CAROLINA BEACH

Planning and Zoning Meeting

Thursday, October 09, 2025 – 6:00 PM

Council Chambers, 1121 N. Lake Park Boulevard, Carolina Beach, NC

AGENDA

CALL TO ORDER

APPROVAL OF MINUTES

1. September 11, 2025 – P&Z Minutes

STAFF REPORT ON RECENT COUNCIL MEETINGS

STAFF REPORT ON RECENT DEVELOPMENTS

PUBLIC HEARING

2. Consider a Subdivision Modification of 4 additional lots for a total of 13 lots located at 1215 Saint Joseph Street. Applicant: Big Bird Land Development, LLC

3. Consider a Conditional Zoning for a hotel located at 223, 225, 227, 234, 235, 236, 237, 239 Carolina Beach Avenue North in the Central Business District. Applicants: Page and Amy Johnson, Carolina Beach Land – East, LLC, Carolina Beach Land – West, LLC

NON-AGENDA ITEMS

ADJOURNMENT

AGENDA ITEM COVERSHEET

PREPARED BY: Gloria Abbotts, Senior Planner

DEPARTMENT: Community Development

MEETING: Planning & Zoning October 9, 2025

SUBJECT: September 11, 2025 – P&Z Minutes

Action:

Approve the September 11, 2025 Minutes

CAROLINA BEACH

Planning and Zoning Commission

Thursday, September 11, 2025 - 6:00 PM

Council Chambers, 1121 N. Lake Park Boulevard, Carolina Beach, NC

MINUTES

CALL TO ORDER
Chairman Rouse called the meeting to order at 6:00 PM.

PRESENT
Chairman Wayne Rouse
Commissioner Melanie Boswell
Commissioner Ethan Crouch
Commissioner Todd Piper
Commissioner Bill Carew
Commissioner Lynn Conto

ABSENT
Vice Chairman Jeff Hogan

ALSO PRESENT
Community Development Director Jeremy Hardison
Senior Planner Gloria Abbotts

APPROVAL OF MINUTES

1. July 10, 2025 – P&Z Minutes

ACTION: Motion to approve the minutes as written
Motion made by Chairman Rouse
Voting Yea: Chairman Rouse, Commissioner Boswell, Commissioner Crouch, Commissioner Piper, Commissioner Carew, Commissioner Conto
Motion passed 6-0

STAFF REPORT ON RECENT DEVELOPMENTS
Mr. Hardison reported the following:

Permitting

- 107 permits (renovation, repair, grading, additions, fences, etc.)
- 15 residential new construction
- 6 certificates of occupancy

Code Enforcement

- 84 complaints received
- 34 resolved
- 49 open

Demos

- 215 Peninsula Drive (single-family home)
- 1611 Snapper Lane (mobile home)
- 1610 Swordfish Lane (mobile home)
- 502 Ocean Boulevard (single-family home)
- 105 Dow Road South (Seaside Chapel church building)
- 1513 Bonito Lane (mobile home)
- 1604 Bonito Lane (mobile home/house moving)

New Businesses

- Nest Realty, 1000 North Lake Park Boulevard, Suite 131
- Embody Movement + Wellness, 1000 North Lake Park Boulevard, Suite 175

Past and Upcoming

- Council August 12: approved 301 Canal Drive MB-1 to CBD rezoning and water-oriented uses text amendment (without any more restrictive regulations); denied motorized beach carts text amendment and accessory structures text amendment
- Council September 9: denied Pedal Pub
- Technical Review Committee (TRC) September 2: Conditional Zoning hotel 223-239 Carolina Beach Avenue North, Fishers Reserve subdivision modification 1215 Saint Joseph Street, beach cleanup baskets, Harbor Master office
- Board of Adjustment September 15: right-of-way materials appeal 101 Delaware Avenue
- Council October 14: Wilson Avenue one-way

PUBLIC COMMENT

None

PUBLIC HEARING

2. Zoning Map Amendment to Consider a Request to Rezone 205 Cape Fear Boulevard from Mixed Use (MX) to Central Business District (CBD)
   Applicant: Cori McQueen

Applicant Cori McQueen has submitted a petition to consider rezoning 205 Cape Fear Boulevard from Mixed Use (MX) to Central Business District (CBD) zoning. The property has been owned by the applicant's family since the 90s and consists of a single-family home that was built in 1930. The surrounding uses are a hotel, auto parts store, restaurants, and a warehouse.

The 1984 zoning ordinance and zoning map show the property in the B-1: Central District. In 2000, 205 Cape Fear Boulevard was rezoned to MX.

During TRC, staff discussed the non-conforming status that the existing single-family home would have if rezoned to CBD. The single-family home could remain, but if it was changed to commercial use, it could not be reverted to a single-family home.

The property is shown on the Future Land Use Map as Mixed Use Commercial and is described as a higher-density area with a mix of uses, within the district and individual buildings. Residential uses are allowed only on upper stories; ground floor is encouraged to be active. Structures of four to five stories are possible, unless adjacent to low- or medium-density residential with attractive street facades.

Staff recommends approval of the rezoning.

Ms. Abbotts presented the details. She reviewed the history, district purpose, permitted uses, and surrounding uses.

Commissioner Crouch asked what the basis for staff's recommendation is. Ms. Abbotts said it was because the property is surrounded by commercial uses and the request is in line with the Land Use Plan.

Chairman Rouse said he spoke to Mr. Hardison and Town Attorney Noel Fox about guidance on whether he should recuse himself from this matter. Chairman Rouse said he is a 1099 contractor for Coldwell Banker, the same company that employs the applicant. He said there is no intermingling of finances between them, and staff and counsel said there was no reason for Chairman Rouse to recuse himself. No one objected.

ACTION: Motion to open the public hearing
Motion made by Chairman Rouse
Voting Yea: Chairman Rouse, Commissioner Boswell, Commissioner Crouch, Commissioner Piper, Commissioner Carew, Commissioner Conto
Motion passed 6-0

Ms. McQueen of 804 South Fifth Street said she grew up at the property for which she is requesting the rezoning. She said she does not know of any neighbors who object, and she would like the ability to open a small restaurant and be treated the same as 204 Harper Avenue and 209 Charlotte Avenue.

No one else requested to speak.

ACTION: Motion to close the public hearing
Motion made by Chairman Rouse
Voting Yea: Chairman Rouse, Commissioner Boswell, Commissioner Crouch, Commissioner Piper, Commissioner Carew, Commissioner Conto
Motion passed 6-0

Commissioner Conto said this is no different than what has already been done, so she has no issues with the request.

Commissioner Crouch said he thinks westerly expansion of the CBD is going to be an ongoing push for high-density development within our community. He said the Town just created a Land Use Plan and will have to amend it to accommodate this change, and he has concerns that offering excuses for each applicant will continue to establish a precedent. Commissioner Crouch said this request is not in conformity with the current Land Use Plan Map or the one in 2000, so he will vote against this request. He said he knows the applicant and thinks she's a great member of the community, but there is a greater overall intensification threat to the community that they should get ahead of instead of letting this slide.

Commissioner Carew said he is in favor of the request because he personally believes in property rights and thinks this would be restoring them due to the property previously being B-1.

Commissioner Piper said he falls in the middle. He said this parcel is the odd man out and is bordered by an auto parts store and hotel on each side, but he does feel like the Town is going down a slippery slope. Commissioner Piper said he can get behind this request but encourages the community and staff to come up with a better plan. He said this is the third time they have heard this argument, and for one of those he deeply regrets his vote and feels like he made a bad decision for residents.

Commissioner Boswell said this must also go to Council for a final vote. She said she agrees that the applicant is a great steward of the community, but at some point they have to vote for what they think is right for the Town. Commissioner Boswell said if they are not careful, the CBD will go all the way back to the elementary school and people will have to live on Fifth Street to get away from bars. She questioned when this will stop and said she doesn't understand why staff is recommending approval of the request.

Chairman Rouse said he is voting in favor of it because he has to look at each property individually, and for this one the rezoning makes sense.

ACTION: Motion for approval that whereas in accordance with the provisions of the North Carolina General Statutes, the Commission does hereby find and determine that the adoption of the zoning map amendment for 205 Cape Fear Boulevard is consistent with the goals and objections of the adopted Land Use Plan and other long-range plans
Motion made by Commissioner Piper, seconded by Commissioner Conto
Voting Yea: Chairman Rouse, Commissioner Piper, Commissioner Carew, Commissioner Conto
Voting Nay: Commissioner Boswell, Commissioner Crouch
Motion passed 4-2

NON-AGENDA ITEMS
Chairman Rouse brought up non-conforming properties and said there are about 400 that need to be addressed comprehensively rather than through repeated Board of Adjustment cases. He said this is going to be a big job and the Commission should get started on it within the next few months. Mr. Hardison said Council discussed this during the latest retreat, and after it goes to TRC in October for ideas and possible options then Council will discuss it again at their October workshop. He said from there, it will come back to the Commission for review.

Commissioner Carew asked if there had been any clarification on where things stand with accessory dwelling units. Mr. Hardison said he has not heard about any movement on potential legislation and said they are waiting to see what happens on the State level.

Chairman Rouse asked if there had been any updates on the State's consideration of parking requirements. Mr. Hardison said he had not heard anything.

Commissioner Piper asked if the previous applicant seeking a text amendment regarding accessory use standards had come up with any other ideas after the Commission and Council had concerns that granting their request could result in loopholes. Mr. Hardison said they had not.

ADJOURNMENT

Chairman Rouse adjourned the meeting at 6:30 PM.

AGENDA ITEM COVERSHEET

PREPARED BY: Gloria Abbotts, Sr Planner

DEPARTMENT: Community Development

MEETING: Planning and Zoning October 9, 2025

SUBJECT: Consider a Subdivision Modification of 4 additional lots for a total of 13 lots located at 1215 Saint Joseph Street. Applicant: Big Bird Land Development, LLC

BACKGROUND:

The applicant, Big Bird Land Development, LLC has submitted a request to modify the preliminary plat approval of the Fisher's Reserve subdivision at 1215 Saint Joseph Street. The proposed modification adds 4 additional lots to the subdivision, for a total of 13 lots. The Planning and Zoning Commission shall review and take final action. Phase one of the subdivision received approval from Planning and Zoning in February of this year.

The total property of the subdivision is 5.05 acres. This subdivision will consist of a total of 13 lots with a minimum lot size of 7,000 square feet. The single-family home that was on the property has been demolished. Phase one is underway, the applicant has completed land clearing, installation of utilities, site work, stormwater, installed the base of the road, and begun landscaping. The proposed 13 lots comply with the minimum standards for R-2. Single-family dwellings are permitted by right in the R-2 zoning district, which has a minimum lot size of 7,000 square feet. Setbacks for structures in this district are 25 feet from the front, 10 feet from the rear, 7.5 feet from the side yards, and 12.5 feet required on corner lots. The maximum height is 45 feet, maximum lot coverage is 40%, and maximum impervious coverage is 65% per lot.

All new streets shall be dedicated for public purposes. The applicant proposes extending the approved 50' right-of-way, Hooks Rd to accommodate four additional lots. The design of the road will adhere to the minimum design and construction standards from NCDOT. Per UDO section 4.12, right-of-way widths must be at least 40' and pavement widths no less than 26', unless approved by the Fire Marshall. The applicant proposed a 24' pavement width, which received approval from the Fire Marshal at the December 2024 TRC meeting. A fire hydrant will be installed at the compliant hammerhead turnaround at the end of the road. The road must be engineered to support a fire engine, and the hammerhead turnaround needs to be completed and inspected prior to construction of any structures.

A dedicated 5-foot pedestrian easement is proposed at the rear of the property for future connectivity. All subdivisions of six or more lots shall be required to install sidewalks along the street. The sidewalks will be 4' wide, comply with ADA requirements, and will be installed on both sides of the road. The proposed 8' St. Joseph multi-use path will be in the right-of-way in front of the subdivision. The subdivider will be responsible for installing a street sign, stop sign, cluster mailbox unit, water and sewer, stormwater drainage, underground utilities, streetlights, and street trees. At least one understory tree for each 50 feet of street frontage is required and shown on the landscaping plan.

The US Postal Service mandates that mail delivery to all new subdivisions is managed through centralized delivery via a cluster box unit (CBU). The location of this CBU has received approval from TRC. In accordance with the NC Building Code, a handicap-accessible space for the CBU has been provided by the applicant.

The applicant is required to obtain a state stormwater permit. A stormwater infiltration basin will be installed at the front of the property. Utilities will be located within the right-of-way and power lines will be buried. Each lot will be serviced with a ¾" water service and meter, a 1" irrigation service and meter, and 6" PVC sewer lateral and cleanout at the public right-of-way.

The applicant has provided a water quality certification from NCDEQ for the mitigation of .66 acres of wetlands. The certification corresponds with the US Army Corps 404 Permit which is still under review. As a condition of approval, the applicant is offering to donate the 1.61 acres of undisturbed wetlands to the Town or a Land Trust.

ACTION REQUESTED:

Consider approval or denial of a 13-lot subdivision located at 1215 Saint Joseph Street.

STAFF RECOMMENDATION:

Staff recommends approval of this preliminary plat subject to the following conditions. Final plat may not be submitted for approval until all conditions, revisions, changes and submissions are made. The conditions, revisions, changes and submissions to be made are as follows:

1. Street trees shall be installed according to preliminary plat submittal. Existing vegetation can be used for this requirement.
2. Permanent monuments of stone or concrete shall be placed at one or more corners of the subdivision to be designated as control corners.
3. A drainage plan that will include all portions of the development shall be submitted. This plan shall be prepared and sealed by a registered surveyor or engineer.
4. Surfacing shall be done in accordance with plans and standard specifications approved by the Planning and Zoning Commission and the State Department of Transportation.
5. The installation of a street sign, light pole, and stop sign is required.
6. Electrical lines shall be buried.

7. Lot coverage for any lot located within the subdivision shall not exceed 40%.
8. Maximum impervious coverage for any lot located within the subdivision shall not exceed 65%.
9. The plan must clearly designate the location of open space, recreation areas, and stormwater ponds, as well as ownership details.
10. Grading, surfacing, curb and gutters, sidewalks, street lighting, street trees, sewage disposal facilities, stormwater drainage facilities, and other utilities shall be installed and certified by a surveyor and/or engineer, or Performance Guarantee provided prior to recordation of the final plat.
11. US Army Corps Permit, State Stormwater Modification Permit, Soil Erosion Control Modification Permit shall be obtained.
12. Donation of 1.61 acres of undisturbed 404 wetlands to the Town or land trust.

MOTION:

Motion to approve or deny the preliminary plat with the proposed conditions.

Permit Number: _____

Application for Subdivision Preliminary Plat
TOWN OF CAROLINA BEACH, N.C.

Each application must be printed or typewritten and have all information answered. Incomplete or illegible applications will not be accepted. No application will be accepted unless accompanied by a drawing of the proposed lot development drawn to scale with the requirements indicated in UDO Article 4.

The Technical Review Committee and/or Planning and Zoning Commission reserves the right to require additional information if needed to assure that the use in its proposed location will be harmonious with the area in which it is proposed to be located and in accordance with the Unified Development Ordinance of the Town of Carolina Beach. Applications must be reviewed by the Community Development Department for completeness prior to acceptance. A fee payable to the Town of Carolina Beach must accompany this application. Fees are nonrefundable after review by the Technical Review Committee. The fee shall be in accordance with the Town's annually adopted Rates and Fee Schedule.

In accordance with the requirements of the **Town of Carolina Beach Subdivision Ordinance,** there is submitted herewith for approval a preliminary plan of the following subdivision:

Name of Subdivision: Fishers Reserve # of Lots Proposed: 4 additional

Tax Parcel(s) #: R08814-003-028-000

Acreage and/or square footage: 0.66 ACRES Existing Zone: _____

Name of Applicant: Big Bird Land Development, LLC 910-876-1680
(Phone Number)

Signature of Applicant: _____

Owner Name and Address: Byron Melvin 425 Clark Blvd
(Print Name) (Address)

Elizabethtown, NC 28337 byron.melvin@outlook.com
(City, State, Zip) (Email Address)

This preliminary plan contains all the information required by Article 4 of the UDO. I certify that this application package contains all requirements of the Town of Carolina Beach Code of Ordinances. The registered Engineer, Landscape Architect or Surveyor under whose supervision this subdivision is being developed is:

Richard M. Collier, PE
(Engineer, Architect, or Surveyor) (Contact Name)

910-343-1048 rcollier@mckimcreed.com
(Telephone Number) (E-Mail Address)

Signature of Owner: _____ Date: 8/18/25

Final Plat Procedure

See Article 2, 2.15 F

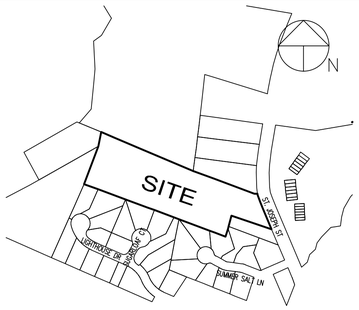
FISHER'S RESERVE SUBDIVISION

TRC APPROVAL PLANS - PHASE 2 LOTS 10-13

1215 ST. JOSEPH STREET, CAROLINA BEACH, NC

2025-08-18

811 Know what's below. Call before you dig.



LOCATION MAP
NOT TO SCALE

4 | VICINITY MAP | SCALE: NOT TO SCALE

NAME:

FISHER'S RESERVE

CONTRACTOR: W3 BUILT, LLC
WESCOTT BUTLER, OWNER
707-A ST JOSEPH AVENUE
CAROLINA BEACH, NC
PHONE: (910) 599-5789
EMAIL: BUTLER@W3BUILT.COM

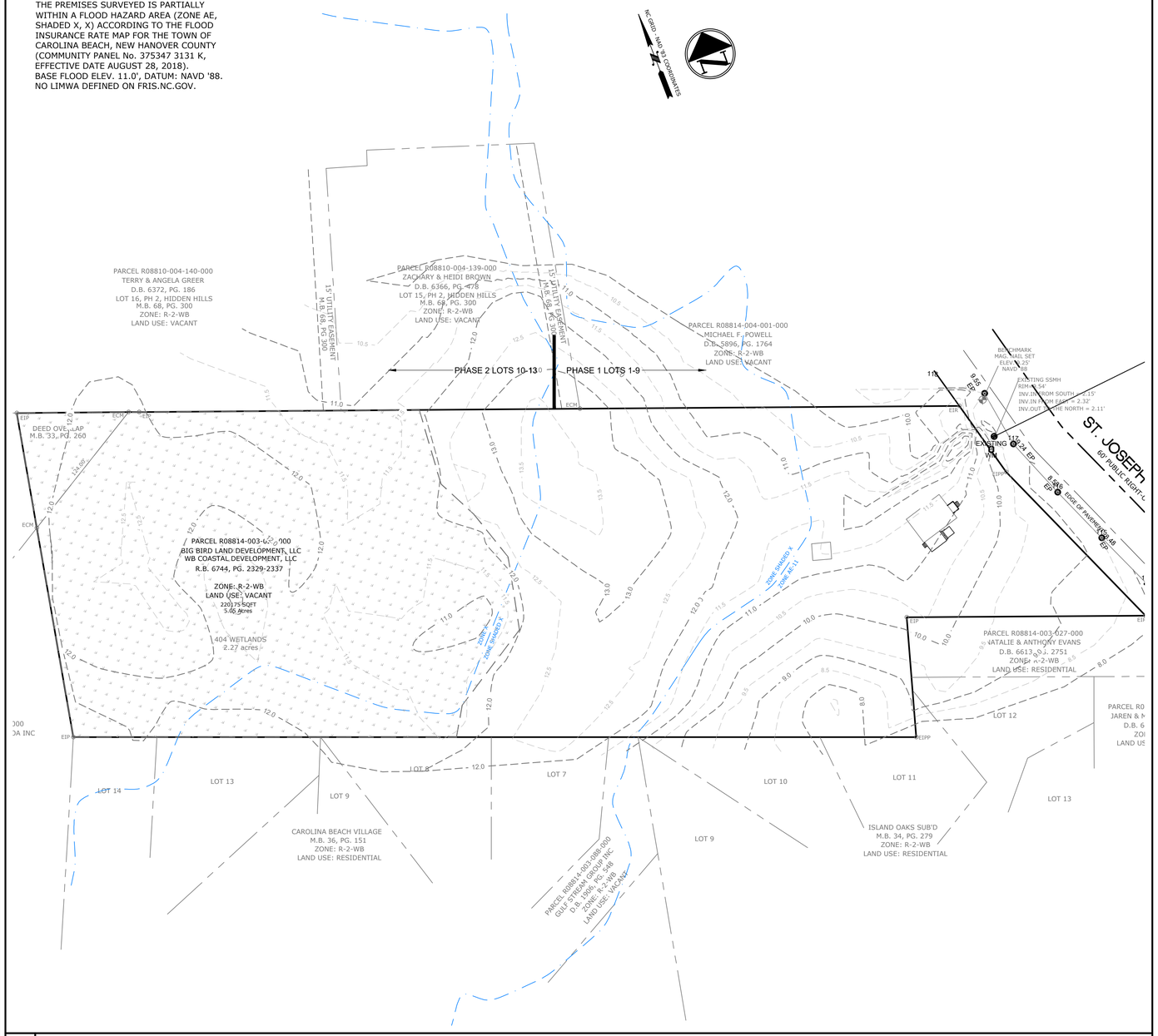
PROJECT CIVIL ENGINEER: RICHARD COLLIER, PE
RCOLLIER@MCKIMCREED.COM

PROJECT SURVEYOR:

PORT CITY LAND SURVEYING, PLLC
FIRM LICENSE No. P-1493
1144 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
(910) 791-0080

3 | PROJECT INFORMATION

THE PREMISES SURVEYED IS PARTIALLY WITHIN A FLOOD HAZARD AREA (ZONE AE, SHADED X, X) ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR THE TOWN OF CAROLINA BEACH, NEW HANOVER COUNTY (COMMUNITY PANEL No. 375347 3131 K, EFFECTIVE DATE AUGUST 28, 2018). BASE FLOOD ELEV. 11.0', DATUM: NAVD '88. NO LIMWA DEFINED ON FRIS.NC.GOV.



SCALE: 1"=50'

2 | LOCATION MAP

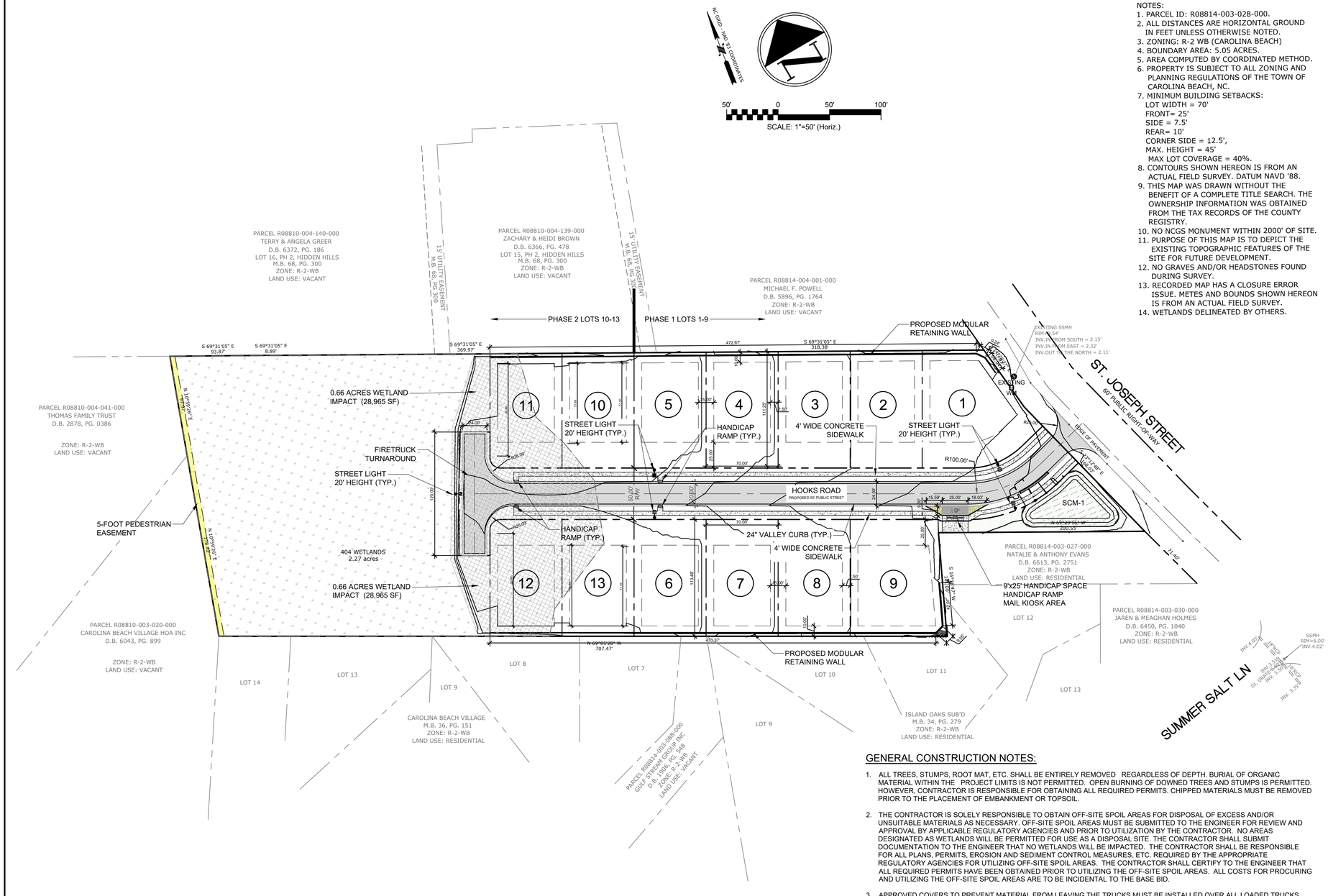
Sheet List Table	
Sheet Number	Sheet Title
--	COVER
C1.0	OVERALL SITE PLAN
C1.1	PRELIMINARY PLAT
C1.2	GRADING AND DRAINAGE PLAN
C1.3	EROSION CONTROL
C2.0	ENLARGED LANDSCAPE PLAN
C2.1	LANDSCAPE DETAILS
C3.0	ENLARGED UTILITY PLAN
C3.1	EROSION CONTROL DETAILS
C3.2	EROSION CONTROL DETAILS
C4.0	SITE DETAILS
C4.1	UTILITY DETAILS
C4.2	STORMWATER DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 22574 ENGINEER RICHARD M. COLLIER
2025-08-18

1 | SHEET INDEX

FISHER'S RESERVE SUBDIVISION

2025-08-18 - TRC APPROVAL PLANS - PHASE 2 LOTS 10-13



NOTES:
1. PARCEL ID: R08814-003-028-000.
2. ALL DISTANCES ARE HORIZONTAL GROUND IN FEET UNLESS OTHERWISE NOTED.
3. ZONING: R-2 WB (CAROLINA BEACH)
4. BOUNDARY AREA: 5.05 ACRES.
5. AREA COMPUTED BY COORDINATED METHOD.
6. PROPERTY IS SUBJECT TO ALL ZONING AND PLANNING REGULATIONS OF THE TOWN OF CAROLINA BEACH, NC.
7. MINIMUM BUILDING SETBACKS:
   LOT WIDTH = 70'
   FRONT= 25'
   SIDE = 7.5'
   REAR= 10'
   CORNER SIDE = 12.5',
   MAX. HEIGHT = 45'
   MAX LOT COVERAGE = 40%.
8. CONTOURS SHOWN HEREON IS FROM AN ACTUAL FIELD SURVEY. DATUM NAVD '88.
9. THIS MAP WAS DRAWN WITHOUT THE BENEFIT OF A COMPLETE TITLE SEARCH. THE OWNERSHIP INFORMATION WAS OBTAINED FROM THE TAX RECORDS OF THE COUNTY REGISTRY.
10. NO NCGS MONUMENT WITHIN 2000' OF SITE.
11. PURPOSE OF THIS MAP IS TO DEPICT THE EXISTING TOPOGRAPHIC FEATURES OF THE SITE FOR FUTURE DEVELOPMENT.
12. NO GRAVES AND/OR HEADSTONES FOUND DURING SURVEY.
13. RECORDED MAP HAS A CLOSURE ERROR ISSUE. METES AND BOUNDS SHOWN HEREON IS FROM AN ACTUAL FIELD SURVEY.
14. WETLANDS DELINEATED BY OTHERS.

GENERAL CONSTRUCTION NOTES:

1. ALL TREES, STUMPS, ROOT MAT, ETC. SHALL BE ENTIRELY REMOVED REGARDLESS OF DEPTH. BURIAL OF ORGANIC MATERIAL WITHIN THE PROJECT LIMITS IS NOT PERMITTED. OPEN BURNING OF DOWNED TREES AND STUMPS IS PERMITTED. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS. CHIPPED MATERIALS MUST BE REMOVED PRIOR TO THE PLACEMENT OF EMBANKMENT OR TOPSOIL.
2. THE CONTRACTOR IS SOLELY RESPONSIBLE TO OBTAIN OFF-SITE SPOIL AREAS FOR DISPOSAL OF EXCESS AND/OR UNSUITABLE MATERIALS AS NECESSARY. OFF-SITE SPOIL AREAS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BY APPLICABLE REGULATORY AGENCIES AND PRIOR TO UTILIZATION BY THE CONTRACTOR. NO AREAS DESIGNATED AS WETLANDS WILL BE PERMITTED FOR USE AS A DISPOSAL SITE. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER THAT NO WETLANDS WILL BE IMPACTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANS, PERMITS, EROSION AND SEDIMENT CONTROL MEASURES, ETC. REQUIRED BY THE APPROPRIATE REGULATORY AGENCIES FOR UTILIZING OFF-SITE SPOIL AREAS. THE CONTRACTOR SHALL CERTIFY TO THE ENGINEER THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO UTILIZING THE OFF-SITE SPOIL AREAS. ALL COSTS FOR PROCURING AND UTILIZING THE OFF-SITE SPOIL AREAS ARE TO BE INCIDENTAL TO THE BASE BID.
3. APPROVED COVERS TO PREVENT MATERIAL FROM LEAVING THE TRUCKS MUST BE INSTALLED OVER ALL LOADED TRUCKS HAULING BORROW EXCAVATED MATERIAL AND/OR FINE AGGREGATES TO OR FROM THE PROJECT SITES OVER STATE MAINTAINED ROADS. THE TRUCKS SHALL BE FULLY COVERED TO PREVENT MATERIAL FROM LEAVING THE TRUCK DURING HAULING. ANY MATERIALS DELIVERED, TRANSPORTED, OR REMOVED IN UNCOVERED TRUCKS WILL BE INCORPORATED INTO THE PROJECT OR REMOVED FROM THE SITE WITH NO ADDITIONAL PAYMENT TO THE CONTRACTOR FOR FURNISHING, REMOVING, OR PLACING THE MATERIALS INVOLVED.
4. DRIVEWAYS ARE NOT TO BE LOCATED OVER WATER METERS OR SEWER CLEANOUTS, METERS WILL NOT BE SET IF WATER METER BOXES, SEWER CLEAN-OUTS, VALVE BOXES OR OTHER APPURTENANCES ARE DAMAGED OR IMPROPERLY POSITIONED.

2 OVERALL SITE PLAN — SCALE: 1"=50'

GENERAL INFORMATION

DATA CLASS	VALUE
PARCEL ADDRESS	1215 ST JOSEPH STREET CAROLINA BEACH
TAX PARCEL IDENTIFICATION NUMBER	R08814-003-028-000
OWNER	BIG BIRD LAND DEVELOPMENT, LLC
DEVELOPER	BIG BIRD LAND DEVELOPMENT, LLC
CURRENT ZONING	R-2 RESIDENTIAL
PROPOSED USE	R-2 RESIDENTIAL
RESIDENTIAL USE (SF)	5.05 AC (220,175 SF)
TOTAL PROJECT AREA	5.05 AC (220,175 SF)
TOTAL LOTS / PROJECT DENSITY	13 LOTS / 3.76 DU/AC

BUILDING INFORMATION

DATA CLASS	REQUIRED	PROPOSED
LOT SIZE (R-2 ZONING)	7,000 SF	7,000 SF MIN
DENSITY	6.2 DUA MAX	3.76 DUA
BUILDING SETBACKS		
LOT WIDTH	70'	75' AND 80'
FRONT	25'	25'
REAR	10'	10'
SIDE CORNER	7.5	7.5'
SIDE INTERIOR	7.5	7.5'
BUILDING HEIGHT	45' MAX	45' MAX

SITE INFORMATION

DATA CLASS	EXISTING	PROPOSED
TOTAL IMPERVIOUS SURFACE AREA	0 SF	55,931 SF
BUA TOTAL (PER LOT = 5,000 OR 4,500 SF)	0 SF	32,500 SF
ROADWAY PAVEMENT	0 SF	20,046 SF
SIDEWALKS / PLAZA	0 SF	3,385 SF
IMPERVIOUS AREA COVERAGE	0%	45.0 %

SURFACE MATERIAL LEGEND

- ROADWAY ASPHALT
- 2'-0" CONCRETE VALLEY CURB
- SIDEWALK / DRIVEWAY APRON
- 24" CONCRETE FLUME
- OPEN SPACE
- HEAVY DUTY CONCRETE

GENERAL NOTES:

1. UTILITIES WILL BE LOCATED WITHIN THE PUBLIC R/W AND WILL BE PUBLIC FACILITIES DEDICATED TO THE TOWN OF CAROLINA BEACH.
2. STORMWATER MANAGEMENT WILL BE TREATED ON-SITE AND WILL MEET THE STATE AND TOWN RULES AND REGULATIONS.
3. LOTS 1, 2, 7, AND 9 WILL HAVE THEIR FINISHED FLOOR ELEVATION 2-FEET ABOVE THE BASE FLOOD ELEVATION OF 11-FEET. THE DEVELOPER RETAINS THE RIGHT TO RAISE ANY, ALL, OR NONE OF THE REMAINING LOTS ABOVE BFE.
4. SIDEWALK IS PROPOSED ON BOTH SIDES OF THE STREET (4' WIDE SIDEWALKS).

OWNERS OF RECORD:
DONALD L. GRADY
17418 SPRING FOREST DRIVE
SPRING, TX 77379

LINDA GRADY SMITH
336 JOHN LEWIS GRADY ROAD
MOUNT OLIVE, NC 28365

BEVERLY GRADY BROWN
P.O.BOX 161
MARS HILL,NC 28754

SURVEY REFERENCES:
D.B. 6269, PG. 2792,
M.B. 33, PG. 260,
NEW HANOVER COUNTY REGISTRY.

TOPOGRAPHIC SURVEY
FOR
HEIRS OF DONALD L GRADY
1215 ST. JOSEPH STREET
TOWN OF CAROLINA BEACH, FEDERAL POINT TOWNSHIP
NEW HANOVER COUNTY, NORTH CAROLINA 28428
SCALE 1"= 40' DATE: FEBRUARY 14, 2024

0 40 80 120

PORT CITY LAND SURVEYING, PLLC
FIRM LICENSE No. P-1493
1144 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
(910) 791-0080

1 SITE DATA TABLE — SCALE: NTS

REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 22574 ENGINEER RICHARD M. COLLIER
2025-08-18

PORT CITY LAND SURVEYING, PLLC
FIRM LICENSE No. P-1493
1144 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
(910) 791-0080

Civil Engineer:
Richard M. Collier, PE
3708 Needle Sound Way
Wilmington, NC
NC-022574

OWNER / DEVELOPER
BIG BIRD LAND DEVELOPMENT, LLC
707A ST JOSEPH ST
CAROLINA BEACH NC

FISHER'S RESERVE
1215 ST JOSEPH STREET, CAROLINA BEACH NC

OVERALL SITE PLAN

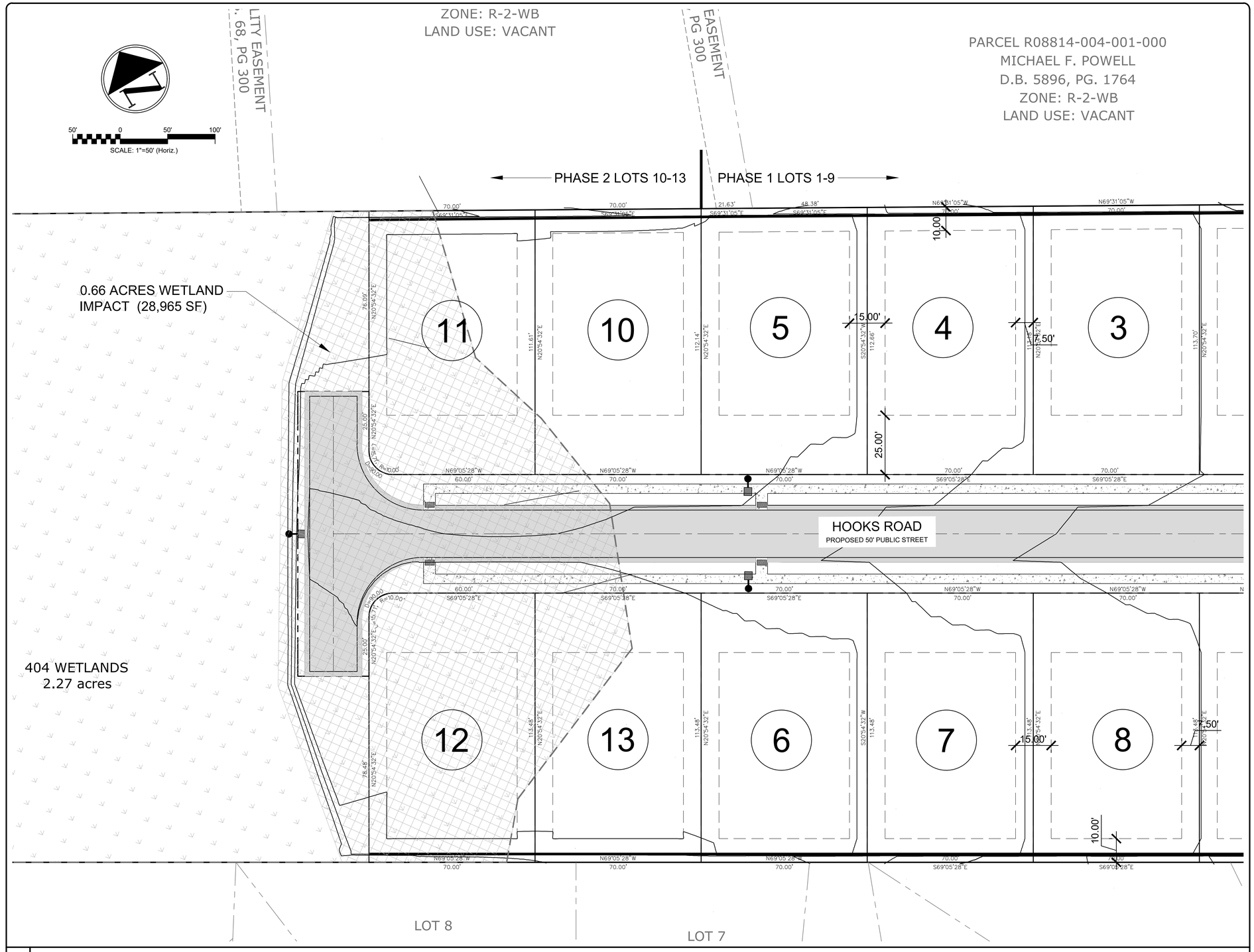
DATE: 2025-08-18
DRAWN: RMC
DESIGNED:
CHECKED:
PROJ. MGR.:

SCALE
HORIZONTAL: 1"=50'
VERTICAL:

C1.0
DRAWING NUMBER

REVISION

STATUS:
RELEASED FOR PERMITTING



2 | PRELIMINARY PLAT - PHASE 1 SCALE: 1"=20'

GENERAL NOTES:

1. UTILITIES WILL BE LOCATED WITHIN THE PUBLIC R/W AND WILL BE PUBLIC FACILITIES DEDICATED TO THE TOWN OF CAROLINA BEACH.
2. STORMWATER MANAGEMENT WILL BE TREATED ON-SITE AND WILL MEET THE STATE AND TOWN RULES AND REGULATIONS.
3. LOTS 1, 2, 7, AND 9 WILL HAVE THEIR FINISHED FLOOR ELEVATION 2-FEET ABOVE THE BASE FLOOD ELEVATION OF 11-FEET. THE DEVELOPER RETAINS THE RIGHT TO RAISE ANY, ALL, OR NONE OF THE REMAINING LOTS ABOVE BFE.
4. SIDEWALK IS PROPOSED ON BOTH SIDES OF THE STREET (4' WIDE SIDEWALKS).

OWNERS OF RECORD:
DONALD L. GRADY
17418 SPRING FOREST DRIVE
SPRING, TX 77379

LINDA GRADY SMITH
336 JOHN LEWIS GRADY ROAD
MOUNT OLIVE, NC 28365

BEVERLY GRADY BROWN
P.O.BOX 161
MARS HILL,NC 28754

SURVEY REFERENCES:
D.B. 6269, PG. 2792,
M.B. 33, PG. 260,
NEW HANOVER COUNTY
REGISTRY.

TOPOGRAPHIC SURVEY
FOR
HEIRS OF DONALD L. GRADY
1215 ST. JOSEPH STREET
TOWN OF CAROLINA BEACH, FEDERAL POINT TOWNSHIP
NEW HANOVER COUNTY, NORTH CAROLINA 28428
SCALE 1"= 40' DATE: FEBRUARY 14, 2024

0 40 80 120

PORT CITY LAND SURVEYING, PLLC
FIRM LICENSE No. P-1493
1144 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
(910) 791-0080

1 | SITE DATA TABLE SCALE: NTS

REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 22574 ENGINEER RICHARD M. COLLIER
2025-08-18

PORT CITY LAND SURVEYING, PLLC
FIRM LICENSE No. P-1493
1144 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
(910) 791-0080

Civil Engineer:
Richard M. Collier, PE
3708 Needle Sound Way
Wilmington, NC
NC-022574

OWNER / DEVELOPER
BIG BIRD LAND DEVELOPMENT, LLC
707A ST JOSEPH ST
CAROLINA BEACH NC

FISHER'S RESERVE
1215 ST JOSEPH STREET, CAROLINA BEACH NC

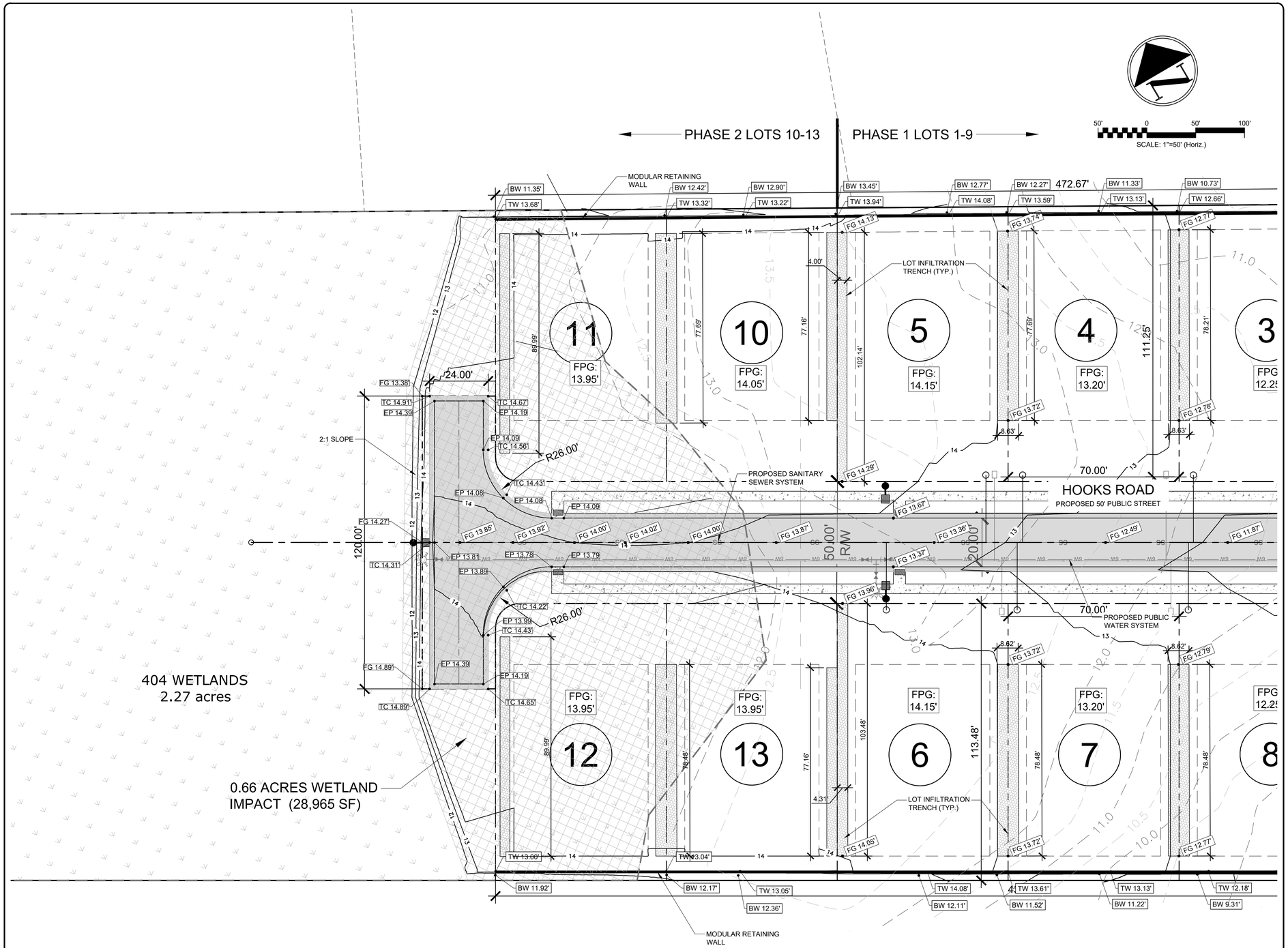
PRELIMINARY PLAT - PHASE 2

DATE:	2025-08-18
DRAWN	RMC
DESIGNED	
CHECKED	
PROJ. MGR.	

SCALE
HORIZONTAL: 1"=20'
VERTICAL: ###

C1.1
DRAWING NUMBER

STATUS:
RELEASED FOR PERMITTING



2 | ENLARGED GRADING AND DRAINAGE PLAN — SCALE: 1"=20'

SURFACE MATERIAL LEGEND

- ROADWAY ASPHALT
- 2'-0" CONCRETE VALLEY CURB
- SIDEWALK / DRIVEWAY APRON
- 24" CONCRETE FLUME
- OPEN SPACE
- HEAVY DUTY CONCRETE

1 | SITE DATA TABLE — SCALE: NTS

REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 22574 ENGINEER RICHARD M. COLLIER
2025-08-18

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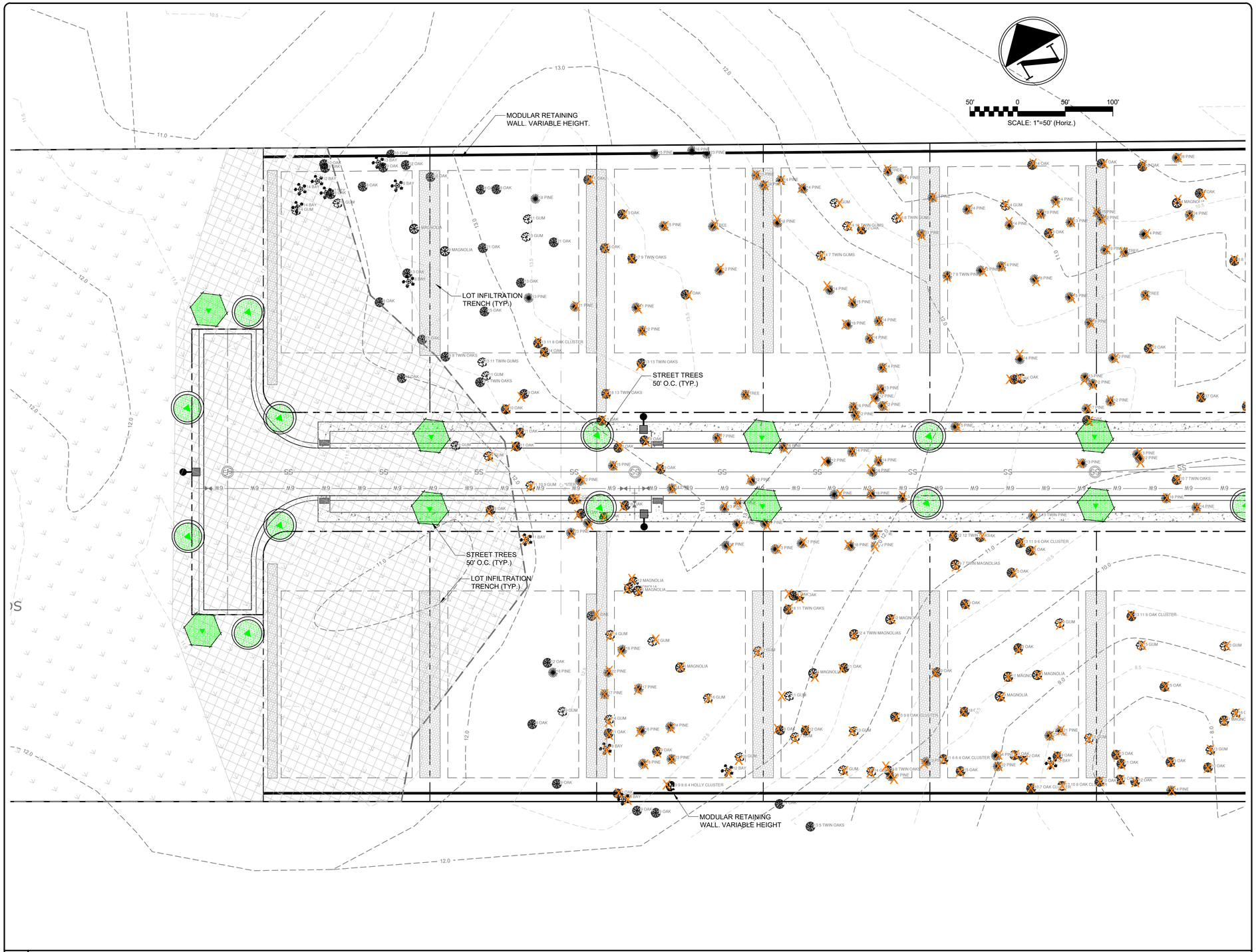
GRADING AND DRAINAGE PLAN

DATE:	2025-08-18
DRAWN	RMC
DESIGNED	
CHECKED	
PROJ. MGR.	

SCALE
HORIZONTAL: 1"=20'
VERTICAL: ###

C1.2
DRAWING NUMBER

STATUS: RELEASED FOR PERMITTING



2 ENLARGED LANDSCAPE PLAN SCALE: 1"=20'

PLANT_SCHEDULE

SHADE TREES	BOTANICAL NAME
	(13) QUERCUS HEMISPHAERICA LAUREL OAK
	(13) MAGNOLIA VIRGINIANA SWEETBAY MAGNOLIA

A. ALL VEGETATION THAT IS USED TO MEET LANDSCAPING REQUIREMENTS SHALL BE MAINTAINED BY THE OWNER OF THE PROPERTY ON A CONTINUING BASIS. ANY PLANTED MATERIAL WHICH BECOMES DAMAGED OR DISEASED OR DIES SHALL BE REPLACED WITHIN 60 DAYS OF THE OCCURRENCE OF SUCH CONDITION.

B. VERIFICATION OF TOTAL LANDSCAPE MATERIAL QUANTITIES AS SHOWN ON THE LANDSCAPE PLANS AND IN THE PLANT LIST SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO FINAL BIDDING OR INSTALLATION.

C. ALL PLANTING TYPES SHALL COMPLY WITH LOCAL GOVERNING CODES AND REGULATIONS, CONFORM TO REQUIREMENTS OF PLANT LIST AND TO THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARD OF NURSERY STOCK" AND "HORTICULTURAL STANDARDS" AS TO SPECIES, AGE, SIZE, AND PLANTING RECOMMENDATIONS.

D. LANDSCAPE MATERIAL PLACED IN PREPARED HOLES SHALL BE PROPERLY BACKFILLED PRIOR TO THE END OF THE WORKING DAY.

E. ALL PREPARED GROUND COVER AND ANNUAL BED INSTALLATIONS SHALL BE PROPERLY SOAKED AND MULCHED PRIOR TO THE END OF THE DAY.

F. LANDSCAPE ARCHITECT SHALL APPROVE ANY ON-SITE PLANT STORAGE AREA FOR ACCESSIBILITY, SHADE CONDITIONS, HEALING-IN MULCH MATERIAL AND TEMPORARY WATERING METHODS.

G. ALL ROPE AND WRAPPING TWINE SHALL BE CUT AND REMOVED FROM AROUND THE UPPER PARTS OF THE ROOT BALL. METAL BASKET WIRES AND BURLAP SHALL BE PULLED BACK AND TUCKED UNDER THE EDGES OF THE SAUCER RINGS ON ALL TREES AND LARGE SHRUBS. ALL SYNTHETIC BURLAP SHALL BE REMOVED FROM PLANT BALLS PRIOR TO BACK FILLING.

H. ALL PLANT MATERIAL SHALL BE PLANTED AT HEIGHTS AND WIDTHS AS ILLUSTRATED IN PLANTING DETAILS.

I. TREE GUYING SHALL BE PERFORMED WITHIN A WEEK OF PLANTING. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TREE GUYING MATERIALS AFTER THE FIRST FULL GROWING SEASON OR ONE YEAR, WHICH EVER COMES FIRST.

J. CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO PLANTING.

K. ANY EXPOSED OR UNCOVERED LINES SHALL BE SHOWN TO GENERAL CONTRACTOR PRIOR TO BACKFILLING.

L. ALL MATERIALS, PLANTING AND LANDSCAPE WORK SHALL CONFORM TO THE CURRENT MUNICIPAL AUTHORITIES STANDARD SPECIFICATIONS AND DETAILS.

M. FIRST YEAR PRUNING OF TREE CROWN SHALL BE LIMITED TO REMOVAL OF DEAD & DAMAGED WOOD.

N. ALL TREES TO HAVE A MINIMUM 2.5" CALIPER AT THE TIME OF PLANTING, UNLESS OTHERWISE INDICATED IN THE PLANTING SPECIFICATION. CALIPER TO BE MEASURED 48" ABOVE THE ROOT BALL.

O. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.

P. SUBSTITUTIONS OF PLANT MATERIALS SPECIFIED CAN ONLY OCCUR WITH PRIOR APPROVAL BY LANDSCAPE ARCHITECT.

Q. AREAS DAMAGED BY ACTIVITIES OF CONTRACTOR SHALL BE RE-ESTABLISHED TO PRE-DISTURBANCE CONDITION AT NO ADDITIONAL COST TO THE OWNER.

R. USE HERBICIDES, PESTICIDES, AND FERTILIZER IN A MANNER CONSISTENT WITH THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT AND IN ACCORDANCE WITH LABEL RESTRICTIONS.

S. LANDSCAPE ARCHITECT OR OWNER SHALL APPROVE PLACEMENT OF TREES PRIOR TO PLANTING.

1 LANDSCAPE DATA SCALE: NTS

REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 22574 ENGINEER RICHARD M COLLIER
2025-08-18

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1215 ST JOSEPH STREET, CAROLINA BEACH NC

ENLARGED LANDSCAPE PLAN

DATE:	2025-08-18
DRAWN	RMC
DESIGNED	
CHECKED	
PROJ. MGR.	

SCALE
HORIZONTAL: 1"=20'
VERTICAL: N/A

C2.0
DRAWING NUMBER

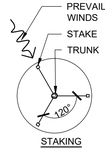
REVISION

STATUS:
RELEASED FOR PERMITTING

1. ALL EXISTING VEGETATION THAT IS USED TO MEET LANDSCAPING REQUIREMENTS, ALL REQUIRED PLANTED LIVING MATERIAL, AND ALL REQUIRED BERMS SHALL BE MAINTAINED BY THE OWNER OF THE PROPERTY ON A CONTINUING BASIS. ANY PLANTED MATERIAL WHICH BECOMES DAMAGED OR DISEASED OR DIES SHALL BE REPLACED BY THE OWNER WITHIN 60 DAYS OF THE OCCURRENCE OF SUCH CONDITION. IF, IN THE OPINION OF THE ZONING ADMINISTRATOR THERE ARE SEASONAL CONDITIONS WHICH WILL NOT PERMIT THE TIMELY REPLACEMENT OF THE VEGETATION (E.G. TOO HOT OR TOO COOL FOR SUCCESSFUL REPLANTING) THIS REQUIREMENT MAY BE ADMINISTRATIVELY WAIVED UNTIL A TIME CERTAIN WHEN THE REPLANTING WOULD BE SUCCESSFUL.
2. VERIFICATION OF TOTAL LANDSCAPE MATERIAL QUANTITIES AS SHOWN ON THE LANDSCAPE PLANS AND IN THE PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO FINAL BIDDING OR INSTALLATION.
3. ALL PLANTING TYPES SHALL COMPLY WITH LOCAL GOVERNING CODES AND REGULATIONS, CONFORM TO REQUIREMENTS OF PLANT LIST AND TO THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARD OF NURSERY STOCK" AND "HORTICULTURAL STANDARDS" AS TO SPECIES, AGE, SIZE, AND PLANTING RECOMMENDATIONS.
4. LANDSCAPE MATERIAL PLACED IN PREPARED HOLES SHALL BE PROPERLY BACKFILLED PRIOR TO THE END OF THE WORKING DAY.
5. ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
6. LANDSCAPE ARCHITECT SHALL APPROVE ANY ON-SITE PLANT STORAGE AREA FOR ACCESSIBILITY, SHADE CONDITIONS, HEALING-IN MULCH MATERIAL AND TEMPORARY WATERING METHODS.
7. ALL ROPE AND WRAPPING TWINE SHALL BE CUT AND REMOVED FROM AROUND THE UPPER PARTS OF THE ROOT BALL. METAL BASKET WIRES AND BURLAP SHALL BE PULLED BACK AND TUCKED UNDER THE EDGES OF THE SAUCER RINGS ON ALL TREES AND LARGE SHRUBS. ALL SYNTHETIC BURLAP SHALL BE REMOVED FROM PLANT BALLS PRIOR TO BACK FILLING.
8. ALL PLANT BEDS OR RAISED SAUCER RINGS SHALL BE EDGED WITH SMOOTH, CONTINUOUS CURVES.
9. ALL PLANT MATERIAL SHALL BE PLANTED AT HEIGHTS AND WIDTHS AS ILLUSTRATED IN PLANTING DETAILS.
10. TREE GUYING SHALL BE PERFORMED WITHIN A WEEK OF PLANTING. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TREE GUYING STRAPPING AND STAKES AFTER THE FIRST FULL GROWING SEASON OR ONE YEAR, WHICH EVER COMES FIRST.
11. CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO PLANTING.
12. ANY EXPOSED OR UNCOVERED LINES SHALL BE SHOWN TO GENERAL CONTRACTOR PRIOR TO BACKFILLING.
13. ALL PLANT BEDS AND RAISED SAUCER RINGS SHALL BE GRADED TO PROVIDE ADEQUATE DRAINAGE AND SHALL BE MULCHED AS SPECIFIED.
14. ALL MATERIALS, PLANTING AND LANDSCAPE WORK SHALL CONFORM TO THE CURRENT MUNICIPAL AUTHORITIES STANDARD SPECIFICATIONS AND DETAILS.
15. ALL LANDSCAPE AREAS THAT ARE NOT PLANTED, MULCHED OR PAVED SHALL BE SEEDED OR SODDED.
16. FIRST YEAR PRUNING OF TREE CROWN SHALL BE LIMITED TO REMOVAL OF DEAD & DAMAGED WOOD.
17. TREE PROTECTION FENCE SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO CLEARING, GRADING AND CONSTRUCTION ACTIVITY OR ISSUANCE OF ANY RELATED PERMITS. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
18. MULCH LINE SHALL CONSIST OF SMOOTH CONTINUOUS CURVES.
19. ALL TREES NOT WITHIN A PLANT BED SHALL BE TREATED WITH A 6' DIAMETER MULCH RING TYPICAL, UNLESS OTHERWISE INDICATED ON THE PLANTING PLANS.
20. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
21. SUBSTITUTIONS OF PLANT MATERIALS SPECIFIED CAN ONLY OCCUR WITH PRIOR APPROVAL BY LANDSCAPE ARCHITECT.
22. ESTABLISH PLANT BED CONFIGURATION. LANDSCAPE ARCHITECT TO APPROVE BED LAYOUT IN FIELD.
23. AREAS DAMAGED BY ACTIVITIES OF CONTRACTOR SHALL BE RE-ESTABLISHED TO PRE-DISTURBANCE CONDITION AT NO ADDITIONAL COST TO THE OWNER.
24. USE HERBICIDES, PESTICIDES, AND FERTILIZER IN A MANNER CONSISTENT WITH THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT AND IN ACCORDANCE WITH LABEL RESTRICTIONS.
25. CONTRACTOR SHALL INSURE THAT ALL PLANT MATERIAL IS FREE OF FIRE ANTS PRIOR TO INSTALLATION.
26. LANDSCAPE ARCHITECT OR OWNER SHALL APPROVE PLACEMENT OF TREES PRIOR TO PLANTING.
27. STREET TREES SHALL BE MAINTAINED TO PROVIDE 13'-6" CLEAR HEIGHT FOR THE PORTION OF THE TREE CANOPY THAT EXTENDS OVER THE VEHICULAR NETWORK.
28. STREET TREES SHALL BE LOCATED A MINIMUM OF 15 FEET FROM STREETLIGHTS.
29. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
30. DEEPROOT ROOT BARRIER OR APPROVED EQUAL SHALL BE INSTALLED AT ALL STREET TREE LOCATIONS AND WHERE A TREE IS WITHIN 10' OF A UTILITY OR HARDSCAPE. THE ROOT BARRIER SHALL BE INSTALLED ACCORDING TO MANUFACTURER RECOMMENDATION.

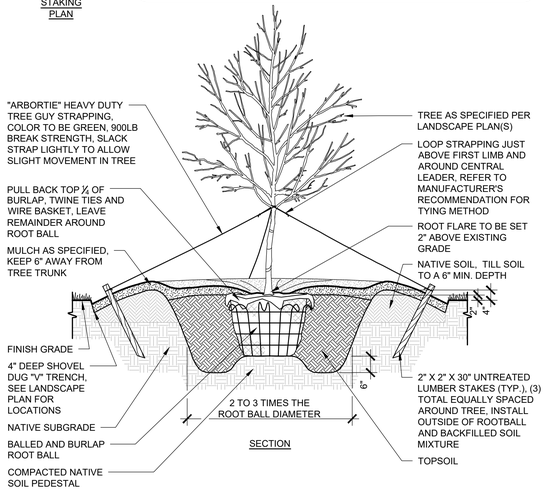
4 GENERAL LANDSCAPE NOTES

5 PLANT LEGEND



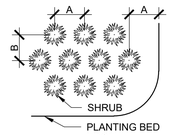
STAKING PLAN

GENERAL NOTES:
A. TREE TO BE STRAIGHTENED PRIOR TO BACKFILL AND GUYING
B. SCARIFY BOTTOM AND SIDES OF PLANT PIT.
C. STAKE AND GUY TREES 3" CALIPER OR GREATER, OR TREES IN WINDING LOCATIONS AS DIRECTED BY LANDSCAPE ARCHITECT.
D. DO NOT WRAP TREE TRUNK.
E. MARK NORTH SIDE OF TREE AT NURSERY AND PLANT WITH MARKING FACING NORTH.
F. BACKFILL PLANTING PITS WITH TOPSOIL MIXTURE AS SPECIFIED, PACK SOIL AROUND BASE OF ROOTBALL TO STABILIZE, INSTALL REMAINDER IN 9" LAYERS, HAND TAMP TO REMOVE VOIDS AND WATER EACH LAYER



SECTION

3 TYPICAL TREE PLANTING

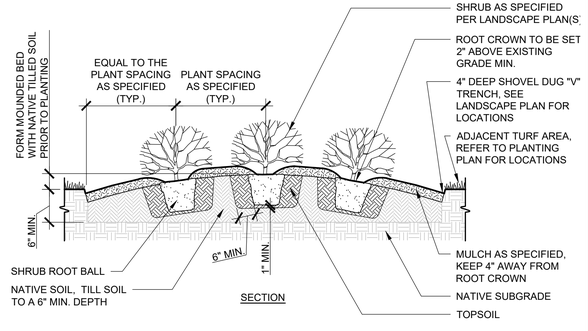


PLANT SPACING PLAN

PLANT SPACING CHART

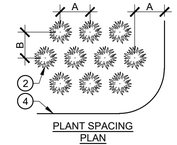
SPACING (A)	ROW OFFSET (B)	SPACING (A)	ROW OFFSET (B)
1'-0" O.C.	10" O.C.	5'-0" O.C.	4'-4" O.C.
1'-6" O.C.	1'-4" O.C.	6'-0" O.C.	5'-2" O.C.
2'-0" O.C.	1'-9" O.C.	7'-0" O.C.	6'-1" O.C.
2'-6" O.C.	2'-2" O.C.	8'-0" O.C.	6'-11" O.C.
3'-0" O.C.	2'-7" O.C.	9'-0" O.C.	7'-10" O.C.
3'-6" O.C.	3'-0" O.C.	10'-0" O.C.	8'-8" O.C.
4'-0" O.C.	3'-6" O.C.		

GENERAL NOTES:
A. SCARIFY BOTTOM AND SIDES OF PLANTING PIT.
B. THE BOTTOM OF SHRUB ROOT BALLS SHALL NOT PROJECT INTO THE NATIVE SUBGRADE . LARGER PLANTS WILL REQUIRE ADDITIONAL TOPSOIL DEPTH.
C. BACKFILL PLANTING PITS WITH TOPSOIL MIXTURE AS SPECIFIED, INSTALL IN 6" LAYERS, HAND TAMP TO REMOVE VOIDS AND WATER EACH LAYER
D. ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED BY HAND PRIOR TO PLACEMENT AND BACKFILLING WITH PREPARED SOILS. HAND TOOLS SHALL NOT BE USED TO SCARIFY ROOT BALLS.



SECTION

2 TYPICAL SHRUB PLANTING

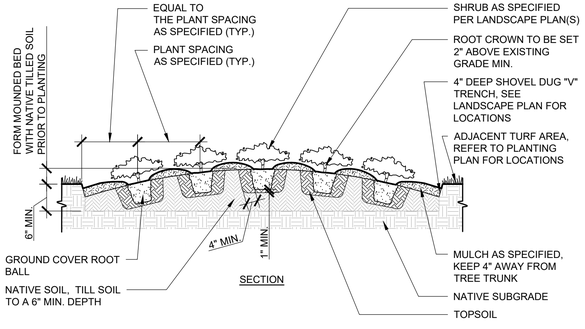


PLANT SPACING PLAN

PLANT SPACING CHART

SPACING (A)	ROW OFFSET (B)	SPACING (A)	ROW OFFSET (B)
6" O.C.	5" O.C.	24" O.C.	1'-9" O.C.
8" O.C.	7" O.C.	36" O.C.	2'-7" O.C.
12" O.C.	10" O.C.	4'-0" O.C.	3'-6" O.C.
15" O.C.	1'-1" O.C.	5'-0" O.C.	4'-4" O.C.
18" O.C.	1'-4" O.C.	6'-0" O.C.	5'-2" O.C.

GENERAL NOTES:
A. SCARIFY BOTTOM AND SIDES OF PLANTING PIT.
B. THE BOTTOM OF GROUND COVER ROOT BALLS SHALL NOT PROJECT INTO THE NATIVE SUBGRADE . LARGER PLANTS WILL REQUIRE ADDITIONAL TOPSOIL DEPTH.
C. BACKFILL PLANTING PITS WITH TOPSOIL MIXTURE AS SPECIFIED, INSTALL IN 6" LAYERS, HAND TAMP TO REMOVE VOIDS AND WATER EACH LAYER
D. ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED BY HAND PRIOR TO PLACEMENT AND BACKFILLING WITH PREPARED SOILS. HAND TOOLS SHALL NOT BE USED TO SCARIFY ROOT BALLS.



