Review Committee consisting of Vice-Chair Hewett, Mr. Christopher Jones, and Mr. Scott Jones and met on July 12th to review the zoning map amendment. The committee went over the existing zoning and future land use map of the area. The future land use map shows this area as a high-density residential rather than Business District. The committee found that rezoning this to R-10 would also be consistent with adjacent uses since it is single-family residential to the east, west, and south. It was the consensus of the Review Committee to recommend that the Planning Board rezone it to R-10.

There was a question brought up at the previous meeting about whether this rezoning would constitute spot zoning. According to the UNC School of Government, Spot Zoning is

defined as the practice of zoning a relatively small area differently from the surrounding property. These cases typically involve property that is owned by one person and rezoning that only benefits one person and not the overall public interest. When determining whether something is spot zoning, it is important to consider the size of the tract in question, the compatibility of the proposed zoning with the comprehensive plan, the compatibility of the proposed zoning with the surrounding area, and the relationship of the uses envisioned under the new zoning and the uses currently present in adjacent tracts. Staff argues that this rezoning request is the opposite of spot zoning since the request is compatible with the comprehensive plan, the proposed zoning is more compatible with the surrounding area as single-family residential as opposed to Business District, and the permitted uses in R-10 are more compatible with the surrounding residential zoning than the permitted uses in Business District. Otherwise, there would be one small tract zoned Business District adjacent to areas largely zoned R-10 and MF.

The Statement of Plan and Consistency and Zoning Recommendation was read by Mr. Chris Jones that recommended approval to the Board of Aldermen.

A motion was made by Mr. Chris Jones to adopt the Consistency Statement that recommended approval to the Board of Aldermen and was seconded by Mr. Mibelli.

Unanimous vote; motion carried

5. Zoning Text Amendment, Section 3.5 Table of Permitted and Special Uses, submitted by Terin Ellis.

The applicant is requesting that the table be modified to make Commercial Recreation, Outdoor permitted by right in the Business District. Commercial Recreation, Outdoor is defined as a commercial facility that is typically outdoors and that provides entertainment, recreational, and amusement opportunities. Examples include water parks, mazes, and miniature golf. It is important to note that this would allow Commercial Recreation, Outdoor uses in all of the Business District.

A Review Committee was appointed that consisted of Christopher Jones, Dick Sloan, and Sue Hodgin. The Review Committee met on July 30th to review the zoning text amendment. Present were the Committee members, Staff, and the applicant Terin Ellis. The committee discussed the proposed change. There were concerns raised about whether this would be an appropriate use in the Business District and whether it would fit in with the character of the BD as well as the uses already allowed in BD. There were also safety concerns about outdoor recreation being too close to the road -- even more so with the amount of traffic on Howe Street. The Committee members felt like this would be more appropriate in a zoning district like Highway Commercial. Highway Commercial would have more restrictive dimensional standards like setbacks and buffers to keep outdoor recreation a more appropriate distance from the road. It was the consensus of the Review Committee to recommend the denial of the zoning text amendment.

The Statement of Plan and Consistency and Zoning Recommendation was read by Chris Jones that recommended denial of the amendment to the Board of Aldermen.

A motion was made by Chris Jones to adopt the Statement of Consistency that recommended denial of the zoning text amendment and was seconded by Dick Sloan.

Unanimous vote; motion carried.

6. Major Site Plan: 115 N. Howe St. Mixed-Use Development; submitted by Barbee Enterprises of Southport Inc.

Mr. Lloyd presented the Major Site Plan application for the redevelopment of an existing property within the City limits. The property is located at 115 N. Howe St., at the corner of N. Howe and W. Nash St. The site area is 15,608 sf or (.38 acres). It is zoned in the Central Business District. The existing structure is proposed to be demolished and replaced with a new structure proposed as a multi-story building 102 feet by 90 feet. The layout on the site would add an additional 3,886 sf for a total of 14,317 sf. The Site Plan proposes four residential dwelling units. The Sketch Plan will be reviewed in detail to ensure all requirements are met and in accordance with the UDO.

A Review Committee was appointed and met on July 15th at 3:30 pm. The Review Committee consists of Chair Sue Hodgins, Gustavo Mibelli, Fred Fiss, and Staff. Also present were the project manager Ron Greger and the property owners Frankie & Eric Beacham. The Committee started out discussing the importance of the Central Business District in Southport and how it was important to have architectural design that matched the character of Southport. The Review Committee mentioned that missing from the application was a Traffic Impact Study, lighting plan, and signage plan. A Traffic Impact Study is required for any project that exceeds 500 trips a day. If an applicant feels like their project does not exceed 500 trips a day, they need to have a traffic engineer submit documentation for that assertion, using ITRE Trip Generation Manual. The applicant said that they would get back together with their civil engineer and work on that documentation.

The Review Committee also indicated that they were concerned with the lack of parking for the uses proposed. Although the CBD does not require off-street parking for nonresidential uses, they were concerned with the lack of parking for the intensity of uses at this location. There was discussion on the 8 parking spaces for nonresidential uses and how one of those parking spaces was handicapped. They asked if the dwelling units were able to use this spot if they did not have a handicapped placard; Staff indicated that they would not.

Mr. Mibelli brought up the 5-ft parking setback from the property line and how it needed to be shown on the plan. Mr. Greger indicated he would get that modified. Mr. Mibelli also asked whether there would be an elevator structure to the rooftop bar in order to comply with ADA requirements. The elevator shaft would need to be in line with zoning requirements.

The Committee also discussed that the corner visibility needed to be clarified and discussed the increase in impervious areas on the site. While the site already has 11,431 sf of impervious area, there would be an additional 2,886 added to the site if developed as proposed.

The Committee further discussed the architectural compatibility. Mr. Greger said they were willing to talk about architectural considerations within reason. He indicated that they would talk to a local architect in Wilmington to get further ideas on how to soften the building and make it more compatible with Southport.

There was also discussion on whether the applicant was aware of potential changes to the City's lighting policy and becoming Dark Sky Compliant.

Mr. Fiss asked about the occupancy and whether there was enough egress according to Fire Code. It was his understanding that there would need to be 3 stairwells. Mr. Greger indicated that they were considering adjusting that and that they would need to resubmit an updated version. There was also discussion on grease interceptors, recycling containers, and the dumpster.

Mr. Fiss conveyed to the applicant that folks around town indicated that they would be more comfortable with a two-story structure rather than a 38-foot tall building. Mr. Greger indicated that the applicant was looking to maximize their profit. Mr. Greger said the meeting was a good way to introduce the project and that they'd gained valuable feedback from it and the feedback received from citizens, verbally and on social media. He indicated that the applicant would incorporate changes and bring the plan back as a resubmittal.

It was the consensus of the Board to table the Site Plan until the plan was resubmitted and further information was provided by the applicant.

7. Zoning Text Amendment: Tree Preservation Changes.

Mr. Lloyd gave an update on the progress of the proposed amendment. He stated The Forestry Committee helped come up with suggestions on how to utilize the current Tree Ordinance with language that becomes more apparent to the current Tree and Landscape Preservation Ordinance. He said there are several things that there certain language that needs to be implemented to qualify Southport for Tree City USA Community designation. The NC Urban Forestry Council also said that the Ordinance should be more about ensuring the preservation of existing trees versus replanting new trees.

The draft of the proposed amendments was provided to the Board for review. Mr. Lloyd felt that City Attorney would help interpret how to disperse penalty funds. By state statute, all civil penalties collected currently go to the county school systems where violations occur.

Another discussion was if the City would consider placing a lien on properties until assessed penalties are paid. The Board will continue to work on the proposed amendment and provide the Board updates to the proposed language and discussions with the City Attorney.

H. New Business

1. Zoning Map Amendment: R-22-0701-01: 1403 Howe St; PUD to BD, submitted by RDK Investments.

Mr. Lloyd gave an over of the application. The zoning map amendment is for a 0.35-acre tract within the City limits. The property is located on N. Howe Street, at the corner of N. Howe and W. 14th Street. It is currently zoned PUD, and the applicant would like to rezone it to BD. The legal description indicates that it is part of the historic Southport Heights subdivision originally platted in 1910. The parcel is approximately 101 feet by 150 feet. The BD does not designate a minimum lot size, only a 10- foot setback, and a 40-foot maximum height. The proposed zoning map amendment would remove PUD zoning and replace it with BD zoning on the zoning map. This would match most of the adjacent properties and would encourage the continuity of the Business District.

It was the consensus of the Board to establish a Review Committee. Vice Chair Hewett, Dick Sloan, and Chris Jones were appointed to the Committee.

2. Establishment of Central Business District Review Committee.

At its meeting on July 14th, the Board of Aldermen requested that the Planning Board consider appointing a committee to review zoning regulations in the UDO pertaining to the City's Central Business District. Staff recommends the appointment of that committee.

Chair Hodgkin, Dick Sloan, and Fred Fiss were appointed to the Committee.

3. Exterior Lighting Amendment.

During the Street Light Policy update process, the Street Light Committee recognized the need to also update the City's Code of Ordinances to include general exterior lighting consistent with the lighting ordinance in the UDO and the street light policy. While changes to the Code of Ordinances do not require Planning Board review the Committee understands that lighting is important to the community at large and an essential element in the planning process. Prior to final consideration, the Committee recommended submitting the draft language for the Exterior Lighting amendment to the Planning Board for review.

Vice Chair Hewett, Chris Jones, and Chair Hodgkin were appointed to the Review Committee.

I. Additional New Business/ Board Comments

Mr. Mibelli mentioned that the experience from the last two major site plan applications such as the Indigo Plantation Phase 2 project and the Site Plan for the mixed-use development at 115 N. Howe St. has been different and challenging. He said that we can learn from the experience in various ways such as through a preliminary meeting between the developer, the consultant working on the project, and the City Planner and UDO Administrator. He said he felt that the Indigo Plantation Phase 2 project developers acted as if they were entitled to the development and that having preliminary discussions prior to the detail of the review would be beneficial to the dialogue for appropriate concerns. He said that Article 2:5 mentions a determination and interpretations of the Ordinance, and he would like to extrapolate that slightly and ask that the next UDO Administrator provides their opinion on whether a project is in complete accordance with the UDO regulations and requirements, or completely out of line. Mr. Mibelli said that interpretations of keywords in the UDO are not defined or explained clearly. He said this would save time when discussions arise such as "the corridors linking, different green areas, and the coal ash parcel for recreation". He said the Ordinance states that coal ash cannot be used in recreational spaces. He said he believes that it is the responsibility of the property owner to mitigate the property to be safe and in good condition. Mr. Mibelli opined that issues like these need to be discussed and revised in the UDO to ensure that the language is defined clearly.

Mr. Sloan stated that he is not in favor of the proposed three-story mixed-use development at 115 N. Howe St. He said that a rooftop bar would not only be a potential safety hazard but also a nuisance to the adjacent residents. He recommends that the third story be eliminated from that project.

Vice-Chair Hewett was in agreement with Mr. Mibelli and recommended that the Board have workshops to discuss and review certain language to help improve the interpretations and determinations of the policies and procedures in the UDO.

With this being Development Services Director Thomas Lloyd's last meeting with the Planning Board before his departure for a new position with the Town of Morrisville, Chair Hodgins presented him with a token of appreciation and the Board's thanks for his help to this body and his service to the City of Southport.

Chair Hodgins confirmed Mr. Fiss' return to Alternate Member status.

Adjournment:

There being no further business, Vice-Chair Hewett made a motion to adjourn, seconded by Mr. Mibelli. ***Unanimous vote; motion carried.***

Meeting adjourned at 8:00 P.M.

Sue Hodgins, Chair

Tanya Shannon, Deputy Clerk



PLANNING BOARD

MEMORANDUM

To: Members of the Planning Board
From: Dorothy Dutton, City Clerk
Wes MacLeod and Sam Shore, CFCOG
Re: Section 3.18 Tree Preservation (**ZA-22-0809-01**)
Date: August 12, 2022

BACKGROUND

The Planning Board and Board of Aldermen have been revising this section of the UDO as needed. This round of updates strengthens the regulations by:

- Requiring an as-built tree survey for residential and non-residential new construction and subdivisions.
- Defining how to calculate mitigation credit for retaining Heritage Live Oak trees.
- Setting penalties for violations of the regulations.
- Defining the responsibilities of the City, the Forestry Committee, and the Citizens
- Defining "Regulated Tree"

Staff has forwarded some legal questions to the City Attorney that the Sub-Committee submitted. Once we have answers, there will be further amendments to the Tree Preservation Ordinance.

PROCESS

The Board of Aldermen must approve a zoning text amendment to amend the UDO. The Planning Board must review the amendment, adopt a statement of Land Use Consistency, and make a recommendation to the Board of Aldermen. A duly advertised public hearing is scheduled for the Board of Aldermen meeting, where the public can comment and provide feedback on the amendment.

POSSIBLE ACTION ITEM

If the Planning Board sees fit, the Statement of Land Use Consistency can be adopted, and a recommendation can be made to the Board of Aldermen to approve or deny the ordinance amendment.

3.18 TREE PROTECTION AND LANDSCAPE PRESERVATION

A. GENERAL

The overarching goal of this section is to proactively manage the City of Southport's Urban Maritime Forest and its tree canopy. This management will take the form of tree preservation when at all possible, and mitigation through the replanting of trees when others must be removed.

A healthy and expansive tree canopy provides a wide range of benefits to the citizens of Southport. Aesthetically, the nurturing of trees and tree canopy provides for a pleasant and beautiful community in which both residents and visitors alike benefit from. Economically, a robust tree canopy provides a consistent cooling effect on our community and on individual properties that can significantly reduce cooling costs for homeowners and businesses alike. Property values on both public and private land are increased when trees form part of the landscape. A healthy tree can increase residential property values by as much as 27 percent.

One large tree can lift up to 100 gallons of water out of the ground and discharge it into the air in a day, helping to filter the air that we breathe and control storm water. In our coastal location, Southport's tree canopy protects our community and helps mitigate the damage caused by wind during tropical storms and hurricanes.

The city finds that the preferred method used by developers of proposed development for minor, major, or PUD development in the city is to clearcut the entire area to be developed and then to replant trees in mitigation of the damage done by the clearcutting. The City finds that, even when fully mitigated pursuant to this ordinance, both the aesthetic and environmental damage done by the mass and indiscriminate destruction of forest by such clearcutting can never be fully restored until the trees planted in mitigation reach maturity many years in the future. For this reason, the City seeks to limit the environmental and aesthetic damage done in the process of development to the extent reasonably possible by reducing the number of trees removed in development rather than planting new trees in substitution therefore.

For all these reasons, the City of Southport places great value on our Urban Maritime Forest and the tangible and intangible benefits that it provides. This section provides a plan to ensure that existing trees are protected, in particular our signature heritage Live Oaks, and at the same time provides guidelines for mitigation through the replanting of native species when it is necessary to remove trees.

B. PURPOSE

1. The general purpose of this section is to regulate and control the planting maintenance, and removal of trees and vegetation on both public and private property.
2. The specific purposes of this section are:

- a) To safeguard and enhance property values and to protect public and private investment through the maintenance and protection of significant existing trees.
- b) To prevent lot clearing
- c) To outline the City's responsibilities with regard to protection and maintenance of Southport's urban forest trees and landscaping on public property; and
- d) To prevent the indiscriminate removal of trees and ensure mitigation when trees are necessarily removed.

C. AUTHORITY TO TREAT OR REMOVE TREES ON PRIVATE PROPERTY

- 1. The UDO Administrator may cause or order the removal of any tree or part thereof on public or private property which is in an unsafe condition, damaging or likely to damage sewers or other public improvements facilities, or which is infested by an injurious fungus, disease, insect or other pest.
- 2. The UDO Administrator may cause or order necessary treatment for any tree on public or private property which is infested by any injurious fungus, disease, insect or other pest when they determine such action is necessary to prevent the spread of any such injurious condition or pest and to prevent danger therefrom to persons or property or to vegetation planted on adjacent property.
- 3. Before exercising the authority conferred by this section, the UDO Administrator shall order the owner or occupant of the property to take corrective action. The order shall be in writing and shall state that the action specified therein must be taken within 10 consecutive calendar days after the order is mailed. The order shall be mailed by certified or registered mail, return receipt requested. Failure to comply with the order of the UDO Administrator shall be a violation of this section. If the condition has not been corrected or if action that would lead to a timely correction of the condition has not been taken within the time specified above, the UDO Administrator or their designee may seek an injunction, order of abatement or other equitable remedy in a court of competent jurisdiction against the property owner to ensure compliance in accordance with NCGS 160A-175.

D. TREE IMPACT PERMIT

- 1. Removal or damage to any protected tree or development activities within the critical root zone of any protected tree without the prior issuance of a tree impact permit or the failure to conform to the terms and conditions thereof is hereby prohibited. A protected, or Regulated Tree, is defined as follows:

Regulated Tree. The subsurface roots, crown and trunk of any self-supporting woody perennial plant such as a large shade tree, which usually has one (1) main stem or trunk, and has a measured DBH as follows:

A. A hardwood tree, having a single trunk at least eight (8) inches in DBH. Trees may have a single or multiple trunks, but at least one trunk must measure eight (8) inches in diameter.

B. A coniferous tree, having a single trunk at least twelve (12) inches DBH.

C. Any tree, of any species, with a DBH of thirty (30") inches or greater.

(Specimen tree)

2. For previously platted residential lots or one or two-family residential uses, a tree impact permit shall be required to remove or conduct any development within the critical root zone of any protected regulated tree located within any setback and for a protected specimen tree located anywhere on said property. An as-built tree survey will be required prior to the Certificate of Occupancy for new residential construction.
3. For nonresidential, multi-family, or major subdivisions, a tree impact permit shall be required to remove any protected tree located anywhere on site. An as-built tree survey shall be required for Major Site Plans prior to the Certificate of Occupancy and for Major Subdivisions prior to Final Plat Approval.
4. Any protected trees permitted to be removed pursuant to any tree impact permit shall be mitigated pursuant to subsection H (entitled "Mitigation") of this section of this ordinance. All persons seeking a permit for removal of a protected tree as provided above shall make application to the city via the tree impact permit application.

E. EXCEPTIONS

1. The UDO Administrator may waive the requirements of this section during a city declared state of emergency in accordance with NCGS 166A-19.22.
2. If any regulated tree shall be determined to be a hazard tree such that it may:
 - a) Immediately endanger the public health, safety or welfare; or
 - b) Cause an immediate disruption of public services.

F. TREE PLAN

1. A tree plan must be submitted to, reviewed, and approved by the UDO Administrator prior to the issuance of a tree impact permit.
2. For nonresidential, multi-family, major subdivisions, or planned unit developments the tree plan shall be a scaled plan not less than 1"= 30' and shall be prepared by a landscape architect registered in the state and the tree plan shall provide the following information:
 - a) Two separate zones during the planning phase:
 - i) Tree Removal Zones – Zones that show the impacts of utility, infrastructure, and drainage improvements. These

- improvements would still require mitigation for all regulated live oaks 8" or greater in diameter.
- ii) Tree Safe Zones/Lot Preservation – The area designated on a preliminary plat of a minor or major subdivision or PUD that makes up the individual lots where trees are to be left untouched. 80% of the lot is to be left untouched prior to lot development.
 - b) Property line with bearings and distances, easements, marsh and wetland delineations and other information necessary to depict the development area;
 - c) All existing and proposed buildings, paving, infrastructure, and utilities;
 - d) All protected regulated and specimen trees located on the site indicating the diameter, species, and the critical root zone for each protected tree;
 - e) All regulated and specimen trees located on the site proposed to be removed, including species and size;
 - f) All proposed newly planted trees indicating the DBH and height at planting, and species;
 - g) Tree protection zones, protective fencing details, and tree wall and/or tree well details;
 - h) Maintenance plan identifying the methods to ensure the viability of all trees and the party responsible for continuing maintenance;
 - i) Listing of total number of trees and DBH inches to be removed and the total number of trees and DBH inches to be planted by species; and
 - j) Seal of the design professionals with signature and date.
3. For residentially zoned vacant lots or one and two-family residential uses, the tree plan to be submitted as part of the permitting process shall include a hand drawn sketch, rendering, or copy of an existing plat or survey of the property indicating the location of those regulated or specimen trees proposed to be removed, as well as any trees proposed to be planted as mitigation (if applicable).
- a) **TREE RETENTION REQUIREMENTS PER LOT IN THE R10, R20, MF, AND PUD ZONING DISTRICTS**
 - 1. 3,000 sq ft - 1 broadleaf canopy tree
 - 2. 6,500 sq ft - 2 broadleaf canopy trees
 - 3. 11,000 sq ft - 3 broadleaf canopy trees
 - 4. 14,000 sq ft - 4 broadleaf canopy trees
 - 5. 20,000+ sq ft - 5 broadleaf canopy trees
 - b) In cases where the tree retention requirements above prohibit the development of a lot, mitigation will be required.
 - c) In cases where the lot does not have canopy trees, the developer must plant to the requirements in 3 a).
4. Distance from utilities. Any tree required by this section which is placed within 20 feet lateral distance from the centerline of an above ground electric utility

line (the line connecting pole centers) should have a maximum expected maturity height as follows:

- a) Zero (0) to 10 feet lateral distance of the centerline, 15-foot maximum expected maturity height; and
- b) Zero (0) to 10 feet lateral distance of the centerline, 15-foot maximum expected maturity height; and
- c) Outside 20 feet of lateral distance, trees should be placed in the most feasible manner to avoid future conflict with aboveground electric utilities and violations of the National Electric Safety Code, and to avoid conflict with any below ground utilities and drainage facilities. Variations to such distance requirements may be made with the approval of the Public Services Director.

G. CRITERIA FOR ISSUANCE OF TREE IMPACT PERMIT

1. Unless the applicant for a permit under this section is engaged in new construction, no tree impact permit shall be issued unless one (1) or more of the following criteria are met:
 - a. The protected tree is dead, severely diseased, injured or in danger of falling close to existing or proposed structures.
 - b. The protected tree is causing disruption of existing utility service or causing drainage or passage problems upon the rights-of-way.
 - c. The protected tree is posing an identifiable threat to pedestrian or vehicular safety.
 - d. The protected tree to be removed is located within 15 feet of the principal structure, within five (5) feet of detached buildings (sheds, accessory structures, garages), pools, hardscape patios, and driveways.
 - e. The protected tree violates state or local safety standards.
 - f. Removal of the protected tree is necessary to enhance or benefit the health or condition of adjacent trees or property.
2. Any tree removed requiring mitigation shall be mitigated through the planting of new material as provided in 3.18 H Mitigation. Mitigation shall not be required for trees that are dead, severely diseased, injured or ~~in danger of falling close to existing structures~~ if the tree poses a threat to an existing structure due to the poor condition of the tree.

H. MITIGATION

1. The indiscriminate removal of trees is not allowed. A tree impact permit request must be accompanied by a clarification of purpose/need. Mitigation is required when it is determined that a tree may be removed. The removal of any protected regulated tree within any setback or the removal of any protected specimen tree located anywhere on site, if approved, must be mitigated in accordance with the following standards:
 - a. The total diameter at breast height (DBH) of all applicable protected trees proposed for removal shall be totaled. The resultant number of DBH inches to be removed must be planted back on the site with an appropriate

number of trees to replace the equivalent DBH of those trees removed. For example, if 72 inches DBH of specimen trees are proposed for removal from a site, the equivalent number of new trees required to meet the 72 inches of DBH removed shall be planted back on site (24 trees installed at three (3) inches Caliper would meet this requirement).

- b. Existing residentially zoned vacant lots or one and two-family residential uses shall only be required to mitigate 25% of the total DBH of regulated or specimen trees removed. All other development types and/or proposals for any major subdivision shall be subject to the full mitigation replacement ratio requirement provided in subsection 1 (a).
 - c. A minimum of one (1) regulated or specimen tree of the same species removed shall be installed through mitigation. Where regulated or specimen canopy trees are removed, the replanting requirement shall consist of a minimum 25% heritage Live Oak (*Quercus virginiana*) and an overall minimum of 50% canopy trees. Where regulated or specimen Live Oak (*Quercus Virginiana*) trees are removed, the replanting requirement shall consist of a minimum of 50% such species.
 - d. Any replanted trees shall be canopy or understory trees as provided in Tables 3.5 or 3.6.
 - e. Utilization of understory trees shall not exceed 50% of the required mitigation plantings.
 - f. A mitigation plan that contains between 10 to 50 understory trees shall include, with balanced representation, a minimum of three understory tree species as provided in Table 3.6.
 - g. A mitigation plan that contains over 50 understory trees shall, with balanced representation, include a minimum of four understory tree species as provided in Table 3.6.
 - h. Minimum sizes for mitigation plantings are canopy trees 3" diameter at breast height and understory trees 2" diameter at breast height.
2. Any mitigation trees required as a result of the removal of regulated or specimen trees may be counted to meet the requirements of the street yard, buffer, or parking facility landscaping requirements.
 3. Significant Heritage Live Oak Trees retained on site will be eligible for a mitigation credit as follows:
 - a. 10" to 20": Retaining and preserving Heritage Live Oaks of this size will receive credit with a multiplier of 2. For example, retaining a 10" Live Oak would equal 20" of mitigation credit.
 - b. 20" to 30": Retaining and preserving Heritage Live Oaks of this size will receive credit with a multiplier of 3. For example, retaining a 20" Live Oak would equal 40" of mitigation credit.
 - c. Greater than 30": Retaining and preserving Heritage Live Oaks of this size will receive credit with a multiplier of 4. For example, retaining a 30" Live Oak would equal 120" of mitigation credit.
 4. Mitigation trees must be planted within a year of the tree permit being issued. Failure to do so will constitute a violation of this section.

I. LOT CLEARING AND PREPARATION

1. No alteration of vegetation, trees, or landscape material in excess of three (3) inches DBH shall occur on a lot or building site prior to the issuance of a zoning or tree impact permit. Some clearing of understory trees and shrubs may be required to prepare a site for survey, inspection by governmental agencies as part of any permitting process, or to stake the proposed building site.
2. On densely vegetated lots, a walking access trail not to exceed three (3) feet may be cleared for access purposes. Permission to clear any understory trees and shrubs less than three (3) inches DBH for said walking access trail shall be permitted following consultation with the UDO Administrator; however, clearing shall be kept to an absolute minimum.
3. Violations of the lot clearing and preparation section shall constitute a minimum (1) one-year delay in the issuance of any city issued development approval.
4. In the event that a lot has been cleared without obtaining all proper permits from the city and the UDO Administrator is unable to determine the exact number of trees which have been removed in violation of this ordinance, a civil penalty shall be levied under this subsection as follows:
 - a) If the property is located within a residential district, the offender shall be subject to a civil penalty in the amount of \$1.00 for each square foot of the total size of the lot that was cleared (not based on the lot area cleared). In addition, the offender shall be required to plant two (2) replacement canopy trees per 10,000 sf or fraction thereof.
 - b) If the property is located within a nonresidential district, the offender shall be subject to a civil penalty in the amount of \$2.00 for each square foot of the total size of the lot that was cleared (not based on the area cleared). In addition, the offender shall be required to plant four (4) replacement canopy trees per 10,000 sf or fraction thereof.
 - c) In addition to the civil penalties set forth in subsections 4(a) and 4(b) above, the offender shall be subject to all enforcement provisions of Section 2.15.D of this Unified Development Ordinance.

J. TREE PROTECTION DURING CONSTRUCTION

1. A major objective of this section is to encourage the preservation of existing vegetation wherever possible while allowing quality development to take place. As a result, the following measures shall be required for protected trees during the construction process.
2. Protective fencing not less than four (4) feet high or other construction barrier shall be placed at and completely encompass the critical root zone of all protected trees.
3. Any tree whose critical root zone will be affected by soil removal shall have roots cut clearly by trenching at a point at least one (1) foot outside the construction barrier installed as required above.
4. The following shall be prohibited within the critical root zone of any protected tree, except as may be necessary when constructing, repairing or replacing public utilities:
 - a) Grading and excavation which involves cutting or filling to a depth of more than three (3) inches.
 - b) Pouring of any material onto ground which is toxic to plants.