SECTION

1 TYPICAL GROUND COVER PLANTING

REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 22574 ENGINEER RICHARD M. COLLIER

2025-08-18

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CAROLINA BEACH NC

FISHER'S RESERVE
1215 ST JOSEPH STREET, CAROLINA BEACH NC

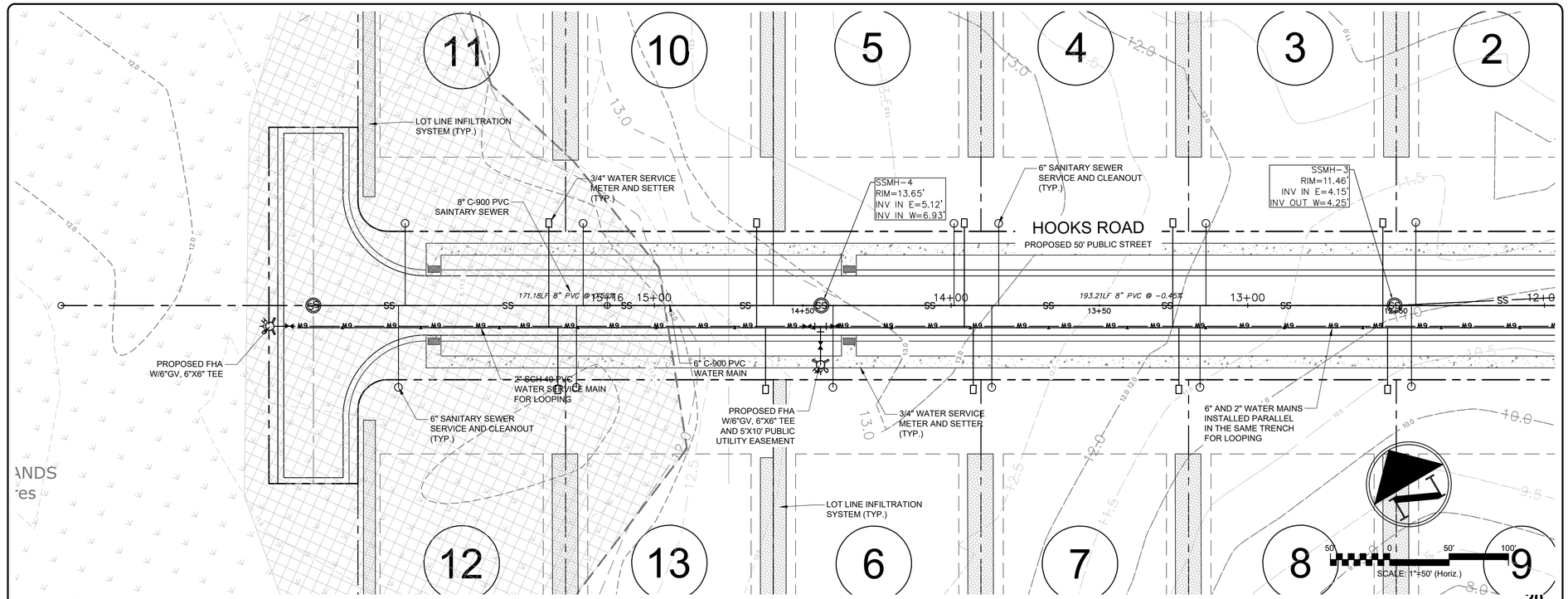
LANDSCAPE DETAILS

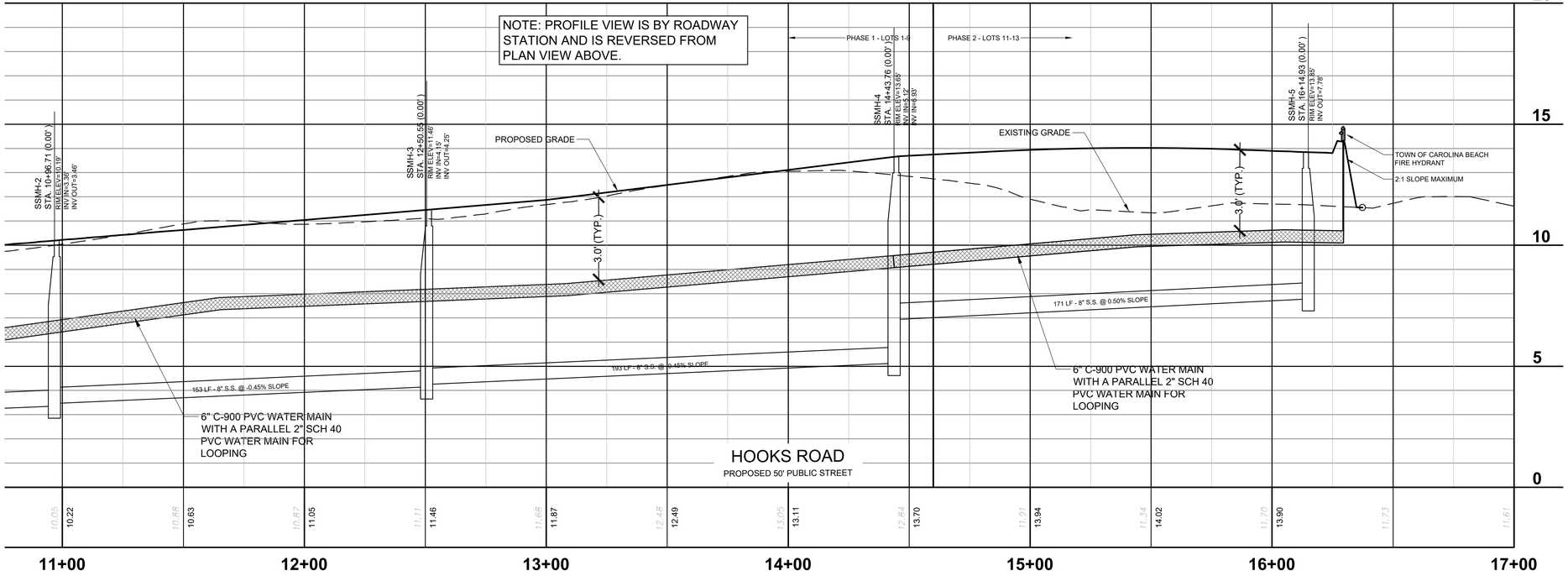
DATE: 2025-08-18
DRAWN: RMC
DESIGNED:
CHECKED:
PROJ. MGR.:

SCALE
HORIZONTAL: 1"=20'
VERTICAL: N/A

C2.1
DRAWING NUMBER

STATUS:
RELEASED FOR PERMITTING





2 | OVERALL UTILITY PLAN — SCALE: 1"=20'

GENERAL UTILITY NOTES

1. ALL DISTANCES ARE GROUND HORIZONTAL.
2. WATER AND SANITARY SEWER TO BE SERVED BY CAROLINA BEACH PUBLIC UTILITIES (CBPU).
3. ELECTRIC, CABLE T.V., AND TELEPHONE SERVICE IS TO BE INSTALLED UNDERGROUND.
4. UTILITIES IN THIS PROJECT SHALL BE PRIVATE AND ALL TO BE CONSTRUCTED IN ACCORDANCE WITH CBPU SPECIFICATIONS AND STANDARDS.
5. CONTRACTOR SHALL BE REQUIRED TO SET FINAL GRADES AT +/-6" OF FINAL GRADE BEFORE REQUESTING SUBSTANTIAL COMPLETION.
6. WHEREVER SEWER OR WATER MAINS CROSS ONE ANOTHER, A MINIMUM VERTICAL CLEARANCE OF 18" SHALL BE PROVIDED BETWEEN THE BOTTOM OF THE WATER PIPE AND THE TOP OF THE SEWER PIPE.
7. WHEREVER SEWER OR STORM CROSS ONE ANOTHER, A MINIMUM VERTICAL CLEARANCE OF 24" SHALL BE PROVIDED BETWEEN THE BOTTOM OF STORM AND TOP OF SEWER.
8. WHEREVER SEWER OR WATER MAINS RUN PARALLEL TO EACH OTHER, A MINIMUM HORIZONTAL SEPARATION OF 10' SHALL BE PROVIDED, IF A 10' HORIZONTAL SEPARATION CAN NOT BE MAINTAINED, A MINIMUM VERTICAL CLEARANCE OF 18" SHALL BE PROVIDED BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER MAIN. IF NEITHER OF THE CONDITIONS CAN BE MET, BOTH MAINS SHALL BE CONSTRUCTED WITH CLASS 50 DIP. DIPS SHALL BE A MINIMUM OF 20 LF CENTERED AT THE CROSSING. BOTH MAINS MUST BE CONSTRUCTED IN ACCORDANCE WITH PUBLIC WATER SUPPLY STANDARDS AND TESTED TO 150 PSI TO ASSURE A WATER TIGHT CONNECTION.
9. WHEREVER MINIMUM SEPARATIONS CANNOT BE ACHIEVE, STOP WORK AND CONTACT THE OWNER AND PROJECT ENGINEER IMMEDIATELY.
10. CONTRACTOR SHALL CONTACT CBPUTO SCHEDULE A INSPECTOR TO BE PRESENT ON-SITE DURING CONNECTION INSTALLATION TO EITHER SYSTEM. THE CONTRACTOR SHALL NOT MAKE ANY CONNECTION TO THE WATER OR SEWER SYSTEM WITHOUT AN INSPECTOR PRESENT.
11. SITE ELECTRICAL AND SITE LIGHTING SHALL BE COORDINATED WITH DUKE ENERGY.
12. EACH LOT SHALL BE SERVED WITH A ¾" WATER SERVICE AND METER, AND A 1" IRRIGATION SERVICE AND METER.
13. EACH LOT TO BE SERVED WITH A 6" PVC SEWER LATERAL AND CLEANOUT AT THE PUBLIC R/W.

1 | UTILITY NOTES — SCALE: NTS

REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 22574 ENGINEER RICHARD M. COLLIER

2025-08-18

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OWNER / DEVELOPER
BIG BIRD LAND DEVELOPMENT, LLC
707A ST JOSEPH ST
CAROLINA BEACH NC

FISHER'S RESERVE
1215 ST JOSEPH STREET, CAROLINA BEACH NC

ENLARGED UTILITY PLAN

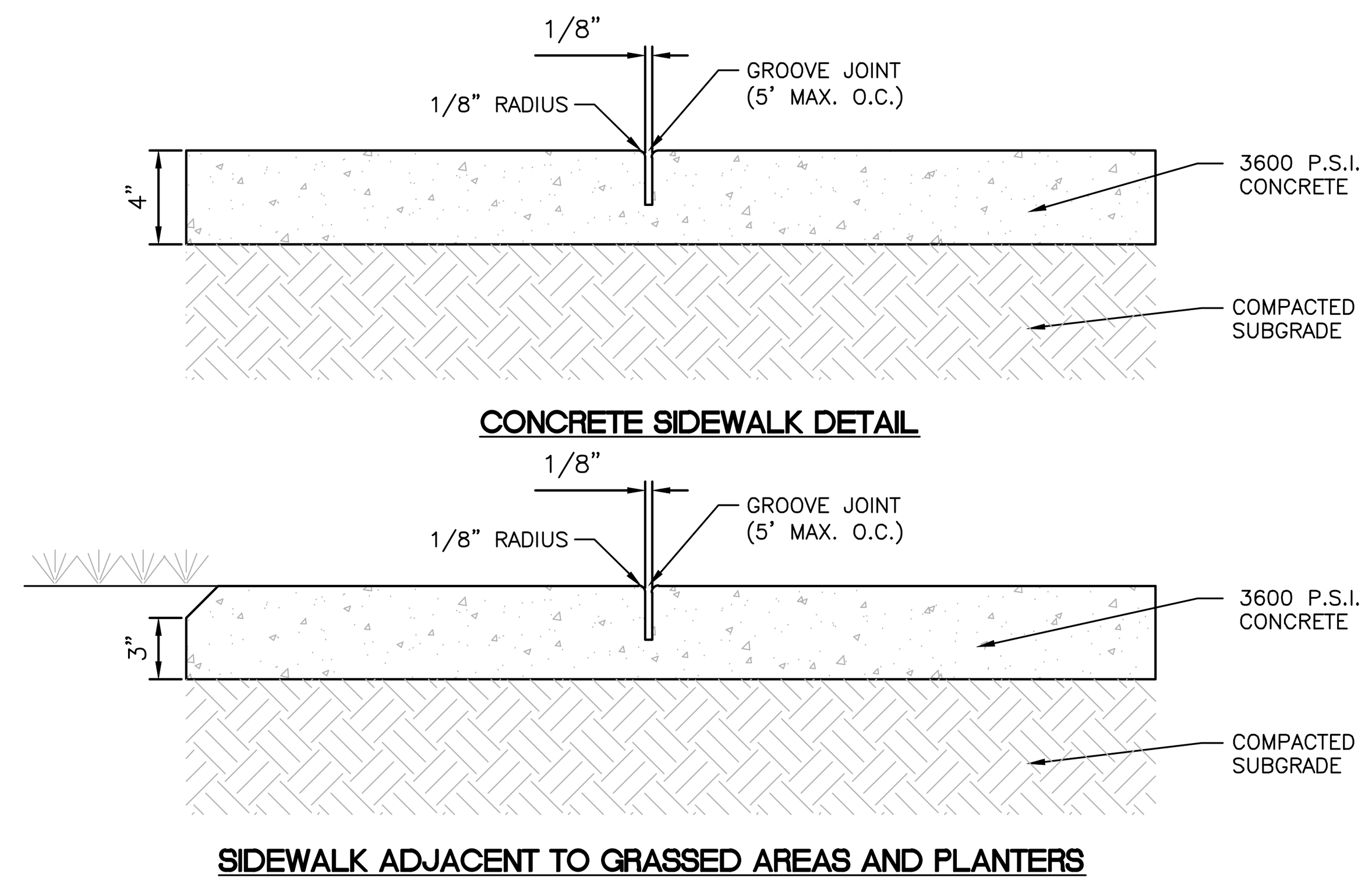
DATE:	2025-08-18
DRAWN	RMC
DESIGNED	
CHECKED	
PROJ. MGR.	

SCALE
HORIZONTAL: 1"=20'
VERTICAL: N/A

C3.0
DRAWING NUMBER

REVISION

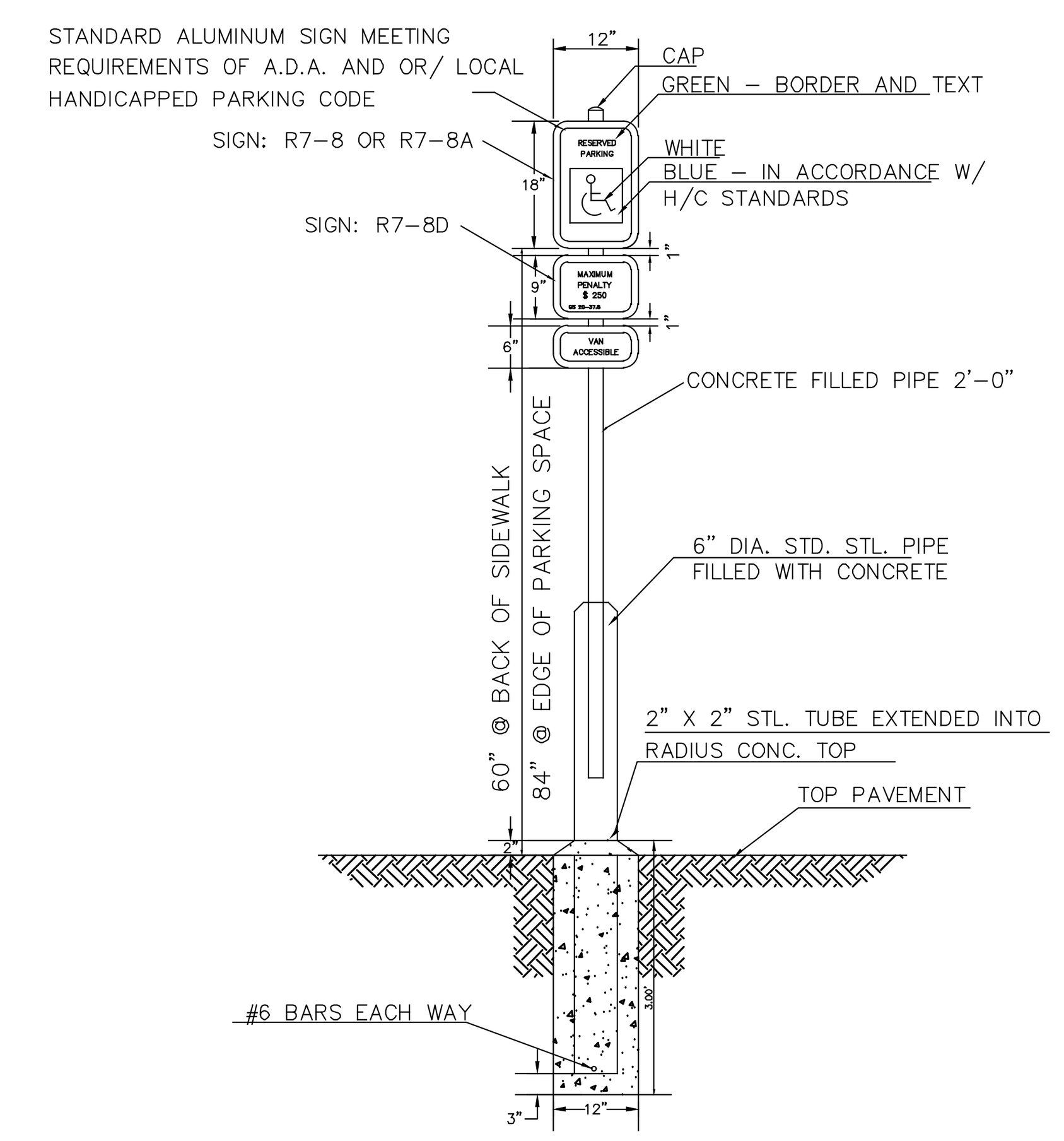
STATUS:
RELEASED FOR PERMITTING



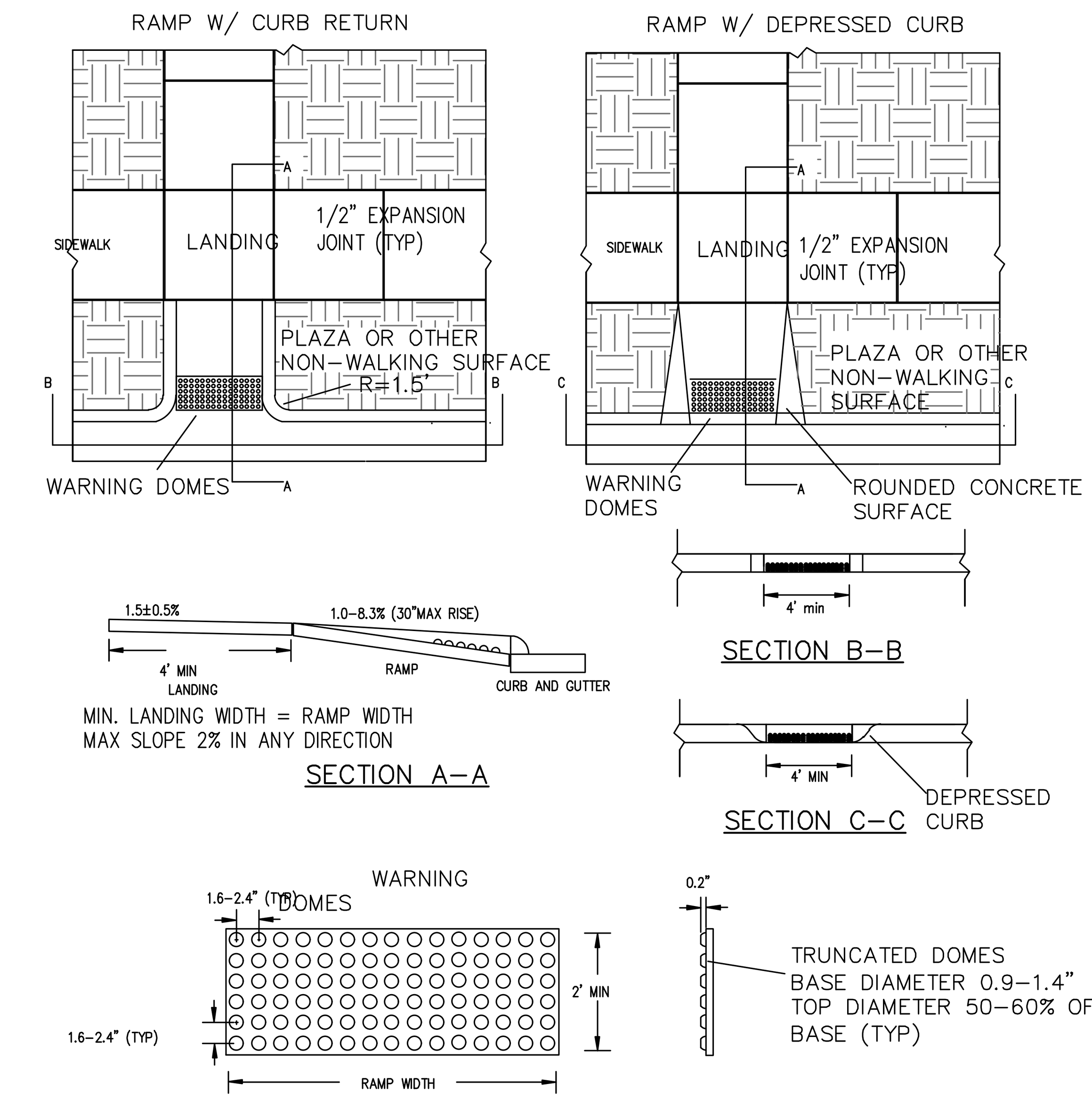
GENERAL NOTES:

1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS.
2. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 45' INTERVALS.
3. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK ABUTS ANY CURB AND GUTTER AND ANY RIGID STRUCTURES.
4. IN SIDEWALKS AND PLAZA AREAS EXPANSION JOINTS ARE REQUIRED AT NO GREATER THAN 30' INTERVALS.
5. CONCRETE SHALL BE 3600 PSI. IN 28 DAYS.

6 | 4'-0" CONCRETE SIDEWALK DETAIL | SCALE: NTS

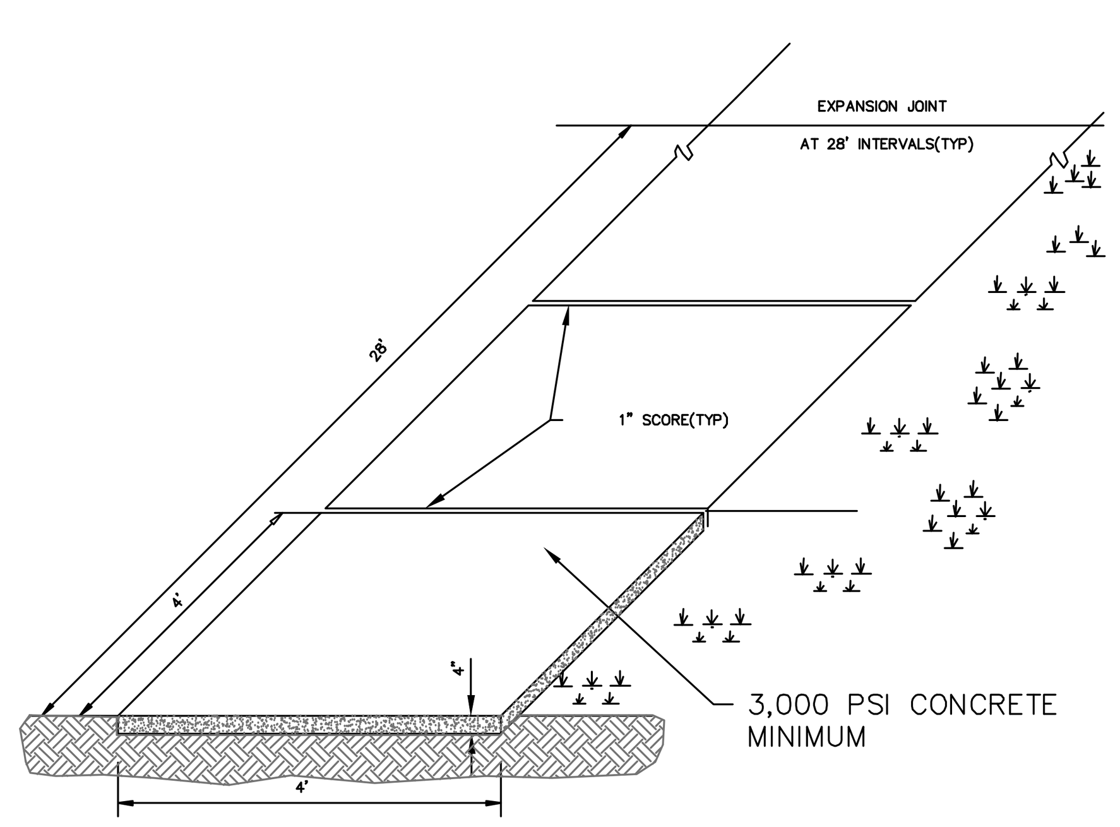


5 | HANDICAP PARKING SIGN | SCALE: NTS

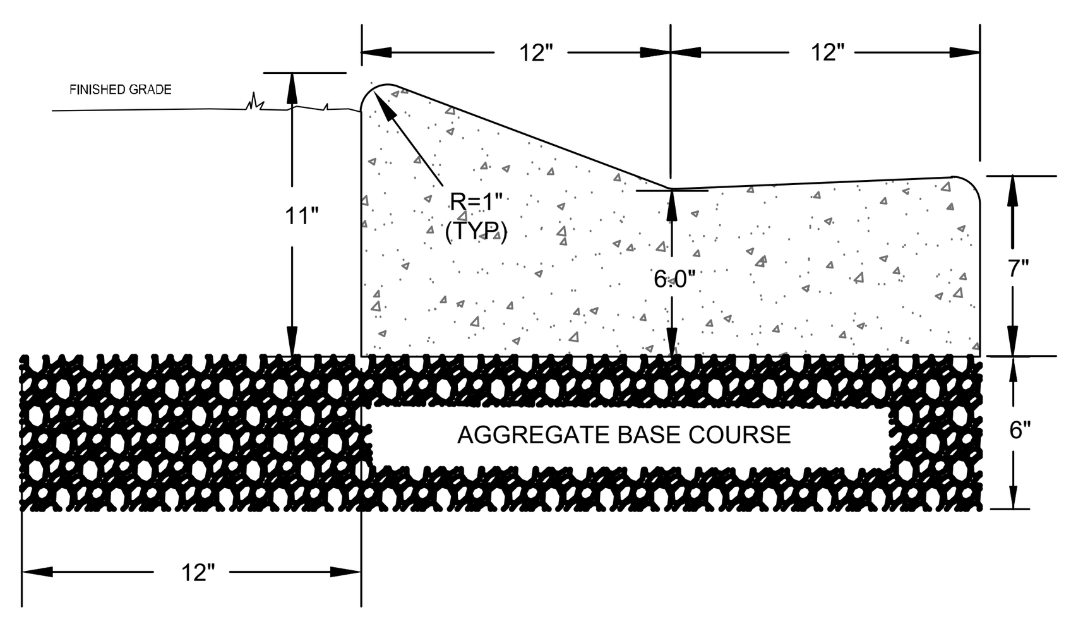


WARNING DOME NOTES:
1. USE CONTRASTING COLORS, RED OR BLACK ON WHITE PAVEMENT.
2. USE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION.
3. RUBBER MATS ARE PERMITTED FOR RETROFITS.
4. LANDING AND RAMP WIDTH MAY BE REDUCED TO 3' WHERE SPACE IS LIMITED AND DESIGN IS APPROVED BY THE CITY ENGINEER.

4 | HANDICAP RAMP | SCALE: NTS

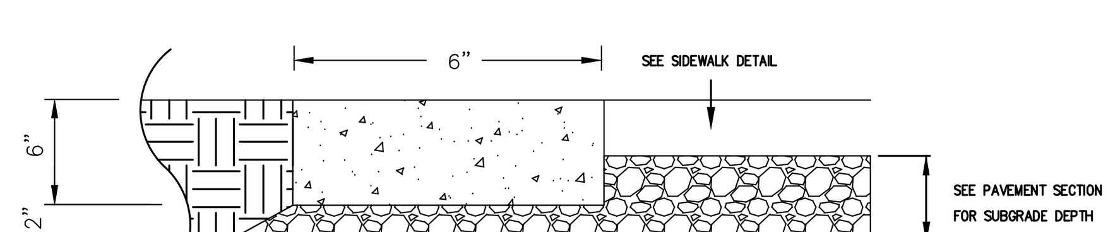


3 | 4'-0" CONCRETE SIDEWALK | SCALE: NTS



NOTES

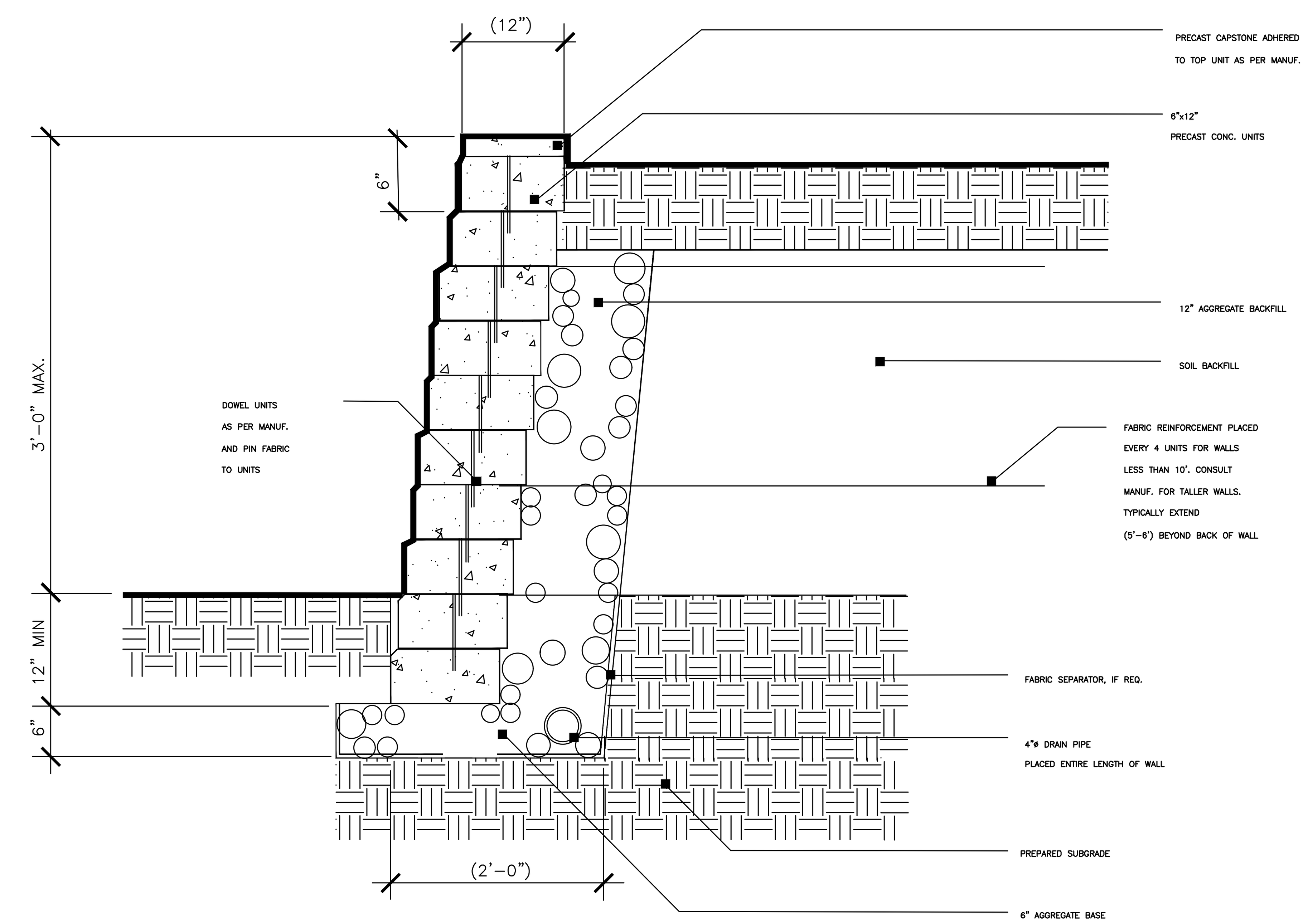
1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. 50' MAX. EXPANSION JOINT SPACING, 10' MAX. CONTRACTION JOINT SPACING.
3. MINIMUM INSTALLATION LENGTH IS 5 LF.
4. CONCRETE TO BE 4000 PSI MIN.



RIBBON CURB DETAIL

NOT TO SCALE

2 | 24" VALLEY CURB / 6" RIBBON CURB | SCALE: NTS



1 | MODULAR RETAINING WALL | SCALE: NTS

REV.NO.	DESCRIPTIONS	DATE
REVISIONS		

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22574 RICHARD M. COLLIER

2025-08-18

PORT CITY LAND SURVEYING, PLLC
FIRM LICENSE No. P-1493

Civil Engineer:
Richard M. Collier, PE
3708 Needle Sound Way
Wilmington, NC
NC-022574

OWNER / DEVELOPER
BIG BIRD LAND DEVELOPMENT, LLC
707A ST JOSEPH ST
CAROLINA BEACH NC

FISHER'S RESERVE

1215 ST JOSEPH STREET, CAROLINA BEACH NC

SITE DETAILS

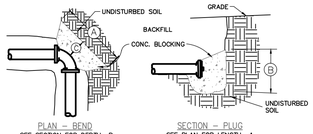
DATE:	2025-08-18
DRAWN:	RMC
DESIGNED	
CHECKED	
PROJ. MGR.	

SCALE
HORIZONTAL: 1"=20'
VERTICAL: N/A

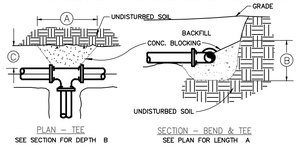
C4.0
DRAWING NUMBER

STATUS: RELEASED FOR PERMITTING

BLOCKING DIMENSIONS			
PIPE SIZE	(A)	(B)	(C)
UP TO 10"	4' – 0"	2' – 6"	1' – 6"
12" TO 16"	5' – 0"	4' – 0"	2' – 0"
18" TO 24"	6' – 0"	6' – 0"	3' – 0"

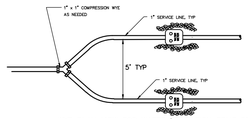


NOTES:
1. 2500 P.S.I. CONC.
2. REMOVE LOOSE EARTH AND POUR AGAINST UNDISTURBED SOIL.
3. BACKFILL TO EXISTING/FINISH GRADE AFTER CONCRETE HAS CURED FOR 24 HOURS.
4. CONCRETE SHALL NOT COVER FLANGES, BOLTS, MEGA-LUGS, RODS, ETC.



4 RESIDENTIAL WATER SERVICE AND THRUST BLOCKING

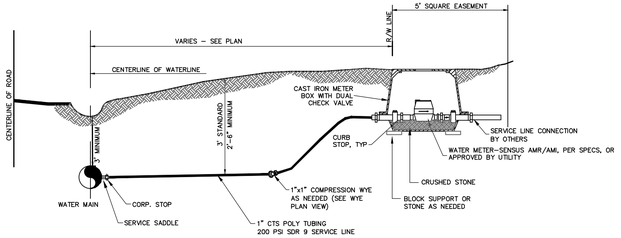
SCALE: NTS



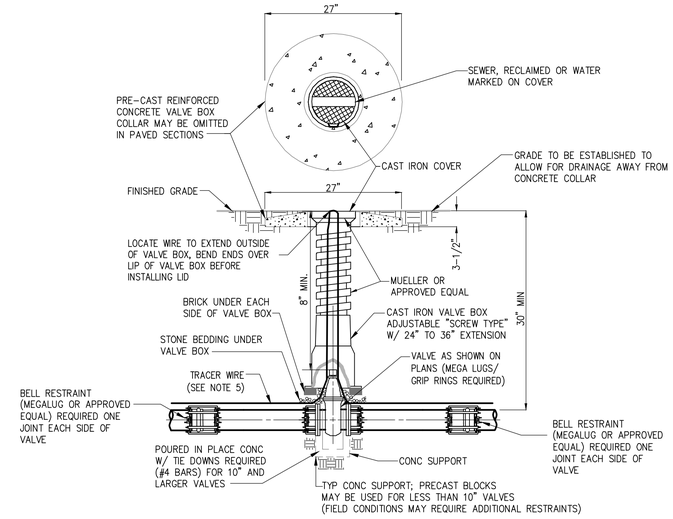
WYE PLAN VIEW FOR WATER/IRRIGATION SPLIT SERVICE
(IRRIGATION SERVICE INSTALLED AFTER MAIN METER)

1"-1" ACCEPTABLE SINGLE METER BOXES	
FORD	VJHD-141-243 TP
McDONALD	75-208-1P2G2437
MUELLER	ECO 1554312

* OR APPROVED EQUAL-MUST ACCOMMODATE SENSUS METER

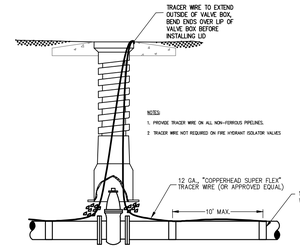


NOTE:
1) CONTRACTOR SHALL PLACE METER BOX IN NON-TRAFFIC AREA
2) METERS SHALL BE SET BY UTILITY.
3) METER BOXES SHALL BE CAST IRON WITH DUAL CHECK VALVES.



NOTES:

1. TOP OF VALVE BOX AND COLLAR SHALL BE PAINTED GREEN FOR SEWER FM, PURPLE FOR RECLAIMED WATER, AND BLUE FOR WATER.
2. EXTENSION STEM WILL BE REQUIRED TO BE WITHIN 2 FEET OF THE SURFACE IF OPERATING NUT WOULD OTHERWISE BE OVER 5 FEET BELOW GRADE. EXTENSIONS SHALL BE PERMANENTLY ATTACHED TO VALVE NUT AND SHALL BE PROVIDED WITH HORIZONTAL SPACERS FOR VERTICAL ALIGNMENT WITHIN THE VALVE BOX.
3. MINIMUM CLEARANCE TO EXTENSION IS 8".
4. WIRE COLORS REQUIRED: SEWER-GREEN/WATER-BLUE/RECLAIMED WATER-PURPLE OR GREEN WITH PURPLE STRIPE
5. 12 GA. COPPERHEAD SUPER FLEX TRACER WIRE OR APPROVED EQUAL.



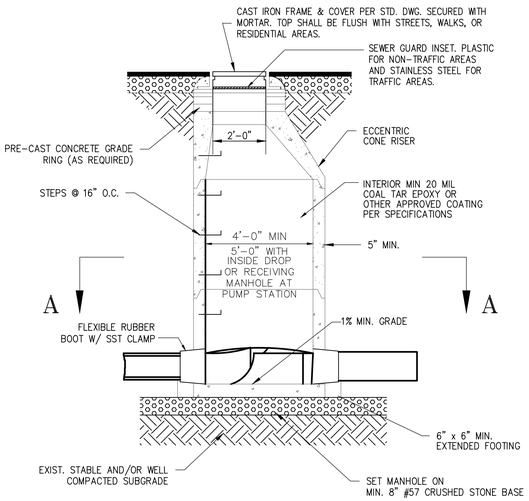
NOTE:
1. WIRE COLOR REQUIRED
- SEWER-GREEN
- WATER-BLUE
- RECLAIMED WATER-PURPLE OR GREEN WITH PURPLE STRIPE

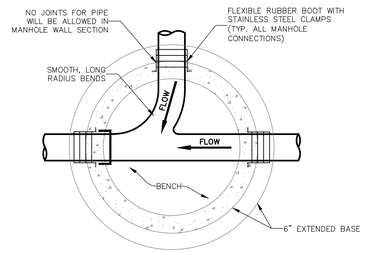
3 VALVE BOX AND TRACER WIRE

SCALE: NTS

NOTES:

1. PRECAST CONCRETE MANHOLES SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C 478. ALL SURFACES SHALL BE SMOOTH AND EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FIN, AND OTHER IMPERFECTIONS.
2. JOINTS BETWEEN MANHOLE SECTIONS SHALL BE SEALED WATERTIGHT USING EITHER O-RING GASKETS CONFORMING WITH ASTM C 443 OR BUTYL RESIN CONFORMING WITH AASHTO M-198.
3. EXTERIOR JOINTS SHALL BE SEALED WITH A 4" WIDE BUTYL RUBBER WRAP.
4. ADD INTERIOR HIGH SOLIDS EPOXY PROTECTION COATING FOR ALL MANHOLES RECEIVING DISCHARGE FROM FORCE MAINS (MIN. 20 MILS).
5. HOLES FOR CONNECTION OF PIPE TO MANHOLE SHALL BE PRECAST OR CORED. DIAMETER OF HOLE SHALL NOT EXCEED OUTSIDE DIAMETER OR PIPE BY MORE THAN 3 INCHES.
6. CONNECTIONS OF PIPE TO MANHOLE SHALL BE MADE WATERTIGHT USING RESILIENT CONNECTORS CONFORMING TO ASTM C 923 OR NEOPRENE BOOTS EMBEDDED IN PRECAST BASE WITH STAINLESS STEEL COMPRESSION BANDS.
7. MANHOLE INVERTS SHALL BE INSTALLED USING BRICK AND MORTAR, OR MANHOLES MAY BE PRECAST, MONOLITHIC SECTIONS WITH FORMED INVERTS.
8. LIFT HOLES SHALL BE PLUGGED AND FILLED FLUSH WITH MORTAR.
9. ALL BRICK AND MORTAR SHALL RECEIVE A 1/2" MORTAR PARGE COAT ON INSIDE AND OUTSIDE.
10. ALL SPACE BETWEEN PIPE AND OPENING INSIDE OF MANHOLE TO BE GROUTED WITH TYPE S MORTAR
11. SEWER MAIN PENETRATIONS AND/OR SERVICE LATERAL PENETRATIONS ENTERING AT 30" OR LESS ABOVE THE MANHOLE BENCH SHALL HAVE A SLIDE CONSTRUCTED OF BRICK AND MORTAR.(SEE DETAIL)
12. ALL PENETRATIONS ENTERING MANHOLE AT GREATER THAN 30" SHALL BE AN INSIDE DROP MANHOLE (SEE DETAIL).
13. INSIDE DROP MANHOLES, AND PUMP STATION RECEIVING MANHOLES SHALL BE MINIMUM 5' DIAMETER MANHOLES.
14. SANITARY SEWER MANHOLES SHALL BE COATED WITH COAL TAR EPOXY 20 MILS THROUGHOUT THE INSIDE OF THE MANHOLE.
15. ALL MANHOLES SHALL HAVE A SEWER GUARD INSERT INSTALLED – PLASTIC IS ALLOWED IN NON-TRAFFIC AREAS – STAINLESS STEEL INSERT PANS ARE REQUIRED IN TRAFFIC AREAS
16. MANHOLES SHALL BE TRAFFIC BEARING WITH A MINIMUM HS-20 LOAD ALLOWANCE.

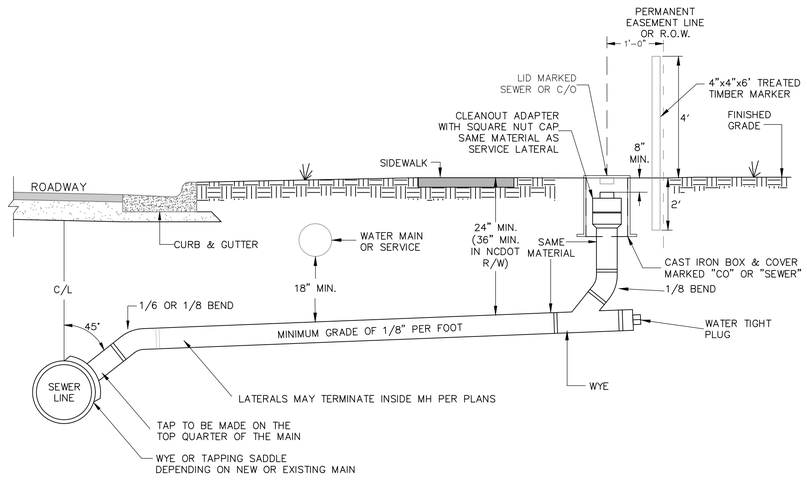




SECTION A–A

2 PRECAST SANITARY SEWER MANHOLE

SCALE: NTS



1 SANITARY SEWER LATERAL CONNECTION

SCALE: NTS

REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	

SEAL

NORTH CAROLINA REGISTERED PROFESSIONAL SEAL 22574 ENGINEER RICHARD M. COLLIER

2025-08-18

PORT CITY LAND SURVEYING, PLLC
FIRM LICENSE No. P-1493
1144 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
(910) 791-0080

Civil Engineer:
Richard M. Collier, PE
3708 Needle Sound Way
Wilmington, NC
NC-022574

OWNER / DEVELOPER
BIG BIRD LAND DEVELOPMENT, LLC
707A ST JOSEPH ST
CAROLINA BEACH NC

FISHER'S RESERVE
1215 ST JOSEPH STREET, CAROLINA BEACH NC

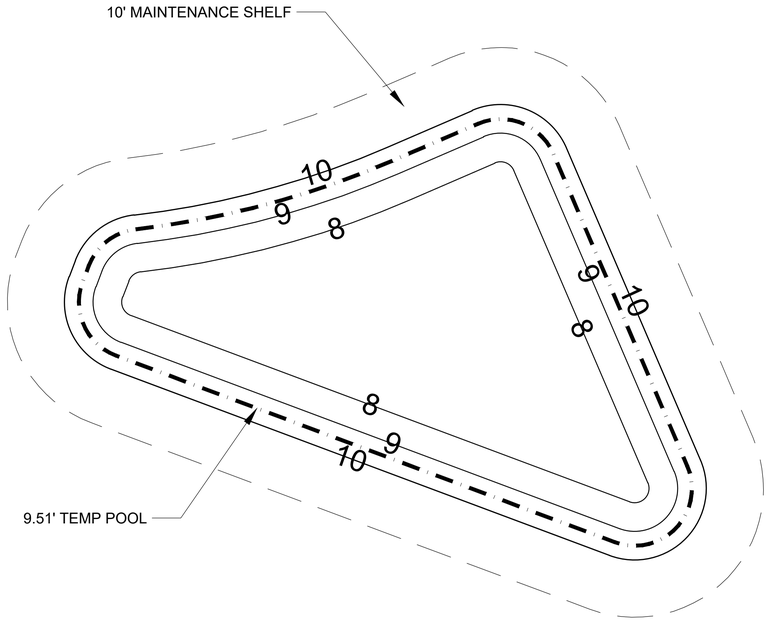
UTILITY DETAILS

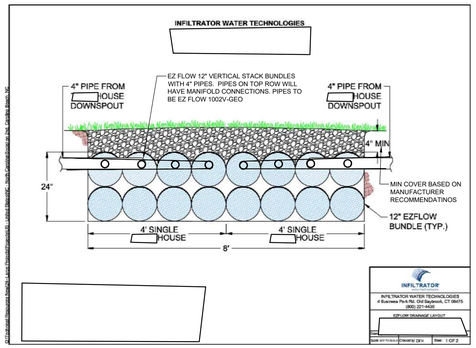
DATE: 2025-08-18
DRAWN: RMC
DESIGNED:
CHECKED:
PROJ. MGR.:

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C4.1
DRAWING NUMBER

STATUS: RELEASED FOR PERMITTING

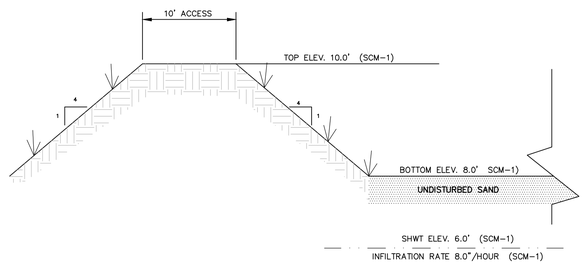




TYPICAL LOT LINE INFILTRATION TRENCH

NOTES

1. THE BOTTOM ELEVATION SHALL NOT BE COMPACTED AND DISTURBED AS MINIMAL AS POSSIBLE DURING CONSTRUCTION. IF THE ENGINEER FINDS THE BOTTOM HAS BEEN DISTURBED TO PREVENT GOOD INFILTRATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OVER-EXCAVATING THE BOTTOM 4-INCHES AND REPLACING WITH CLEAN SAND.
2. IF HARDPAN OR OTHER UNSUITABLE SOILS ARE ENCOUNTERED, CONTACT THE ENGINEER FOR DETERMINATION OF SUITABLE BACKFILL MATERIAL.
3. THE ENTIRE INFILTRATION BASIN SHALL BE SOD WITH ZOYSIA GRASS IMMEDIATELY FOLLOWING FINAL GRADING.



2 TYPICAL LOTLINE INFILTRATION TRENCH SCALE: NTS

1 INFILTRATION BASIN SCALE: NTS

REV.NO.	DESCRIPTIONS	DATE

REVISIONS

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 22574 ENGINEER RICHARD M. COLLIER

2025-08-18

PORT CITY LAND SURVEYING, PLLC
FIRM LICENSE No. P-1493
1144 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
(910) 791-5080

Civil Engineer:
Richard M. Collier, PE
3708 Needle Sound Way
Wilmington, NC
NC-022574

OWNER / DEVELOPER
BIG BIRD LAND DEVELOPMENT, LLC
707A ST JOSEPH ST
CAROLINA BEACH NC

FISHER'S RESERVE
1215 ST JOSEPH STREET, CAROLINA BEACH NC

STORMWATER DETAILS

DATE:	2025-08-18
DRAWN	RMC
DESIGNED	
CHECKED	
PROJ. MGR.	

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C4.2
DRAWING NUMBER

STATUS:
RELEASED FOR PERMITTING

JOSH STEIN
Governor
D. REID WILSON
Secretary
RICHARD E. ROGERS, JR.
Director

NORTH CAROLINA
Environmental Quality

September 25, 2025

DWR #20250313
New Hanover County

W3 Built
Attn: Westcott Butler
707 Saint Joseph Street
Carolina Beach, NC 28428

Delivered via email to: butler@w3built.com

Subject: **Approval of Individual 401 Water Quality Certification**
1215 Saint Joseph St.
USACE Action ID. No. SAW-2025-00193

Location: 34.047516, -77.894720

Dear Westcott Butler:

Attached hereto is a copy of Certification No. WQC008275 issued to Westcott Butler and W3 Built, dated September 25, 2025. This approval is for the purpose and design described in your application.

This Water Quality Certification does not relieve the Permittee of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.

Upon the presentation of proper credentials, the Division of Water Resources (Division) may inspect the property.

This Water Quality Certification shall expire on the same day as the expiration date of the corresponding Section 404 Permit that is current at the time this Certification is issued. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Water Quality Certification.

Non-compliance with or violation of the conditions herein set forth may result in revocation of this Water Quality Certification for the project and may also result in criminal and/or civil penalties.

This approval and its conditions are final and binding unless contested [G.S. 143-215.5].

This Certification can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) **within sixty (60) calendar days**. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at https://www.oah.nc.gov or by calling the OAH Clerk's Office at (919) 431-3000.

A party filing a Petition must serve a copy of the Petition on:

Dan Hirschman, General Counsel
Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

If the party filing the Petition is not the Permittee, then the party must also serve the recipient of the Certification in accordance with N.C.G.S. 150B-23(a).

This letter completes the Division's review under Section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Samantha Wooten at (919) 707-3631 or samantha.wooten@deq.nc.gov if you have any questions or concerns.

Sincerely,

DocuSigned by:
Stephanie Goss
755ABF0CD80B428...

Stephanie Goss, Supervisor
401 & Buffer Permitting Branch

Electronic cc: Megan Dean, Southern Environmental Group, Inc. (megan@segi.us)
Big Bird Land Development, LLC
Brad Shaver, USACE Wilmington Regulatory Field Office (Brad.E.Shaver@usace.army.mil)
Maria Dunn, NCWRC (maria.dunn@ncwildlife.org)
DWR 401 & Buffer Permitting Branch Electronic file

Filename: 20250313 1215 Saint Joseph St. – New Hanover – 401 – IP w MRTF.docx

NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

CERTIFICATION #WQC008275 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to North Carolina's Regulations in 15 NCAC 02H .0500 and 15A NCAC 02B .0200, to Westcott Butler and W3 Built, who have authorization for the impacts listed below, as described within your application received by the N.C. Division of Water Resources (Division) on January 24, 2025, with fee received on March 10, 2025, and subsequent information on January 31, 2025, April 15, 2025, June 6, 2025, and September 8, 2025, and by Public Notice issued by the U. S. Army Corps of Engineers on May 13, 2025, and within the *Reasonable Period of Time* pursuant to 40 CFR Part 121.6.

The State of North Carolina certifies that this activity will comply with water quality requirements and the applicable portions of Sections 301, 302, 303, 306, 307 of the Public Laws 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, and conditions hereinafter set forth.

The following impacts are hereby approved. No other impacts are approved, including incidental impacts. [15A NCAC 02H .0506(b)]

Type of Impact	Amount Approved Permanent	Amount Approved Temporary	Mitigation Amount Required
Non-Riparian Wetlands			
Site #1 – Road Infrastructure for lots and associated utilities	0.66 acres	0 acres	0.66 credits
Totals:	*0.66 acres*	*0 acres*	*0.66 credits*

This approval requires you to follow the conditions listed in the Certification below.

CONDITIONS OF CERTIFICATION [15A NCAC 02H .0507(c)]:

1. Mitigation must be provided for the proposed impacts as specified in the table below. The attached Compensatory Mitigation Responsibility Transfer Form (Form) shall be completed and provided to the Division prior to *any* impacts occurring. If the Mitigation Provider specified on the attached Form(s) for the proposed impacts changes after issuance of this Certificate, then the Permittee shall request a revised Compensatory Mitigation Responsibility Transfer Form from the Division prior to conducting any impacts.

	Compensatory Mitigation Required	River and Sub-basin Number
Wetland	0.66 acres (credits)	White Oak \ 03020302

Citation: 15A NCAC 02H .0506(c); 15A NCAC 02H .0507(c)

2. The plans and specifications for this project are incorporated by reference as part of this Water Quality Certification. If you change your project, you must notify the Division, and you may be required to submit a new application package with the appropriate fee.

   If the property is sold, the Permittee shall provide the new owner must with a copy of this Water Quality Certification and all plans and specifications incorporated by reference. The Permittee may transfer this Water Quality Certification to the new owner by submitting a letter to the Division with the following statement: *"At the time the property is transferred, the terms and conditions of this 401 Individual Water Quality Certification, including the responsibility to ensure compliance, are binding on the new owner(s) of the property."* The letter shall be signed and dated by both the transferee and the new owner.

   Citation: 15A NCAC 02H .0507(d)(2)

3. Any final construction plans for this project must include or reference the application and plans approved by the Division under this authorization letter and certification. The applicant will also be required to evaluate all acquired permits to assure that they are consistent, and all relative impacts are accounted for and shown on the construction plans. Any additional impacts to streams and/or wetlands within the project may be considered cumulative to impacts approved in this Certification and may require a modification of this 401 Water Quality Certification approval.

   Citation: 15A NCAC 02H .0506; 15A NCAC 02H .0507(c)

4. All wetlands, streams, and surface waters located within 50 feet of the construction area on the project site shall be clearly marked (example- orange fabric fencing) prior to any land disturbing activities and must be maintained on the property until the project phase is completed.

   Citation: 15A NCAC 02H .0506(b)(2); 15A NCAC 02H .0507(c)

5. Appropriate measures should be installed prior to any land clearing activities to protect wetlands, streams, and/or buffers from turbidity and/ or sedimentation. These measures should be routinely inspected and properly maintained, and excavated materials should be contained outside wetland, stream, and/or buffer boundaries. Excessive silt and sediment loads can have numerous detrimental effects on aquatic resources including destruction of spawning habitat, suffocation of eggs, and clogging of gills of aquatic species.

   Citation: 15A NCAC 02H .0506(b)(2); 15A NCAC 02H .0507(c)

6. The permittee shall comply with any moratoriums per the National Marine Fisheries Service and/or the US Fish and Wildlife Service.

   Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 04B .0125

7. The Permittee shall secure an *approved* stormwater management plan (SMP) from New Hanover County ***before any*** impacts authorized in this Certification occur. The applicable portion of the approved SMP shall be constructed and operational before any permanent building or other permanent structure is occupied at the site. If any of the SCMs are used as an Erosion and

Sediment Control device, it must be restored to the approved stormwater design condition within 30 days of close-out of the Erosion and Sediment Control Plan.

Citation: 15A NCAC 02H .0506(b)(2) and (3); 15A NCAC 02H .0507(c)

8. If the Permittee becomes aware of any inability to comply with any of the conditions of this Water Quality Certification, they must notify the Wilmington Regional Office within 24 hours (or the next business day if a weekend or holiday) from the time the Permittee becomes aware of the circumstances. The Permittee may be required to submit a new application package with appropriate fee to initiate modification of this authorization, and/or to conduct corrective actions as determined by the Division.

   Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

9. The Permittee shall report to the DWR Wilmington Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200], including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the Permittee became aware of the non-compliance circumstances.

   Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

10. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the approved impacts (including temporary impacts).

    Citation: 15A NCAC 02H .0506; 15A NCAC 02H .0507(c)

11. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur.

    Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *North Carolina Department of Transportation Sediment and Erosion Control Manual*.

    All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; 15A NCAC 02B .0231

12. Sediment and erosion control measures shall not be installed in wetland or waters except within the footprint of temporary or permanent impacts otherwise authorized by this Certification. If placed within authorized impact areas, then placement of such measures shall not be conducted in a manner that results in dis-equilibrium of any wetlands, streambeds, or streambanks. Any silt fence installed within wetlands shall be removed from wetlands and the natural grade restored within two (2) months of the date that DEMLR or the locally delegated program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

13. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

14. If the project is covered by NPDES Construction Stormwater Permit Number NCG010000 or NPDES Construction Stormwater Permit Number NCG250000, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping, and reporting requirements is required.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

15. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State, and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters.

    Citation: 15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

16. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

17. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication, and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

18. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance and compaction.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231

19. In accordance with 143-215.85(b), the Permittee shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.

    Citation: 15A NCAC 02H .0507(c); N.C.G.S 143-215.85(b)

20. The Permittee and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

21. The Permittee shall require its contractors and/or agents to comply with the terms and conditions of this Certification in the construction and maintenance of this project and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this Water Quality Certification. A copy of this Water Quality Certification shall be available at the project site during the construction and maintenance of this project.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

22. This Water Quality Certification neither grants nor affirms any property right, license, or privilege in any lands or waters, or any right of use in any waters. This Water Quality Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and does not create any prescriptive right or any right of priority regarding any usage of water. This Water Quality Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Water Quality Certification to possess any prescriptive or other right of priority with respect to any other consumptive user.

This Water Quality Certification shall expire on the same day as the expiration date of the corresponding Section 404 Permit that is current at the time this Certification is issued. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Water Quality Certification.

This, the 25th day of September 2025

DocuSigned by:
Stephanie Goss
755ABF0CD80B428...

Stephanie Goss, Supervisor
401 & Buffer Permitting Branch

JOSH STEIN
Governor
D. REID WILSON
Secretary
RICHARD E. ROGERS, JR.
Director

NORTH CAROLINA
Environmental Quality

COMPENSATORY MITIGATION RESPONSIBILITY TRANSFER FORM

September 25, 2025

Permittee: Westcott Butler and W3 Built

DWR Project #20250313

Project Name: 1215 Saint Joseph St.

County: New Hanover

The Division has received a Statement of Availability (SOA) from Davey Resource Group, Inc. for the Lower Cape Fear Umbrella Mitigation Bank (Mitigation Provider) to satisfy the mitigation requirements set forth in 401 Individual Certification No. WQC008275 issued to Westcott Butler and W3 Built, dated September 25, 2025, as provided in the table below.

	Compensatory Mitigation	River and 8-digit HUC Number
Non-Riparian Wetland	0.66 acres (credits)	White Oak \ 03020302

The Permittee must provide a copy of this form to the Mitigation Provider specified above, who will then sign the form to verify receipt of payment and the transfer of the mitigation responsibility. Once the Mitigation Provider has signed this form, it is the Permittee's responsibility to ensure that a signed copy of this form is submitted to DEQ.WR.401MRT@deq.nc.gov ***before*** conducting any of the authorized impacts.

The Mitigation Provider verifies that the mitigation requirements (credits) shown above, have been released and are available at the identified bank site(s). By signing below, the Mitigation Provider is accepting full responsibility for the identified mitigation. As a reminder to the Mitigation Provider, no more than 25 percent of the total mitigation required by Division can be met through preservation, unless requested and approved by the Division Director (15A NCAC 02H. 0506(c)(7)).

Signature Authority Name (print): _____

Signature: _____ Date: _____

AGENDA ITEM COVERSHEET

PREPARED BY: Gloria Abbotts, Sr Planner

DEPARTMENT: Community Development

MEETING: Planning and Zoning October 9, 2025

SUBJECT: Consider a Conditional Zoning for a hotel located at 223, 225, 227, 234, 235, 236, 237, 239 Carolina Beach Avenue North in the Central Business District. Applicants: Page and Amy Johnson, Carolina Beach Land – East, LLC, Carolina Beach Land – West, LLC

BACKGROUND:

The applicants, Page and Amy Johnson, Carolina Beach Land – East, LLC, Carolina Beach Land – West, LLC applied for a Conditional Zoning application for a 140-room hotel, restaurant, and meeting space project in the Central Business District located at 223, 225, 227, 234, 235, 236, 237, and 239 Carolina Beach Avenue North.

A Conditional Zoning District allows a particular use to be established only in accordance with specific standards and conditions pertaining to each individual development project. Certain land uses can significantly impact the surrounding area and community in ways that cannot be anticipated or managed solely through general district standards. In some cases, it may not be suitable for a property to have a general district designation that allows a use by right, even if the use itself might be permissible. The review process enables such uses to be accommodated by reclassifying the property into a conditional zoning district, ensuring that conditions are met to maintain compatibility with the neighboring properties and their use and enjoyment.

All applications shall include a site plan and any development standards to be approved concurrently with the rezoning application. Development standards may include such things as parking, landscaping, design guidelines, and buffers. When evaluating an application for the creation of a Conditional Zoning District, the Planning & Zoning Commission shall consider the following:

1. The application's consistency to the general policies and objectives of the Town's CAMA Land Use Plan, any other applicable officially adopted plan, and the Unified Development Ordinance.
2. Potential impacts and/or benefits on the surrounding area, adjoining properties.
3. Report on results from the public input meeting.

No permit shall be issued for any development activity within a conditional zoning district except in accordance with the approved petition and applicable site plan, subdivision plat, and/or permit for the district.

History and Surrounding Area:

The project area consists of the Sea Witch Café and its associated parking lot along with parking lots currently being leased by the Town for public parking. The property is surrounded by the Central Business District, and the adjacent uses include a motel, restaurant, gas station, Town parking lots, condos, and single-family homes.

The Sea Witch Café and Tiki Bar located at 227 Carolina Beach Avenue North consists of an existing one-story frame restaurant, dining area, and tiki bar. The restaurant structure was built in 1961, and the tiki bar was built in 2001. The property was previously used as a motel. 223 and 225 Carolina Beach Avenue North currently serve as the parking lot for the restaurant.

Arcadius, a large-scale project was approved in October of 2004. The 140-foot-tall project included 278 residential units, 56,811 square feet of retail space, and 2 parking garages. The project included redevelopment of 11 parcels between Carolina Beach Ave N, Canal Dr, and Pelican Ln. The Conditional Use Permit expired in 2009 after three extensions were granted by Town Council. The project was never completed because the owners filed for bankruptcy.

The Town purchased property along the east and west sides of Carolina Beach Avenue North in 2009. The goal was to build a 1,000’ long pier for the North Carolina Aquarium system, and eventually an aquarium nearby. The Guy Johnson Motel and Surfside Motor Lodge were motels on the properties until they were demolished in 2019.

Zoning:

The purpose of the Central Business District (CBD) is to accommodate, protect, rehabilitate, and maintain the traditional Central Business District and boardwalk area of the town. This area accommodates a wide variety of pedestrian-oriented, commercial and service activities, including retail, business, office, professional, financial, entertainment, and tourism. The regulations of this district are intended to encourage the use of land for concentrated development of permitted uses while maintaining a substantial relationship between land uses and the capacity of the town's infrastructure. Developments which would significantly disrupt the historic balance between pedestrians and automobiles within the district, thereby destroying the pedestrian-oriented nature of the area, are specifically discouraged. Large, off-street parking areas are encouraged to be located outside the district. Similarly, buildings and structures should have pedestrian-oriented activities at ground level.

Motels and hotels are permitted with Conditional Zoning in the CBD. The proposed development consists of two eastern parcels and six western parcels along Carolina Beach Avenue N that will be combined prior to the issuance of a building permit for a total of 1.75 acres or 76,230 square

feet. The project will consist of a hotel on the western parcels with a pedestrian skybridge connecting the hotel to an oceanfront restaurant and meeting space. The properties are located within VE16 and AE11 flood zones, the proposed buildings must be designed to meet the minimum requirements for flood damage prevention. The CBD does not have minimum setbacks, maximum lot coverage, or maximum impervious surface coverage. There is a maximum height of 50' that staff can permit, the maximum height limit may be exceeded for sprinklered structures and are subject to conditional zoning approval. The proposed height of the hotel is 67' to the top of the parapet wall and 73' to the top of the elevator/stair tower. The proposed height of the oceanfront restaurant and meeting space is 39'.

Parking:

The applicant is providing 140 parking spaces for the 140 rooms in the hotel. The total parking provided by the applicant on-site is 168 spaces. A total of 174 parking spaces is required for the hotel and its associated on-site uses. Twenty percent of the required parking may be utilized for compact vehicles or golf cart/LSV parking. The applicant is providing 23 compact spaces and 20 golf cart/LSV spaces. The ordinance requires that if the 20 percent exception is utilized for golf cart/LSV parking, the applicant must provide a bicycle rack with a minimum of four spaces. Three bike racks are proposed adjacent to the parking areas for the hotel and restaurant/meeting space. When hotels are located within the CBD, off-street parking requirements are waived for their accessory uses if public parking spaces are located within 500 feet of the uses. A total of 15 standard parking spaces are waived for the restaurant and meeting space.

Total Required Parking	80% Standard Spaces	20% Golf Cart/compact spaces	80% Standard Spaces Provided	20% Standard Spaces Provided	80% Standard Spaces Short
174	140	34	125	43	15

Landscaping and Sidewalks:

A Type D landscaping buffer is required for the project. For every 50 linear feet of frontage, or fraction thereof, the street yard shall contain one understory tree with sidewalks or planters built within the sidewalk. A total of 13 street trees is required to be planted for the project, 5 trees will be located on the western side of Carolina Beach Avenue, and 8 trees on the eastern side of Carolina Beach Avenue N. Additional plantings beyond the requirements will be provided by the applicant for further screening of the property from the residential neighbors on the southwestern corner of their property that borders 214 and 222 Canal Drive. A five-foot buffer with shrubs and trees will be placed in this area. A 6-foot fence with 80 percent opacity will also be installed on the western property line. The applicant is providing a sidewalk on the western portion of Pelican Lane and will be repaving the sidewalks around the entirety of the project. All sidewalks will be five feet wide. A portion of the public sidewalk will be partially on the applicant's property; a maintenance agreement or easement will need to be provided.

Stormwater and Utilities:

A State Stormwater permit, CAMA Major Permit, and Soil and Erosion Control permit are required for the project. Stormwater will be contained underground beneath the parking areas. The

applicant proposes extending the existing 8-inch water main on Canal Drive to the intersection of Pelican Lane and Carolina Beach Avenue North. The existing fire hydrant at that intersection will be relocated or replaced. The project will tie into the existing 12-inch sewer line on Carolina Beach Avenue N. The applicant has provided water and sewer capacity calculations. The Town's engineer and Utility Director have determined that there is enough water for the project.

Refuse, loading zone:
The applicant provides a total of two off-street loading spaces on Pelican Lane to service the hotel and its associated uses. Trash compactors and recycling areas will be services and are located underneath both buildings. Refuse collection sites must be enclosed on three sides by a minimum six-foot opaque fence.

Traffic:
A Traffic Impact Analysis is required for the site and will need to incorporate those required improvements. The TIA has been submitted to the WMPO for review. The TIA recommends restriping the eastbound approach to provide full length storage left turn lane and a thru-right turn lane with 100 feet of storage plus appropriate deceleration and taper. Additionally, the signal at Carl Winner Drive and Canal Drive will be updated to accommodate the dominant traffic pattern. The town plans to restripe the northbound lane of Canal Drive at the intersection with Carl Winner Ave to remove the left turn lane. The existing configuration has the southbound lane off set with the northbound left turn lane.

Public Improvements:
The applicant will be removing the current retaining wall along the western property line that borders the Town's parking lot. For corner lots adjacent to streets that terminate in a beach or sound access, any driveways should solely allow entrance and exit from the main street, oriented parallel to the ocean or sound, to maintain public access. The Technical Review Committee has the authority to permit a new driveway on a street end, in this case, Pelican Lane, if the property owner enhances public access. The applicant proposes a one-way exit driveway on Pelican Lane. Proposed public improvements include paving Pelican Lane, providing two public golf cart parking spaces in front of the beach accessway, installing a sidewalk on Pelican Lane, and adding a crosswalk at the intersection of Pelican Lane and Carolina Beach Avenue N. The applicant is coordinating with Duke Energy to bury the existing power lines along Carolina Beach Avenue N. Lighting will be provided for the street and sidewalks on the side of the buildings to eliminate the need for additional streetlights to be placed in the right-of-way.

Conditional Zoning Process:

As part of the application process a community meeting is required. The applicant held multiple meetings in March 2024 and March and May of 2025. The applicant has provided summary comments from the meetings. Based off the comments from the meeting, the applicant can make changes and place conditions on the project to help mitigate the impacts and concerns

from the neighboring properties. As a result of those meetings, the applicant has scaled back the project from the original proposal.

The Planning & Zoning Commission may recommend that the applicant add reasonable and appropriate conditions to the approval of the petition. Any such conditions should relate to the relationship of the proposed use to the impact on the following details:

1. Town services
2. Surrounding property
3. Proposed support facilities such as parking areas and driveways
4. Pedestrian and vehicular circulation systems
5. Screening and buffer areas
6. Timing of development
7. Street and right-of-way improvements
8. Infrastructure improvements (i.e. water)
9. Provision of open space
10. Other matters that the participants in the public input meeting, staff, Planning & Zoning Commission, and Town Council find appropriate or the petitioner may propose

If the applicant does not agree with the Planning & Zoning Commission or staff's recommendations for additional conditions, the Town Council shall have the authority to accept none, any, or all the conditions forwarded from the review process.

Proposed Conditions:

1. Provide for an easement or maintenance agreement for the portion of the sidewalk on private property.
2. Provide lighting for the streets and sidewalks on the side of the building.
3. Lighting shall be angled downward so as not to present a hazard to drivers, pedestrians, or sea turtles, and so as not to create a nuisance to neighboring properties.
4. Electrical lines shall be buried.
5. A total of 13 street trees are required.
6. Install recommendations from the Traffic Impact Analysis.
7. CAMA Major Permit, State Stormwater Permit, Soil and Erosion Control Permit required.
8. Pave oceanfront portion of Pelican Lane right-of-way and provide two public golf cart parking spaces.
9. Provide 5' sidewalks and crosswalks around the entire project, including the oceanfront portion of Pelican Lane.
10. No parking spaces, fences, walls, posts, signs, lights, shrubs, or trees shall be permitted in the sight distance triangle.
11. All proposed signage requires a sign permit and shall be compliant with the dimensional and location requirements per the Town's UDO.
12. Recombination plat is required prior to building permit issuance.
13. The building shall be designed to meet VE 16 and AE 11 standards.

Land Use Plan:

The project is in general conformity with the 2020 Land Use Plan. The properties are shown in the Downtown Business area on the Future Land Use Map. This character area contains the boardwalk commercial area and central recreation district of town. Three to four-story buildings are recommended and maintain a pedestrian-scale environment with active ground floor uses; residential and other uses permitted above with limited on-street parking.

ACTION REQUESTED:

Consider recommending approval or denial of a conditional zoning hotel project located at 223, 225, 227, 234, 235, 236, 237, 239 Carolina Beach Avenue North

Staff recommend approval of the project with conditions.

MOTION:

Approval - whereas in accordance with the provisions of the NCGS, the Commission does hereby find and determine that the adoption of the Conditional Zoning District to allow for a hotel located at 223, 225, 227, 234, 235, 236, 237, 239 Carolina Beach Avenue North is consistent with the goals and objectives of the adopted Land Use Plan and other long-range plans and the potential impacts on the surrounding area, are mitigated by the approved conditions.

Denial - based on inconsistencies with the goals and objectives of the adopted Land Use Plan and/or other long-range planning documents and the potential impacts on the surrounding areas.

Please complete all sections of the application.

A. Property Information

Address(es): 223, 225, 227 N. Carolina Beach Ave.

PIN(s): R09006-005-015-000, R09006-005-016-000, R09006-005-019-000

Project Name Harmony Hotel and Pavilion at Carolina Beach

Size of lot(s): Total these properties: 0.64 Acres

B. Application for Conditional Zoning

Application is hereby made for a Conditional Zoning for use of the property described above as a (please provide a brief description of the use):

Hotel and associated on-site uses, including parking, restaurant / bar, and meeting / assembly uses.

C. Applicant Contact Information

Company/corporate Name (if applicable):

Page and Amy Johnson
Applicant's Name

1300 Diamond Springs Rd. Suite 204
Mailing Address

Virgina Beach, VA 23455
City, State, and Zip Code

757-363-9671
Telephone

PAGE.JOHNSON@HARMONYCOMPANIES.COM
Email

D. Owner Contact Information (if different)

Owner's Name

Mailing Address

City, State, and Zip Code

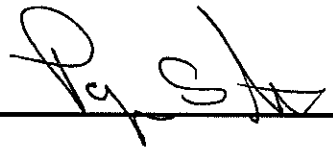
Telephone

Email

SUPPLEMENTAL INFORMATION REQUIRED WITH THE APPLICATION

1. Detailed project narrative describing the proposed site and request.
2. Agent form if the applicant is not the property owner.
3. Request for site specific vesting plan shall be submitted in accordance with Chapter 40 Article XIII

OWNER'S SIGNATURE: In filing this application for a conditional zoning, I/we as the property owner(s), hereby certify that all of the information presented in this application is accurate to the best of my knowledge, information and belief.



6/11/25

Signature **Date**

AUTHORITY FOR APPOINTMENT OF PERSON TO ACT ON MY BEHALF

The undersigned owner, Page and Amy Johnson, does hereby appoint Paramounte Engineering, Inc. to act on my behalf for the purpose of petitioning the Town of Carolina Beach for: a) an amendment to the text regulations; b) a change to the zoning map; and/or c) street closing, as applicable to the property described in the attached petition. The owner does hereby covenant and agree with the Town of Carolina Beach that said person has the authority to do the following acts for and on behalf of the owner: (1) To submit a proper petition and the required supplemental materials: (2) To appear at public meetings to give testimony and make commitments on behalf of the owner; and (3) In the case of conditional zoning, to accept conditions or recommendations made for the conditional zoning on the owner's property. (4) To act on the owner's behalf without limitations with regard to any and all things directly or indirectly connected with or arising out of any petition. This appointment agreement shall continue in effect until final disposition of the petition submitted in conjunction with this appointment.

Date: 6/11/25

Appointee's Name, Address & Telephone:

Paramounte Engineering, Inc.
122 Cinema Dr.
Wilmington, NC 28403

Signature of Owner: _____

Please complete all sections of the application.

A. Property Information

Address(es): 235, 237, 239 N. Carolina Beach Ave.

PIN(s): R09006-005-020-000, R08818-019-001-000, R08818-019-002-000

Project Name Harmony Hotel and Pavilion at Carolina Beach

Size of lot(s): Total these properties: 0.54 Acres

B. Application for Conditional Zoning

Application is hereby made for a Conditional Zoning for use of the property described above as a (please provide a brief description of the use):

Hotel and associated on-site uses, including parking, restaurant / bar, and meeting / assembly uses.

C. Applicant Contact Information

Carolina Beach Land - West, LLC
Company/corporate Name (if applicable):

PAGE S. JOHNSON
Applicant's Name

1300 Diamond Springs Rd. Suite 204
Mailing Address

Virgina Beach, VA 23455
City, State, and Zip Code

757-363-9671
Telephone

PAGE.JOHNSON@HARMONYCOMPANIES.COM
Email

D. Owner Contact Information (if different)

Owner's Name

Mailing Address

City, State, and Zip Code

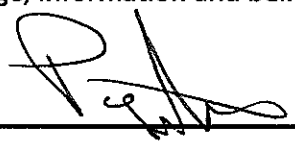
Telephone

Email

SUPPLEMENTAL INFORMATION REQUIRED WITH THE APPLICATION

1. Detailed project narrative describing the proposed site and request.
2. Agent form if the applicant is not the property owner.
3. Request for site specific vesting plan shall be submitted in accordance with Chapter 40 Article XIII

OWNER'S SIGNATURE: In filing this application for a conditional zoning, I/we as the property owner(s), hereby certify that all of the information presented in this application is accurate to the best of my knowledge, information and belief.



10/1/25

Signature **Date**

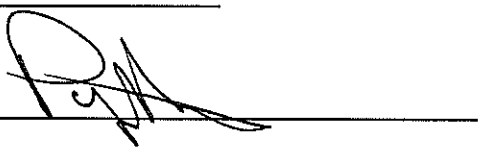
AUTHORITY FOR APPOINTMENT OF PERSON TO ACT ON MY BEHALF

The undersigned owner, Carolina Beach Land - West, LLC, does hereby appoint Paramounte Engineering, Inc. to act on my behalf for the purpose of petitioning the Town of Carolina Beach for: a) an amendment to the text regulations; b) a change to the zoning map; and/or c) street closing, as applicable to the property described in the attached petition. The owner does hereby covenant and agree with the Town of Carolina Beach that said person has the authority to do the following acts for and on behalf of the owner: (1) To submit a proper petition and the required supplemental materials: (2) To appear at public meetings to give testimony and make commitments on behalf of the owner; and (3) In the case of conditional zoning, to accept conditions or recommendations made for the conditional zoning on the owner's property. (4) To act on the owner's behalf without limitations with regard to any and all things directly or indirectly connected with or arising out of any petition. This appointment agreement shall continue in effect until final disposition of the petition submitted in conjunction with this appointment.

Date: 6/11/25

Appointee's Name, Address & Telephone:

Paramounte Engineering, Inc.
122 Cinema Drive
Wilmington, NC 28403

Signature of Owner: 

Please complete all sections of the application.

A. Property Information

Address(es): 234 and 236 N. Carolina Beach Ave.

PIN(s): R09006-006-001-000 and R08818-018-001-000

Project Name Harmony Hotel and Pavilion at Carolina Beach

Size of lot(s): Total these properties: 0.57 Acres

B. Application for Conditional Zoning

Application is hereby made for a Conditional Zoning for use of the property described above as a (please provide a brief description of the use): Hotel and associated on-site uses, including parking, restaurant / bar, and meeting / assembly uses.

C. Applicant Contact Information

Carolina Beach Land - East, LLC
Company/corporate Name (if applicable):

Page S. Johnson
Applicant's Name

1300 Diamond Springs Rd., Suite 204
Mailing Address

Virginia Beach, VA 23455
City, State, and Zip Code

(757) 363-9671
Telephone

Page.Johnson@HarmonyCcompanies.com
Email

D. Owner Contact Information (if different)

Owner's Name

Mailing Address

City, State, and Zip Code

Telephone

Email

SUPPLEMENTAL INFORMATION REQUIRED WITH THE APPLICATION

1. Detailed project narrative describing the proposed site and request.
2. Agent form if the applicant is not the property owner.
3. Request for site specific vesting plan shall be submitted in accordance with Chapter 40 Article XIII

OWNER'S SIGNATURE: In filing this application for a conditional zoning, I/we as the property owner(s), hereby certify that all of the information presented in this application is accurate to the best of my knowledge, information and belief.

8/13/25

Signature **Date**

Carolina Beach Hotel, LLC
Land Details

Ownership / Address	Parcel ID
Page & Amy Johnson	
223 N Carolina Beach Avenue	R09006-005-015-000
225 N Carolina Beach Avenue	R09006-005-016-000
227 N Carolina Beach Avenue	R09006-008-019-000
Carolina Beach Land - East, LLC	
234 N Carolina Beach Avenue	R09006-006-001-000
236 N Carolina Beach Avenue	R08818-018-001-000
Carolina Beach Land - West, LLC	
235 N Carolina Beach Avenue	R09006-005-020-000
237 N Carolina Beach Avenue	R08818-019-001-000
239 N Carolina Beach Avenue	R08818-019-002-000

PARAMOUNTE
ENGINEERING, INC.

Harmony Hotel & Pavilion at Carolina Beach
Conditional Zoning Narrative

Subject Site

Address(s): 223, 225, 227, 235, 237, & 239 Carolina Beach Avenue N. (6 parcels)

Tax Parcels: R08818-019-002-000, R08818-019-001-000, R090006-005-020-000, R09006-005-019-000, R09006-005-016-000, R09006-005-015-000

Total Size: +/- 1.18 Acres Combined

Applicant/Owner Information

Harmony Hospitality, Inc.
Page S. Johnson, II, President
1300 Diamond Springs Rd., Ste. 204
Virginia Beach, VA 23455
(757) 363-9671

Carolina Beach Land West, LLC
1300 Diamond Springs Rd., Ste. 24
Virginia Beach, VA 23455

Agent Information

Paramounte Engineering, Inc.
122 Cinema Drive
Wilmington, NC 28403
910-791-6707

Proposal

The Applicant is seeking approval of a Conditional Zoning Application to construct a 140 room Hotel and associated on-site uses, including a 2,599 SF meeting space. The request for Conditional Zoning is required because the proposed structure would exceed 50' in height and the proposed use is a hotel.

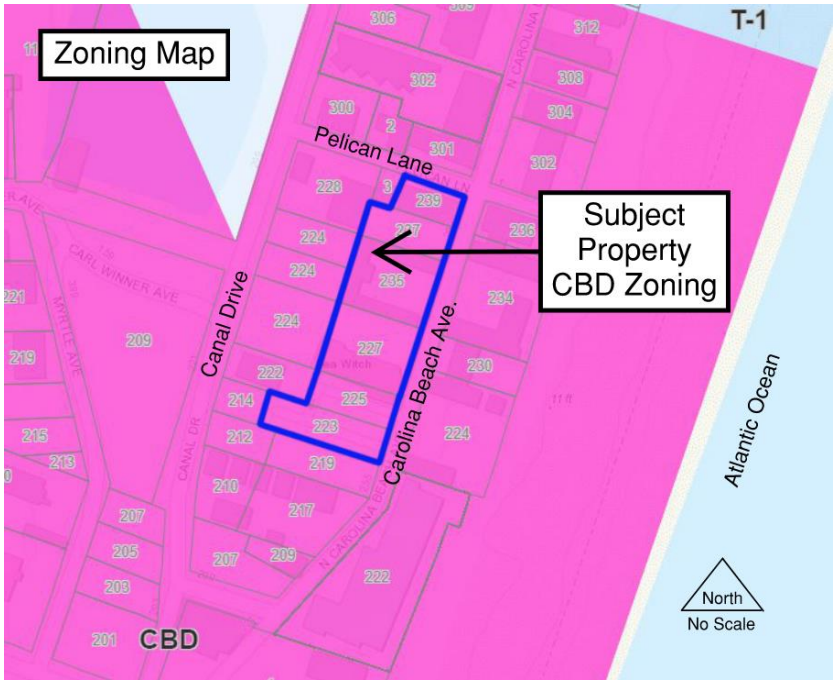
The subject site has frontages on two streets, Carolina Beach Avenue N. and Pelican Lane and consists of six parcels totaling approximately 1.18 acres of land. The subject site was previously used for restaurant, lodging, and parking uses.

This proposal conforms to the Town of Carolina Beach's Code of Ordinances and Zoning Map and is consistent with the Community Goals and Objectives of the Carolina Beach Coastal Area Management Act (CAMA) Land Use Plan and Future Land Use Map (2020) and the Master Development Plan for the Town of Carolina Beach (2008).

Narrative

The subject site is currently zoned Central Business District (CBD), a commercial district that accommodates a wide variety of pedestrian-oriented, commercial and service activities, including retail, business, office, professional, financial, entertainment, and tourism. On all

sides of the subject property, the adjacent properties along Carolina Beach Avenue and Pelican Lane are also zoned CBD.



In the CBD, the maximum 50-footheight limitation may be exceeded for sprinklered structures. Additionally, the CBD zoning district permits Motels and Hotels with a Conditional Zoning application. The proposed structure will be constructed with fire sprinklers allowing it to exceed the 50' height limit and the proposed uses are supported, encouraged, and conform with the town's Code of Ordinances and Zoning Map.

The Town's 2020 CAMA Land Use Plan and Future Land Use Map (FLUM) projects the desired, general arrangement of land uses into the future of Carolina Beach. The FLUM states support for uses in the CBD that develop this district as a downtown destination with activities for families, residents, and visitors; and expanding opportunities for public activities, including events, should be pursued. Specific Goals and Objectives of the FLUM that are supportive of the proposed project include:

- *"Sustain a healthy and vibrant locally oriented economy that respects tourism":*
  The proposed project will invigorate and support the local economy by providing visitor-serving overnight accommodation, activate the downtown as a destination and provide opportunities for public activities and events with meeting space.

- *"Increase Pedestrian Mobility and Connectivity" (Provide Public Sidewalks):*
  The project will enhance and increase pedestrian safety by providing public sidewalks on Pelican Lane and Carolina Beach Avenue and include a pedestrian crossing at Carolina Beach Avenue to access the beach. This effectively creates a pedestrian safe corridor from the harbor to the oceanfront enhancing visitor safety.

Due to the narrow public rights-of-way on both Carolina Beach Avenue and Pelican Lane, the proposed project will provide accommodation to allow the 5' public sidewalk to extend onto private property. This will allow a full-width sidewalk to occur on these streets, where otherwise there is not adequate room in the public right of way to provide these pedestrian enhancements.

In exchange for allowing the public sidewalk to extend onto private property, the applicant is requesting flexibility to the requirements for street trees on Carolina Beach Ave. and Pelican Lane. The ordinance requires trees at 50' intervals on the project's street frontages. In this case, the total number of trees required is eight.

However, due to the sidewalk encroachment onto private property there are areas along Carolina Beach Ave, and Pelican Lane where street trees can't be accommodated. The applicant is seeking flexibility in the street tree plantings by decreasing the number of trees on these streets by half the requirement. The proposed landscape plan illustrates the location of the proposed street trees, four in total, at the north and south end of the proposed hotel, which are provided to satisfy the required street tree planting requirements. The result of this flexibility will allow the applicant to provide the total number of trees that are required and also accommodate the public sidewalk on private property.

- *"Increase safe non-motorized connectivity to activity centers in general, and to downtown specifically"*:
  The project supports non-automobile transportation by providing golf cart parking and encourages bicycle use in the community with bicycle parking facilities.

The Master Development Plan for the Town of Carolina Beach (Master Plan) was adopted in 2008 and provides recommendations and goals to create a mix of uses, support economic development, encourage a unique built environment, protect natural resources and facilitate multi-modal circulation within the CBD zoning district. This plan reinforces goals and objectives that support economic development and the tourism industry, specifically through the enhancement of pedestrian facilities and tourism-supportive facilities such as lodging and parking. The plan also calls for increased building height allowances and stepped vertical setback requirements.

The proposed project addresses many of the Master Plan's goals and objectives and is designed to meet the plans "Key Urban Design Principles" as follows:

- *Goal #1 Land Use: "Encourage a mix of land uses in Carolina Beach that support the needs and desires of residents and visitors."*
  Objective: "To provide a full range of amenities, attractions and services that will enhance Carolina Beach as a destination for visitors."

- *Goal #2 Economic Development: "Enhance economic development opportunities in Carolina Beach in a manner that improves the livability of the Town for residents and its attraction as a destination for visitors."*
  - *Objective:* "To create a business and investment atmosphere that results in a stable economic environment and encourages high quality developments offering a variety of services and retail opportunities."

- *Goal #3 Urban Form: "Create an urban form in the Central Business District (CBD) that strengthens the unique character of Carolina Beach and encourages appropriate and sustainable development."*
  - *Objective: "To establish Carolina Beach as an attractive and welcoming oceanfront community with new development that is well planned and designed."*

The proposed project supports Land Use Goal #1 of the town's Master Plan by providing a new hotel with meeting space (*"amenities, attractions and services"*) that will promote Carolina Beach as a destination for visitors. Economically (Goal #2), the proposed hotel will generate revenue for the town through increased Room Occupancy Tax and support businesses by retaining visitors longer with overnight or extended visits that capture additional dollars spent in the community at local restaurants, shops and other businesses.

To address Urban Form, Goal #3, the proposed project will be designed architecturally to reflect many of the Key Urban Design Principals identified in the Master Plan to create a project that is appropriately scaled, pedestrian-friendly, and able to accommodate its intended uses. The Master Plan provides "Key Guidelines" for building design that are incorporated in the proposed architecture, including:

- Buildings should be designed to express a clearly defined base, mid-section and crown. The base of the building should extend no higher than the top of the 3rd floor and should be articulated with an architectural cornice feature.
- Tall buildings should be orientated perpendicular to the beach to maximize "windows" to the ocean and convey a mass that is more narrow than wide.
- Buildings should be located at the street edge to create a well-defined "urban wall," sense of enclosure and strong relationship to the public realm.
- Building entrances should be highlighted and clearly defined with enhanced architectural treatment.
- Buildings should express a dominant horizontal line.

Parking is an important aspect that defines the Urban Form and the proposed project provides all the required motor vehicle parking either on site, or on the adjacent parking lot that is owned by the project applicant. In the future, when the applicant redevelops the existing parking lot, parking will be included to support the needs of the hotel in conformance with the town ordinances.

Conclusion

The Applicant is seeking approval of a Conditional Zoning Application to construct a high-quality hotel and associated on-site uses that will be both resident and visitor serving. The project is zoned to allow the proposed use and meets all the requirements set forth in the town ordinances and will provide fire sprinkler systems as required to exceed the 50' height limit as allowed by code. Furthermore, the proposed project incorporates elements to address key community goals and objectives of land use, economic development and urban form as defined in the Carolina Beach Coastal Area Management Act (CAMA) Land Use Plan and Future Land Use Map (2020) and the Master Development Plan for the Town of Carolina Beach (2008). All parking is provided on site or at the existing adjacent parking lot that is owned by the project applicant. The project also includes provisions for golf cart and bicycle parking. The proposed project will support local businesses and residents and will welcome visitors to Carolina Beach as their destination of choice by offering high-quality experiences, services and opportunities.

HARMONY HOTEL AND PAVILION AT CAROLINA BEACH

N. CAROLINA BEACH AVENUE
CAROLINA BEACH, NORTH CAROLINA

CONDITIONAL ZONING APPLICATION PLANS
SEPTEMBER 22, 2025

PROJECT APPLICANT:

HARMONY HOSPITALITY, INC.
1300 DIAMOND SPRINGS RD., STE 204
VIRGINIA BEACH, VA 23455

PRELIMINARY - NOT ISSUED FOR CONSTRUCTION

HARMONY HOTEL AND PAVILION
AT CAROLINA BEACH
CAROLINA BEACH, NORTH CAROLINA

PROJECT # 23329.PE	SEPTEMBER 22, 2025

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
	COVER SHEET
SV-1 - SV-2	EXISTING CONDITIONS
C-2.0	OVERALL SITE PLAN
C-2.1 - C-2.2	DETAILED SITE PLANS
L-2.0	LANDSCAPE PLAN
A101, A102, A 201 & A901	FULL-SERVICE HOTEL PRELIMINARY FLOOR PLANS & EXTERIOR ELEVATIONS
A101, A102, A 201 & A901	OCEANFRONT PAVILION PRELIMINARY FLOOR PLANS & EXTERIOR ELEVATIONS

PROJECT CONSULTANTS

CIVIL ENGINEER / LANDS SURVEYOR / LANDSCAPE ARCHITECT:

PARAMOUNTE ENGINEERING, INC.
ENGINEER: ROB BALLAND, PE
SURVEYOR: JOSH TAYLOR, PLS
LANDSCAPE ARCHITECT: MIKE NICHOLS, RLA
122 CINEMA DRIVE
WILMINGTON, NC 28403
PHONE: (910) 791-6707

ARCHITECT:

BECKER MORGAN GROUP
DAVID BOTSCHELLER, AIA
333 JAECKLE DRIVE, SUITE 210
WILMINGTON, NC 28403
PHONE: (910) 341-7506

PREPARED BY:

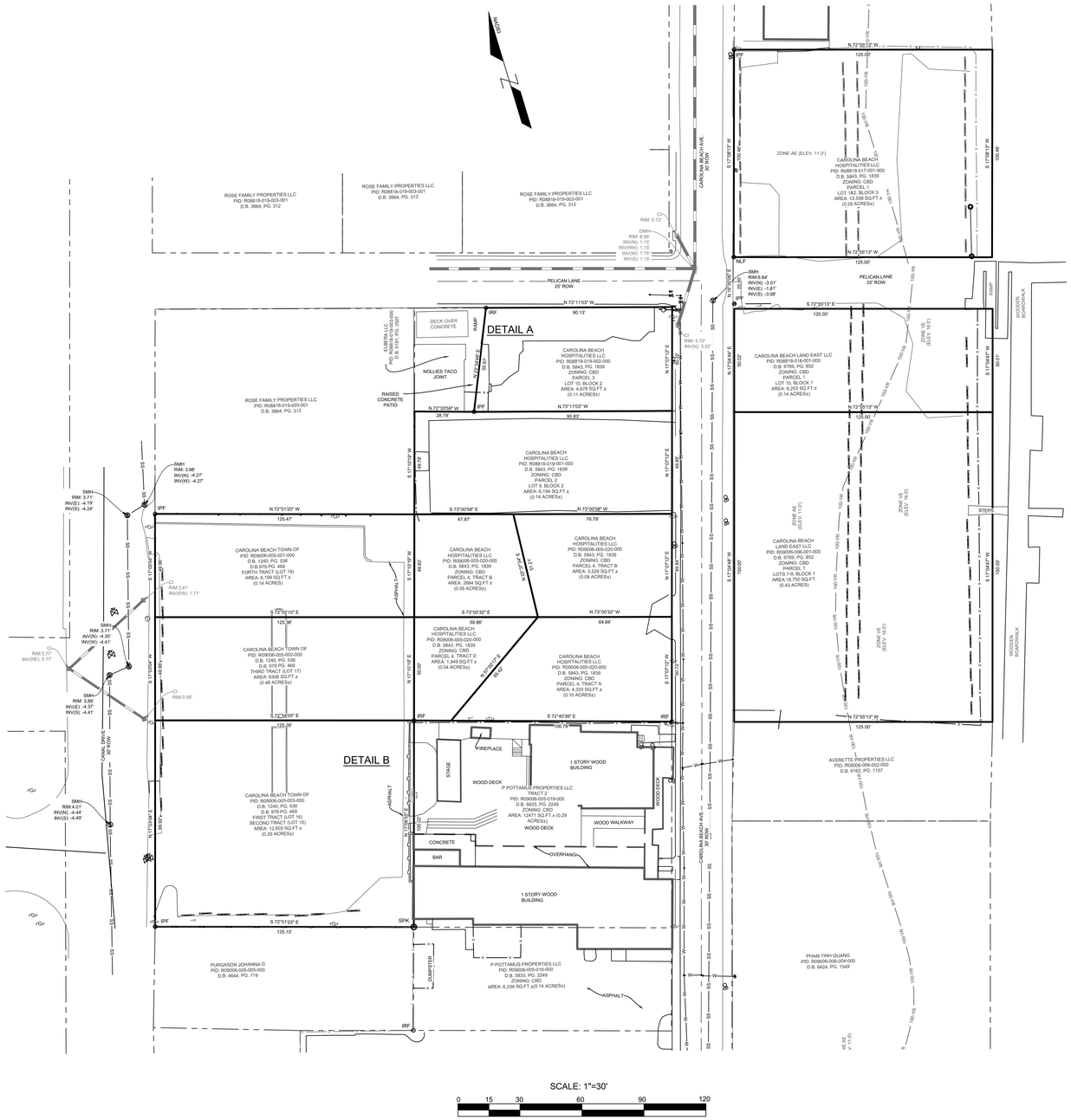
PARAMOUNTE
ENGINEERING, INC.
122 Cinema Drive Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

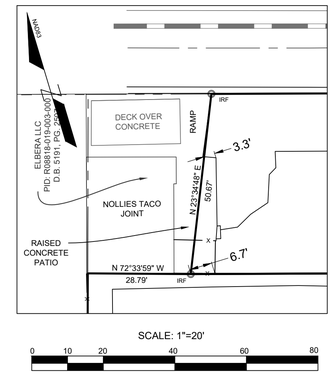
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND

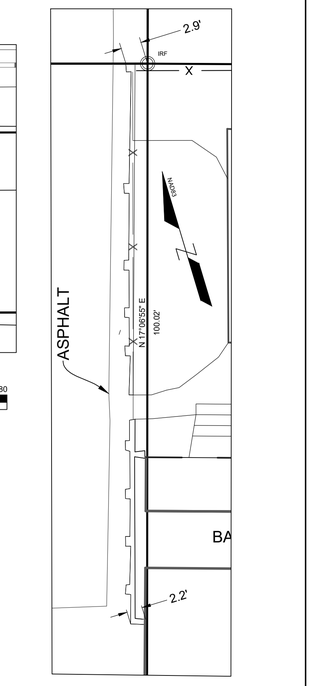
09/22/2025

NOTES

1. AREA CALCULATED BY COORDINATE METHOD.
2. HORIZONTAL (NAD 83-2011) AND VERTICAL (NAVD 88) DATA WERE ESTABLISHED UTILIZING A TOPCON HIPER-V GPS RECEIVER OPERATING IN VRS MODE WITH REPEAT OBSERVATIONS.
3. THIS PARCEL IS LOCATED IN ZONE AE (BFE = 11.0) – A SPECIAL FLOOD HAZARD AREA - AS SHOWN ON FEMA FLOOD MAP NO. 3720313000K BEARING AN EFFECTIVE DATE OF 8/28/2018.
4. UTILITIES AS SHOWN ARE PLOTTED FROM INFORMATION VISIBLE IN THE FIELD AND FROM INFORMATION PROVIDED BY UTILITY COMPANIES. ADDITIONAL UTILITIES NOT SHOWN MAY EXIST. THE APPROPRIATE UTILITY COMPANIES SHOULD BE CONTACTED PRIOR TO LAND DISTURBING ACTIVITIES.
5. THIS LOT IS SUBJECT TO ALL UTILITY EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
6. DETAILS A & B ILLUSTRATE ENCROACHMENTS AS SHOWN HEREON.







LEGEND:

IPF	IRON PIPE FOUND
IRF	IRON ROD FOUND
	IRON ROD SET
SPK	SPIKE FOUND
PKS	PK NAIL SET
TV	TV RISER
TR	TRANSFORMER
	LIGHT POLE
	POWER POLE
	GUY ANCHOR
	TELEPHONE RISER
	WATER METER
	WATER VALVE
	FIRE HYDRANT
	CLEAN-OUT
S	SANITARY SEWER MANHOLE
D	STORM DRAINAGE MANHOLE
W	WELL
	CURB INLET
	CATCH BASIN
	BOUNDARY LINE
	ADJOINING BOUNDARY LINE
	RIGHT OF WAY
100-YR	100-YR FLOOD LINE

CERTIFICATE OF ACCURACY AND MAPPING

I, GLENN AYALA, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTIONS RECORDED IN THE REFERENCES NOTED ON THIS DRAWING); THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS DASHED LINES AS DRAWN FROM INFORMATION NOTED; THAT THE RATIO OF PRECISION IS 1:10,000; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56. 1600). THIS _____ DAY OF _____, A.D., _____.

I, GLENN AYALA, CERTIFY THAT THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND OR ONE OR MORE EXISTING EASEMENTS AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.

GLENN AYALA, PLS LICENSE NO. L-5264

REVISIONS:

CLIENT INFORMATION:

CAROLINA BEACH HOSPITALITIES LLC
2318 CROWN CENTRE DR.
CHARLOTTE, NC 28227

PARAMOUNT ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

CAROLINA BEACH HOSPITALITIES
EXISTING CONDITIONS
DEED BOOK 5843, PAGE 1839

FEDERAL POINT TOWNSHIP
NEW HANOVER COUNTY, NC

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

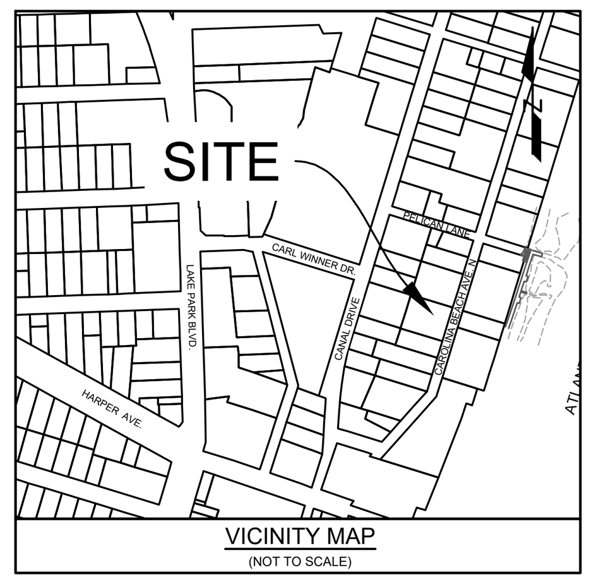
DRAWING INFORMATION
DATE: 11/21/23
SCALE: 1"= 30'
DESIGNED: GA
DRAWN: JWT
CHECKED:

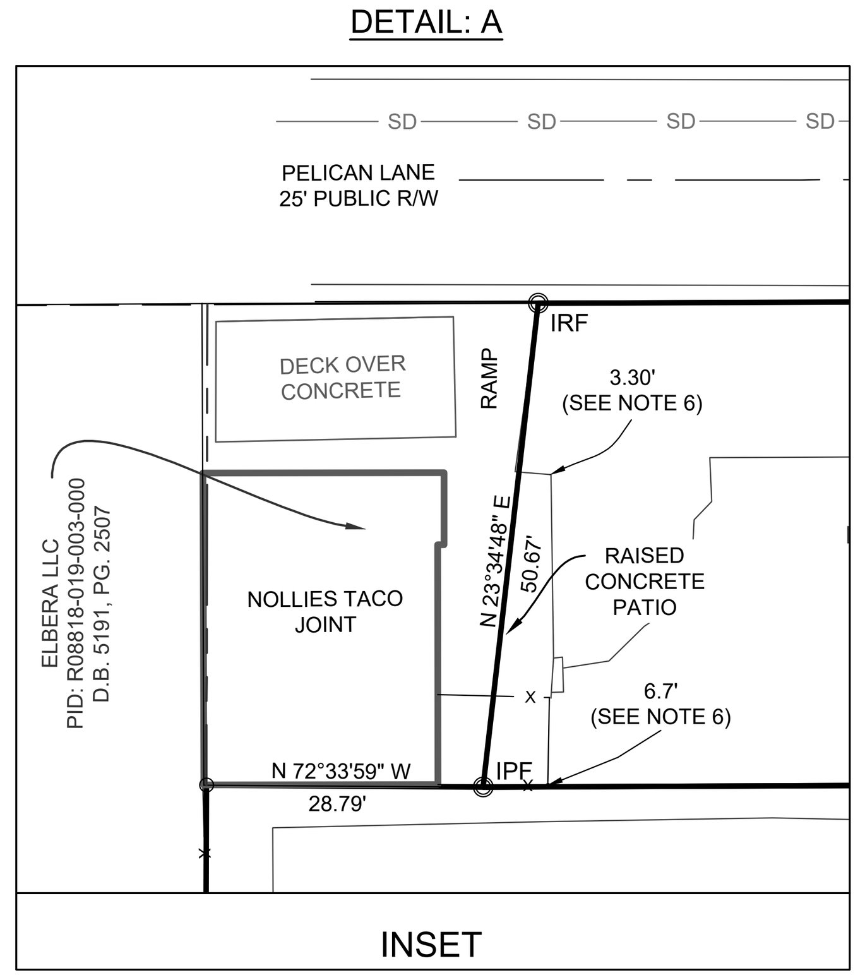
SEAL

PRELIMINARY DRAWING DO NOT USE FOR CONSTRUCTION, RECORDATION, CONVEYANCES, OR SALES.

SV-1

PEI JOB#: 0000.PE





INSET SCALE: 1"=20'

0 10 20 40 60 80

NOTES

1. AREA CALCULATED BY COORDINATE METHOD.
2. HORIZONTAL (NAD 83-2011) AND VERTICAL (NAVD 88) DATA WERE ESTABLISHED UTILIZING A TOPCON HIPER-V GPS RECEIVER OPERATING IN VRS MODE WITH REPEAT OBSERVATIONS.
3. PORTIONS OF THIS PARCEL ARE LOCATED IN ZONE AE (BFE = 11.0) , AND ZONE VE (ELEV. 16.0') -A SPECIAL FLOOD HAZARD AREA - AS SHOWN ON FEMA FLOOD MAP NO. 3720313000K BEARING AN EFFECTIVE DATE OF 8/28/2018.
4. UTILITIES AS SHOWN ARE PLOTTED FROM INFORMATION VISIBLE IN THE FIELD AND FROM INFORMATION PROVIDED BY UTILITY COMPANIES. ADDITIONAL UTILITIES NOT SHOWN MAY EXIST. THE APPROPRIATE UTILITY COMPANIES SHOULD BE CONTACTED PRIOR TO LAND DISTURBING ACTIVITIES.
5. THIS LOT IS SUBJECT TO ALL UTILITY EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
6. CONCRETE PATIO AND FENCE ALONG THE EASTERN SIDE OF THE ELBERA LLC PROPERTY PROJECT ACROSS PROPERTY LINE AS SHOWN IN INSET. CONCRETE PARKING PAD AND MULTIPLE FENCES PROJECT ACROSS THE NORTHERN LINE OF THE AVERETTE PROPERTIES LLC PROPERTY AS SHOWN HEREON.
7. MAP BOOK 3, PAGE 67 DOES NOT SHOW ANY EASEMENTS OR SETBACKS. TOWN OF CAROLINA BEACH DOES NOT HAVE SETBACKS FOR SUBJECT PARCELS IN THE CBD ZONING AREA.
8. NO ENVIRONMENTAL SURVEY DATA WAS PROVIDED TO THE SURVEYOR AND NO WETLAND OR OTHER DELINEATION FLAGS OR MARKERS WERE VISIBLE AT THE TIME OF THE SURVEY.

EXHIBIT "A"

SITUATED IN THE TOWN OF CAROLINA BEACH, STATE OF NORTH CAROLINA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT:

PARCEL NO. 1:

234, 236 AND 302 CAROLINA BEACH AVENUE NORTH (FORMERLY ERRONEOUSLY DESCRIBED AS 234, 236 AND 300 LAKE PARK BOULEVARD SOUTH IN THAT DEED FROM SURFSIDE PROPERTIES, LLC. TO ARCADIUS DEVELOPMENT, LLC, RECORDED IN BOOK 4972, AT PAGE 2530)

PARCEL NOS. 09006-006-001-000; R088 I 8-017-001-000 AND R08818-018-001-000

ALL OF LOTS 7, 8, 9 AND IN BLOCK 1 AND ALL OF LOTS 1 AND 2 IN BLOCK 3 OF THE TOWN OF CAROLINA BEACH AS THE SAME ARE SHOWN ON MAP RECORDED IN MAP BOOK 3 AT PAGE 67 IN THE NEW HANOVER COUNTY REGISTRY; REFERENCE TO SAID PLAT IS HEREBY MADE FOR A FURTHER AND MORE ACCURATE METES AND BOUNDS DESCRIPTION.

PARCEL NO. 2:

237 CAROLINA BEACH AVENUE NORTH - PARCEL NO. R08818-019-001-000

BEGINNING AT THE POINT WHERE THE WESTERN LINE OF CAROLINA BEACH AVENUE, NORTH, IS INTERSECTED BY THE DIVIDING LINE BETWEEN LOTS 9 AND 10 IN BLOCK 2 OF SAID TOWN, AS SHOWN ON MAP RECORDED IN MAP BOOK 3 AT PAGE 67 IN THE NEW HANOVER COUNTY REGISTRY; RUNNING THENCE WESTWARDLY ALONG SAID DIVIDING LINE AND PERPENDICULAR TO CAROLINA BEACH AVENUE NORTH, 125 FEET; THENCE SOUTHWARDLY AND PARALLEL WITH CAROLINA BEACH AVENUE NORTH, 50 FEET; THENCE EASTWARDLY AND PERPENDICULAR TO CAROLINA BEACH AVENUE NORTH, 125 FEET TO THE WESTERN LINE OF CAROLINA BEACH AVENUE NORTH; THENCE NORTHWARDLY ALONG SAID WESTERN LINE OF SAID AVENUE 50 FEET TO THE POINT OF BEGINNING, THE SAME BEING ALL OF THE LOT 9 AND THE EASTERN PORTION OF LOT 19 IN BLOCK 2 OF THE TOWN OF CAROLINA BEACH AS SHOWN ON THE ABOVE MENTIONED MAP.

PARCEL NO. 3:

239 CAROLINA BEACH AVENUE NORTH - PARCEL NO. R08818-019-002-000

BEGINNING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF CAROLINA BEACH AVENUE NORTH AND FIRST AVENUE; RUNNING THENCE WESTWARDLY IN THE SOUTHERN LINE OF FIRST AVENUE, 90 FEET TO THE FORMER HIGH WATER MARK OF MYRTLE GROVE SOUND, THENCE SOUTHWARDLY ALONG SAID FORMER HIGH WATER MARK ABOUT 50 FEET, THENCE EASTWARDLY AND PARALLEL WITH FIRST AVENUE, 96 FEET TO THE WESTERN LINE OF CAROLINA BEACH AVENUE NORTH, THENCE NORTHWARDLY IN THE WESTERN LINE OF CAROLINA BEACH AVENUE NORTH, 50 FEET TO THE POINT OF BEGINNING, BEING ALL OF LOT 10, BLOCK 2, ACCORDING TO THE MAP OF THE NORTHERN SECTION OF CAROLINA BEACH PREPARED BY M. H. LANDER, C.E., DATED JUNE 1, 1939, AND RECORDED IN MAP BOOK 3 AT PAGE 67 IN THE NEW HANOVER COUNTY REGISTRY.

PARCEL NO. 4:

235 CAROLINA BEACH AVENUE NORTH - PARCEL NO. R09006-005-020-000

TRACT A

BEGINNING AT A POINT IN THE WESTERN LINE OF CAROLINA BEACH AVENUE ONE HUNDRED AND FIFTY (150) FEET SOUTHWARDLY FROM WHERE THE SOUTHERN LINE OF FIRST AVENUE INTERSECTS CAROLINA BEACH AVENUE, AND RUNNING THENCE WESTWARDLY AND PARALLEL WITH FIRST AVENUE SIXTY FIVE (65) FEET: THENCE IN A SOUTHWESTWARDLY DIRECTION TO A POINT IN THE BOUNDARY LINE BETWEEN LOT 7 AND LOT 6 IN BLOCK 2 OF CAROLINA BEACH, WHICH SAID POINT IS LOCATED ONE HUNDRED AND SEVEN (107) FEET WESTWARDLY FROM THE WESTERN BOUNDARY OF CAROLINA BEACH AVENUE; RUNNING THENCE EASTWARDLY AND PARALLEL WITH FIRST AVENUE ONE HUNDRED AND SEVEN (107) FEET TO THE WESTERN BOUNDARY OF CAROLINA BEACH AVENUE. AND RUNNING THENCE NORTHWARDLY ALONG THE WESTERN LINE OF CAROLINA BEACH AVENUE FIFTY (50) FEET TO THE POINT OF BEGINNING, SAME BEING A PORTION OF LOT 7 IN BLOCK 2 ACCORDING TO THE OFFICIAL PLAN OF CAROLINA BEACH.

TRACT B

BEGINNING AT A POINT IN THE WESTERN LINE OF CAROLINA BEACH AVENUE ONE HUNDRED (100) FEET SOUTHWARDLY FROM WHERE THE SOUTHERN LINE OF FIRST AVENUE INTERSECTS CAROLINA BEACH AVENUE AND RUNNING THENCE WESTWARDLY AND PARALLEL WITH FIRST AVENUE, SEVENTY SEVEN (77) FEET; THENCE IN A SOUTHWARDLY DIRECTION TO A POINT IN THE BOUNDARY LINE BETWEEN LOT 7 AND LOT 8 IN BOOK 2 OF CAROLINA BEACH, WHICH SAID POINT IS LOCATED SIXTY FIVE (65) FEET WESTWARDLY FROM THE WESTERN BOUNDARY OF CAROLINA BEACH AVENUE: RUNNING THENCE EASTWARDLY AND PARALLEL WITH FIRST AVENUE SIXTY-LIVE (65) FEEL TO THE WESTERN BOUNDARY OF CAROLINA BEACH AVENUE, AND RUNNING THENCE NORTHWARDLY ALONG THE WESTERN BOUNDARY OF CAROLINA BEACH AVENUE FIFTY (50) FEET TO THE POINT OF BEGINNING, THE SAME BEING A PORTION OF LOT 8 IN BLOCK 2 ACCORDING TO THE OFFICIAL PLAN OF CAROLINA BEACH.

THE TWO ABOVE MENTIONED TRACTS OF LAND ARE SHOWN ON A MAP PREPARED BY J. L. BECTON. C.E. AND RECORDED IN BOOK 72 AT PAGES 32 AND 33 AND LATER, JANUARY, 1939: CHECKED BY M. H. LANDER, C.E., AND RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS OF NEW HANOVER COUNTY IN MAP BOOK 3, PAGE 67.

TRACT C

BEGINNING AT A POINT IN THE DIVIDING LINE BETWEEN LOTS 18 AND 19 IN BLOCK 2 ACCORDING TO MAP OF PORTION OF CAROLINA BEACH, RECORDED IN MAP BOOK 3, PAGE 67 OF THE NEW HANOVER COUNTY REGISTRY, 125 FEET EASTWARDLY FROM THE INTERSECTION OF SAID DIVIDING LINE WITH THE EASTERN LINE OF CANAL DRIVE; RUNNING THENCE EASTWARDLY ALONG SAID DIVIDING LINE, 48 FEET, MORE OR LESS, TO THE WESTERN LINE OF LOT NO. 8 IN SAID BLOCK 2, AS APPEARS ON SAID MAP; THENCE SOUTHWARDLY ALONG SAID WESTERN LINE OF SAID LOT 8 IN SAID BLOCK 2. TO THE DIVIDING LINE BETWEEN LOTS 17 AND 18 IN SAID BLOCK, AT A POINT I 85 FEET EASTWARDLY FROM THE INTERSECTION OF SAID DIVIDING LINE WITH THE EASTERN LINE OF CANAL DRIVE; THENCE WESTWARDLY 60 FEET TO A POINT IN SAID DIVIDING LINE 125 FEET EASTWARDLY FROM THE EASTERN LINE OF CANAL DRIVE, MEASURED ALONG SAID DIVIDING LINE; THENCE NORTHWARDLY PARALLEL WITH CANAL DRIVE 50 FEET TO THE POINT OF BEGINNING. THE SAME BEING THE EASTERN PART OF LOT #18 IN SAID BLOCK 2, OR THAT PART OF SAID LOT I 8 WHICH WAS NOT SOLD TO E. E. PAGE AND WIFE BY DEED RECORDED IN BOOK 300, PAGE 264 OF THE NEW HANOVER COUNTY REGISTRY.

TRACT D

BEGINNING AT A POINT IN THE DIVIDING LINE BETWEEN LOTS 17 AND 18 IN BLOCK 2, ACCORDING TO MAP RECORDED IN MAP BOOK 3, PAGE 67 OF THE NEW HANOVER COUNTY REGISTRY, 125 FEET EASTWARDLY MEASURED ALONG SAID DIVIDING LINE FROM WHERE IT INTERSECTS THE EASTERN LINE OF CANAL DRIVE; RUNNING THENCE EASTWARDLY ALONG SAID DIVIDING LINE, 60 FEET TO THE WESTERN LINE OF LOT 7 IN SAID BLOCK; THENCE SOUTHWARDLY ALONG THE WESTERN LINE OF SAID LOT 7 TO THE DIVIDING LINE BETWEEN LOTS 16 AND I 7 IN SAID BLOCK; THENCE WESTWARDLY ALONG SAID DIVIDING LINE IN SAID BLOCK 2, 18 FEET TO A POINT; 125 FEET EASTWARDLY FROM WHERE SAID DIVIDING LINE INTERSECTS THE EASTERN LINE OF CANAL DRIVE; THENCE NORTHWARDLY PARALLEL WITH CANAL DRIVE 50 FEET TO THE POINT OF BEGINNING; THE SAME BEING ALL OF LOT 17, IN SAID BLOCK 2, NOT SOLD TO E. F. RISLEY AND WIFE, BY DEED RECORDED IN BOOK 290, PAGE 484 OF THE NEW HANOVER COUNTY REGISTRY. ·

TOGETHER WITH ALL AND SINGULAR LANDS, TENEMENTS, EASEMENTS AND APPURTENANCES THERETO BELONGING OR IN ANYWISE APPERTAINING.

SUBJECT TO ANY EASEMENT OF RIGHT OF WAY IN FAVOR OF THE TOWN OF CAROLINA BEACH THE COUNTY OF NEW HANOVER, THE STATE OF NORTH CAROLINA, OR THE UNITED STATES OF AMERICA, FOR BERM AND DUNE PURPOSES, AND FOR BEACH PROTECTION OR BEACH EROSION PURPOSES.

AS SURVEYED DESCRIPTIONS

BEING ALL OF PARCEL 3 LOT 10, BLOCK 2, LOT 9 & EASTERN PORTION OF LOT 19, PARCEL 2 BLOCK 2, PARCEL 4, TRACT C, EASTERN PART OF LOT 18, PARCEL 4, TRACT B, PORTION OF LOT 8, BLOCK 2 PARCEL 4, TRACT D LOT 17, BLOCK 2, PARCEL 4, TRACT A, PORTION OF LOT 7, BLOCK 2 OF THE TOWN OF CAROLINA BEACH, NORTH CAROLINA, AND BEING SHOWN ON MAP RECORDED IN MAP BOOK 3 AT PAGE 67 IN THE NEW HANOVER COUNTY REGISTRY, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.

BEGINNING AT AN IRON ROD ON THE SOUTHWESTERN CORNER OF P POTTAMUS PROPERTIES LLC AS RECORDED IN DEED BOOK 5833, PAGE 2249, AND THE SOUTHWESTERN CORNER OF PARCEL 4, TRACT D;

THENCE FROM THE POINT OF BEGINNING, North 17°10'19" East A DISTANCE OF 149.61' TO A POINT;

THENCE ALONG THE LINE OF ELBERA LLC. AS RECORDED IN DEED BOOK 5191, PAGE 2507,South 72°33'59" East A DISTANCE OF 28.79' TO AN IRON PIPE; North 23°34'48" East A DISTANCE OF 50.67' TO AN IRON ROD;

THENCE ALONG THE SOUTHERN MARGIN OF PELICAN LANE HAVING A 25' PUBLIC RIGHT OF WAY, South 73°11'03" East A DISTANCE OF 90.13' TO A POINT;

THENCE TURNING AND RUNNING ALONG THE WESTERN MARGIN OF CAROLINA BEACH AVENUE, HAVING A 30' PUBLIC RIGHT OF WAY;
South 17°07'12" West A DISTANCE OF 200.72' TO AN IRON ROD;

THENCE LEAVING SAID RIGHT OF WAY, North 72°40'39" West A DISTANCE OF 124.75' TO THE POINT OF BEGINNING.

HAVING AN AREA OF 23,367 SQ. FT., OR 0.54 ACRES MORE OR LESS.

BEING ALL OF LOTS 1 AND 2 IN BLOCK 3 OF THE TOWN OF CAROLINA BEACH, NORTH CAROLINA, AND BEING SHOWN ON MAP RECORDED IN MAP BOOK 3 AT PAGE 67 IN THE NEW HANOVER COUNTY REGISTRY, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.

BEGINNING AT A MAG MAIL FOUND AT THE NORTHEASTERN INTERSECTION OF CAROLINA BEACH AVENUE, HAVING A 30' PUBLIC RIGHT OF WAY, AND PELICAN LANE HAVING A 25' PUBLIC RIGHT OF WAY:

THENCE FROM THE POINT OF BEGINNING;
NORTH 17°08'13" EAST A DISTANCE OF 100.46' TO AN IRON PIPE FOUND;
THENCE SOUTH 72°55'13" EAST A DISTANCE OF 125.00' TO A POINT;
THENCE SOUTH 17°08'13" WEST A DISTANCE OF 100.46' TO A POINT;
THENCE NORTH 72°55'13" WEST A DISTANCE OF 125.00' TO THE POINT OF BEGINNING.

HAVING AN AREA OF 12,558 SQ. FT., OR 0.29 ACRES MORE OR LESS.

BEING ALL OF LOTS 7-10 IN BLOCK 1 OF THE TOWN OF CAROLINA BEACH, NORTH CAROLINA, AND BEING SHOWN ON MAP RECORDED IN MAP BOOK 3 AT PAGE 67 IN THE NEW HANOVER COUNTY REGISTRY, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.

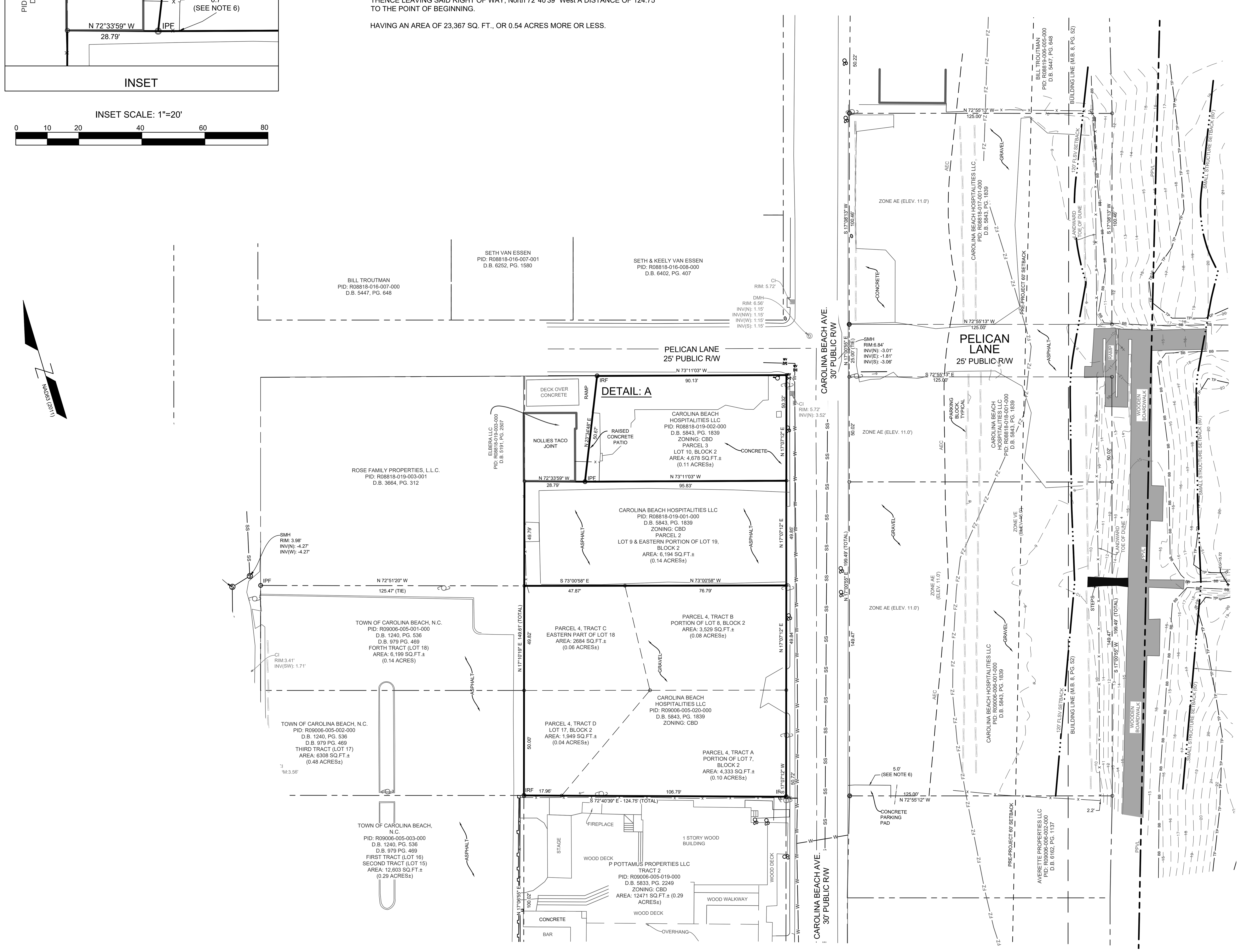
BEGINNING AT A POINT ON THE NORTHWESTERN CORNER OF AVERETTE PROPERTIES LLC AS RECORDED IN DEED BOOK 6162, PAGE 1137, AND THE EASTERN MARGIN OF CAROLINA BEACH AVENUE, HAVING A 30' PUBLIC RIGHT OF WAY;

THENCE FROM THE POINT OF BEGINNING, RUNNING ALONG THE SAID MARGIN OF CAROLINA BEACH AVENUE, 17°00'55" East A DISTANCE OF 199.49 TO A POINT.
THENCE TURNING AND RUNNING ALONG THE SOUTHERN MARGIN OF PELICAN LANE South 72°55'13" East A DISTANCE OF 125.00' TO A POINT;
THENCE South 17°00'55" West A DISTANCE OF 199.49' TO A COMPUTED POINT;
THENCE ALONG THE NORTHERN LINE OF AVERETTE PROPERTIES LLC North 72°55'12" West A DISTANCE OF 125.00' TO THE POINT OF BEGINNING.

HAVING AN AREA OF 24,937 SQ. FT., OR 0.57 ACRES MORE OR LESS.

LEGEND:

- IPF IRON PIPE FOUND
- IRF IRON ROD FOUND
- IRON ROD SET
- SPK SPIKE FOUND
- PKS PK NAIL SET
- TV RISER
- TRANSFORMER
- LIGHT POLE
- POWER POLE
- GUY ANCHOR
- TELEPHONE RISER
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- CLEAN-OUT
- SANITARY SEWER MANHOLE
- STORM DRAINAGE MANHOLE
- WELL
- CURB INLET
- CATCH BASIN
- EXCEPTION TAG
- BOUNDARY LINE
- ADJOINING BOUNDARY LINE
- RIGHT OF WAY
- 100-YR 100-YR FLOOD LINE
- FZ FLOOD ZONE
- X X FENCE LINE
- SD STORM DRAIN
- SS SANITARY SEWER
- W W WATER LINE



COMMITMENT NO. VAN000071
SCHEDULE B, PART II
EXCEPTIONS

1. TAXES OR ASSESSMENTS FOR THE YEAR 2023, AND SUBSEQUENT YEARS, NOT YET DUE OR PAYABLE. - NOT A SURVEY ISSUE.
2. RESTRICTIONS APPEARING OF RECORD. - BUILDING LINE AS SHOWN HEREON..
3. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN MAP BOOK 3, PAGE 67. **SEE NOTES 6 & 7 REGARDING EASEMENT, SETBACK, AND ENCROACHMENT.**
   ANY RIGHT, INTEREST, CLAIM, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN MAP 3, PAGE 67 IS NOT A SURVEY ISSUE.
4. SUBJECT TO EASEMENTS AND RIGHTS OF WAY FOR STREETS AND UTILITIES CURRENTLY IN USE. - STREET RIGHTS OF WAY AS SHOWN HEREON. NO EASEMENTS OF RECORD WERE FOUND.
5. RIPARIAN RIGHTS INCIDENT TO THE PREMISES, IF ANY. - NOT A SURVEY ISSUE.
6. TITLE TO THAT PORTION OF THE PROPERTY LYING BELOW THE MEAN HIGH TIDE TO THE ADJOINING TIDAL WATERS. - NOT A SURVEY ISSUE.
7. RIGHTS OF THE STATE OF SOUTH CAROLINA AS TO ACCRETIONS OCCURRING AFTER JULY 1, 1977, AS PROVIDED IN TITLE 48, CHAPTER 31 (COASTAL TIDELANDS AND WETLANDS ACT) OF THE SOUTH CAROLINA CODE OF LAWS, 1976, AS AMENDED. - NOT A SURVEY ISSUE.
8. TITLE TO THAT PORTION OF THE PROPERTY LYING BELOW THE HIGH MEAN WATER MARK OF THE ATLANTIC OCEAN. - NOT A SURVEY ISSUE.
9. RIGHTS, IF ANY, OF THE PUBLIC TO USE AS A PUBLIC BEACH OR RECREATION AREA ANY PART OF ANY OF THE LANDS LYING BETWEEN THE BODY OF WATER ABUTTING ANY OF THE SUBJECT PROPERTY AND THE NATURAL LINE OF VEGETATION, BLUFF, EXTREME HIGH WATER LINE OR OTHER APPARENT BOUNDARY LINES SEPARATING THE PUBLICLY USED ARE FROM THE UPPER LAND PRIVATE AREAS. - NOT A SURVEY ISSUE. SEE NOTE 8.
10. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION AS TENANTS UNDER UNRECORDED LEASES, IF ANY. - NOT A SURVEY ISSUE.
11. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. THE COVERAGE AFFORDED BY COVERED RISK 2(C) OF THE FINAL TITLE POLICY IS HEREBY DELETED. - AS SHOWN HEREON - SEE NOTE 6.

*NOTE TO THE CLIENT, INSURER, AND LENDER - WITH REGARD TO TABLE A, ITEM 11, SOURCE INFORMATION FROM PLANS AND MARKINGS WILL BE COMBINED WITH OBSERVED EVIDENCE OF UTILITIES PURSUANT TO SECTION 5.E.iv. TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE, IN WHICH CASE THE SURVEYOR SHALL NOTE ON THE PLAT OR MAP HOW THIS AFFECTED THE SURVEYOR'S ASSESSMENT OF THE LOCATION OF THE UTILITIES. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION AND/OR A PRIVATE UTILITY LOCATE REQUEST MAY BE NECESSARY.

SCALE: 1"=30'

0 15 30 60 90 120

ALTA/NSPS SURVEYORS CERTIFICATION

Commitment Number: VAN000071

TO:

- -OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
- -CAROLINA BEACH LAND - EAST, LLC
- -CAROLINA BEACH LAND - WEST, LLC
- -CAROLINA BEACH HOSPITALITIES, LLC

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1-4, 8, 11, 13 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON 11/1/2023.

DATE OF PLAT OR MAP: 03/28/2025

JOSHUA W. TAYLOR, PLS L-5217

REVISIONS:

CLIENT INFORMATION:

HARMONY HOSPITALITY, INC.
1300 DIAMOND SPRINGS RD. STE. 204
VIRGINIA BEACH, VA 23455

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

ALTA/ NSPS LAND TITLE SURVEY

COMMITMENT NO. VAN000071
HARMONY HOSPITALITY, INC.

TOWN OF CAROLINA BEACH
NEW HANOVER COUNTY, NC

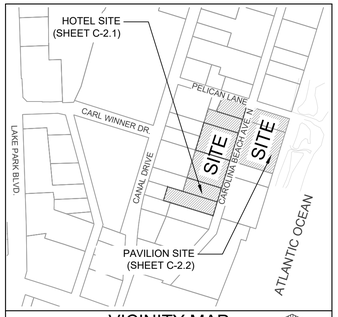
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 03/28/2025
SCALE: 1"= 30'
DESIGNED:
DRAWN: GA
CHECKED: JWT

SEAL
NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L-5217 JOSHUA W. TAYLOR

SV-2

PEI JOB#: 23329.PE



VICINITY MAP

SCALE: 1" = 250'

NORTH

SITE DATA

PROJECT NAME: HARMONY HOTEL AND PAVILION AT CAROLINA BEACH

SITE ADDRESS: 223, 225, 227, 234, 235, 236, 237 & 239 NORTH CAROLINA BEACH AVENUE CAROLINA BEACH, NC 28546

APPLICANT: HARMONY HOSPITALITY, INC. 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

OWNER(S): CAROLINA BEACH LAND WEST, LLC 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

CAROLINA BEACH LAND EAST, LLC 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

JOHNSON PAGE S II, AMY A 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

PARCEL ID	PARCEL ADDRESS	PARCEL SIZE	SITE
R08818-019-002-000	239	0.11 ACRES	HOTEL
R08818-019-001-000	237	0.14 ACRES	HOTEL
R09006-006-001-000	234	0.43 ACRES	PAVILION
R09006-005-020-000	235	0.29 ACRES	HOTEL
R08818-018-001-000	236	0.14 ACRES	PAVILION
R09006-005-019-000	227	0.29 ACRES	HOTEL
R09006-005-016-000	225	0.14 ACRES	HOTEL
R09006-005-015-000	223	0.21 ACRES	HOTEL
TOTAL SITE AREA:		1.75 ACRES	(+/- 76,230 SF)

EXISTING ZONING: CBD (CENTRAL BUSINESS DISTRICT)
PROPOSED ZONING: CBD-CZ
JURISDICTION: CAROLINA BEACH
PROPOSED USE: HOTEL AND ASSOCIATED ON-SITE USES (SEE SITE PARKING CALCULATIONS FOR DETAIL)
NUMBER OF ROOMS: 140

NUMBER OF STORIES:
HOTEL: GROUND LEVEL (PARKING), PLUS 4 STORIES (73' HEIGHT)
PAVILION: GROUND LEVEL (PARKING), PLUS 1 STORY (39' HEIGHT)

GROSS FLOOR AREA:

HOTEL	123,950 GFA
PAVILION	20,320 GFA
TOTAL	144,682 GFA

IMPERVIOUS & BUILDING LOT COVERAGE:
HOTEL: TOTAL SITE: 51,400 SF / IMPERVIOUS COVERAGE: 48,681 SF (94.71%)
GROUND (PARKING LEVEL): 2,815 SF BUILDING FOOTPRINT (5.48%)
FIRST FLOOR (OVER PARKING): 38,960 SF (75.80%)

PAVILION: TOTAL SITE: 24,830 SF / IMPERVIOUS COVERAGE: 22,085 SF (88.94%)
GROUND (PARKING LEVEL): 1,837 SF BUILDING FOOTPRINT (7.39%)
FIRST FLOOR (OVER PARKING): 18,500 SF (74.50%)

SITE PARKING

HOTEL / MOTEL (NOT CONDOMINIUMS)
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER SLEEPING ROOM
NUMBER OF HOTEL ROOMS: 140 = 140 SPACES REQUIRED

MEETING / ASSEMBLY ROOMS
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER 500 SF MEETING / ASSEMBLY ROOM
8,285SF / 500 = 17 SPACES REQUIRED

EATING AND/OR DRINKING ESTABLISHMENTS
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER 110 SF OF INDOOR GROSS FLOOR AREA
3,088 SF / 110 = 28 SPACES REQUIED

SUBTOTAL PARKING SPACES REQUIRED: 185**
** *25% PARKING REDUCTION SHALL BE GIVEN IF 50 OR GREATER SPACES ARE REQUIRED; REDUCTION ONLY APPLIES TO ASSOCIATED ON-SITE USES, LIMITED TO RESTAURANTS, BARS, AND MEETING ROOMS*

ALLOWABLE PARKING SPACE REDUCTION:

MEETING/ASSEMBLY ROOMS:	17 SPACES
EATING AND/OR DRINKING ESTABLISHMENTS	28 SPACES
SUBTOTAL:	45 SPACES
ALLOWABLE DEDUCTION (25% X 45 SPACES):	11 SPACES

TOTAL PARKING SPACES REQUIRED (185 MINUS 11): 174 SPACES
TOTAL PARKING SPACES PROVIDED (168 ON-SITE, PLUS 6 OFF-SITE): 174 SPACES

ON-SITE
117 STANDARD VEHICLE PARKING SPACES (9' X 18')
23 COMPACT VEHICLE PARKING SPACES (8'-6" X 18')
8 ADA ACCESSIBLE PARKING SPACES (INCLUDES 2 VAN SPACES)
20 GOLF CART PARKING SPACES (6' X 14')
168 PARKING SPACES PROVIDED ON SITE

OFF-SITE
6 OFF-SITE PUBLIC PARKING SPACES

OFF STREET LOADING SPACES PROVIDED: 2 TOTAL
(1) LOADING SPACE 12' WIDE X 35' LONG
(1) LOADING SPACE 12' WIDE X 45' LONG

LOBBY / VALET DROP-OFF SPACES: 2*
(*NOT INCLUDED IN TOTAL PARKING SPACES PROVIDED)

DIMENSIONAL REQUIREMENTS

	REQUIRED	PROPOSED
- MINIMUM LOT SIZE (SF):	NONE	+/- 51,400 SF
- MINIMUM LOT WIDTH:	NONE	91.13'
- FRONT SETBACK:	NONE	NONE
- REAR SETBACK:	NONE	NONE
- SIDE SETBACK:	NONE	NONE
- MAXIMUM BUILDING HEIGHT:	50'*	66'
- MAXIMUM LOT COVERAGE:	NONE	95.84%

* *IN THE CBD DISTRICT, THE MAXIMUM 50-FOOT HEIGHT LIMITATION MAY BE EXCEEDED FOR SPRINKLERED STRUCTURE(S) WHICH SHALL BE SUBJECT TO A CONDITIONAL ZONING APPROVAL*

LANDSCAPE BUFFER REQUIREMENTS:

1. SEE LANDSCAPE PLAN FOR CALCULATIONS

SOLID WASTE NOTES

TRASH CONTAINMENT AND RECYCLING AREAS SHALL BE LOCATED AND SERVICED FROM WITHIN THE BUILDING ENVELOPE AND SCREENED FROM VIEW FROM PUBLIC R.O.W.'S

BUILDING CONSTRUCTION TYPE

CONSTRUCTION TYPE: II-B (ALL BUILDINGS)
SPRINKLERS: YES

SYMBOLS LEGEND:

LANDSCAPE PLANTER AREA

CONCRETE PAVING

WATER AND SEWER CAPACITY CALCULATIONS:

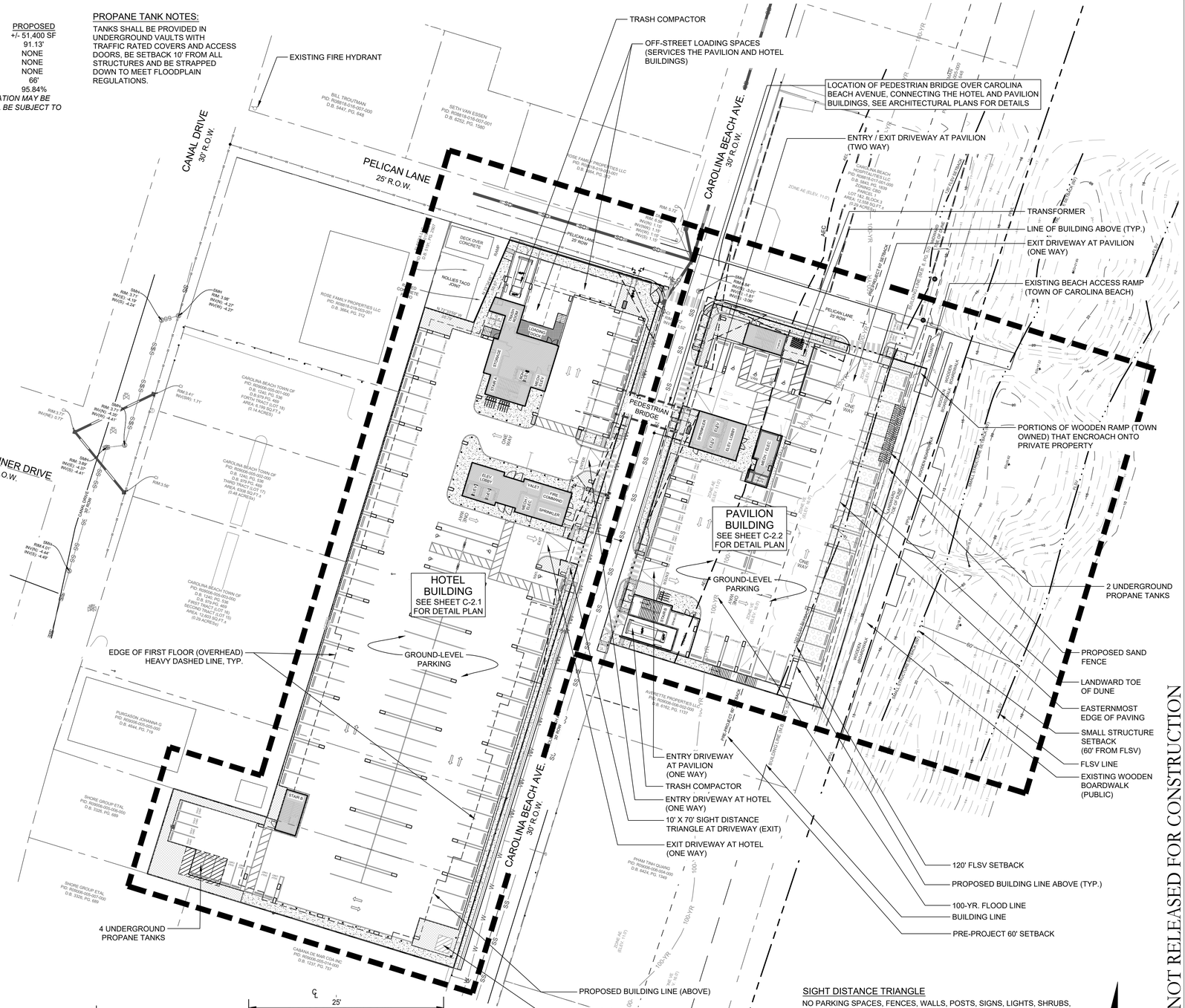
WATER FLOW USAGE: 20,680 GALLONS/DAY
SEWER FLOW USAGE: 18,800 GALLONS/DAY

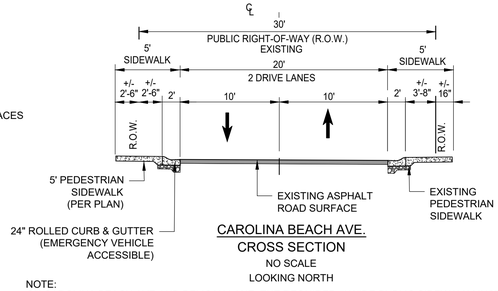
LIGHTING NOTES:

PROJECT OWNER SHALL PROVIDE ADEQUATE LIGHTING FOR STREETS AND SIDEWALKS ON THE BUILDING STRUCTURE AT THEIR OWN COST TO ELIMINATE THE NEED FOR ADDITIONAL STREET LIGHTING IN THE PUBLIC RIGHT-OF-WA. ALL LIGHTING SHALL COMPLY WITH TOWN'S STANDARDS AND SPECIFICATIONS OUTLINED IN THE TOWN ORDINANCES.