- c) Installing, depositing, placing, storing, or maintaining any stone, brick, sand, concrete or other materials which may impede the free unobstructed growth of or passage of water, air, and fertilizer to the roots.
 - d) Storing of any construction materials within the critical root zones of the protected trees.
 - e) Attaching any sign, poster, notice or other object, or fastening any guy wire, cable, rope, nail, screw, or other device to any protected tree for any reason other than that of a protective nature to the tree.
 - f) Causing or encouraging any fire or burning of any kind near or around any tree.
5. In the event that a developer is unable to meet the critical root zone requirements of this section, the developer must have a Landscape Architect or ISA Certified Arborist prepare guidelines on how to protect the Critical Root Zone to the maximum extent possible during the development process.

K. DAMAGE TO TREES

- 1. It shall be unlawful to intentionally damage or destroy trees planted on municipally owned or controlled property except as a part of a city-authorized improvement program.
- 2. It shall also be a violation of this section to attach or place any rope or wire (other than one to support a young or broken tree), sign, poster, handbill, or anything to any such public tree.
- 3. A person damaging a tree on public property in violation of this section shall be liable to the city for such damage, including any loss of value. In the event damage is so pervasive as to result in the treatment or removal of the tree, the person damaging such tree shall also be liable for costs of treatment or removal. Values of public trees or the amount of damages thereto will be determined by a certified arborist retained by the City of Southport.
- 4. The monies collected for damages and loss of value will be placed in the City of Southport Tree Mitigation Fund and are to be used solely for restitution for damages or for other costs incurred by the city for violation of this section.

L. HAZARD TREE

- 1. Every owner of any tree overhanging a street or sidewalk within the city is responsible for pruning the branches so that such branches shall not obstruct vehicles or pedestrians. Provided further, that all property owners within the city are hereby required to cause the removal of any dead or diseased trees on their property whenever such trees constitute a hazard to life and property or harbor insects or diseases which constitute a potential threat to other trees. Failure to take such action shall be a violation of this section.
- 2. The UDO Administrator or his designated representative shall give written notice to any owner violating the terms of this section of said violation and give said owner no less than 10 days to perform the duties in connection with his or her property as specified in (a). If said owner or occupant shall refuse or neglect to perform the

duties hereof, the UDO Administrator or his designee may seek an injunction, order of abatement or other equitable remedy in a court of competent jurisdiction against the property owner to ensure compliance in accordance with NC GS 160A-175.

3. In case the owner(s) of any lot or other real property is unknown or their whereabouts is not known after diligent efforts to identify and locate said person, then a copy of the written notice herein above referred to shall be posted upon the premises. The City Clerk shall make an affidavit setting out the facts and circumstances justifying the posting of said property.

M. PROTECTION OF UTILITIES

Public utilities shall exercise reasonable care and utilize best management practices to avoid damage and injury to public trees during the installation and maintenance of its facilities. The City's Public Services Director or their designee will provide assistance on any utility project to see that the public utilities can be installed or repaired with minimal damage to any public tree utilizing standards outlined in the City of Southport Urban Forest Management Plan (2011).

N. NOTIFICATION FOR WORK NEAR PUBLIC TREES

1. As part of any new construction project, no person or business shall perform any grading, excavation, place any fill, compact the soil or construct any building structure, street, sidewalk, driveway, pavement or public utility within 25 feet of any public tree without first notifying and consulting with the UDO Administrator. Any such work shall be conducted in accordance with this section.
2. Any public utility constructing or maintaining any overhead wires or underground pipes or conduits within 25 feet of public trees shall consult with the Public Services Director prior to performing work which may cause injury to public trees.

O. PRUNING REQUIREMENTS

A permit is not required for the pruning of trees. However, in order to prevent excessive pruning and topping of trees and to prevent pruning that will be hazardous to the health and natural appearance to the tree, compliance with approved pruning standards is required, and failure to meet these standards is a violation of this section. The UDO Administrator shall maintain on file at all times a copy of the current edition of Pruning Standards by the American Society of Consulting Arborists and shall make copies of such standards available for the cost of reproduction upon request.

P. PENALTIES FOR VIOLATIONS OF THIS SECTION

1. Any person removing any tree in violation of this section, in addition to mitigation requirements, shall be subject to a civil penalty of one hundred dollars (\$100.00) per inch diameter at breast height (DBH) of the tree.
2. Any person removing any regulated tree after notice of the requirements of this section, in addition to the mitigation requirements, shall be subject to a civil penalty of two hundred dollars (\$200.00) per inch DBH of the tree.

3. Any person removing any City Owned Tree in violation of this section, in addition to the mitigation requirements, shall be subject to a civil penalty of three hundred dollars (\$300.00) per inch DBH of the tree.

Q. CITY OF SOUTHPORT; RESPONSIBILITY

1. It is the responsibility of the City of Southport to maintain the City's iconic, Urban Maritime Forest. The City shall undertake a program of review, maintenance, and regulatory oversight in order to maintain the current and future health of our forest landscape.

R. FORESTRY COMMITTEE; RESPONSIBILITY.

1. The City of Southport Forestry Committee shall review and recommend actions to preserve and enhance the community's trees. The committee's actions will include protection of existing trees, tree replenishment, public education, and any other function related to the community's urban forest environment.

S. APPROVED TREE LIST

1. The City shall maintain a list of approved native trees for various applications. A copy of the approved native tree list can be found in Section 3.17.

T. DEVELOPMENT OF ANNUAL TREE PROGRAM.

1. The City Manager, in cooperation with the Forestry Committee, shall annually review its tree maintenance and installation needs including new projects, pruning of existing trees and replacement of diseased or damaged trees in conjunction with development of the City's annual budget. The City, in coordination with the Forestry Committee, will undertake an annual planting program, focusing on Southport's iconic live oaks (*Quercus virginiana*) on the City's public areas and rights of way. The Forestry Committee will identify planting locations with a focus on replacing trees that have been lost/removed as well as to expand the forest canopy.

U. COMMUNITY AWARENESS

1. The City shall undertake programs, as may be determined by the Forestry Committee, Director of Tourism, and/or the Director of Parks and Recreation, which enhance the community's awareness of the value of trees and qualify for points toward the Tree City, USA Growth Award. The City shall annually hold an Arbor Day Ceremony, planned and organized by the Southport Forestry Committee, which focuses attention on the value of trees in the urban environment, and encourages public participation in tree planting or other activities supporting Southport's urban forest.

V. MAINTENANCE OF PUBLIC TREES/PROJECTS

1. The Public Services department shall be responsible for the maintenance of trees on municipal property with the advice of the City Manager or his designee. The Public Works department and Forestry Committee will annually assess trees located on

public property and identify those that require maintenance or removal. The City will undertake any required maintenance utilizing City Staff, or when required, contract the work to be completed within current ANSI standards and/or International Society of Arboriculture (ISA) Best Management Practices.

2. The City shall have the right to prune, maintain and remove any tree on public grounds which interferes with the safe flow of traffic, any traffic control device or sign.
3. It shall be unlawful for any person to top or cut back to stubs the crown of any tree on City property or ROW.
4. Trees severely damaged by storms or other causes where required pruning practices are impractical may be exempted from this section as determined by the City Manager. This also includes dead, dying, or diseases determined by the City Manager or their designee and which pose a threat to the safety of the community.
5. All other City departments shall cooperate fully with the City Manager or his designee in carrying out the responsibilities of this section.
6. The planting, maintenance, and/or removal activities of public trees shall meet current arboricultural best management practices (ANSI A300 Standards) and follow guidelines outlined in the 2011 City of Southport Urban Forest Management Plan. City departments, contractors, community organizations and individuals performing tree related activities on City-managed property are required to adhere to these standards.

Further Questions:

- We need further input from legal representation on how to structure the penalties for removing trees without a permit. How can we structure it so a percentage of the penalties go to either a Tree Mitigation fund or Tree Maintenance fund for City trees? Would we need a local act from the General Assembly in order to do that?
- Would the city further consider a fee in lieu in situations where a developer is unable to meet the criteria of the ordinance?
- Could a Tax Lien be put on a violators property if they don't pay the tree violation penalty?



City of Southport
Statement of Plan Consistency and Zoning Recommendation
(As per NC General Statute 160D-604)

When conducting a review of proposed zoning text or map amendments pursuant to this section, the planning board shall advise and comment on whether the proposed action is consistent with any comprehensive plan that has been adopted and any other adopted plan that is applicable. The planning board shall provide a written recommendation to the governing board that addresses plan consistency and other matters as deemed appropriate by the planning board. A comment by the planning board that a proposed amendment is inconsistent with the comprehensive plan shall not preclude consideration or approval of the proposed amendment by the governing board.

AMENDMENT: **ZA 22-0809-01**

STATEMENT OF CONSISTENCY AND RECOMMENDATION:

The City of Southport Planning Board has reviewed the proposed text amendment of the Unified Development Ordinance and finds that it is consistent with the City's 2015 CAMA Core Land Use Plan, originally adopted November 13, 2014, and subsequently amended by the Southport Board of Aldermen. More specifically, the proposed amendment is consistent with Policy 2.21, supporting the maintenance of environmentally sensitive areas, and Policy 7.9, encouraging development that supports its Vision and Core Values and preserve its atmosphere. The Planning Board recommends action 2.5A, continually monitoring the need for possible revisions to the UDO. Further, the Planning Board finds the proposed text amendment reasonable and in the public interest because it preserves and protects the City's character and heritage, the environment, and Southport's aesthetic beauty. The Planning Board recommends that the Board of Aldermen adopt the zoning text amendment.

The statement and motion was seconded and passed _____.

City Clerk

Sue Hodgins, Planning Board Chair

**ORDINANCE TO AMEND SECTION 3.18 TREE PRESERVATION OF THE
UNIFIED DEVELOPMENT ORDINANCE FOR THE
CITY OF SOUTHPORT, NORTH CAROLINA**

THAT WHEREAS, the City has enacted a set of development regulations that control land development and construction within the City's incorporated and extraterritorial jurisdiction areas; and

WHEREAS, in order to promote public health, safety, and general welfare and to promote the best interests of the City and community, it is necessary from time to time for the Planning Board and Board of Aldermen to consider appropriate revisions, modifications, and updates to the City's development regulations; and

WHEREAS, the Planning Board, along with City staff, has prepared and submitted an update to the development regulations; and

WHEREAS, the Planning Board has thoroughly reviewed this matter and found the proposed zoning text amendment to be consistent with the City of Southport CAMA Core Land Use Plan and recommends its approval; and

WHEREAS, pursuant to N.C. General Statutes and City ordinances, a public hearing, properly noticed, was held on _____, 2022, where public comment was heard and considered by the Board of Aldermen regarding this issue; and

WHEREAS, the Board of Aldermen, after considering the public hearing response and the recommendation of the Planning Board, hereby finds that it is consistent with the City's 2015 CAMA Core Land Use Plan, originally adopted on November 13, 2014, and subsequently amended. More specifically, the proposed amendment is consistent with Policy 2.21 (Southport supports the maintenance of environmentally sensitive areas), Policy 7.9 (the City will encourage development that supports its Vision and Core Values and preserve its atmosphere), and recommended action 2.5A (The City will monitor the need for possible revisions to the UDO.); and

WHEREAS, the Board of Aldermen further finds the proposed amendment is reasonable and in the public interest because it (i) protects and preserves the City's character and heritage, (ii) protects the environment, and (iii) it preserves Southport's aesthetic beauty;

NOW, THEREFORE, BE IT ORDAINED by the City of Southport Board of Aldermen that the proposed zoning text amendment of Article 3: Zoning, as shown in EXHIBIT A, is hereby adopted and shall become effective immediately.

Adopted this the _____ day of September 2022.

Dorothy Dutton, City Clerk

Joseph P. Hatem, M.D., M.P.H.
Mayor, City of Southport



PLANNING BOARD

MEMORANDUM

To: Members of the Planning Board
From: Dorothy Dutton, City Clerk, CZO
Wes MacLeod, Cape Fear Council of Governments
Re: Zoning Map Amendment: PUD to BD, one lot on N. Howe Street (.35 acres total, Parcel ID 221MA029), submitted by RDK Investments on behalf of the owners, Thomas Wilson ETUX.
(RZ-22-0701-01)
Date: July 14, 2022

BACKGROUND

The attached zoning map amendment is for a 0.35-acre tract in the City limits. The property is located on N. Howe Street, at the corner of N. Howe and W. 14th Street. It is currently zoned PUD, and the applicant would like to rezone it to BD. The legal description indicates that it is part of the Southport Heights subdivision that was originally platted in 1910. The parcel is approximately 101 feet by 150 feet. The BD does not designate a minimum lot size, only a 10-foot setback, and a 40-foot maximum height.

The Planning Board and Board of Aldermen may consider the following when deciding on a zoning map amendment: all uses allowed in that zoning district, impacts on neighbors, economic impact, tax base increase, spot zoning, road capacity, whether there is adequate infrastructure, community opinion, property values, consistency with the CAMA Land Use Plan, the future land use map, the land suitability map, jobs, public services, buffering requirements, the environmental impacts, site limitations, and consistency with other plans and prior decisions. The Boards cannot consider ethnicity, income, affordable housing, owner vs. rental housing, or who the owner is when deciding.

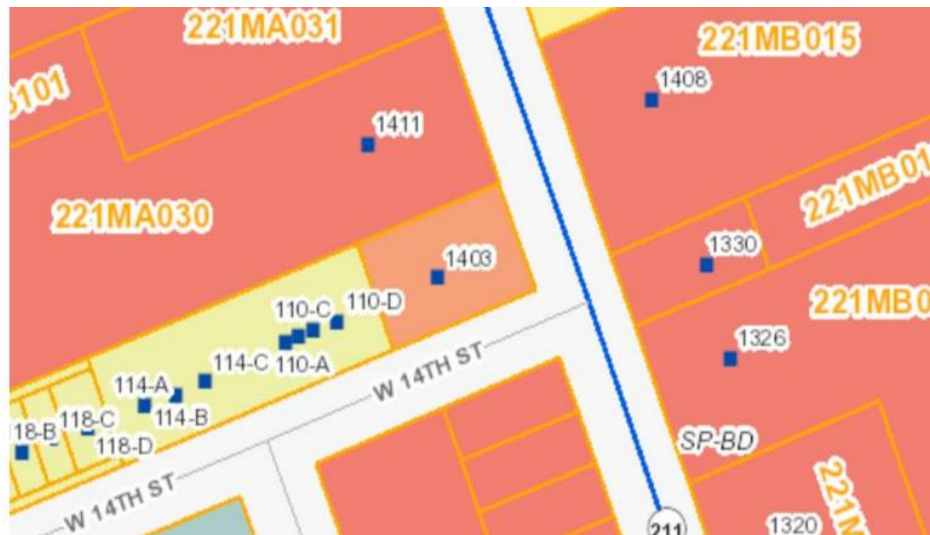
ZONING MAP AMENDMENT (Rezoning)

The proposed zoning map amendment would remove PUD zoning and replace it with BD zoning on the zoning map. This would match most of the adjacent properties and would encourage the continuity of the Business District.

PROCESS

To rezone the property to BD, a zoning map amendment must be approved. A consistency statement will also be required for the zoning map amendment, which may include a motion for a recommendation of approval or denial. Following a recommendation from the Planning Board, the zoning map amendment will be sent to the Board of Aldermen for their consideration. A duly advertised public hearing will be held and the rezoning will require mailing a notice of the hearing to each property owner to be rezoned and abutting property owner. The Planning Board may appoint a review committee to review this zoning map amendment if they deem it necessary.

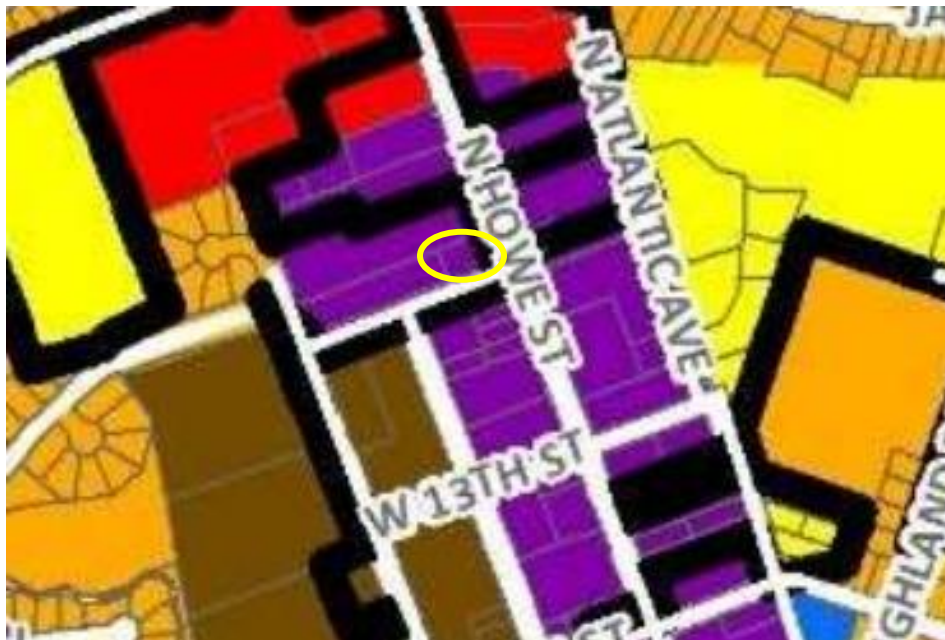
Figure 1: Existing Zoning Map:



The parcel is surrounded by BD on the north and south sides, and on the east. The property directly west is zoned MF.

There is an existing residential-type structure on the property.

Figure 2: CAMA Future Land Use Map:



The Future Land Use Map shows identifies the property as Light Commercial. Light Commercial can be defined as commercial uses containing no heavy manufacturing or process equipment, a residential structure converted for commercial/office use, or a multi-unit residential property with more than (4) units.



Zoning Map Amendment

City of Southport, North Carolina

1029 N. Howe St, Southport NC 28461
www.southportnc.org

Planning & Inspections
Phone 910-457-7961 Fax 910-457-7957

For Staff Use Only

PERMIT No. _____ FEE: \$ _____ Date Received: _____

Applicant's Name: RDK Investments - John Koz, Brad Dinkel, Andrew Robinson

Mailing Address: 5039 Poplar Grove Dr **City:** Charlotte

State: NC **Zip Code:** 28269 **Phone:** 704-560-0999

Email: jkoznc@gmail.com

Property Owner's Name: RDK Investments

Address of Owner: 1403 N. Howe **City:** Southport

State: NC **Zip Code:** 28269 **Phone:** 704-560-0999

Email: jkoznc@gmail.com

Project Name: 1403 N. Howe

Project Address and/or Description of Location: 1403 N. Howe St. Southport 28461

Parcel ID #: 221MA029 **Number of Lots:** 1 **Site Acreage:** .35

Current Zoning District: PUD **Proposed Zoning District:** BD

A complete application for any amendment shall contain a description of the proposed zoning regulation or zoning map amendment. The application shall state in detail whether the proposed amendment is consistent with the CAMA Core Land Use Plan and any other officially adopted plan that is applicable. The application shall also give detailed evidence that the proposed amendment is in the interest and will benefit the general public and not solely be of benefit to the applicant; that the uses within the proposed zoning district are similar or comparable to the uses in the district as currently zoned, or that none of the uses permitted in the proposed zoning district may potentially adversely affect property values or the health, safety, morals, or general welfare of the residents of the surrounding area. Such application shall be filed with the Administrator to be processed in accordance with Section 2.7.D of the UDO.

The Planning Board and Board of Aldermen may consider the following when deciding: Impact on neighbors and neighborhood, traffic, environment, utilities, suitability of land, harmony with area, schools, economic impact, tax base increase, spot zoning created, road capacity, adequate infrastructure, community opinion, property values, consistency with the Land Use Plan, future land use map, jobs, public services, buffering requirements, environmental impact, site limitations, and consistency with plans and prior decisions. The Boards cannot consider ethnicity, income of future residents, owner vs. renter housing, or who the owner is when deciding.

If the proposed change would require a change in the zoning map, attach an accurate diagram of the property proposed for rezoning showing:

- A. Boundaries indicated as approximately following the centerlines of alleys, streets, highways, streams, or railroads shall be construed to follow such centerline;
- B. Boundaries indicated as approximately following lot lines, city limits, or extraterritorial boundary lines, shall be construed as following such lines, limits, or boundaries;
- C. Boundaries indicated as following shorelines shall be construed to follow such shorelines, and in the event of change in the shoreline shall be construed as following such shorelines;
- D. Where a district boundary divides a lot each part of the lot or tract so divided shall be used in conformity with the regulations established by this ordinance for the district in which said part is located, nor shall a change in lot line be construed to have modified a zoning district boundary;
- E. Where any street or alley is hereafter officially vacated or abandoned, the regulations applicable to each parcel of abutting property shall apply to that portion of such street or alley added thereto by virtue of such vacation or abandonment.
- F. Where any further uncertainty exists, the UDO Administrator shall interpret the intent of the map as to location of such boundaries.

Future Land Use Map Designation: BD

Is the proposed zoning consistent with the Land Use Plan? (Check One and Describe Below):

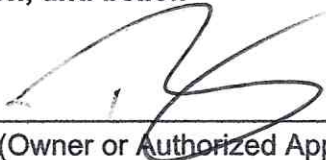
☒ Yes ☐ No

Both the neighbor to the right and across the street are commercial properties,
as well as the majority of the properties on N. Howe St.

Please describe the changing conditions in the area or in the City of Southport that makes the proposed amendment necessary to the promotion of the public health, safety and general welfare, or that identifies an obvious error in the zoning map based upon the zoning classification or current land use of surrounding properties. Also include an explanation on why the proposed zoning is or is not consistent with the Land Use Plan and other adopted plans (Attach separate sheet if necessary)

Changing this property to BD will compliment the like kind properties within close proximity
of this property. This will help with the continuity of business development in the area.

In filing this Rezoning Petition, I hereby certify that I am authorized to submit this application and that all of the information presented in this application is accurate to the best of my knowledge, information, and belief.



Signature (Owner or Authorized Applicant)

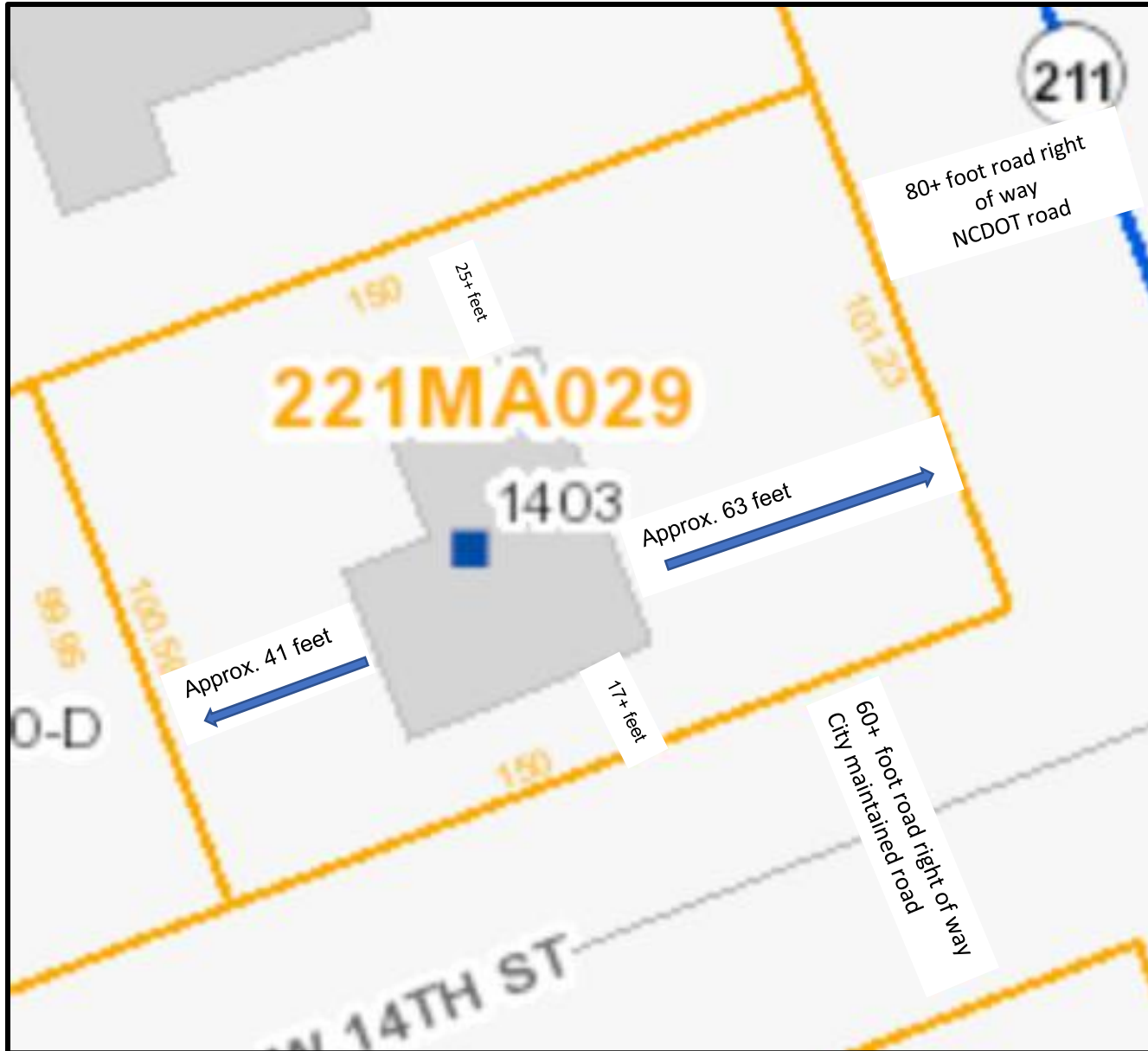
7-1-22

Date

APPROVED BY:

UDO Administrator

Date



RDK Investments
Zoning Map Amendment Parcel# 221MA029



**City of Southport Planning Board
Statement of Plan Consistency and Zoning Recommendation
(As per NC General Statute 160D-604)**

When conducting a review of proposed zoning text or map amendments pursuant to this section, the planning board shall advise and comment on whether the proposed action is consistent with any comprehensive plan that has been adopted and any other officially adopted plan that is applicable. The planning board shall provide a written recommendation to the governing board that addresses plan consistency and other matters as deemed appropriate by the planning board, but a comment by the planning board that a proposed amendment is inconsistent with the comprehensive plan shall not preclude consideration or approval of the proposed amendment by the governing board.

AMENDMENT: RZ-22-0701-01

STATEMENT OF CONSISTENCY AND RECOMMENDATION:

The City of Southport Planning Board hereby finds that the proposed zoning map amendment is consistent with the 2015 CAMA Land Use Plan adopted November 13, 2014 and subsequently amended by the Board of Aldermen. More specifically, the proposed zoning map amendment is consistent with the future land use map. It is consistent with the CAMA Land Use Plan because it supports commercial development along the Howe Street corridor (Objective 2. Policy 2.12), and the proposed rezoning is consistent with the future land use plan/map because it promotes business in-fill and transition between the Central Business District and Highway Commercial zoning district. The Planning Board recommends that the Board of Aldermen adopt the zoning map amendment.

This statement and motion was seconded and passed _____.

Dorothy Dutton, City Clerk

Sue Hodgin, Planning Board Chair



MEMORANDUM

TO: Members of the Planning Board

FROM: Dorothy Dutton, City Clerk

Wes Macleod, CFCOG

Sam Shore, CFCOG

RE: Chapter 4. Section V. Exterior Lighting Ordinance Amendment

During the Street Light Policy update process, the Street Light Committee recognized the need to also update the City's Code of Ordinances to include general exterior lighting consistent with the lighting ordinance in the UDO and the street light policy.

While changes to the Code of Ordinances do not require Planning Board review, the Committee understands that lighting is important to the community at large and an essential element in the planning process.

The Board of Aldermen sent the proposed amendment to the Planning Board at their July meeting. The review committee that was assigned for this review is holding their first meeting on Monday, August 15, 2022.

The draft amendment and a diagram of acceptable/unacceptable light fixtures is included.

POSSIBLE ACTION:

If the review sub-committee has had sufficient review of the proposed ordinance amendment, a recommendation can be made which would send it back to the Board of Aldermen. No Land Use Consistency Statement is needed because it is not changing the UDO.