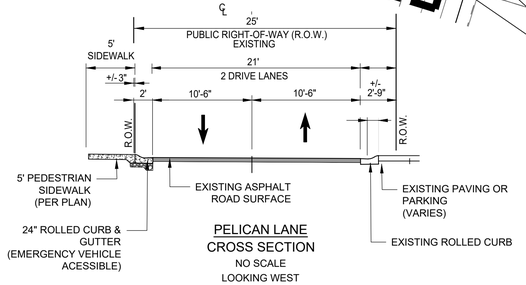
PROPANE TANK NOTES:

TANKS SHALL BE PROVIDED IN UNDERGROUND VAULTS WITH TRAFFIC RATED COVERS AND ACCESS DOORS, BE SETBACK 10' FROM ALL STRUCTURES AND BE STRAPPED DOWN TO MEET FLOODPLAIN REGULATIONS.



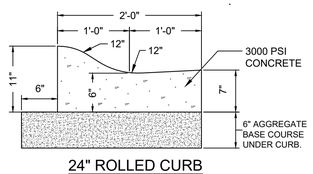


CAROLINA BEACH AVE.
CROSS SECTION
NO SCALE
LOOKING NORTH



PELICAN LANE
CROSS SECTION
NO SCALE
LOOKING WEST

NOTE:
ON CAROLINA BEACH AVE AND PELICAN LANE, THE REQUIRED 5' WIDE PUBLIC SIDEWALK MUST ENCROACH ONTO PRIVATE PROPERTY DUE TO THE EXISTING NARROW ROW WIDTH ON BOTH STREETS.
THE PROVISION OF PUBLIC SIDEWALK ON PRIVATE PROPERTY LIMITS THE ABILITY TO PROVIDE THE REQUIRED STREET TREE PLANTINGS ON BOTH STREETS, SEE LANDSCAPE PLAN FOR ADDITION INFORMATION.



24" ROLLED CURB

NOT TO SCALE

SIGHT DISTANCE TRIANGLE

NO PARKING SPACES, FENCES, WALLS, POSTS, SIGNS, LIGHTS, SHRUBS, TREES OR OTHER TYPE OF OBSTRUCTIONS NOT SPECIFICALLY EXEMPTED SHALL BE PERMITTED IN THE SPACE BETWEEN 30 INCHES ABOVE GROUND LEVEL AND 10 FEET ABOVE GROUND LEVEL WITHIN A SIGHT DISTANCE TRIANGLE. A SIGHT DISTANCE TRIANGLE SHALL BE THE VISUALLY UNOBSTRUCTED AREA (RESTRICTIVE AREA) OF A STREET CORNER / INTERSECTION AS DETERMINED BY MEASURING A DISTANCE OF 30 FEET ALONG THE INTERSECTING CURB LINES, OR EDGES OF PAVEMENT OF THE INTERSECTING STREET/DRIVEWAY IF CURBS ARE NOT PRESENT, AND CONNECTING THE TWO (2) POINTS BY A STRAIGHT LINE TO FORM A TRIANGULAR SHAPED AREA OVER THE CORNER. SIGHT DISTANCE AT DRIVEWAYS SHALL COMPLY WITH NCDOT 10' X 70' TRIANGLES, AS OFFSET 10' INTO THE PROPERTY MEASURED FROM THE STREET RIGHT-OF-WAY AND EXTENDING 70' ALONG THE STREET R.O.W. TO FORM TWO SIDES OF THE RESTRICTIVE AREA WITHIN THE TRIANGLE.

NAD83 (2011)

GRAPHIC SCALE
0 15 30 60 90
SCALE: 1"=30'

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

Item 3.

REVISIONS:

CLIENT INFORMATION:
HARMONY HOSPITALITY, INC.
1300 DIAMOND SPRINGS RD., STE. 204
VIRGINIA BEACH, VA 23455

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

OVERALL SITE PLAN
HARMONY HOTEL AND PAVILION
AT CAROLINA BEACH
CAROLINA BEACH AVE.
CAROLINA BEACH, NC

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/22/2025
SCALE: 1" = 30'
DESIGNED:
DRAWN:
CHECKED:

SEAL

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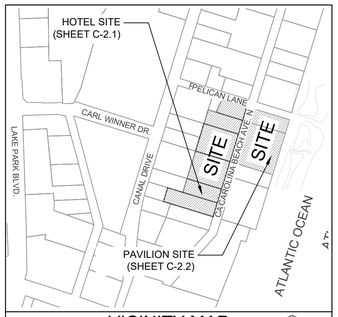
PEI JOB#: 00000.PE



VICINITY MAP

SCALE: 1" = 250'

NORTH

SITE DATA

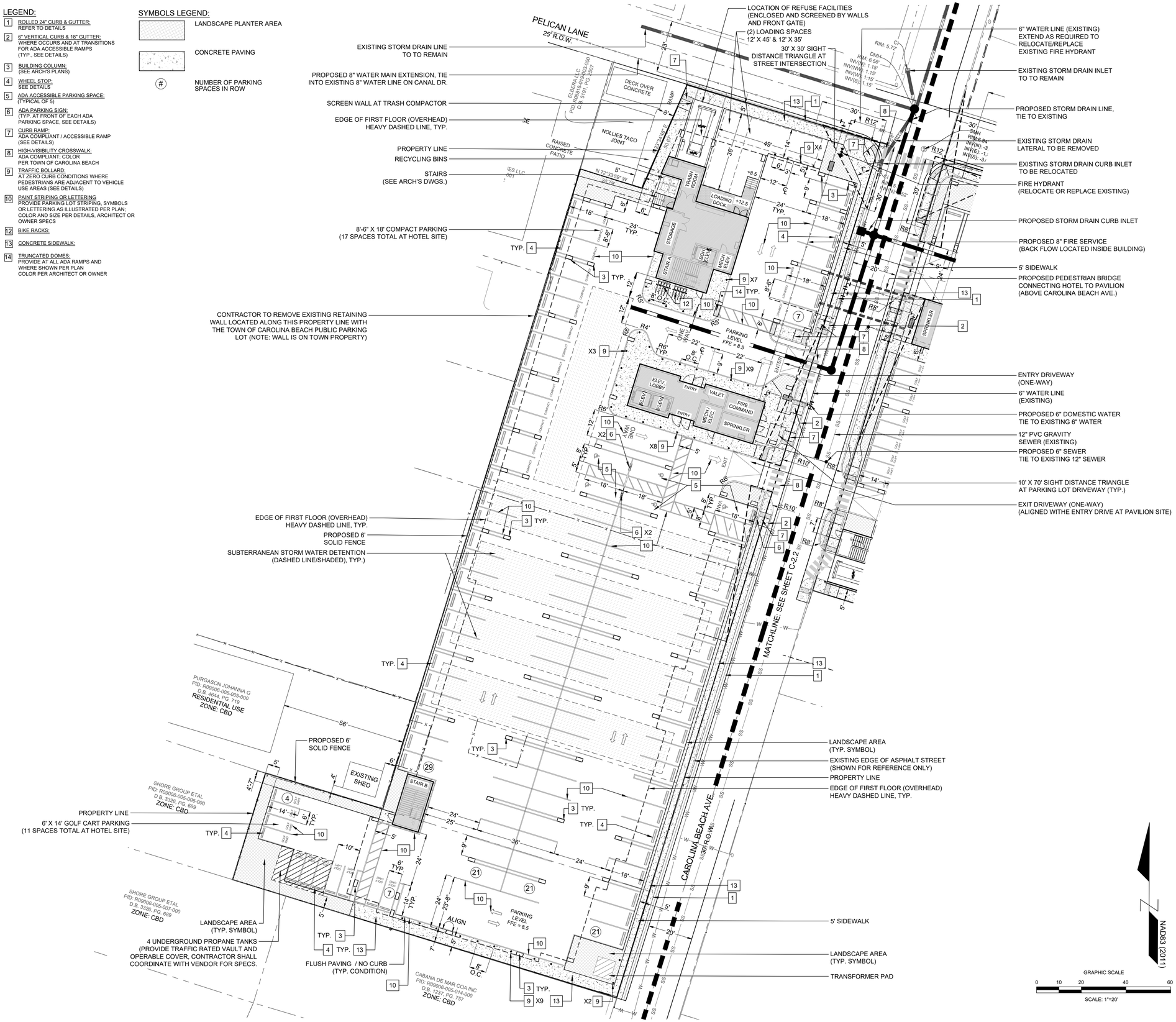
PROJECT NAME:	HARMONY HOTEL AND PAVILION AT CAROLINA BEACH
SITE ADDRESS:	223, 225, 227, 235, 237 & 239 NORTH CAROLINA BEACH AVENUE CAROLINA BEACH, NC 28546
APPLICANT:	HARMONY HOSPITALITY, INC. 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455
OWNER(S):	CAROLINA BEACH LAND WEST, LLC 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455 JOHNSON PAGE S II, AMY A 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

LEGEND:

1. ROLLED 24" CURB & GUTTER: REFER TO DETAILS
2. 6" VERTICAL CURB & 18" GUTTER: WHERE OCCURS AND AT TRANSITIONS FOR ADA ACCESSIBLE RAMPS (TYP., SEE DETAILS)
3. BUILDING COLUMN: (SEE ARCH'S PLANS)
4. WHEEL STOP: SEE DETAILS
5. ADA ACCESSIBLE PARKING SPACE: (TYPICAL OF 5)
6. ADA PARKING SIGN: (TYP. AT FRONT OF EACH ADA PARKING SPACE, SEE DETAILS)
7. CURB RAMP: ADA COMPLIANT / ACCESSIBLE RAMP (SEE DETAILS)
8. HIGH-VISIBILITY CROSSWALK: ADA COMPLIANT; COLOR PER TOWN OF CAROLINA BEACH
9. TRAFFIC BOLLARD: AT ZERO CURB CONDITIONS WHERE PEDESTRIANS ARE ADJACENT TO VEHICLE USE AREAS (SEE DETAILS)
10. PAINT STRIPING OR LETTERING PROVIDE PARKING LOT STRIPING, SYMBOLS OR LETTERING AS ILLUSTRATED PER PLAN; COLOR AND SIZE PER DETAILS, ARCHITECT OR OWNER SPECS
12. BIKE RACKS:
13. CONCRETE SIDEWALK:
14. TRUNCATED DOMES: PROVIDE AT ALL ADA RAMPS AND WHERE SHOWN PER PLAN COLOR PER ARCHITECT OR OWNER

SYMBOLS LEGEND:

- LANDSCAPE PLANTER AREA
- CONCRETE PAVING
- (#) NUMBER OF PARKING SPACES IN ROW



PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

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PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

DETAIL PLAN - HOTEL
HARMONY HOTEL AND PAVILION
AT CAROLINA BEACH
CAROLINA BEACH AVE.
CAROLINA BEACH, NC

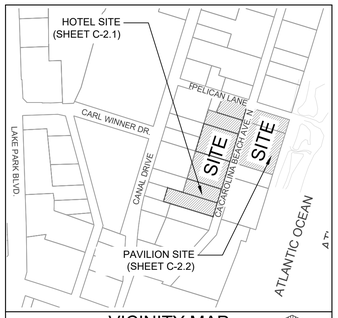
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/22/2025
SCALE: 1" = 20'
DESIGNED:
DRAWN:
CHECKED:

SEAL

C-2.1

PEI JOB#: 00000.PE



VICINITY MAP

SCALE: 1" = 250'

NORTH

SITE DATA

PROJECT NAME: HARMONY HOTEL AND PAVILION AT CAROLINA BEACH

SITE ADDRESS: 223, 225, 227, 235, 237 & 239 NORTH CAROLINA BEACH AVENUE CAROLINA BEACH, NC 28546

APPLICANT: HARMONY HOSPITALITY, INC. 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

OWNER(S): CAROLINA BEACH LAND WEST, LLC 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

JOHNSON PAGE S II, AMY A 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

LEGEND:

1. ROLLED 24" CURB & GUTTER: REFER TO DETAILS
2. 6" VERTICAL CURB & 18" GUTTER: WHERE OCCURS AND AT TRANSITIONS FOR ADA ACCESSIBLE RAMPS (TYP., SEE DETAILS)
3. BUILDING COLUMN: (SEE ARCH'S PLANS)
4. WHEEL STOP: SEE DETAILS
5. ADA ACCESSIBLE PARKING SPACE: (TYPICAL OF 5)
6. ADA PARKING SIGN: (TYP. AT FRONT OF EACH ADA PARKING SPACE, SEE DETAILS)
7. CURB RAMP: ADA COMPLIANT / ACCESSIBLE RAMP (SEE DETAILS)
8. HIGH-VISIBILITY CROSSWALK: ADA COMPLIANT; COLOR PER TOWN OF CAROLINA BEACH
9. TRAFFIC BOLLARD: AT ZERO CURB CONDITIONS WHERE PEDESTRIANS ARE ADJACENT TO VEHICLE USE AREAS (SEE DETAILS)
10. PAINT STRIPING OR LETTERING PROVIDE PARKING LOT STRIPING, SYMBOLS OR LETTERING AS ILLUSTRATED PER PLAN; COLOR AND SIZE PER DETAILS, ARCHITECT OR OWNER SPECS
12. BIKE RACKS:
13. CONCRETE SIDEWALK:
14. TRUNCATED DOMES: PROVIDE AT ALL ADA RAMPS AND WHERE SHOWN PER PLAN COLOR PER ARCHITECT OR OWNER
15. TRANSFORMER PAD: 3' X 3' CLEAR FROM BUILDING, OPEN TO SKY ABOVE

SYMBOLS LEGEND:

LANDSCAPE PLANTER AREA

CONCRETE PAVING

(#) NUMBER OF PARKING SPACES IN ROW

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

HARMONY HOSPITALITY, INC.
1300 DIAMOND SPRINGS RD., STE. 204
VIRGINIA BEACH, VA 23455

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NC License #: C-2846

DETAIL PLAN - PAVILION
HARMONY HOTEL AND PAVILION AT CAROLINA BEACH
CAROLINA BEACH AVE.
CAROLINA BEACH. NC

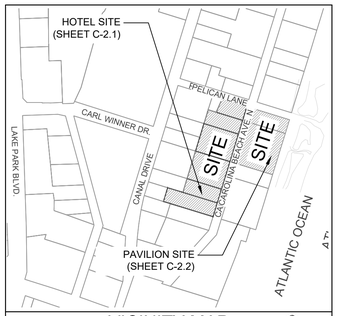
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/22/2025
SCALE: 1"= 20'
DESIGNED:
DRAWN:
CHECKED:

SEAL

C-2.2

PEI JOB#: 00000.PE



VICINITY MAP

SCALE: 1" = 250'

SITE DATA

PROJECT NAME:	HARMONY HOTEL AND PAVILION AT CAROLINA BEACH
SITE ADDRESS:	223, 225, 227, 235, 237 & 239 NORTH CAROLINA BEACH AVENUE CAROLINA BEACH, NC 28546
APPLICANT:	HARMONY HOSPITALITY, INC. 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455
OWNER(S):	CAROLINA BEACH LAND WEST, LLC 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455
	JOHNSON PAGE S II, AMY A 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

PARCEL ID	PARCEL ADDRESS	PARCEL SIZE
R08818-019-002-000	239	0.11 ACRES
R08818-019-001-000	237	0.14 ACRES
R09006-005-020-000	235	0.29 ACRES
R09006-005-019-000	227	0.29 ACRES
R09006-005-016-000	225	0.14 ACRES
R09006-005-015-000	223	0.21 ACRES
TOTAL SITE AREA:		1.18 ACRES (+/- 51,400 SF)

EXISTING ZONING:	CBD (CENTRAL BUSINESS DISTRICT)
PROPOSED ZONING:	CBD-CZ
JURISDICTION:	CAROLINA BEACH
PROPOSED USE:	HOTEL AND ASSOCIATED ON-SITE USES (SEE SITE PARKING CALCULATIONS FOR DETAIL)
NUMBER OF STORIES:	GROUND LEVEL PLUS 4 STORIES (66' HEIGHT)
NUMBER OF ROOMS:	140
GROSS FLOOR AREA:	122,700 GFA
BUILDING LOT COVERAGE:	GROUND (PARKING LEVEL): 3,170 SF BUILDING FOOTPRINT (6.16%) FIRST FLOOR (OVER PARKING): 40,819 (79.41%)
IMPERVIOUS LOT COVER:	TOTAL SITE - LANDSCAPE AREAS: 51,400 SF - 2,138 SF = 49,262 (95.84%)

STREET YARD LANDSCAPE REQUIREMENTS

CBD ZONING DISTRICT, TYPE D STREET BUFFER, FOR EVERY 50 LINEAR FEET OF STREET FRONTAGE, OR FRACTION THEREOF, THE STREET YARD SHALL CONTAIN ONE (1) UNDERSTORY TREE WITH SIDEWALKS OR PLANTERS BUILT WITHIN THE SIDEWALK

HOTEL SITE (WESTSIDE) STREET FRONTAGE (LF*)	REQUIRED TREES	PROPOSED TREES**
CAROLINA BEACH AVENUE (376 LF)	7.5	4
PELICAN LANE (19 LF)	0.38	1
TOTAL TREES:	7.88 (8 TREES)	5 (-3)***

PAVILION SITE (EAST SIDE) STREET FRONTAGE (LF*)	REQUIRED TREES	PROPOSED TREES
CAROLINA BEACH AVENUE (148 LF)	2.9	6
PELICAN LANE (105 LF)	2.1	2
TOTAL TREES:	5.0 (5 TREES)	8 (+3)***

* *LINEAR FOOT (LF) OF FRONTAGE, MINUS THOSE PORTIONS OF STREET FRONTAGE THAT ARE USED FOR DRIVEWAYS*

** *SEE PROJECT NARRATIVE FOR ADDITIONAL INFORMATION, PUBLIC SIDEWALK WILL BE PROVIDED PARTIALLY ON PRIVATE PROPERTY DUE TO NARROW WIDTH OF EXISTING RIGHT-OF-WAY. IN EXCHANGE, A REDUCTION IN THE NUMBER OF STREET TREES REQUIRED IS REQUESTED*

*** *THE HOTEL STREET FRONTAGE ON CAROLINA BEACH AVE IS 3 TREES SHORT OF THE STREET TREE REQUIREMENT - TO HELP OFFSET THIS DEFICIT, THE PAVILION STREET FRONTAGE ON CAROLINA BEACH AVE IS 3 TREES OVER THE NUMBER OF STREET TREES REQUIRED.*

IRRIGATION NOTES:

ALL PROPOSED LANDSCAPE / PLANTER AREAS SHALL INCORPORATE LANDSCAPE IRRIGATION AND RECEIVE SUPPLEMENTAL WATER VIA AN AUTOMATICALLY CONTROLLED LOW-FLOW (DRIP TUBING, BUBBLERS OR POP-UP SPRAY HEADS) IRRIGATION SYSTEM, INSTALLED WITH WATER CONSERVATION EQUIPMENT, SUCH AS RAIN SENSORS AND MASTER CONTROL VALVES (WHERE REQUIRED), AND DESIGNED TO MEET SITE AND PLANT SPECIFIC ENVIRONMENTAL NEEDS ACCORDING TO SOIL CONDITIONS, WATER REQUIREMENTS, ON SITE MICROCLIMATES, SOLAR ORIENTATION AND WIND EXPOSURE.

1. IRRIGATION PLANS ARE REQUIRED AND ARE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE IN ADVANCE OF CONSTRUCTION ACTIVITIES FOR REVIEW AND APPROVAL BY OWNER. ANY IRRIGATION SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND FOR ABIDING BY ALL APPLICABLE RULES AND REGULATIONS FOR IRRIGATION DESIGN AND INSTALLATION.
2. THE IRRIGATION CONTRACTOR SHALL PROVIDE A DESIGN PLAN AND OBTAIN APPROVAL BY OWNER/OWNER'S REPRESENTATIVE PRIOR TO ORDERING OR INSTALLING MATERIALS.
3. THE IRRIGATION DESIGN SHALL DEPICT A TWO WIRE, AUTOMATED IRRIGATION SYSTEM SUITABLE TO WATER ALL PROPOSED PLANTING OR SEEDED / LAWN AREAS, INCLUDING BUT NOT LIMITED TO: STREET YARD, PERIMETER BUFFERS, FOUNDATION PLANTINGS AND PARKING LOT AREA PLANTING.
4. SEE UTILITY PLANS FOR LOCATION OF IRRIGATION METER AND POINT-OF-CONNECTION.
5. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF IRRIGATION CONTROLLER & ELECTRICAL SUPPLY FROM BUILDING.
6. ALL LANDSCAPED AREAS OF THE PROPERTY SHALL BE IRRIGATED AND CONTROLLED BY A PROGRAMMABLE IRRIGATION CONTROL DEVICE.
7. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND ADJUSTED TO PROVIDE UNIFORM COVERAGE THROUGHOUT ALL PLANTED AREAS AND SHALL PREVENT RUNOFF.
8. THE IRRIGATION SYSTEM SHALL BE DESIGNED TO PREVENT OVER SPRAY ONTO WALKS, WALLS, FENCES, PATIOS, STREETS OR ADJACENT PROPERTIES.
9. ALL PIPING AND WIRES BENEATH PAVING SHALL BE SLEEVED.
9. ALL HARD-PIPED SYSTEMS SHALL BE PROVIDED BELOW GRADE AS REQUIRED BY CODE. 'ON-GRADE' SYSTEMS ARE NOT ALLOWED.
7. WHERE USED, IRRIGATION HEADS SHALL BE INSTALLED A MINIMUM OF 3' FROM EDGE OF CURBS.
8. CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS TO OWNER UPON COMPLETION OF INSTALLATION.

PLANT SCHEDULE

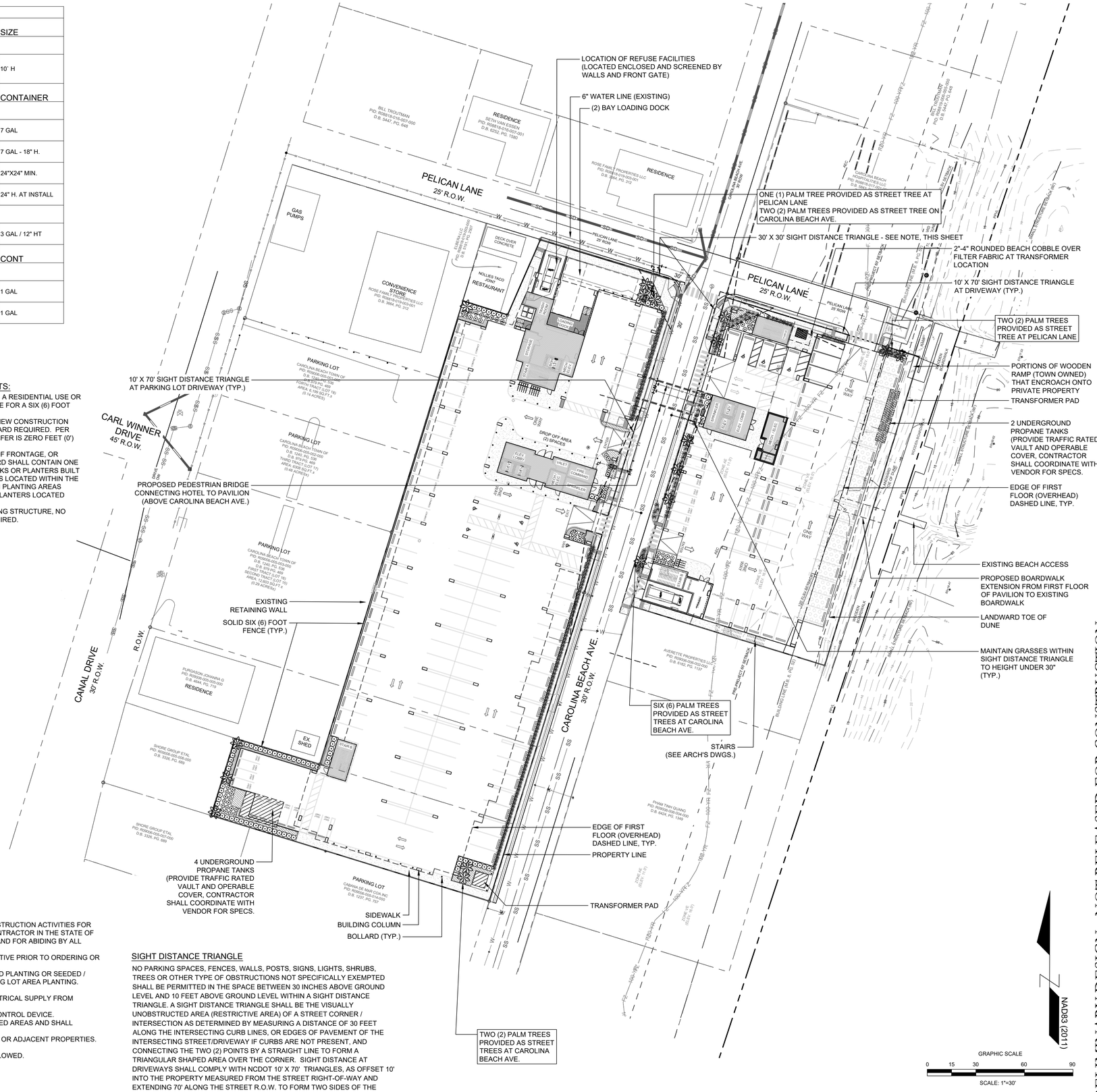
SYMBOL	QTY	COMMON / BOTANICAL NAME	SIZE
PALM TREES			
✿	17	SABAL PALMETTO	10` H
SYMBOL	QTY	COMMON / BOTANICAL NAME	CONTAINER
SHRUBS			
⊕	7	CAST IRON PLANT ASPIDISTRA ELATIOR	7 GAL
❀	8	JAPANESE ARALIA FATSIA JAPONICA	7 GAL - 18" H.
◎	43	MOJO® JAPANESE PITTOSPORUM PITTOSPORUM TOBIRA 'CNI THREE'	24"X24" MIN.
⊕	82	SHRUBBY YEW PODOCARPUS PODOCARPUS M. MAKI	24" H. AT INSTALL
ORNAMENTAL GRASSES			
✳	211	PINK MUHLY MUHLENBERGIA CAPILLARIS	3 GAL / 12" HT
SYMBOL	QTY	COMMON / BOTANICAL NAME	CONT
GROUND COVERS			
▨	66	ASIATIC JASMINE TRACHELOSPERMUM A. `ASIATIC`	1 GAL
▤	345	DAYLILY HEMEROCALLIS X `HAPPY RETURNS`	1 GAL

SYMBOLS LEGEND:

░	CONCRETE PAVING

LANDSCAPE BUFFER REQUIREMENTS:

1. ANY SIDE OR REAR YARD THAT ABUTS A RESIDENTIAL USE OR RESIDENTIAL DISTRICT SHALL PROVIDE FOR A SIX (6) FOOT FENCE WITH 80% OPACITY
2. CENTRAL BUSINESS DISTRICT (CBD), NEW CONSTRUCTION ONLY, TYPE D BUFFER AND STREET YARD REQUIRED. PER SECTTION 3.27, TABLE 3.9, TYPE D BUFFER IS ZERO FEET (0') WIDE.
3. TYPE D. FOR EVERY 50 LINEAR FEET OF FRONTAGE, OR FRACTION THEREOF, THE STREET YARD SHALL CONTAIN ONE (1) UNDERSTORY TREE WITH SIDEWALKS OR PLANTERS BUILT WITHIN THE SIDEWALK. STREET YARDS LOCATED WITHIN THE CBD SHALL INCLUDE SIDEWALKS WITH PLANTING AREAS EITHER ADJACENT TO THE CURB OR PLANTERS LOCATED WITHIN THE SIDEWALK.
4. PARKING IS LOCATED WITHIN A PARKING STRUCTURE, NO LANDSCAPE ISLANDS OR TREES REQUIRED.



SIGHT DISTANCE TRIANGLE

NO PARKING SPACES, FENCES, WALLS, POSTS, SIGNS, LIGHTS, SHRUBS, TREES OR OTHER TYPE OF OBSTRUCTIONS NOT SPECIFICALLY EXEMPTED SHALL BE PERMITTED IN THE SPACE BETWEEN 30 INCHES ABOVE GROUND LEVEL AND 10 FEET ABOVE GROUND LEVEL WITHIN A SIGHT DISTANCE TRIANGLE. A SIGHT DISTANCE TRIANGLE SHALL BE THE VISUALLY UNOBSTRUCTED AREA (RESTRICTIVE AREA) OF A STREET CORNER / INTERSECTION AS DETERMINED BY MEASURING A DISTANCE OF 30 FEET ALONG THE INTERSECTING CURB LINES, OR EDGES OF PAVEMENT OF THE INTERSECTING STREET/DRIVEWAY IF CURBS ARE NOT PRESENT, AND CONNECTING THE TWO (2) POINTS BY A STRAIGHT LINE TO FORM A TRIANGULAR SHAPED AREA OVER THE CORNER. SIGHT DISTANCE AT DRIVEWAYS SHALL COMPLY WITH NCDOT 10' X 70' TRIANGLES, AS OFFSET 10' INTO THE PROPERTY MEASURED FROM THE STREET RIGHT-OF-WAY AND EXTENDING 70' ALONG THE STREET R.O.W. TO FORM TWO SIDES OF THE RESTRICTIVE AREA WITHIN THE TRIANGLE.

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

Item 3.

REVISIONS:

CLIENT INFORMATION:

HARMONY HOSPITALITY, INC.
1300 DIAMOND SPRINGS RD., STE. 204
VIRGINIA BEACH, VA 23455

PARAMOUNTE
ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

LANDSCAPE PLAN
HARMONY HOTEL AND PAVILION
AT CAROLINA BEACH
CAROLINA BEACH AVE.
CAROLINA BEACH. NC

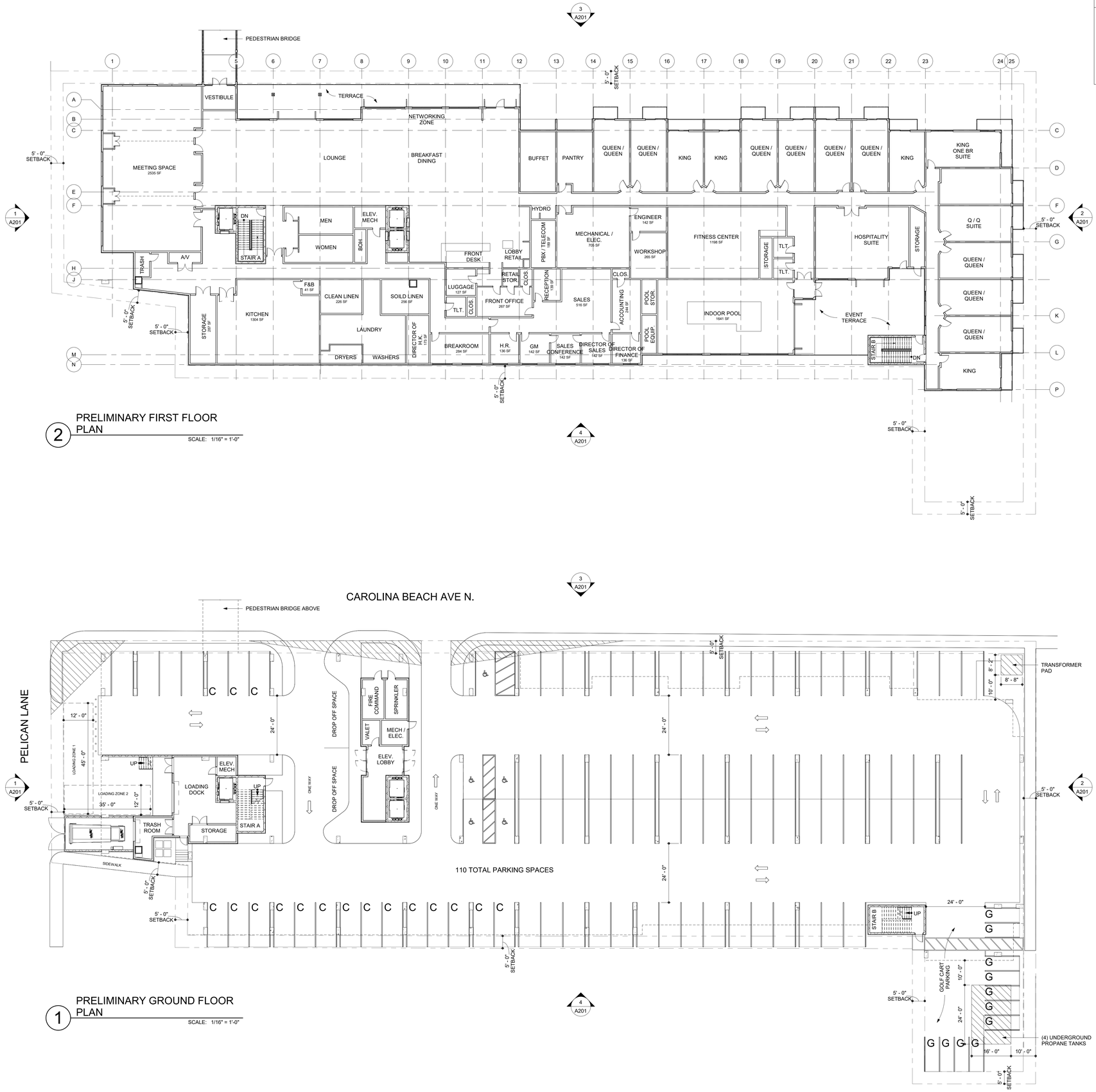
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.:

DRAWING INFORMATION
DATE: 09/22/2025
SCALE: 1" = 30'
DESIGNED:
DRAWN:
CHECKED:

SEAL

L-2.0

PEI JOB#: 00000.PE



2 PRELIMINARY FIRST FLOOR PLAN

SCALE: 1/16" = 1'-0"

1 PRELIMINARY GROUND FLOOR PLAN

SCALE: 1/16" = 1'-0"

GUEST ROOM MATRIX

	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	FOURTH FLOOR	TOTAL
KING -	4	11	11	11	**37**
KING ACC -	-	1	1	-	**2**
KING 1 BR SUITE -	1	1	1	-	**3**
QUEEN / QUEEN -	9	23	23	26	**81**
QUEEN / QUEEN ACC -	-	2	2	-	**4**
Q / Q SUITE -	1	2	2	2	**7**
Q / Q 1 BR SUITE -	-	1	1	1	**3**
2 BR FAMILY SUITE	-	1	1	1	**3**
	15	**42**	**42**	**41**	**140**

SITE PARKING

HOTEL / MOTEL (NOT CONDOMINIUMS)
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER SLEEPING ROOM
NUMBER OF HOTEL ROOMS: 140 = 140 SPACES REQUIRED

MEETING / ASSEMBLY ROOMS
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER 500 SF MEETING / ASSEMBLY ROOM
8,262 SF / 500 = 17 SPACES

EATING AND/OR DRINKING ESTABLISHMENTS
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER 110 SF OF INDOOR GROSS FLOOR AREA
3,214 SF / 110 = 29 SPACES

SUBTOTAL PARKING SPACES REQUIRED: 186**
*** 25% PARKING REDUCTION SHALL BE GIVEN IF 50 OR GREATER SPACES ARE REQUIRED; REDUCTION ONLY APPLIES TO ASSOCIATED ON-SITE USES, LIMITED TO RESTAURANTS, BARS AND MEETING ROOMS*

ALLOWABLE PARKING SPACE REDUCTION:

MEETING / ASSEMBLY ROOMS:	17 SPACES
EATING AND/OR DRINKING ESTABLISHMENTS	29 SPACES
ALLOWABLE DEDUCTION (25% X 46 SPACES)	12 SPACES

TOTAL PARKING SPACES REQUIRED (186 MINUS 12): 174 SPACES
TOTAL PARKING SPACES PROVIDED : 168

117	STANDARD VEHICLE PARKING SPACES (9' x 18')
23	COMPACT VEHICLE PARKING SPACES (8'-6" x 18')
8	ADA ACCESSIBLE PARKING SPACES (INCLUDES 1 VAN SPACE)
20	GOLF CART PARKING SPACES (6' x 14'
168	PARKING SPACES PROVIDED

TOTAL ON-SITE LOADING SPACES PROVIDED: 2 SPACES
(1) LOADING SPACE 12' WIDE X 35' LONG
(1) LOADING SPACE 12' WIDE X 45' LONG

LOBBY / VALET DROP-OFF SPACES: 2*
(*NOT INCLUDED IN TOTAL PARKING SPACES PROVIDED)

GROSS FLOOR AREA CALCULATIONS

HOTEL -

- GROUND FLOOR =	2,760 GFA
- FIRST FLOOR =	38,960 GFA
- SECOND FLOOR =	27,410 GFA
- THIRD FLOOR =	27,410 GFA
- FOURTH FLOOR =	27,410 GFA
TOTAL GROSS FLOOR AREA =	**123,950 GFA**

BECKER MORGAN GROUP

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410.546.9100

North Carolina
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Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

CAROLINA BEACH FULL SERVICE HOTEL

CAROLINA BEACH AVE. N.
CAROLINA BEACH, NC 28428

PRELIMINARY
DESIGN CONCEPT ONLY, SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS
ISSUED: 09/22/2025

SHEET TITLE

PRELIMINARY GROUND & FIRST FLOOR PLANS

0' 8' 16' 32'
SCALE: 1/16" = 1'-0"

ISSUE BLOCK

Mark	Date	Description
1	09.22.25	TRC RESUBMISSION

PROJECT NO:	2025153.00
DATE:	09.22.25
SCALE:	As indicated
DRAWN BY: DJB	PROJ MGR: DJB

A101

Autodesk Docs://Carolina Beach Springhill Suites & Amenity Pavilion/2025153D0.rvt
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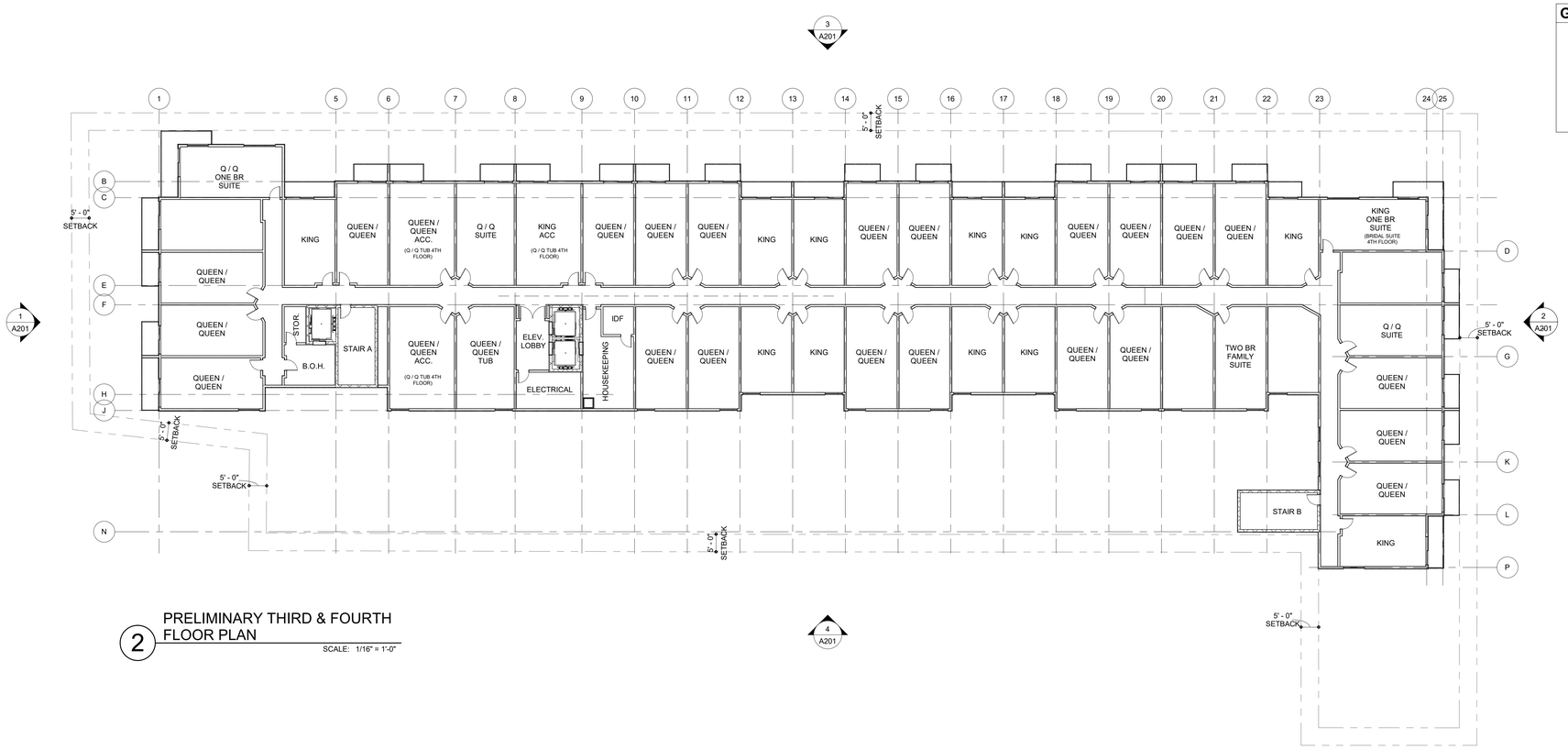
GUEST ROOM MATRIX

	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	FOURTH FLOOR	TOTAL
KING -	4	11	11	11	**37**
KING ACC -	-	1	1	-	**2**
KING 1 BR SUITE -	1	1	1	-	**3**
QUEEN / QUEEN -	9	23	23	26	**81**
QUEEN / QUEEN ACC -	-	2	2	-	**4**
Q / Q SUITE -	1	2	2	2	**7**
Q / Q 1 BR SUITE -	-	1	1	1	**3**
2 BR FAMILY SUITE	-	1	1	1	**3**
	15	**42**	**42**	**41**	**140**

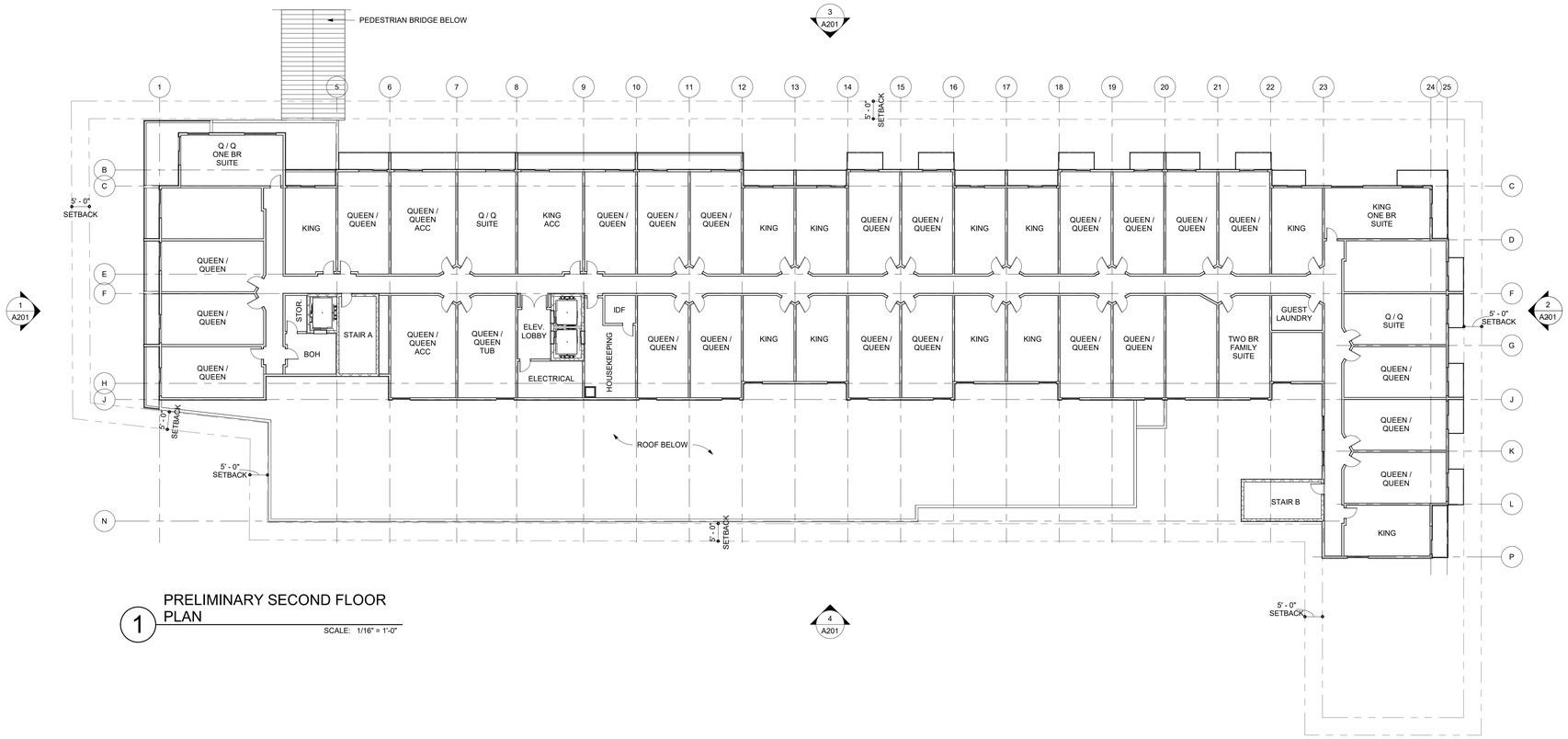
GROSS FLOOR AREA CALCULATIONS

HOTEL -	
- GROUND FLOOR =	2,760 GFA
- FIRST FLOOR =	38,960 GFA
- SECOND FLOOR =	27,410 GFA
- THIRD FLOOR =	27,410 GFA
- FOURTH FLOOR =	27,410 GFA
TOTAL GROSS FLOOR AREA =	**123,950 GFA**



PRELIMINARY THIRD & FOURTH FLOOR PLAN

SCALE: 1/16" = 1'-0"



PRELIMINARY SECOND FLOOR PLAN

SCALE: 1/16" = 1'-0"

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North Carolina
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910.341.7600

www.beckermorgan.com

PROJECT TITLE

CAROLINA BEACH FULL SERVICE HOTEL

CAROLINA BEACH AVE. N.
CAROLINA BEACH, NC 28428

PRELIMINARY

DESIGN CONCEPT ONLY, SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS.

ISSUED: 09/22/2025

SHEET TITLE

PRELIMINARY UPPER FLOOR PLANS

0' 8' 16' 32'

SCALE: 1/16" = 1'-0"

ISSUE BLOCK

Mark	Date	Description
1	09.22.25	TRC RESUBMISSION

PROJECT NO:	2025153.00
DATE:	09.22.25
SCALE:	As indicated
DRAWN BY: DJB	PROJ MGR: DJB

A102

1 OVERALL NORTH ELEVATION
SCALE: 1/16" = 1'-0"

2 OVERALL SOUTH ELEVATION
SCALE: 1/16" = 1'-0"

3 OVERALL EAST ELEVATION
SCALE: 1/16" = 1'-0"

4 OVERALL WEST ELEVATION
SCALE: 1/16" = 1'-0"

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PROJECT TITLE

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CAROLINA BEACH, NC 28428

PRELIMINARY
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ISSUED: 09/22/2025

SHEET TITLE

PRELIMINARY EXTERIOR ELEVATIONS

ISSUE BLOCK

Mark	Date	Description
1	09.22.25	TRC RESUBMISSION

PROJECT NO:	2025153.00
DATE:	09.22.25
SCALE:	1/16" = 1'-0"
DRAWN BY: DJB	PROJ MGR: DJB

A201

1 WEST PERSPECTIVE - CAROLINA BEACH AVE.
SCALE:

2 SOUTHWEST PERSPECTIVE - INTERSECTION
SCALE:

3 NORTHWEST PERSPECTIVE - CAROLINA BEACH AVE.
SCALE:

4 NORTHWEST BIRDSEYE
SCALE:

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ISSUED: 09/22/2025

SHEET TITLE

PRELIMINARY EXTERIOR PERSPECTIVES

ISSUE BLOCK

Mark	Date	Description
1	09.22.25	TRC RESUBMISSION

PROJECT NO: 2025153.00
DATE: 09.22.25
SCALE:
DRAWN BY: DJB | PROJ MGR: DJB

A901

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SITE PARKING

HOTEL / MOTEL (NOT CONDOMINIUMS)
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER SLEEPING ROOM
NUMBER OF HOTEL ROOMS: 140 = 140 SPACES REQUIRED

MEETING / ASSEMBLY ROOMS
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER 500 SF MEETING / ASSEMBLY ROOM
8,262 SF / 500 = 17 SPACES

EATING AND/OR DRINKING ESTABLISHMENTS
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER 110 SF OF INDOOR GROSS FLOOR AREA
3,214 SF / 110 = 29 SPACES

SUBTOTAL PARKING SPACES REQUIRED: 186**
*** 25% PARKING REDUCTION SHALL BE GIVEN IF 50 OR GREATER SPACES ARE REQUIRED: REDUCTION ONLY APPLIES TO ASSOCIATED ON-SITE USES, LIMITED TO RESTAURANTS, BARS AND MEETING ROOMS*

ALLOWABLE PARKING SPACE REDUCTION:

MEETING / ASSEMBLY ROOMS:	17 SPACES
EATING AND/OR DRINKING ESTABLISHMENTS	29 SPACES
ALLOWABLE DEDUCTION (25% X 46 SPACES)	12 SPACES

TOTAL PARKING SPACES REQUIRED (186 MINUS 12): 174 SPACES
TOTAL PARKING SPACES PROVIDED - 168

117	STANDARD VEHICLE PARKING SPACES (9' x 18')
23	COMPACT VEHICLE PARKING SPACES (8'-6" x 18')
8	ADA ACCESSIBLE PARKING SPACES (INCLUDES 1 VAN SPACE)
20	GOLF CART PARKING SPACES (6' x 14'
168	PARKING SPACES PROVIDED

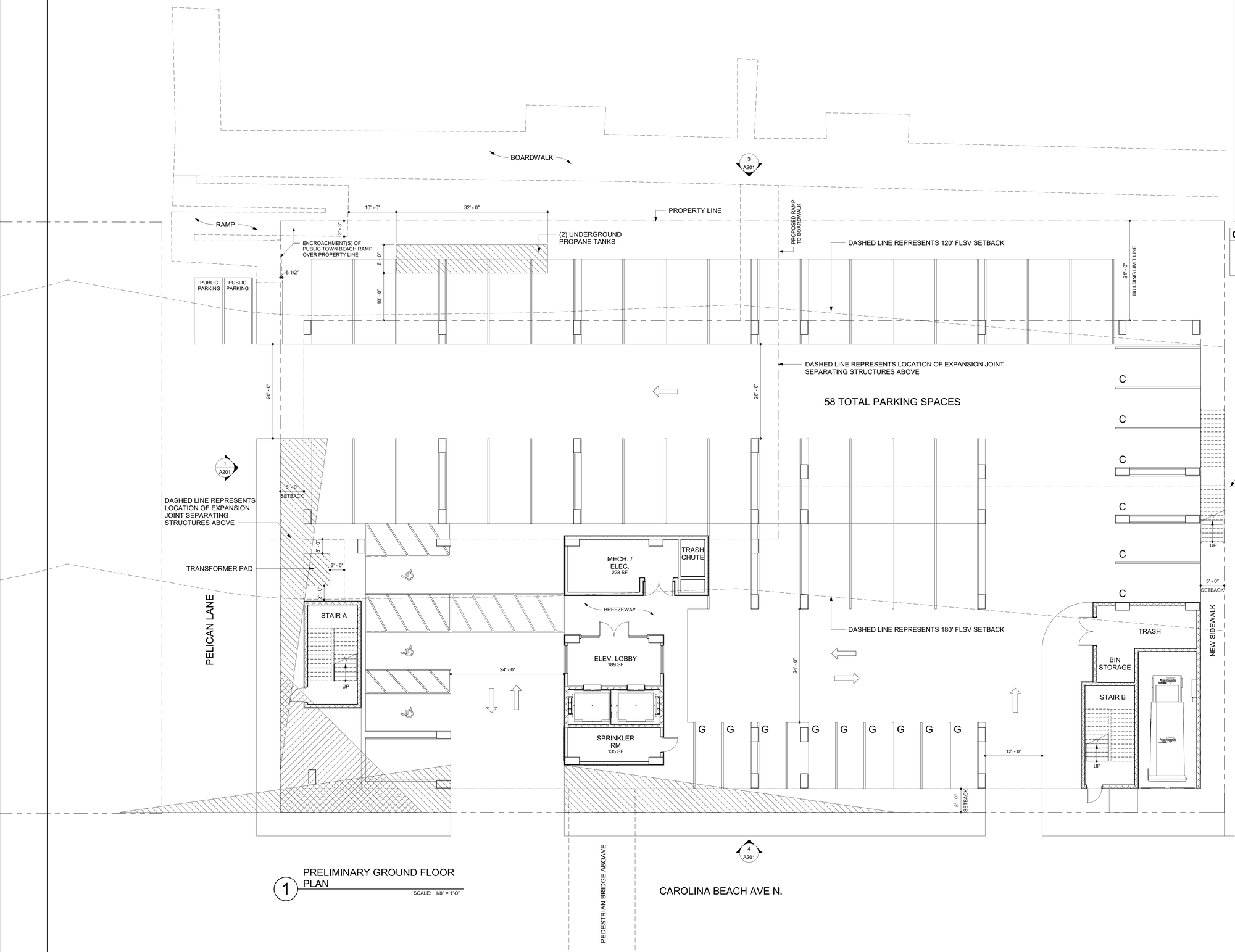
TOTAL ON-SITE LOADING SPACES PROVIDED: 2 SPACES
(1) LOADING SPACE 12' WIDE X 35' LONG
(1) LOADING SPACE 12' WIDE X 45' LONG

LOBBY / VALET DROP-OFF SPACES: 2*
(*NOT INCLUDED IN TOTAL PARKING SPACES PROVIDED)

GROSS SQUARE FOOTAGE CALCULATIONS

OCEANFRONT AMENITY PAVILION -

- GROUND FLOOR CONDITIONED SPACE =	225 GSF
- FIRST FLOOR CONDITIONED SPACE =	14,920 GSF
TOTAL CONDITIONED SPACE =	**15,145 GSF**



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

BECKER MORGAN GROUP

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ENGINEERING

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309 S Governors Ave
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Salisbury, MD 21801
410.546.9100
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
www.beckermorgan.com

PROJECT TITLE

OCEANFRONT AMENITY PAVILION

LOTS 7-10, BLOCK 1
CAROLINA BEACH AVE N
CAROLINA BEACH, NC 28428

PRELIMINARY
DESIGN CONCEPT ONLY. SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS.
ISSUED: 09/22/2025

SHEET TITLE

PRELIMINARY GROUND FLOOR PLAN

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

ISSUE BLOCK

Mark	Date	Description
1	09.22.25	TRC RESUBMISSION

PROJECT NO:	2023042.02
DATE:	09.22.25
SCALE:	As indicated
DRAWN BY: DJB	PROJ MGR: DJB

A101

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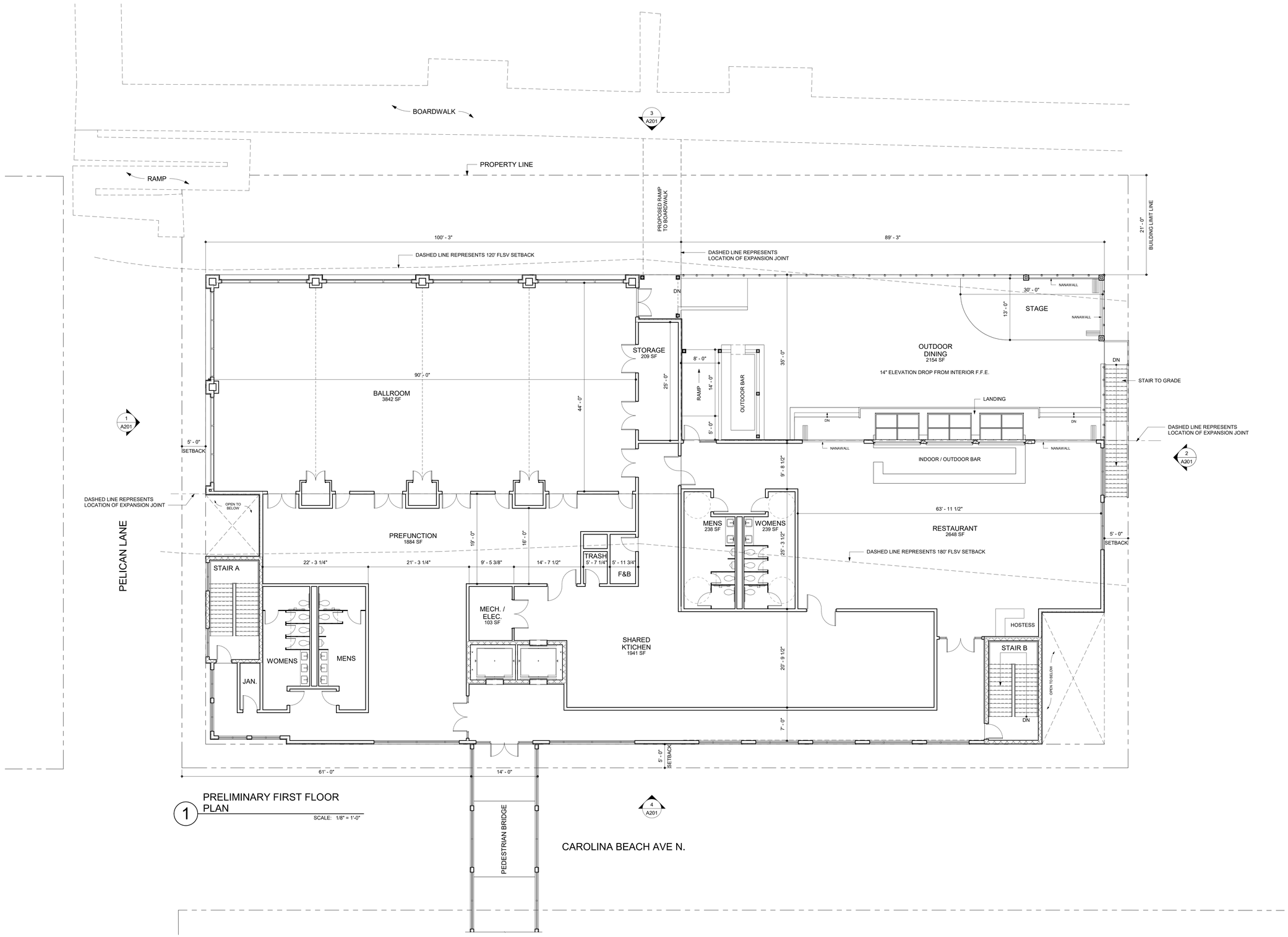
GROSS SQUARE FOOTAGE CALCULATIONS

OCEANFRONT AMENITY PAVILION -	
- GROUND FLOOR CONDITIONED SPACE =	225 GSF
- FIRST FLOOR CONDITIONED SPACE =	14,920 GSF
TOTAL CONDITIONED SPACE =	**15,145 GSF**



1 PRELIMINARY FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

OCEANFRONT AMENITY PAVILION

LOTS 7-10, BLOCK 1
CAROLINA BEACH AVE N
CAROLINA BEACH, NC 28428

PRELIMINARY

DESIGN CONCEPT ONLY, SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS.

ISSUED: 09/22/2025

SHEET TITLE

PRELIMINARY FIRST FLOOR PLAN

N

0' 4' 8' 16'

SCALE: 1/8" = 1'-0"

ISSUE BLOCK

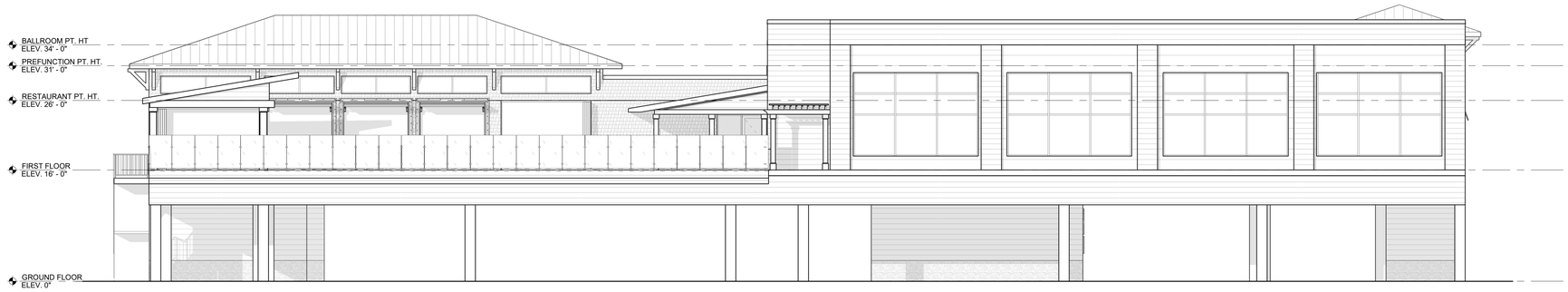
Mark	Date	Description
1	09.22.25	TRC RESUBMISSION

PROJECT NO:	2023042.02
DATE:	09.22.25
SCALE:	As indicated
DRAWN BY: DJB	PROJ MGR: DJB

A102

4 WEST ELEVATION

SCALE: 1/8" = 1'-0"



3 EAST ELEVATION

SCALE: 1/8" = 1'-0"

2 SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

1 NORTH ELEVATION

SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 S Governors Ave
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PROJECT TITLE

OCEANFRONT AMENITY PAVILION

LOTS 7-10, BLOCK 1
CAROLINA BEACH AVE N
CAROLINA BEACH, NC 28428

PRELIMINARY

DESIGN CONCEPT ONLY, SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS

ISSUED: 09/22/2025

SHEET TITLE

PRELIMINARY EXTERIOR ELEVATIONS

0' 4' 8' 16'

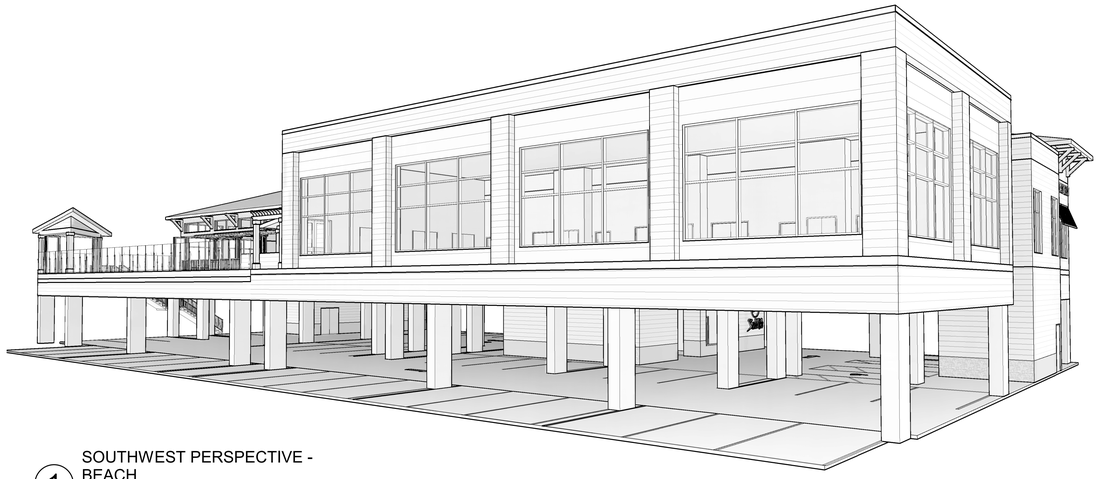
SCALE: 1/8" = 1'-0"

ISSUE BLOCK

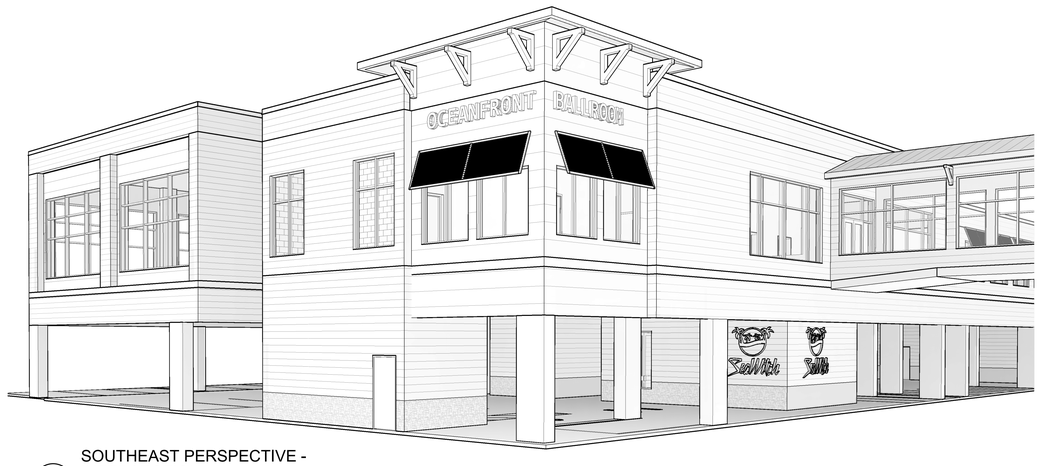
Mark	Date	Description
1	09.22.25	TRC RESUBMISSION

PROJECT NO:	2023042.02
DATE:	09.22.25
SCALE:	1/8" = 1'-0"
DRAWN BY: DJB	PROJ MGR: DJB

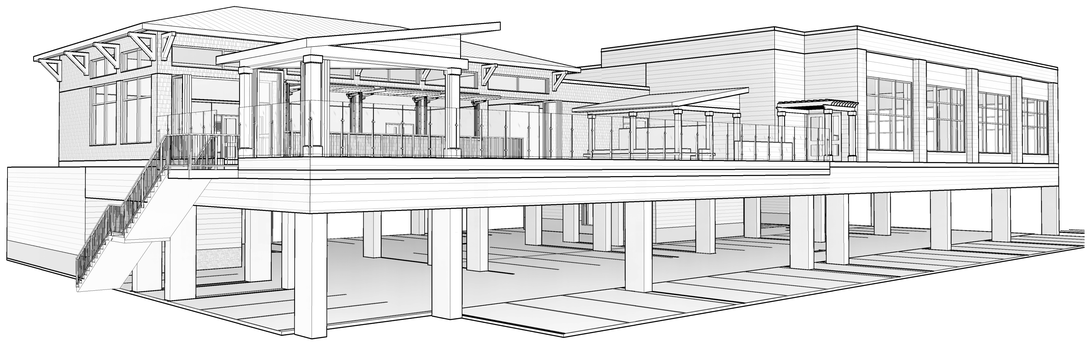
A201



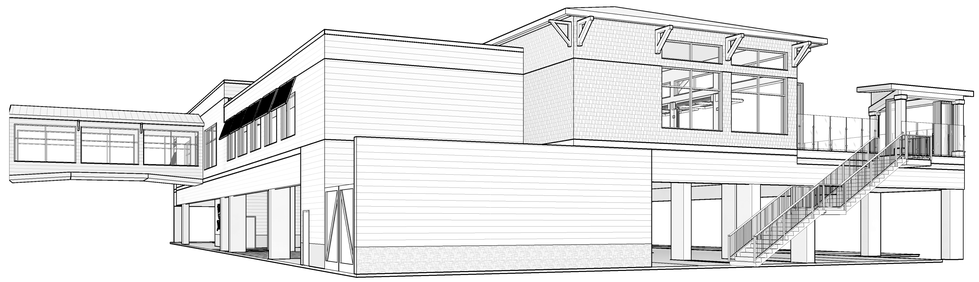
1 SOUTHWEST PERSPECTIVE - BEACH
SCALE:



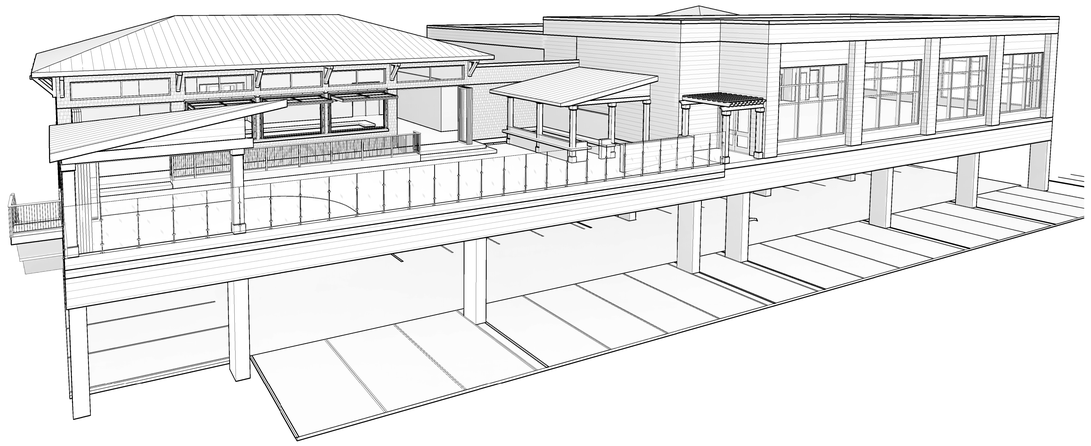
2 SOUTHEAST PERSPECTIVE - INTERSECTION
SCALE:



3 NORTHWEST PERSPECTIVE - BEACH
SCALE:



4 NORTHEAST PERSPECTIVE - CAROLINA BEACH AVE
SCALE:



5 NORTHEAST BIRDSEYE - BEACH
SCALE:

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

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100 Discovery Boulevard, Suite 102
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3333 Jaeckle Drive, Suite 120
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PROJECT TITLE

OCEANFRONT AMENITY PAVILION

LOTS 7-10, BLOCK 1
CAROLINA BEACH AVE N
CAROLINA BEACH, NC 28428

PRELIMINARY
DESIGN CONCEPT ONLY. SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS.
ISSUED: 09/22/2025

SHEET TITLE

PERLIMINARY EXTERIOR PERSPECTIVES

ISSUE BLOCK

Mark	Date	Description
1	09.22.25	TRC RESUBMISSION

PROJECT NO: 2023042.02
DATE: 09.22.25
SCALE:
DRAWN BY: DJB | PROJ MGR: DJB

A901


SPRINGHILL SUITES
BY MARRIOTT


SPRINGHILL SUITES
SPRINGHILL SUITES
OCEANFRONT
AK-279-AR


OCEANFRONT

HARMONY
H • O • S • P • I • T • A • L • I • T • Y

1300 Diamond Springs Road, Suite 204
Virginia Beach, VA 23455
(757) 363-9671 • *fax* (757) 363-9262
harmonyhospitality.com

Dear Town of Carolina Beach Officials,

At Harmony Hospitality, we are excited to contribute to the Carolina Beach community with the development of our new hotel, designed to enhance the charm and vitality of this beloved coastal destination. We recognize the town's concerns about parking availability in a beach community where spaces can be limited.

Our hotel's parking plan is designed to meet Carolina Beach's code requirements, providing spaces to accommodate guests. Based on our experience managing properties like the Embassy Suites Wilmington Riverfront, where approximately 75% of guests arrive by car, we have informed our architect to align parking capacity with anticipated demand, including staff needs.

Hotel schedules for staff are distinctly different than for guests. Most staff, such as housekeeping and maintenance teams, work during morning and daytime hours when guest parking demand is lower. Guests often arrive in the late afternoon or evening, allowing for natural turnover of spaces as staff depart. This staggered timing has been observed at similar properties.

To support our parking strategy, we are considering employee policies that encourage carpooling, public transportation, off-site parking options (where feasible), and flexible scheduling to reduce on-site vehicles during peak guest hours. The SeaWitch Cafe and Tiki Bar currently purchases parking permits from the town for some employee parking, and we anticipate continuing this practice for its staff upon relocation to the oceanfront location. Our experience indicates these measures will help balance demands.

We are confident that our data-driven approach will support smooth operations for guests, staff, and the community. We look forward to contributing to the town's vibrant tourism economy while preserving its accessibility and appeal.

Thank you for your consideration. We are available to discuss this further or provide additional details.

Sincerely,

Harmony Hospitality Team

Harmony Hotel and Pavilion at Carolina Beach
Food and Beverage Deliveries

The following are details regarding Food & Beverage Delivery Trucks:

- The largest trailer that the big box food purveyors run in the Carolina Beach area is a 28 ft refrigerated unit. Due to the tightness of the locations, street widths, and parking lots, the bigger larger trucks create a safety issue.

Delivery Times:

- We can do Key Drops. Those trucks usually begin around 3AM. We can make sure that the new route reflects early delivery.
- Most deliveries for any one specific location are dependent on the size of the drop -- no more than an hour at any one stop, most are faster. The bigger stops usually take around an hour to deliver. However, this is a case-by-case situation based on where they can park the truck, distance to drop zone, etc. At that time in the morning and not having to fight the normal barriers to fast deliveries it's usually a much faster turnaround.

As for other deliveries, primarily beer and wine, the deliveries are a bit more sporadic as far as timing goes. There are two large vendors, Adams Beverage and Coastal, that service all of Wilmington and Carolina Beach with 41-foot tractor trailers for beer deliveries. They deliver on Tuesday and Friday mornings in season, and the delivery times are typically before 11am-noon (at the latest) and the deliveries take no more than 10 -15 minutes. Outside of these two large distributors, the other beer and wine vendors deliver in small vans or 14' - 16' box trucks on various days, and again, the deliveries last no longer than 10-15 minutes. The other beverage vendors include breweries, Empire, and Windham Distribution.

All the restaurants/ hotels on the island are on the same delivery schedule with these purveyors.

February 19, 2024

RE: Community Meeting for Conditional Rezoning Request for property
at 223, 225, 227, 235, 237, & 239 Carolina Beach Avenue

We invite you to join us for a community meeting for the proposed conditional rezoning of property located at 223, 225, 227, 235, 237, & 239 Carolina Beach Avenue, Carolina Beach, North Carolina and identified as New Hanover County Parcels: R09006-005-015-000, R09006-005-016-000, R09006-005-019-000, R09006-005-020-000, R08818-019-001-000 & R08818-019-002-000. The current zoning of the property is CBD. The proposed conditional rezoning would allow for a multipurpose development to include a hotel, restaurant, and parking.

We welcome the opportunity to discuss the proposed project with you at the community meeting where we will give a brief presentation and answer any questions. The community meeting will be held on March 7, 2024, at 6:00 p.m. at the Community Life Center located at 300 Harper Avenue, Carolina Beach, NC, 28428.

If you cannot attend the community meeting, you can send questions and comments to Info@HarmonyHospitality.com or 757 363-9671.

We look forward to seeing you at **6:00 p.m. on March 7, 2024,** at:

Community Life Center
300 Harper Avenue
Carolina Beach, NC 28428

March 7, 2024
Community Meeting for Conditional Rezoning Request for Property at 223, 225, 227, 235, 237 and 239 Carolina Beach Avenue.

The meeting was held at the Community Life Center, 300 Harper Avenue in Carolina Beach, NC. Attendance was approximately 150 people.

Overview:
Discussion was focused on the proposed conditional rezoning of property located at 223, 225, 227, 235, 237 and 239 Carolina Beach Avenue and identified as New Hanover County Parcels: R09006-005-015-000, R09006-005-016-000, R09006-005-019-000, R09006-005-020-000, R08818-019-001-000 and R08818-109-002-000. The current zoning of the property is CBD. The proposed conditional rezoning would allow for a multipurpose development to include a hotel, restaurant, and parking.

Introduced a proposed 100' Embassy Suites hotel. Formal invitations were sent to property owners within 500' of the project site. Attached documents include meeting minutes, mailing list, attendee sign-in sheets, and invitation.

Community Concerns:
- Height of the proposed hotel
- Infrastructure (water and sewer capacity)
- Traffic impacts
- Stormwater management

Outcome:
Collected valuable community feedback to guide project refinements and inform subsequent meetings.

Attachments:
- Mailing List
- Attendee Sign In Sheets
- Meeting Invitation

March 2025
Informal Community Meeting for project publicized via social media.

The meeting was held at SeaWitch, 227 Carolina Beach Avenue N, Carolina Beach, NC. Attendance was approximately 175 people.

Overview:
This was an informal meeting publicized via social media. There were no formal invitations or attendance records. Meeting minutes were provided by Melissa.

Introduced the Holiday Inn. Explained economic need for a taller structure and proposed a 50' Holiday Inn Express (HIE) with fewer amenities as an alternative. This hotel type will meet height requirements.

Community Concerns:

- **Water Infrastructure:** Town confirmed additional water infrastructure will be operational in 1.5 years; regulatory agencies will ensure sufficiency before approval.
- **Sewer Infrastructure:** Town verified existing sewer capacity is adequate.
- **Traffic:** Draft Traffic Impact Assessment (TIA) shows no detrimental impact on transportation capacity or mobility.
- **Stormwater:** Current lots are impervious; the project will comply with local/state regulations, improving existing conditions.

New Concerns Raised:

- Community felt HIE lacked desired amenities. Suggested a mix of HIE and Embassy Suites features.
- Continued concerns about water infrastructure reliability.

Outcome:
Demonstrated responsiveness by exploring alternative hotel designs and reinforcing infrastructure assurances.

A survey regarding the project was distributed to the list of interested parties to complete and collected after the meeting. Attached is the completed survey. There were 246 respondents and comments were generally very positive regarding the project. The consensus was that 52% of respondents preferred a full-service hotel and 20.7% of people preferred a select service product.

Attachments:

- Meeting Invitation
- Survey Results
- Graph of Results

May 2025
Informal Community Meeting for project publicized via social media.

The meeting was held at SeaWitch, 227 Carolina Beach Avenue N, Carolina Beach, NC. Approximately 150 people were in attendance.

Overview:
This was an informal meeting publicized via social media. There were no formal invitations or attendance records. Meeting minutes were provided by Melissa. The meeting was highly positive, with significant community support for the revised proposal.

Positive Developments:

- **Enhanced Amenities:** Proposed a restaurant and event space on the oceanfront lot, addressing community's desires for high-quality facilities.
- **Revised Design:** Introduced a shorter hotel on the lot across the street, aligning with community preferences for a less imposing structure.
- **Water Infrastructure:** Reassured attendees that the project will not proceed without sufficient infrastructure, as confirmed by government officials and regulatory oversight.

Community Feedback:

- Attendees expressed excitement about the new proposal.
- Post-meeting, numerous community members approached the project team to thank them for listening to their feedback and incorporating it into the revised plans.
- There were no complaints/concerns with the new height of the hotel.

Additional Notes:

- Parking was raised as a minor concern, but the team clarified that the preliminary design is ongoing with detailed parking plans forthcoming.

Outcome:
Strong community enthusiasm and support for the updated proposal, reflecting successful engagement and responsiveness to feedback.

Attachments:

- Meeting Invitation

NGUYEN PHILLIP CATHY H	16032 DEER RIVER RD		CHARLOTTE NC 28278
ESSEN SETH V	6220 S MARION WAY		LITTLETON CO 80121
FAUST CHERYL C	4205 N TURNBULL DR		METAIRIE LA 70002
BEACH HARBOUR HOA INC	302 CANAL DR		CAROLINA BEACH NC 28428
SUTTON MARGARET H MICHAEL A	901 NUTT ST	APT 1E	WILMINGTON NC 28401
PALAZZO BEATRICE	78 ELMHURST AVE		MEDFORD NY 11763
SALDAMARCO JENNIE L	112 BOCA CIEGA RD		COCOA BEACH FL 32931
ROOF RALPH W TRUSTEE	221 LOCHVIEW DR		CARY NC 27518
SEEL JAMES FRANK JEAN MARIE TRUSTEES	6303 WESCOTT DR		SUMMERFIELD NC 27358
PHILLIPS LAURA	302 CANAL DR	UNIT 35	CAROLINA BEACH NC 28428
REITZEL JEFFREY B	10 GRACE ST	APT 501	WILMINGTON NC 28401
WILLIAMSON BRANDON TIFFANY C	302 CANAL DR	UNIT 16	CAROLINA BEACH NC 28428
SCHWENNESEN DEBORAH K ETAL	12800 E GANO CHANCE DR		CENTRALIA MO 65240
MANNING OLLIN H JR	1731 GOLFVIEW DR		KISSIMMEE FL 34746
WATSON BRIDGET G	3612 OLYMPIA DR		RALEIGH NC 27603
DREWERY RICKY D ETAL	4954 CASAR RD		LAWNDALE NC 28090
P POTTAMUS PROPERTIES LLC	9115 SEDGLEY DR		WILMINGTON NC 28412
WHITING JEFFREY B	7127 ORCHARD TRCE		WILMINGTON NC 28409
MCCLANAHAN LINDA KAY TRUSTEE	5607 OLD GARDEN RD	APT 106	WILMINGTON NC 28403
HINE RAYMOND J DEBORAH M	570 WATERFORD DR		MANCHESTER NJ 08759
MCCORKLE TOMMY JOE SR	4616 RAPIDS LN		DURHAM NC 27705
RICHARD ANN MARIE S		PO BOX 1486	CAROLINA BEACH NC 28428
CASH RANDY DEBORA	75 FRANK TIMBERLAKE RD		TIMBERLAKE NC 27583
FONTAINE MICHELLE D TIMOTHY R	112 CABOT DR		HOLLY SPRINGS NC 27540
ESSEN SETH V	730 FRONT RANGE RD		LITTLETON CO 80120
CAROLINA BEACH TOWN OF	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428
RODGERS WILLIAM E III MICHELLE R	2028 HOWSON RD		RALEIGH NC 27603
SCHILLING ROBERT DIANNE	6714 LOOP RD		HUNTINGDON PA 16652
HOWARD AMY K JAMES J	1003 E LADY DIANA CT		APEX NC 27502
ROSE FAMILY PROPERTIES LLC	203 COUNTRY CLUB RD		JACKSONVILLE NC 28546
DIMITRIU RADU GABRIELLA R	431 BILL CLINE RD		NEWNAN GA 30263

S & S BEACH ENTERPRISES LLC		PO BOX 657	CAROLINA BEACH NC 28428
CARLISLE JACK	8620 RIVER RD		WILMINGTON NC 28412
SIMOTAS SPIRIDON GIANOULA	317 GATEFIELD DR		WILMINGTON NC 28412
LANGHEIM GREGORY F CAROLE A	13133 SARGAS ST		RALEIGH NC 27614
ANDERSON DENNIS W		PO BOX 3992	WILMINGTON NC 28406
THAVISIN VORAVUT	222 N CAROLINA BEACH AVE	UNIT 414	CAROLINA BEACH NC 28428
BOURBOUS NICKOLAOS G ETAL	1106 HILL ST		DURHAM NC 27707
CABANA DE MAR ASSOCIATION INC	1612 MILITARY CUTOFF RD	SUITE 108	WILMINGTON NC 28403
CREGIN YAMNA A MATTHEW T	15 CUB RD		LAKE ARIEL PA 18436
WEATHERTREE2 LLC	302 ABBEY OAK LN		APEX NC 27502
PAGE WILLIAM JOSEPH CATHERINE H TRUSTEES	8501 CEDARBROOK DR		CHARLOTTE NC 28215
MURPHY MICHAEL DEAN LIV TRUST	545 VARDON CIR		HEMET CA 92545
BEESON J BLAKE ETAL	222 CAROLINA BEACH AVE	UNIT 305	CAROLINA BEACH NC 28428
FANG CHENG HAN	726 KEYSTONE PARK DR		MORRISVILLE NC 27560
AVERETTE PROPERTIES LLC	3729 W LAKE RD		APEX NC 27539
PURGASON JOHANNA G		PO BOX 478	CAROLINA BEACH NC 28428
CAROLINA BEACH HOSITALITIES LLC	2318 CROWN CENTRE DR		CHARLOTTE NC 28227
WALKER CLAY A	2628 HUNTSMAN TR		WILMINGTON NC 28412
KURTH JEFFREY R AMANDA L	222 CAROLINA BEACH AVE	UNIT 211	CAROLINA BEACH NC 28428
BORDEAUX JOY LEE WILLIAM T TRUSTEES		PO BOX 552	CAROLINA BEACH NC 28428
BAY INVESTMENTS COMPANY LTD		PO BOX 2629	ADDISON TX 75001
6 HARPER AVE LLC	102411 OVERSEAS AVE		KEY LARGO FL 33037
PARKER ROBERT W SR		PO BOX 1687	CAROLINA BEACH NC 28428
ANDERSON DENNIS W		PO BOX 3992	WILMINGTON NC 28406
WILLIAMS ELISE TRUSTEE	302 CANAL DR		CAROLINA BEACH NC 28428
K5 OCEAN PROPERTIES LLC	1141 BEXLEY HILLS BND		APEX NC 27502
ESSEN SETH V	730 FRONT RANGE RD		LITTLETON CO 80120
FERRER PROPERTIES LLC	312 N CAROLINA BEACH AVE		CAROLINA BEACH NC 28428
PRITCHETT ROASANNE H	257 ROCKY VIEW RD		TAYLORSVILLE NC 28681
ELBERA LLC		PO BOX 349	CAROLINA BEACH NC 28428
WHITE STEPHANIE J MICHAEL B	7728 MINSTREL AVE		WEST HILLS CA 91304

CAROLINA BEACH HOSPITALITIES LLC	2318 CROWN CENTRE DR		CHARLOTTE NC 28227
WEATHERTREE 2 LLC	302 ABBEY OAK LN		APEX NC 27502
CBP3 INC	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428
BLASER LISA MAYBERRY ETAL	7240 SUMMIT WATERS LN		RALEIGH NC 27613
CB ADVENTURES LLC	6040 CHANCELLORSVILLE DR		WILMINGTON NC 28409
MORGANTI KAREN	302 CANAL DR	UNIT 18	CAROLINA BEACH NC 28428
SCOTT VINCENT	2104 BRUCE PUGH RD		FRANKLINVILLE NC 27248
WHITE HOUSE CB PROPERTIES LLC	109 TEAKWOOD DR	APT 802	CAROLINA BEACH NC 28428
ILM VACATIONS LLC	1330 W MAIN ST		CLAYTON NC 27520
DUKE STEVEN R DOROTHY G	1116 THISTLE BRIAR PL		CARY NC 27511
GARCES/ROWLINGS REAL EST TR_ST	222 CAROLINA BEACH AVE	UNIT 230	CAROLINA BEACH NC 28428
ATKINSON DEBORAH L PAUL W	10820 CAHILL RD		RALEIGH NC 27614
CABANA DE MAR COA INC	ST	PO BOX 1283	CAROLINA BEACH NC 28428
HERNANDEZ HEBER R Q	1710 BARCLAY POINTE BLVD	APT 10207	WILMINGTON NC 28412
ADAMS SHARON LEIGH ETAL	1026 BENNET LN		CAROLINA BEACH NC 28428
CAROLINA BEACH HOSPITALITIES LLC	2318 CROWN CENTRE DR		CHARLOTTE NC 28227
P POTTAMUS PROPERTIES LLC	9115 SEDGLEY DR		WILMINGTON NC 28412
GRAHAM THOMAS SHERRI L	4285 EMILY LOOP	APT 1C	HIGH POINT NC 27265
EAT MORE FUDGE LLC	920 RIPTIDE LN		CAROLINA BEACH NC 28428
THOMAS BRENDA B ETAL	211 ROYAL FERN RD		WILMINGTON NC 28412
TAFT JEFFREY P ROSANNE D TRUSTEES	351 GREAT NORTHERN STA		APEX NC 27502
SMITH ALAN C MARY K	222 N CAROLINA BEACH AVE	UNIT 406	CAROLINA BEACH NC 28428
GLUCK LYNDA D	7549 REGENCY DR		PALM SPRINGS CA 92264
BLACKWELL DANIELLE M JOHNIE A III	2706 FORT FISHER TRACE		APEX NC 27502
SCOTT VINCENT	2054 BRUCE PUGH RD		FRANKLINVILLE NC 27248
CAROLINA BEACH TOWN OF	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428
ADLER JEFFREY STEPHANIE N SCHERLOH	222 CAROLINA BEACH AVE	130	CAROLINA BEACH NC 28428
VALENTIN JOSE A KRISTEN	7228 KANEOHE BAY PL		WILMINGTON NC 28409
SHERRY TRAVIS M ETAL	1708 CAROLINA BEACH AVE		CAROLINA BEACH NC 28428
VDI LLC 401K	205 N 15TH ST		WILMINGTON NC 28401
BOARDWALK BUNGALOW LLC	222 CAROLINA BEACH AVE	UNIT 226	CAROLINA BEACH NC 28428

TOMAYKO THOMAS W JESSICA	105 PINECROFT DR		RALEIGH NC 27609
K5 OCEAN PROPERTIES LLC	1141 BEXLEY HILLS BND		APEX NC 27502
TOWN OF CAROLINA BEACH	1121 N LAKE PARK BLVD		CAROLINA BEACH NC 28428
WIEDMAN TODD D STACY A	228 PARKWOOD AVE		CHARLOTTE NC 28206
CAROLINA BEACH TOWN OF	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428
CAROLINA BEACH HOSPITALITY LLC	2743 PERIMETER PKY	SUITE 370	AUGUSTA GA 30909
ALKURDI MOHAMMAD KSABINE A HACHEM	5920 CYPRESS SPRINGS RD		ELKRIDGE MD 21075
MULLINS DIANE P	302 CANAL DR	UNIT 29	CAROLINA BEACH NC 28428
BORDEAUX JOY LEE WILLIAM T TRUSTEES		PO BOX 552	CAROLINA BEACH NC 28428
SAPIKOWSKI CHRISTOPHER J LAUREN A	1228 DALGARVEN DR		APEX NC 27502
KIRKLAND SHERRY D ETL	4906 GLEN GARDEN CIR		LELAND NC 28451
CAROLINA BEACH TOWN OF	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428
CAROLINA BEACH TOWN OF	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428
KARNOPP CHARLOTTE		PO BOX 417	CAROLINA BEACH NC 28428
BAYSINGER CHRISTINA MARIE	6758 AA HWY		NEWPORT KY 41076
DICIOCCIO CHRISTINA ET VIR	125 GLADE VALLEY AVE		MOORESVILLE NC 28117
MAGNINI NICHOLAS R MEREDITH M	2914 ANGELICA ROSE WAY		APEX NC 27502
KOTULAK RYAN J VERONICA	8801 ORMAND WAY		WAKE FOREST NC 27587
EVERHART JOHN ZACHARY	109 BEECHWOOD DR		ATLANTIC BEACH NC 28512
TOOMAYAN GLEN SHANNON KOZLOWICZ	1525 LINDEN RD		ABERDEEN NC 28315
WILLIAMSON TIFFANY C BRANDON	4102 LAUREL RIDGE DR		RALEIGH NC 27612
MEEK STEPHEN JULIE A	302 CANAL DR		CAROLINA BEACH NC 28428
PHAM TINH QUANG	3304 CASSEDALE PL		GOLDSBORO NC 27534
BORDEAUX JOY LEE WILLIAM T TRUSTEES		PO BOX 552	CAROLINA BEACH NC 28428
U211 LLC		PO BOX 1273	PILOT MOUNTAIN NC 27041
CAROLINA BEACH HOSITALITIES LLC	2318 CROWN CENTRE DR		CHARLOTTE NC 28227
VAN ESSEN SETH KEELY	6220 S MARION WAY		LITTLETON CO 80121
CABANA DE MAR ASSOC INC	4700 HOMEWOOD CT		RALEIGH NC 27609
COHEN ELLEN M ETAL	404 SHAMBLEY RD		MEBANE NC 27302
LATTNER BROTHER HOLDINGS LLC	4034 1ST AVE		SEATTLE WA 98105
CAROLINA BEACH HOSITALITIES LLC	2318 CROWN CENTRE DR		CHARLOTTE NC 28227

QIN JENNIFER TRUSTEE	1113 EVANGELINE DR		LELAND NC 28451
P POTTAMUS PROPERTIES LLC	9115 SEDGLEY DR		WILMINGTON NC 28412
SHORE GROUP ETAL	305 SOMBRERO BEACH RD		MARATHON FL 33050
MCDONALDS CORPORATION		PO BOX 3992	WILMINGTON NC 28406
GUSSE ZACHARY	4321 WORLEY DR		RALEIGH NC 27613
CAWLEY BENJAMIN V ERIN	4515 GRENDEL RD		GREENSBORO NC 27410
CARRABIS ANGELINA ETAL	9840 WOOLWORTH CT		WEST PALM BEACH FL 33414
IMANA LLC	3917 CITY OF OAKS WYND		RALEIGH NC 27612
SCUTARO JOSEPH JOANNE	11 VALENTINE RD		SHOREHAM NY 11786
TROUTMAN BILL	6247 GLYNMOOR LAKES DR		CHARLOTTE NC 28277
CIPOLLINI DANA MARIE	104 BALZAC CT		CARY NC 27511
STOKED INN LLC	5208 CAROLINA BEACH RD		WILMINGTON NC 28412
WILLS FELECIA	7723 COMPASS PT		WILMINGTON NC 28409
CAROLINA BEACH TOWN OF	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428
STOKED INN LLC	5208 CAROLINA BEACH RD		WILMINGTON NC 28412
CAROLINA BEACH TOWN OF	207 CANAL DR		CAROLINA BEACH NC 28428
JAVA NORTH LLC	318 N CAROLINA BEACH AVE		CAROLINA BEACH NC 28428
CABANA DE MAR COA INC		PO BOX 1283	CAROLINA BEACH NC 28428
600 MILES SOUTH LLC	131 UNION ST		BROOKLYN NY 11231
NOELLE HOLDINGS LLC ETAL	5231 MASONBORO HARBOUR DR		WILMINGTON NC 28409
WALSH LEON C III DEBRA B	1640 CONE AVE		APEX NC 27502
MACDONALD CHRISTOPHER	222 N CAROLINA BEACH AVE	UNIT 113	CAROLINA BEACH NC 28428
TROYER MARK M LISA L TRUST	1101 EXCHANGE PL	APT 915	DURHAM NC 27713
TROUTMAN BILL	6247 GLYNMOOR LAKES DR		CHARLOTTE NC 28277
RISING TIDE OF THE CAROLINAS LLC	102 SACKETT ST		BROOKLYN NY 11231
CASA AL MARE LLC	212 BORDEAUX LN		CARY NC 27511
PISANO JOHN DANA	11204 SILVERLEAF DR		FAIRFAX VA 22039
ROSS SUSAN B TRUSTEE	3913 MADISON AVE		GREENSBORO NC 27410
KAY GREGORY P SUSAN	4816 DEERWOOD DR		RALEIGH NC 27612
NANAK INCORPORATED	6134 CAROLINA BEACH RD		WILMINGTON NC 28412
MCMILLAN DANIEL H	5620 WADE PARK BLVD		RALEIGH NC 27607

JAVA NORTH LLC	318 N CAROLINA BEACH AVE		CAROLINA BEACH NC 28428
600 MILES SOUTH LLC	131 UNION ST		BROOKLYN NY 11231
TWO FEET OVER HEAD LLC	131 UNION ST		BROOKLYN NY 11231
JAB NC LLC		PO BOX 32547	CHARLOTTE NC 28232
ALTOMARE PHILIP	5 EISENHOWER CT		BLAUVELT NY 10913
HAYWARD HOWARD H JOYCE L TRUSTEES		PO BOX 142	ELKHORN WI 53121
CAROLINA BEACH HOSITALITIES L_C	2318 CROWN CENTRE DR		CHARLOTTE NC 28227
CAROLINA BEACH TOWN OF	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428
PISANO JOHN	11204 SILVERLEAF DR		FAIRFAX VA 22039
EBERHARDT TODD	305 FOLLY ISLAND CT		WILMINGTON NC 28411
SHORE GROUP ETAL	305 SOMBRERO BEACH RD		MARATHON FL 33050
CARRABIS FAMILY REVOCABLE TRUST	9840 WOOLWORTH CT		WEST PALM BEACH FL 33414
BALATIAS CYNTHIA L TERRY K	1320 JERSEY LN		CHARLOTTE NC 28209
HORNE ROY F JR VIRGINIA J ETAL	335 COLLIE RD		MILTON NC 27305
EQUITY TRUST COMPANY CUSTODIAN/	1003 E LADY DIANA CT		APEX NC 27502
CASTRO HECTOR E DIANA C	2308 REDBRIDGE LN		APEX NC 27502
CAROLINA BEACH TOWN OF	1121 N LAKE PARK BLV		CAROLINA BEACH NC 28428

Welcome!

PLEASE SIGN IN BELOW

HARMONY HOSPITALITY PUBLIC MEETING - 3/7/2024 - 300 HARPER AVENUE

NAME	EMAIL
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Cynthia Dunn	cdunn4765@gmail.com
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Pete Green	Peter.t.green3@gmail.com
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WICK WICKLIFFE	
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Pam Capel	pamcapel49@yahoo.com

Welcome!

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Kenny Lewis	kennylewis7985@gmail.com
Dianne Gillum	
William Gillum	
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Cheryl Smith	CherylCSmith77@gmail.com
Anne Cooley	annecooley@hotmail.com
Billy Cooley	" "
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Lisa Merewether	LM1421@yahoo.com
Phil PERRY	PPERRY236@Gmail.Com
Laura PERRY	

Welcome!

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HARMONY HOSPITALITY PUBLIC MEETING - 3/7/2024 - 300 HARPER AVENUE

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Item 3.

Welcome!

PLEASE SIGN IN BELOW

HARMONY HOSPITALITY PUBLIC MEETING - 3/7/2024 - 300 HARPER AVENUE

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Crystal Lee	lee.crystal.quilter12@aol.com

Welcome!

PLEASE SIGN IN BELOW

HARMONY HOSPITALITY PUBLIC MEETING - 3/7/2024 - 300 HARPER AVENUE

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Welcome!

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Item 3.

Welcome!

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RANIER BERG	RKberg15@gmail.com

Welcome!

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Mary Watson	maryfromapex@gmail.com
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Welcome!

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Jasmine McKee	Plc
Tom Ulrich	tom.ulrich@crestlinehotels.com
Kenneth Shipp	KWshipp@gmail.com
Bryan Snarski	Pleasure Island Rentals
Meredith Ezzell	meredithezzell@yahoo.com

Welcome!

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David Pernell	davepernell@yahoo.com
Shawn Hardesty	Snh7860@yahoo.com
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Welcome!

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Cofer fam	cofferkc@aol.com
Jennifer Watts	Jennifer@CarolinaBeachMag.com
Lynda Wynne	wynnelm@aol.com
Michael Hannan	
Kate Dolan	Katedolan42@gmail.com

February 19, 2024

RE: Community Meeting for Conditional Rezoning Request for property at 223, 225, 227, 235, 237, & 239 Carolina Beach Avenue

We invite you to join us for a community meeting for the proposed conditional rezoning of property located at 223, 225, 227, 235, 237, & 239 Carolina Beach Avenue, Carolina Beach, North Carolina and identified as New Hanover County Parcels: R09006-005-015-000, R09006-005-016-000, R09006-005-019-000, R09006-005-020-000, R08818-019-001-000 & R08818-019-002-000. The current zoning of the property is CBD. The proposed conditional rezoning would allow for a multipurpose development to include a hotel, restaurant, and parking.

We welcome the opportunity to discuss the proposed project with you at the community meeting where we will give a brief presentation and answer any questions. The community meeting will be held on March 7, 2024, at 6:00 p.m. at the Community Life Center located at 300 Harper Avenue, Carolina Beach, NC, 28428.

If you cannot attend the community meeting, you can send questions and comments to Info@HarmonyHospitality.com or 757 363-9671.

We look forward to seeing you at **6:00 p.m. on March 7, 2024,** at:

Community Life Center
300 Harper Avenue
Carolina Beach, NC 28428

Additional Features You Would Like to See Retained Please list any other specific aspects or features you would like to see retained from the SeaWitch Tiki Bar that were not listed above.	Other Comments or Suggestions for the New Development We welcome any additional thoughts or suggestions you have regarding the proposed development at the SeaWitch Tiki Bar site.	What types of community initiatives or partnerships do you think our company should support or get involved in at Carolina Beach? Please feel free to suggest any ideas or programs that would benefit the local community and environment.	Optional: Contact Information (If you'd like to stay i If you'd like to stay informed about the project, feel
Specials!	Love the plans.	The Aquarium! :)	Leigh Anne
Indoor as well as outdoor environment!	Embassy Suites please and thank		Hayley Foster, hayleyakane@gmail.com
N/A	N/a		
Halloween	I want seawitch to remain - not a hotel or condos.	Finance the greenway	
It's important to have the same family friendly vibe. If we want a similar Cloud 9 we can go downtown	N/a	N/a	N/a
Heat and A/C	Keep seawitch bar /restaurat		Cathy Drosihn splendidevents@rocketmail.com 30
Unknown	Stay within zoning codes	Stay within zoning codes	
Staff	Smaller	Leave	
None	In favor of embassy suite SJ	Holiday parties	kaymcclanahan@hotmail.com
None	None		ual312@aol.com
Seawitch atmosphere but elevated	Pushing town to use the land trade as an opportunity to put green space		Lizzie Sutton, empaluso@gmail.com, 910-508-497
Character Otherwise none	Make it nice.	Like the idea of the original plan.	Kedcottrell1960@gmail.com
None	Love the idea of Embassy Suites to upgrade CB clientele, provide nice hotel/bar, bring in guests who spend $ in town	Any and all community efforts	martin.jeanene@gmail.com
Public access to a fun space that is casual	Keep the very local feel while drawing in and supporting visitors	More Cultural activities - music, art, opportunity to connect with neighbors	emadncmic@gmail.com
Bar atmosphere	Help improver drainage on canal drive	Boardwalk, park areas, senior center	
A laid back bar like the Sea Witch and not a swanky hotel bar.	Keep the building below 50"	Affordable housing for your employees in town so you can employ local folks.	Jacques Vermeulen, 910 294 1288
None	None		
The Tuna Nachos!!	Thanks for considering the 2nd & 3rd options but as a local resident, I personally want to see CB continue to upgrade in terms of amenities offered, visitors/patrons, aesthetics etc. I strongly believe that either condos or a Holiday Inn Express would represent a backwards step for CB. Stick with your original plan. Looking forward to having a drink in the new rooftop Seawitch Bar.		Henry Thomas / Hhtpanthers03@gmail.com
Smaller version of Embassy Suites	Smaller version of Embassy	More green space	
Live bands and a large dance floor are very important. Local's discounted passed (like we have now) would be grea	Large conference rooms	Pool memberships that could be purchased for locals	
N/a	Love the rooftop bar!!	Local fundraisers, Mac and cheese fest	farrellmegs@gmail.com
Open air environment	Be classy	Anything charitable and local	
N/A	Smaller scale, low density, parking, minimize traffic		
Live outdoor music	Don't sue the town		
Outside atmosphere	Min change		
Bike racks	Stillnbe a sportsbar		
I do not want to see any chance I want zero multi level development It leads to crowded beaches and clogged traffic	Keep the sea witch		J casey@casey-construction.net

Additional Features You Would Like to See Retained Please list any other specific aspects or features you would like to see retained from the SeaWitch Tiki Bar that were not listed above.	Other Comments or Suggestions for the New Development We welcome any additional thoughts or suggestions you have regarding the proposed development at the SeaWitch Tiki Bar site.	What types of community initiatives or partnerships do you think our company should support or get involved in at Carolina Beach? Please feel free to suggest any ideas or programs that would benefit the local community and environment.	Optional: Contact Information (If you'd like to stay i If you'd like to stay informed about the project, feel
None	An ocean view from the "Tiki Bar" would be nice.	Pay for programs within the community that support the locals. Not all (most) local homeowners of Carolina Beach did not want this development.... But since your company is here maybe you can make it a little more digestible.	
Parking	This is a small beach community	Family oriented	Alicia Leo. Aleo15@msn.com
Nothing specific.	Seriously - offer the Town something worthwhile. Like paying a SIGNIFICANT portion of the cost of the new water storage tank. Give the taxpayers something of you want something from us. That's business.	Pay at least half of the cost of a new water tower.	Paul Levy. Thelevysatthebeach@gmail.com. 336-6
Leave it	Keep it short	Free parking	
Bike parking	Get the locals involved or you won't succeed. Invest in the community. Good food and good cocktails are important otherwise you'll end up like the Lazy Pirate.	Ocean Cure	Carolina carovel90@gmail.com
Keep Seawitch	Would like to see a boutique hotel that's smaller and has additional restaurants and event areas that are an extension of the boardwalk. Maintain the CB vibe.	Redo Seawitch and add shops.	
Live, local bands.	Keep it classy, Harmony. I am a CB firefighter with concerns about water pressure. With recent residential additions, I know this is an issue that needs to be considered and addressed before moving forward.	Discounted rates and discounts on food/beverages as a courtesy to actual local residents.	Davidschifter1@gmail.com
Local spot	Green space	Children	Heather Kenny 910-352-3693
The Sea Witch as is, no new build	I cannot understand how you can add another 139+ vehicles a weekend coming through Wilmington, over the bridge and by the marina and not disrupt the integrity of the area. Plus getting your employees to work and home.		
Keep the unique non-chain feeling	As small as possible please thank you	Thank you for including community input	Kate Dolan katedolan42@gmail.com 4432260996
Music venue	Music venue		
Nothing .	The right answer is the full service hotel. Every other option is already here.	Support local charities	
Accessibility to boardwalk; local accommodations; low roof profile	LOW building height. Crucial to maintain the integrity of our shoreline and protection for sea life (lights from big building)	Sea turtle patrol (concern of new, large 24/7 lights during turtle season)	Krystal Hutchison, kroselyons@gmail.com
Small coastal vibe	Traffic is primary concern ... esp with canal drive ongoing issues.		johnsonbob100@gmail.com
N/A	Keeping the seawitch tiki bar and building a boutique max 50' hotel on the ocean front. This would have limited impact on the current landscape of Carolina Beach.		Caleb Lewis, Lewis.calebj@gmail.com
Music, atmosphere, vibe	Would like to see environmental impact on s drinking water long term	I like the additional expo hall/venue to help support off season revenue for the other businesses	Vern Herrington vernherrington@yahoo.com (404)
Stay within the 50 ft guidlines	No bar	Parking	coastcleanllc@yahoo.com
Similar size restaurant with live music venue. Ample parking without fees	Small beach community feel. We don't want Myrtle Beach in NC		
Local Charm of the Sea Witch	I would vote yes to the Embassy Suites if you helped pay for the water infrastructure and had public parking available.	Providing opportunities for live music	melodygreenhouse@gmail.com
Community feel	50 foot limitation with a bar for residents to frequent		
Some homage with pictures or description to the original tiki bar	I think the event space would be fantastic for our businesses in the shoulder seasons	Carolina Beach Police Foundation, Pleasure Island Chamber of Commerce	Wayne Rouse - waynerouse1@hotmail.com
None	None	Carolina Beach Police Foundation, Carolina Beach Mural Project, CB American Legion. Island Men Island Women, Ocean Cure	kimlosito@outlook.com
Just be good corporate citizens	Didn't let the Carolina beach Facebook groups think they speak for everyone. Totally in favor of your project		Vincent Losito. Vlosito@outlook.com. 3362091515
The staff	Full service hotel with a venue to replicate the Seawitch Bar experience		

Additional Features You Would Like to See Retained Please list any other specific aspects or features you would like to see retained from the SeaWitch Tiki Bar that were not listed above.	Other Comments or Suggestions for the New Development We welcome any additional thoughts or suggestions you have regarding the proposed development at the SeaWitch Tiki Bar site.	What types of community initiatives or partnerships do you think our company should support or get involved in at Carolina Beach? Please feel free to suggest any ideas or programs that would benefit the local community and environment.	Optional: Contact Information (if you'd like to stay i If you'd like to stay informed about the project, feel
None	None		
The food is mediocre and would appreciate an improvement to the menu	Really hoping you can come up with a plan to move forward with the embassy suites. The town is due for an upgrade and this development unlocks future opportunities for the town. Thank you for taking the time to present to the community.	Direct investment on civil works improvements to mitigate king tide flooding on canal drive	Mike Janis - Mike.janis@outlook.com - 919390470
Small town feel	Please try not to cast a shadow, especially my friends right next to your lot.	Ocean cure, CBES, senior center, Martha's kitchen	twokdogs@gmail.com
I don't want the large hotel, which is the only option with a bar element. So this foil doesn't pertain.	Very concerned if the hotel were to come online before new water capacity was up and running.		Jim Weidman weidmanink@gmail.com
Special events	Convention center space & parking	Holiday celebrations	Mary-Katherine Smith, 910-444-8002 riversmithrea
Large outside fireplace's	Local residents parking free with permit.	Local support for residents that have supported th Seawitch.	Greg Caldwell gcaldwell001@gmail.com 919-801-9
2$ domestic beers	Miniature golf	High status in the loyalty program with enough points to stay at a typical brand hotel for a 4 nights	artdeplasylum@mac.com
The ability of walking into the SeaWitch right from the street	I'd prefer condos on the ocean front and the SeaWitch to stay as is!!		Renee ralewis7985@gmail.com 919-616-1126
Music on the ground level and bands till midnight or later	Keep the 50' height limit and build something that fits the town		
Dont over think the bar with a corporate look and feel. Keep the genuine tiki bar theme. People here like to pretend they are in Key West.	None		Paul Bastuscheck Bastuscheck@hotmail.com 202
Ocean views	I'm for Embassy Suites		Beverly Godfrey seasidedealer@gmail.com
Live entertainment with great bands!	I don't like the idea of exceeding the current zoning height of 50 feet. It would be nice if developer could build within existing zoning limitations.		Doug Watson, property-king@outlook.com
We know that development is inevitable and hope that you'll take into account the island and community vibe. Thank you for giving the community an opportunity for feedback.	We are full time residents. I know the town or the state dictate traffic, water and sewer standards, etc and I'm just hoping there are smart people on staff setting those standards. I know it's not your issue you just need to abide by what the town says, but I don't have a ton of confidence in them ensuring we don't max out.	There are a lot of opportunities on the island to donate things and support charities that benefit the CB community. The Lo Tide Run is a huge community event. As is the annual event by OceanCure. Island Men and Women sponsor a ton of events benefiting island residents. I would hope and expect that your organization will plug into those opportunities.	Andrea Fitzgerald, andreamfitzgerald100@gmail.c
NA	I would prefer a boutique type hotel that Mets the 50' height requirement but also offers a restaurant /bar.	I since your business plan will increase demand on water supply, as the developer you should contribute additional funds for the required upgrades to the system as opposed to pushing those costs onto the residents.	Kim Betcher, kimbbeachbum@comcast.net,
Na	Na	Na	Na
It would be cool to dismantle the SeaWitch and. Rebuild it on top of the hotel keeping as much or the original as possible except for the bathrooms lol those could be new. The stage for bands is great and should be retained too.	It would be cool to dismantle the SeaWitch and Rebuild it on top of the hotel keeping as much or the original as possible, except for the bathrooms lol those could be new. The stage for bands is great and should be retained too.		
Would love that laid back look, multi layer on ground level, not rooftop! Do t want to have to to pay go get in and high price drinks like in most hotels!	Road system, flooding area needs major improvement	Pleasure Island Chsmber if Commerce, arts council	wmcmillian2@icloud com
I'd prefer a Tiki Bar that's actually much nicer than the current SeaWitch with tastier food. The idea is great but I would prefer an outside bar that's more comfortable, more attractive with higher quality food.	I'm a full time resident. Much prefer an up scale hotel with great amenities that CB residents could also enjoy. Would hate to see a holiday inn express or more condos.		Joey Fitzgerald joeyfitzgerald3428@gmail.com
Stage, party room	Keep it casual and tropical, not concrete and sterile		
Support of community nonprofits	Bike Racks for all three options, plans to eliminate congestion.	Nonprofit organizations, supportive measures to work with existing businesses, environmental friendly programs.	Crystal Lee lee.crystalgwilm12@aol.com (910)599
No additional features	Attractive landscape around building		Diane Mullins, mullinsnsm@aol.cim
Friendly low key atmosphere	NA	Special events at he hotel	

Additional Features You Would Like to See Retained Please list any other specific aspects or features you would like to see retained from the SeaWitch Tiki Bar that were not listed above.	Other Comments or Suggestions for the New Development We welcome any additional thoughts or suggestions you have regarding the proposed development at the SeaWitch Tiki Bar site	What types of community initiatives or partnerships do you think our company should support or get involved in at Carolina Beach? Please feel free to suggest any ideas or programs that would benefit the local community and environment.	Optional: Contact Information (if you'd like to stay i if you'd like to stay informed about the project, feel
All of it	Build small and community oriented.		
Na	Love the north end anchor option with 100' hotel	Food insecurity, support of sea turtles teaching, beach volleyball, art murals	erinwoz@hotmail.com Jeannett 919-897-9779
Keep it small town local	Just don't take business away from other businesses and keep our small town feel	The American legion Post 129	nakdgrl.tb@gmail.com
Na	Na	Na	mavencom@gmail.com
Lighting that does NOT affect the beach and wildlife.		Island Women, Island Men, Pleasure Island Sea Turtle Project	jenifr75@yahoo.com
No high rise hotels blocking out the sun and causing more traffic on an already strained infrastructure.	Please stop the overdevelopment of our island	Please go home	I only answered the development of the site portion
I love sea witch and hope to see it stay very similar to it is now!!	Love it how it is		
Reasonable prices	Go big! 2 elevators minimum. Pay up for traffic solution. Give us additional fire and law enforcement personnel.	Ocean cure Pink houses	Ok
Tuna nachos	Keep the tuna nachos	Build a parking garage where town passes and boardwalk employee passes would be honored.	
Don't change the family vibe and local of feel Carolina Beach. It's not a convention town. The tourism is bustling as it is, no need to increase the impact. Keep it a great place to live.	Please do not build over 50 feet. Carolina Beach is one of the few places left not ruined by high rises and hotels. Keep our beautiful skyline and don't pack so many more people into such a small space.	Beach Renourishment, Infrastructure Improvement, limit over development	
N/A	Don't go over the height limit	Can't think of any right now	
The local feel amd love of the seawitch	Updated venue		
Welcoming to locals and visitors	N/a	N/a	
Drink and food specials. Season passes available to residents. Support the locals during peak season.	A development that would have something that the local residents could enjoy. Resturants, bars. Another general hotel would not have any amenities for the use of a local resident. A convention space. Parking.access for local residents.	Donate back to charitable causes like Island Men, American Legion etc.	Michaellewis@att.net
I don't have any opinion on this	the above question is a trick question. You don't give the opportunity to say NO development. This area does't need another hotel for a couple weeks in summer.	supporting a green environment. More green spaces.	
more free parking	more free parking		
Character	Go as high as possible. 10 is great !	Too many to mention.	Already am
Atmosphere and music	A smaller boutique hotel with a bar would be perfect.	Work to prevent the flooding on Canal and Pelican Drive	Rebecca.Schisler735@gmail.com
The beach vibe	Don't loose the beach layed back vibe !!	Carolina Beach	Kathymss1@aol.com
It's all about the love	We do not want to be like Myrtle Beach so please stop trying.	Get involved with the community first and then you will know what we are about and what we need/want.	
Ground level	Mirror the existing restaurant	Adhere to the existing height requirements per the town ordinance	
Outside stage	I would prefer a building within your 50 to 70 foot guideline that would include all the amenities that you are trying to eliminate if we go to a straight 50 foot height.	Provide a banquet hall to support community events	Stan Piatkowski 862-223-3685 Piatkowskisc@pell
All features, leave it alone stop tearing everything down and taking away the charm of the town	How about leave Sea Witch alone and build a parking garage so there is more parking for the beach to help with accessibility to the beach for all the hundreds of thousands of people NHC is allowing to move here.	Farmers markets, environmental programs,	Kathleen Turowski, ktluvdogs@gmail.com
Just want to keep it! Love the live music and social aspects.	Keep the restaurant	Keeping the restaurant and atmosphere for islanders and guests	Katie Gilmore.gilmorekatie5@gmail.com
Local hires	Convention center to drive off season tourists	Ocean cure.	

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Tuna Nachos!	The height of the complex is the biggest concern. The Courtyard is a blight on our coastline. Keep the new hotel inside of the existing height restrictions to preserve the CB feel. No one is interested in CB eventually looking like Myrtle Beach.	The Pleasure Island Sea Turtle Project is actively working with the town to adopt turtle safe lighting. Many other beach towns have already adopted this requirement. Commit to this now and you'll win some support with the locals.	
N/A	Do not allow height to exceed current zoning		
The community atmosphere	Although I would love a full service hotel, i would like it to be 50ft in height. The Holiday Inn express is not an appealing option. I feel like there should be a compromise of an option		Rkberg15@gmail.com
None	Convention space is key to growth.	Corporate sponsors for Island Men events to give back to the island.	wbw21957@gmail.com
A one story building	It's a shame that you want to turn the sea switch into a hotel. This will change the vibe of Carolina Beach. Developers and owners don't live here. You just wanna put a big hotel up to make money and ruin our town. It's a shame.	None	
Good food at a good price, good draft beer selection, appreciation for locals support.	I am between the big and medium hotel options and need to do more research. Carolina beach has been discovered Ang growth is inevitable. One the other hand we do not want to become Myrtle Beach. Interested and open hearing more from developer, and will get feedback from my local friends and business owners.	Support for local fundraisers and organizations like island men is a good way to get your name out. Parking for locals has been a mess for years; an offseason option for locals would be welcomed. CB has no local pool ... maybe off season options for locals to buy? Given local distrust in town hall, the best thing you could do is push out all info as it happens.	smjaeb@outlook.com
Outdoor seating and casual atmosphere	Casual outdoor dining, bar-type food, seafood baskets, burgers, etc. Old beach music and some dance floor.	Like local benefits (like Lo Tide Run). Kick-off campaigns and end up events.	Johanna Grantham, jjgrant@charter net
We love the way it is now short and sweet	Keep it small	We love the local small feeling in cb getting involved with local holidays parades and party's on the board walk	
Palm trees	I'd really love to see an updated, funky exterior with varying rooftop heights/colors. Something different from an Embassy Suites or the Marriott or Hampton.	The flooding issues on Canal Drive/Pelican/CBAN	
The variety of music and open air stage & dance floor. Do better on the food- almost every restaurant has the same menu. We love the music but eat somewhere else first. Offer a small dessert & cocktail space. Atlanta's Cafe Intermezzo comes to mind.	Private/ Public parking structure- development has first 2 floors, 3-4 floors paid parking open to public	CB Murals, Federal Point History Center, Ocean Cure, local community events ie Trashwalkers, Pets in the Park, Freeman Park	
Continue with off season specials	Building that are in town codes and not built around codes	Assistance with the traffic and true traffic study's	Ray Parker
keeping our one last hometown feel place to go less touristy	NO HOTEL we dont need any more people coming the traffic and crowds are bad enough		
Palm trees	Keep sea witches menu. It's better than cloud 9's. I like going for dinner		Moslun@aol.com
All the same	Tbd		dak32868@gmail.com
Music venue for large bands	Please do not go taller than the town ordinance states	Work with the Pleasure Island Sea Turtle Project to create and install turtle friendly lighting initiatives.	krystalwebb777@gmail.com
None	None	NA	
The SeaWitch is a staple to Carolina Beach. It is a unique establishment with it's own vibe.	Please consider a boutique hotel that stays within the current guidelines and keeps the SeaWitch. Thank you.	Infrastructure improvements! We do not have the infrastructure to support the proposed development as-is.	Dava Vandall, davathediva@hotmail.com, 910-470-
Cheap beer	More coverage in inclement weather		
Better blending into existing cbd plans	Why not make a boutique hotel and venue instead of a boring holiday inn express at the lower height?	Invest in island infrastructure improvements	
Open air aspect of the dance floor	Traffic during the high season is a very legitimate concern if the embassy suites is built. It already backs up with people trying to get to Freeman park and the north beach area. Sure wish there was a way to incorporate the current site as the outdoor music venue to a smaller boutique-type hotel.		

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Keep the employees	I would like to see the seawitch elements incorporated into a rooftop tiki bar with upgrades. Maintain the vibe and scene but with the rooftop views. Would like parking to be available to patrons for maybe first 90 mins free or something similar to some of the downtown Wilmington parking decks.	Help sponsor fundraising events on the island put on by Island Men, Carolina Beach Bar Club, etc	
Open air feeling	Low impact development is preferred	Public Art	lynnempicard@gmail.com
Any of the iconic pieces from the original Sea Witch , aka the outdoor fireplace , signage etc	Please take a lot of photos from the Tiki bar and frame those and add to decor of the new bar Look at the two outside bars and recreate those elements in your updated version	Reach out to the CB murial project to place artwork of the old Sea Witch on a portion of the new Embassy Suites Island men , American Legion, and any other local partnerships	Jerilyn Jones , jerilynmarie0123@hotmail.com , 33
None	Na	Na	David Tilley, captaindavetilley@gmail.com,910-264
None to list	Nothing to list	Clean up and beautification	islandcruises.nc@gmail.com
Tuna nachos	Keep a small town vibe	Community involvement by the residents	
Local vibe	Pay employees enough so they can actually live where they work (so they WONT effect traffic and parking.....) not in your presentation	NC coastal Fedeeation	dgavitt@verizon.net
Local food/flavor	I would like the Embassy Suites amenities with a smaller scale. Whatever you end up building, a roof top bar that is open to the community would be wonderful.		Dcjama@gmail.com
As much to stay the same as possible. Love the extra rentable room	Less in and out traffic is most desirable, so a condo model would be best for that location.	Island Drainage, public water improvement and road improvements along with beach cleaning	
The SeaWitch and no development	Prefer no development and do not appreciate that we are required to choose on the above question.		
The multiple styles of places to enjoy the restaurant	Please choose the option of less floors.	All of the things here	
Decor	Keep height restrictions in place	Family friendly companies (water park)	
Ambiance and decor	None		Steve Fehervari 518-225-3382 sfehervari@msn.cor
Open outdoor space to enjoy live music	Try to keep the small beach town charm and not turn it into a huge commercial monstrosity.	Sea turtle protection and conservation	mandygail112@gmail.com
Beach vibe	Embassy suites proposal		Craig Hare, jcfla95@gmail.com
The large stage and better lighting	I love the small beach town charm feeling	Local beers and wines along with local food.	Bjohnson8404@gmail.com Brian Johnson 571221
A place for everyone young and old.	Please don't		Snmccrary196@gmail.com
No hotels or condos on the space	It need to be dark sky friendly, no lights pointing towards the beach so the baby turtles don't get confused and go towards the light.	Donate to / participate in local causes (island charities, food bank, etc.)	
none	I think an Embassy Suites would be a great enhancement		
Host Special Events/Fundraisers	Keep SeaWitch Tiki Bar as is. Incorporate it in development site.	Infrastructure Improvement. Schools. Beautification.	
Great catering!	Outdoor seating		
Occasional bigger name bands	Ocean front dining and bar		
Part of CBs history	Stick to 50' high		
Na	This community does not want a high-rise hotel and although I am sure we will get one, it will be a scar on the land.	This company has already planned the entire high-rise hotel behind the backs of the community with our community officials and put on a dog and pony show for the community to give them the impression that their input even matters	
NA	Please don't build over height restrictions	Sponsor community events like the Lo Tide Run, neon bike ride, etc	
The relaxed atmosphere	Would love for it to remain the same		

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The relaxed atmosphere	Would love for it to remain the same		
Easy access	Embassy suites		
Nothing extra	.	.	
bar restaurant	no more than 3 floors		
Sports bar	None	Pride Lo Tide Art Murals	
Outdoor vibe	Large meeting space for year round business after vacation season to keep community vibrant year round	Wilmington CVB efforts	Lee Campbell, sldcamp@bellsouth.net
I appreciate that the Seawitch is on ground level and open air. It would be best to enhance that space and make it an entertainment venue vs building a hotel or condos	I think the Seawitch tiki bar should stay and not be replaced by a hotel or a condo building and we definitely shouldn't allow 100' structures on this small charming island	Expand the entertainment industry	
Current Seawitch meets 50' limit rule - keep that	Stay with 50' limit rule		
Open atmosphere	We are a small community, we do not want to see another 100'+ hotel		
You covered it	None		
Na	I'm upset . This is the best bar on the island		
More Parking	Please no walk up 4 floors to a overpriced rooftop Marriott bar. Keep it beachy!		Angie, abkmrussell@gmail.com, 9104717993
Maybe the palm roof over the bar and to me transferred to a new position.	Need to keep in with the unique beach vibes. Ie smaller the bette, even though I understand it may not be viable.	Carolina beach bar club. Sports teams on the beach	robintoone@bellsouth.net
A bar and restaurant with 99% outdoor seating with a key west laid back vibe.	50' or less.	Help with our town's infrastructure	
Town parking by the marina. Music venue. Outdoor restaurant.	Do not build over 50'.	Sponsor everything. Youth sports. Mural project. Festivals.	
Music venue	People love the live outdoor music		Outdoor Live music venue
Island vibe , dive bar	Use Carl winner ave as entrance and exit for hotel		
Would not like a hotel there	Would not like a hotel there. This is not something our town needs right now.	Nothing	
Corona sign!	Ability to support conventions and weddings		

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	I would have liked to be an actual middle ground option. It was obvious that Holiday Inn Express option was only there to make the Embassy Suites seem like a sweet deal. For example, a boutique hotel with a speakeasy bar/restaurant would have been a nice option. All these presentations revolve around bringing tourists to the island, tax revenue and increases to local businesses. But you have to remember that the majority of the people that live here don't own businesses on the island. If there is going to be a development, we want to see benefits as residents too - and not just hypothetical tax revenue from the occupancy tax. We moved here to be in a small beach town. Examples of what I would like to see : - Unique establishments, not cookie-cutter, stereotypical developments. Think speakeasys, innovative activities, day spas. - Parking for residents; how will residents be able to go to the restaurants if they don't have parking in the area? - Partnering with local businesses; would be nice to have a spot within the hotel for local businesses to showcase their business on a rotating basis (ie samples, activities, etc). - Free events for locals - Dog friendly options I understand that you guys are in the hotel space but we really don't need/want another hotel here. We are real people that have built our lives here and I understand you guys wanting to make money but you're doing so at our expense. You're demolishing a part of the town that we can never get back. I would have also liked for these presentations to be more infortmative & for you guys to be more prepared to answer questions. Its very frustrating to schedule my time to come to these meetings & the questions aren't answered.		
The exact structure. It would be a waste of everyones time to try to "remake" seawitch; the only way that could happen is if you took it apart and then rebuilt it as the rooftop bar with the original pieces.		I think you should stay in Carolina Beach for a week. Actually get to know the locals If you want to get involved, it's very easy.	Melissa Balbach melissabalbach@icloud.com 336
Small town feel	It needs to stay at 50 foot regulation.		I attended the event
A building with current code.	None		
None	None		
Keep the Seawitch and build a small boutique hotel next t.	Seawitch Tiki Bar is a staple in CB. Keep it with a smaller hotel.		
You got them All	While to welcome you to the community!		
Small town feel	No	CB mural project	
Compliance with town height restrictions.	Condos would have the least impact on town infrastructure and comply with height restrictions currently in place.	None that I can think of.	Bill Coen wcoen@att.net
Better Restrooms for events.	We need a full convention center to pull groups in the office season. Everyone in business on the island would benefit from that.		amyrowlett@gmail.com
Th neighborhood vibe. It's got the small town beach feel that I love.	I think the most important thing is that any new development fit in line with the community vibe. I don't want cb to turn into Myrtle beach.	Those that preserve the small beach town we all love. The infrastructure of our town cannot support a massive development. Our community needs to stay accessible, bike-able and needs to be more pedestrian friendly.	Kathryn.waple@gmail.com
None	High tech games, virtual reality, something for the people to do as we have too many places to stay		
Small locally owned beach bar feel, not chain, corporate fancy, uppity	None of the above options are appealing as a citizen of CB. More of a casual, beach, surf, boutique hotel, less corporate, chain. Something that fits CB.	Carolina Beach Elementary, Ocean Cure, Pleasure Island Sea Turtles. It's not too late to donate to the Carolina Beach Elementary School "Seastar Shuffle" annual fundraiser. https://click.pstmrk.it/3s/app.99pledges.com%2Ffund%2Fcbseastarshuffle%2Fteam-tugwell/tolM/qe_7AQ/AQ/c5979689-2314-4ed7-9dd9-643f87465d6b/1/ugdk5wRwLL	

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Compliance with town restrictions.	Condos would have lowest impact with infrastructure and height ordinances.	None	Uscgamecocks01@gmail.com
Everything don't change it 1 bit	No monstrous hotel please	Ocean cure	
Shabby	Smaller is better		Cherylwward@gmail.com
I	I	I	I
Better good choices; more than bar food. Healthy options, using locally sourced Whole Foods and less fried seafood! Catch of the Day—Your Way!	Locals to get discounts/access to amenities. Locals who actually live ON the island.	Locals to get discounts/access to amenities. Locals who actually live ON the island. Reduced rental Costs on meeting spaces, % discount on published menus, support local art — the Mural Project would love a wall...	Andrea 404.200.5868
not to exceed 50'. entire roof recreated with part of see witch and look reminiscent of sea witch. keeping the spirit of the town to the core of the new hotel structure. have the building be part of the town culture and vibe versus trying to fit a square peg in a round hole.	see above	fund raising	dbalbach@outlook.com
Good hours	If something has to go there which I know it does, I prefer something different than just more condos or a little hotel. I'd rather have more amenities like restaurants.		Mtodd14@hotmail.com
Great drinks	I like your ideas	Bar Club fund raisers	Terry Wyckoff Phixitall@outlook.com 304-476-810
Reasonable prices. Off season specials.	Not to exceed the 50 hight restriction	Island Men, Island Women, Ocean Cure, CB Bar club	David Marshall davidmnc_1999@yahoo.com 910-3
none	please make it look like it belongs -not a random modern structure with no beach feel		tlwfrisco@gmail.com
The long time staff	I like the idea of everything the full service option brings to the area.	Transportation options - I have some technology I'm working on	Scott Thomas scottytcbnc@gmail.com 203-873-6
Location and assessable entrances	I'm against ant type of structure that goes over 50'. We do not have the infrastructure to support the number of people that will bring to our area.	Partner with our ems services. The influx of more people will cause issues that will require emergency services-fire, police, and medical personnel are already stretched thin- they can't handle the current load during tourist season.	Debby Ruffin / 434-841-6069 / debbyruffin@gmail.
Just a beach vibe about the design	Blend in with the vibe of the town		
None	A boutique hotel with a roof bar. This would fit the environment.	You need more infrastructure for the community - fresh water, drainage, parking.	Haywarjo020@gmail.com
The place as it is with no hotel	Don't change a thing and just keep Seawitch as it is. I haven't been there since the plans for a hotel came about. If you don't build a hotel I will come back but I won't support you if you build a hotel	Don't build a massive hotel	
The open sky and not building anything	To keep the seawitch as is and where it is		zoeybrass66@gmail.com zoey brass
Welcoming community feel	Open green spaces, if I was the town I would ask you to pay for sidewalks, benches, ect to agree to the height variation	Off season events	
The same local vibe bar. Open outdoor space with live music Not having that would be a huge loss to the island.	Please keep an outdoor concert space!!		Sherice myagentsherice@gmail.com
Commit to community	Have your own parking spaces.	Island Arts Council Rotating Gallery, popup art events	
Community	A 50 foot hotel with a variance for a roof top bar.	Relieve traffic flow at Canal intersection. Water and sewer upgrades.	Bob Ponzoni rjponzoni@yahoo.com
Na	Nothing over 50 ft height restriction, and keeping with the island aesthetic. People visit our ish and because we are not Myrtle beach. A boutique hotel would fit in perfectly.		Christina Pershing, pershd@yahoo com 443-417-6
None	None	None	
None	None	None	Nine
Halloween Costume Party	If full service hotel is the choice, a world class spa would be ideal to add.	CB is all about community, all should be considered.	