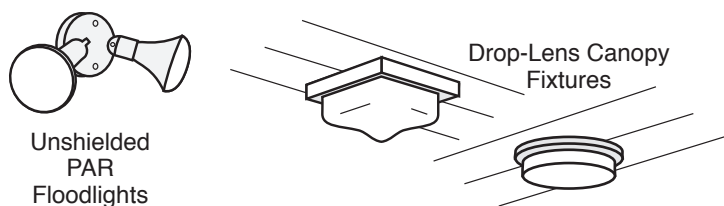
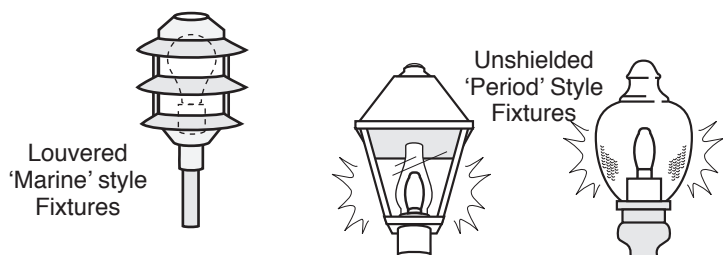
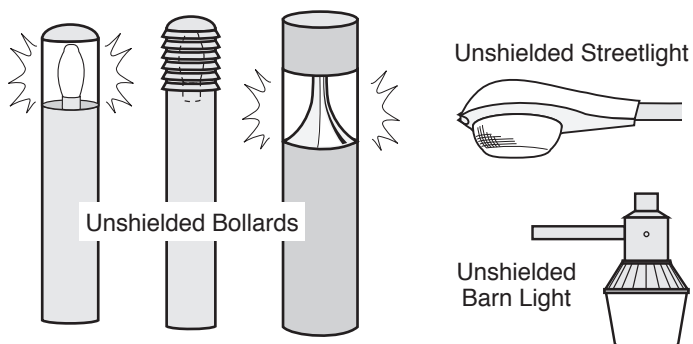
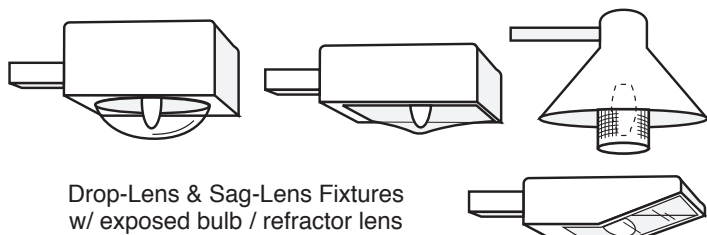
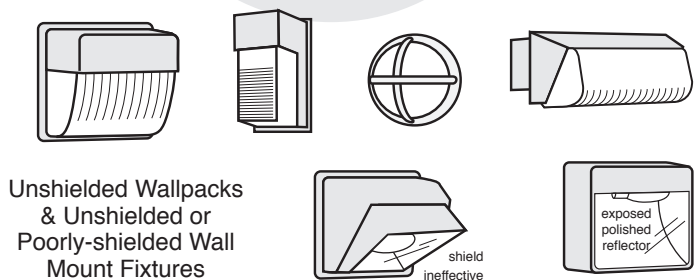
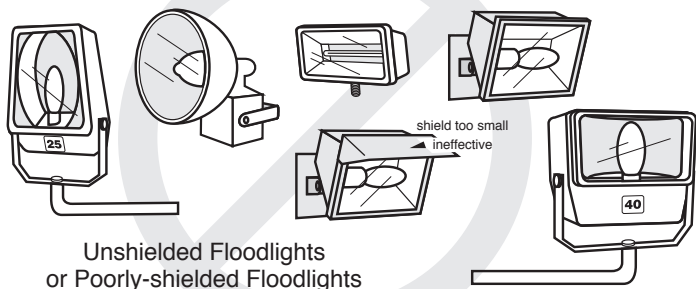
DRAFT - Code of Ordinances - Chapter 4, Article V - Exterior Lighting

- A. Exterior lighting within any property that unnecessarily illuminates or interferes with the use or enjoyment of any other property is prohibited. Without exception, this provision (A.) shall apply to all exterior lighting herein.
- B. Exterior lighting shall not be oriented so as to direct glare or illumination onto streets in a manner that may distract or interfere with the vision of drivers on such streets. Without exception, this provision (B.) shall apply to all exterior lighting herein.
- C. Private security light fixtures may not exceed 25 feet in height and must be aimed to avoid light emitting upwards toward the sky and shielded to prevent light trespass onto adjacent properties or roadways.
- D. Lighting used to accent landscaping, architectural features or art shall be aimed and shielded to avoid light emitting upwards toward the sky and prevent direct visualization of the source from adjacent properties.
- E. Blinking or flashing lights shall be prohibited unless the lights are required as a safety feature.
- F. Floodlights that are not controlled by an automatic timing device, such as a motion sensor that temporarily provides light where and when needed, must be aimed to avoid light emitting upwards toward the sky and shielded to prevent light trespass onto adjacent properties or roadways.
- G. Fixtures shall meet International Dark Sky Association standards and have a color temperature of 3000 Kelvin or less. For acceptable fixture design refer to provision (N.) herein, "Examples of Acceptable/Unacceptable Lighting Fixtures".
- H. If an existing light fixture is removed and replaced, it shall be replaced with a conforming light fixture design (see provision N.). When an existing fixture requires bulb/lamp replacement, the new bulb/lamp shall conform to the provisions of this chapter.
- I. The temporary use of seasonal "Holiday lighting" is exempted from the provisions of this chapter, with the exception of provisions (A. and B.) herein. Provisions (A. and B.) apply to all exterior lighting.
- J. Light produced directly or indirectly by the combustion of natural or propane gas is exempted from the provisions of this chapter, with the exception of provisions (A. and B.) herein. Provisions (A. and B.) apply to all exterior lighting.
- K. All exterior lighting regardless of the date of installation shall conform to provisions (A. and B.) herein. Exterior lighting installed after the effective date of this ordinance shall conform to the requirements established by this chapter and other applicable ordinances unless otherwise exempted.
- L. "Exterior lighting" means temporary or permanent lighting that is installed, located or used in such a manner to cause light rays to shine outside. Fixtures that are installed indoors that are intended to light something outside are considered exterior lighting for the intent of this chapter.
- M. These regulations shall not supersede the City of Southport Street Light Policy.

Examples of Acceptable & Unacceptable Lighting Fixtures

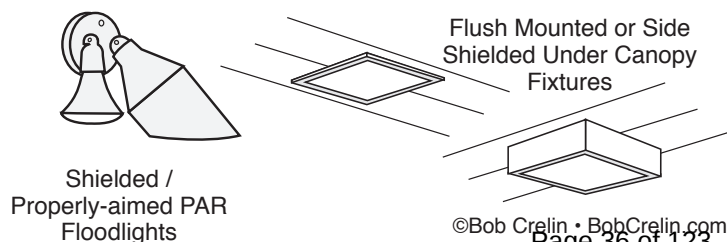
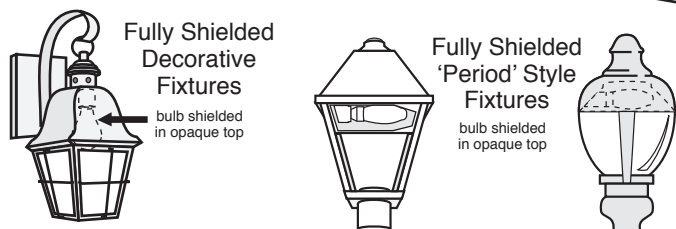
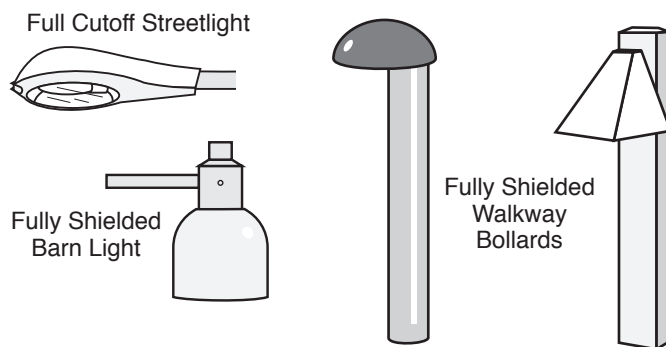
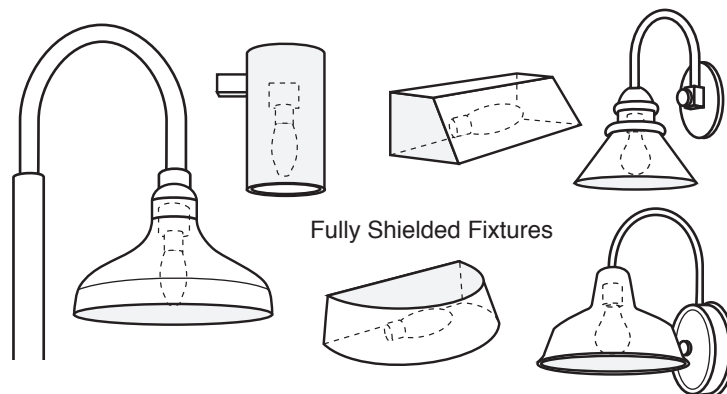
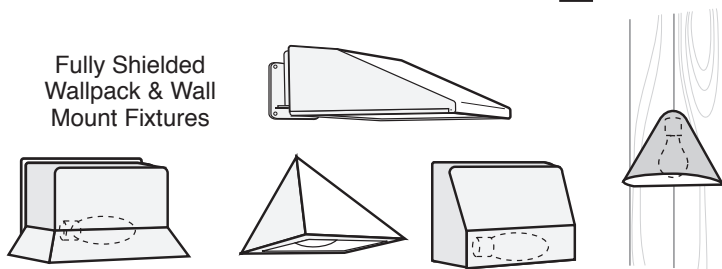
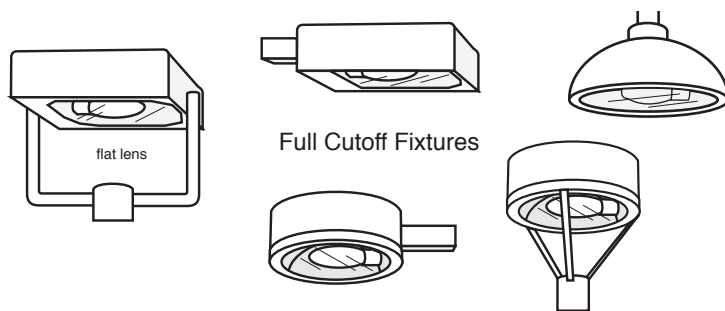
Unacceptable/Not Compliant

Fixtures that produce glare and light trespass



Acceptable/Compliant

Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night





TO: Members of the Planning Board
FROM: Dorothy Dutton, City Clerk, CZO
RE: Central Business District Amendments

MEMORANDUM

Some of the Planning Board feels it is in the best interest of the City to change some of the standards in the Central Business District. These changes include reducing the maximum height of any new building, limiting the number of stories that can be built, redefining the amount of parking that might be available based on the use, change of use, and dimensions of the parcel.

The attached proposed amendments were discussed and prepared by the Review Sub-committee. The proposed changes are highlighted.

Once the Planning Board makes a recommendation to the Board of Aldermen, a public notice will be published with the date and time of a public hearing. After the Board of Aldermen hold the public hearing, they will be able to consider approving the ordinance amendments along with the Land Use Consistency Statement.

POSSIBLE ACTION:

This is the first time that the proposed changes is being reviewed by the full Planning Board. If the Planning Board sees fit, they can adopt the Statement of Land Use Consistency and recommend approval to the Board of Aldermen.

3.3 OVERLAY DISTRICTS

A. ESTABLISHMENT OF OVERLAY DISTRICTS

Reserved.

1. Parking Overlay District (PO). The off-street parking and loading requirements shall apply to all districts with the exception of the area shown on the Official Zoning Map of the City of Southport as the Parking Overlay District.

Within the PO District, if an existing structure is demolished, and subsequently replaced with a new structure situated on the same footprint, or of equal or less square footage to the existing structure, then the owner will be exempt from the off-street parking requirement if a building permit for reconstruction has been secured within (180) days following demolition. Properties which are substantially damaged from a natural disaster, such as flooding or hurricane, are exempt from the off-street parking requirement when replaced.

Vacant lots in the PO District existing on June 10, 2004 are not required to provide off-street parking.

Refer to Article 2.11 Conditional Rezoning for proposed increases to the established footprint and square footage of existing structures in the PO District.

3.7 RESIDENTIAL USE STANDARDS

F. MIXED USES

Where permitted, the following shall apply:

1. First floor shall be permitted business uses only.
2. The floor area devoted to the dwelling(s) in CBD or BD shall not exceed the floor area devoted to the permitted business use(s).
3. The floor area devoted to the dwelling(s) in PUD or O-I shall not exceed twice the floor area devoted to the permitted business use(s).
4. The minimum floor area for each dwelling shall be (500) square feet and the maximum floor area shall be (1,000) square feet.
5. No mixed-use building shall exceed the maximum height limit established in 3.9 Dimensional Requirements, Table 3.2.
6. Each dwelling shall have a direct means of access to the exterior of the building so that no access to the dwelling is provided through the use located on the lower floor(s) of the commercial building.
7. Parking for such dwelling(s) shall be in addition to that required for the permitted lower floor use(s).
8. Proposed curb cuts and driveways for required off-street parking lots that eliminate existing on street parking spaces shall replace the number of eliminated spaces within the parking lot created, in addition to the number of parking spaces otherwise required by this ordinance.

3.9 DIMENSIONAL REQUIREMENTS

Table 3.2: Dimensional Requirements by Zoning District						
Zoning District	Minimum Lot Size (sq.ft.)	Minimum Lot Width (feet)	Minimum Front Setback (feet)	Minimum Rear Setback (feet)	Minimum Side Setback (feet)	Maximum Height Limit (feet)
CBD	0	0	0	0	0	30 (2)
BD	0	0	0	10	0	30 (2)

1. Where any side yard is provided, though not required, the same shall be not less than (4) feet.
2. In "Special Flood Hazard Areas" within CBD and BD, where regulatory flood protection elevations are required, the maximum height limit shall be (40) feet.

3.11 BUILDING DESIGN STANDARDS

H. DESIGN STANDARDS

1. The primary entrance of the structure shall be architecturally and functionally designed on the front façade of the primary street.
2. Except for corner lots, the front façade of the principal structure shall be parallel to the front lot line and street.
3. Façade colors shall be of low reflectance earth tone, muted, subtle, or neutral colors. Building trim may feature brighter colors as an accent material. The use of high-intensity, metallic, fluorescent, dayglow, or neon colors shall be prohibited.
4. Ground mounted mechanical equipment, solid waste storage, and recycling storage shall be located to the rear or side yard and screened from the view of the street.
5. Outparcels shall be designed and integrated with the main project or principal structure.
6. No portion of a building facing a front or side lot line, unless a zero lot line common wall, shall be constructed of unadorned (unfaced) concrete masonry units or corrugated and/or sheet metal.
7. No single façade extending unbroken more than (35) feet in a horizontal plane may be visible from a public roadway. Compliance may be obtained through one of the following:
 - a.) The use of projections or recesses. When used, each projection or recess shall have a projection (or depth) dimension of no less than (18) inches and a width of no less than (36) inches.; or
 - b.) The use of columns or other architectural detail to provide visual interest. Where used, columns should be harmonious with the general design of the structure.

8. At least 25% of the first floor of the street façade(s) shall be transparent (including all sides facing a street right-of way). Street level windows shall be visually permeable. Mirrorized glass is not permitted in any location. False or display casements are not permitted in lieu of exterior window treatments for the frontage elevation. A window shall be measured as follows:

- a.) Minimum area: 16 square feet
- b.) Minimum width: 3 feet
- c.) Minimum height: 4 feet

9. A pitched roof shall have eaves a minimum of (12) inches from the building face including gutters. This shall not apply to zero lot line structures.

10. No structure shall exceed two (2) stories.

3.14 PARKING

D. MINIMUM OFF-STREET PARKING RATIOS

1. The following tables establishes the formulas to be used to calculate the number of parking spaces required for a particular use. For uses that do not correspond to the use types listed in Table 3.4, Minimum Off-Street Parking Spaces Required, the UDO Administrator shall determine the minimum parking space requirement. In such instances, the applicant shall provide adequate information for review, which includes, but it not limited to the type of use(s), number of employees, the occupancy of the building, square feet of sales, service and office area, parking spaces proposed, and hours of operation.

2. In the CBD and BD zoning districts, for nonresidential uses, where on-street or public parking facilities are located within (500) linear feet of a proposed use, measured as a straight-line distance from the entrance of the building, the minimum off-street parking requirement may be reduced by 50%. This requirement shall not apply to residential uses.

3. Within any zoning district, if the off-street parking space required by the ordinance cannot be reasonably provided on the same lot on which the principal use is located, such space may be provided on any land within (400) feet of the main entrance to such principal use.

Table 3.4: Minimum Off-Street Parking Spaces Required	
Change of Use or Redevelopment in the CBD and BD District	
A change of use or redevelopment whereby the floor area of the building or parcel is not expanded by greater than 15%.	No Parking required.
Change of use or redevelopment whereby the floor area of the building or parcel is expanded by greater than 15%.	Additional parking required shall be calculated based on the increase in square footage in floor area, above the 15% threshold of the expanded building. All other applicable requirements of this section shall apply.
Change of use from a residential to nonresidential use.	50% of the required parking shall be provided. All other applicable requirements of this section apply.
Change of use from a nonresidential to residential use or the addition of residential uses.	Full compliance with residential off-street parking space minimum and all other requirements.

(Chart continues with no other proposed changes)

3.17 LANDSCAPE AND BUFFERS

I. BUFFERYARDS

1-5. No changes proposed.

6. Bufferyards range in width from 10 to 40 feet. The following table illustrates the required bufferyard widths:

Table 3.8 Bufferyard Width						
Adjacent Property Zoning and Required Buffer Width (feet)						
Applicant Zoning District	#1: OS	#2: R-10, R-20	#3: MF, MH, O & I	#4: BD, CBD	#5: HC	#6: HI, LI
#1: OS	0'	0'	0'	0'	0'	0'
#2: R-10, R-20	0'	0'	0'	0'	0'	0'
#3: MF, MH, O & I	20'	20'	0'	20'	20'	20'
#4: BD	10'	20'	10'	0'	0'	0'
#5: CBD	0'	20'	10'	0'	0'	0'
#6: HC	40'	40'	20'	0'	0'	20'
#7: HI, LI	40'	40'	40'	20'	20'	0'



**City of Southport Planning Board
Statement of Plan Consistency and Zoning Recommendation
(As per NC General Statute 160D-604)**

When conducting a review of proposed zoning text or map amendments pursuant to this section, the planning board shall advise and comment on whether the proposed action is consistent with any comprehensive plan that has been adopted and any other officially adopted plan that is applicable. The planning board shall provide a written recommendation to the governing board that addresses plan consistency and other matters as deemed appropriate by the planning board, but a comment by the planning board that a proposed amendment is inconsistent with the comprehensive plan shall not preclude consideration or approval of the proposed amendment by the governing board.

AMENDMENT: **ZA 22-0811-01** (Central Business District Standards)

STATEMENT OF CONSISTENCY AND RECOMMENDATION:

The City of Southport Planning Board hereby recommends the adoption of the proposed text amendment of the Unified Development Ordinance to the Board of Aldermen and finds that the proposed zoning text amendment is consistent with the 2015 CAMA Land Use Plan adopted on November 13, 2014, and as subsequently amended by the Southport Board of Aldermen. The Planning Board finds that it is in the public interest because it will advance the public health, safety, and/or welfare of the City of Southport by preserving the City's historic nature, and it continues to support a vibrant Central Business District in the Central Business District areas, specifically Goal Policies 7.1, 7.3, and 7.9, which recognize the historic character of the City while supporting commercial development and the local economy.

The statement and motion was seconded and passed _____.

City Clerk

Sue Hodgins, Chair



PLANNING BOARD

MEMORANDUM

To: Members of the Planning Board

From: Dorothy Dutton, City Clerk, CZO

Wes MacLeod, CFCOG

Sam Shore, CFCOG

RE: Zoning Map Amendment: **(RZ-22-0307-01)** BD to HC-CZ

Corner of Howe and 14th Street (2.07 acres of Parcel IDs 221MA028,
221MA02801, 221MA02803, 221MA02804, 221MA0701

Date: August 15, 2022

BACKGROUND

The attached zoning map amendment application is for a 2.07 acre tract currently in the Extraterritorial Jurisdiction (ETJ). The property is located on the corner of W.14th and N. Howe Street. It is currently zoned Business District (BD), and the application would like to rezone it to Highway Commercial-Conditional Zoning (HC-CZ).

A conditional zoning district is intended for a development with a high level of certainty of being constructed and is typically accompanied with specified uses. Conditional zoning is only considered in nonresidential zoning districts. All proposals for conditional zoning must abide by the dimensional standards required by the underlying zoning district (HC).

The Planning Board and Board of Aldermen may consider the following when deciding on a zoning map amendment:

- a.) the application's consistency to the general policies and objectives of the City's Comprehensive Plan, and any other officially adopted plan that is applicable, and the Unified Development ordinance.
- b.) The potential impacts and/or benefits on the surrounding area, adjoining properties.
- c.) The report of results from the public meeting

Any conditions should relate to the relationship of the proposed use to the impact on city services, surrounding property, proposed support facilities such as parking and driveways, screening and buffer areas, right-of-way improvements, water/sewer improvements, stormwater drainage, and many other items.

The applicant shall consider and respond to any such conditions after the Planning Board meeting and at least (3) days prior to the Board of Aldermen meeting. If the applicant does not agree with the Planning Board or staff's recommendation, the Board

The master development plan does not substitute for an approved minor site plan, site plan, or subdivision plat as required by this ordinance. No permit shall be issued for any development activity within a conditional zoning district except in accordance with the approved petition, applicable site plan, plat, and permit for the district.

BD to HC



The surrounding area consists of BD to the east, west and south, and MF and PUD to the north.

Figure 2: CAMA Future Land Use Map



The Future Land Use Map shows the property as light commercial. According to the CAMA Land Use Plan, light commercial is generally associated with lower density commercial uses such as offices, boutiques, and places of worship. There are a variety of uses that are allowed in HC, but not BD that are higher density uses. Conditional Zoning would help to mitigate those concerns.

Staff recommends that a review committee be appointed to go over this request for conditional zoning from BD to HC-CZ. Any applicable conditions, possible uses, and the master development plan should be considered.



Zoning Map Amendment

City of Southport, North Carolina

1029 N. Howe St, Southport NC 28461
www.southportnc.org

Planning & Inspections
Phone 910-457-7961 Fax 910-457-7957

For Staff Use Only

PERMIT No. _____ FEE: \$ _____ Date Received: _____

Applicant's Name: Rhetson Companies, Inc.
Mailing Address: 2075 Juniper Lake Road City: West End
State: NC Zip Code: 27376 Phone: 910-944-0881
Email: chris@rhetson.com

Property Owner's Name: Lisa B. Fitchett, Trustee
Address of Owner: 603 West Divine Street City: Dunn
State: NC Zip Code: 28334 Phone: _____
Email: _____

Project Name: General Retail
Project Address and/or Description of Location: N. Howe Street
6 parcels surrounded by N. Lord Street, W. 14th Street and Hwy 211.
Parcel IDs: 221MA028, 221MA02801, 221MA02802, 221MA02803, 221MA02804, 221MA02701
Parcel ID #: _____ Number of Lots: 6 Site Acreage: 2.07+-
Current Zoning District: BD Proposed Zoning District: HC-CZ

A complete application for any amendment shall contain a description of the proposed zoning regulation or zoning map amendment. The application shall state in detail whether the proposed amendment is consistent with the CAMA Core Land Use Plan and any other officially adopted plan that is applicable. The application shall also give detailed evidence that the proposed amendment is in the interest and will benefit the general public and not solely be of benefit to the applicant; that the uses within the proposed zoning district are similar or comparable to the uses in the district as currently zoned, or that none of the uses permitted in the proposed zoning district may potentially adversely affect property values or the health, safety, morals, or general welfare of the residents of the surrounding area. Such application shall be filed with the Administrator to be processed in accordance with Section 2.7.D of the UDO.

The Planning Board and Board of Aldermen may consider the following when deciding: Impact on neighbors and neighborhood, traffic, environment, utilities, suitability of land, harmony with area, schools, economic impact, tax base increase, spot zoning created, road capacity, adequate infrastructure, community opinion, property values, consistency with the Land Use Plan, future land use map, jobs, public services, buffering requirements, environmental impact, site limitations, and consistency with plans and prior decisions. The Boards cannot consider ethnicity, income of future residents, owner vs. renter housing, or who the owner is when deciding.

If the proposed change would require a change in the zoning map, attach an accurate diagram of the property proposed for rezoning showing:

- A. Boundaries indicated as approximately following the centerlines of alleys, streets, highways, streams, or railroads shall be construed to follow such centerline;
- B. Boundaries indicated as approximately following lot lines, city limits, or extraterritorial boundary lines, shall be construed as following such lines, limits, or boundaries;
- C. Boundaries indicated as following shorelines shall be construed to follow such shorelines, and in the event of change in the shoreline shall be construed as following such shorelines;
- D. Where a district boundary divides a lot each part of the lot or tract so divided shall be used in conformity with the regulations established by this ordinance for the district in which said part is located, nor shall a change in lot line be construed to have modified a zoning district boundary;
- E. Where any street or alley is hereafter officially vacated or abandoned, the regulations applicable to each parcel of abutting property shall apply to that portion of such street or alley added thereto by virtue of such vacation or abandonment.
- F. Where any further uncertainty exists, the UDO Administrator shall interpret the intent of the map as to location of such boundaries.

Future Land Use Map Designation: Yes

Is the proposed zoning consistent with the Land Use Plan? (Check One and Describe Below):

☒ Yes ☐ No

See attached.

Please describe the changing conditions in the area or in the City of Southport that makes the proposed amendment necessary to the promotion of the public health, safety and general welfare, or that identifies an obvious error in the zoning map based upon the zoning classification or current land use of surrounding properties. Also include an explanation on why the proposed zoning is or is not consistent with the Land Use Plan and other adopted plans (Attach separate sheet if necessary)

See attached.

In filing this Rezoning Petition, I hereby certify that I am authorized to submit this application and that all of the information presented in this application is accurate to the best of my knowledge, information, and belief.



Signature (Owner or Authorized Applicant)

2/15/2022

Date

APPROVED BY:

UDO Administrator

Date

Zoning Map Amendment – City of Southport Attachment for Rhetson Companies, Inc.

Is the proposed zoning consistent with the Land Use Plan?

Rhetson Companies, Inc. submitted a Zoning Map Amendment application for properties in Southport's ETJ located between S Howe Street, N Lord Street, W 14th Street, and W 13th Street, totaling approximately 2.07 acres, from Business District (BD) to Conditional-Highway Commercial (C-HC).

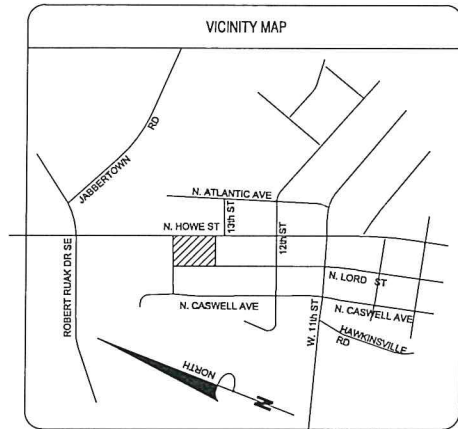
This zoning map amendment request is consistent with the CAMA Core Land Use Plan ("Land Use Plan") and any applicable officially adopted plans. These properties are identified as Light Commercial in the Land Use Plan. Light Commercial is generally associated with lower intensity commercial uses such as offices, boutiques, and places of worship. As evidenced on the attached zoning map, the uses within the proposed zoning district are similar or comparable to the uses in the district as currently zoned.

Please describe the changing conditions in the area or in the City of Southport that makes the proposed amendment necessary to the promotion of the public health, safety and general welfare, or that identifies an obvious error in the zoning map based upon the zoning classification or current land use of surrounding properties. Also include an explanation on why the proposed zoning is or is not consistent with the Land Use Plan and other adopted plans.

This area was previously identified on land use maps as office/institutional. However, the 2020 modifications to the CAMA Core Land Use Plan identified Howe Street specifically as appropriate for a variety of commercial uses. The proposed amendment is in the interest and will benefit the general public by increasing access to goods and services to the community as well as creating potential employment opportunities. The properties are located on Howe Street, a major corridor identified in the Plan as the proper location for future commercial development.