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NA	No taller than 50ft.	Maintaining the essence that makes Carolina Beach such a special place. Support local	
good hours	Local specials	Ocean Cure, Trash Walkers	
As much of the current talent as possible.	None	Host the "Island Men" and Women groups	Colin, cmcgrath78@yahoo.com, 603 714 5652
Easy ground level access. No hotel.	No hotel!!!!!!!!!!!!!	Don't build!!!!	
Family-friendly feel	None		
None	None		
Nothing over 50 ft	Nothing over 50 ft		
Much of the current employees	Team Embassy Suites	Island Men and Island Women	Marilyn McGrath. Mmcgrath78@yahoo.com
A lively outdoor music venue for vacationers and locals	Keep what is already there! It's a successful business and tourist and locals flock to it	Keep the vibes of what is already there	marcia54@me.com
Local atmosphere. A place where everyone knows each other. I can't imagine a restaurant/bar in a large scale hotel offering that.	Ideally I would like to see a boutique hotel with a rooftop restaurant that adheres to the 50 foot height requirements. Carolina Beach does not need nor want another flagship hotel. I understand that the developer has every right to build what they want on their property. I just hope that it adheres to the rules, aesthetics and desires of the community. I feel like a boutique hotel can give both the developer and local community a great comprise between both parties. Most locals do not care about the additional tax revenue that a larger hotel will "promise" to bring.	Honestly just contributing to upgrading our local water supply and traffic issues. Locals don't care about restaurants in a flagship hotel. Locals will support the already established restaurants and bars and will likely not have much interest in visiting any establishment located in a hotel. Teasing us with restaurants so you can go over the current height restrictions or build a big hotel is not what Carolina Beach residents desire no matter what tax revenue it brings in.	Rsheadavis@yahoo.com
None	The offseason business it would create is much needed.		
Affordable	For the previous question, I'd like things to stay exactly as they are. I'd prefer "none of the above".	Island Women / Men, CBES, rec center youth sports programs, Ocean Cure, PISTP	
None	Embassy Suites would be a wonderful upscale addition to Carolina Beach and the island.		
I don't think it adds up that the owner said that he purchased the land because he loved the SeaWitch. You will not be able to emulate the SeaWitch in a hotel bar or restaurant. I think what makes the SeaWitch so vital in the community is that you can just walk right in off the street and its casual atmosphere for both tourist and locals which will not be captured in a hotel.	I think the best option for the community and your bottom line is renovate the SeaWitch and keep as is, then build a small hotel or condos on the Oceanside plot of land. Also, the Holiday Inn Express does not have the brand loyalty and will not attract the cliental that you are hoping for.		
Live band entertainment	Like to see you giving back to local community fundraising events	Supporting local 501.c.3 fundraising efforts with The Island Men, Island Women, CB Bar Club, Ocean Cure, Lotide Run for Cancer	
Reasonable prices for locals, maybe local card access similar to music passes	Open air venue with some covered seating	This is a charity driven island, pick any or all to support	
Outdoor and indoor mixed space	Very excited for the embassy suites proposal!	Centennial celebrations, service oriented events	Ryan Sutton, rsutton801@gmail.com
Keep the Seawitch as is. No changes necessary, wanted or appreciated. Any of the proposed plans will only create traffic issues in an already congested area.	The options listed do not include my preference which is, "Other" or "None of these".		
Beach vibe laid back bar that is more enticing to the locals than catering to the tourists because the locals will help sustain it through the off season.	Definitely want a hotel with all the amenities and a conference center. This area needs a larger capacity conference center that can bring in bigger events from all over. But I do hope that you keep the vibe and feel of the SeaWitch tiki bar. Almost separate from the hotel. Also know that there is a relatively small group of locals that are against any and everything the town does and they do not collectively reflect the true desires of the town. They are the same people that complain when the town does something but then in the same breath complains they don't do enough.	Locals discounts. Social events. Support the CB fire and police departments. Involvement with the chamber. Giving back to the town and supporting community events. Good restaurants! This town needs some new and good restaurants with variety and not just basic plates. Soul flavor is killing it in this town but there needs to be another place that's similar but different.	
Live music ability with 50' option	No high rise. Traffic is already a problem.		Michelle Bumgarner. micburn94@gmail.com

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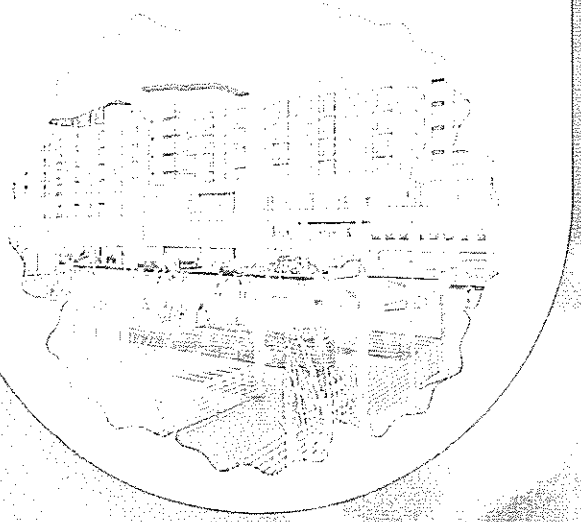
I would say everything but I truly would add additional indoor or covered seating for bad weather days.	Don't want to see anything built higher than currently allowed. No wavers for parking should be allowed. If a religious school was denied due to traffic (during our OFFseason) then an already congested, Heavy season traffic should be denied as well.		
The view of the street.	Kelly Slater Wave Co provides the ultimate surf setting, providing the highest levels of service and experiences. Kelly Slater Wave Co technology comes alive in partnership with the World Surf League, delivering unparalleled surf programs, training and events that share the stoke of surfing.	Kelly Slater and https://www.kswaveco.com/	Daniel Kempf, dtk1973@gmail.com, 910-547-1728
It's the only big music venue on the island. Would like to keep the same bands and the same staff not clean house like many establishments do	Keep it quaint and down to earth vibe that is CBesque	Cleaning the beach of trash! The more hotels the more tourist and the more the beach is littered. The music scene, there are ton of local musicians that need to still be supported. The funding of a round a bout or something to help with traffic since canal is bad on traffic as it is. This should be funded by yall, not at the locals expense.	Becca.whitson89@gmail.com
The restaurant itself.	.	.	
A local, small town feel as it has been for the past 20+ years vs something fancier or higher up on a rooftop	Carolina beach is and has historically been a small beach town. Development and growth is inevitable, but keeping that feel vs increasing traffic, restricting view or taking away from that atmosphere ruins the charm of Carolina beach. A well developed, small town southern coastal looking property would fit in well. In addition, supporting the other small businesses around the new development (Nollies, Gulf Stream, etc) is essential to locals.	Bringing in a local coffee co for the lobby, giving back to local charities, etc.	
The ante room available for rental for parties/ gatherings	I'm not happy with the height. Height brings people. And cars. And congestion. And loss of permeable surfaces. And utility usage. And loss of vibe. A huge hotel looks like a huge monstrosity. That's a fear. Losing the island "feel." You want to make money. I get it. But we don't need another Myrtle Beach.	Support island non-profit organizations that provide services that better our island and our residents. Allow small businesses to partner for increasing their viewership. Initiatives: ease of transport (bike and walk paths), accessibility (beach access to disabled). Provide memberships and discounts for residents.	
Just maintain small feel, boutique hotel , nothing over built	Main concern is that the building is not any taller than, the Hampton inn		
Large outdoor deck area	Do not build a 10 floor mega structure that blocks out the beach	Sponsorship of sports leagues, CB park groups	
I've been going to Sea Witch for 20 years or more. I wanna see it stay the same.	Keep it as close to how it is	Fundraisers for locals and the community	annmwms@live.com
I've been going to Sea Witch for 20 years or more. I wanna see it stay the same.	Keep it as close to how it is	Fundraisers for locals and the community	annmwms@live.com
Leave it alone	Leave it alone	Carolina beach elementary school	
Rooftop bars are becoming more popular, but a modern rooftop bar is not congruent with the beach vibe we have at the Seawitch. Casual dining, boardwalk feel occurs at ground level, not on the roof.	There is a happy medium. 100 feet is too much. Parking is requirement. Restaurant and bar open to the Public will help you sustain during off season, but if you change what is loved about Seawitch, you'll become just another Marriott hotel that the Town ignores.	Support the community with specials during the week, or certain projects for the Town. Keep the beach/boardwalk feel. Fancy hotels are a dime a dozen in other towns. that's not CB	
The trees.	Keeping the same atmosphere is important for this location. One of our only music and dance venues that is large enough to handle the summer crowds. If this is coming, do it well and listen to with an open mind.	Be involved in all of them. We have so many and the involvement the better it will look.	
Please keep it the same. Vibe and all. This is very important to locals. I grew up here	.	If you have room in this. Chili cook off. Big hit here on island	Lila Torres april.nutechhearingnc@gmail.com 919
None	Largest development possible is welcome	Something to help compensate neighboring hospitality businesses who will suffer negative impacts during the development and construction due to noise, road closure, utility work, etc	Dan Tollens, dan@palmettocontainer.com, 843-442
Local vibes and offseason specials	We don't want the development of anything!		
None	None	Be active in supporting fundraisers, community projects, schools, police and fire fighter groups. Be a good neighbor in our community.	
Build to town ordinances that you mentioned numerous times today.	Build within town ordinances that you mentioned numerous times today.	Being part of the how community works would have already provided this	

Additional Features You Would Like to See Retained Please list any other specific aspects or features you would like to see retained from the SeaWitch Tiki Bar that were not listed above.	Other Comments or Suggestions for the New Development We welcome any additional thoughts or suggestions you have regarding the proposed development at the SeaWitch Tiki Bar site.	What types of community initiatives or partnerships do you think our company should support or get involved in at Carolina Beach? Please feel free to suggest any ideas or programs that would benefit the local community and environment.	Optional: Contact Information (If you'd like to stay i If you'd like to stay informed about the project, feel
Local specials and incentives to bring locals i	Make it local friendly. And consider a 50 foot structure with a variance for a rooftop bar/restaurant		Collectivefilmgroup@gmail.com
All of them	Leave it alone and stop ruining the island for financial gain	None. You're not a community partner. You're a leach looking to make money while running small businesses out of business	BBUCKNER83@yahoo.com
Totally against it. Dont turn CB into myrtle beach	Totally against it. Dont turn CB into myrtle beach	Totally against it. Dont turn CB into myrtle beach	
Live band	Make plumbing and flooding and parking a priority		
Keep it casual and inviting to the public.	Make it CB not some conglomerate mess.	Island Men, a group that gives back to the community	240-299-9440
Hollie's taco joint	Do not exceed 50'		
Band venue with tiki bar like it is It's all we have	No higher than 100' hotel only	Weekend big local bands with bar and light foods	
The Seawitch Tiki Bar is a great place for the Islanders to meet up with friends. It's like one big happy family where everyone knows each other. For many it's walking distance to their homes. If you don't live on the island, you just don't get it	Leave well enough alone !!	We feel another high rise hotel is not needed at Carolina Beach. This is a small family oriented community. This is not Myrtle Beach. There are not enough streets to accommodate the traffic or amenities to support the infux of people who would come to stay. Think about the infrastructure. The local residents will be paying for all of the needed upgrades. There is limited access onto the 2 streets that will support the hotel. During the summer, it now can take a minimum of 30+ minutes just to get off the island. What happens when emergency vehicles need to arrive at a location and can't get through the traffic. Also, what about when the streets are flooded. We feel more planning is necessary before another hotel chain takes up residence on the beach. Better yet, perhaps a location between Carolina and Kure Beach where there isn't as much traffic congestion.	
Keep the locals engaged - it's critical	Please do the best you can to keep the same ambience and vibe of seawitch going forward. I've been longer than seawitch and locals will honor that	Bike paths and walking paths Tennis courts, and Pickleball courts Many locals want to stay active and healthy	Shawn - snh7860@yahoo.con

Public Gathering

March 26, 2025
5:00PM- 8:00PM
SeaWitch Tiki Bar

HARMONY
H·O·S·P·I·T·A·L·I·T·Y



Waves of chatter about the future development?

Ride the facts at SeaWitch Tiki Bar with our presentation & shore fire deals!

227 Carolina Beach Ave N.
Complimentary parking in designated areas!
Presentation begins at 5:45PM

Embassy Public Meeting Q&A Minutes

Intro & Presentation

Presentation start time: 6:09 PM

Time (PM)	Notes
6:34 PM	A comment from the crowd "No we didn't." when presenter mentioned occupancy tax paying for Freeman Park.

Note: Presentation of Embassy proposed plan was met with little-to-no interruptions

Q&A Start Time: 6:37pm

Time (PM)	Name	Question	Notes
6:38	Steve Shellworth	Is the 240 parking spaces in addition to the parking garage?	Asked if HH asked about height. Believes bulk and scale does not fit. Does not agree with the parking situation, scale and fit
6:40	Not stated	If the hotel is sold out, does parking go over 240 parking spots? Can our sewer system handle this?	Brought up Section 40-50 Brings up parking issues Brings up taxes
6:43	Not stated	What changed in the central business ordinance that allows for this multi-use "mega hotel".	Concern about changing the zoning requirements
6:45	Not stated	Is HH going to do anything about the current water & sewage system?	Main concern. Water & Sewage
6:48	Dave Tilly	Are you going to be able to bring in things	

		during the Winter time? Do you have any projections about how many conventions this will bring in?	
6:49	Neil Betan	No question – commented his appreciation with the project	
6:50	Sydney Dunn	When do you think you anticipate going online with this project once everything is approved? Sidewalk commitments – those roads are narrow now, how is it going to affect 2 way traffic on both streets Parking decks – open to public to use, How will you push the town to make the park?	
6:53	Sydney's brother – name not stated	Where will the 200 Embassy employees park? Asked about the access off the Carolina Beach Ave to the parking	One issue – the businesses struggle with employee parking
6:57	Susie Shelflan	How many stories will it be, how tall will it be? How does it compare to other hotels in the area?	

6:57	Christian Dunn	Which council members were you meeting with before you purchased the Seawitch?	
6:58	Meredith Piezel	You mentioned something about powerline burial?	
6:59	Not stated	Is the sidewalk going to be 2 blocks?	
7:00	Brad	How many people in the room want the hotel? How does this project get passed?	
7:01	Outburst	Whose to stop us from turning into Myrtle Beach?	
7:02	Outburst	Why do we need more commercial property?	
7:02	Not stated	Has the town thought about the traffic impact with the project?	
7:03	Not stated	Can we have options in design without breaking town ordinances?	
7:04	Not stated	Statement about the height concern with where they live will block the sunrise	
7:06	Todd P.	If you stick to only 50 feet, what amenities would we be losing?	or the other amenities
7:07	Outburst	Do you plan on holding more meetings?	

7:08	Not stated	Has other research been done on the Island in terms of employment count
7:10	Not stated	Will traffic survey be done during peak season?
7:11	Not stated	Am I the only here that really enjoyed the seawitch?
7:13	Not stated	Concern about the restaurant capacity summer time for locals

Q& A ends at 7:13

Next steps was addressed after Q&A

Optional: Contact Information (if you'd like to stay informed about future meetings or updates)" If you'c
Hayley Foster, hayleyakane@gmail.com Cathy Drosihn splendidevents@rocketmail.com 301-991-6399 kaymcclanahan@hotmail.com ual312@aol.com Lizzie Sutton, empaluso@gmail.com, 910-508-4977 Kedcottrell1960@gmail.com martin.jeanene@gmail.com emadncmic@gmail.com Jacques Vermeulen, 910 294 1288 Henry Thomas / Hhtpanthers03@gmail.com farrellmegs@gmail.com J.casey@casey-construction.net Alicia Leo. Aleo15@msn.com Paul Levy. Thelevysatthebeach@gmail.com. 336-687-4094 Carolina carovel90@gmail.com Davidschifter1@gmail.com Heather Kenny 910-352-3693 Kate Dolan katedolan42@gmail.com 4432260996 Krystal Hutchison, kroselyons@gmail.com johnsonbob100@gmail.com Caleb Lewis, Lewis.calebj@gmail.com Vern Herrington vernherrington@yahoo.com (404) 245-8625 coastcleanllc@yahoo.com melodygreenhouse@gmail.com Wayne Rouse - waynerouse1@hotmail.com kimlosito@outlook.com Vincent Losito. Vlosito@outlook.com. 3362091515 Mike Janis - Mike.janis@outlook.com - 9193904702 twokdogs@gmail.com Jim Weidman weidmanink@gmail.com Mary-Katherine Smith, 910-444-8002 riversmithrealty@gmail.com Greg Caldwell gcaldwell001@gmail.com 919-801-9422 artdeptasylum@mac.com Renee ralewis7985@gmail.com 919-616-1126 Paul Bastuscheck Bastuscheck@hotmail.com 202-709-0025 Beverly Godfrey seasidedealer@gmail.com Doug Watson, property-king@outlook.com Andrea Fitzgerald, andreamfitzgerald100@gmail.com, Kim Belcher, kimbbeachbum@comcast.net, Na wmcmillian2@icloud.com Joey Fitzgerald joeyfitzgerald3428@gmail.com Crystal Lee lee.crystalgwilm12@aol.com (910)599-4662 Diane Mullins, mullinsnsm@aol.cim

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Rkberg15@gmail.com
wbw21957@gmail.com
smjaeb@outlook.com
Johanna Grantham, jjgrant@charter.net
Ray Parker
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krystalwebb777@gmail.com
Dava Vandall, davathediva@hotmail.com, 910-470-3283
lynnempicard@gmail.com
Jerilyn Jones , jerilynmarie0123@hotmail.com , 336-965-2953
David Tilley, captaindavetilley@gmail.com,910-264-3973
islandcruises.nc@gmail.com
dgavitt@verizon.net
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mandygail112@gmail.com
Craig Hare, jcfla95@gmail.com
Bjohnson8404@gmail.com Brian Johnson 5712215278
Snmccrary196@gmail.com
Lee Campbell, sldcamp@bellsouth.net
Angie, abkmrussell@gmail.com, 9104717993
robintoone@bellsouth.net
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amyrowlett@gmail.com
Kathryn.waple@gmail.com
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Scott Thomas scottytcbnc@gmail.com 203-873-8601
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Haywarjo020@gmail.com

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Bob Ponzoni rjponzoni@yahoo.com
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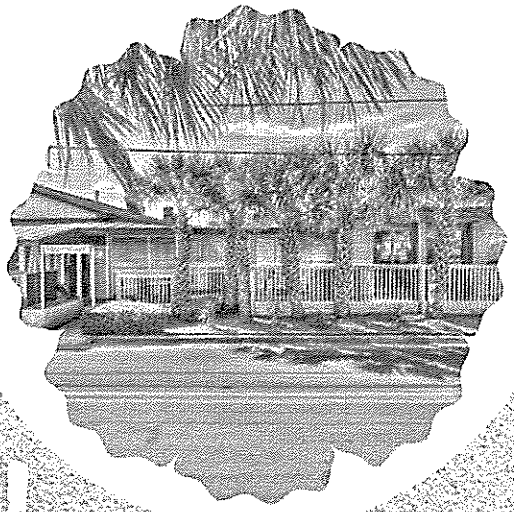
Lila Torres april.nutechhearingnc@gmail.com 919-908-3152
Dan Tollens, dan@palmettocontainer.com, 843-442-0809
Collectivefilmgroup@gmail.com
BBUCKNER83@yahoo.com

Shawn - snh7860@yahoo.con

I like to stay informed about the project, feel free to provide your contact information below. (Name, Email, Phor

HARMONY

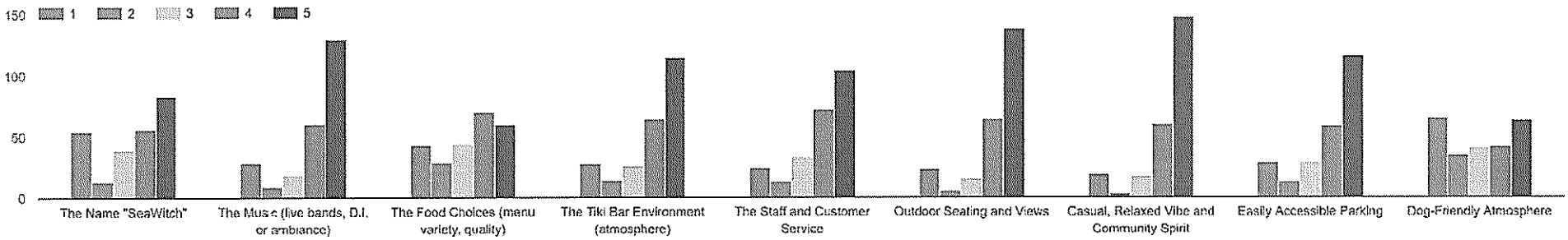
H·O·S·P·I·T·A·L·I·T·Y



You're Invited!

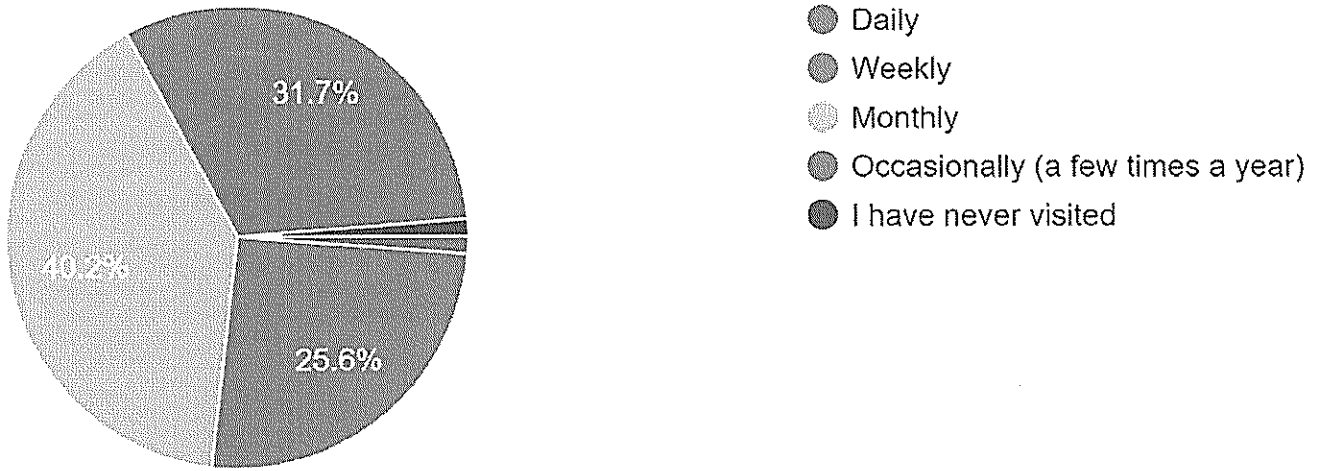
Public Meeting
with updated plans, based on your valuable feedback

Features of the SeaWitch Tiki Bar You Would Like to Retain: Please rate the following aspects of the SeaWitch Tiki Bar based on importance to you. (1 = Not Important, 5 = Very Important)



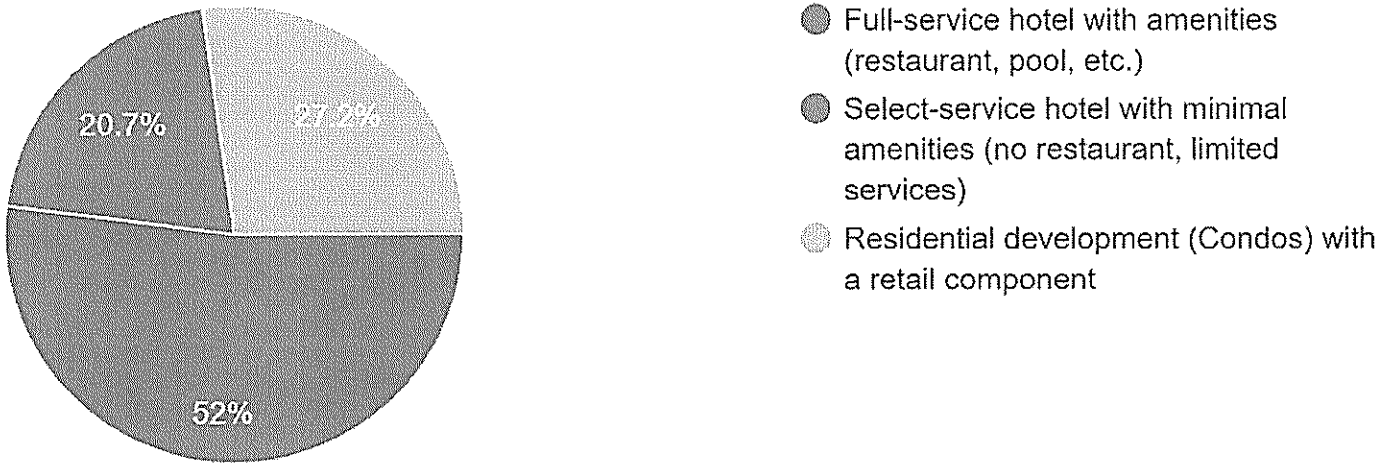
How Often Do You Patronize the SeaWitch Tiki Bar?

246 responses



What Type of Development Would You Prefer for the Site? Please indicate your preference for what you would like to see on the site of the SeaWitch Tiki Bar. (Select one)

246 responses



September 29, 2025

DAVENPORT

TRANSPORTATION IMPACT ANALYSIS

Embassy Suites Hotel

Carolina Beach, NC

Project # 232024

Prepared For: Embassy Suites by Hilton Wilmington Riverfront

DAVENPORT

Transportation Impact Analysis

Embassy Suites Hotel
Carolina Beach, NC

Prepared for
Embassy Suites By Hilton Wilmington Riverfront

September 25, 2025

Analysis and Graphics by: Sheheryar Shafique, EI

Reviewed and Sealed by: Donald R. Bennett, II, PE.

SEAL

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Serving the Southeast since 2002

EXECUTIVE SUMMARY

The Embassy Suites Hotel commercial development is located in the southwest and southeast quadrants of the intersection of Carolina Beach Avenue and Pelican Lane in the Town of Carolina Beach, NC. Originally, the proposed development consisted of a hotel with up to 177 guest rooms. A Transportation Impact Analysis (TIA) was prepared and submitted dated December 13th, 2024. Since then, the site plan has been revised, and the Town of Carolina Beach has requested a supplement to the TIA reflecting the updated site plan. The updated site plan includes a hotel on the west side, with up to 140 guest rooms, and an event center on the east side of Carolina Beach Avenue. The development will retain the originally proposed connection with Carolina Beach Avenue using two (2) one-way driveways, one ingress and one egress. The expected build-out year for this development is 2026. Information regarding the property was provided by Embassy Suites by Hilton Wilmington Riverfront.

DAVENPORT was retained to determine the potential traffic impact of this development and to identify transportation improvements that may be required to accommodate the new development traffic.

The supplemental Transportation Impact Analysis (TIA) was performed based on the scope agreed upon with Town of Carolina Beach, NCDOT and the WMPO. The original trip generation potential of this site (based on 177 guest rooms), 1,495 daily trips with 103 trips in the Friday PM peak hour and 128 trips in the Saturday mid-day peak hour, was retained for this analysis. It should be noted that since the original trip generation retained for this analysis is based on 177 hotel guest rooms where no reduction to site trips was considered, therefore the impact results of the study are inherently conservative.

In conclusion, this study has determined the potential traffic impact of this development and has recommended measures to mitigate the impact of future site traffic. Improvements include:

1) Restripe the eastbound approach to provide full length storage left turn lane and a thru-right turn lane with 100 feet of storage plus appropriate deceleration and taper.
2) Revise the signal plan to accommodate the dominant traffic pattern.

The analysis indicates that with the recommended improvements in place, the proposed site is not expected to have a detrimental effect on transportation capacity and mobility within the study area. The recommendations summarized in Figure A and in Table A should be constructed to comply with applicable local standards.

Table A – Recommended Improvements	
INTERSECTION	**RECOMMENDATIONS**
US 421 (N Lake Park Blvd) and Carl Winner Drive	• No improvements are recommended.
Carl Winner Drive and Canal Drive	• Restripe the eastbound approach to provide full length storage left turn lane and a thru-right turn lane with 100 feet of storage plus appropriate deceleration and taper. • Revise the signal plan to accommodate the dominant traffic pattern.
Canal Drive and Pelican Lane	• No improvements are recommended
Pelican Lane and Carolina Beach Avenue	• No improvements are recommended.
Pelican Lane and Carolina Beach Avenue	• No improvements are recommended.
Carolina Beach Avenue and Site Access 1	• Design site driveway according to applicable local standards.
Carolina Beach Avenue and Site Access 2	• Design site driveway according to the applicable local standards.

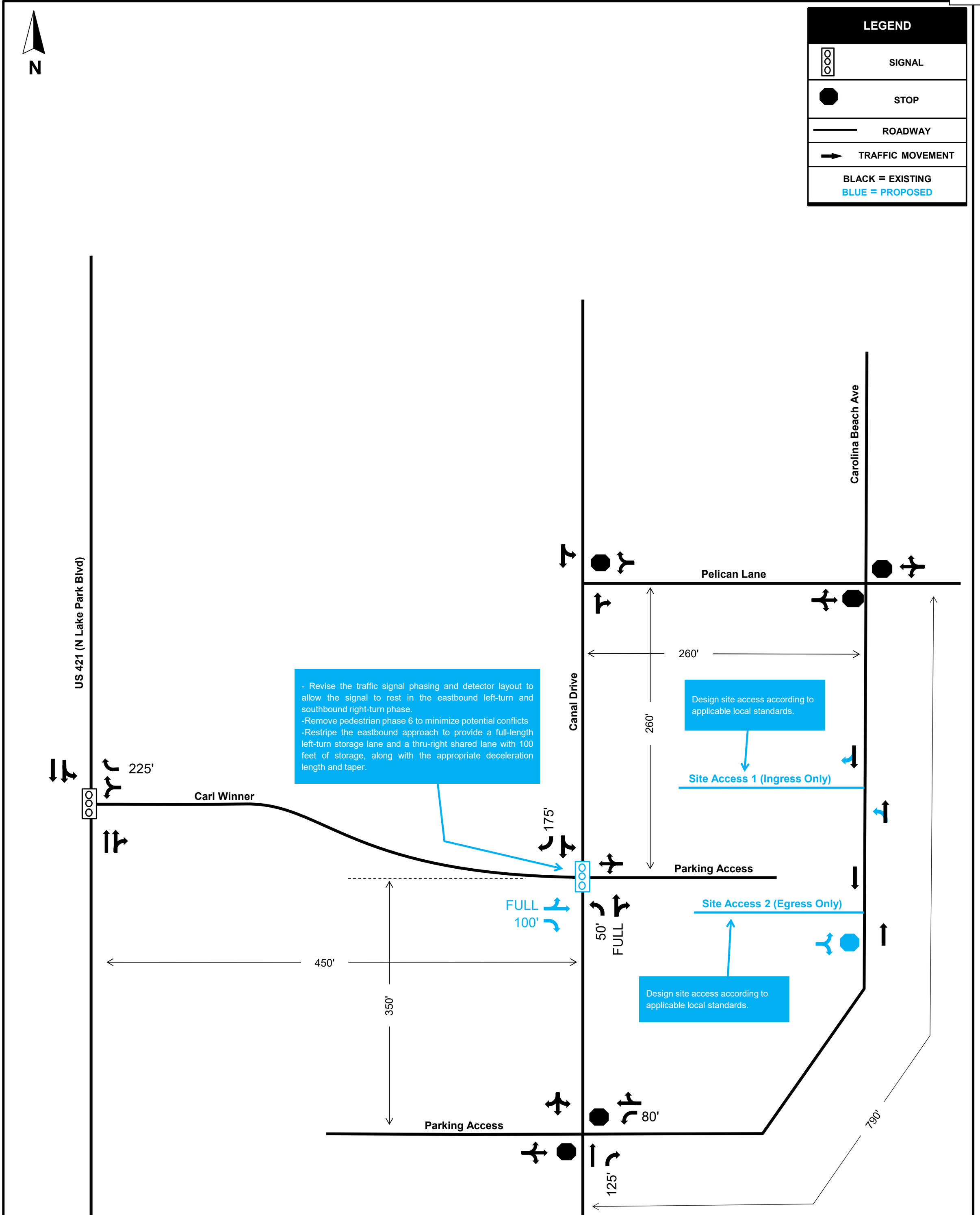


FIGURE A
RECOMMENDED IMPROVEMENTS

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT

*** NOT TO SCALE ***

Table of Contents

1.0 Introduction

The Embassy Suites Hotel commercial development is located in the southwest and southeast quadrants of the intersection of Carolina Beach Avenue and Pelican Lane in the Town of Carolina Beach, NC. Originally, the proposed development consisted of a hotel with up to 177 guest rooms. A Transportation Impact Analysis (TIA) was prepared and submitted dated December 13th, 2024. Since then, the site plan has been revised, and the Town of Carolina Beach has requested a supplement to the TIA reflecting the updated site plan. The updated site plan includes a hotel on the west side, with up to 140 guest rooms, and an event center on the east side of Carolina Beach Avenue. The development will retain the originally proposed connection with Carolina Beach Avenue using two (2) one-way driveways, one ingress and one egress. The expected build-out year for this development is 2026. Information regarding the property was provided by Embassy Suites by Hilton Wilmington Riverfront.

The conceptual site plans for the hotel and event center are shown in Figure 1A and 1B respectively. A site location map and a vicinity map are provided in Figures 2A and 2B, respectively.

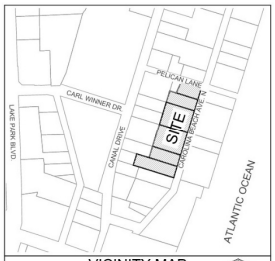
DAVENPORT was retained to determine the potential traffic impact of this development and to identify transportation improvements that may be required to accommodate the new development traffic. The following intersections are included in the study:

1. US 421 (Lake Park Boulevard) at Carl Winner Drive (signalized)
2. Carl Winner Drive at Canal Drive (signalized)
3. Canal Drive at Pelican Lane
4. Pelican Lane and Carolina Beach Avenue
5. Carolina Beach Avenue at Canal Drive
6. Carolina Beach Avenue and Site Access Driveway(s)

These intersections were analyzed during the Friday PM peak hour and Saturday mid-day peaks for the following conditions:

- 2024 Existing Conditions
- 2026 Future No Build Conditions
- 2026 Future Build Conditions
- 2026 Future Build Conditions + Improvements

This supplemental Transportation Impact Analysis (TIA) was performed based on the scope agreed upon with the Town of Carolina Beach, Wilmington Urban Area Metropolitan Planning Organization (WMPO) and North Carolina Department of Transportation (NCDOT). It was conducted according to the standards and best practices of the transportation engineering profession.



VICINITY MAP
SCALE: 1" = 250'
NORTH

SYMBOLS LEGEND:

CONCRETE PAVING

LANDSCAPE BUFFER REQUIREMENTS:

1. ANY SIDE OR REAR YARD THAT ABUTS A RESIDENTIAL USE OR RESIDENTIAL DISTRICT SHALL PROVIDE FOR A SIX (6) FOOT FENCE WITH 80% OPACITY
2. CENTRAL BUSINESS DISTRICT (CBD), NEW CONSTRUCTION ONLY. TYPE D BUFFER AND STREET YARD REQUIRED. PER SECTTION 3.27, TABLE 3.9, TYPE D BUFFER IS ZERO FEET (0') WIDE.
3. TYPE D. FOR EVERY 50 LINEAR FEET OF FRONTAGE, OR FRACTION THEREOF, THE STREET YARD SHALL CONTAIN ONE (1) UNDERSTORY TREE WITH SIDEWALKS OR PLANTERS BUILT WITHIN THE SIDEWALK. STREET YARDS LOCATED WITHIN THE CBD SHALL INCLUDE SIDEWALKS WITH PLANTING AREAS EITHER ADJACENT TO THE CURB OR PLANTERS LOCATED WITHIN THE SIDEWALK.
4. PARKING IS LOCATED WITHIN A PARKING STRUCTURE. NO LANDSCAPE ISLANDS OR TREES REQUIRED.

IRRIGATION NOTES:

ALL PROPOSED LANDSCAPE / PLANTER AREAS SHALL INCORPORATE LANDSCAPE IRRIGATION AND RECEIVE SUPPLEMENTAL WATER VIA AN AUTOMATICALLY CONTROLLED LOW-FLOW (DRIP TUBING, BUBBLERS OR POP-UP SPRAY HEADS) IRRIGATION SYSTEM, INSTALLED WITH WATER CONSERVATION EQUIPMENT, SUCH AS RAIN SENSORS AND MASTER CONTROL VALVES (WHERE REQUIRED), AND DESIGNED TO MEET SITE AND PLANT SPECIFIC ENVIRONMENTAL NEEDS ACCORDING TO SOIL CONDITIONS, WATER REQUIREMENTS, ON SITE MICROCLIMATES, SOLAR ORIENTATION AND WIND EXPOSURE.

SITE DATA

PROJECT NAME: HARMONY HOTEL AND PAVILION AT CAROLINA BEACH

SITE ADDRESS: 223, 225, 227, 235, 237 & 239 NORTH CAROLINA BEACH AVENUE CAROLINA BEACH, NC 28546

APPLICANT: HARMONY HOSPITALITY, INC. 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

OWNER(S): CAROLINA BEACH LAND WEST, LLC 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

JOHNSON PAGE S II, AMY A 1300 DIAMOND SPRINGS RD., STE 204 VIRGINIA BEACH, VA 23455

PARCEL ID	PARCEL ADDRESS	PARCEL SIZE
R08818-019-002-000	239	0.11 ACRES
R08818-019-001-000	237	0.14 ACRES
R09006-005-020-000	235	0.29 ACRES
R09006-005-019-000	227	0.29 ACRES
R09006-005-016-000	225	0.14 ACRES
R09006-005-015-000	223	0.21 ACRES
TOTAL SITE AREA:		1.18 ACRES (+/- 51,400 SF)

EXISTING ZONING: CBD (CENTRAL BUSINESS DIS
PROPOSED ZONING: CBD-CZ

JURISDICTION: CAROLINA BEACH
PROPOSED USE: HOTEL AND ASSOCIATED ON- SS
(SEE SITE PARKING CALCULA OR DETAIL)

NUMBER OF STORIES: GROUND LEVEL PLUS 4 STOR EIGHT)
NUMBER OF ROOMS: 140
GROSS FLOOR AREA: 122,700 GFA

BUILDING LOT COVERAGE: GROUND (PARKING LEVEL): 3,170 SF BUILDING FOOTPRINT (6.16%)
FIRST FLOOR (OVER PARKING): 40,819 (79.41%)
IMPERVIOUS LOT COVER: TOTAL SITE - LANDSCAPE AREAS: 51,400 SF - 2,138 SF = 49,262 (95.84%)

STREET YARD LANDSCAPE REQUIREMENTS

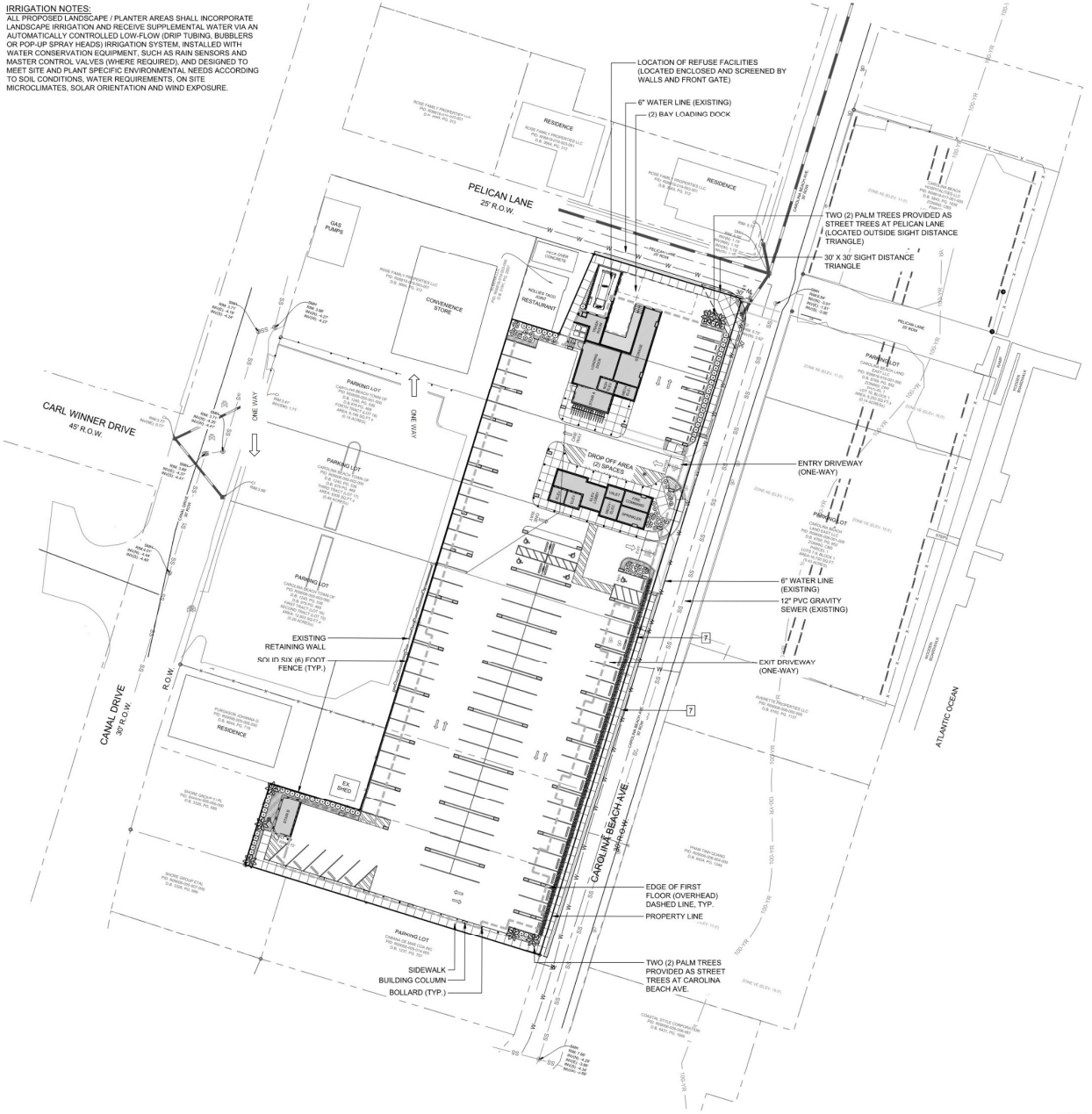
CBD ZONING DISTRICT, TYPE D STREET BUFFER, FOR EVERY 50 LINEAR FEET OF STREET FRONTAGE, OR FRACTION THEREOF, THE STREET YARD SHALL CONTAIN ONE (1) UNDERSTORY TREE WITH SIDEWALKS OR PLANTERS BUILT WITHIN THE SIDEWALK

STREET FRONTAGE (LF)*	REQUIRED TREES	PROPOSED TREES**
CAROLINA BEACH AVENUE (376 LF)	7.5	2
PELICAN LANE (19 LF)	0.38	2
TOTAL TREES:	7.88 (8 TREES)	4

* *LINEAR FOOT (LF) OF FRONTAGE, MINUS THOSE PORTIONS OF STREET FRONTAGE THAT ARE USED FOR DRIVEWAYS*
** *SEE PROJECT NARRATIVE FOR ADDITIONAL INFORMATION, PUBLIC SIDEWALK WILL BE PROVIDED PARTIALLY ON PRIVATE PROPERTY DUE TO NARROW WIDTH OF EXISTING RIGHT-OF-WAY. IN EXCHANGE, A REDUCTION IN THE NUMBER OF STREET TREES REQUIRED IS REQUESTED*

PLANT SCHEDULE

SYMBOL	QTY	COMMON / BOTANICAL NAME	SIZE
PALM TREES			
	7	SABAL PALMETTO	10` H
SYMBOL	QTY	COMMON / BOTANICAL NAME	CONTAINER
SHRUBS			
	5	CAST IRON PLANT ASPIDISTRA ELATIOR	7 GAL
	7	JAPANESE ARALIA FATSIA JAPONICA	7 GAL - 18" H.
	21	MOJO® JAPANESE PITTOSPORUM PITTOSPORUM TOBIRA 'CNI THREE'	24"X24" MIN.
	73	SHRUBBY YEW PODOCARPUS PODOCARPUS M. MAKI	24" H. AT INSTALL
ORNAMENTAL GRASSES			
	99	PINK MUHLY MUHLENBERGIA CAPILLARIS	3 GAL / 12" HT
SYMBOL	QTY	COMMON / BOTANICAL NAME	CONT
GROUND COVERS			
	194	ASIATIC JASMINE TRACHELOSPERMUM A. 'ASIATIC'	1 GAL
	60	DAYLILY HEMEROCALLIS X 'HAPPY RETURNS'	1 GAL



NAD83 (2011)

GRAPHIC SCALE
0 15 30 60 90
SCALE: 1"=30'

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
HARMONY HOSPITALITY, INC.
1300 DIAMOND SPRINGS RD., STE. 204
VIRGINIA BEACH, VA 23455

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2946

LANDSCAPE PLAN
HARMONY HOTEL AND PAVILION
AT CAROLINA BEACH
CAROLINA BEACH AVE.
CAROLINA BEACH, NC

PROJECT STATUS
PRELIMINARY LAYOUT:
FINAL DESIGN:
FINAL ISSUE:
CONST.

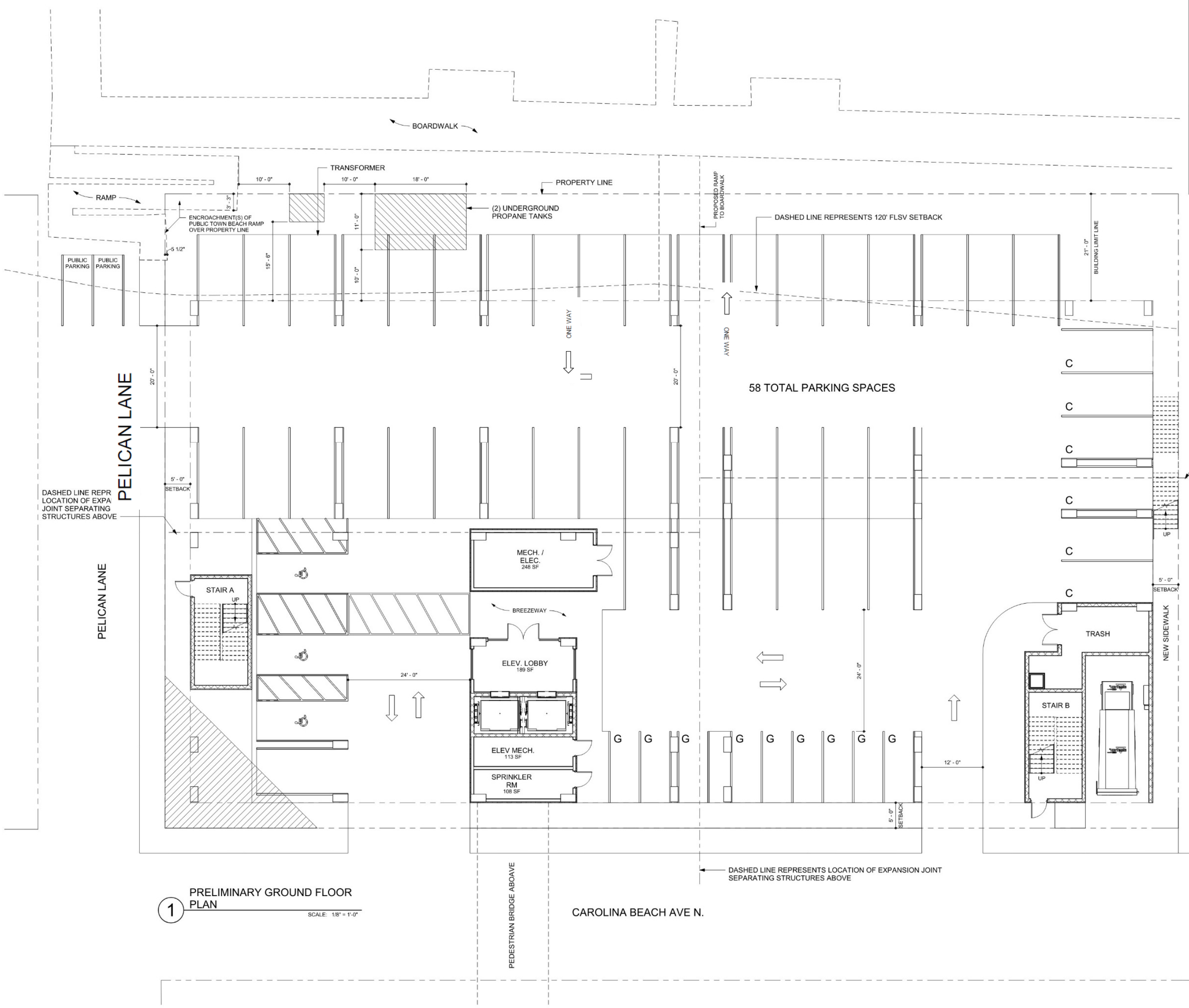
DRAWING INFORMATION
DATE: 08/16/2023
SCALE: 1" = 30'
DESIGNED:
DRAWN:
CHECKED:

SEAL

L-2.0

PEI JOB#: 00000.PE

Item 3.



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

SITE PARKING

HOTEL / MOTEL (NOT CONDOMINIUMS)
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER SLEEPING ROOM
NUMBER OF HOTEL ROOMS: 140 = 140 SPACES REQUIRED

MEETING / ASSEMBLY ROOMS
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER 500 SF MEETING / ASSEMBLY ROOM
8,285 SF / 500 = 17 SPACES

EATING AND/OR DRINKING ESTABLISHMENTS
MINIMUM PARKING SPACES REQUIRED:
1 SPACE PER 110 SF OF INDOOR GROSS FLOOR AREA
3,088 SF / 110 = 28 SPACES

SUBTOTAL PARKING SPACES REQUIRED: 185**
*** 25% PARKING REDUCTION SHALL BE GIVEN IF 50 OR GREATER SPACES ARE REQUIRED; REDUCTION ONLY APPLIES TO ASSOCIATED ON-SITE USES, LIMITED TO RESTAURANTS, BARS AND MEETING ROOMS*

ALLOWABLE PARKING SPACE REDUCTION:

MEETING / ASSEMBLY ROOMS:	17 SPACES
EATING AND/OR DRINKING ESTABLISHMENTS	28 SPACES
ALLOWABLE DEDUCTION (25% X 45 SPACES)	11 SPACES

TOTAL PARKING SPACES REQUIRED (185 MINUS 11): 174 SPACES
TOTAL PARKING SPACES PROVIDED : 168

117	STANDARD VEHICLE PARKING SPACES (9' x 18')
23	COMPACT VEHICLE PARKING SPACES (8'-6" x 18')
8	ADA ACCESSIBLE PARKING SPACES (INCLUDES 1 VAN SPACE)
20	GOLF CART PARKING SPACES (6' x 14'
168	PARKING SPACES PROVIDED

TOTAL ON-SITE LOADING SPACES PROVIDED: 2 SPACES
(1) LOADING SPACE 12' WIDE X 35' LONG
(1) LOADING SPACE 12' WIDE X 45' LONG

LOBBY / VALET DROP-OFF SPACES: 2*
(*NOT INCLUDED IN TOTAL PARKING SPACES PROVIDED)

GROSS FLOOR AREA CALCULATIONS

OCEANFRONT AMENITY PAVILION -	
- GROUND FLOOR =	1,820 GFA
- FIRST FLOOR =	18,500 GFA
TOTAL GROSS FLOOR AREA =	**20,320 GFA**

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
www.beckermorgan.com

PROJECT TITLE
OCEANFRONT AMENITY PAVILION

LOTS 7-10, BLOCK 1
CAROLINA BEACH AVE N
CAROLINA BEACH, NC 28428

PRELIMINARY
DESIGN CONCEPT ONLY, SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS
ISSUED: 08/12/2025

SHEET TITLE
PRELIMINARY GROUND FLOOR PLAN

SCALE: 1/8" = 1'-0"

ISSUE BLOCK

Mark	Date	Description

PROJECT NO:	2023042.02
DATE:	08.12.25
SCALE:	As indicated
DRAWN BY: DJB	PROJ MGR: DJB

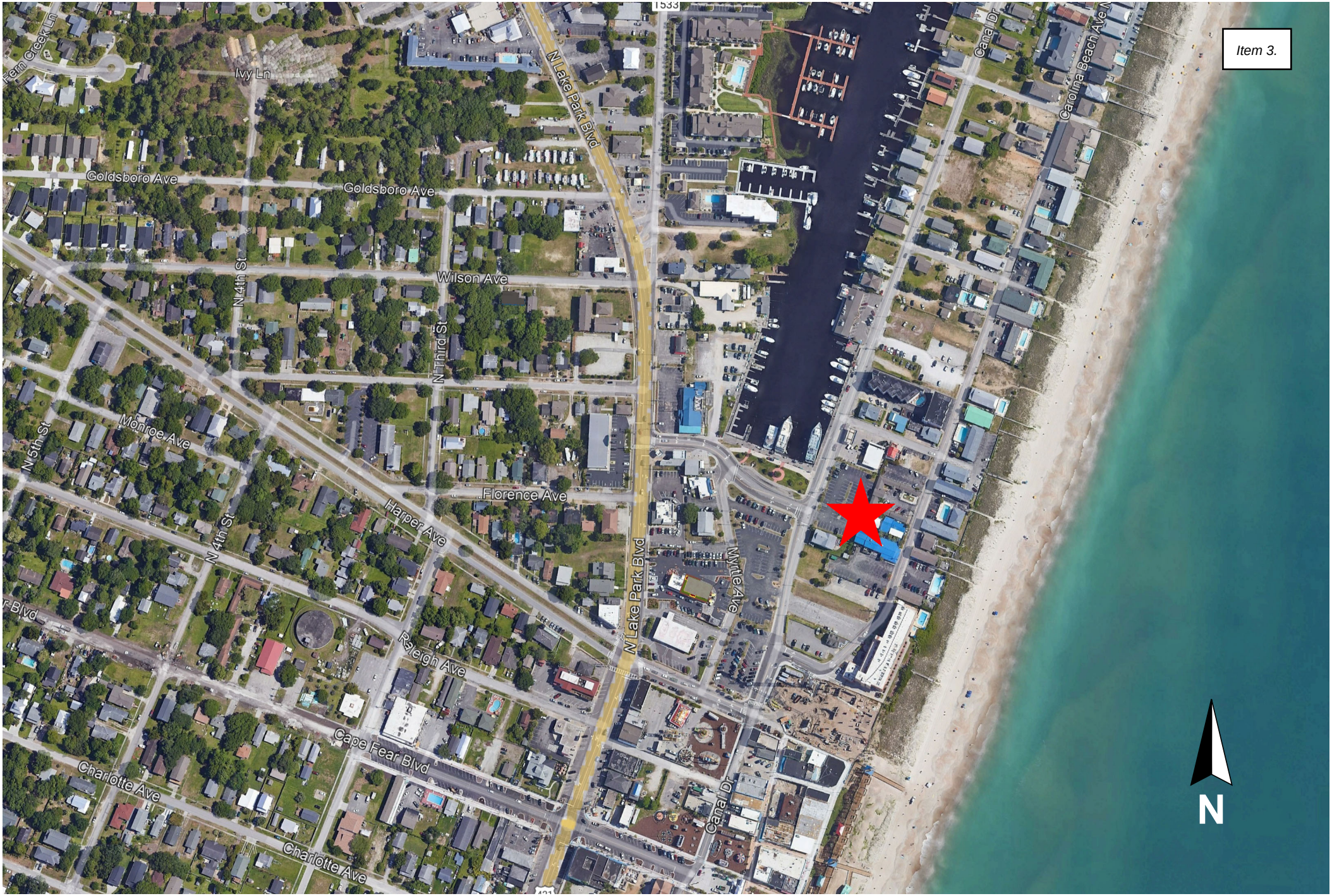
A101

Autodesk Docs://Embassy Suites Carolina Beach/2023042_OFAB_Option B.rvt
8/12/2025 12:03:30 PM

DAVENPORT

FIGURE 1B
EVENT CENTER CONCEPTUAL
SITE PLAN

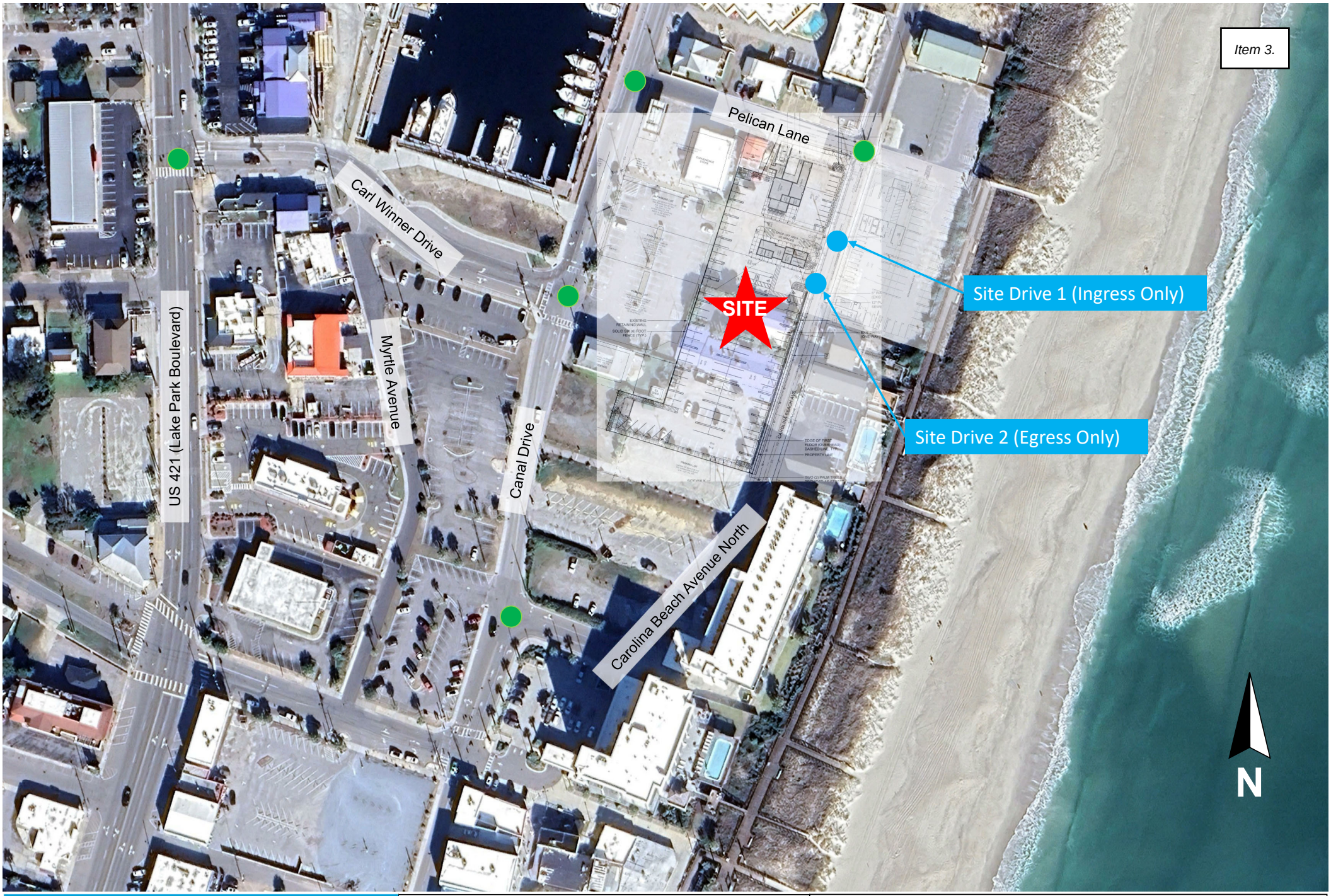
EMBASSY SUITES CAROLINA BEACH
DAVENPORT PROJECT 23202



DAVENPORT

FIGURE 2A
SITE LOCATION MAP

SITE INDICATOR



DAVENPORT

FIGURE 2B
VICINITY MAP

STUDY INTERSECTIONS
EXISTING
PROPOSED

2.0 Existing Conditions

2.1 Inventory

Table 2.1 presents a summary of the study area roadway conditions. Figure 3 shows the existing lane geometry.

Table 2.1 - Street Inventory

Facility Name	Route #	2023 AADT (vpd)	Typical Cross Section	Lane Width	Speed Limit (MPH)	Maintained By
North Lake Park Boulevard	US 421	18,000	4-lane undivided	12 feet	25	NCDOT
Carolina Beach Avenue	N/A	1,200[1]	2-lane undivided	12 feet	25	Town of Carolina Beach
Carl Winner Drive	N/A	Not reported	2-lane undivided	12 feet	25	Town of Carolina Beach
Canal Drive	N/A	3,800[1]	2-lane undivided	12 feet	25	Town of Carolina Beach
Pelican Lane	N/A	Not reported	2-lane undivided	12 feet	25	Town of Carolina Beach

[1] Based on NCDOT traffic counts taken in 2023

2.2 Existing Traffic Volumes

The original turning movement counts collected for the original TIA were retained for this supplemental analysis. These counts were collected by Burns Service, Incorporated on a weekend, to reflect summer traffic volumes. Table 2.2 contains the location, dates, and times these counts were conducted. The traffic volumes were not balanced between the study intersections since the existing driveways and land uses account for the imbalance. The existing peak hour volumes are shown in Figures 4. Traffic count data are provided in the Appendix.

Table 2.2 - Traffic Volume Data

Count Location	Date Taken	Hours
US 421(Lake Park Boulevard) and Carl Winner Drive (signalized)	Friday, June 7, 2024	3:00PM – 5:00PM
	Saturday, June 8, 2024	11:00AM – 1:00PM
Carl Winner Drive and Canal Drive (signalized)	Friday, June 7, 2024	3:00PM – 5:00PM
	Saturday, June 8, 2024	11:00AM – 1:00PM
Canal Drive and Pelican Lane (unsignalized)	Friday, June 7, 2024	3:00PM – 5:00PM
	Saturday, June 8, 2024	11:00AM – 1:00PM
Carolina Beach Avenue N and Pelican Lane (unsignalized)	Friday, June 7, 2024	3:00PM – 5:00PM
	Saturday, June 8, 2024	11:00AM – 1:00PM
Carolina Beach Avenue N and Canal Drive (unsignalized)	Friday, June 7, 2024	3:00PM – 5:00PM
	Saturday, June 8, 2024	11:00AM – 1:00PM

N

LEGEND

- SIGNAL
- STOP
- ROADWAY
- TRAFFIC MOVEMENT
- BLACK = EXISTING
- XXXX — 2023 AADT VOLUMES

SPEED LIMIT 25

18,000

US 421 (Lake Park Blvd)

12,000

SPEED LIMIT 25

SPEED LIMIT 25

3,800

Canal Drive

Pelican Lane

260'

260'

SPEED LIMIT 25

1,200

Carolina Beach Ave

225'

Carl Winner

175'

Parking Access

100'

50'

FULL

450'

350'

Parking Access

80'

790'

125'

SPEED LIMIT 25

*** NOT TO SCALE ***

FIGURE 3
EXISTING LANE GEOMETRY

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT

N

LEGEND

- SIGNAL
- STOP
- ROADWAY
- TRAFFIC MOVEMENT
- BLACK = EXISTING
- FRIDAY PM / SATURDAY MIDDAY PEAKS

US 421 (Lake Park Blvd)

Canal Drive

Carolina Beach Ave

Carl Winner

Pelican Lane

Parking Access

Parking Access

306 / 372
543 / 827

319 / 257
66 / 59

63 / 101
551 / 534

11 / 4
293 / 275

9 / 17
51 / 53

52 / 100
288 / 306

7 / 8
25 / 31
290 / 269

6 / 15
9 / 4
4 / 2

296 / 357
12 / 27
60 / 60

8 / 16
44 / 48
47 / 46

1 / 3
84 / 65
35 / 30

2 / 4
5 / 17
3 / 2

55 / 40
5 / 34
13 / 14

0 / 8
49 / 76
5 / 10

19 / 26
54 / 57
3 / 10

27 / 23
3 / 0
67 / 59

8 / 31
1 / 1
13 / 13

48 / 72
64 / 110
21 / 37

*** NOT TO SCALE ***

** A minimum of 4 vehicles per hour is analyzed for each movement per NCDOT Congestion Management Guidelines.

FIGURE 4
2024 EXISTING TRAFFIC VOLUMES

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT

3.0 Approved Development and Committed Improvements

3.1 Approved Developments

Approved developments are projects that have been authorized in the area but are not yet constructed. Per the approved scoping document, one nearby development was identified and included in the traffic volumes for the future build conditions.

Proximity Mixed Use Carolina Beach is planned to consist of 266 multi-family residential units, with the following additional commercial uses:

- Fitness Club
- Office Building
- Shopping Center
- Restaurant

A TIA was prepared by Kimley Horn Associates on November 2, 2021, and approved by NCDOT on February 11, 2022. According to the findings of the approved TIA, additional thru movement volumes were added to the study intersection of US 421 (Lake Park Boulevard) and Carl Winner Avenue. Approved development volumes are shown in Figure 5.

3.2 Committed Improvements

Committed improvements are projects planned by NCDOT, the Town of Carolina Beach or associated with a prior approved development(s) in the area but are not yet constructed. Per the approved scoping document, there are no committed improvements to be included in this study.

N

LEGEND
SIGNAL
STOP
ROADWAY
TRAFFIC MOVEMENT
BLACK = EXISTING
FRIDAY PM / SATURDAY MIDDAY PEAKS

US 421 (Lake Park Blvd)

Canal Drive

Carolina Beach Ave

Pelican Lane

Parking Access

Carl Winner

Parking Access

Parking Access

19 / 0

0 / 0

0 / 0

0 / 0

0 / 0

25 / 0

*** NOT TO SCALE ***

** A minimum of 4 vehicles per hour is analyzed for each movement per NCDOT Congestion Management Guidelines.

FIGURE 5
APPROVED DEVELOPMENT TRIPS

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT

4.0 Methodology

4.1 Baseline Assumptions and Standards

In general, the analysis for this project was conducted utilizing commonly accepted NCDOT standards. Table 4.1 contains a summary of the baseline assumptions.

Table 4.1 - Assumptions	
Annual Growth Rate	1%
Analysis Software	Synchro/SimTraffic
Lane Widths	12 feet
Peak Hour Factor	0.90
Truck Percentage	2%

4.2 Future No Build Volumes

The 2026 future no build traffic volumes were retained from the original TIA for this analysis. The 2026 future no build traffic volumes were computed by applying a one percent (1%) compounded annual growth rate to the 2024 existing traffic volumes and adding approved development trips. Figure 6 shows 2026 future no build traffic volumes.

4.3 Site Access, Site Trips and Traffic Pattern

Per the conceptual site plan, the proposed hotel will connect to Carolina Beach Avenue via two (2) one-way driveways: one designated for ingress and one for egress. Similarly, the event center located on the east side will provide two (2) one-way driveways, with ingress from Carolina Beach Avenue and egress to Pelican Lane. Based on coordination with WMPO, the Town of Carolina Beach, and NCDOT, the following assumptions were established to define the scope of this study:

a) Although the proposed hotel will relocate the existing Sea Witch Restaurant and Tiki Bar, traffic volumes associated with the Fisherman Lot will remain unchanged. This approach ensures consistency with the original analysis, facilitates performance comparison, and provides a conservative basis for evaluation.
b) According to the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, Land Use Code (LUC) 310 for hotels accounts for sleeping accommodations and supporting facilities such as full-service restaurants, cocktail lounges, meeting rooms, banquet rooms, and convention facilities. Based on the updated site plan, the proposed event center includes a ballroom, the relocated Sea Witch Restaurant and Tiki Bar, and an outdoor dining area. A separate trip generation estimate for the event center was not prepared, as the trip generation under ITE LUC 310 encompasses these uses.
c) Although the proposed event center will remove approximately 67 parking spaces from the existing Carolina Beach parking supply, no trip reductions were applied in the future analysis scenarios to maintain consistency with the original TIA scope. Furthermore, it is anticipated that some event attendees will be hotel guests accessing the event center primarily on foot via the proposed pedestrian skybridge connecting the two facilities. Based on engineering judgment, vehicular trips exclusively associated with the event center are expected to be minimal, with negligible operational impacts. Therefore, the trip distribution assumptions from the original TIA were retained, and the two (2) one-way driveways serving the event center were not analyzed in this study.

N

LEGEND

- SIGNAL
- STOP
- ROADWAY
- TRAFFIC MOVEMENT
- BLACK = EXISTING
- FRIDAY PM / SATURDAY MIDDAY PEAKS

US 421 (Lake Park Blvd)

Canal Drive

Carolina Beach Ave

Pelican Lane

Carl Winner

Parking Access

Parking Access

Parking Access

312 / 379
573 / 844

325 / 262
67 / 60

64 / 103
587 / 545

11 / 4
299 / 281

9 / 17
52 / 54

1 / 3
86 / 66
36 / 31

2 / 4
5 / 17
3 / 2

53 / 102
294 / 312

56 / 41
5 / 35
13 / 14

0 / 8
50 / 78
5 / 10

7 / 8
26 / 32
296 / 274

6 / 15
9 / 4
4 / 2

302 / 364
12 / 28
61 / 61

8 / 16
45 / 49
48 / 47

19 / 27
55 / 58
3 / 10

28 / 23
3 / 0
68 / 60

8 / 32
1 / 1
13 / 13

49 / 73
65 / 112
21 / 38

*** NOT TO SCALE ***

** A minimum of 4 vehicles per hour is analyzed for each movement per NCDOT Congestion Management Guidelines.

FIGURE 6
2026 FUTURE NO BUILD VOLUMES

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT

4.4 Trip Generation

Per the updated site plan, the proposed hotel will include up to 140 guest rooms versus the 177 guest rooms proposed and analyzed in the original TIA. However, for the purpose of consistency and performance comparison, the original trip generation based on 177 guest rooms was retained for this analysis.
The original trip generation potential of this development, projected based on the Institute of Transportation Engineers (ITE) *11th Edition*, *Trip Generation Manual* and guidance from NCDOT Congestion Management on the selection of appropriate variables, is presented in Table 4.2 for reference. It should be noted that since the original trip generation retained for this analysis is based on 177 hotel guest rooms, the results are expected to be inherently conservative.

Table 4.2 - ITE 11th Edition Trip Generation

Average Weekday Driveway Volumes				Daily	PM Peak Hour			Saturday Midday Peak Hour		
ITE Land Use and Code	Size		Data Source	Total	Enter	Exit	Total	Enter	Exit	Total
Hotel, 310	177	Rooms	Adjacent-Equation	1,495	53	50	103	72	56	128
Total Site Trips				**1,495**	**53**	**50**	**103**	**72**	**56**	**128**

4.5 Trip Distribution and Assignment

Site trip distribution for this proposed development, retained from the original TIA, was based on the existing traffic patterns and engineering judgment. The trip distribution model is shown in Figure 7. The directional distribution for site trips is:

- 95% to and from the north on US 421 (Lake Park Boulevard)
- 5% to and from the south on US 421 (Lake Park Boulevard)

The daily distribution percentages do not have equal origins and destinations due to one-way driveway operations, and existing and future travel patterns.

4.6 Future Build Volumes

Since the updated site plan does not displace the Fisherman Lot located at the intersection of Carl Winner and Canal Drive, the 2026 future no-build trips were retained to determine the 2026 future build volumes. Site trips were added to the future no build volumes to compute the 2026 Future Build volumes. Additionally, a minimum of four vehicles per hour were assigned to all movements, per NCDOT Congestion Management standards. Site trips are shown in Figures 8, and future build volumes are shown in Figure 9.