The Howe Street location provides sufficient infrastructure and utilities to support commercial development. In addition, multiple policies support rezoning the properties from BD to HC, specifically **Policy 2.11:** Southport supports development that blends a mix of uses at a reasonable scale offering convenient retail facilities to nearby residents in an effort to reduce traffic flow on main thoroughfares; and **Policy 2.12:** Southport supports commercial development along the Howe Street Corridor and other areas consistent with the City's future land use map.

This zoning map amendment request is consistent with the CAMA Core Land Use Plan and any applicable officially adopted plans. These properties are identified as Light Commercial in the Land Use Plan. Light Commercial is generally associated with lower intensity commercial uses such as offices, boutiques, and places of worship all of which are also consistent with uses permitted in the Highway Commercial.



DEVELOPMENT DATA	
DEVELOPMENT NAME:	SOUTHPORT SHOPS
STREET ADDRESS:	N. HOWE STREET BRUNSWICK COUNTY, NC
PROPERTY IDENTIFICATION # (PIN):	209607595026, 209607596042, 209607586967, 209607585917, 209607585868, 209607586851
PROPERTY #:	221MA02807, 221MA02803, 221MA02804, 221MA028, 221MA02801, 221MA02701
DEED BOOK/PAGE:	1116 / 47
EXISTING ZONING:	BD-BUSINESS DISTRICT
PROPOSED ZONING:	HC-C2-HIGHWAY COMMERCIAL
WATERSHED DISTRICT:	NONE
WATER DISTRICT:	1
TOTAL SITE ACRES:	90.566 SF (2.08 AC)
INSIDE TOWN LIMITS:	NO
EXISTING USE:	VACANT
PROPOSED BUILDING USE:	RETAIL SALES
PROPOSED TOTAL BUILDING AREA:	10,640 SF (8,522 SF SALES FLOOR AREA)
MAX BUILDING HEIGHT:	40 FT
MIN LOT AREA:	10,000 SF
MIN LOT WIDTH:	75 FT
FRONT SETBACK:	25 FT
SIDE SETBACK:	8 FT
REAR SETBACK:	20 FT
STREET YARD BUFFER:	10 FT
SIDE YARD BUFFER:	0 FT
PARKING REQUIREMENTS:	
PARKING REQUIRED:	54
TOTAL PROVIDED:	41
ACCESSIBLE SPACES PROVIDED:	2
LOADING AREA:	1 PROVIDED

Proposed Southport Shops N Howe Street Brunswick County, NC

DEVELOPER

Rhetson Companies, Inc.
Attn: Chris Morgan
2075 Juniper Lake Road
West End, NC 27376
(910) 944-0881
chris@rhetson.com



CIVIL ENGINEER
Bowman North Carolina, Ltd.
4006 Barrett Drive
Suite 104
Raleigh, NC 27609
(919) 553-6570
mlowder@bowman.com
FIRM# F-1445

CURRENT PROPERTY OWNERS
The Lisa B. Fitchett, Trustee
603 West Divine Street
Dunn, NC 28334



Sheet List Table	
SHEET NUMBER	SHEET TITLE
C1.0	COVER SHEET
C3.0	SITE PLAN
C3.1	LANDSCAPE PLAN
C3.2	LIGHTING PLAN
C7.1	SPECIMEN TREE PLAN



Bowman

Bowman North Carolina Ltd.
4006 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 553-6570
bowman.com
Bowman North Carolina Ltd.

COVER SHEET

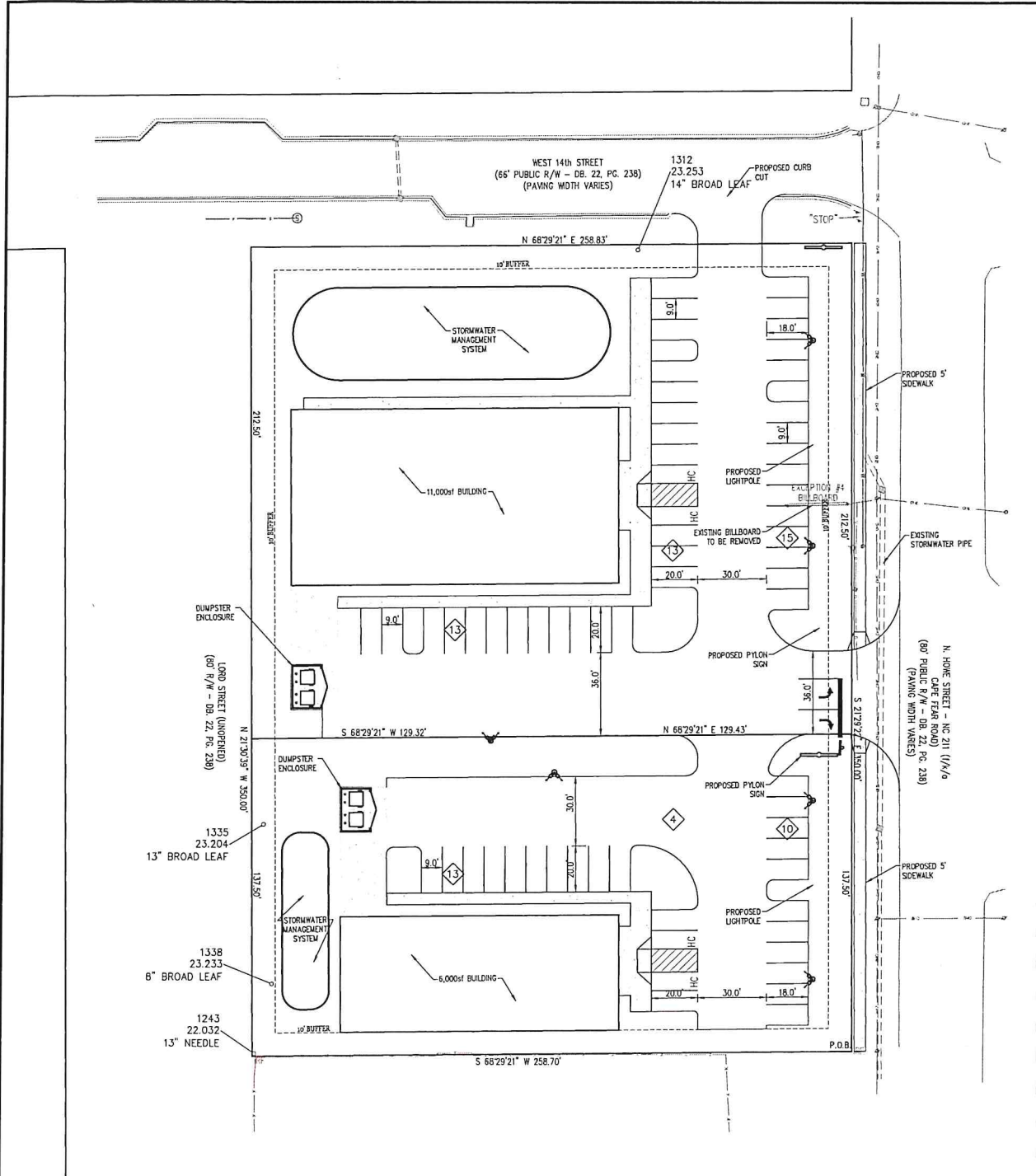
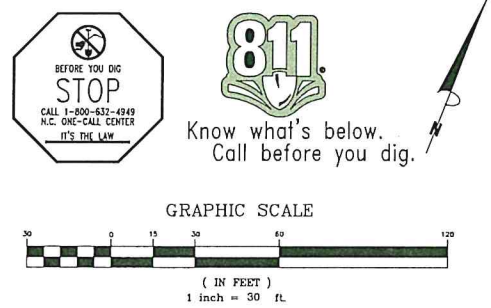
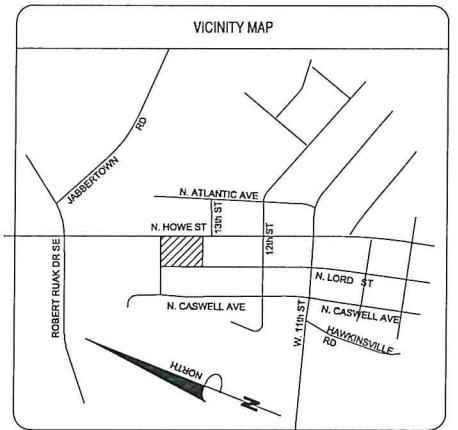
SOUTHPORT, NORTH CAROLINA

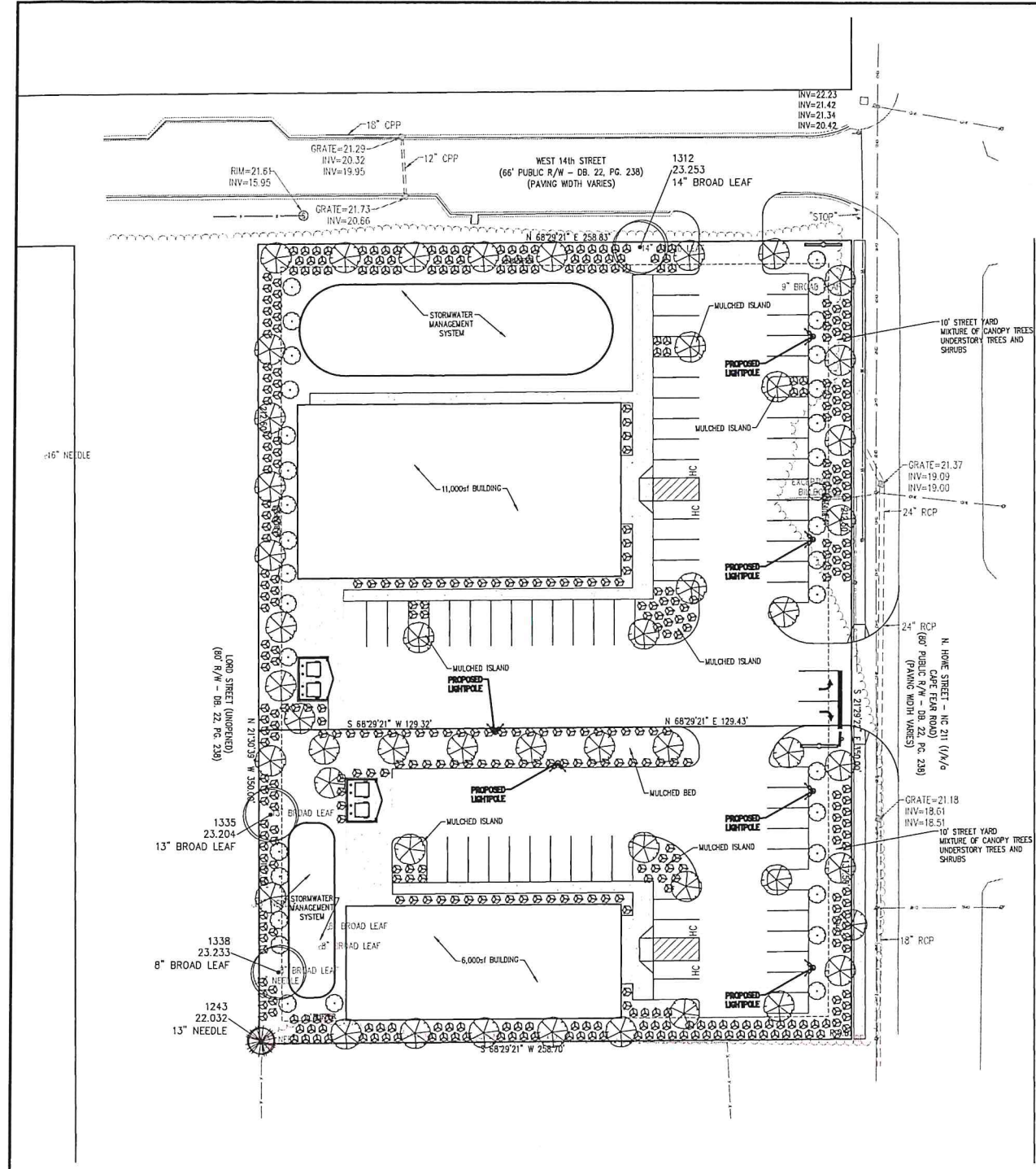
PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION

PLAN STATUS
07/2022 REZONING SUBMISSION

DATE	DESCRIPTION
MLL DESIGN	MLL DRAWN
SCALE	H: 1" = 30'
JOB No.	TSD-058-015
DATE	JULY 5, 2022
FILE No.	
SHEET	C1.0

PLAN STATUS		
07/2022 REZONING SUBMISSION		
DATE DESCRIPTION		
MLL DESIGN	MLL DRAWN	MLL CHKD
SCALE H: 1" = 30'		
V: 1" = 30'		
JOB No. TSD-058-015		
DATE JULY 5, 2022		
FILE No.		
SHEET C3.0		



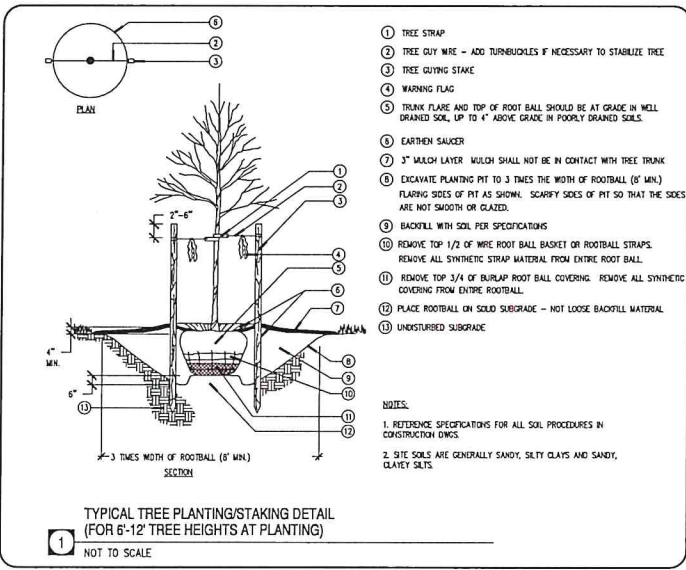


MASTER PLANT LIST											
TYPE	SYM/KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SYMBOL	CALIPER	HEIGHT	SPREAD	ROOT	SPACING	OTHER
LARGE TREES	OS	49	Canopy Tree	TBD		3.5"	6' MIN		B&B	AS SHOWN	
	AB	34	Understory Tree	TBD		2"	6' MIN		B&B	AS SHOWN	
SHRUBS	RD	245	Shrubs	TBD		-	2'-4'		1 GAL MIN	AS SHOWN	

- LANDSCAPING NOTES:

 - CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING ALL REQUIRED LANDSCAPING FOR THE ENTIRE SITE, TO INCLUDE BUT NOT LIMITED TO: SOODED/SEEDED AREAS, SHRUB BEDS, PARKING LOT ISLANDS, ROADSIDE SIGN BASE(S) AND MONUMENT PLANTERS.
 - CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGARDING LANDSCAPING.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A HEALTHY STAND OF GRASS ON ALL SEEDED AREAS.
 - IN THE EVENT THAT PLANTING BEDS AND MULCH ARE REQUIRED, THE CONTRACTOR SHALL INSTALL BLACK FABRIC WEED BLOCK LANDSCAPE MESH UNDER THE MULCH TO PREVENT WEED GROWTH.
 - CONTRACTOR SHALL PROVIDE NATURAL TOPSOIL THAT IS FERTILE, FRIABLE, WITHOUT MIXTURE OF SUBSOIL, MATERIALS, AND OBTAINED FROM A WELL DRAINED, AVAILABLE SITE. IT SHALL NOT CONTAIN SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL BE SCREENED AND FREE FROM CLAY, LUMPS, STONES, ROOTS, PLANTS, OR SIMILAR SUBSTANCES 1" OR MORE IN DIAMETER, DEBRIS, OR OTHER OBJECTS WHICH MIGHT BE A HINDERANCE TO PLANTING OPERATIONS. TOPSOIL SHALL CONTAIN AT LEAST 4-6% ORGANIC MATTER BY WEIGHT AND HAVE A PH RANGE OF 5.5 TO 7.0.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATERING AND THE MAINTENANCE OF ALL LANDSCAPED AREAS UNTIL THE LATER OF: (a) THIRTY (30) DAYS FOLLOWING THE PLANTING OF THE GRASS AND SHRUBS, OR (b) THE DATE THAT DOLLAR GENERAL OPENS FOR BUSINESS TO THE PUBLIC.
 - GENERAL CONTRACTOR IS TO CLEAN ENTIRE SITE OF ALL CONSTRUCTION DEBRIS AND RAKE ALL GRASS AREAS.
 - PROVIDE LANDSCAPE PLANS TO DOLLAR GENERAL AND AS REQUIRED BY LOCAL JURISDICTION TO THE BLDG. DEPT. FOR REVIEW AND APPROVAL PRIOR TO START OF WORK.
 - ALL LANDSCAPING, TREES, SHRUBS, ETC. SHALL NOT INTERFERE WITH THE VISIBILITY OF DOLLAR GENERAL SIGNAGE.
 - CONTRACTOR TO VERIFY QUANTITIES PRIOR TO COMMENCING WORK.
 - OPEN AREAS WITHIN PLANTING BEDS SHALL BE MULCHED.
- GENERAL LANDSCAPE NOTES:

 - ANY DISTURBED AREAS NOT SCHEDULED FOR HARDSCAPE, PLANTINGS, OR MULCH SHALL BE SEEDED LAWN.
 - NO PLANT SUBSTITUTIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE.
 - ALL PLANT AND BED LINE LOCATIONS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
 - ALL PLANTINGS SHALL BE INSTALLED WITH THE SPECIFIED LAYER OF MULCH. REFERENCE DETAILS AND SPECIFICATIONS FOR DEPTH AND TYPE OF MULCH. ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS AND SHALL BE SEPARATED FROM TURF GRASS AREAS.
 - GRASS COVERAGE TO EXTEND FROM PROPERTY LINES TO BACK OF CITY SIDEWALKS AND/OR CURBS.
 - MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER (FOR SINGLE STEM TREES). ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 6 FEET TALL.
 - ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
 - FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 18" NEW TOPSOIL, OR TILL AND AMEND THE TOP 18" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES.
 - LARGE MATURING TREES MAY NOT BE PLANTED WHERE THERE ARE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.
 - ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS, WATER, PHONE, AND ELECTRICAL LINES).
 - ATTENTION LANDSCAPER: NOTIFY OWNER OF ANY SIGN, POWER LINE, OR OTHER CONFLICTS BEFORE PLANTING NEW TREES.



GRAPHIC SCALE

0 10 20 30 40 50 60 70 80 90 100

(IN FEET)

1 inch = 30 ft

Bowman

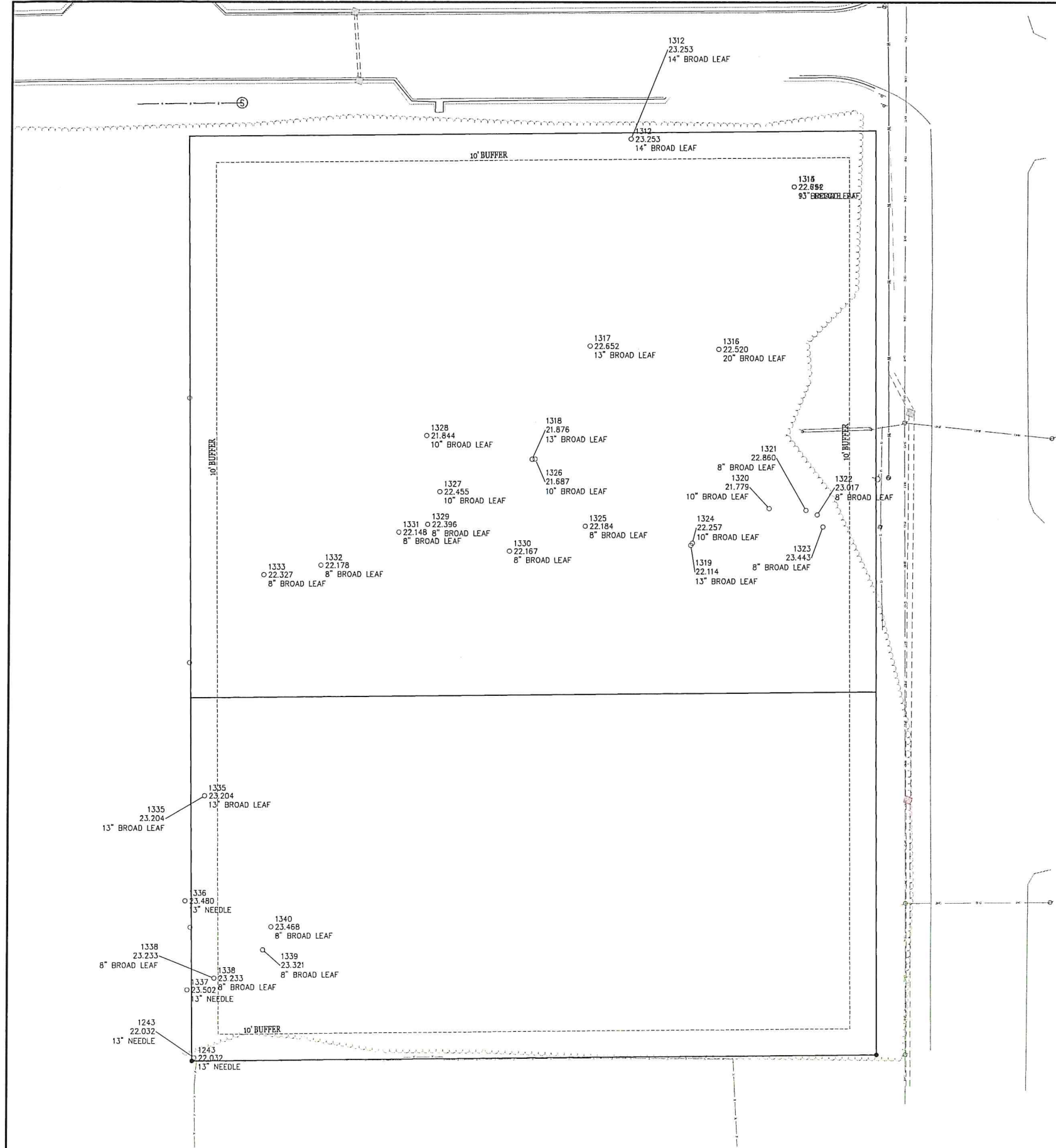
Bowman North Carolina Ltd.
4008 RABBITT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 553-8570
bowman.com
Bowman North Carolina Ltd.

LANDSCAPE PLAN

SOUTHPORT, NORTH CAROLINA

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION

PLAN STATUS	07/2022	REZONING SUBMISSION
DATE		DESCRIPTION
MLL	MLL	MLL
DESIGN	DRAWN	CHKD
SCALE	H: 1" = 30'	V:
JOB No.	TSD-058-015	
DATE	JULY 5, 2022	
FILE No.		
SHEET	C7.2	



MASTER PLANT LIST			
TYPE	CALIPER	TO REMAIN	TO BE REMOVED
BROAD LEAF	14"	X	
	13"		X
	9"		X
	20"		X
	13"		X
	10"		X
	13"		X
	10"		X
	8"		X
	8"		X
	8"		X
	10"		X
	10"		X
	8"		X
	8"		X
	8"		X
NEEDLE TREE	10"		X
	13"		X
	13"	X	
	8"	X	
EXISTING TREE INCHES		61	232
PROPOSED TREE INCHES		171	
TOTALS		232 INCHES PROPOSED AND TO REMAIN	232 TO BE REMOVED

Bowman

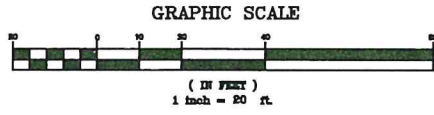
Bowman North Carolina Ltd.
4008 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 553-6570
bowman.com
Bowman North Carolina Ltd.

SPECIMEN TREE PLAN
SOUTHPORT, NORTH CAROLINA

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION



Know what's below.
Call before you dig.



PLAN STATUS		
07/2022 REZONING SUBMISSION		
DATE		DESCRIPTION
MLL DESIGN	MLL DRAWN	MLL CHKD
SCALE	H: 1" = 30' V:	
JOB No. TSD-058-015		
DATE		JULY 5, 2022
FILE No.		
SHEET		C7.1

TRAFFIC IMPACT ANALYSIS REPORT

SOUTHPORT RETAIL

BCG File No. 150108-01-001

Prepared By:

Bowman

Bowman Consulting Group, Ltd.

880 Island Park Drive, Suite 400

Charleston, SC 29492

Phone: 843.501.0333

07-08-2022



Table of Contents

1.0	EXECUTIVE SUMMARY.....	3
2.0	INTRODUCTION.....	3
3.0	BASE CONDITIONS.....	4
4.0	TRAFFIC FORECAST AND BACKGROUND TRAFFIC	5
5.0	TRIP GENERATION	6
6.0	TRIP DISTRIBUTION	6
7.0	CAPACITY ANALYSIS.....	6
7.1	<i>N HOWE STREET AT W 14TH STREET/PORT REALTY DRIVEWAY</i>	8
7.2	<i>N HOWE STREET AT SITE ACCESS #1</i>	8
7.3	<i>W 14TH STREET AT SITE ACCESS #2</i>	9
8.0	SUMMARY OF FINDINGS AND CONCLUSIONS	10

1.0 Executive Summary

Bowman has been retained to perform a Traffic Impact Analysis (TIA) for the proposed Southport Retail project, a 10,640 square-foot (sq ft) retail store. The project is proposed to be constructed on the southwest corner of the intersection of N Howe Street and W 14th Street/Port Realty Driveway in Southport, NC. Access to the site is proposed to be provided via two full access driveways, one on N Howe Street and one on W 14th Street. It is anticipated that the development will be constructed and fully operational by the end of 2023.

The study area includes the following intersections:

- N Howe Street at W 14th Street/Port Realty Driveway
- N Howe Street at Site Access #1 (2023 Build and 2023 Build with Improvements conditions only)
- W 14th Street at Site Access #2 (2023 Build and 2023 Build with Improvements conditions only)

The intersection of N Howe Street at W 14th Street/Port Realty Driveway operates at level of service (LOS) D during the AM peak hour and at LOS E during the PM peak hour in the Existing and 2023 No Build conditions. In the 2023 Build conditions, the intersection is projected to operate at LOS D during the AM peak hour and at LOS F during the PM peak hour. Due to the intersection operating at LOS F at buildout, an exclusive eastbound left-turn lane with 50 feet of storage is recommended for mitigation. With the addition of the left-turn lane, the intersection is projected to operate at LOS D during the AM peak hour and at LOS E during the PM peak hour in the 2023 Build with Improvements condition.

In the 2023 Build and 2023 Build with Improvements conditions, the proposed intersection of N Howe Street at Site Access #1 is projected to operate at LOS C during the AM and PM peak hours. The proposed intersection of W 14th Street at Site Access #2 is projected to operate at LOS A during the AM and PM peak hours.

Based on the results of this study, an exclusive eastbound left-turn lane with 50 feet of storage is recommended at the intersection of N Howe Street at W 14th Street/Port Realty Driveway.

The purpose of this study is as follows: (i) to determine the number of trips generated by the proposed site; (ii) to determine the potential impacts of the proposed development on the roadway network; (iii) to propose improvements, if required.

2.0 Introduction

The Southport Retail project consists of a 10,640 sq ft retail store. The project is to be located on the southwest corner of the intersection of N Howe Street and W 14th Street/Port Realty Driveway in Southport, NC. Access to the site is proposed to be provided via two full access driveways, one on N Howe Street and one on W 14th Street. It is anticipated that the development will be constructed and fully operational by the end of 2023.

Figure 1 depicts the location of the proposed development. A conceptual site plan is depicted in **Appendix A**.