N

LEGEND

- SIGNAL
- STOP
- ROADWAY
- TRAFFIC MOVEMENT
- BLACK = EXISTING
  BLUE = PROPOSED
- IN = ENTERING
  OUT = EXITING
- % ORIGIN/DESTINATION NODE

95%

US 421 (Lake Park Blvd)

95% IN

95% OUT

Carl Winner Drive

Canal Drive

25% OUT

Parking Access

90% IN

5% IN

70% OUT

5% IN

70% OUT
5% OUT

Parking Access

5% IN

5%

25% OUT

Pelican Lane

90% IN

90% IN

25% OUT

Carolina Beach Ave

Parking Access

90% IN

Site Access 1
Ingress Only

10% IN

25% OUT

Site Access 2
Egress Only

25% OUT
75% OUT

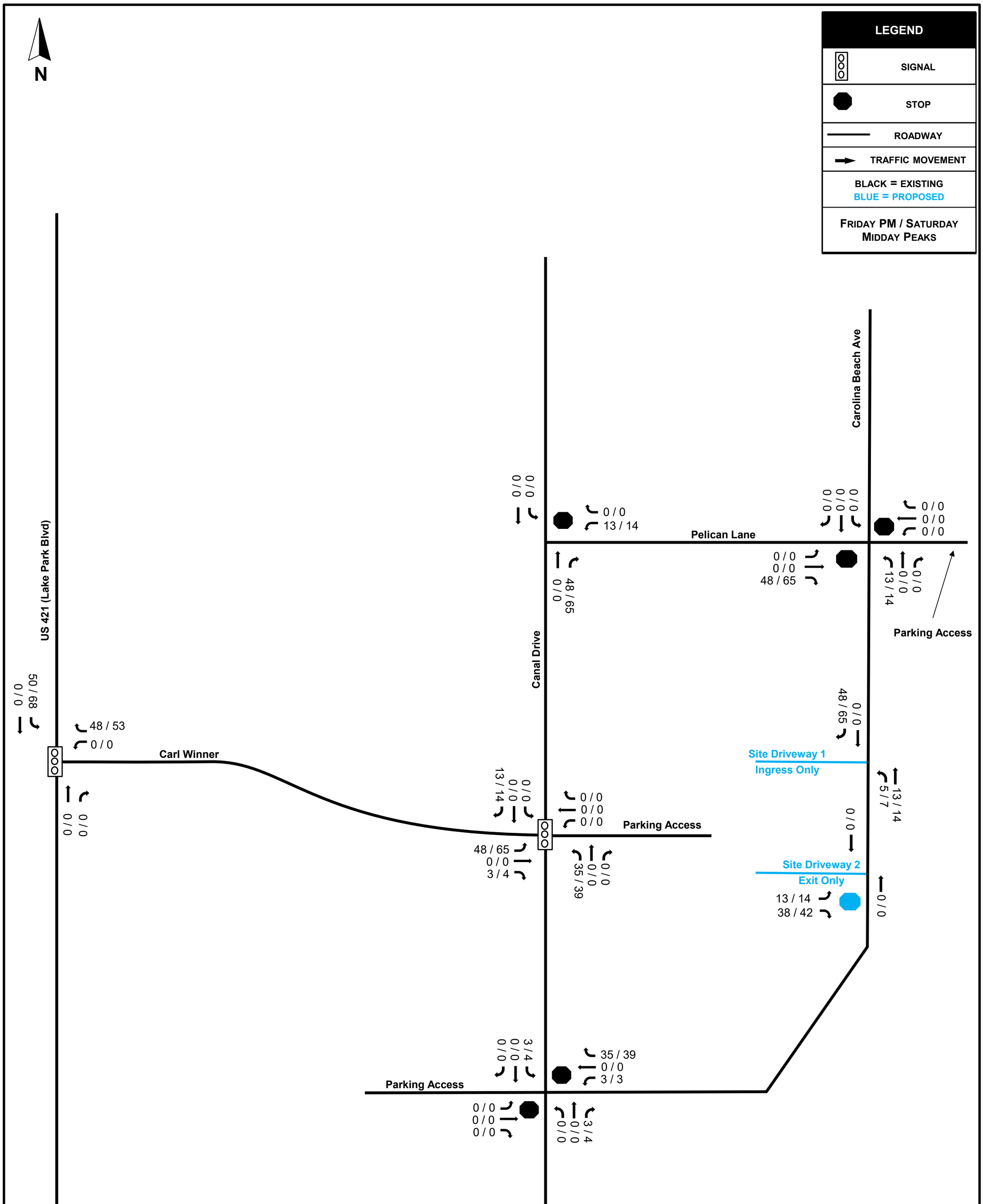
FIGURE 7
TRIP DISTRIBUTION

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT

*** NOT TO SCALE ***



*** NOT TO SCALE ***

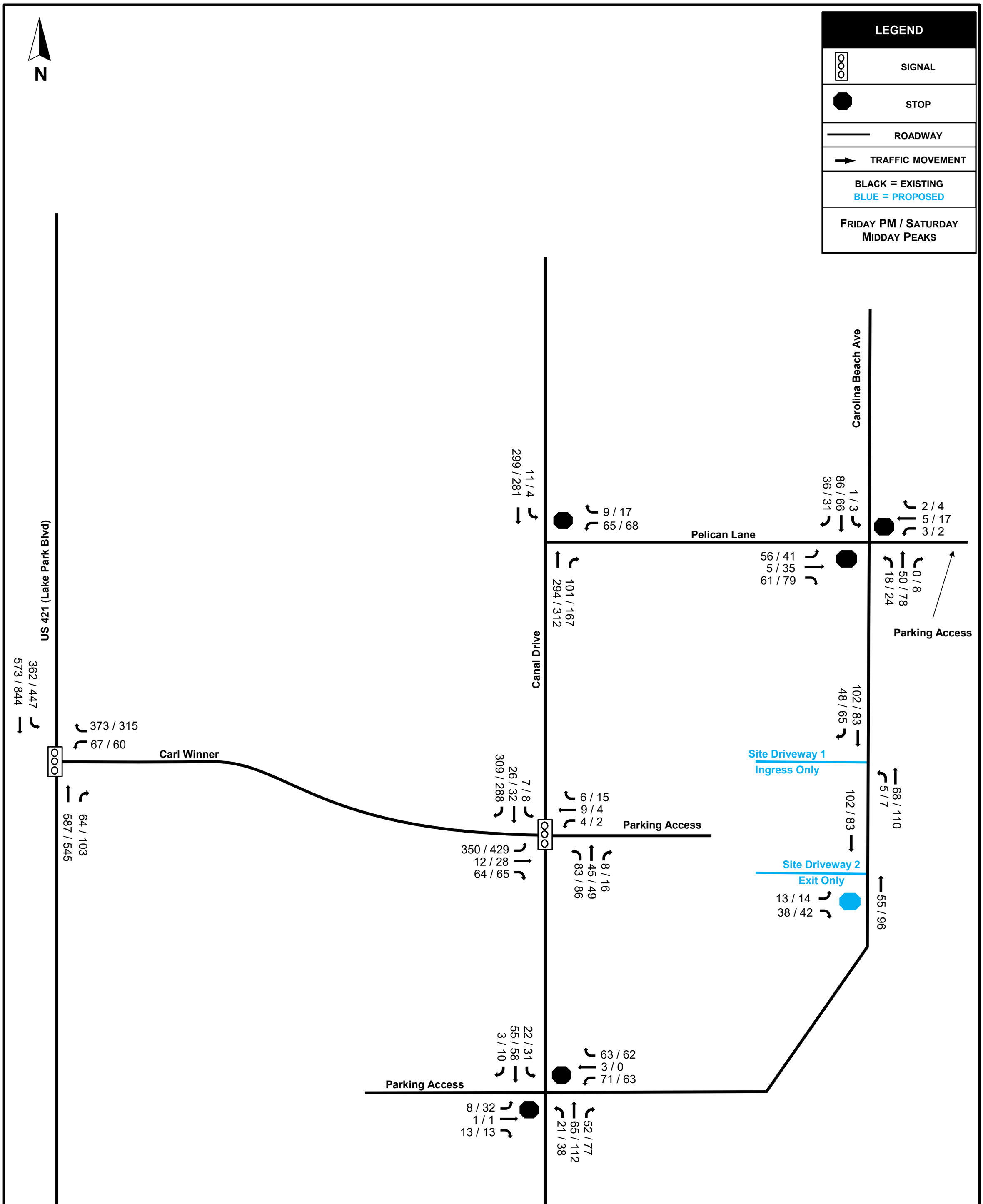
** A minimum of 4 vehicles per hour is analyzed for each movement per NCDOT Congestion Management Guidelines.

FIGURE 8
SITE TRIPS

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT



*** NOT TO SCALE ***

** A minimum of 4 vehicles per hour is analyzed for each movement per NCDOT Congestion Management Guidelines.

FIGURE 9
2026 FUTURE BUILD VOLUMES

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT

5.0 Capacity Analysis

5.1 Level of Service Evaluation Criteria

The Transportation Research Board's *Highway Capacity Manual* (HCM) utilizes the term "level of service" (LOS) to measure how traffic operates in intersections and on roadway segments. There are six levels of service ranging from A to F as shown in Table 5.1. Level of service "A" represents low-volume traffic operations and level of service "F" represents high-volume, oversaturated traffic operations. Synchro traffic modeling software is used to determine the LOS and delay for study intersections. Synchro analysis worksheet reports are provided in the Appendix.

Table 5.1 – Highway Capacity Manual

Levels of Service and Control Delay Criteria			
Signalized Intersection		**Unsignalized Intersection**	
Level of Service	Control Delay Per vehicle (seconds)	Level of Service	Delay Range (seconds)
A	≤ 10	A	≤ 10
B	> 10 and ≤ 20	B	> 10 and ≤ 15
C	> 20 and ≤ 35	C	> 15 and ≤ 25
D	> 35 and ≤ 55	D	> 25 and ≤ 35
E	> 55 and ≤ 80	E	> 35 and ≤ 50
F	> 80	F	> 50

5.2 Queueing Evaluation

A queueing analysis was performed using Synchro and SimTraffic simulation, based on a minimum 10-minute seeding, a 60-minute recording period, and 10 runs. The maximum SimTraffic queues and 95th-percentile Synchro queues are provided, along with the turn lane lengths. Synchro and SimTraffic queue reports are provided in the Appendix.

5.3 Level of Service and Queueing Results

The results of the capacity and queue analyses are discussed by intersection in the following paragraphs. The LOS, delay, and queue results are summarized in Tables 5.2 to 5.8.

US 421 (N Lake Park Blvd) at Carl Winner Drive (signalized)

This signalized intersection has a very heavy southbound left turning movement (> 300 vehicles) on US 421 (Lake Park Boulevard) during Friday PM peak and Saturday Midday peak hours. The southbound left turns are presently served by a left-thru shared lane and operate with a protected plus permitted phase during signal operation. Although the *NCDOT Capacity Analysis Guidelines Standards* require that the analysis of future conditions for a signalized intersection should use either protected only or permitted only phasing for left turns, the existing permitted plus protected phasing for southbound left turns was maintained in analysis of future no build/build conditions. This was done since modelling the southbound left turns with protected only phasing in Synchro produced unrealistic results indicating an overall LOS F and more than 1,300 seconds of average delay per vehicle even in the existing conditions. This deviation from the guidelines was communicated to and approved by NCDOT during the Step 1A review.

Under existing conditions, the overall intersection operates at LOS C during the Friday PM peak hour and at LOS B during the Saturday midday peak hour under existing conditions. In future no build and build conditions, the overall intersection is expected to operate at LOS C during the Friday PM and Saturday Midday peak hours.

The results of the queuing analysis indicate that queues are contained within the available storage during existing, future no build and future build conditions. While the overall intersection operates at an acceptable LOS, the westbound approach consistently operates at LOS E during the studied peak hours during existing and future no-build/build conditions. However, the right-of-way constraints along all the approaches of this intersection do not permit any geometric improvements. Therefore, no improvements are recommended.

Table 5.2 - LOS and Queueing US 421 (Lake Park Blvd) and Carl Winner Drive (signalized)					
Scenario	Overall LOS	Level of Service per Movement & by Approach			
		Westbound		Northbound	Southbound
Friday PM Peak Hour					
2024 Existing	C (20.3)	LR*	R	TR	LT
		E (69.6)		A (4.9)	A (9.1)
		E (65.6)	E (73.7)	A (4.9)	A (9.1)
	Available Storage (ft)	Full	225	Full	Full
	95th% Queue (ft)	#246	#261	90	197
	Max Queue (ft)	217	200	118	338
2026 Future No Build	C (20.5)	LR*	R	TR	LT
		E (70.2)		A (5.1)	A (9.9)
		E (66.1)	E (74.6)	A (5.1)	A (9.9)
	Available Storage (ft)	Full	225	Full	Full
	95th% Queue (ft)	#251	#267	97	220
	Max Queue (ft)	206	205	148	315
2026 Future Build	C (24.2)	LR*	R	TR	LT
		E (78.8)		A (5.3)	B (11.7)
		E (73.1)	F (84.7)	A (5.3)	B (11.7)
	Available Storage (ft)	Full	225	Full	Full
	95th% Queue (ft)	#294	#313	97	253
	Max Queue (ft)	238	226	140	400
Saturday Midday Peak Hour					
2024 Existing	B (19.7)	LR*	R	TR	LT
		E (62.6)		A (4.6)	B (16.4)
		E (59.6)	E (65.6)	A (4.6)	B (16.4)
	Available Storage (ft)	Full	225	Full	Full
	95th% Queue (ft)	180	#196	94	#463
	Max Queue (ft)	181	179	138	442
2026 Future No Build	C (20.7)	LR*	R	TR	LT
		E (63.0)		A (4.7)	B (18.1)
		E (59.9)	E (66.2)	A (4.7)	B (18.1)
	Available Storage (ft)	Full	225	Full	Full
	95th% Queue (ft)	183	#202	97	#562
	Max Queue (ft)	168	161	140	571
2026 Future Build	C (28.5)	LR*	R	TR	LT
		E (68.0)		A (5.0)	C (28.7)
		E (63.6)	E (72.9)	A (5.0)	C (28.7)
	Available Storage (ft)	Full	225	Full	Full
	95th% Queue (ft)	#235	#255	97	#626
	Max Queue (ft)	188	184	147	867

Notes:
 # 95th percentile volume exceeds capacity; queue may be longer.
**While the westbound left turn lane storage is shown as full length, there is approximately 450 feet to the next intersection.*
While the SimTraffic results indicate queues > storage length, observation of the SimTraffic simulation does not indicate excess queues.
The increase in delay is greater than 25% compared to future no build conditions.

Carl Winner Drive at Canal Drive (signalized)

The overall intersection operates at LOS B in existing and future no build conditions in both Friday PM and Saturday mid-day peak hours. With the proposed development in place, the overall intersection is expected to continue operating at LOS B during the Friday PM peak and Saturday midday peak hours under future build conditions.

The results of the queuing analysis indicate that available storage is sufficient to contain queues except eastbound and northbound left turn lanes where queues exceed storage during Friday PM and Saturday Midday peak hours under existing and future no-build/build conditions.

It is recommended to revise the traffic signal phasing and detector layout to allow the signal to rest in the eastbound left-turn and southbound right-turn phase, accommodating the prevailing traffic patterns. Additionally, removal of pedestrian phase 6 movement is recommended to minimize potential conflicts. For the eastbound approach, it is further recommended to restripe the approach to provide a full-length left-turn storage lane and a thru-right shared lane with 100 feet of storage, along with the appropriate deceleration length and taper.

With the recommended improvements in place, the overall intersection is expected to operate at LOS B or better during Friday PM and Saturday Midday peak hours. The results of the queuing analysis indicate that the queues are expected to be contained within available storage except the eastbound thru-right lane and northbound left turn lane where the queues exceed available storage by less than two (2) car lengths. The excess queues are expected to be accommodated by their respective adjacent full length storage lanes during short-lived peak hour conditions. In addition, the right-of-way constraints along the northbound and eastbound approaches do not permit any geometric improvements. Therefore, no other improvements are recommended.

Table 5.3 - LOS and Queueing Carl Winner Drive and Canal Drive (signalized)								
Scenario	Overall LOS	Level of Service per Movement & by Approach (delay in seconds/vehicle)						
		Eastbound		Westbound	Northbound		Southbound	
Friday PM Peak Hour								
2024 Existing	B (14.5)	L	TR*	LTR	L	TR	LT	R
		B (15.0)		A (8.7)	B (10.4)		B (15.4)	
		B (16.4)	A (9.2)	A (8.7)	B (10.6)	B (10.2)	B (10.1)	B (16.0)
	Available Storage (ft)	100	Full	Full	50	Full	Full	175
	95th% Queue (ft)	148	37	14	28	30	21	143
	Max Queue (ft)	162	121	37	63	57	47	161
2026 Future No Build	B (14.9)	L	TR*	LTR	L	TR	LT	R
		B (15.6)		A (9.4)	B (10.6)		B (15.7)	
		B (17.0)	A (9.8)	A (9.4)	B (10.7)	B (10.4)	B (10.2)	B (16.3)
	Available Storage (ft)	100	Full	Full	50	Full	Full	175
	95th% Queue (ft)	161	39	15	28	30	21	146
	Max Queue (ft)	159	140	46	73	73	69	165
2026 Future Build	B (16.4)	L	TR*	LTR	L	TR	LT	R
		B (17.3)		A (9.4)	B (11.6)		B (17.5)	
		B (18.9)	A (9.8)	A (9.4)	B (12.0)	B (10.9)	B (10.7)	B (18.2)
	Available Storage (ft)	100	Full	Full	50	Full	Full	175
	95th% Queue (ft)	#199	40	15	44	30	21	153
	Max Queue (ft)	149	221	38	92	96	72	175
2026 Future Build with Improvements	A (9.0)	L*	TR	LTR	L	TR	LT	R
		B (10.2)		C (21.8)	B (17.9)		A (3.1)	
		B (11.1)	A (6.1)	C (21.8)	B (18.5)	B(17.0)	B (17.1)	A (1.6)
	Available Storage (ft)	Full	100	Full	50	Full	Full	175
	95th% Queue (ft)	201	27	28	74	50	36	72
	Max Queue (ft)	215	137	48	92	95	69	112
Saturday Midday Peak Hour								
2024 Existing	B (15.5)	L	TR*	LTR	L	TR	LT	R
		B (17.4)		A (8.2)	B (11.2)		B (15.4)	
		B (17.9)	A (8.6)	A (8.1)	B (11.5)	B (11.2)	B (10.9)	B (17.7)
	Available Storage (ft)	100	Full	Full	50	Full	Full	175
	95th% Queue (ft)	180	40	15	28	36	25	133
	Max Queue (ft)	160	92	37	71	68	94	163
2026 Future No Build	B (15.8)	L	TR*	LTR	L	TR	LT	R
		B (16.3)		A (8.6)	B (11.7)		B (17.2)	
		B (18.1)	A (9.1)	A (8.6)	B (11.8)	B (11.6)	B (11.2)	B (18.1)
	Available Storage (ft)	100	Full	Full	50	Full	Full	175
	95th% Queue (ft)	#202	43	16	28	36	25	134
	Max Queue (ft)	145	152	38	62	72	173	186
2026 Future Build	B (18.4)	L	TR*	LTR	L	TR	LT	R
		C (20.3)		A (8.9)	B (12.6)		B (18.7)	
		C (22.6)	A (9.3)	A (8.9)	B (13.2)	B (11.9)	B (11.5)	B (19.8)
	Available Storage (ft)	100	Full	Full	50	Full	Full	175
	95th% Queue (ft)	#295	46	16	46	35	25	142
	Max Queue (ft)	148	176	44	80	80	225	198
2026 Future Build with Improvements	B (12.7)	L*	TR	LTR	L	TR	LT	R
		B (14.0)		C (27.4)	C (23.1)		A (4.9)	
		B (15.8)	A (5.5)	C (27.4)	C(24.0)	C (22.0)	C (21.9)	A (2.5)
	Available Storage (ft)	Full	100	Full	50	Full	Full	175
	95th% Queue (ft)	265	33	34	86	66	46	67
	Max Queue (ft)	240	149	52	93	129	65	117

Notes:
 # 95th percentile volume exceeds capacity; queue may be longer.
**While the turn lane storage is shown as full length, there is approximately 450 feet to the next intersection.*
While the SimTraffic results indicate queues > storage length, observation of the SimTraffic simulation does not indicate excess queues.
Queues exceed available storage.

Canal Drive at Pelican Lane (unsignalized)

Under existing conditions, the minor-street approach is expected to operate at LOS C during the Friday PM peak and LOS B during the Saturday Midday peak hours. Under future no-build and build conditions, the minor-street approach is expected to operate at LOS C during both peak hours. No improvements are recommended.

Table 5.4 - LOS and Queueing Canal Drive and Pelican Lane (unsignalized)

Scenario	*LOS of the Worst Approach	Level of Service per Movement & by Approach (delay in seconds/vehicle)				
		Westbound	Northbound		Southbound	
Friday PM Peak Hour						
2024 Existing	C (15.0) WB Approach	LR	T	R	L	T
		C (15.0)	A (0.0)		A (0.3)	
		C (15.0)	A (0.0)	A (0.0)	A (8.1)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full
	95th% Queue (ft)	13	0	0	0	0
	Max Queue (ft)	64	2	2	50	50
2026 Future No Build	C (15.2) WB Approach	LR	T	R	L	T
		C (15.2)	A (0.0)		A (0.3)	
		C (15.2)	A (0.0)	A (0.0)	A (8.1)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full
	95th% Queue (ft)	15	0	0	0	0
	Max Queue (ft)	66	2	2	53	53
2026 Future Build	C (16.3) WB Approach	LR	T	R	L	T
		C (16.3)	A (0.0)		A (0.3)	
		C (16.3)	A (0.0)	A (0.0)	A (8.2)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full
	95th% Queue (ft)	20	0	0	0	0
	Max Queue (ft)	78	2	2	74	74
Saturday Midday Peak Hour						
2024 Existing	B (14.9) WB Approach	LR	T	R	L	T
		B (14.9)	A (0.0)		A (0.1)	
		B (14.9)	A (0.0)	A (0.0)	A (8.3)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full
	95th% Queue (ft)	15	0	0	0	0
	Max Queue (ft)	64	0	0	44	44
2026 Future No Build	C (15.2) WB Approach	LR	T	R	L	T
		C (15.2)	A (0.0)		A (0.1)	
		C (15.2)	A (0.0)	A (0.0)	A (8.3)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full
	95th% Queue (ft)	18	0	0	0	0
	Max Queue (ft)	67	2	2	45	45
2026 Future Build	C (16.6) WB Approach	LR	T	R	L	T
		C (16.6)	A (0.0)		A (0.1)	
		C (16.6)	A (0.0)	A (0.0)	A (8.5)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full
	95th% Queue (ft)	23	0	0	0	0
	Max Queue (ft)	88	0	0	62	62

**Represents the LOS and delay for the worst unsignalized approach.*
HCM 95th-percentile queue converted from vehicles to feet; assumes 1 vehicle = 25 feet.

Pelican Lane and Carolina Beach Avenue (unsignalized)

Under existing, future no build, and future build conditions, the minor-street approach is expected to operate at LOS B in the Friday PM and Saturday Midday peak hours. No improvements are recommended.

Table 5.5 - LOS and Queueing Carolina Beach Avenue and Pelican Lane (Unsignalized)

Scenario	*LOS of the Worst Approach	Level of Service per Movement & by Approach (delay in seconds/vehicle)							
		Eastbound	Westbound	Northbound			Southbound		
Friday PM Peak Hour									
2024 Existing	B (10.2) EB Approach	LTR	LTR	L	T	R	L	T	R
		B (10.2)	A (9.7)	A (0.6)			A (0.2)		
		B (10.2)	A (9.7)	A (7.5)	A (0.0)	A (0.0)	A (7.3)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full	Full	Full	Full
	95th% Queue (ft)	8	3	0	0	0	0	0	0
	Max Queue (ft)	59	37	12	12	12	6	6	6
2026 Future No Build	B (10.2) EB Approach	LTR	LTR	L	T	R	L	T	R
		B (10.2)	A (9.7)	A (0.6)			A (0.2)		
		B (10.2)	A (9.7)	A (7.5)	A (0.0)	A (0.0)	A (7.3)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full	Full	Full	Full
	95th% Queue (ft)	10	3	0	0	0	0	0	0
	Max Queue (ft)	66	34	12	12	12	6	6	6
2026 Future Build	B (10.4) EB Approach	LTR	LTR	L	T	R	L	T	R
		B (10.4)	B (10.1)	A (1.9)			A (0.2)		
		B (10.4)	B (10.1)	A (7.5)	A (0.0)	A (0.0)	A (7.3)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full	Full	Full	Full
	95th% Queue (ft)	15	3	0	0	0	0	0	0
	Max Queue (ft)	67	38	31	31	31	5	5	5
Saturday Midday Peak Hour									
2024 Existing	B (10.7) EB Approach	LTR	LTR	L	T	R	L	T	R
		B (10.7)	B (10.3)	A (0.8)			A (0.3)		
		B (10.7)	B (10.3)	A (7.4)	A (0.0)	A (0.0)	A (7.4)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full	Full	Full	Full
	95th% Queue (ft)	13	3	0	0	0	0	0	0
	Max Queue (ft)	69	40	15	15	15	8	8	8
2026 Future No Build	B (10.7) EB Approach	LTR	LTR	L	T	R	L	T	R
		B (10.7)	B (10.4)	A (0.8)			A (0.3)		
		B (10.7)	B (10.4)	A (7.4)	A (0.0)	A (0.0)	A (7.4)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full	Full	Full	Full
	95th% Queue (ft)	13	3	0	0	0	0	0	0
	Max Queue (ft)	59	38	20	20	20	14	14	14
2026 Future Build	B (10.9) EB Approach	LTR	LTR	L	T	R	L	T	R
		B (10.9)	B (10.8)	A (1.6)			A (0.3)		
		B (10.9)	B (10.8)	A (7.5)	A (0.0)	A (0.0)	A (7.4)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	Full	Full	Full	Full	Full	Full	Full
	95th% Queue (ft)	20	3	3	0	0	0	0	0
	Max Queue (ft)	77	40	28	28	28	3	3	3

**Represents the LOS and delay for the worst unsignalized approach.*
HCM 95th-percentile queue converted from vehicles to feet; assumes 1 vehicle = 25 feet.

Canal Drive at Carolina Beach Avenue (unsignalized)

Under existing, future no build and future build conditions, the minor-street approach is expected to operate at LOS B in the Friday PM and Saturday Mid-day peak hours. No improvements are recommended.

Table 5.6- LOS and Queueing Canal Drive & Carolina Beach Ave (unsignalized)										
Scenario	***LOS of Worst Approach**	**Level of Service per Movement & by Approach (delay in seconds/vehicle)**								
		Eastbound	**Westbound**		**Northbound**			**Southbound**		
Friday PM Peak Hour										
2024 Existing	B (10.2) WB Approach	LTR	L	TR	L	T	R	L	T	R
		A (9.8)	B (10.2)		A (1.2)			A (1.8)		
		A (9.8)	B (10.8)	A (9.0)	A (7.4)	A (0.0)	A (0.0)	A (7.5)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	100	Full	Full	Full	125	Full	Full	Full
	95th% Queue (ft)	3	10	3	0	0	0	0	0	0
	Max Queue (ft)	35	59	50	24	24	4	32	32	32
2026 Future No Build	B (10.2) WB Approach	LTR	L	TR	L	T	R	L	T	R
		A (9.8)	B (10.2)		A (1.1)			A (1.8)		
		A (9.8)	B (10.8)	A (9.0)	A (7.4)	A (0.0)	A (0.0)	A (7.5)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	100	Full	Full	Full	125	Full	Full	Full
	95th% Queue (ft)	3	10	3	0	0	0	0	0	0
	Max Queue (ft)	38	50	41	21	21	2	29	29	29
2026 Future Build	B (10.0) WB Approach	LTR	L	TR	L	T	R	L	T	R
		B (10.0)	B (10.0)		A (1.1)			A (2.0)		
		B (10.0)	B (10.9)	A (9.1)	A (7.4)	A (0.0)	A (0.0)	A (7.5)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	100	Full	Full	Full	125	Full	Full	Full
	95th% Queue (ft)	3	10	8	0	0	0	3	0	0
	Max Queue (ft)	38	47	48	19	19	6	35	35	35
Saturday Midday Peak Hour										
2024 Existing	B (11.5) EB Approach	LTR	L	TR	L	T	R	L	T	R
		B (11.5)	B (11.2)		A (1.3)			A (2.1)		
		B (11.5)	B (12.0)	A (9.4)	A (7.4)	A (0.0)	A (0.0)	A (7.7)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	100	Full	Full	Full	125	Full	Full	Full
	95th% Queue (ft)	8	10	3	3	0	0	3	0	0
	Max Queue (ft)	61	57	40	29	29	4	38	38	38
2026 Future No Build	B (11.6) EB Approach	LTR	L	TR	L	T	R	L	T	R
		B (11.6)	B (11.3)		A (1.3)			A (2.2)		
		B (11.6)	B (12.2)	A (9.4)	A (7.4)	A (0.0)	A (0.0)	A (7.7)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	100	Full	Full	Full	125	Full	Full	Full
	95th% Queue (ft)	8	10	3	3	0	0	3	0	0
	Max Queue (ft)	59	47	33	36	36	8	38	38	38
2026 Future Build	B () EB Approach	LTR	L	TR	L	T	R	L	T	R
		B (12.2)	B (10.8)		A (1.2)			A (2.4)		
		B (12.2)	B (12.3)	A (9.4)	A (7.4)	A (0.0)	A (0.0)	A (7.7)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	100	Full	Full	Full	125	Full	Full	Full
	95th% Queue (ft)	8	10	8	3	0	0	3	0	0
	Max Queue (ft)	66	49	40	37	37	2	50	50	50

**Represents the LOS and delay for the worst unsignalized approach.*
HCM 95th-percentile queue converted from vehicles to feet; assumes 1 vehicle = 25 feet.

Carolina Beach Avenue and Site Access 1 (Ingress Only) (unsignalized)

Site Access 1 is proposed to be designed as an ingress only driveway on Carolina Beach Avenue located approximately 120 feet south of Pelican lane. The northbound approach is expected to operate at LOS A during Friday PM and Saturday Midday peak hours.

This intersection was analyzed using the Division 3 methodology for the turn lane warrant nomograph from the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. The southbound right turn plotted above the curve for storage or taper for the Friday PM and Saturday Mid-day peaks. Turn warrant nomograph figures are included in the Appendix.

Although the turn lane warrant results for southbound right turns plotted above the curve, due to low speeds (posted speed limit less than 25 mph), less than 4,000 AADT and right of way constraints along Carolina Beach Avenue, a southbound right turn lane is not recommended.

It is recommended to design the site driveway according to applicable local standards. No additional improvements are recommended.

Table 5.7 - LOS and Queueing Carolina Beach Avenue and Site Access 1 (Unsignalized)

Scenario	*LOS of the Worst Approach	Level of Service per Movement & by Approach (delay in seconds/vehicle)	
		Northbound	Southbound
Friday PM Peak Hour			
2026 Future Build	A (0.6) NB Approach	LT	TR
		A (0.6)	A (0.0)
		A (0.6)	A (0.0)
	Available Storage (ft)	Full	Full
	95th% Queue (ft)	0	0
	Max Queue (ft)	22	0
Saturday Midday Peak Hour			
2026 Future Build	A (0.5) NB Approach	LT	TR
		A (0.5)	A (0.0)
		A (0.5)	A (0.0)
	Available Storage (ft)	Full	Full
	95th% Queue (ft)	0	0
	Max Queue (ft)	12	0

**Represents the LOS and delay for the worst unsignalized approach.*
Due to the limitation of HCM 6th Edition methodology, HCM 2000 results were reported for this intersection.
HCM 95th-percentile queue converted from vehicles to feet; assumes 1 vehicle = 25 feet.

Carolina Beach Avenue and Site Access 2 (Egress Only) (unsignalized)

Site Access 1 is proposed to be designed as an egress only driveway on Carolina Beach Avenue located approximately 175 feet south of Pelican lane. The eastbound site access approach is expected to operate at LOS A during Friday PM and Saturday Midday peak hours.

It is recommended to design site access according to the applicable local standards. No additional improvements are recommended.

Table 5.8 - LOS and Queueing Carolina Beach Avenue and Site Access 2 (Unsignalized)

Scenario	*LOS of the Worst Approach	Level of Service per Movement & by Approach (delay in seconds/vehicle)		
		Eastbound	Northbound	Southbound
Friday PM Peak Hour				
2026 Future Build	A (9.2) EB Approach	LR	T	T
		A (9.2)	A (0.0)	A (0.0)
		A (9.2)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	Full	Full
	95th% Queue (ft)	5	0	0
	Max Queue (ft)	54	0	0
Saturday Midday Peak Hour				
2026 Future Build	A (9.2) EB Approach	LT		TR
		A (9.2)	A (0.0)	A (0.0)
		A (9.2)	A (0.0)	A (0.0)
	Available Storage (ft)	Full	Full	Full
	95th% Queue (ft)	5	0	0
	Max Queue (ft)	59	0	0

**Represents the LOS and delay for the worst unsignalized approach.*
HCM 95th-percentile queue converted from vehicles to feet; assumes 1 vehicle = 25 feet.

6.0 Summary and Conclusion

The Embassy Suites Hotel commercial development is located in the southwest and southeast quadrants of the intersection of Carolina Beach Avenue and Pelican Lane in the Town of Carolina Beach, NC. Originally, the proposed development consisted of a hotel with up to 177 guest rooms. A Transportation Impact Analysis (TIA) was prepared and submitted dated December 13th, 2024. Since then, the site plan has been revised, and the Town of Carolina Beach has requested a supplement to the TIA reflecting the updated site plan. The updated site plan includes a hotel on the west side, with up to 140 guest rooms, and an event center on the east side of Carolina Beach Avenue. The development will retain the originally proposed connection with Carolina Beach Avenue using two (2) one-way driveways, one ingress and one egress. The expected build-out year for this development is 2026. Information regarding the property was provided by Embassy Suites by Hilton Wilmington Riverfront.

The supplemental Transportation Impact Analysis (TIA) was performed based on the scope agreed upon with Town of Carolina Beach, NCDOT and the WMPO. The original trip generation potential of this site (based on 177 guest rooms), 1,495 daily trips with 103 trips in the Friday PM peak hour and 128 trips in the Saturday mid-day peak hour, was retained for this analysis. It should be noted that since the original trip generation retained for this analysis is based on 177 hotel guest rooms where no reduction to site trips was considered, therefore the impact results of the study are inherently conservative.

In conclusion, this study has determined the potential traffic impact of this development and revisions to the existing signal operations are recommended. Table 6.1 summarizes the recommended improvements, which are also reflected in Figure 10. With the recommended improvements in place, the anticipated transportation impact of the proposed development will be addressed.

Table 6.1 – Recommended Improvements

INTERSECTION	RECOMMENDATIONS
US 421 (N Lake Park Blvd) and Carl Winner Drive	• No improvements are recommended.
Carl Winner Drive and Canal Drive	• Restripe the eastbound approach to provide full length storage left turn lane and a thru-right turn lane with 100 feet of storage plus appropriate deceleration and taper. • Revise the signal plan to accommodate the dominant traffic pattern.
Canal Drive and Pelican Lane	• No improvements are recommended
Pelican Lane and Carolina Beach Avenue	• No improvements are recommended.
Pelican Lane and Carolina Beach Avenue	• No improvements are recommended.
Carolina Beach Avenue and Site Access 1	• Design site driveway according to applicable local standards.
Carolina Beach Avenue and Site Access 2	• Design site driveway according to the applicable local standards.

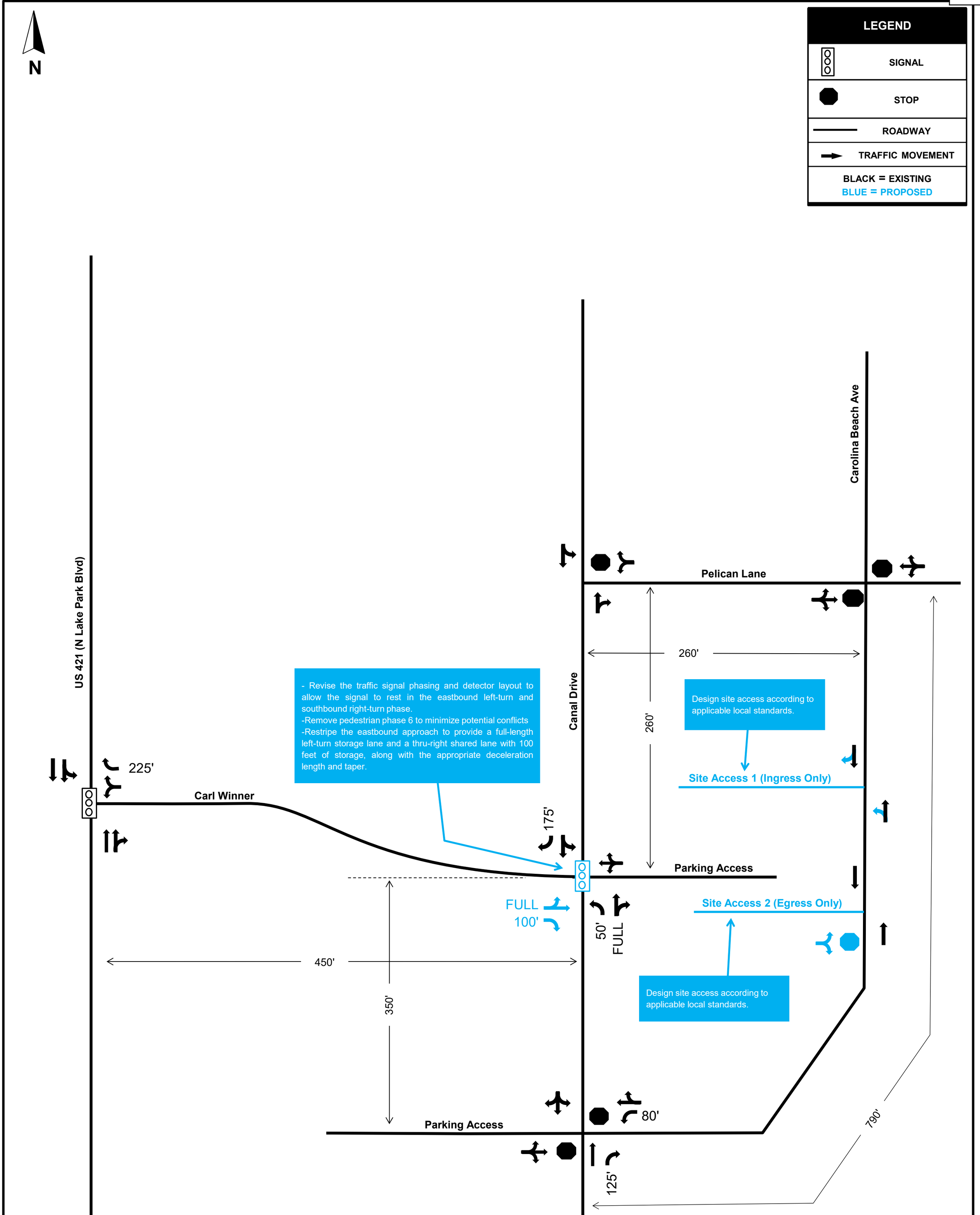


FIGURE 10
RECOMMENDED IMPROVEMENTS

EMBASSY SUITES
CAROLINA BEACH, NC

PROJECT NUMBER 232024

DAVENPORT

*** NOT TO SCALE ***

Appendix

Approved Scoping Documents

Sherry Shafique

From: Caitlin Cerza <Caitlin.Cerza@wilmingtonnc.gov>
Sent: Thursday, August 28, 2025 9:13 AM
To: Don Bennett; Abby Lorenzo
Cc: Erin Govea; Sherry Shafique; Ben Hughes; Bryce Cox; Stoney Mathis; Jeremy Hardison
Subject: RE: Carolina Beach Embassy - request for consensus and time on schedule. DAVENPORT project 232024

Good morning, Don,

As discussed yesterday at the development review meeting, we agree with proceeding with the proposed scope and assumptions below from your email sent to us on 8/14/25. Please let me know if you have any additional questions.

Thank you,

Caitlin M. Cerza
Transportation Planning Engineer
Wilmington Urban Area Metropolitan Planning Organization

910-473-5130
Caitlin.Cerza@WilmingtonNC.gov
https://www.wmpo.org/
525 N. 4th St., Wilmington, NC 28401

From: Caitlin Cerza
Sent: Monday, August 18, 2025 11:18 AM
To: Don Bennett <DBennett@davenportworld.com>; Abby Lorenzo <Abigail.Lorenzo@wilmingtonnc.gov>
Cc: Erin Govea <EGovea@davenportworld.com>; Sherry Shafique <sshafique@davenportworld.com>; Ben Hughes <bthughes@ncdot.gov>; Bryce Cox <bacox2@ncdot.gov>; Stoney Mathis <sdmathis@ncdot.gov>; Jeremy Hardison <jeremy.hardison@carolinabeach.org>
Subject: RE: Carolina Beach Embassy - request for consensus and time on schedule. DAVENPORT project 232024

I will have this as the first agenda item for next week (8/27) at 9:05am. I will send the invite shortly.

Thank you,

Caitlin M. Cerza
Transportation Planning Engineer
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From: Don Bennett <DBennett@davenportworld.com>
Sent: Monday, August 18, 2025 8:50 AM
To: Caitlin Cerza <Caitlin.Cerza@wilmingtonnc.gov>; Abby Lorenzo <Abigail.Lorenzo@wilmingtonnc.gov>
Cc: Erin Govea <EGovea@davenportworld.com>; Sherry Shafique <sshafique@davenportworld.com>; Ben Hughes <bthughes@ncdot.gov>; Bryce Cox <bacox2@ncdot.gov>; Stoney Mathis <sdmathis@ncdot.gov>; Jeremy Hardison <jeremy.hardison@carolinabeach.org>
Subject: RE: Carolina Beach Embassy - request for consensus and time on schedule. DAVENPORT project 232024

Thank you, Caitlin. Please advise which time slot we will have on this.

Don Bennett, PE | Senior Transportation Engineer
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From: Caitlin Cerza <Caitlin.Cerza@wilmingtonnc.gov>
Sent: Monday, August 18, 2025 8:31 AM
To: Don Bennett <DBennett@davenportworld.com>; Abby Lorenzo <Abigail.Lorenzo@wilmingtonnc.gov>
Cc: Erin Govea <EGovea@davenportworld.com>; Sherry Shafique <sshafique@davenportworld.com>; Ben Hughes <bthughes@ncdot.gov>; Bryce Cox <bacox2@ncdot.gov>; Stoney Mathis <sdmathis@ncdot.gov>; Jeremy Hardison <jeremy.hardison@carolinabeach.org>
Subject: RE: Carolina Beach Embassy - request for consensus and time on schedule. DAVENPORT project 232024

Hi Don,

Can we have you on our call next Wednesday, 8/27 just so NCDOT, ToCB, and the WMPO has time to review the information below? We have a full agenda for this upcoming Wednesday and it may be better to approach this one first thing at the next meeting. If we have any questions before the call, I'll reach out to you.

Thank you,

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From: Don Bennett <DBennett@davenportworld.com>
Sent: Thursday, August 14, 2025 11:12 AM
To: Caitlin Cerza <Caitlin.Cerza@wilmingtonnc.gov>; Abby Lorenzo <Abigail.Lorenzo@wilmingtonnc.gov>
Cc: Erin Govea <EGovea@davenportworld.com>; Sherry Shafique <sshafique@davenportworld.com>; Ben Hughes <bthughes@ncdot.gov>; Bryce Cox <bacox2@ncdot.gov>; Stoney Mathis <sdmathis@ncdot.gov>; Jeremy Hardison <jeremy.hardison@carolinabeach.org>
Subject: Carolina Beach Embassy - request for consensus and time on schedule. DAVENPORT project 232024

Caitlin,
I just received a call from the client indicating that additional study has been requested as a supplement to the preliminarily approved TIA. May I please request time on the 8/19 or 8/26 meeting as appropriate and confirm the assumptions below?

For purposed of outlining a proposed supplement to the TIA may I request the following for discussion in the meeting:

- Provide a supplement to the preliminarily approved signed and sealed TIA reflecting an access scenario 3 with full build analysis and reporting table compared to prior no-build results.
- Utilize the prior data collection to keep the comparison for this revised site plan as consistent with the prior effort.
- Retain 2026 build year for consistent comparison to the original evaluations.
- Updated site plan, but retain original hotel room trip generation for consistency with prior study. We understand that the Sea Witch and Sea Witch Tiki Bar will be relocated to the event center on the beach side of Carolina Beach Ave. for no net increase in trips related to that use.
- Distributions will be retained as shown in Figure 7 where trips are routed to and from the proposed site driveways to the west side of Carolina Beach Ave.
- Counts from the existing surface lot at Canal/Carl Winner will be reinserted into the build analysis at locations where they were adjusted via Figure 8A of the sealed TIA.

We're providing an addendum to the client for the additional analysis and reporting to address the Town's concerns and need to understand the scope of the product needed to get the prior study updated to reflect the third access scenario. I included Abby as she signed the original approved scope.

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DAVENPORT

Capacity Analysis
Synchro Worksheets

Existing Conditions

Lanes, Volumes, Timings
100: US 421 (N Lake Park Blvd) & Carl Winner Drive

11/28/2024

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	66	319	551	63	306	543
Future Volume (vph)	66	319	551	63	306	543
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Storage Length (ft)	0	225		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95
Frt	0.900	0.850	0.985			
Flt Protected	0.984					0.982
Satd. Flow (prot)	1595	1454	3370	0	0	3360
Flt Permitted	0.984					0.602
Satd. Flow (perm)	1595	1454	3370	0	0	2060
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	511		1122			1204
Travel Time (s)	13.9		30.6			32.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	354	612	70	340	603
Shared Lane Traffic (%)		41%				
Lane Group Flow (vph)	218	209	682	0	0	943
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	4	4			6	
Detector Phase	4	4	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	22.9	22.9	19.9		12.3	15.3
Total Split (s)	23.0	23.0	42.0		35.0	77.0
Total Split (%)	23.0%	23.0%	42.0%		35.0%	77.0%
Maximum Green (s)	18.1	18.1	37.1		29.7	71.7
Yellow Time (s)	3.0	3.0	3.2		3.0	3.2
All-Red Time (s)	1.9	1.9	1.7		2.3	2.1
Lost Time Adjust (s)	0.1	0.1	0.1			-0.3
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	8.0			
Pedestrian Calls (#/hr)	0	0	0			
Act Effct Green (s)	16.6	16.6	73.4			73.4
Actuated g/C Ratio	0.17	0.17	0.73			0.73
v/c Ratio	0.83	0.87	0.28			0.62
Control Delay	65.6	73.7	4.9			9.1
Queue Delay	0.0	0.0	0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	65.6	73.7	4.9			9.1
LOS	E	E	A			A
Approach Delay	69.6		4.9			9.1
Approach LOS	E		A			A
Queue Length 50th (ft)	133	135	68			140
Queue Length 95th (ft)	#246	#261	90			197
Internal Link Dist (ft)	431		1042			1124
Turn Bay Length (ft)		225				
Base Capacity (vph)	287	261	2474			1513
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.76	0.80	0.28			0.62

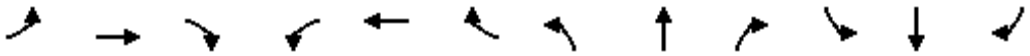
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 10 (10%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 63.8%		ICU Level of Service B	
Analysis Period (min) 15			

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

Splits and Phases: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Lanes, Volumes, Timings
200: Canal Drive & Carolina Beach Ave

11/28/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	4	13	67	4	27	21	64	48	19	54	4
Future Volume (vph)	8	4	13	67	4	27	21	64	48	19	54	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		125	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930			0.868				0.850		0.994	
Flt Protected		0.984		0.950				0.988			0.988	
Satd. Flow (prot)	0	1705	0	1770	1617	0	0	1840	1583	0	1829	0
Flt Permitted		0.984		0.950				0.988			0.988	
Satd. Flow (perm)	0	1705	0	1770	1617	0	0	1840	1583	0	1829	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1075			857			1197			380	
Travel Time (s)		29.3			23.4			32.6			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	4	14	74	4	30	23	71	53	21	60	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	74	34	0	0	94	53	0	85	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	4	13	67	4	27	21	64	48	19	54	4
Future Vol, veh/h	8	4	13	67	4	27	21	64	48	19	54	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	125	-	-	-
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	9	4	14	74	4	30	23	71	53	21	60	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	265	274	62	230	223	71	64	0	0	124	0	0
Stage 1	104	104	-	117	117	-	-	-	-	-	-	-
Stage 2	161	170	-	113	106	-	-	-	-	-	-	-
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	688	633	1003	725	676	991	1538	-	-	1463	-	-
Stage 1	902	809	-	888	799	-	-	-	-	-	-	-
Stage 2	841	758	-	892	807	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	648	613	1003	694	655	991	1538	-	-	1463	-	-
Mov Cap-2 Maneuver	648	613	-	694	655	-	-	-	-	-	-	-
Stage 1	888	797	-	874	786	-	-	-	-	-	-	-
Stage 2	798	746	-	861	795	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	10.2	1.2	1.8
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1538	-	-	785	694	929	1463	-	-
HCM Lane V/C Ratio	0.015	-	-	0.035	0.107	0.037	0.014	-	-
HCM Control Delay (s)	7.4	0	-	9.8	10.8	9	7.5	0	-
HCM Lane LOS	A	A	-	A	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	0	-	-

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive

11/28/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	296	12	60	4	9	6	47	44	8	7	25	290
Future Volume (vph)	296	12	60	4	9	6	47	44	8	7	25	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	50		0	0		175
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	50			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.874			0.955			0.977				0.850
Flt Protected	0.950				0.991		0.950				0.989	
Satd. Flow (prot)	1770	1628	0	0	1763	0	1770	1820	0	0	1842	1583
Flt Permitted	0.744				0.957		0.734				0.947	
Satd. Flow (perm)	1386	1628	0	0	1702	0	1367	1820	0	0	1764	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		511			1264			380			292	
Travel Time (s)		13.9			34.5			10.4			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	329	13	67	4	10	7	52	49	9	8	28	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	329	80	0	0	21	0	52	58	0	0	36	322
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	28.0	28.0		28.0	28.0		28.0	28.0		28.0	28.0	28.0
Total Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	23.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0		-1.0	-1.0			-1.0	-1.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		15.0	15.0		15.0	15.0	15.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		45.0	45.0		45.0	45.0	45.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	15.7	15.7			15.7		14.6	14.6			14.6	14.6
Actuated g/C Ratio	0.38	0.38			0.38		0.36	0.36			0.36	0.36
v/c Ratio	0.62	0.13			0.03		0.11	0.09			0.06	0.57

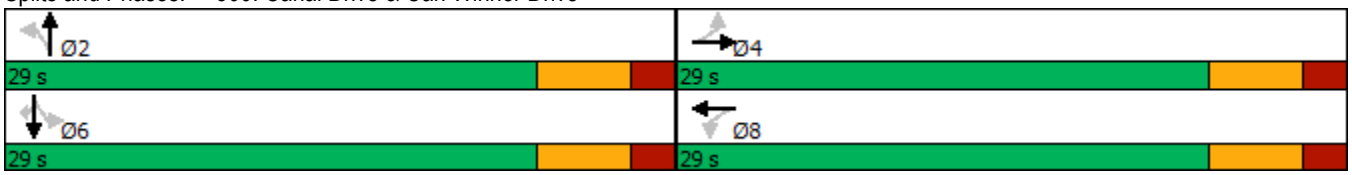
Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive

11/28/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	16.4	9.2			8.7		10.6	10.2			10.1	16.0
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	16.4	9.2			8.7		10.6	10.2			10.1	16.0
LOS	B	A			A		B	B			B	B
Approach Delay		15.0			8.7			10.4			15.4	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	51	10			3		7	8			5	54
Queue Length 95th (ft)	148	37			14		28	30			21	143
Internal Link Dist (ft)		431			1184			300			212	
Turn Bay Length (ft)	100						50					175
Base Capacity (vph)	854	1003			1049		842	1122			1087	975
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.39	0.08			0.02		0.06	0.05			0.03	0.33

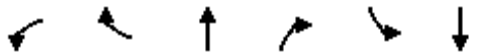
Intersection Summary			
Area Type:	Other		
Cycle Length: 58			
Actuated Cycle Length: 40.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 14.5		Intersection LOS: B	
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 300: Canal Drive & Carl Winner Drive



Lanes, Volumes, Timings
400: Canal Drive & Pelican Lane

11/28/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	51	9	288	52	11	293
Future Volume (vph)	51	9	288	52	11	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980		0.979			
Flt Protected	0.959					0.998
Satd. Flow (prot)	1751	0	1824	0	0	1859
Flt Permitted	0.959					0.998
Satd. Flow (perm)	1751	0	1824	0	0	1859
Link Speed (mph)	25		25			25
Link Distance (ft)	287		292			1065
Travel Time (s)	7.8		8.0			29.0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	10	320	58	12	326
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	0	378	0	0	338
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	9	288	52	11	293
Future Vol, veh/h	51	9	288	52	11	293
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	10	320	58	12	326

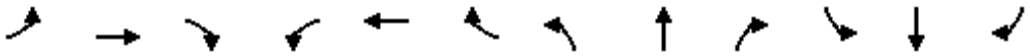
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	699	349	0	0	378	0
Stage 1	349	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	406	694	-	-	1180	-
Stage 1	714	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	401	694	-	-	1180	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	704	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	428	1180	-
HCM Lane V/C Ratio	-	-	0.156	0.01	-
HCM Control Delay (s)	-	-	15	8.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Lanes, Volumes, Timings
500: Carolina Beach Ave & Pelican Lane

11/28/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	5	13	4	5	4	5	49	4	4	84	35
Future Volume (vph)	55	5	13	4	5	4	5	49	4	4	84	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.961			0.992			0.961	
Flt Protected		0.964			0.986			0.995			0.999	
Satd. Flow (prot)	0	1754	0	0	1765	0	0	1839	0	0	1788	0
Flt Permitted		0.964			0.986			0.995			0.999	
Satd. Flow (perm)	0	1754	0	0	1765	0	0	1839	0	0	1788	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		287			1208			857			1123	
Travel Time (s)		7.8			32.9			23.4			30.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	6	14	4	6	4	6	54	4	4	93	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	0	0	14	0	0	64	0	0	136	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	5	13	4	5	4	5	49	4	4	84	35
Future Vol, veh/h	55	5	13	4	5	4	5	49	4	4	84	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	61	6	14	4	6	4	6	54	4	4	93	39

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	194	191	113	199	208	56	132	0	0	58	0	0
Stage 1	121	121	-	68	68	-	-	-	-	-	-	-
Stage 2	73	70	-	131	140	-	-	-	-	-	-	-
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	765	704	940	760	689	1011	1453	-	-	1546	-	-
Stage 1	883	796	-	942	838	-	-	-	-	-	-	-
Stage 2	937	837	-	873	781	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	753	699	940	739	684	1011	1453	-	-	1546	-	-
Mov Cap-2 Maneuver	753	699	-	739	684	-	-	-	-	-	-	-
Stage 1	879	794	-	938	835	-	-	-	-	-	-	-
Stage 2	923	834	-	851	779	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9.7	0.6	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1453	-	-	776	779	1546	-	-
HCM Lane V/C Ratio	0.004	-	-	0.105	0.019	0.003	-	-
HCM Control Delay (s)	7.5	0	-	10.2	9.7	7.3	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

Lanes, Volumes, Timings
100: US 421 (N Lake Park Blvd) & Carl Winner Drive

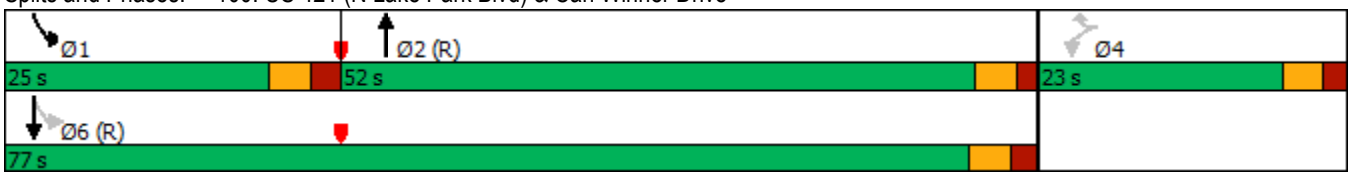
12/02/2024

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	59	257	534	101	372	827
Future Volume (vph)	59	257	534	101	372	827
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Storage Length (ft)	0	225		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95
Frt	0.905	0.850	0.976			
Flt Protected	0.982					0.985
Satd. Flow (prot)	1600	1454	3339	0	0	3370
Flt Permitted	0.982					0.613
Satd. Flow (perm)	1600	1454	3339	0	0	2097
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	511		1122			1120
Travel Time (s)	13.9		30.6			30.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	286	593	112	413	919
Shared Lane Traffic (%)		40%				
Lane Group Flow (vph)	180	172	705	0	0	1332
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	4	4			6	
Detector Phase	4	4	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	22.9	22.9	19.9		12.3	15.3
Total Split (s)	23.0	23.0	52.0		25.0	77.0
Total Split (%)	23.0%	23.0%	52.0%		25.0%	77.0%
Maximum Green (s)	18.1	18.1	47.1		19.7	71.7
Yellow Time (s)	3.0	3.0	3.2		3.0	3.2
All-Red Time (s)	1.9	1.9	1.7		2.3	2.1
Lost Time Adjust (s)	0.1	0.1	0.1			-0.3
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	8.0			
Pedestrian Calls (#/hr)	0	0	0			
Act Effct Green (s)	15.0	15.0	75.0			75.0
Actuated g/C Ratio	0.15	0.15	0.75			0.75
v/c Ratio	0.75	0.79	0.28			0.85
Control Delay	59.6	65.6	4.6			16.4
Queue Delay	0.0	0.0	0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	59.6	65.6	4.6			16.4
LOS	E	E	A			B
Approach Delay	62.6		4.6			16.4
Approach LOS	E		A			B
Queue Length 50th (ft)	110	110	66			270
Queue Length 95th (ft)	180	#196	94			#463
Internal Link Dist (ft)	431		1042			1040
Turn Bay Length (ft)		225				
Base Capacity (vph)	288	261	2504			1572
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.63	0.66	0.28			0.85

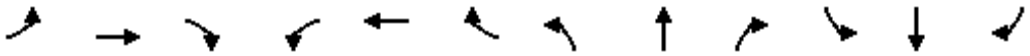
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 85 (85%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 72.7%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive



Lanes, Volumes, Timings
200: Canal Drive & Carolina Beach Ave

12/02/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	4	13	59	4	23	37	110	72	26	57	10
Future Volume (vph)	31	4	13	59	4	23	37	110	72	26	57	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		125	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964			0.870				0.850		0.986	
Flt Protected		0.968		0.950				0.988			0.986	
Satd. Flow (prot)	0	1738	0	1770	1621	0	0	1840	1583	0	1811	0
Flt Permitted		0.968		0.950				0.988			0.986	
Satd. Flow (perm)	0	1738	0	1770	1621	0	0	1840	1583	0	1811	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1221			862			1191			380	
Travel Time (s)		33.3			23.5			32.5			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	4	14	66	4	26	41	122	80	29	63	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	66	30	0	0	163	80	0	103	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	4	13	59	4	23	37	110	72	26	57	10
Future Vol, veh/h	31	4	13	59	4	23	37	110	72	26	57	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	125	-	-	-
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	34	4	14	66	4	26	41	122	80	29	63	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	386	411	69	340	336	122	74	0	0	202	0	0
Stage 1	127	127	-	204	204	-	-	-	-	-	-	-
Stage 2	259	284	-	136	132	-	-	-	-	-	-	-
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	573	531	994	614	585	929	1526	-	-	1370	-	-
Stage 1	877	791	-	798	733	-	-	-	-	-	-	-
Stage 2	746	676	-	867	787	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	532	503	994	577	555	929	1526	-	-	1370	-	-
Mov Cap-2 Maneuver	532	503	-	577	555	-	-	-	-	-	-	-
Stage 1	850	774	-	773	710	-	-	-	-	-	-	-
Stage 2	699	655	-	831	770	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	11.2	1.3	2.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1526	-	-	605	577	845	1370	-	-
HCM Lane V/C Ratio	0.027	-	-	0.088	0.114	0.036	0.021	-	-
HCM Control Delay (s)	7.4	0	-	11.5	12	9.4	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.4	0.1	0.1	-	-

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive

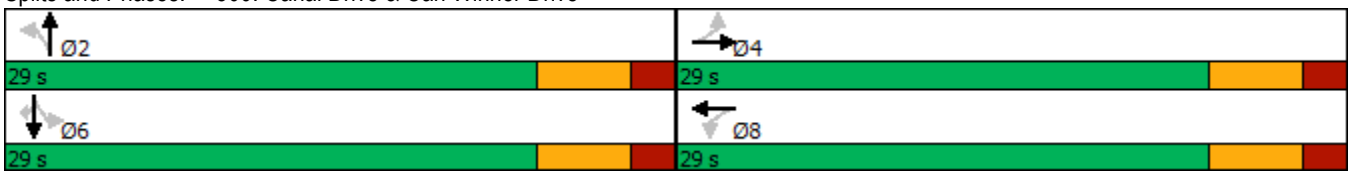
12/02/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	357	27	60	4	4	15	46	48	16	8	31	269
Future Volume (vph)	357	27	60	4	4	15	46	48	16	8	31	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	50		0	0		175
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	75			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.896			0.908			0.962				0.850
Flt Protected	0.950				0.992		0.950				0.990	
Satd. Flow (prot)	1770	1669	0	0	1678	0	1770	1792	0	0	1844	1583
Flt Permitted	0.741				0.964		0.729				0.942	
Satd. Flow (perm)	1380	1669	0	0	1630	0	1358	1792	0	0	1755	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		511			1126			380			292	
Travel Time (s)		13.9			30.7			10.4			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	397	30	67	4	4	17	51	53	18	9	34	299
Shared Lane Traffic (%)												
Lane Group Flow (vph)	397	97	0	0	25	0	51	71	0	0	43	299
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	28.0	28.0		28.0	28.0		28.0	28.0		28.0	28.0	28.0
Total Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	23.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0		-1.0	-1.0			-1.0	-1.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		15.0	15.0		15.0	15.0	15.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		45.0	45.0		45.0	45.0	45.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	16.6	16.6			16.6		12.8	12.8			12.8	12.8
Actuated g/C Ratio	0.41	0.41			0.41		0.32	0.32			0.32	0.32
v/c Ratio	0.70	0.14			0.04		0.12	0.12			0.08	0.59

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	17.9	8.6			8.1		11.5	11.2			10.9	17.7
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	17.9	8.6			8.1		11.5	11.2			10.9	17.7
LOS	B	A			A		B	B			B	B
Approach Delay		16.1			8.1			11.3			16.8	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	64	12			3		8	11			6	53
Queue Length 95th (ft)	180	40			15		28	36			25	133
Internal Link Dist (ft)		431			1046			300			212	
Turn Bay Length (ft)	100						50					175
Base Capacity (vph)	881	1065			1040		867	1144			1120	1010
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.45	0.09			0.02		0.06	0.06			0.04	0.30

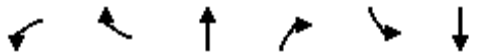
Intersection Summary			
Area Type:	Other		
Cycle Length: 58			
Actuated Cycle Length: 40.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 15.5		Intersection LOS: B	
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 300: Canal Drive & Carl Winner Drive



Lanes, Volumes, Timings
400: Canal Drive & Pelican Lane

12/02/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	17	306	100	4	275
Future Volume (vph)	53	17	306	100	4	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.967		0.967			
Flt Protected	0.964					0.999
Satd. Flow (prot)	1736	0	1801	0	0	1861
Flt Permitted	0.964					0.999
Satd. Flow (perm)	1736	0	1801	0	0	1861
Link Speed (mph)	25		25			25
Link Distance (ft)	287		292			1396
Travel Time (s)	7.8		8.0			38.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	59	19	340	111	4	306
Shared Lane Traffic (%)						
Lane Group Flow (vph)	78	0	451	0	0	310
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	17	306	100	4	275
Future Vol, veh/h	53	17	306	100	4	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	19	340	111	4	306

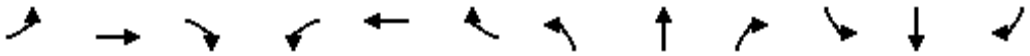
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	710	396	0	0	451	0
Stage 1	396	-	-	-	-	-
Stage 2	314	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	400	653	-	-	1109	-
Stage 1	680	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	398	653	-	-	1109	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	440	1109	-
HCM Lane V/C Ratio	-	-	0.177	0.004	-
HCM Control Delay (s)	-	-	14.9	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Lanes, Volumes, Timings
500: Carolina Beach Ave & Pelican Lane

12/02/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	34	14	4	17	4	10	76	8	4	65	30
Future Volume (vph)	40	34	14	4	17	4	10	76	8	4	65	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.978			0.980			0.988			0.959	
Flt Protected		0.978			0.993			0.995			0.998	
Satd. Flow (prot)	0	1782	0	0	1813	0	0	1831	0	0	1783	0
Flt Permitted		0.978			0.993			0.995			0.998	
Satd. Flow (perm)	0	1782	0	0	1813	0	0	1831	0	0	1783	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		287			1266			862			1270	
Travel Time (s)		7.8			34.5			23.5			34.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	38	16	4	19	4	11	84	9	4	72	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	27	0	0	104	0	0	109	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	40	34	14	4	17	4	10	76	8	4	65	30
Future Vol, veh/h	40	34	14	4	17	4	10	76	8	4	65	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	44	38	16	4	19	4	11	84	9	4	72	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	219	212	89	235	224	89	105	0	0	93	0	0
Stage 1	97	97	-	111	111	-	-	-	-	-	-	-
Stage 2	122	115	-	124	113	-	-	-	-	-	-	-
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	737	685	969	720	675	969	1486	-	-	1501	-	-
Stage 1	910	815	-	894	804	-	-	-	-	-	-	-
Stage 2	882	800	-	880	802	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	712	677	969	672	668	969	1486	-	-	1501	-	-
Mov Cap-2 Maneuver	712	677	-	672	668	-	-	-	-	-	-	-
Stage 1	903	813	-	887	798	-	-	-	-	-	-	-
Stage 2	850	794	-	823	800	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	10.3	0.8	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1486	-	-	728	704	1501	-	-
HCM Lane V/C Ratio	0.007	-	-	0.134	0.039	0.003	-	-
HCM Control Delay (s)	7.4	0	-	10.7	10.3	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-	-

Future No Build Conditions

Lanes, Volumes, Timings
100: US 421 (N Lake Park Blvd) & Carl Winner Drive

11/29/2024

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	67	325	587	64	312	573
Future Volume (vph)	67	325	587	64	312	573
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Storage Length (ft)	0	225		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95
Frt	0.900	0.850	0.985			
Flt Protected	0.984					0.983
Satd. Flow (prot)	1595	1454	3370	0	0	3363
Flt Permitted	0.984					0.594
Satd. Flow (perm)	1595	1454	3370	0	0	2032
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	511		1122			1204
Travel Time (s)	13.9		30.6			32.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	361	652	71	347	637
Shared Lane Traffic (%)		41%				
Lane Group Flow (vph)	222	213	723	0	0	984
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	4	4			6	
Detector Phase	4	4	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	22.9	22.9	19.9		12.3	15.3
Total Split (s)	23.0	23.0	42.0		35.0	77.0
Total Split (%)	23.0%	23.0%	42.0%		35.0%	77.0%
Maximum Green (s)	18.1	18.1	37.1		29.7	71.7
Yellow Time (s)	3.0	3.0	3.2		3.0	3.2
All-Red Time (s)	1.9	1.9	1.7		2.3	2.1
Lost Time Adjust (s)	0.1	0.1	0.1			-0.3
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	8.0			
Pedestrian Calls (#/hr)	0	0	0			
Act Effct Green (s)	16.7	16.7	73.3			73.3
Actuated g/C Ratio	0.17	0.17	0.73			0.73
v/c Ratio	0.83	0.88	0.29			0.66
Control Delay	66.1	74.6	5.1			9.9
Queue Delay	0.0	0.0	0.0			0.0

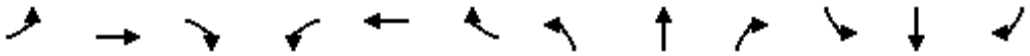
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	66.1	74.6	5.1			9.9
LOS	E	E	A			A
Approach Delay	70.2		5.1			9.9
Approach LOS	E		A			A
Queue Length 50th (ft)	136	138	74			153
Queue Length 95th (ft)	#251	#267	97			220
Internal Link Dist (ft)	431		1042			1124
Turn Bay Length (ft)		225				
Base Capacity (vph)	287	261	2468			1488
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.77	0.82	0.29			0.66

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 10 (10%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Lanes, Volumes, Timings
200: Canal Drive & Carolina Beach Ave

11/29/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	4	13	68	4	28	21	65	49	19	55	4
Future Volume (vph)	8	4	13	68	4	28	21	65	49	19	55	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		125	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930			0.867				0.850		0.994	
Flt Protected		0.984		0.950				0.988			0.988	
Satd. Flow (prot)	0	1705	0	1770	1615	0	0	1840	1583	0	1829	0
Flt Permitted		0.984		0.950				0.988			0.988	
Satd. Flow (perm)	0	1705	0	1770	1615	0	0	1840	1583	0	1829	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1488			869			1179			380	
Travel Time (s)		40.6			23.7			32.2			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	4	14	76	4	31	23	72	54	21	61	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	76	35	0	0	95	54	0	86	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	4	13	68	4	28	21	65	49	19	55	4
Future Vol, veh/h	8	4	13	68	4	28	21	65	49	19	55	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	125	-	-	-
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	9	4	14	76	4	31	23	72	54	21	61	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	268	277	63	232	225	72	65	0	0	126	0	0
Stage 1	105	105	-	118	118	-	-	-	-	-	-	-
Stage 2	163	172	-	114	107	-	-	-	-	-	-	-
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	685	631	1002	723	674	990	1537	-	-	1460	-	-
Stage 1	901	808	-	887	798	-	-	-	-	-	-	-
Stage 2	839	756	-	891	807	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	645	611	1002	692	653	990	1537	-	-	1460	-	-
Mov Cap-2 Maneuver	645	611	-	692	653	-	-	-	-	-	-	-
Stage 1	887	796	-	873	785	-	-	-	-	-	-	-
Stage 2	795	744	-	860	795	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	10.2	1.1	1.8
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1537	-	-	783	692	930	1460	-	-
HCM Lane V/C Ratio	0.015	-	-	0.035	0.109	0.038	0.014	-	-
HCM Control Delay (s)	7.4	0	-	9.8	10.8	9	7.5	0	-
HCM Lane LOS	A	A	-	A	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	0	-	-