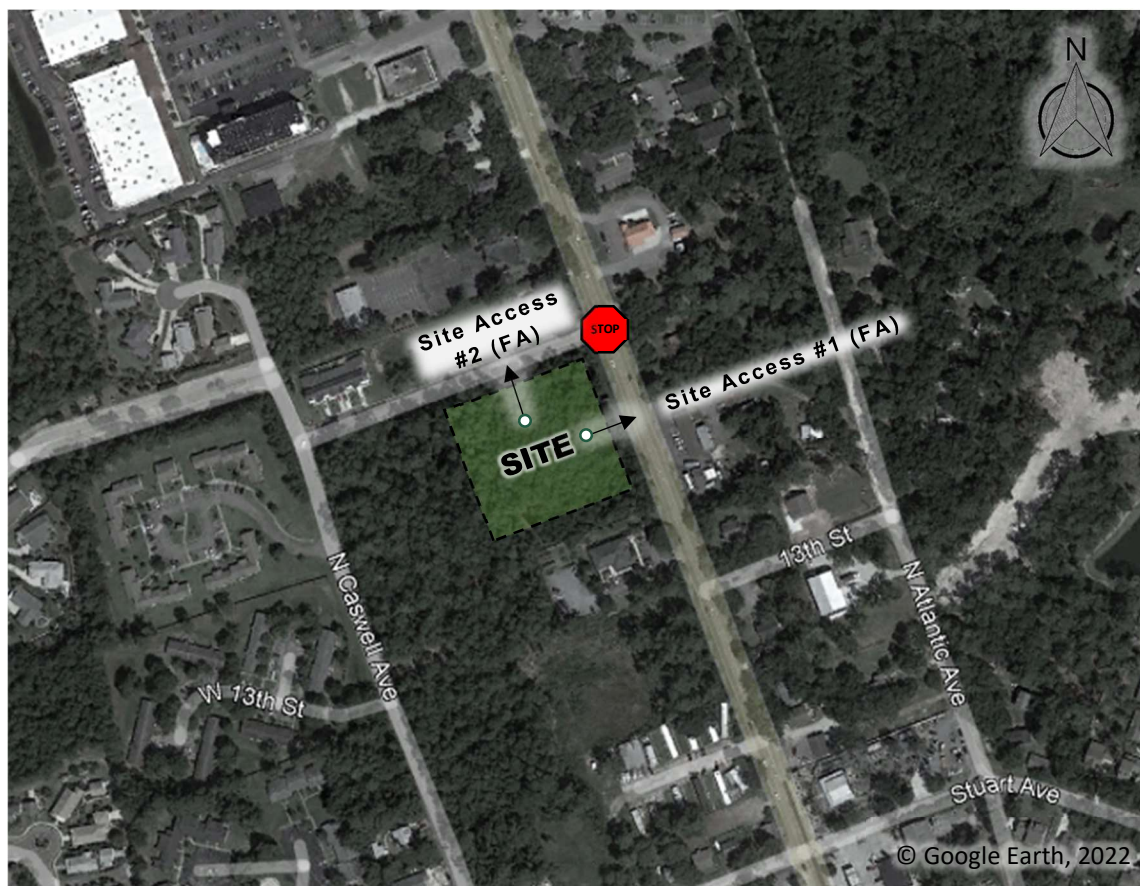


Figure 1 Site Location

The purpose of this study is as follows: (i) to determine the number of trips generated by the proposed site; (ii) to determine the potential impacts of the proposed development on the roadway network; (iii) to propose improvements, if required.

3.0 Base Conditions

For the purposes of this study, the following data was collected:

- An inventory of existing roadway geometry, traffic control devices, and location of existing and proposed driveways
- Published North Carolina Department of Transportation (NCDOT) Annual Average Daily Traffic (AADT) counts and functional classification information

The existing laneage for the following intersections are depicted on **Exhibit 1** in **Appendix C**:

- N Howe Street at W 14th Street/Port Realty Driveway

The following roadways are within the study area: N Howe Street, W 14th Street, and Port Realty Driveway

N Howe Street (NC 211): Within the identified study area N Howe Street is a state-maintained, three-lane roadway with a two-way left-turn lane (TWLTL). N Howe Street has a North-South alignment and a posted speed limit of 35 mph. Per NCDOT AADT counts, N Howe Street had a 2020 AADT of 16,500 vehicles per day (vpd). N Howe Street will have one full access driveway (Site Access #1) for the development.

W 14th Street: W 14th Street is a two-lane, undivided roadway. W 14th Street has an East-West alignment and will have one full access driveway (Site Access #2) for the development.

Port Realty Driveway: Port Realty Driveway is a two-lane, divided driveway for Port Realty.

Turning Movement Counts (TMC), including pedestrian counts and heavy vehicle volumes, were collected during an average weekday, Wednesday, March 16, 2022, for the AM (7:00 am – 9:00 am) and PM (4:00 pm – 6:00 pm) peak hours. The counts are presented in **Appendix B**. The 2022 Existing peak hour traffic volumes are depicted on **Exhibit 2** in **Appendix C**.

4.0 Traffic Forecast and Background Traffic

For purposes of this analysis, it is anticipated that the proposed development will be constructed by 2023. The following scenarios were evaluated as part of this study.

- Existing Conditions (2022) (Existing)
- Future Conditions (2023) without the proposed development (No Build)
- Future Conditions (2023) with the proposed development (Build)
- Future Conditions (2023) with the proposed development and roadway network and site improvements (Build with Improvements)

To develop the future traffic volumes, a background growth rate applicable for the study area was defined in coordination with NCDOT. For a conservative approach, a 1.00% average annual growth rate was used for all traffic in the study area. This growth rate was applied to the 2022 Existing traffic volumes to yield the 2023 No Build Peak Hour Traffic Volumes, which are depicted on **Exhibit 3** in **Appendix C**. Note that based on the coordination with the agencies, no committed developments were found in the study area.

5.0 Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition was used to determine the number of trips generated by the proposed development. The development consists of a 10,640 sq ft retail store. **Table 1** outlines the trip generation calculations for the proposed development.

Table 1 Trip Generation.

Land Use	Land Use Code ⁽¹⁾	LU Intensity	Units	Time period	Equation / Average Rate	Peak Hour Trips ⁽¹⁾		
						In	Out	Total
Variety Store	814	10.64	Sq. Ft. GFA	Weekday	63.66	338	339	677
				AM ⁽²⁾	3.04	17	15	32
				PM ⁽²⁾	6.70	36	35	71

(1) Based on the Institute of Transportation Engineers Trip Generation, 11th Edition

(2) Peak Hour of Adjacent Street

As presented in **Table 1**, the proposed development is expected to generate a total of 677 daily trips (338 entering and 339 exiting), 32 trips (17 entering and 15 exiting) during the AM peak hour, and a total of 71 trips (36 entering and 35 exiting) during the PM peak hour.

6.0 Trip Distribution

The anticipated trip distribution for the proposed site was developed based on the review of the turning movement counts for each roadway segment, the proposed access to/from the project, and locations of population centers in the area. The following trip distribution is anticipated for the proposed development.

- 35% to/from the North on N Howe Street
- 60% to/from the South on N Howe Street
- 5% to/from the West on W 14th Street

The new site trip distribution is presented in **Exhibit 4** in **Appendix C**.

The new site trips are presented in **Exhibit 5** in **Appendix C**.

The new site trips were added to the 2023 No Build volumes to yield the 2023 Build volumes, presented in **Exhibit 6** in **Appendix C**.

7.0 Capacity Analysis

The study intersections were analyzed for each scenario following the Highway Capacity Manual (HCM 6th Edition) methodologies using the computer software Synchro 11 and SimTraffic. The analysis uses capacity, Level of Service (LOS), and control delay as the criteria for the performance of the intersections and driveways.

Capacity, as defined by the HCM, is a measure of the maximum number of vehicles in an hour that can travel through an intersection or section of roadway under typical conditions. LOS is a marker of the driving conditions and perception of drivers while traveling during the given time period. LOS ranges from LOS A which represents free flow conditions, to LOS F which represents breakdown conditions.

Table 2 shows the LOS for signalized and unsignalized intersections as defined by the HCM.

Table 2 HCM Level of Service Criteria

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

Control delay is a measure of the total amount of delay experienced by an individual vehicle and includes delay related to deceleration, queue delay, stopped delay, and acceleration. **Table 2** displays the amount of control delay (in seconds per vehicle) that corresponds to the LOS for signalized and unsignalized intersections.

A PHF of 0.90 and a heavy vehicle percentage of 2.0% was used for all intersections in all conditions per NCDOT Capacity Analysis Guidelines. In addition, a minimum of 4 vehicles per hour were used in Synchro at every turning movement in all conditions per NCDOT standards.

Capacity analyses were conducted for the Existing, 2023 No Build, 2023 Build, and 2023 Build with Improvements conditions at the following intersections.

- N Howe Street at W 14th Street/Port Realty Driveway
- N Howe Street at Site Access #1 (2023 Build and 2023 Build with Improvements conditions only)
- W 14th Street at Site Access #2 (2023 Build and 2023 Build with Improvements conditions only)

7.1 N Howe Street at W 14th Street/Port Realty Driveway

The AM and PM peak hour capacity results for N Howe Street at W 14th Street/Port Realty Driveway during each condition are summarized in **Table 3**. The corresponding Synchro LOS and SimTraffic Queuing and Blocking reports are provided in **Appendix D**.

Table 3 AM and PM Peak Hour Capacity Analysis – N Howe Street at W 14th Street/Port Realty Driveway

AM PEAK HOUR			Existing		2023 No Build		2023 Build		2023 Build with Improvements	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS	DELAY (S)	LOS	DELAY (S)	LOS
N Howe St & W 14th St/Port Realty Driveway	EB	Approach	35.7	D	36.3	D	36.9	D	34.4	D
	WB	Approach	29.0	D	29.5	D	30.0	D	30.0	D
	NB	Approach	0.1	A	0.1	A	0.1	A	0.1	A
	SB	Approach	0.0	A	0.0	A	0.0	A	0.0	A
PM PEAK HOUR			Existing		2023 No Build		2023 Build		2023 Build with Improvements	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS	DELAY (S)	LOS	DELAY (S)	LOS
N Howe St & W 14th St/Port Realty Driveway	EB	Approach	45.7	E	46.1	E	52.2	F	47.1	E
	WB	Approach	46.5	E	47.4	E	49.5	E	49.5	E
	NB	Approach	0.1	A	0.1	A	0.1	A	0.1	A
	SB	Approach	0.1	A	0.1	A	0.0	A	0.1	A

Extracted from Synchro 11 Simulation Software.

Based on the results of the capacity analysis, the intersection of N Howe Street at W 14th Street/Port Realty Driveway currently operates at LOS D during the AM peak hour and at LOS E during the PM peak hour and is projected to continue to operate at the same LOS in the 2023 No Build condition. In the 2023 Build conditions, the intersection is projected to operate at LOS D during the AM peak hour and at LOS F during the PM peak hour.

Due to the intersection operating at LOS F during the PM peak hour at buildout, an exclusive eastbound left-turn lane with 50 ft of storage was added to the 2023 Build with Improvements condition. With addition of the exclusive left-turn lane, the intersection is projected to operate at LOS D during the AM peak hour and at LOS E during the PM peak hour as shown in the 2023 Build with Improvements condition.

95th percentile queuing is considered the maximum queuing to be expected at an intersection. The 95th percentile queuing is projected to be less than 50' at all approaches for all conditions during both peak hours.

7.2 N Howe Street at Site Access #1

The AM and PM peak hour capacity results for N Howe Street at Site Access #1 during the 2023 Build and 2023 Build with Improvements conditions are summarized in **Table 4**. The corresponding Synchro LOS and SimTraffic Queuing and Blocking reports are provided in **Appendix D**.

Table 4 AM and PM Peak Hour Capacity Analysis – N Howe Street at Site Access #1

AM PEAK HOUR			2023 Build		2023 Build with Improvements	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
N Howe St & Site Access #1	EB	Approach	16.2	C	16.2	C
	WB	Approach	-	-	-	-
	NB	Approach	0.2	A	0.2	A
	SB	Approach	0.0	A	0.0	A
PM PEAK HOUR			2023 Build		2023 Build with Improvements	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
N Howe St & Site Access #1	EB	Approach	17.3	C	17.3	C
	WB	Approach	-	-	-	-
	NB	Approach	0.2	A	0.2	A
	SB	Approach	0.0	A	0.0	A

Extracted from Synchro 11 Simulation Software.

Based on the results of the capacity analysis, the intersection of N Howe Street at Site Access #1 is projected to operate at LOS C in the 2023 Build and 2023 Build with Improvements conditions during both peak hours. The 95th percentile queuing is projected to be less than 50' at all approaches for both peak hours in both conditions.

Based on the volume guidelines set in the *NCDOT Roadway Design Manual* (2022), it was determined that a southbound right-turn lane along N Howe Street at Site Access #1 is not needed. The corresponding auxiliary turn lane guidelines are provided in **Appendix E**.

7.3 W 14th Street at Site Access #2

The AM and PM peak hour capacity results for W 14th Street at Site Access #2 during the 2023 Build and 2023 Build with Improvements conditions are summarized in **Table 5**. The corresponding Synchro LOS and SimTraffic Queuing and Blocking reports are provided in **Appendix D**.

Table 5 AM and PM Peak Hour Capacity Analysis – W 14th Street at Site Access #2

AM PEAK HOUR			2023 Build		2023 Build with Improvements	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
W 14th St & Site Access #2	EB	Approach	0.0	A	0.0	A
	WB	Approach	3.2	A	3.2	A
	NB	Approach	8.6	A	8.6	A
	SB	Approach	-	-	-	-
PM PEAK HOUR			2023 Build		2023 Build with Improvements	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
W 14th St & Site Access #2	EB	Approach	0.0	A	0.0	A
	WB	Approach	2.1	A	2.1	A
	NB	Approach	8.6	A	8.6	A
	SB	Approach	-	-	-	-

Extracted from Synchro 11 Simulation Software.

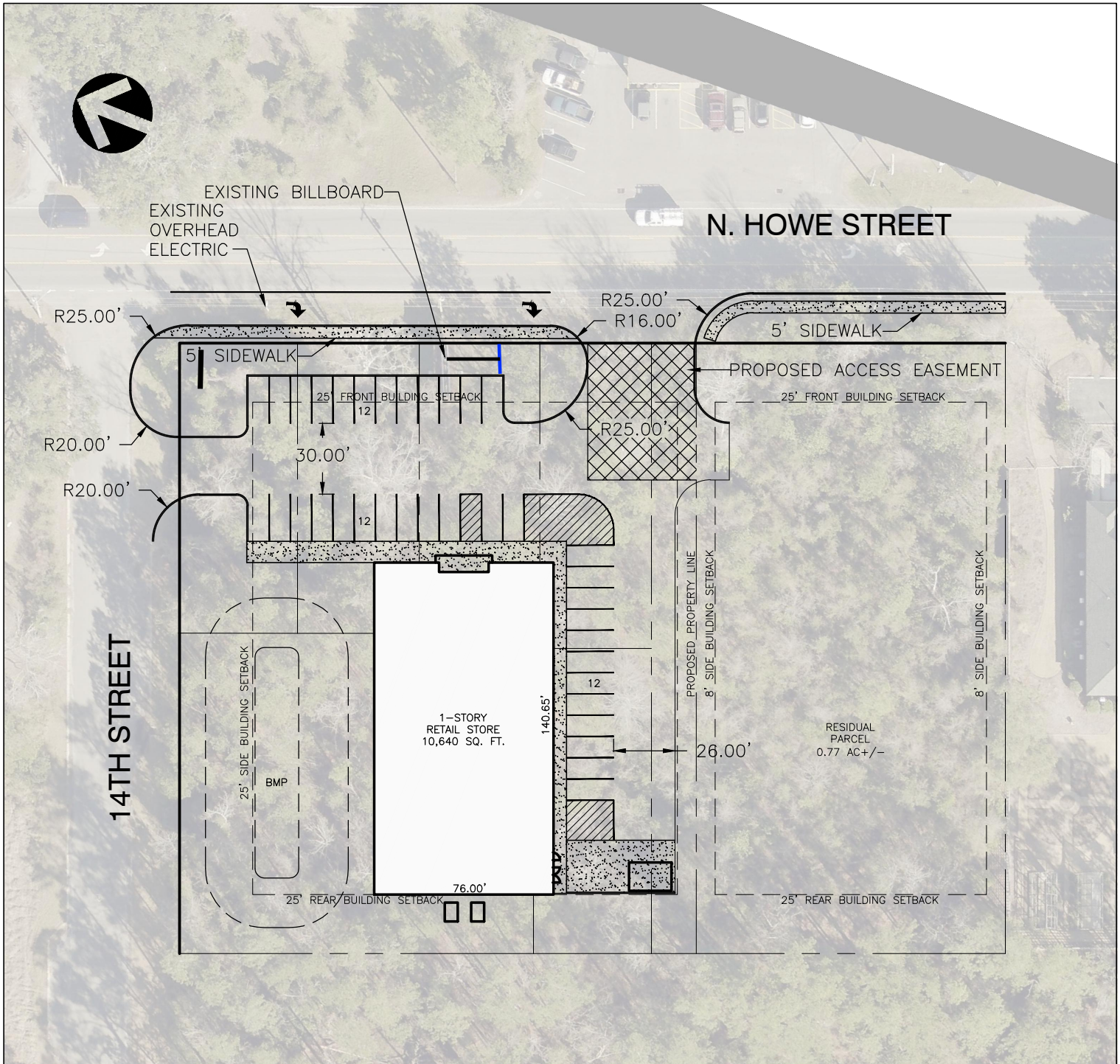
Based on the results of the capacity analysis, the intersection of W 14th Street at Site Access #2 is projected to operate at LOS A in the 2023 Build and 2023 Build with Improvements conditions during both peak hours. The 95th percentile queuing is projected to be less than 40' at the northbound approach for both peak hours in both conditions.

Based on the volume guidelines set in the *NCDOT Roadway Design Manual* (2022), it was determined that an eastbound right-turn lane and a westbound left-turn lane along W 14th Street at Site Access #2 are not needed. The corresponding auxiliary turn lane guidelines are provided in **Appendix E**.

8.0 Summary of Findings and Conclusions

- Based on ITE trip generation rates for land use 814, the proposed development is expected to generate a total of a total of 677 daily trips (338 entering and 339 exiting), 32 trips (17 entering and 15 exiting) during the AM peak hour, and a total of 71 trips (36 entering and 35 exiting) during the PM peak hour.
- Based on the results of the capacity analysis, the intersection of N Howe Street at W 14th Street/Port Realty Driveway currently operates at LOS D during the AM peak hour and at LOS E during the PM peak hour and is projected to continue to operate at the same LOS in the 2023 No Build condition. In the 2023 Build condition, the intersection is projected to operate at LOS D during the AM peak hour and at LOS F during the PM peak hour.
- Due to the intersection of N Howe Street at W 14th Street/Port Realty Driveway operating at LOS F in the 2023 Build condition, an exclusive eastbound left-turn lane with 50 feet of storage is recommended. With the addition of the left-turn lane, the intersection is projected to operate at LOS D during the AM peak hour and at LOS E during the PM peak hour in the 2023 Build with Improvements condition.
- Based on the results of the capacity analysis, the intersection of N Howe Street at Site Access #1 is projected to operate at LOS C during both peak hours in the 2023 Build and 2023 Build with Improvements conditions. It was also determined that a southbound right-turn lane along N Howe Street at Site Access #1 is not needed.
- Based on the results of the capacity analysis, the intersection of W 14th Street at Site Access #2 is projected to operate at LOS A during both peak hours in the 2023 Build and 2023 Build with Improvements conditions. It was also determined that an eastbound right-turn lane and a westbound left-turn lane along W 14th Street at Site Access #2 are not needed.
- Based on the results presented in this study, the proposed development is not expected to adversely impact the surrounding roadway network.

APPENDIX A



NOTES: 1. SCHEMATIC SITE PLAN IS BASED ON HC ZONING (REQUIRES REZONING) 2. KBJW RECOMMENDS CONFIRMING ALL RIGHT-OF-WAY REQUIRES WITH LOCAL AND STATE AGENCIES. 3. POSSIBLE EASEMENTS LOCATED ON PROPERTY. VACATE ALL EXISTING INTERIOR PROPERTY LINES. 4. DEVELOPER SHALL RELOCATE EXISTING UTILITIES AND EASEMENTS. 5. ALL PROPERTY LINES AND EXISTING CONDITIONS ARE APPROXIMATE. KBJW RECOMMENDS SURVEYING THE PROJECT LIMITS. 6. PROPOSED PARCEL A IS 1.18 AC +/- AND THE RESIDUAL PARCEL IS 0.77 AC +/--.	
---	--

 KOONTZ BRYANT JOHNSON WILLIAMS 630 N. WITCHDUCK RD VA BEACH, VIRGINIA 23462 P757.226.0081 www.kbjwgroup.com		KBJW NO. 6213.15 N HOWE STREET – SOUTHPORT, NC SCHEMATIC SITE PLAN		SCALE: 1"=60'	
PROTOTYPE:	TYPE A	STREET, CITY, STATE: NORTH HOWE STREET, SOUTHPORT, NC		ISSUE DATE	DRAWING NUMBER
BLDG/SALES SF:	10,640	COMPANY:	RHETSON COMPANIES	11/4/21	1
ACREAGE:	2.07 +/-	NAME:	CATHERINE ACORD	REVISED ON	
PARKING SPACES:	36	PHONE:	910-944-0081	11/23/21	
		NAME:	ELMER TOLLE		
		PHONE:	757-226-0081		

APPENDIX B

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : N Howe St @ W 14th St

Site Code : 00031622

Start Date : 03/16/2022

Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

Start Time	N Howe St Southbound				Port Realty Westbound				N Howe St Northbound				W 14th St Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	0	84	0	0	0	0	1	0	0	59	0	1	1	0	0	0	146
07:15	0	109	0	1	0	0	0	0	0	67	0	0	1	0	1	0	179
07:30	0	137	3	0	0	0	0	0	0	71	0	0	1	0	0	0	212
07:45	0	216	0	0	0	0	0	0	0	65	0	0	1	0	4	0	286
Total	0	546	3	1	0	0	1	0	0	262	0	1	4	0	5	0	823
08:00	0	164	0	0	0	0	1	0	0	82	0	0	3	0	0	0	250
08:15	0	224	1	0	0	0	0	0	0	140	0	0	2	0	1	0	368
08:30	0	157	1	0	0	0	0	0	0	175	0	0	2	0	2	0	337
08:45	0	189	2	0	0	0	0	0	1	121	0	1	3	0	1	0	318
Total	0	734	4	0	0	0	1	0	1	518	0	1	10	0	4	0	1273
16:00	0	119	5	0	0	0	0	0	0	220	0	1	1	0	2	0	348
16:15	0	161	3	1	0	0	0	0	0	211	0	0	3	0	0	0	379
16:30	0	164	1	1	0	0	0	0	2	212	0	1	0	0	3	0	384
16:45	0	163	1	0	0	0	0	0	2	220	0	1	3	0	2	0	392
Total	0	607	10	2	0	0	0	0	4	863	0	3	7	0	7	0	1503
17:00	0	149	2	0	2	0	1	0	1	238	0	0	0	0	1	0	394
17:15	0	157	0	1	0	0	0	0	2	189	0	0	4	0	1	0	354
17:30	0	155	4	0	0	0	0	0	1	164	0	0	0	0	0	0	324
17:45	0	147	2	1	1	0	0	0	2	155	0	0	2	0	1	0	311
Total	0	608	8	2	3	0	1	0	6	746	0	0	6	0	3	0	1383
Grand Total	0	2495	25	5	3	0	3	0	11	2389	0	5	27	0	19	0	4982
Apprch %	0	98.8	1	0.2	50	0	50	0	0.5	99.3	0	0.2	58.7	0	41.3	0	
Total %	0	50.1	0.5	0.1	0.1	0	0.1	0	0.2	48	0	0.1	0.5	0	0.4	0	
Passenger Vehicles	0	2476	24	3	3	0	3	0	11	2377	0	5	27	0	19	0	4948
% Passenger Vehicles	0	99.2	96	60	100	0	100	0	100	99.5	0	100	100	0	100	0	99.3
Heavy Vehicles	0	8	0	0	0	0	0	0	0	6	0	0	0	0	0	0	14
% Heavy Vehicles	0	0.3	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0.3
Buses	0	11	1	2	0	0	0	0	0	6	0	0	0	0	0	0	20
% Buses	0	0.4	4	40	0	0	0	0	0	0.3	0	0	0	0	0	0	0.4

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

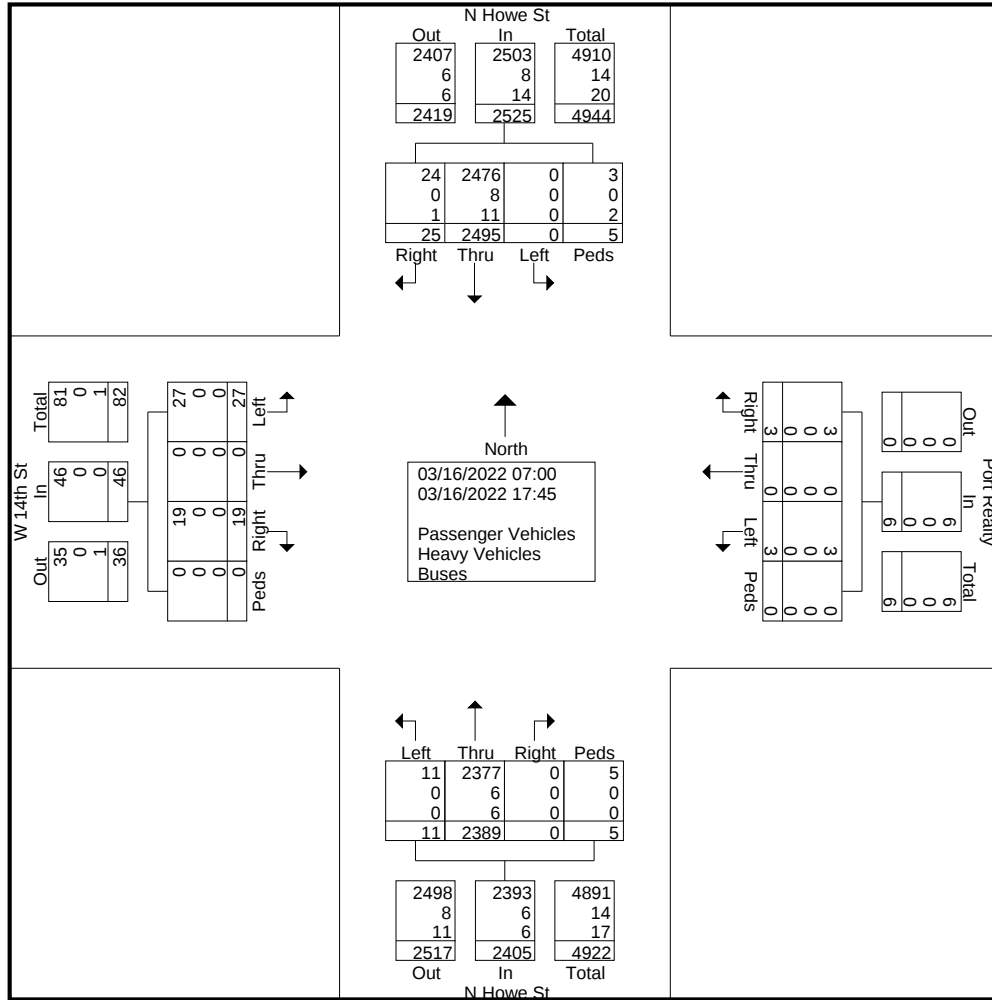
We can't say we're the Best, but you Can!

File Name : N Howe St @ W 14th St

Site Code : 00031622

Start Date : 03/16/2022

Page No : 2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

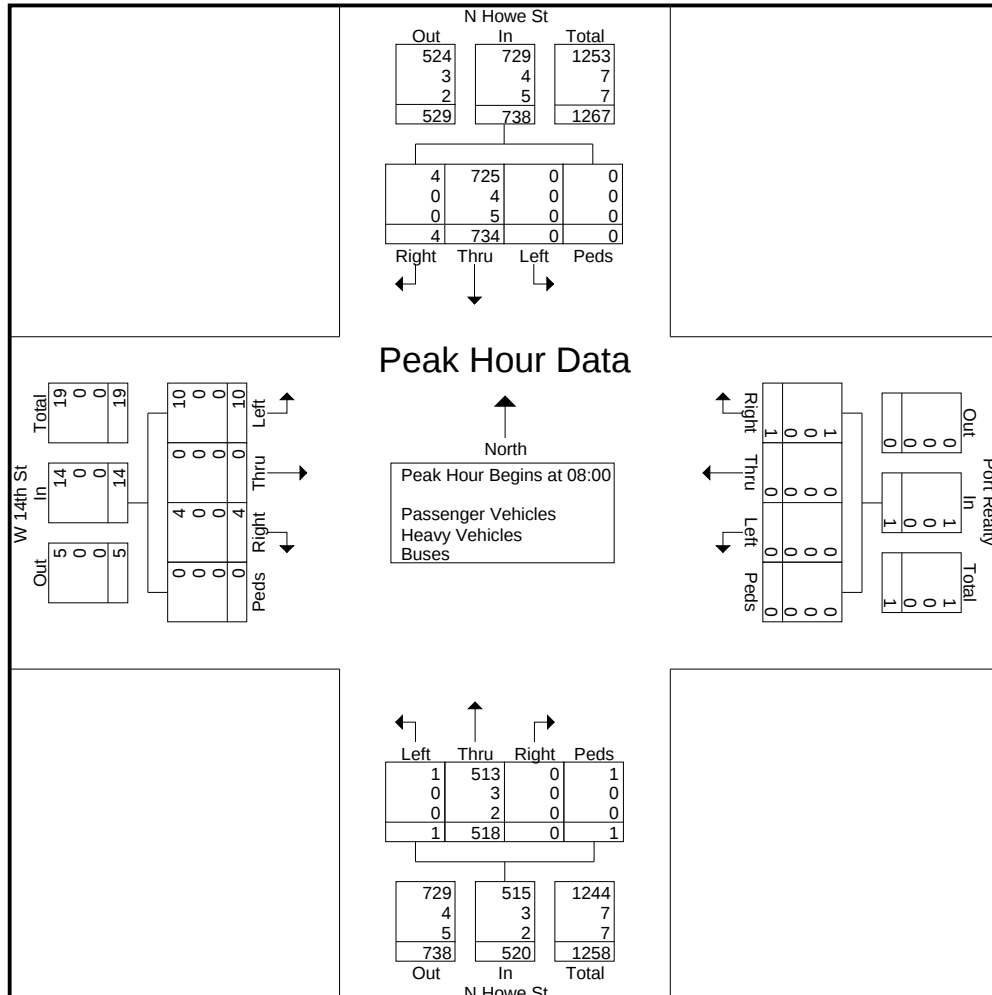
File Name : N Howe St @ W 14th St

Site Code : 00031622

Start Date : 03/16/2022

Page No : 3

	N Howe St Southbound					Port Realty Westbound					N Howe St Northbound					W 14th St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	0	164	0	0	164	0	0	1	0	1	0	82	0	0	82	3	0	0	0	3	250
08:15	0	224	1	0	225	0	0	0	0	0	0	140	0	0	140	2	0	1	0	3	368
08:30	0	157	1	0	158	0	0	0	0	0	0	175	0	0	175	2	0	2	0	4	337
08:45	0	189	2	0	191	0	0	0	0	0	1	121	0	1	123	3	0	1	0	4	318
Total Volume	0	734	4	0	738	0	0	1	0	1	1	518	0	1	520	10	0	4	0	14	1273
% App. Total	0	99.5	0.5	0		0	0	100	0		0.2	99.6	0	0.2		71.4	0	28.6	0		
PHF	.000	.819	.500	.000	.820	.000	.000	.250	.000	.250	.250	.740	.000	.250	.743	.833	.000	.500	.000	.875	.865
Passenger Vehicles	0	725	4	0	729	0	0	1	0	1	1	513	0	1	515	10	0	4	0	14	1259
% Passenger Vehicles																					
Heavy Vehicles	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
% Heavy Vehicles	0	0.5	0	0	0.5	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0.5
Buses	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
% Buses	0	0.7	0	0	0.7	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0.5



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : N Howe St @ W 14th St

Site Code : 00031622

Start Date : 03/16/2022

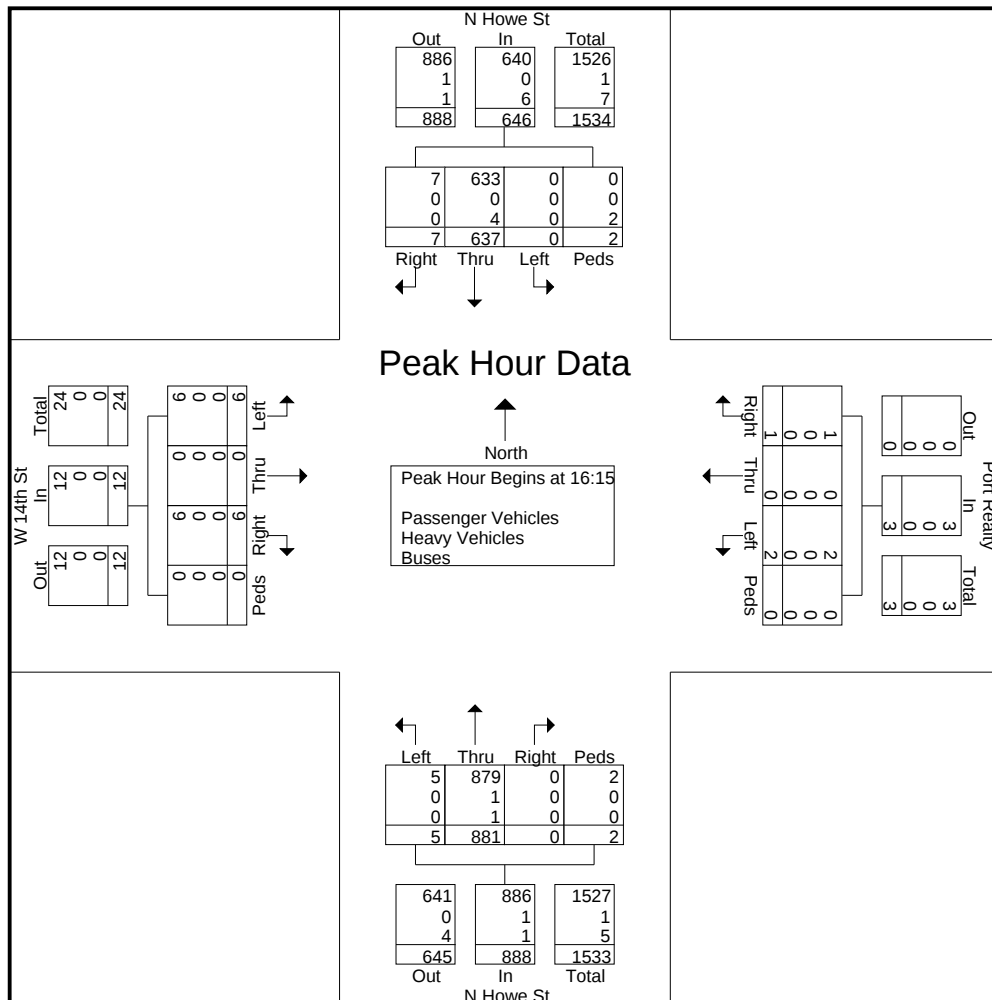
Page No : 4

	N Howe St Southbound					Port Realty Westbound					N Howe St Northbound					W 14th St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

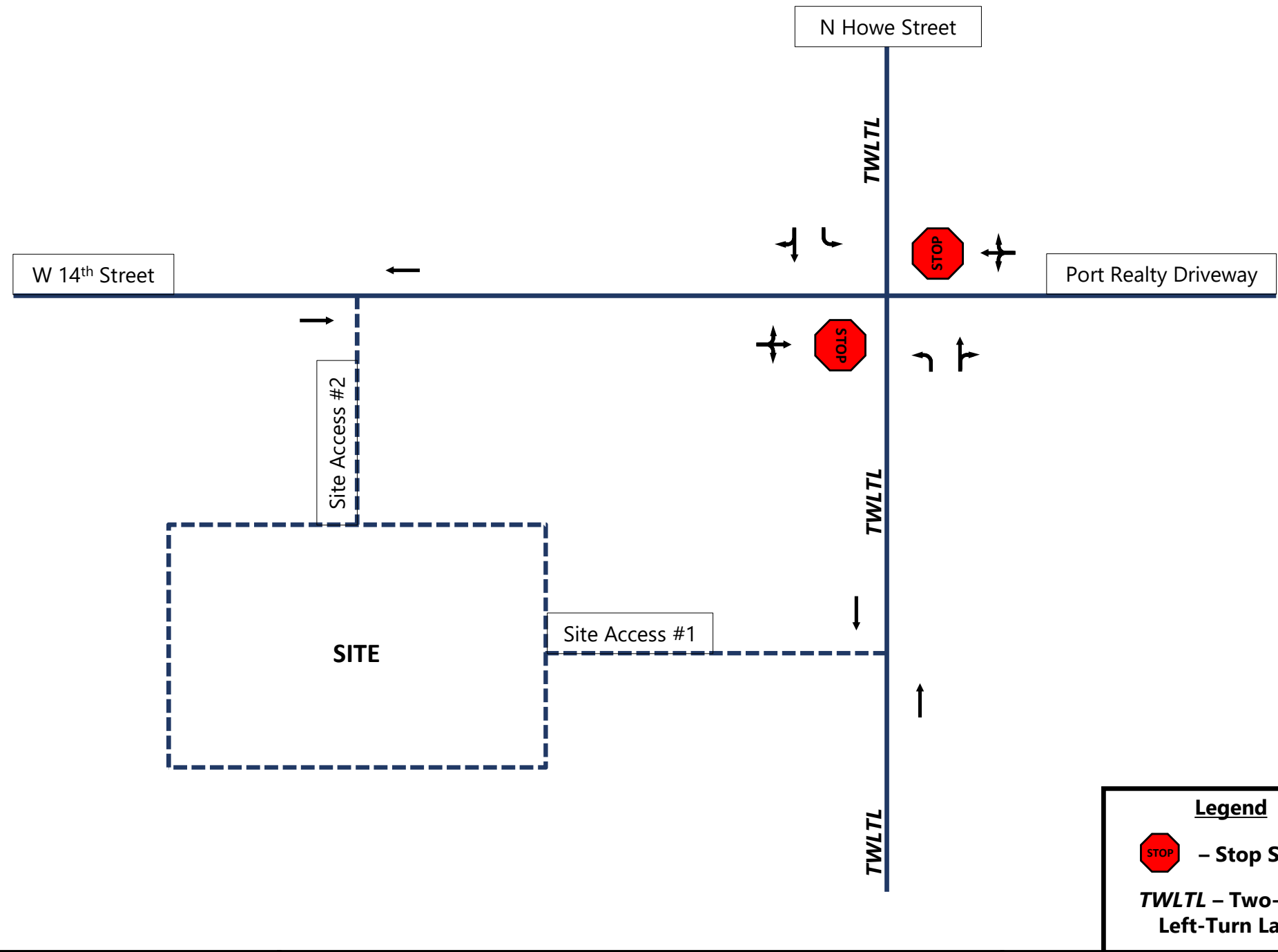
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

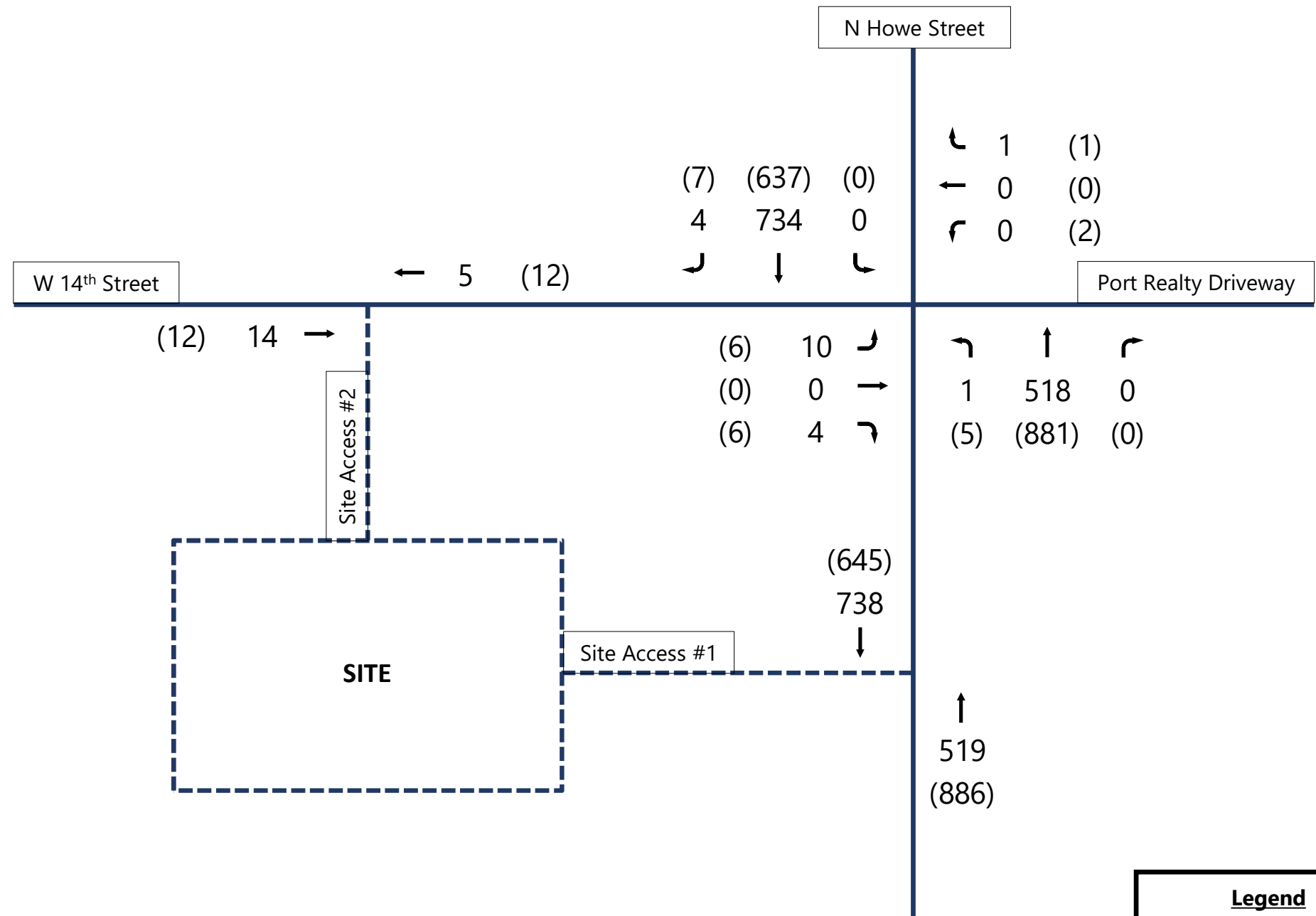
Peak Hour for Entire Intersection Begins at 16:15

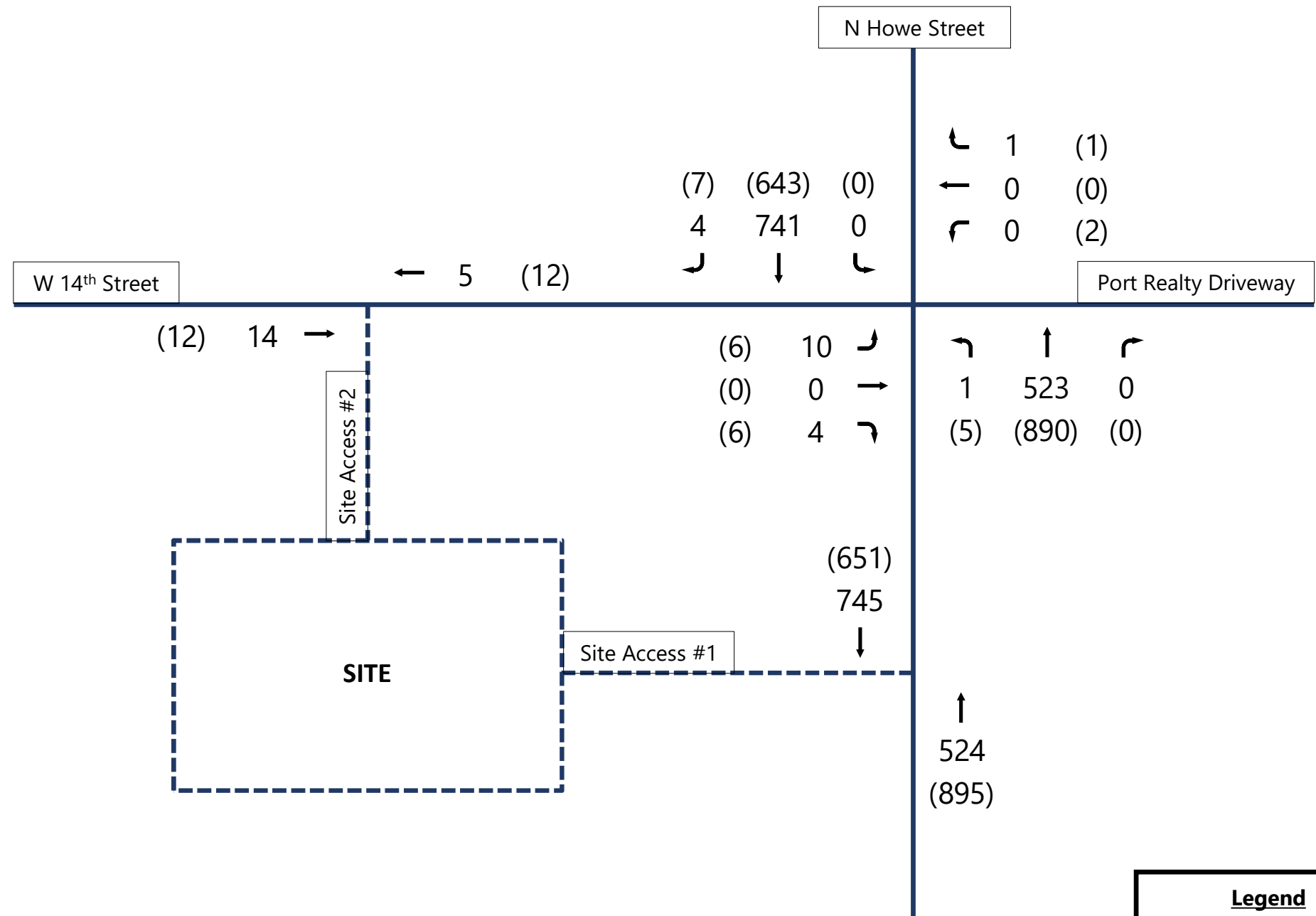
16:15	0	161	3	1	165	0	0	0	0	0	0	211	0	0	211	3	0	0	0	3	379
16:30	0	164	1	1	166	0	0	0	0	0	0	212	0	1	215	0	0	3	0	3	384
16:45	0	163	1	0	164	0	0	0	0	0	2	220	0	1	223	3	0	2	0	5	392
17:00	0	149	2	0	151	2	0	1	0	3	1	238	0	0	239	0	0	1	0	1	394
Total Volume	0	637	7	2	646	2	0	1	0	3	5	881	0	2	888	6	0	6	0	12	1549
% App. Total	0	98.6	1.1	0.3		66.7	0	33.3	0		0.6	99.2	0	0.2		50	0	50	0		
PHF	.000	.971	.583	.500	.973	.250	.000	.250	.000	.250	.625	.925	.000	.500	.929	.500	.000	.500	.000	.600	.983
Passenger Vehicles	0	633	7	0	640	2	0	1	0	3	5	879	0	2	886	6	0	6	0	12	1541
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1
Buses	0	4	0	2	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
% Buses	0	0.6	0	100	0.9	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.5

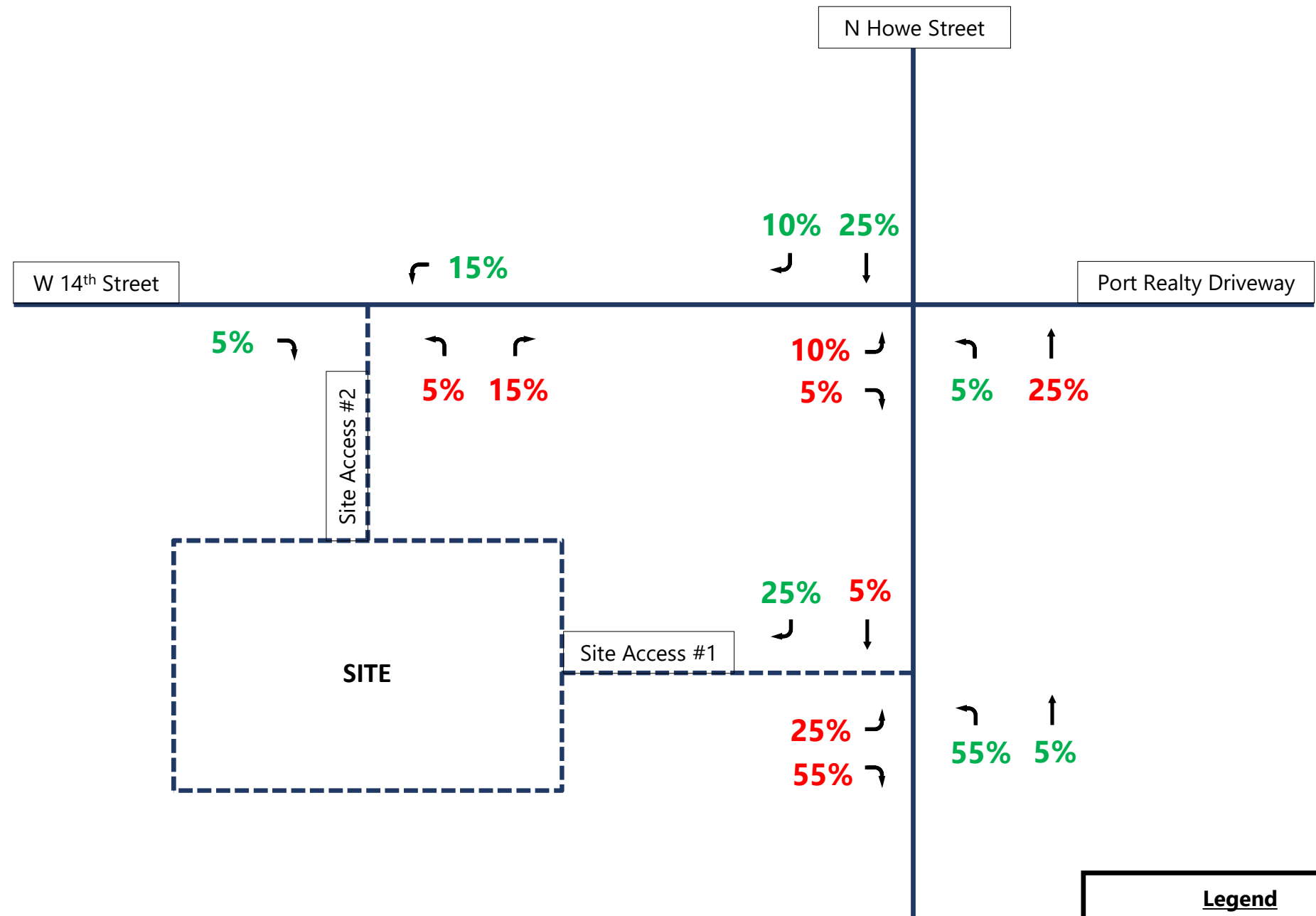


APPENDIX C









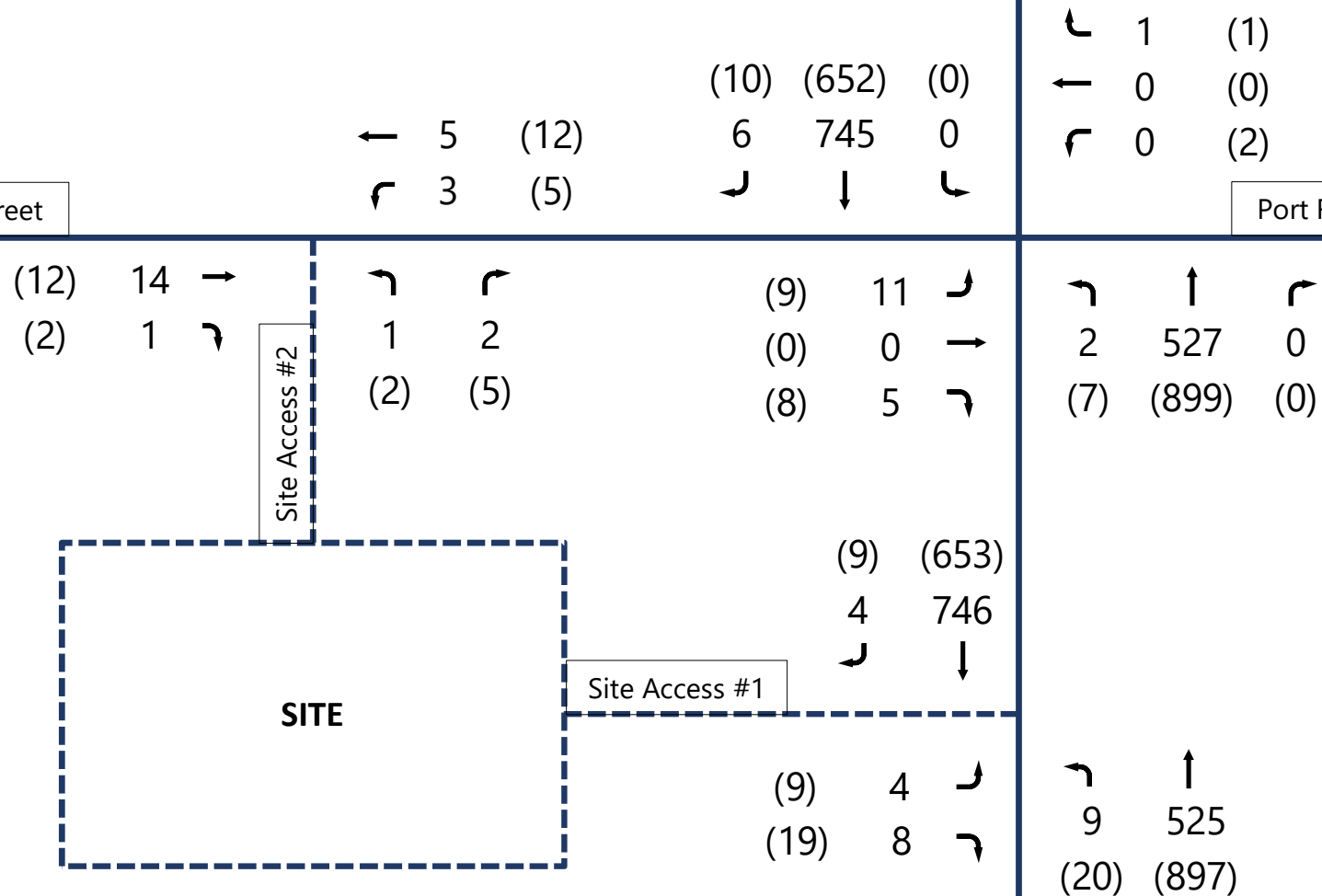
Legend
XX% – Percent Inbound
XX% – Percent Outbound



N Howe Street

W 14th Street

Port Realty Driveway



Legend

XX – AM Volumes
(XX) – PM Volumes

APPENDIX D

HCM 6th TWSC
3: N Howe Street & W 14th Street/Port Realty Driveway

Existing AM
07/06/2022

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	10	4	4	4	4	4	4	518	4	4	734	4
Future Vol, veh/h	10	4	4	4	4	4	4	518	4	4	734	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	4	4	4	4	4	4	576	4	4	816	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1416	1415	818	1417	1415	579	820	0	0	581	0	0
Stage 1	826	826	-	587	587	-	-	-	-	-	-	-
Stage 2	590	589	-	830	828	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	115	137	376	115	137	515	809	-	-	993	-	-
Stage 1	366	387	-	496	497	-	-	-	-	-	-	-
Stage 2	494	495	-	364	386	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	110	136	376	110	136	515	809	-	-	992	-	-
Mov Cap-2 Maneuver	110	136	-	110	136	-	-	-	-	-	-	-
Stage 1	364	385	-	493	494	-	-	-	-	-	-	-
Stage 2	483	492	-	354	384	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	35.7		29		0.1		0	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	809	-	-	137	163	992	-
HCM Lane V/C Ratio	0.005	-	-	0.146	0.082	0.004	-
HCM Control Delay (s)	9.5	-	-	35.7	29	8.6	-
HCM Lane LOS	A	-	-	E	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.3	0	-

HCM 6th TWSC
3: N Howe Street & W 14th Street/Port Realty Driveway

Existing PM
07/06/2022

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	6	4	6	4	4	4	5	881	4	4	637	7
Future Vol, veh/h	6	4	6	4	4	4	5	881	4	4	637	7
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	2	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	4	7	4	4	4	6	979	4	4	708	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1719	1719	714	1721	1721	983	718	0	0	985	0	0
Stage 1	722	722	-	995	995	-	-	-	-	-	-	-
Stage 2	997	997	-	726	726	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	71	90	431	70	89	302	883	-	-	701	-	-
Stage 1	418	431	-	295	323	-	-	-	-	-	-	-
Stage 2	294	322	-	416	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	66	88	430	66	87	301	881	-	-	700	-	-
Mov Cap-2 Maneuver	66	88	-	66	87	-	-	-	-	-	-	-
Stage 1	414	428	-	292	320	-	-	-	-	-	-	-
Stage 2	284	319	-	403	427	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	45.7		46.5		0.1		0.1	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	881	-	-	106	100	700	-
HCM Lane V/C Ratio	0.006	-	-	0.168	0.133	0.006	-
HCM Control Delay (s)	9.1	-	-	45.7	46.5	10.2	-
HCM Lane LOS	A	-	-	E	E	B	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.4	0	-

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	10	4	4	4	4	4	4	523	4	4	741	4
Future Vol, veh/h	10	4	4	4	4	4	4	523	4	4	741	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	4	4	4	4	4	4	581	4	4	823	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1428	1427	825	1429	1427	584	827	0	0	586	0	0
Stage 1	833	833	-	592	592	-	-	-	-	-	-	-
Stage 2	595	594	-	837	835	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	113	135	372	112	135	512	804	-	-	989	-	-
Stage 1	363	384	-	493	494	-	-	-	-	-	-	-
Stage 2	491	493	-	361	383	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	108	134	372	107	134	512	804	-	-	988	-	-
Mov Cap-2 Maneuver	108	134	-	107	134	-	-	-	-	-	-	-
Stage 1	361	382	-	490	491	-	-	-	-	-	-	-
Stage 2	480	490	-	351	381	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	36.3		29.5		0.1		0	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	804	-	-	135	160	988	-
HCM Lane V/C Ratio	0.006	-	-	0.148	0.083	0.004	-
HCM Control Delay (s)	9.5	-	-	36.3	29.5	8.7	-
HCM Lane LOS	A	-	-	E	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.3	0	-

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Vol, veh/h	6	4	6	4	4	4	5	890	4	4	643	7
Future Vol, veh/h	6	4	6	4	4	4	5	890	4	4	643	7
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	2	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	4	7	4	4	4	6	989	4	4	714	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1735	1735	720	1737	1737	993	724	0	0	995	0	0
Stage 1	728	728	-	1005	1005	-	-	-	-	-	-	-
Stage 2	1007	1007	-	732	732	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	69	88	428	68	87	298	879	-	-	695	-	-
Stage 1	415	429	-	291	319	-	-	-	-	-	-	-
Stage 2	290	319	-	413	427	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	65	87	427	64	86	297	877	-	-	694	-	-
Mov Cap-2 Maneuver	65	87	-	64	86	-	-	-	-	-	-	-
Stage 1	411	426	-	288	316	-	-	-	-	-	-	-
Stage 2	280	316	-	400	424	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	46.1		47.4		0.1		0.1	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	877	-	-	105	98	694	-
HCM Lane V/C Ratio	0.006	-	-	0.169	0.136	0.006	-
HCM Control Delay (s)	9.1	-	-	46.1	47.4	10.2	-
HCM Lane LOS	A	-	-	E	E	B	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.5	0	-

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	11	4	5	4	4	4	4	527	4	4	745	6
Future Vol, veh/h	11	4	5	4	4	4	4	527	4	4	745	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	4	6	4	4	4	4	586	4	4	828	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1440	1439	832	1442	1440	589	835	0	0	591	0	0
Stage 1	840	840	-	597	597	-	-	-	-	-	-	-
Stage 2	600	599	-	845	843	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	111	133	369	110	133	508	798	-	-	985	-	-
Stage 1	360	381	-	490	491	-	-	-	-	-	-	-
Stage 2	488	490	-	357	380	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	106	132	369	105	132	508	798	-	-	984	-	-
Mov Cap-2 Maneuver	106	132	-	105	132	-	-	-	-	-	-	-
Stage 1	358	379	-	487	488	-	-	-	-	-	-	-
Stage 2	477	487	-	346	378	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	36.9		30		0.1		0	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	798	-	-	135	157	984	-
HCM Lane V/C Ratio	0.006	-	-	0.165	0.085	0.005	-
HCM Control Delay (s)	9.5	-	-	36.9	30	8.7	-
HCM Lane LOS	A	-	-	E	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.3	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	8	9	525	746	4
Future Vol, veh/h	4	8	9	525	746	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	9	10	583	829	4

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1434	831	833	0	-	0
Stage 1	831	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	147	370	800	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	145	370	800	-	-	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	423	-	-	-	-	-
Stage 2	546	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.2	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	800	-	335	-	-
HCM Lane V/C Ratio	0.013	-	0.04	-	-
HCM Control Delay (s)	9.6	-	16.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	4	4	5	4	4
Future Vol, veh/h	14	4	4	5	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	4	4	6	4	4
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	32	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	14	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1596	-	982	1061
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	1009	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1596	-	979	1061
Mov Cap-2 Maneuver	-	-	-	-	979	-
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	1006	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.2		8.6	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1018	-	-	1596	-	
HCM Lane V/C Ratio	0.009	-	-	0.003	-	
HCM Control Delay (s)	8.6	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	9	4	8	4	4	4	7	899	4	4	652	10
Future Vol, veh/h	9	4	8	4	4	4	7	899	4	4	652	10
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	2	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	4	9	4	4	4	8	999	4	4	724	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1761	1761	732	1763	1764	1003	737	0	0	1005	0	0
Stage 1	740	740	-	1019	1019	-	-	-	-	-	-	-
Stage 2	1021	1021	-	744	745	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	66	84	421	66	84	294	869	-	-	689	-	-
Stage 1	409	423	-	286	314	-	-	-	-	-	-	-
Stage 2	285	314	-	407	421	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	62	82	420	61	82	293	867	-	-	688	-	-
Mov Cap-2 Maneuver	62	82	-	61	82	-	-	-	-	-	-	-
Stage 1	405	420	-	283	311	-	-	-	-	-	-	-
Stage 2	274	311	-	392	418	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	52.2		49.5		0.1		0.1	
HCM LOS	F		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	867	-	-	99	94	688	-
HCM Lane V/C Ratio	0.009	-	-	0.236	0.142	0.006	-
HCM Control Delay (s)	9.2	-	-	52.2	49.5	10.3	-
HCM Lane LOS	A	-	-	F	E	B	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.5	0	-

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	19	20	897	653	9
Future Vol, veh/h	9	19	20	897	653	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	21	22	997	726	10

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1772	731	736
Stage 1	731	-	-
Stage 2	1041	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	91	422	870
Stage 1	476	-	-
Stage 2	340	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	89	422	870
Mov Cap-2 Maneuver	218	-	-
Stage 1	464	-	-
Stage 2	340	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.3	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	870	-	324	-	-
HCM Lane V/C Ratio	0.026	-	0.096	-	-
HCM Control Delay (s)	9.2	-	17.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	4	5	12	4	5
Future Vol, veh/h	12	4	5	12	4	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	4	6	13	4	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	17	0	40	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	25	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1600	-	972	1065
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	998	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1600	-	968	1065
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	994	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.1		8.6	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1020	-	-	1600	-	
HCM Lane V/C Ratio	0.01	-	-	0.003	-	
HCM Control Delay (s)	8.6	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	4	5	4	4	4	4	527	4	4	745	6
Future Vol, veh/h	11	4	5	4	4	4	4	527	4	4	745	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	4	6	4	4	4	4	586	4	4	828	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1440	1439	832	1442	1440	589	835	0	0	591	0	0
Stage 1	840	840	-	597	597	-	-	-	-	-	-	-
Stage 2	600	599	-	845	843	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	111	133	369	110	133	508	798	-	-	985	-	-
Stage 1	360	381	-	490	491	-	-	-	-	-	-	-
Stage 2	488	490	-	357	380	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	106	132	369	105	132	508	798	-	-	984	-	-
Mov Cap-2 Maneuver	106	132	-	105	132	-	-	-	-	-	-	-
Stage 1	358	379	-	487	488	-	-	-	-	-	-	-
Stage 2	477	487	-	346	378	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	34.4		30		0.1		0	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	798	-	-	106	205	157	984	-	-
HCM Lane V/C Ratio	0.006	-	-	0.115	0.049	0.085	0.005	-	-
HCM Control Delay (s)	9.5	-	-	43.3	23.5	30	8.7	-	-
HCM Lane LOS	A	-	-	E	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0.3	0	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	8	9	525	746	4
Future Vol, veh/h	4	8	9	525	746	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	9	10	583	829	4
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1434	831	833	0	-	0
Stage 1	831	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	147	370	800	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	145	370	800	-	-	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	423	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.2	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	800	-	335	-	-	
HCM Lane V/C Ratio	0.013	-	0.04	-	-	
HCM Control Delay (s)	9.6	-	16.2	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	4	4	5	4	4
Future Vol, veh/h	14	4	4	5	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	4	4	6	4	4
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	32	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	14	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1596	-	982	1061
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	1009	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1596	-	979	1061
Mov Cap-2 Maneuver	-	-	-	-	979	-
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	1006	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.2		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1018	-	-	1596	-	
HCM Lane V/C Ratio	0.009	-	-	0.003	-	
HCM Control Delay (s)	8.6	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	4	8	4	4	4	7	899	4	4	652	10
Future Vol, veh/h	9	4	8	4	4	4	7	899	4	4	652	10
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	2	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	4	9	4	4	4	8	999	4	4	724	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1761	1761	732	1763	1764	1003	737	0	0	1005	0	0
Stage 1	740	740	-	1019	1019	-	-	-	-	-	-	-
Stage 2	1021	1021	-	744	745	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	66	84	421	66	84	294	869	-	-	689	-	-
Stage 1	409	423	-	286	314	-	-	-	-	-	-	-
Stage 2	285	314	-	407	421	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	62	82	420	61	82	293	867	-	-	688	-	-
Mov Cap-2 Maneuver	62	82	-	61	82	-	-	-	-	-	-	-
Stage 1	405	420	-	283	311	-	-	-	-	-	-	-
Stage 2	274	311	-	392	418	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	47.1		49.5		0.1		0.1	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	867	-	-	62	177	94	688	-	-
HCM Lane V/C Ratio	0.009	-	-	0.161	0.075	0.142	0.006	-	-
HCM Control Delay (s)	9.2	-	-	73.9	27	49.5	10.3	-	-
HCM Lane LOS	A	-	-	F	D	E	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.2	0.5	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	19	20	897	653	9
Future Vol, veh/h	9	19	20	897	653	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	21	22	997	726	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1772	731	736	0	-	0
Stage 1	731	-	-	-	-	-
Stage 2	1041	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	91	422	870	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	89	422	870	-	-	-
Mov Cap-2 Maneuver	218	-	-	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.3	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	870	-	324	-	-	
HCM Lane V/C Ratio	0.026	-	0.096	-	-	
HCM Control Delay (s)	9.2	-	17.3	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-	

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	4	5	12	4	5
Future Vol, veh/h	12	4	5	12	4	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	4	6	13	4	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	17	0	40	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	25	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1600	-	972	1065
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	998	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1600	-	968	1065
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	994	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.1		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1020	-	-	1600	-	
HCM Lane V/C Ratio	0.01	-	-	0.003	-	
HCM Control Delay (s)	8.6	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Queuing and Blocking Report Baseline

07/06/2022

Intersection: 3: N Howe Street & W 14th Street/Port Realty Driveway

Movement	EB	WB	SB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	31	31	26
Average Queue (ft)	12	12	5
95th Queue (ft)	37	37	22
Link Distance (ft)	1082	1087	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: N Howe Street & W 14th Street/Port Realty Driveway

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	30
Average Queue (ft)	12	6
95th Queue (ft)	37	26
Link Distance (ft)	1082	1087
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: N Howe Street & W 14th Street/Port Realty Driveway

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	30
Average Queue (ft)	12	6
95th Queue (ft)	37	26
Link Distance (ft)	1082	1087
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: N Howe Street & W 14th Street/Port Realty Driveway

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	30
Average Queue (ft)	12	6
95th Queue (ft)	37	26
Link Distance (ft)	1082	1087
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: N Howe Street & W 14th Street/Port Realty Driveway

Movement	EB	WB	NB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	31	31	31
Average Queue (ft)	12	6	12
95th Queue (ft)	38	26	36
Link Distance (ft)	1118	1098	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: N Howe Street & Site Access #1

Movement	NB
Directions Served	L
Maximum Queue (ft)	30
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Site Access #2 & W 14th Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	12
95th Queue (ft)	36
Link Distance (ft)	998
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: N Howe Street & W 14th Street/Port Realty Driveway

Movement	EB	NB	SB
Directions Served	LTR	L	L
Maximum Queue (ft)	31	30	29
Average Queue (ft)	18	12	11
95th Queue (ft)	43	36	33
Link Distance (ft)	1118		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: N Howe Street & Site Access #1

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	31	31
Average Queue (ft)	19	12
95th Queue (ft)	44	37
Link Distance (ft)	996	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Site Access #2 & W 14th Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	998
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: N Howe Street & W 14th Street/Port Realty Driveway

Movement	EB	EB	WB	NB
Directions Served	L	TR	LTR	L
Maximum Queue (ft)	30	30	31	30
Average Queue (ft)	6	6	6	12
95th Queue (ft)	26	26	27	35
Link Distance (ft)		1074	1091	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: N Howe Street & Site Access #1

Movement	NB
Directions Served	L
Maximum Queue (ft)	29
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Site Access #2 & W 14th Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	12
95th Queue (ft)	36
Link Distance (ft)	1066
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: N Howe Street & W 14th Street/Port Realty Driveway

Movement	EB	EB	NB	SB
Directions Served	L	TR	L	L
Maximum Queue (ft)	30	30	30	29
Average Queue (ft)	6	12	12	11
95th Queue (ft)	26	35	35	34
Link Distance (ft)	1074			
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50		100	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: N Howe Street & Site Access #1

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	31	31
Average Queue (ft)	19	24
95th Queue (ft)	44	44
Link Distance (ft)	1019	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Site Access #2 & W 14th Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	1066
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

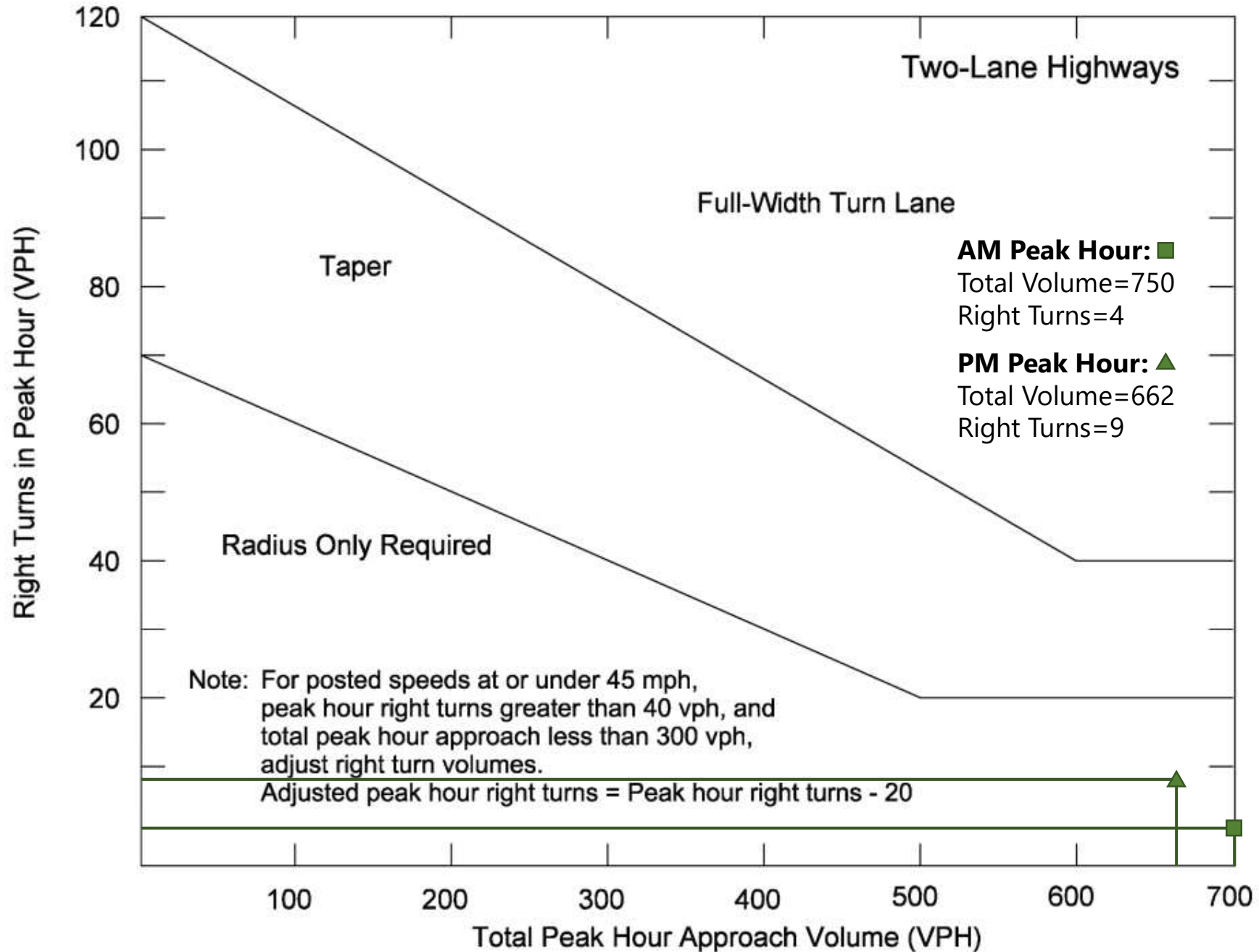
Network wide Queuing Penalty: 0

APPENDIX E

Two-Lane Highway Right Turn Lane Warrant

N Howe Street at Site Access #1

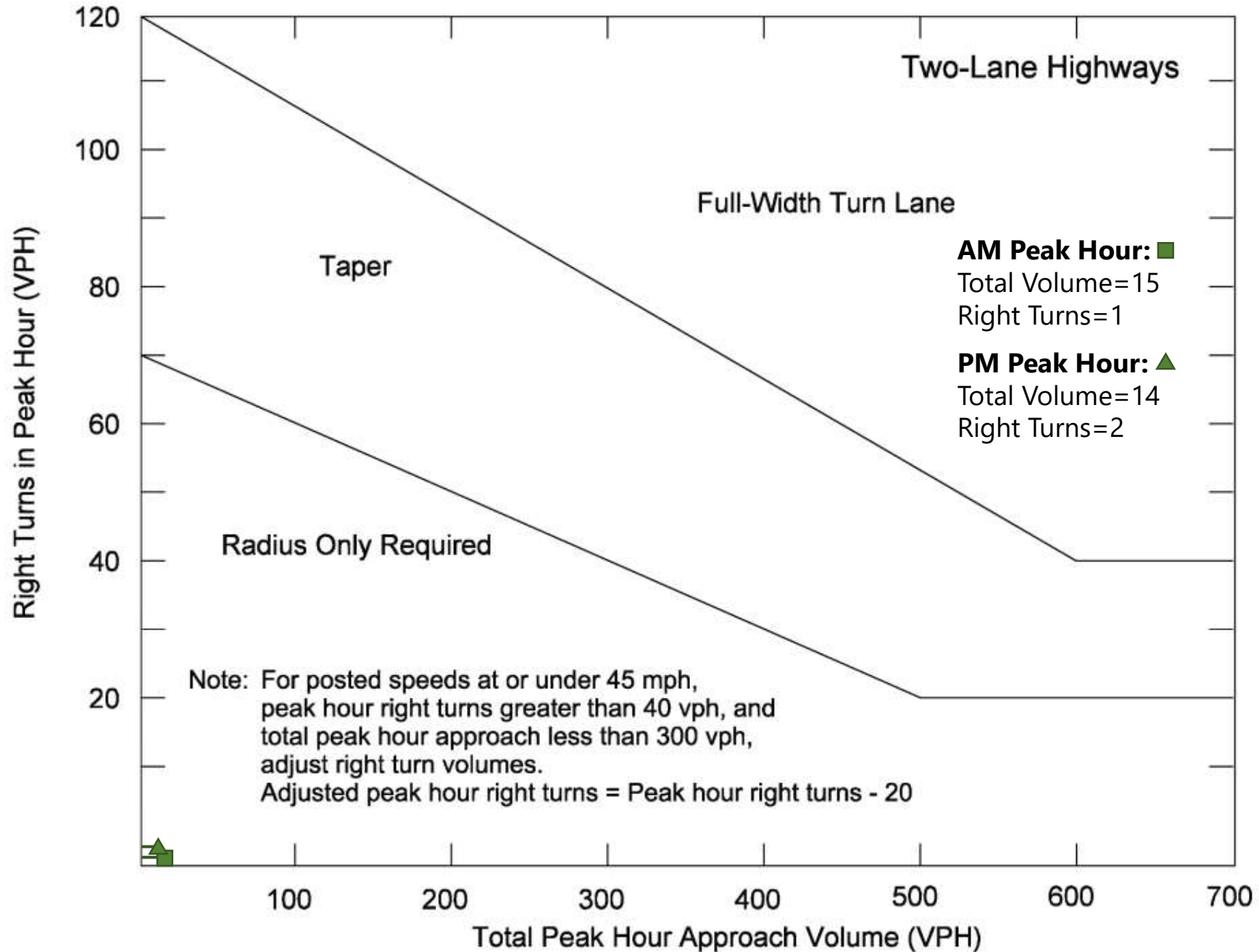
Radius Only
Required



Two-Lane Highway Right Turn Lane Warrant

W 14th Street at Site Access #2

Radius Only
Required



Intersections on Arterials in Urban Areas Left-Turn Lane Warrant

W 14th Street at Site Access #2

AM Peak Hour: ■

Major Volume=8

Left Turns=3

PM Peak Hour: ▲

Major Volume=17

Left Turns=5

**Left-Turn Lane
Not Warranted**

Table 9-24. Suggested Left-Turn Lane Guidelines Based on Results from Benefit–Cost Evaluations for Unsignalized Intersections on Arterials in Urban Areas (16)

Left-Turn Lane Peak-Hour Volume (veh/h)	Three-Leg Intersection, Major-Road Volume (veh/h/ln) that Warrants a Left-Turn Lane	Four-Leg Intersection, Major-Road Volume (veh/h/ln) that Warrants a Left-Turn Lane
5	450	50
10	300	50
15	250	50
20	200	50
25	200	50
30	150	50
35	150	50
40	150	50
45	150	< 50
50 or More	100	< 50

Note: These guidelines apply where the major road is uncontrolled and the minor-road approaches are stop- or yield-controlled. Both the left-turn peak-hour volume and the major-road volume warrants should be met as shown in Figure 9-35.

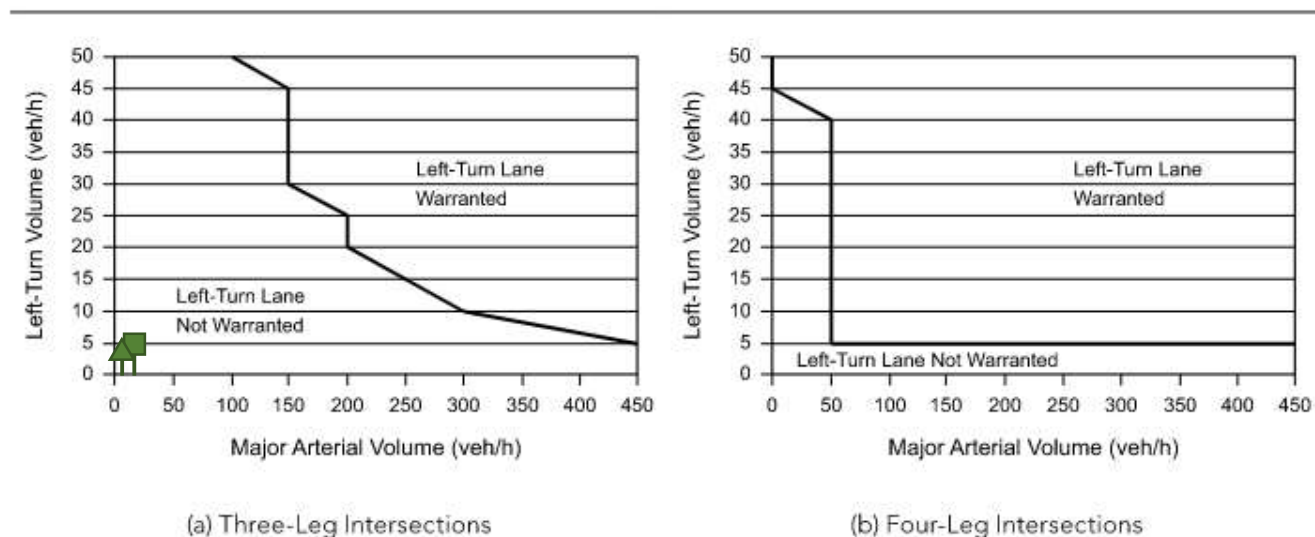


Figure 9-35. Suggested Left-Turn Lane Warrants Based on Results from Benefit–Cost Evaluations for Intersections on Arterials in Urban Areas (16)

Southport Retail dated 07/08/22 Final Review (Review notes provided in green.
Recommendations are provided in red)

- Development includes:
 - 10,640 square feet: Variety Store (LUC 814)
 - Build Year: 2023
- **NC 211 (N Howe Street) at W 14th Street** (stop-controlled full movement intersection)
 - In the AM, no drop in LOS or delay increase >25%. All approaches operate at LOS D or better
 - In the PM, EB approach drops from LOS E to LOS F, but the delay increase is <25%. All other approaches operate at LOS E or better
 - No queues exceed storage

Recommended Improvements by Developer:

- Provide an exclusive eastbound left-turn lane with 50 feet of storage

Based on review of the analysis, the following improvements are necessary by the Developer:

Construct an eastbound right turn lane on W 14th Street with 50 feet of storage, 50 feet full-width deceleration and 50 feet of taper

- **NC 211 (N Howe Street) and Site Access 1** (proposed stop-controlled T-intersection)
 - In the AM, all approaches operate at LOS C or better
 - In the PM, all approaches operate at LOS C or better
 - Based on the site trips no turn lanes are warranted

Recommended Improvements by Developer:

- No improvements are recommended

Based on review of the analysis, the following improvements are necessary by the Developer:

Construct site access with one ingress and one egress lane

Provide stop-control for eastbound approach

Provide an internal protected stem of 50 feet, measured from the right-of-way

- **W 14th Street and Site Access 2** (proposed stop-controlled T-intersection)
 - In the AM, all approaches operate at LOS A
 - In the PM, all approaches operate at LOS A
 - Based on the site trips no turn lanes are warranted

Recommended Improvements by Developer:

- No improvements are recommended

Based on review of the analysis, the following improvements are necessary by the Developer:

Construct site access with one ingress and one egress lane

Provide stop-control for northbound approach

Provide an internal protected stem of 50 feet, measured from the right-of-way

Southport CAMA Land Use Plan Rezoning Talking Points

- All uses allowed in a zoning district. Rezoning requests cannot be based on consideration of only one use or a partial list of uses allowed within a zoning district. That would be contract zoning. Contract zoning is against the law.
- The potential for spot zoning. Rezoning requests will not be approved if the requested change will result in spot zoning. Spot zoning is a form of discriminatory zoning where the sole purpose is to serve private interests of one or more landowners instead of furthering the welfare of the entire community as part of an overall zoning plan.
- The likelihood of a zoning decision resulting in a strip development. Strip developments should be discouraged. These types of developments are typically commercial, extending along both sides of a major street. Strip development may severely reduce traffic-carrying capacity of abutting streets by allowing for excessive and conflicting curb cuts.
- Zoning regulations should be made in accordance with the Southport Land Use Plan and designed to lessen congestion in the streets; to secure safety from fire, panic and other dangers; to promote health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; and to facilitate the adequate provision of transportation, water, sewage, schools, parks, and other public requirements. The regulations shall be made with reasonable consideration, among other things, as to the character of the district and its particular suitability for uses, and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout Southport's planning jurisdiction.
- Does Southport need more land in the zoning class requested?
- Is there property in the City that might be more appropriate for this zoning?
- Is the request in accordance with the CAMA Land Use Plan?
- Will the request have a serious impact on traffic circulation, parking space, sewer, water, or other utilities?
- Is there a good possibility that the request, as proposed, will result in lessening the enjoyment or use of adjacent properties?
- Will the request cause serious noise, odors, light, activity, or unusual disturbance?
- Does the request raise serious legal questions such as spot zoning, hardship, violation of precedents, or need for this type of use?
- Does the request adversely impact any CAMA AEC's or other environmentally sensitive areas including water quality?

Article 4: Subdivision Regulations

TABLE OF CONTENTS

ARTICLE 4: SUBDIVISION REGULATIONS.....	4-1
4.1 GENERAL	4-2
4.2 APPROVAL	4-2
4.3 LOT STANDARDS.....	4-2
4.4 EASEMENTS.....	4-2
4.5 HOMEOWNERS/PROPERTY OWNERS ASSOCIATION	4-3
4.6 CONSTRUCTION PROCEDURES	4-3
4.7 REQUIRED IMPROVEMENTS	4-4
A. INSTALLATION OF IMPROVEMENTS	4-4
B. ACCEPTANCE OF PUBLIC IMPROVEMENTS	4-4
C. INSPECTION OF REQUIRED IMPROVEMENTS.....	4-4
D. LIST OF REQUIRED IMPROVEMENTS.....	4-5
4.8 STREETS AND ROADWAY NETWORK	4-6
A. GENERAL	4-6
B. STREET DESIGN	4-6
C. STREET CONSTRUCTION STANDARDS	4-7
D. PRIVATE STREETS	4-8
4.9 STREET LIGHTING.....	4-8
A. APPLICABILITY.....	4-8
4.10 TRAFFIC CONTROL DEVICES, STREET NAME SIGNS, AND CLUSTER MAILBOX UNITS.....	4-8
A. TRAFFIC CONTROL DEVICES	4-8
B. STREET NAME SIGNS AND MAILBOXES (CLUSTER BOX UNITS)	4-9
4.11 PEDESTRIAN FACILITIES	4-9
4.12 WATER AND SEWER SYSTEMS	4-9
4.13 STORMWATER DRAINAGE AND SEDIMENTATION EROSION CONTROL	4-10
4.14 RECREATION AND OPEN SPACE	4-10
A. APPLICABILITY.....	4-10
B. EXCLUSIVE PURPOSE OF LAND.....	4-10
C. AMOUNT OF LAND DEDICATED.....	4-10
D. PUBLIC DEDICATION.....	4-10
E. PRIVATE OWNERSHIP	4-10
F. EFFECT ON PRIVATELY-OWNED OPEN SPACE	4-11
G. CRITERIA	4-11
4.15 PLANNED UNIT DEVELOPMENT	4-12
A. APPROVAL	4-12
B. APPLICABILITY.....	4-12
C. REQUIRED IMPROVEMENTS.....	4-12
D. MAXIMUM DENSITY REQUIREMENTS	4-12
E. MINIMUM DIMENSIONAL STANDARDS.....	4-12

4.1 GENERAL

- A. The purpose of this article is to support and guide the proper subdivision of land within the jurisdiction of the city in order to promote the public health, safety, and general welfare of the citizens of Southport. This article establishes standards for the division of land and creation of lots. These standards are necessary in order to:
1. Ensure proper legal description, identification, monumentation and recordation of real estate boundaries;
 2. Further the orderly layout and appropriate use of the land;
 3. Provide safe, convenient, and economic circulation of vehicular traffic;
 4. Provide suitable building sites which are readily accessible to emergency vehicles;
 5. Ensure the proper installation of streets and utilities;
 6. Help conserve and protect the physical and economic resources of the city; and
 7. Facilitate adequate provisions for transportation, water, sewerage, and other public requirements.

4.2 APPROVAL

Approval procedures for the division of land and creation of lots are provided in Article 2 of this ordinance.

4.3 LOT STANDARDS

- A. The following standards shall apply to all lots within a proposed subdivision, except where otherwise specified for a Planned Unit Development (PUD):
1. Conformation to Zoning. All lots shall conform to the dimensional requirements of the zoning district in which the subdivision is located.
 2. Minimum Dimensions. In no case shall any lot have a frontage of less than 75 feet. Lots located on the turning circle of a cul-de-sac may have individual minimum frontages of 40 feet per lot provided that the lot shall have a lot width of at least 75 feet measured 50 feet from the front property line.
 3. Flag lots. Flag lots shall not be allowed except to provide access to a body of water, golf course, or similar recreational facility.
 4. Lot size. No new lot shall be created for building purposes that contains an area wholly within the required setbacks of opposing lot sides.
 5. Reserve strips. There shall be no reserve strips platted in any subdivision.
 6. Lots Restricted to Public Streets and Approved Private Streets. Every lot shall front or abut on a public street, approved private street, or duly recorded permanent access easement.

4.4 EASEMENTS

- A. Easements for underground utilities shall be provided, where necessary, across lots or centered on rear or side lot lines and shall be at least 20 feet minimum width for water lines, sanitary sewer lines, and stormwater drainage and as required by the companies involved for telephone, gas, power lines, and cable TV.

- B. Where a subdivision is traversed by a stream or drainage way, an easement shall be provided conforming with the lines of the stream and of sufficient width as will be adequate for the purpose. All easements, including width, shall conform with all state and federal requirements.

4.5 HOMEOWNERS/PROPERTY OWNERS ASSOCIATION

- A. No subdivision final plat for which a homeowners' association (or property owners) will exist shall be approved until all required legal instruments have been reviewed and approved by the city attorney as to legal form and effect.
- B. If streets, stormwater, recreation and open space, or other commonly owned facility is deeded to a homeowners' association, the subdivider shall file a declaration of covenants, conditions, and restrictions that will govern such association. The provisions of such declaration of covenants, conditions, and restrictions shall include, but not be limited to, the following:
 - 1. The homeowners' association must be set up before any property is sold in the subdivision.
 - 2. Membership must be mandatory and automatic when property is purchased in the subdivision.
 - 3. The association must be responsible for liability insurance, local taxes, and maintenance of all common facilities.
 - 4. Property owners must pay their pro rata share of the cost; the assessment levied by the association can become a lien on the property.
 - 5. The association must be able to adjust the assessment to meet changed needs.
 - 6. Covenants for maintenance assessments shall run with the land.
 - 7. All lands so conveyed shall be subject to the right of the grantee or grantees to enforce maintenance and improvement of the common facilities.

4.6 CONSTRUCTION PROCEDURES

- A. No building, zoning, or other permits shall be issued for erection of a structure on any lot not of record at the time of adoption of this ordinance until the final plat has been approved and recorded.
- B. No construction or installation of improvements shall commence in a proposed subdivision until the preliminary plat has been approved, and all plans and specifications have been approved by the Public Services Department. Land disturbing activities associated with a subdivision shall not take place until applicable tree removal or stormwater permits have been approved.
- C. Following approval of the preliminary plat, the subdivider shall submit four (4) sets of detailed utility plans, including water, sewer, and stormwater, and showing connections to existing systems or plans for individual water supply systems and sewage disposal systems. Plans must show line sizes, the location of fire hydrants, blow-offs, manholes, pumps, force mains, gate valves, utility and maintenance easements, and daily estimated sewer flow figures. Type of construction materials and brand of appurtenances may require approval from the City of Southport, Brunswick County Utilities, and/or NCDOT. Plans shall include profiles based on mean sea level datum for gravity sanitary and storm

sewers. Any such plans must be approved by the Public Services Department or by the appropriate utility where applicable. Utility plan review and approval fees shall accompany any such request.

- D. Following approval of all utility plans, the subdivider is authorized to proceed with the installation or arrangement of the required improvements and the preparation of a final plat.
- E. As-Built Drawings Required. Whenever a subdivider installs or causes to be installed any water, sewer, or stormwater system as required by this ordinance, the subdivider shall, as soon as practicable after installation is complete, and before approval of the associated final plat, furnish the city with a copy of a drawing that shows the exact location of such infrastructure. Such drawings must be verified as accurate by the Public Services Department or utility service provider.

4.7 REQUIRED IMPROVEMENTS

A. INSTALLATION OF IMPROVEMENTS

- 1. The cost of all improvements shall be at the subdivider's expense. No financial guarantee or performance bond shall be allowed for installation of required improvements. All required improvements shall be installed prior to final plat approval. Approval of subdivision final plats shall be subject to the installation of the improvements outlined herein, where specified.
- 2. All required improvements shall be completed by the subdivider or his or her agents.

B. ACCEPTANCE OF PUBLIC IMPROVEMENTS

- 1. At the time of final plat approval, the applicant shall make a formal request in writing to the UDO Administrator for acceptance of any required improvements to be dedicated to the public as indicated on the final plat. An extension may be granted by the UDO Administrator where less than 80 percent of the lots within the final plat have not been conveyed to individual ownership or issued a certificate of occupancy.
- 2. All required offers to dedicate or reserve for future dedication shall be made clear of all liens and encumbrances on the property prior to consideration for acceptance by the city.
- 3. Such acceptance shall be made through the use of a legally recorded deed or transfer of ownership which has been reviewed and approved by the city attorney.

C. INSPECTION

- 1. Prior to the acceptance of any public infrastructure or approval of a final plat with private infrastructure, including streets, stormwater systems, or water/sewer systems the subdivider is required to have a professional engineer perform a required inspection and prepare an accompanying sealed report demonstrating compliance with the required standards of this ordinance and any

- applicable specifications manual under authority of the Public Services Department or other applicable agency.
2. Prior to the inspection, the subdivider shall contact the Public Services Department to ensure the director or his/her designee shall be present.
 3. The Public Services Department requires a minimum of 48 hours' notice before construction is to begin so that the Public Services Department can schedule construction inspection for the work.
 4. Any inspection report prepared without the presence of an authorized City of Southport staff member shall deem the report null and void.
 5. Streets:
 - a) All streets shall pass a compaction and proof roll test on the sub-grade and the stone base and shall be conducted by a professional engineer with the corresponding sealed inspection report.
 - b) Prior to the final surface course of asphalt, the Public Services Department shall conduct an inspection with the installer of the base course asphalt.
 - c) The subdivider shall be responsible for repairing any damages or failures identified as a result of the inspection to the satisfaction of the Public Services Department.
 6. Stormwater:
 - a) All stormwater infrastructure and facilities shall be designed and installed in accordance with the city's stormwater technical manual, and in accordance with the requirements in all state issued permits for the project.
 7. Water and sewer systems:
 - a) All water, sewer, and pump station infrastructure shall be installed in accordance with city standards, and in accordance with the requirements in all state issued permits for the project.
 - b) Materials will be checked at the site of construction to verify conformance with approved materials. Any materials not in accordance with city standards, will not be assumed for use. The subdivider will be directed to remove these materials from the area before work can proceed. The subdivider may be directed to expose any work suspected of containing inferior materials. Failure by the Public Services Department to notice faulty materials or work does not relieve the subdivider of responsibility to provide a completed final product that meets the requirements of the plans and specifications.
 - c) The materials, methods of manufacture and completed pipes, fittings, valves, and appurtenances shall be subject to inspection and rejection at all times.

D. LIST OF REQUIREMENT IMPROVEMENTS

1. Streets within the subdivision per Section 4.8 and improvements to existing streets/road network required for safe and adequate access to the subdivision or

- improvements required in accordance with a Traffic Impact Study per Section 3.13.
2. Street lights per Section 4.9
3. Traffic control devices, street name signs, and cluster mailbox units per Section 4.10.
4. Pedestrian facilities per Section 4.11.
5. Water supply and sewage disposal systems per Section 4.12.
6. Erosion and sedimentation control devices; Drainage facilities and easements, and stormwater management devices per Section 4.13 and Article 6.
7. Recreation and open space facilities per Section 4.14.
8. Any other improvement required as a condition for preliminary plat approval.

4.8 STREETS AND ROADWAY NETWORK

A. GENERAL

1. The purpose of this section is to support the creation of a highly connected transportation system within the city in order to provide choices for drivers, bicyclists, and pedestrians; promote walking and bicycling; connect neighborhoods to each other and to local destinations such as schools, parks, and shopping centers; reduce vehicle miles of travel and travel times; improve air quality; reduce emergency response times; increase effectiveness of municipal service delivery; and free up arterial capacity to better serve regional long distance travel needs.
2. Street Names. Proposed streets which are obviously in alignment with existing streets shall be given the same name. In assigning new names, duplication of existing names shall be avoided, and in no case shall the proposed name be phonetically similar to existing names irrespective of the use of a suffix such as street, road, drive, place, court, etc. Street names shall be subject to the approval of the UDO Administrator after review by the Brunswick County GIS/E-911 Department.
3. Subdivision Street Disclosure Statement. All streets shown on the final plat shall be designated in accordance with NCGS 136-102.6, and designation as public shall be conclusively presumed an offer of dedication to the public. Where streets are dedicated to the public but not accepted into a municipal or the state system, before lots are sold, a statement explaining the status of the street shall be included with the final plat.

B. STREET DESIGN

1. The design of all streets and roads, including drainage, shall be in accordance with the minimum design and construction criteria for the most recent version of the NCDOT Subdivision Roads Minimum Construction Standards and NCDOT Guidelines for Drainage Studies and Hydraulic Design, unless this ordinance establishes a stricter standard.
2. Coordination and Continuation of Streets. The proposed street layout within a subdivision shall be coordinated with the existing street system of the

surrounding area, and where possible, existing principal streets shall be extended.

3. Street Connectivity Requirements. The Board of Aldermen hereby finds and determines that an interconnected street system is necessary in order to protect the public health, safety, and welfare in order to ensure that streets will function in an interdependent manner, to provide adequate access for emergency and service vehicles, to enhance nonvehicular travel such as pedestrians and bicycles, and to provide continuous and comprehensible traffic routes. All proposed streets shall be continuous and connect to existing or platted streets without offset with the exception of cul-de-sacs as permitted and except as provided below. Whenever practicable, provisions shall be made for the continuation of planned streets into adjoining areas.
4. Cul-de-sacs. Cul-de-sacs shall not exceed 750 feet in length. Turnarounds shall be provided for any dead-end street greater than 150 feet in length. The turnaround shall have a roadway diameter of at least 90 feet and a right-of-way of at least 100 feet. Temporary turnarounds shall be paved or graveled in accordance with the NCDOT Subdivision Roads Minimum Construction Standards.
5. Fire apparatus access roads. Any subdivision of more than 30 residential units or lots, or additions to existing developments such that the total number of units exceeds 30, shall be required to provide two (2) vehicular access/fire apparatus access roads per Appendix D of the NC Building Code. Such fire apparatus access roads shall be placed at a distance apart equal to not less than one-half the length of the maximum overall diagonal dimension of the property to be served, measured in a straight-line distance between accesses.
6. Blocks. Block lengths shall not exceed 1,500 linear feet nor be less than 400 feet unless the subdivision proposed encompasses dimensions less than 400 linear feet. Block size should generally allow for two (2) tiers of lots of minimum depth.
7. Intersections. Street intersections shall be as nearly at right angles as possible and in no cases shall be less than 60 degrees.
8. Alleys. All alleys shall be constructed in accordance NCDOT Subdivision Roads Minimum Construction Standards.
9. Most streets will be constructed in accordance with standards provided for "Residential Local Subdivision Roads" as specified in the NCDOT Subdivision Roads Minimum Construction Standards manual. Alternative street designs may be approved by the UDO Administrator with plans and street specifications prepared by a licensed professional engineer in accordance with the NCDOT Complete Streets Planning and Design Guidelines and for an advisory recommendation by the Technical Review Committee and City Fire Chief. In no case shall right-of-way widths be less than 60 feet and pavement widths less than 26 feet, unless explicitly approved by the City Fire Chief.

C. STREET CONSTRUCTION STANDARDS

All streets shall be constructed in accordance with the following minimum standards:

1. The sub-grade must contain a minimum 12 inches of compacted earth.
2. The stone base must contain a minimum eight (8) inches of compacted stone.
3. The base course of asphalt must contain a minimum two (2) inches of b-25-ob.
4. A minimum one and one-half (1-1/2") inches of SF9.5A final surface course shall be applied to all streets

D. PRIVATE STREETS

1. Streets designated as private may be allowed in subdivisions when assurance is provided through a legally established homeowners' association, that the street shall be properly maintained. All such streets shall be designated a "Private Street" on the preliminary plats and final plats. Whenever a private street intersects a US or NCDOT roadway an approved NCDOT Driveway Permit, shall be submitted concurrent with the final plat.
2. All private streets must meet the minimum design and construction standards as provided in this ordinance.
3. The final plat for each such subdivision containing private streets shall contain a certificate indicating the book and page number of the homeowners' association covenants, conditions, and restrictions. The covenants, conditions, and restrictions shall specify lot owners' responsibilities for maintenance of private streets and drainage systems, and shall provide for assessments to finance all maintenance activities. Covenants shall provide that the homeowners' association will construct all stub streets prior to offering any connecting for acceptance by NCDOT or the city.
4. The recorded plat of any subdivision that includes a private street shall clearly state that such road is a private street and must be accompanied by a private street maintenance agreement that is also recorded.

4.9 STREET LIGHTING

A. APPLICABILITY

The subdivider of a major subdivision shall be required to install street lighting via underground distribution, unless an above ground line exists at the time of preliminary plat approval, along all proposed streets within the subdivision. Such street lighting shall be designed and installed in accordance with the city's street light policy.

4.10 TRAFFIC CONTROL DEVICES, STREET NAME SIGNS, AND CLUSTER MAILBOX UNITS

A. TRAFFIC CONTROL DEVICES

Traffic-control devices such as stop, yield, and speed limit signs, but not including electric or electronic traffic signals, shall be installed on public streets by the subdivider. The construction of all control devices shall be in accordance traffic control standards as designated in the Manuals on Uniform Traffic Control Devices, North Carolina Supplement to the Manual on Uniform Traffic Control Devices, and the North Carolina Highway Design Branch Roadway Standard Drawings.

B. STREET NAME SIGNS AND MAILBOXES (CLUSTER BOX UNITS)

Street name signs shall be installed by the subdivider at each street intersection as appropriate to identify all street names. Approved mailboxes will be installed before any residence can be occupied. Street name signs, poles, and brackets and mailboxes shall be subject to approval by the UDO Administrator. Where feasible and practical, street name signs and mailboxes shall be of a common design or theme throughout the subdivision or in individual phases of the subdivision. It is the policy of the U. S. Postal Service that mail delivery to all new subdivisions is centralized delivery, most often using cluster box units (CBU). It is the responsibility of the subdivider to provide the necessary mail receptacle equipment in accordance with the Postal Operations Manual.

4.11 PEDESTRIAN FACILITIES

- A. Sidewalks shall be required on at least one (1) side of the street in all new major subdivisions. For subdivisions of 20 or more lots, sidewalks shall be required on both sides of the street.
 - 1. In lieu of placing sidewalks on both sides of the street, the subdivider may install a connected multi-use path/greenway network a minimum width of eight (8) feet along one (1) side of the street and connecting to recreation and open space areas. Such path shall not count towards the required open space requirement.
- B. Sidewalks and multi-use paths shall be installed within the right-of-way and connect to adjacent facilities where applicable. Where right-of-way widths adjacent to the edge of pavement are in excess of 10 feet, sidewalks shall be separated by a minimum three (3) foot landscaped strip adjacent to the edge of pavement.
- C. In all cases, sidewalks shall extend to the property line.
- D. Sidewalks shall be at least five (5) feet wide and constructed of concrete at least five (5) inches thick. Sidewalks shall consist of a minimum of six (6) inches of concrete at driveway crossings or shall be adequately reinforced otherwise. All sidewalks and multi-use paths must meet ADA requirements, including where necessary to serve required cluster mailbox locations.
- E. Sidewalks and multi-use paths built adjacent to an NCDOT road facility shall be built to meet NCDOT standards.

4.12 WATER AND SEWER SYSTEMS

- A. All applications for major subdivisions must be accompanied by satisfactory evidence as to the proposed method and system of water supply and sanitary sewage collection and disposal. All proposed subdivisions must comply with the requirements set forth in the by the city's Public Services Department for connection and/or the Brunswick County Utility Department, where applicable.
- B. Where public or community water supply and/or sewerage systems are not required to be provided, a written statement from the county health department or licensed soil scientist shall be submitted with all subdivision applications indicating that each lot has adequate land area and soil conditions suitable to accommodate the proposed methods of water supply and sewage disposal.

4.13 STORMWATER DRAINAGE & SEDIMENTATION/EROSION CONTROL

All major subdivisions shall provide an adequate drainage system for the proper drainage of all surface water. The design of such a system shall be subject to the approval of the Public Services Department in accordance with Article 6 of this ordinance. In order to prevent soil erosion and sedimentation pollution of streams, springs, flat water bodies, or other drainage networks, the subdivider shall comply with all requirements of the North Carolina Sedimentation Pollution Control Act.

4.14 RECREATION AND OPEN SPACE

A. APPLICABILITY

Every person, firm, or corporation who subdivides land for residential purposes consisting of 20 or more cumulative lots shall be required to dedicate a portion of such land for the purpose of public recreation/open space, including the preservation of natural and cultural resources, to serve the leisure needs of the residents of the subdivision and the city of Southport (if recreation area is publicly dedicated). In all cases, the Southport Parks and Recreation Director shall review and make recommendations to the Planning Board and Board of Aldermen on the provision or dedication of recreation and/or open space areas.

B. EXCLUSIVE PURPOSE OF LAND

The land dedicated in accordance with this section shall be used only for the purpose of providing parks or recreation areas and the location of the land shall bear a reasonable relationship to the use of the area by the future inhabitants of the subdivision or residential development.

C. AMOUNT OF LAND DEDICATED

1. The amount of land required to be dedicated shall be computed on the basis of the following formula:
 - a) Area to be dedicated (in acres) = (.02) x (number of dwelling units or lots – whichever is greater)
 - b) All PUDs shall retain a minimum 20% of open space area, exclusive of 404 wetlands. Such open space shall comply with the provisions outlined within this section.

D. PUBLIC DEDICATION

1. Land dedicated for public recreation areas shall be designated on both the preliminary and final plat(s) of the subdivision and must be dedicated to an appropriate unit of local government. Determination of the appropriate unit of local government shall be made by the Board of Aldermen, upon recommendation from the City Manager.

E. PRIVATE OWNERSHIP

1. Where land for private recreation and open space purposes is provided in a proposed subdivision and such space is to be privately owned and maintained by all of the future residents of the subdivision, such areas shall comply with the following standards:

- a) The private ownership and maintenance of the recreation areas is adequately provided for by written agreement.
- b) The use of the private recreational areas is restricted to recreational purposes by recorded covenants which run with the land in favor of the future owners of property within the tract.
- c) All land set aside for privately controlled recreational areas shall be made available to all residents of the residential development against which the site obligation was originally assumed.

F. EFFECT ON PRIVATELY-OWNED OPEN SPACE

Nothing in this division shall be construed to limit the amount of privately controlled open space land which may be included under this agreement, over and above the recreation and open space obligation.

G. CRITERIA

1. All land dedicated for recreation and open space areas shall comply with the following criteria:
 - a) Unity. The dedicated land shall form a single parcel of land except where two (2) or more parcels or a connecting corridor of open space would be better serve residents in which case the corridor shall not be less than 30 feet wide for the purpose of accommodating a path or trail. Noncontiguous open space shall not account for greater than 50% of the required allocation of open space.
 - b) Location. The dedicated recreation or park land shall be located so as to reasonably serve the recreation needs of the subdivision for which the dedication was made.
 - c) Access. Public access to the dedicated land shall be provided either by adjoining street frontage of at least 50 feet or public easement at least 20 feet in width.
 - d) Usableness. The dedicated land shall be usable for recreation or passive open space. CAMA Areas of Environmental Concern (AEC), water bodies, or stormwater ponds may not be included in computing dedicated land area unless served by a constructed boardwalk and/or gazebo/lookout facility or similar. In such case, a 30-foot right-of-way must accompany the boardwalk, gazebo, or similar improved facility and no more than 25% of the required open space allocation may be utilized by such lands. The calculation of such space shall be the square footage enclosure of the 30-foot right-of-way. 404 wetlands shall not count towards any required open space even if also considered a CAMA AEC or water body.
 - i) Land provided or dedicated for active recreational purposes shall be of a character, slope, and location suitable for use as play areas, tennis courts, multi-purpose courts, picnic areas, ball fields, and other similar recreation uses. Active recreation areas shall be located on land that is relatively flat (0 to 7.5% slopes),

- free of 404 wetlands, easements for public utility transmission lines, and is otherwise capable of accommodating active recreation uses.
- ii) Land provided or dedicated for passive recreation and open space purposes shall be of a character, slope, and location suitable for use for walking, jogging, reading, and similar quiet activities, and the preservation of natural features and cultural resources such as steep slopes, rock outcrops, native plant life and wildlife cover, mature woodlands, and water resources.
- e) Plans. Municipal and county plans shall be taken into consideration

4.15 PLANNED UNIT DEVELOPMENT

A. APPROVAL

Approval procedures for Planned Unit Developments are provided in Article 2 of this ordinance. Following approval of the PUD, an applicant may submit a site plan, subdivision plat, and/or permit for development within the PUD.

B. APPLICABILITY

The minimum amount of land (unified control to be planned and developed as a whole) required for a PUD district shall be eight (8) acres of net buildable area within the City corporate limits, on one or more contiguous parcels or 25 acres of net buildable area in the ETJ, on one (1) or more parcels (this may include parcels on both sides of a street).

C. REQUIRED IMPROVEMENTS

All PUD development and subsequent subdivision shall comply with Section 4.7 Required Improvements. This shall include provisions for recreation and open space as outlined by Section 4.14.

D. MAXIMUM DENSITY REQUIREMENTS

The maximum density shall be six (6) dwelling units per acre.

E. MINIMUM DIMENSIONAL STANDARDS

1. Lot area. Not less than 60 percent of the minimum lot area which would normally be required under the single-family standards of the prevailing zoning district.
2. Lot width. 40 feet.
3. Lot frontage. 40 feet, except on the radius of a cul-de-sac where such distance may be reduced to 20 feet.
4. Public or private street setback. No principal or accessory structure shall be closer than 10 feet to a public street right-of-way or private street easement.
5. Side yard setback. Not less than 8 feet. Dwellings which do not utilize zero lot line provisions shall maintain a minimum side setback of not less than six (6) feet.
6. Rear yard setback. Not less than 15 feet.
7. Building separations. No portion of any principal structure shall be located less than 10 feet from any accessory structure as measured to the closest point.

8. Periphery boundary setback. No principal or accessory structure shall be located less than 25 feet from the peripheral boundaries of the development.
9. Maximum height. 40 feet.
10. Detached accessory structure requirements.
 - a) Shall not be located within any front yard setback;
 - b) Shall not be located within five (5) feet of any other accessory structure;
 - c) Shall not cover more than twenty (20) percent of any side or rear yard;
and
 - d) The side or rear yard requirement for detached accessory structures shall not be less than five (5) feet.
 - e) Shall not be greater than 30 feet in height.

2022 PLANNING BOARD ATTENDANCE

MEETING <u>DATE</u>	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sept	Oct	Nov	Dec	
<u>NAME</u>													Total Absences
Sue Hodgins Chair	P	P	P	P	P	P	P						
Will Hewett Vice-Chair	P	P	P	P	P	P	P						
Fred Fiss	N/A	P	P	P	P	P	P						
Christopher Jones	P	P	P	P	A	P	P						1
Scott Jones	P	P	P	P	P	P	P						
Donnie Joyner	P	P	P	P	P	P	A						1
Maureen Meehan	P	P	A	P	P	P	P						1
Gustavo E. Mibelli	P	P	P	P	P	P	P						
Dick Sloan	P	P	P	P	P	A	P						1

P = Present

A = Absent