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive

11/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	302	12	61	4	9	6	48	45	8	7	26	296
Future Volume (vph)	302	12	61	4	9	6	48	45	8	7	26	296
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	50		0	0		175
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	50			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.874			0.955			0.977				0.850
Flt Protected	0.950				0.991		0.950				0.989	
Satd. Flow (prot)	1770	1628	0	0	1763	0	1770	1820	0	0	1842	1583
Flt Permitted	0.744				0.955		0.733				0.946	
Satd. Flow (perm)	1386	1628	0	0	1699	0	1365	1820	0	0	1762	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		511			1759			380			292	
Travel Time (s)		13.9			48.0			10.4			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	336	13	68	4	10	7	53	50	9	8	29	329
Shared Lane Traffic (%)												
Lane Group Flow (vph)	336	81	0	0	21	0	53	59	0	0	37	329
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	22.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0			-2.0		-2.0	-2.0			-2.0	-2.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		15.0	15.0		15.0	15.0	15.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		45.0	45.0		45.0	45.0	45.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	17.2	17.2			17.2		16.0	16.0			16.0	16.0
Actuated g/C Ratio	0.39	0.39			0.39		0.37	0.37			0.37	0.37
v/c Ratio	0.62	0.13			0.03		0.11	0.09			0.06	0.57

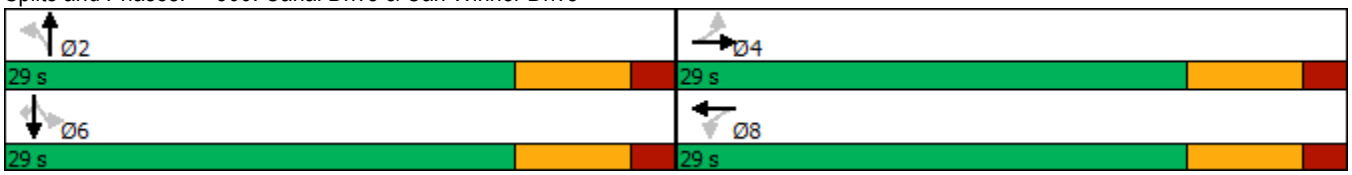
Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive

11/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	17.0	9.8			9.4		10.7	10.4			10.2	16.3
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	17.0	9.8			9.4		10.7	10.4			10.2	16.3
LOS	B	A			A		B	B			B	B
Approach Delay		15.6			9.4			10.6			15.7	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	58	11			3		8	9			6	61
Queue Length 95th (ft)	161	39			15		28	30			21	146
Internal Link Dist (ft)		431			1679			300			212	
Turn Bay Length (ft)	100						50					175
Base Capacity (vph)	795	934			975		783	1044			1011	908
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.42	0.09			0.02		0.07	0.06			0.04	0.36

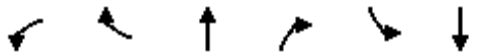
Intersection Summary			
Area Type:	Other		
Cycle Length: 58			
Actuated Cycle Length: 43.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 41.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 300: Canal Drive & Carl Winner Drive



Lanes, Volumes, Timings
400: Canal Drive & Pelican Lane

11/29/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	9	294	53	11	299
Future Volume (vph)	52	9	294	53	11	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980		0.979			
Flt Protected	0.959					0.998
Satd. Flow (prot)	1751	0	1824	0	0	1859
Flt Permitted	0.959					0.998
Satd. Flow (perm)	1751	0	1824	0	0	1859
Link Speed (mph)	25		25			25
Link Distance (ft)	287		292			1002
Travel Time (s)	7.8		8.0			27.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	10	327	59	12	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	0	386	0	0	344
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	9	294	53	11	299
Future Vol, veh/h	52	9	294	53	11	299
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	10	327	59	12	332

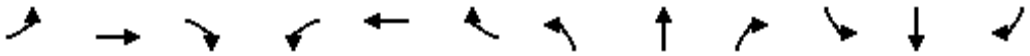
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	713	357	0	0	386	0
Stage 1	357	-	-	-	-	-
Stage 2	356	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	398	687	-	-	1172	-
Stage 1	708	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	393	687	-	-	1172	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	708	-	-	-	-	-
Stage 2	700	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	419	1172	-
HCM Lane V/C Ratio	-	-	0.162	0.01	-
HCM Control Delay (s)	-	-	15.2	8.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Lanes, Volumes, Timings
500: Carolina Beach Ave & Pelican Lane

11/29/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	5	13	4	5	4	5	50	4	4	86	36
Future Volume (vph)	56	5	13	4	5	4	5	50	4	4	86	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.961			0.992			0.961	
Flt Protected		0.964			0.986			0.995			0.999	
Satd. Flow (prot)	0	1754	0	0	1765	0	0	1839	0	0	1788	0
Flt Permitted		0.964			0.986			0.995			0.999	
Satd. Flow (perm)	0	1754	0	0	1765	0	0	1839	0	0	1788	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		287			1387			869			1077	
Travel Time (s)		7.8			37.8			23.7			29.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	6	14	4	6	4	6	56	4	4	96	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	14	0	0	66	0	0	140	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	56	5	13	4	5	4	5	50	4	4	86	36
Future Vol, veh/h	56	5	13	4	5	4	5	50	4	4	86	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	62	6	14	4	6	4	6	56	4	4	96	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	199	196	116	204	214	58	136	0	0	60	0	0
Stage 1	124	124	-	70	70	-	-	-	-	-	-	-
Stage 2	75	72	-	134	144	-	-	-	-	-	-	-
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	760	699	936	754	684	1008	1448	-	-	1544	-	-
Stage 1	880	793	-	940	837	-	-	-	-	-	-	-
Stage 2	934	835	-	869	778	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	748	694	936	734	679	1008	1448	-	-	1544	-	-
Mov Cap-2 Maneuver	748	694	-	734	679	-	-	-	-	-	-	-
Stage 1	876	791	-	936	834	-	-	-	-	-	-	-
Stage 2	920	832	-	847	776	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9.7	0.6	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1448	-	-	771	775	1544	-	-
HCM Lane V/C Ratio	0.004	-	-	0.107	0.019	0.003	-	-
HCM Control Delay (s)	7.5	0	-	10.2	9.7	7.3	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0	-	-

Lanes, Volumes, Timings
100: US 421 (N Lake Park Blvd) & Carl Winner Drive

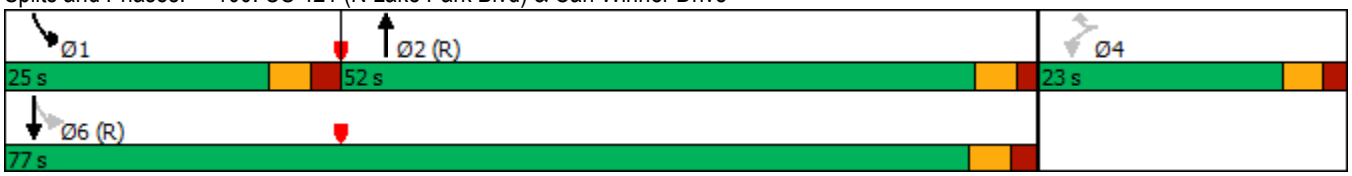
12/02/2024

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	60	262	545	103	379	844
Future Volume (vph)	60	262	545	103	379	844
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Storage Length (ft)	0	225		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95
Frt	0.905	0.850	0.976			
Flt Protected	0.982					0.985
Satd. Flow (prot)	1600	1454	3339	0	0	3370
Flt Permitted	0.982					0.609
Satd. Flow (perm)	1600	1454	3339	0	0	2084
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	511		1122			1120
Travel Time (s)	13.9		30.6			30.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	67	291	606	114	421	938
Shared Lane Traffic (%)		40%				
Lane Group Flow (vph)	183	175	720	0	0	1359
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	4	4			6	
Detector Phase	4	4	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	22.9	22.9	19.9		12.3	15.3
Total Split (s)	23.0	23.0	52.0		25.0	77.0
Total Split (%)	23.0%	23.0%	52.0%		25.0%	77.0%
Maximum Green (s)	18.1	18.1	47.1		19.7	71.7
Yellow Time (s)	3.0	3.0	3.2		3.0	3.2
All-Red Time (s)	1.9	1.9	1.7		2.3	2.1
Lost Time Adjust (s)	0.1	0.1	0.1			-0.3
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	8.0			
Pedestrian Calls (#/hr)	0	0	0			
Act Effct Green (s)	15.1	15.1	74.9			74.9
Actuated g/C Ratio	0.15	0.15	0.75			0.75
v/c Ratio	0.76	0.80	0.29			0.87
Control Delay	59.9	66.2	4.7			18.1
Queue Delay	0.0	0.0	0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	59.9	66.2	4.7			18.1
LOS	E	E	A			B
Approach Delay	63.0		4.7			18.1
Approach LOS	E		A			B
Queue Length 50th (ft)	111	112	68			293
Queue Length 95th (ft)	183	#202	97			#562
Internal Link Dist (ft)	431		1042			1040
Turn Bay Length (ft)		225				
Base Capacity (vph)	288	261	2499			1560
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.64	0.67	0.29			0.87

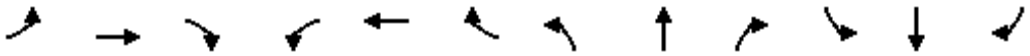
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 85 (85%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 20.7		Intersection LOS: C	
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive



Lanes, Volumes, Timings
200: Canal Drive & Carolina Beach Ave

12/02/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	4	13	60	4	23	38	112	73	27	58	10
Future Volume (vph)	32	4	13	60	4	23	38	112	73	27	58	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		125	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.965			0.870				0.850		0.986	
Flt Protected		0.968		0.950				0.988			0.986	
Satd. Flow (prot)	0	1740	0	1770	1621	0	0	1840	1583	0	1811	0
Flt Permitted		0.968		0.950				0.988			0.986	
Satd. Flow (perm)	0	1740	0	1770	1621	0	0	1840	1583	0	1811	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1387			872			1044			380	
Travel Time (s)		37.8			23.8			28.5			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	4	14	67	4	26	42	124	81	30	64	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	67	30	0	0	166	81	0	105	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	4	13	60	4	23	38	112	73	27	58	10
Future Vol, veh/h	32	4	13	60	4	23	38	112	73	27	58	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	125	-	-	-
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	36	4	14	67	4	26	42	124	81	30	64	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	394	419	70	347	343	124	75	0	0	205	0	0
Stage 1	130	130	-	208	208	-	-	-	-	-	-	-
Stage 2	264	289	-	139	135	-	-	-	-	-	-	-
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	566	525	993	607	579	927	1524	-	-	1366	-	-
Stage 1	874	789	-	794	730	-	-	-	-	-	-	-
Stage 2	741	673	-	864	785	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	525	497	993	570	548	927	1524	-	-	1366	-	-
Mov Cap-2 Maneuver	525	497	-	570	548	-	-	-	-	-	-	-
Stage 1	847	771	-	769	707	-	-	-	-	-	-	-
Stage 2	694	652	-	827	767	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	11.3	1.3	2.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1524	-	-	597	570	841	1366	-	-
HCM Lane V/C Ratio	0.028	-	-	0.091	0.117	0.036	0.022	-	-
HCM Control Delay (s)	7.4	0	-	11.6	12.2	9.4	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.4	0.1	0.1	-	-

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive

12/02/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	364	28	61	4	4	15	47	49	16	8	32	274
Future Volume (vph)	364	28	61	4	4	15	47	49	16	8	32	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	50		0	0		175
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	50			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.897			0.908			0.962				0.850
Flt Protected	0.950				0.992		0.950				0.990	
Satd. Flow (prot)	1770	1671	0	0	1678	0	1770	1792	0	0	1844	1583
Flt Permitted	0.741				0.963		0.728				0.942	
Satd. Flow (perm)	1380	1671	0	0	1629	0	1356	1792	0	0	1755	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		511			1669			380			292	
Travel Time (s)		13.9			45.5			10.4			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	404	31	68	4	4	17	52	54	18	9	36	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	404	99	0	0	25	0	52	72	0	0	45	304
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	22.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0			-2.0		-2.0	-2.0			-2.0	-2.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		15.0	15.0		15.0	15.0	15.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		45.0	45.0		45.0	45.0	45.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	19.1	19.1			19.1		14.4	14.4			14.4	14.4
Actuated g/C Ratio	0.43	0.43			0.43		0.33	0.33			0.33	0.33
v/c Ratio	0.68	0.14			0.04		0.12	0.12			0.08	0.59

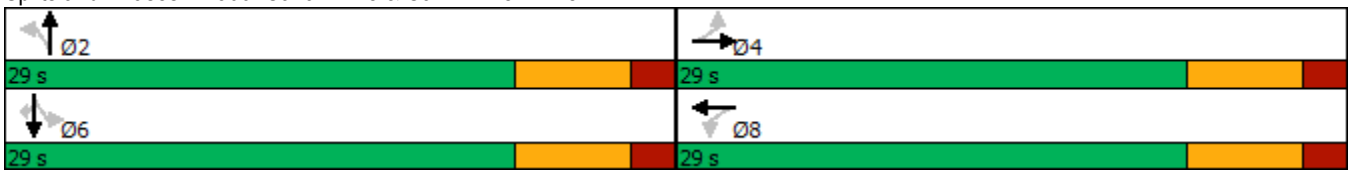
Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive

12/02/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	18.1	9.1			8.6		11.8	11.6			11.2	18.1
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	18.1	9.1			8.6		11.8	11.6			11.2	18.1
LOS	B	A			A		B	B			B	B
Approach Delay		16.3			8.6			11.7			17.2	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	74	14			3		9	13			8	63
Queue Length 95th (ft)	#202	43			16		28	36			25	134
Internal Link Dist (ft)		431			1589			300			212	
Turn Bay Length (ft)	100						50					175
Base Capacity (vph)	792	959			935		778	1028			1007	908
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.51	0.10			0.03		0.07	0.07			0.04	0.33

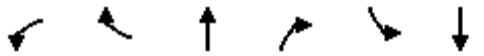
Intersection Summary			
Area Type:	Other		
Cycle Length: 58			
Actuated Cycle Length: 44			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 300: Canal Drive & Carl Winner Drive



Lanes, Volumes, Timings
400: Canal Drive & Pelican Lane

12/02/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	54	17	312	102	4	281
Future Volume (vph)	54	17	312	102	4	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.968		0.967			
Flt Protected	0.963					0.999
Satd. Flow (prot)	1736	0	1801	0	0	1861
Flt Permitted	0.963					0.999
Satd. Flow (perm)	1736	0	1801	0	0	1861
Link Speed (mph)	25		25			25
Link Distance (ft)	287		292			1323
Travel Time (s)	7.8		8.0			36.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	19	347	113	4	312
Shared Lane Traffic (%)						
Lane Group Flow (vph)	79	0	460	0	0	316
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	17	312	102	4	281
Future Vol, veh/h	54	17	312	102	4	281
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	19	347	113	4	312

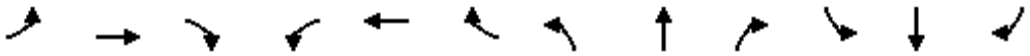
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	724	404	0	0	460	0
Stage 1	404	-	-	-	-	-
Stage 2	320	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	393	647	-	-	1101	-
Stage 1	674	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	391	647	-	-	1101	-
Mov Cap-2 Maneuver	391	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	733	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	432	1101	-
HCM Lane V/C Ratio	-	-	0.183	0.004	-
HCM Control Delay (s)	-	-	15.2	8.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

Lanes, Volumes, Timings
500: Carolina Beach Ave & Pelican Lane

12/02/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	35	17	4	17	4	10	78	8	4	66	31
Future Volume (vph)	41	35	17	4	17	4	10	78	8	4	66	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.980			0.989			0.959	
Flt Protected		0.978			0.993			0.995			0.998	
Satd. Flow (prot)	0	1776	0	0	1813	0	0	1833	0	0	1783	0
Flt Permitted		0.978			0.993			0.995			0.998	
Satd. Flow (perm)	0	1776	0	0	1813	0	0	1833	0	0	1783	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		287			1305			872			1377	
Travel Time (s)		7.8			35.6			23.8			37.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	39	19	4	19	4	11	87	9	4	73	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	104	0	0	27	0	0	107	0	0	111	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	41	35	17	4	17	4	10	78	8	4	66	31
Future Vol, veh/h	41	35	17	4	17	4	10	78	8	4	66	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	46	39	19	4	19	4	11	87	9	4	73	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	223	216	90	241	229	92	107	0	0	96	0	0
Stage 1	98	98	-	114	114	-	-	-	-	-	-	-
Stage 2	125	118	-	127	115	-	-	-	-	-	-	-
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	733	682	968	713	671	965	1484	-	-	1498	-	-
Stage 1	908	814	-	891	801	-	-	-	-	-	-	-
Stage 2	879	798	-	877	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	708	674	968	662	664	965	1484	-	-	1498	-	-
Mov Cap-2 Maneuver	708	674	-	662	664	-	-	-	-	-	-	-
Stage 1	901	812	-	884	795	-	-	-	-	-	-	-
Stage 2	847	792	-	816	798	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	10.4	0.8	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1484	-	-	730	699	1498	-	-
HCM Lane V/C Ratio	0.007	-	-	0.142	0.04	0.003	-	-
HCM Control Delay (s)	7.4	0	-	10.7	10.4	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-	-

Future Build Conditions

Lanes, Volumes, Timings
100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	67	373	587	64	362	573
Future Volume (vph)	67	373	587	64	362	573
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Storage Length (ft)	0	225		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95
Frt	0.895	0.850	0.985			
Flt Protected	0.985					0.981
Satd. Flow (prot)	1587	1454	3370	0	0	3356
Flt Permitted	0.985					0.584
Satd. Flow (perm)	1587	1454	3370	0	0	1998
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	511		1122			1204
Travel Time (s)	13.9		30.6			32.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	414	652	71	402	637
Shared Lane Traffic (%)		42%				
Lane Group Flow (vph)	248	240	723	0	0	1039
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	4	4			6	
Detector Phase	4	4	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	22.9	22.9	19.9		12.3	15.3
Total Split (s)	23.0	23.0	42.0		35.0	77.0
Total Split (%)	23.0%	23.0%	42.0%		35.0%	77.0%
Maximum Green (s)	18.1	18.1	37.1		29.7	71.7
Yellow Time (s)	3.0	3.0	3.2		3.0	3.2
All-Red Time (s)	1.9	1.9	1.7		2.3	2.1
Lost Time Adjust (s)	0.1	0.1	0.1			-0.3
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	8.0			
Pedestrian Calls (#/hr)	0	0	0			
Act Effct Green (s)	17.6	17.6	72.4			72.4
Actuated g/C Ratio	0.18	0.18	0.72			0.72
v/c Ratio	0.89	0.94	0.30			0.72
Control Delay	73.1	84.7	5.3			11.7
Queue Delay	0.0	0.0	0.0			0.0

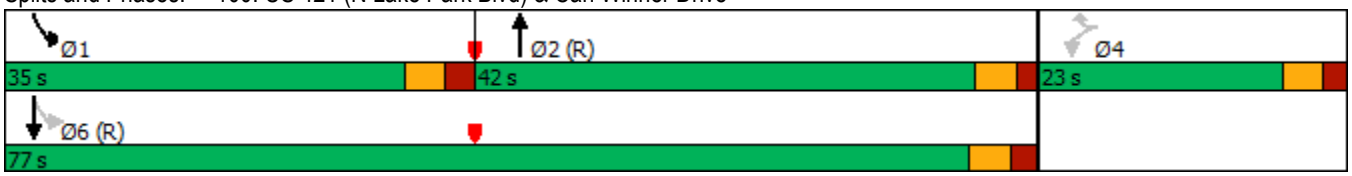
Lanes, Volumes, Timings
100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	73.1	84.7	5.3			11.7
LOS	E	F	A			B
Approach Delay	78.8		5.3			11.7
Approach LOS	E		A			B
Queue Length 50th (ft)	155	160	74			174
Queue Length 95th (ft)	#294	#313	97			253
Internal Link Dist (ft)	431		1042			1124
Turn Bay Length (ft)		225				
Base Capacity (vph)	285	261	2439			1446
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.87	0.92	0.30			0.72

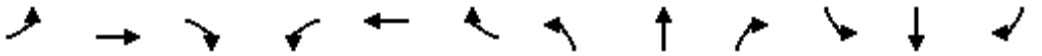
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 10 (10%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 24.2		Intersection LOS: C	
Intersection Capacity Utilization 68.5%		ICU Level of Service C	
Analysis Period (min) 15			

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

Splits and Phases: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive



Lanes, Volumes, Timings
200: Canal Drive & Carolina Beach Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	4	13	71	4	63	21	65	52	22	55	4
Future Volume (vph)	8	4	13	71	4	63	21	65	52	22	55	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		125	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930			0.858				0.850		0.994	
Flt Protected		0.984		0.950				0.988			0.987	
Satd. Flow (prot)	0	1705	0	1770	1598	0	0	1840	1583	0	1827	0
Flt Permitted		0.984		0.950				0.988			0.987	
Satd. Flow (perm)	0	1705	0	1770	1598	0	0	1840	1583	0	1827	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1283			487			1492			380	
Travel Time (s)		35.0			13.3			40.7			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	4	14	79	4	70	23	72	58	24	61	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	79	74	0	0	95	58	0	89	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.9%		ICU Level of Service A	
Analysis Period (min) 15			

HCM 6th TWSC
200: Canal Drive & Carolina Beach Ave

Intersection	
Int Delay, s/veh	5.1

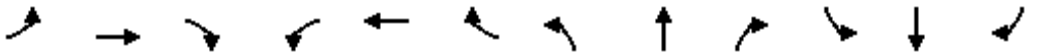
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	4	13	71	4	63	21	65	52	22	55	4
Future Vol, veh/h	8	4	13	71	4	63	21	65	52	22	55	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	125	-	-	-
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	9	4	14	79	4	70	23	72	58	24	61	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	295	287	63	238	231	72	65	0	0	130	0	0
Stage 1	111	111	-	118	118	-	-	-	-	-	-	-
Stage 2	184	176	-	120	113	-	-	-	-	-	-	-
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	657	623	1002	716	669	990	1537	-	-	1455	-	-
Stage 1	894	804	-	887	798	-	-	-	-	-	-	-
Stage 2	818	753	-	884	802	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	592	602	1002	684	647	990	1537	-	-	1455	-	-
Mov Cap-2 Maneuver	592	602	-	684	647	-	-	-	-	-	-	-
Stage 1	880	790	-	873	785	-	-	-	-	-	-	-
Stage 2	744	741	-	852	788	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	10	1.1	2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1537	-	-	755	684	960	1455	-	-
HCM Lane V/C Ratio	0.015	-	-	0.037	0.115	0.078	0.017	-	-
HCM Control Delay (s)	7.4	0	-	10	10.9	9.1	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.3	0.1	-	-

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive/Parking Access



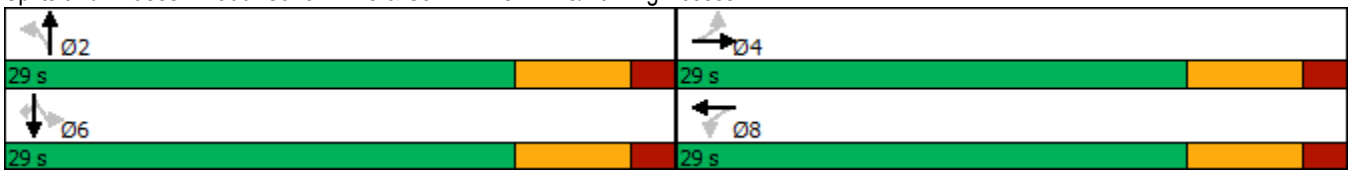
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	12	64	4	9	6	83	45	8	7	26	309
Future Volume (vph)	350	12	64	4	9	6	83	45	8	7	26	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	50		0	0		175
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	50			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.873			0.955			0.977				0.850
Flt Protected	0.950				0.991		0.950				0.989	
Satd. Flow (prot)	1770	1626	0	0	1763	0	1770	1820	0	0	1842	1583
Flt Permitted	0.744				0.958		0.733				0.945	
Satd. Flow (perm)	1386	1626	0	0	1704	0	1365	1820	0	0	1760	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		511			1348			380			292	
Travel Time (s)		13.9			36.8			10.4			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	389	13	71	4	10	7	92	50	9	8	29	343
Shared Lane Traffic (%)												
Lane Group Flow (vph)	389	84	0	0	21	0	92	59	0	0	37	343
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	22.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0			-2.0		-2.0	-2.0			-2.0	-2.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		15.0	15.0		15.0	15.0	15.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		45.0	45.0		45.0	45.0	45.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	18.8	18.8			18.8		15.9	15.9			15.9	15.9
Actuated g/C Ratio	0.42	0.42			0.42		0.35	0.35			0.35	0.35
v/c Ratio	0.68	0.12			0.03		0.19	0.09			0.06	0.62

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive/Parking Access

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	18.9	9.8			9.4		12.0	10.9			10.7	18.2
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	18.9	9.8			9.4		12.0	10.9			10.7	18.2
LOS	B	A			A		B	B			B	B
Approach Delay		17.3			9.4			11.6			17.5	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	76	12			3		16	10			6	73
Queue Length 95th (ft)	#199	40			15		44	30			21	153
Internal Link Dist (ft)		431			1268			300			212	
Turn Bay Length (ft)	100						50					175
Base Capacity (vph)	776	911			955		764	1019			986	887
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.50	0.09			0.02		0.12	0.06			0.04	0.39

Intersection Summary			
Area Type:	Other		
Cycle Length: 58			
Actuated Cycle Length: 45.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 16.4		Intersection LOS: B	
Intersection Capacity Utilization 45.7%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 300: Canal Drive & Carl Winner Drive/Parking Access



Lanes, Volumes, Timings
400: Canal Drive & Pelican Lane

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	65	9	294	101	11	299
Future Volume (vph)	65	9	294	101	11	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984		0.966			
Flt Protected	0.958					0.998
Satd. Flow (prot)	1756	0	1799	0	0	1859
Flt Permitted	0.958					0.998
Satd. Flow (perm)	1756	0	1799	0	0	1859
Link Speed (mph)	25		25			25
Link Distance (ft)	287		292			524
Travel Time (s)	7.8		8.0			14.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	10	327	112	12	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	0	439	0	0	344
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

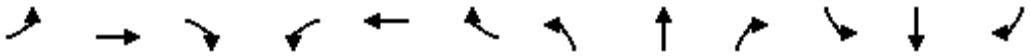
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	65	9	294	101	11	299
Future Vol, veh/h	65	9	294	101	11	299
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	10	327	112	12	332

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	739	383	0	0	439	0
Stage 1	383	-	-	-	-	-
Stage 2	356	-	-	-	-	-
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	385	664	-	-	1121	-
Stage 1	689	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	380	664	-	-	1121	-
Mov Cap-2 Maneuver	380	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	700	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.3	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	401	1121	-
HCM Lane V/C Ratio	-	-	0.205	0.011	-
HCM Control Delay (s)	-	-	16.3	8.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0	-

Lanes, Volumes, Timings
500: Carolina Beach Ave & Pelican Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	5	61	4	5	4	18	50	4	4	86	36
Future Volume (vph)	56	5	61	4	5	4	18	50	4	4	86	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.961			0.993			0.961	
Flt Protected		0.978			0.986			0.988			0.999	
Satd. Flow (prot)	0	1698	0	0	1765	0	0	1828	0	0	1788	0
Flt Permitted		0.978			0.986			0.988			0.999	
Satd. Flow (perm)	0	1698	0	0	1765	0	0	1828	0	0	1788	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		287			1810			231			462	
Travel Time (s)		7.8			49.4			6.3			12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	6	68	4	6	4	20	56	4	4	96	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	136	0	0	14	0	0	80	0	0	140	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.7%		ICU Level of Service A	
Analysis Period (min) 15			

HCM 6th TWSC
500: Carolina Beach Ave & Pelican Lane

Intersection	
Int Delay, s/veh	4.7

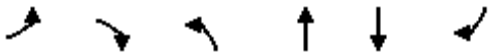
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	56	5	61	4	5	4	18	50	4	4	86	36
Future Vol, veh/h	56	5	61	4	5	4	18	50	4	4	86	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	62	6	68	4	6	4	20	56	4	4	96	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	227	224	116	259	242	58	136	0	0	60	0	0
Stage 1	124	124	-	98	98	-	-	-	-	-	-	-
Stage 2	103	100	-	161	144	-	-	-	-	-	-	-
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	728	675	936	694	660	1008	1448	-	-	1544	-	-
Stage 1	880	793	-	908	814	-	-	-	-	-	-	-
Stage 2	903	812	-	841	778	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	711	664	936	632	649	1008	1448	-	-	1544	-	-
Mov Cap-2 Maneuver	711	664	-	632	649	-	-	-	-	-	-	-
Stage 1	868	791	-	895	803	-	-	-	-	-	-	-
Stage 2	880	801	-	772	776	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	10.1	1.9	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1448	-	-	805	722	1544	-	-
HCM Lane V/C Ratio	0.014	-	-	0.168	0.02	0.003	-	-
HCM Control Delay (s)	7.5	0	-	10.4	10.1	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0	-	-

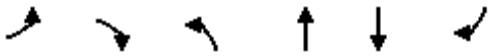
Lanes, Volumes, Timings
600: Carolina Beach Ave & Site Access 1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	5	68	102	48
Future Volume (vph)	0	0	5	68	102	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.957	
Flt Protected				0.996		
Satd. Flow (prot)	0	0	0	1855	1783	0
Flt Permitted				0.996		
Satd. Flow (perm)	0	0	0	1855	1783	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	1185			163	231	
Travel Time (s)	32.3			4.4	6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	6	76	113	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	82	166	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 11.6%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
600: Carolina Beach Ave & Site Access 1

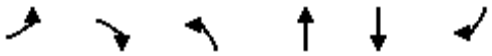


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	5	68	102	48
Future Volume (Veh/h)	0	0	5	68	102	48
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	6	76	113	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	228	140	166			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	228	140	166			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	757	909	1412			

Direction, Lane #	NB 1	SB 1
Volume Total	82	166
Volume Left	6	0
Volume Right	0	53
cSH	1412	1700
Volume to Capacity	0.00	0.10
Queue Length 95th (ft)	0	0
Control Delay (s)	0.6	0.0
Lane LOS	A	
Approach Delay (s)	0.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	11.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lanes, Volumes, Timings
700: Carolina Beach Ave & Site Access 2



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	38	0	55	102	0
Future Volume (vph)	13	38	0	55	102	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899					
Flt Protected	0.988					
Satd. Flow (prot)	1655	0	0	1863	1863	0
Flt Permitted	0.988					
Satd. Flow (perm)	1655	0	0	1863	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	1207			487	163	
Travel Time (s)	32.9			13.3	4.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	42	0	61	113	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	0	61	113	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	38	0	55	102	0
Future Vol, veh/h	13	38	0	55	102	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	42	0	61	113	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	174	113	-	0	-	0
Stage 1	113	-	-	-	-	-
Stage 2	61	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	816	940	0	-	-	0
Stage 1	912	-	0	-	-	0
Stage 2	962	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	816	940	-	-	-	-
Mov Cap-2 Maneuver	816	-	-	-	-	-
Stage 1	912	-	-	-	-	-
Stage 2	962	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	905	-
HCM Lane V/C Ratio	-	0.063	-
HCM Control Delay (s)	-	9.2	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0.2	-

Lanes, Volumes, Timings
100: US 421 (N Lake Park Blvd) & Carl Winner Drive

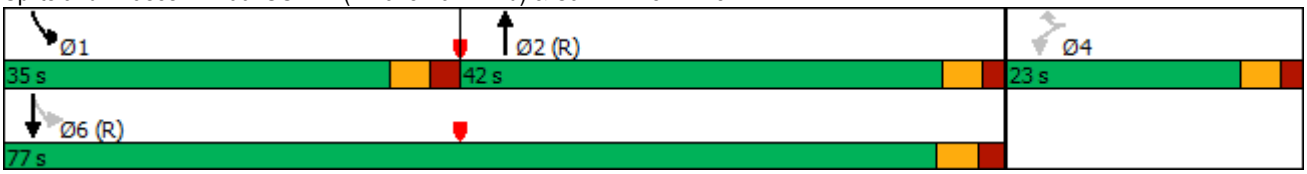
09/23/2025

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	60	315	545	103	447	844
Future Volume (vph)	60	315	545	103	447	844
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Storage Length (ft)	0	225		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95
Frt	0.898	0.850	0.976			
Flt Protected	0.984					0.983
Satd. Flow (prot)	1591	1454	3339	0	0	3363
Flt Permitted	0.984					0.597
Satd. Flow (perm)	1591	1454	3339	0	0	2042
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	511		1122			1120
Travel Time (s)	13.9		30.6			30.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	67	350	606	114	497	938
Shared Lane Traffic (%)		41%				
Lane Group Flow (vph)	211	206	720	0	0	1435
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	4	4			6	
Detector Phase	4	4	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	22.9	22.9	19.9		12.3	15.3
Total Split (s)	23.0	23.0	42.0		35.0	77.0
Total Split (%)	23.0%	23.0%	42.0%		35.0%	77.0%
Maximum Green (s)	18.1	18.1	37.1		29.7	71.7
Yellow Time (s)	3.0	3.0	3.2		3.0	3.2
All-Red Time (s)	1.9	1.9	1.7		2.3	2.1
Lost Time Adjust (s)	0.1	0.1	0.1			-0.3
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	8.0			
Pedestrian Calls (#/hr)	0	0	0			
Act Effct Green (s)	16.4	16.4	73.6			73.6
Actuated g/C Ratio	0.16	0.16	0.74			0.74
v/c Ratio	0.81	0.86	0.29			1.02dl
Control Delay	63.6	72.9	5.0			28.7
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	63.6	72.9	5.0			28.7
LOS	E	E	A			C
Approach Delay	68.2		5.0			28.7
Approach LOS	E		A			C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Length 50th (ft)	128	133	73			388
Queue Length 95th (ft)	#235	#255	97			#626
Internal Link Dist (ft)	431		1042			1040
Turn Bay Length (ft)		225				
Base Capacity (vph)	286	261	2456			1502
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.74	0.79	0.29			0.96

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 85 (85%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 28.5		Intersection LOS: C	
Intersection Capacity Utilization 76.9%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			

Splits and Phases: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive



Lanes, Volumes, Timings
200: Canal Drive & Carolina Beach Ave

09/23/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	4	13	63	4	62	38	112	77	31	58	10
Future Volume (vph)	32	4	13	63	4	62	38	112	77	31	58	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		125	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.965			0.858				0.850		0.986	
Flt Protected		0.968		0.950				0.988			0.985	
Satd. Flow (prot)	0	1740	0	1770	1598	0	0	1840	1583	0	1809	0
Flt Permitted		0.968		0.950				0.988			0.985	
Satd. Flow (perm)	0	1740	0	1770	1598	0	0	1840	1583	0	1809	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1670			470			1455			380	
Travel Time (s)		45.5			12.8			39.7			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	4	14	70	4	69	42	124	86	34	64	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	70	73	0	0	166	86	0	109	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	4	13	63	4	62	38	112	77	31	58	10
Future Vol, veh/h	32	4	13	63	4	62	38	112	77	31	58	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	125	-	-	-
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	36	4	14	70	4	69	42	124	86	34	64	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	426	432	70	355	351	124	75	0	0	210	0	0
Stage 1	138	138	-	208	208	-	-	-	-	-	-	-
Stage 2	288	294	-	147	143	-	-	-	-	-	-	-
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	539	516	993	600	573	927	1524	-	-	1361	-	-
Stage 1	865	782	-	794	730	-	-	-	-	-	-	-
Stage 2	720	670	-	856	779	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	474	487	993	562	540	927	1524	-	-	1361	-	-
Mov Cap-2 Maneuver	474	487	-	562	540	-	-	-	-	-	-	-
Stage 1	837	762	-	769	707	-	-	-	-	-	-	-
Stage 2	641	649	-	817	759	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.2	10.8	1.2	2.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1524	-	-	552	562	888	1361	-	-
HCM Lane V/C Ratio	0.028	-	-	0.099	0.125	0.083	0.025	-	-
HCM Control Delay (s)	7.4	0	-	12.2	12.3	9.4	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.4	0.3	0.1	-	-

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive/Parking Access

09/23/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	429	28	65	4	4	15	86	49	16	8	32	288
Future Volume (vph)	429	28	65	4	4	15	86	49	16	8	32	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	50		0	0		175
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	50			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.895			0.908			0.962				0.850
Flt Protected	0.950				0.992		0.950				0.990	
Satd. Flow (prot)	1770	1667	0	0	1678	0	1770	1792	0	0	1844	1583
Flt Permitted	0.741				0.965		0.728				0.944	
Satd. Flow (perm)	1380	1667	0	0	1632	0	1356	1792	0	0	1758	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		511			1445			380			292	
Travel Time (s)		13.9			39.4			10.4			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	477	31	72	4	4	17	96	54	18	9	36	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	477	103	0	0	25	0	96	72	0	0	45	320
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (s)	29.0	29.0		29.0	29.0		29.0	29.0		29.0	29.0	29.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	22.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0			-2.0		-2.0	-2.0			-2.0	-2.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		15.0	15.0		15.0	15.0	15.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		45.0	45.0		45.0	45.0	45.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	21.5	21.5			21.5		15.3	15.3			15.3	15.3
Actuated g/C Ratio	0.46	0.46			0.46		0.32	0.32			0.32	0.32
v/c Ratio	0.76	0.14			0.03		0.22	0.12			0.08	0.62
Control Delay	22.6	9.3			8.9		13.2	11.9			11.5	19.8
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	22.6	9.3			8.9		13.2	11.9			11.5	19.8
LOS	C	A			A		B	B			B	B

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive/Parking Access

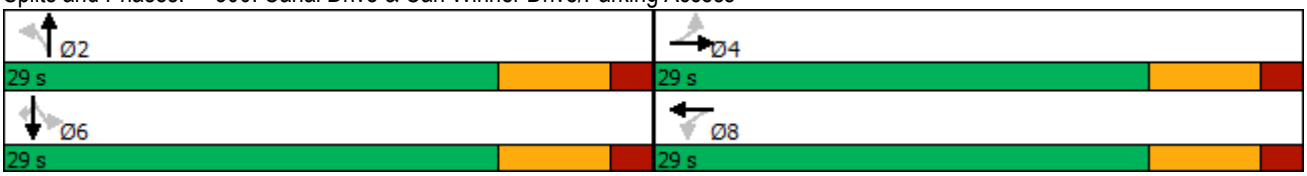
09/23/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		20.3			8.9			12.6			18.7	
Approach LOS		C			A			B			B	
Queue Length 50th (ft)	98	15			3		20	15			9	78
Queue Length 95th (ft)	#295	46			16		46	35			25	142
Internal Link Dist (ft)		431			1365			300			212	
Turn Bay Length (ft)	100						50					175
Base Capacity (vph)	727	878			859		714	944			926	833
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.66	0.12			0.03		0.13	0.08			0.05	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 58			
Actuated Cycle Length: 47.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 18.4		Intersection LOS: B	
Intersection Capacity Utilization 50.2%		ICU Level of Service A	
Analysis Period (min) 15			

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

Splits and Phases: 300: Canal Drive & Carl Winner Drive/Parking Access



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	68	17	312	167	4	281
Future Volume (vph)	68	17	312	167	4	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973		0.953			
Flt Protected	0.962					0.999
Satd. Flow (prot)	1744	0	1775	0	0	1861
Flt Permitted	0.962					0.999
Satd. Flow (perm)	1744	0	1775	0	0	1861
Link Speed (mph)	25		25			25
Link Distance (ft)	287		292			1211
Travel Time (s)	7.8		8.0			33.0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	19	347	186	4	312
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	533	0	0	316
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	17	312	167	4	281
Future Vol, veh/h	68	17	312	167	4	281
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	19	347	186	4	312

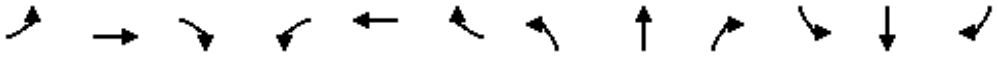
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	760	440	0	0	533	0
Stage 1	440	-	-	-	-	-
Stage 2	320	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	374	617	-	-	1035	-
Stage 1	649	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	372	617	-	-	1035	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	649	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	404	1035	-
HCM Lane V/C Ratio	-	-	0.234	0.004	-
HCM Control Delay (s)	-	-	16.6	8.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.9	0	-

Lanes, Volumes, Timings
500: Carolina Beach Ave & Pelican Lane

09/23/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	35	79	4	17	4	24	78	8	4	66	31
Future Volume (vph)	41	35	79	4	17	4	24	78	8	4	66	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.931			0.980			0.990			0.959	
Flt Protected		0.987			0.993			0.989			0.998	
Satd. Flow (prot)	0	1712	0	0	1813	0	0	1824	0	0	1783	0
Flt Permitted		0.987			0.993			0.989			0.998	
Satd. Flow (perm)	0	1712	0	0	1813	0	0	1824	0	0	1783	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		287			1996			231			1344	
Travel Time (s)		7.8			54.4			6.3			36.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	39	88	4	19	4	27	87	9	4	73	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	173	0	0	27	0	0	123	0	0	111	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	41	35	79	4	17	4	24	78	8	4	66	31
Future Vol, veh/h	41	35	79	4	17	4	24	78	8	4	66	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	46	39	88	4	19	4	27	87	9	4	73	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	255	248	90	308	261	92	107	0	0	96	0	0
Stage 1	98	98	-	146	146	-	-	-	-	-	-	-
Stage 2	157	150	-	162	115	-	-	-	-	-	-	-
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	698	655	968	644	644	965	1484	-	-	1498	-	-
Stage 1	908	814	-	857	776	-	-	-	-	-	-	-
Stage 2	845	773	-	840	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	667	641	968	549	630	965	1484	-	-	1498	-	-
Mov Cap-2 Maneuver	667	641	-	549	630	-	-	-	-	-	-	-
Stage 1	891	812	-	841	761	-	-	-	-	-	-	-
Stage 2	805	758	-	725	798	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	10.8	1.6	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1484	-	-	784	651	1498	-	-
HCM Lane V/C Ratio	0.018	-	-	0.22	0.043	0.003	-	-
HCM Control Delay (s)	7.5	0	-	10.9	10.8	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.1	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	7	110	83	65
Future Volume (vph)	0	0	7	110	83	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.941	
Flt Protected				0.997		
Satd. Flow (prot)	0	0	0	1857	1753	0
Flt Permitted				0.997		
Satd. Flow (perm)	0	0	0	1857	1753	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	1504			163	231	
Travel Time (s)	41.0			4.4	6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	8	122	92	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	130	164	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
600: Carolina Beach Ave & Site Access 1

09/23/2025

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	7	110	83	65
Future Volume (Veh/h)	0	0	7	110	83	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	8	122	92	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	266	128	164			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	266	128	164			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	719	922	1414			

Direction, Lane #	NB 1	SB 1
Volume Total	130	164
Volume Left	8	0
Volume Right	0	72
cSH	1414	1700
Volume to Capacity	0.01	0.10
Queue Length 95th (ft)	0	0
Control Delay (s)	0.5	0.0
Lane LOS	A	
Approach Delay (s)	0.5	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	14.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	42	0	96	83	0
Future Volume (vph)	14	42	0	96	83	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899					
Flt Protected	0.987					
Satd. Flow (prot)	1653	0	0	1863	1863	0
Flt Permitted	0.987					
Satd. Flow (perm)	1653	0	0	1863	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	1553			470	163	
Travel Time (s)	42.4			12.8	4.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	47	0	107	92	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	107	92	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	42	0	96	83	0
Future Vol, veh/h	14	42	0	96	83	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	47	0	107	92	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	199	92	-	0	-	0
Stage 1	92	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	790	965	0	-	-	0
Stage 1	932	-	0	-	-	0
Stage 2	917	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	790	965	-	-	-	-
Mov Cap-2 Maneuver	790	-	-	-	-	-
Stage 1	932	-	-	-	-	-
Stage 2	917	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	914	-
HCM Lane V/C Ratio	-	0.068	-
HCM Control Delay (s)	-	9.2	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0.2	-

Future Build Conditions with Improvements

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive/Parking Access

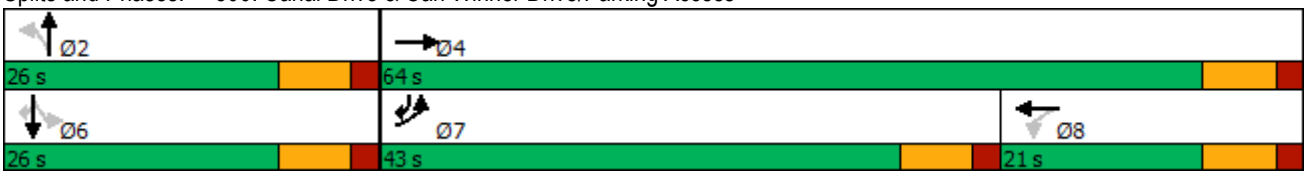
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	12	64	4	9	6	83	45	8	7	26	309
Future Volume (vph)	350	12	64	4	9	6	83	45	8	7	26	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	50		0	0		175
Storage Lanes	1		1	0		0	1		0	0		1
Taper Length (ft)	50			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.873			0.955			0.977				0.850
Flt Protected	0.950				0.991		0.950				0.989	
Satd. Flow (prot)	1770	1626	0	0	1763	0	1770	1820	0	0	1842	1583
Flt Permitted	0.950				0.912		0.733				0.925	
Satd. Flow (perm)	1770	1626	0	0	1622	0	1365	1820	0	0	1723	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		511			1348			380			292	
Travel Time (s)		13.9			36.8			10.4			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	389	13	71	4	10	7	92	50	9	8	29	343
Shared Lane Traffic (%)												
Lane Group Flow (vph)	389	84	0	0	21	0	92	59	0	0	37	343
Turn Type	Prot	NA		Perm	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	7	4			8			2			6	7
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	7.0
Minimum Split (s)	14.0	21.0		21.0	21.0		21.0	21.0		17.0	17.0	14.0
Total Split (s)	43.0	64.0		21.0	21.0		26.0	26.0		26.0	26.0	43.0
Total Split (%)	47.8%	71.1%		23.3%	23.3%		28.9%	28.9%		28.9%	28.9%	47.8%
Maximum Green (s)	36.0	57.0		14.0	14.0		19.0	19.0		19.0	19.0	36.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0			-2.0		-2.0	-2.0			-2.0	-2.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead			Lag	Lag							Lead
Lead-Lag Optimize?	Yes			Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		15.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		45.0	45.0		45.0	45.0	0.0
Recall Mode	Min	Min		None	None		None	None		None	None	Min
Walk Time (s)		7.0		7.0	7.0		7.0	7.0				
Flash Dont Walk (s)		7.0		7.0	7.0		7.0	7.0				
Pedestrian Calls (#/hr)		0		0	0		0	0				
Act Effct Green (s)	26.2	28.1			10.0		14.0	14.0			14.0	43.6
Actuated g/C Ratio	0.57	0.61			0.22		0.30	0.30			0.30	0.95
v/c Ratio	0.39	0.08			0.06		0.22	0.11			0.07	0.23
Control Delay	11.1	6.1			21.8		18.5	17.0			17.1	1.6
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	11.1	6.1			21.8		18.5	17.0			17.1	1.6
LOS	B	A			C		B	B			B	A

Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive/Parking Access

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.2			21.8			17.9			3.1	
Approach LOS		B			C			B			A	
Queue Length 50th (ft)	56	10			3		14	9			5	0
Queue Length 95th (ft)	201	27			28		74	50			36	72
Internal Link Dist (ft)		431			1268			300			212	
Turn Bay Length (ft)							50					175
Base Capacity (vph)	1491	1561			617		682	909			861	1491
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.26	0.05			0.03		0.13	0.06			0.04	0.23

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 46.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 45.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 300: Canal Drive & Carl Winner Drive/Parking Access



Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive/Parking Access

09/24/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	429	28	65	4	4	15	86	49	16	8	32	288
Future Volume (vph)	429	28	65	4	4	15	86	49	16	8	32	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	50		0	0		175
Storage Lanes	1		1	0		0	1		0	0		1
Taper Length (ft)	50			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.895			0.908			0.962				0.850
Flt Protected	0.950				0.992		0.950				0.990	
Satd. Flow (prot)	1770	1667	0	0	1678	0	1770	1792	0	0	1844	1583
Flt Permitted	0.950				0.921		0.728				0.933	
Satd. Flow (perm)	1770	1667	0	0	1558	0	1356	1792	0	0	1738	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		511			1445			380			292	
Travel Time (s)		13.9			39.4			10.4			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	477	31	72	4	4	17	96	54	18	9	36	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	477	103	0	0	25	0	96	72	0	0	45	320
Turn Type	Prot	NA		Perm	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	7	4			8			2			6	7
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	12.0	21.0		21.0	21.0		21.0	21.0		12.0	12.0	12.0
Total Split (s)	45.0	66.0		21.0	21.0		24.0	24.0		24.0	24.0	45.0
Total Split (%)	50.0%	73.3%		23.3%	23.3%		26.7%	26.7%		26.7%	26.7%	50.0%
Maximum Green (s)	38.0	59.0		14.0	14.0		17.0	17.0		17.0	17.0	38.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0			-2.0		-2.0	-2.0			-2.0	-2.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead			Lag	Lag							Lead
Lead-Lag Optimize?	Yes			Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		15.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		45.0	45.0		45.0	45.0	0.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0				
Flash Dont Walk (s)		7.0		7.0	7.0		7.0	7.0				
Pedestrian Calls (#/hr)		0		0	0		0	0				
Act Effct Green (s)	22.9	27.0			9.6		12.5	12.5			12.5	45.6
Actuated g/C Ratio	0.45	0.53			0.19		0.24	0.24			0.24	0.89
v/c Ratio	0.60	0.12			0.09		0.29	0.16			0.11	0.23
Control Delay	15.8	5.5			27.4		24.0	22.0			21.9	2.5
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	15.8	5.5			27.4		24.0	22.0			21.9	2.5
LOS	B	A			C		C	C			C	A

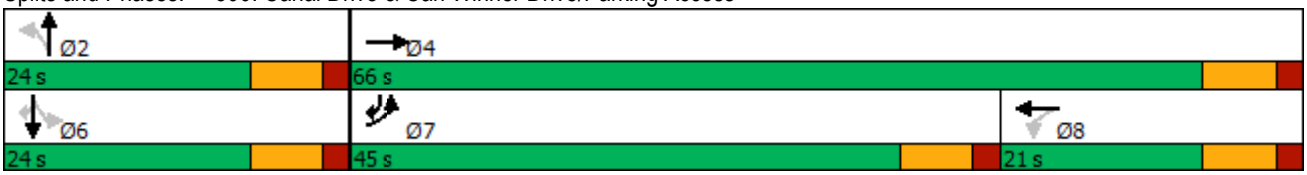
Lanes, Volumes, Timings
300: Canal Drive & Carl Winner Drive/Parking Access

09/24/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.0			27.4			23.1			4.9	
Approach LOS		B			C			C			A	
Queue Length 50th (ft)	67	11			4		16	12			7	0
Queue Length 95th (ft)	265	33			34		86	66			46	67
Internal Link Dist (ft)		431			1365			300			212	
Turn Bay Length (ft)							50					175
Base Capacity (vph)	1441	1545			567		586	774			751	1466
Starvation Cap Reductn	20	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.34	0.07			0.04		0.16	0.09			0.06	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 51.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 50.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 300: Canal Drive & Carl Winner Drive/Parking Access



DAVENPORT

Queueing Analysis
SimTraffic Worksheets

Intersection: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LR	R	T	TR	LT	T
Maximum Queue (ft)	217	200	118	113	338	320
Average Queue (ft)	120	117	65	46	171	112
95th Queue (ft)	183	177	110	96	274	242
Link Distance (ft)	421		1090	1090	1169	1169
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225				
Storage Blk Time (%)	0	0				
Queuing Penalty (veh)	0	0				

Intersection: 200: Canal Drive & Carolina Beach Ave

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (ft)	35	59	50	24	4	32
Average Queue (ft)	17	27	18	1	0	2
95th Queue (ft)	42	46	42	11	4	15
Link Distance (ft)	1046		790	1158		314
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100			125	
Storage Blk Time (%)		0				
Queuing Penalty (veh)		0				

Intersection: 300: Canal Drive & Carl Winner Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	LT	R
Maximum Queue (ft)	162	121	37	63	57	47	161
Average Queue (ft)	83	24	10	25	20	15	86
95th Queue (ft)	137	72	33	55	50	41	138
Link Distance (ft)		421	1229		314	224	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	100			50			175
Storage Blk Time (%)	3	0		3	1		0
Queuing Penalty (veh)	2	0		2	1		0

Intersection: 400: Canal Drive & Pelican Lane

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	64	2	50
Average Queue (ft)	30	0	4
95th Queue (ft)	57	2	26
Link Distance (ft)	230	224	1043
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 500: Carolina Beach Ave & Pelican Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	59	37	12	6
Average Queue (ft)	30	11	1	0
95th Queue (ft)	50	35	7	4
Link Distance (ft)	230	1178	790	1095
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 5

Intersection: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LR	R	T	TR	LT	T
Maximum Queue (ft)	181	179	125	138	442	381
Average Queue (ft)	101	103	65	52	251	195
95th Queue (ft)	156	155	116	109	398	349
Link Distance (ft)	428		1090	1090	1086	1086
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225				
Storage Blk Time (%)	0	0				
Queuing Penalty (veh)	0	0				

Intersection: 200: Canal Drive & Carolina Beach Ave

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (ft)	61	57	40	29	4	38
Average Queue (ft)	25	24	13	3	0	5
95th Queue (ft)	52	46	31	17	3	23
Link Distance (ft)	1192		798	1155		313
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100			125	
Storage Blk Time (%)		0				
Queuing Penalty (veh)		0				

Intersection: 300: Canal Drive & Carl Winner Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	LT	R
Maximum Queue (ft)	160	92	37	71	68	94	163
Average Queue (ft)	89	26	11	28	23	20	85
95th Queue (ft)	140	63	32	59	52	61	140
Link Distance (ft)		428	1091		313	224	
Upstream Blk Time (%)						0	
Queuing Penalty (veh)						0	
Storage Bay Dist (ft)	100			50			175
Storage Blk Time (%)	3	0		5	1		0
Queuing Penalty (veh)	2	0		3	1		0

Intersection: 400: Canal Drive & Pelican Lane

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	64	44
Average Queue (ft)	33	2
95th Queue (ft)	56	19
Link Distance (ft)	231	1374
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 500: Carolina Beach Ave & Pelican Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	69	40	15	8
Average Queue (ft)	34	17	1	0
95th Queue (ft)	57	42	8	6
Link Distance (ft)	231	1236	798	1242
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 7

Intersection: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LR	R	T	TR	LT	T
Maximum Queue (ft)	206	205	148	132	315	260
Average Queue (ft)	126	123	73	52	181	126
95th Queue (ft)	187	187	126	108	276	243
Link Distance (ft)	421		1090	1090	1169	1169
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225				
Storage Blk Time (%)	0	0				
Queuing Penalty (veh)	0	0				

Intersection: 200: Canal Drive & Carolina Beach Ave

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (ft)	38	50	41	21	2	29
Average Queue (ft)	20	24	13	1	0	3
95th Queue (ft)	45	44	32	12	2	17
Link Distance (ft)	1460		806	1142		313
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100			125	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 300: Canal Drive & Carl Winner Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	LT	R
Maximum Queue (ft)	159	140	46	73	73	69	165
Average Queue (ft)	90	28	11	29	22	15	92
95th Queue (ft)	146	83	37	61	55	48	151
Link Distance (ft)		421	1725		313	224	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	100			50			175
Storage Blk Time (%)	5	0		4	1	0	0
Queuing Penalty (veh)	3	0		2	1	0	0

Intersection: 400: Canal Drive & Pelican Lane

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	66	2	53
Average Queue (ft)	32	0	5
95th Queue (ft)	57	2	30
Link Distance (ft)	230	224	980
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 500: Carolina Beach Ave & Pelican Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	66	34	12	6
Average Queue (ft)	32	11	0	0
95th Queue (ft)	54	36	7	4
Link Distance (ft)	230	1359	806	1049
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 7

Intersection: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LR	R	T	TR	LT	T
Maximum Queue (ft)	168	161	140	129	571	547
Average Queue (ft)	103	104	67	52	284	239
95th Queue (ft)	157	155	117	108	512	471
Link Distance (ft)	428		1090	1090	1086	1086
Upstream Blk Time (%)					0	0
Queuing Penalty (veh)					0	0
Storage Bay Dist (ft)		225				
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 200: Canal Drive & Carolina Beach Ave

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (ft)	59	47	33	36	8	38
Average Queue (ft)	27	23	11	3	0	4
95th Queue (ft)	54	42	27	19	5	22
Link Distance (ft)	1358		806	1005		313
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100			125	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 300: Canal Drive & Carl Winner Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	LT	R
Maximum Queue (ft)	145	152	38	62	72	173	186
Average Queue (ft)	88	30	9	28	25	27	103
95th Queue (ft)	138	82	31	56	57	104	175
Link Distance (ft)		428	1634		313	224	
Upstream Blk Time (%)						0	
Queuing Penalty (veh)						1	
Storage Bay Dist (ft)	100			50			175
Storage Blk Time (%)	3	0		4	2	0	2
Queuing Penalty (veh)	3	0		2	1	0	1

Intersection: 400: Canal Drive & Pelican Lane

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	67	2	45
Average Queue (ft)	33	0	3
95th Queue (ft)	58	2	20
Link Distance (ft)	231	224	1301
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 500: Carolina Beach Ave & Pelican Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	59	38	20	14
Average Queue (ft)	33	15	1	1
95th Queue (ft)	52	40	10	8
Link Distance (ft)	231	1274	806	1349
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 9

Intersection: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LR	R	T	TR	LT	T
Maximum Queue (ft)	238	226	140	130	400	349
Average Queue (ft)	138	130	72	56	218	163
95th Queue (ft)	210	200	124	110	355	312
Link Distance (ft)	427		1090	1090	1169	1169
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225				
Storage Blk Time (%)	1	0				
Queuing Penalty (veh)	1	1				

Intersection: 200: Canal Drive & Carolina Beach Ave

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (ft)	38	47	48	19	6	35
Average Queue (ft)	19	27	23	1	0	3
95th Queue (ft)	44	44	42	9	4	18
Link Distance (ft)	1254		434	1452		314
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100			125	
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 300: Canal Drive & Carl Winner Drive/Parking Access

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	LT	R
Maximum Queue (ft)	149	221	38	92	96	72	175
Average Queue (ft)	105	45	9	41	26	18	97
95th Queue (ft)	156	140	32	75	66	53	157
Link Distance (ft)		427	1314		314	224	
Upstream Blk Time (%)							0
Queuing Penalty (veh)							0
Storage Bay Dist (ft)	100			50			175
Storage Blk Time (%)	8	0		10	1		0
Queuing Penalty (veh)	6	0		5	1		0

Intersection: 400: Canal Drive & Pelican Lane

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	78	2	74
Average Queue (ft)	34	0	8
95th Queue (ft)	61	3	41
Link Distance (ft)	230	224	502
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 500: Carolina Beach Ave & Pelican Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	67	38	31	5
Average Queue (ft)	37	11	3	0
95th Queue (ft)	57	36	18	5
Link Distance (ft)	230	1782	175	433
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 600: Carolina Beach Ave & Site Access 1

Movement	NB
Directions Served	LT
Maximum Queue (ft)	22
Average Queue (ft)	1
95th Queue (ft)	8
Link Distance (ft)	118
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Future Buid Friday PM Peak

Intersection: 700: Carolina Beach Ave & Site Access 2

Movement	EB
Directions Served	LR
Maximum Queue (ft)	54
Average Queue (ft)	27
95th Queue (ft)	50
Link Distance (ft)	1173
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 14

Intersection: 100: US 421 (N Lake Park Blvd) & Carl Winner Drive

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LR	R	T	TR	LT	T
Maximum Queue (ft)	188	184	143	147	867	808
Average Queue (ft)	115	117	70	57	445	397
95th Queue (ft)	169	168	122	111	860	828
Link Distance (ft)	428		1090	1090	1086	1086
Upstream Blk Time (%)					4	5
Queuing Penalty (veh)					0	0
Storage Bay Dist (ft)		225				
Storage Blk Time (%)	0	0				
Queuing Penalty (veh)	0	0				

Intersection: 200: Canal Drive & Carolina Beach Ave

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (ft)	66	49	40	37	2	50
Average Queue (ft)	28	23	19	3	0	6
95th Queue (ft)	54	41	33	17	2	28
Link Distance (ft)	1642		420	1420		312
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100			125	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 300: Canal Drive & Carl Winner Drive/Parking Access

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	LT	R
Maximum Queue (ft)	148	176	44	80	80	225	198
Average Queue (ft)	101	33	9	43	33	45	119
95th Queue (ft)	149	103	31	74	69	162	196
Link Distance (ft)		428	1410		312	224	
Upstream Blk Time (%)						2	
Queuing Penalty (veh)						6	
Storage Bay Dist (ft)	100			50			175
Storage Blk Time (%)	6	0		13	3	0	6
Queuing Penalty (veh)	5	0		8	3	1	2

Intersection: 400: Canal Drive & Pelican Lane

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	88	62
Average Queue (ft)	38	5
95th Queue (ft)	68	37
Link Distance (ft)	230	1189
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 500: Carolina Beach Ave & Pelican Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	77	40	28	3
Average Queue (ft)	42	18	1	0
95th Queue (ft)	65	43	13	3
Link Distance (ft)	230	1967	172	1316
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 600: Carolina Beach Ave & Site Access 1

Movement	NB
Directions Served	LT
Maximum Queue (ft)	12
Average Queue (ft)	1
95th Queue (ft)	8
Link Distance (ft)	118
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 700: Carolina Beach Ave & Site Access 2

Movement	EB
Directions Served	LR
Maximum Queue (ft)	59
Average Queue (ft)	29
95th Queue (ft)	53
Link Distance (ft)	1518
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 26

Queuing and Blocking Report
Future Buid W Imp Friday PM Peak

Intersection: 300: Canal Drive & Carl Winner Drive/Parking Access

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	LT	R
Maximum Queue (ft)	215	137	48	92	95	69	112
Average Queue (ft)	102	24	16	45	31	21	44
95th Queue (ft)	179	77	41	80	73	52	85
Link Distance (ft)	427		1314		314	224	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		100		50			175
Storage Blk Time (%)	6	0		11	4		
Queuing Penalty (veh)	5	0		6	3		

Intersection: 300: Canal Drive & Carl Winner Drive/Parking Access

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	LT	R
Maximum Queue (ft)	240	149	52	93	129	65	117
Average Queue (ft)	119	35	16	46	40	24	47
95th Queue (ft)	199	105	42	81	88	56	90
Link Distance (ft)	428		1410		312	224	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		100		50			175
Storage Blk Time (%)	9	0		12	6		
Queuing Penalty (veh)	8	0		8	5		

DAVENPORT

Turning Movement Counts

File Name : CarolinaBeach(Canal and Carl)
Site Code :
Start Date : 6/7/2024
Page No : 1

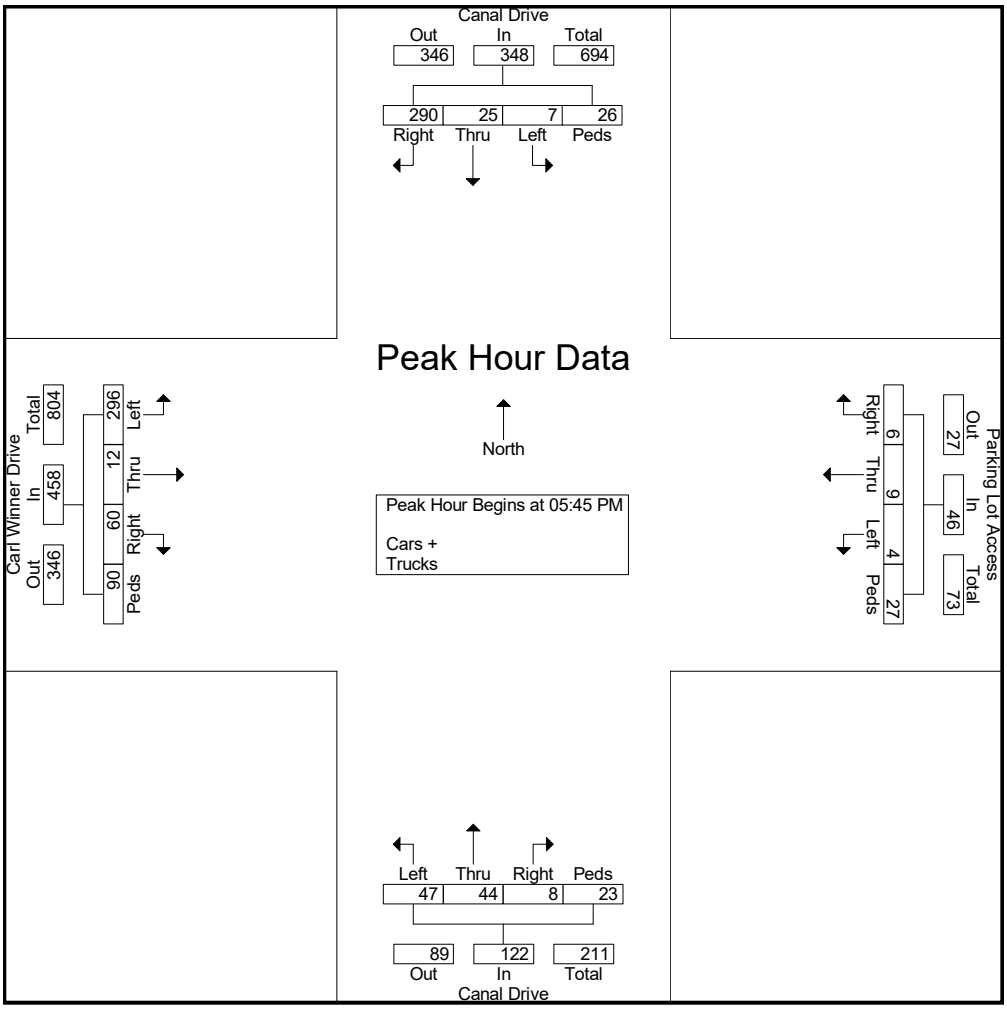
Groups Printed- Cars + - Trucks

	Canal Drive Southbound					Parking Lot Access Westbound					Canal Drive Northbound					Carl Winner Drive 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
03:00 PM	0	9	66	2	77	0	0	2	3	5	14	10	1	0	25	68	3	17	6	94	201
03:15 PM	0	8	66	0	74	0	1	2	1	4	12	14	1	1	28	72	2	14	4	92	198
03:30 PM	1	6	64	0	71	0	0	0	3	3	18	7	1	3	29	63	1	13	2	79	182
03:45 PM	1	7	72	4	84	1	2	5	1	9	14	8	3	5	30	57	0	14	5	76	199
Total	2	30	268	6	306	1	3	9	8	21	58	39	6	9	112	260	6	58	17	341	780
04:00 PM	1	7	73	1	82	1	3	3	1	8	14	8	0	2	24	82	1	15	2	100	214
04:15 PM	0	4	55	0	59	0	1	1	5	7	13	8	2	4	27	63	2	13	0	78	171
04:30 PM	0	5	82	4	91	0	1	4	4	9	9	5	1	3	18	70	4	10	3	87	205
04:45 PM	1	6	68	0	75	0	2	2	1	5	11	8	4	0	23	78	1	12	11	102	205
Total	2	22	278	5	307	1	7	10	11	29	47	29	7	9	92	293	8	50	16	367	795
05:00 PM	1	2	56	2	61	2	1	3	2	8	17	10	3	2	32	72	3	13	0	88	189
05:15 PM	0	3	83	7	93	0	0	1	4	5	18	16	0	4	38	66	0	15	8	89	225
05:30 PM	0	11	76	2	89	0	2	3	0	5	11	12	2	7	32	79	2	10	4	95	221
05:45 PM	0	5	84	2	91	2	2	0	8	12	11	7	2	0	20	66	6	12	25	109	232
Total	1	21	299	13	334	4	5	7	14	30	57	45	7	13	122	283	11	50	37	381	867
06:00 PM	4	6	73	0	83	1	2	2	4	9	10	12	2	11	35	72	2	28	14	116	243
06:15 PM	2	5	80	12	99	0	2	4	4	10	17	13	4	2	36	80	3	9	22	114	259
06:30 PM	1	9	53	12	75	1	3	0	11	15	9	12	0	10	31	78	1	11	29	119	240
06:45 PM	1	11	65	5	82	1	1	1	2	5	16	11	1	2	30	52	3	7	9	71	188
Total	8	31	271	29	339	3	8	7	21	39	52	48	7	25	132	282	9	55	74	420	930
Grand Total	13	104	1116	53	1286	9	23	33	54	119	214	161	27	56	458	1118	34	213	144	1509	3372
Apprch %	1	8.1	86.8	4.1		7.6	19.3	27.7	45.4		46.7	35.2	5.9	12.2		74.1	2.3	14.1	9.5		
Total %	0.4	3.1	33.1	1.6	38.1	0.3	0.7	1	1.6	3.5	6.3	4.8	0.8	1.7	13.6	33.2	1	6.3	4.3	44.8	
Cars +	13	104	1111	51	1279	9	23	33	50	115	213	160	27	56	456	1114	34	212	136	1496	3346
% Cars +	100	100	99.6	96.2	99.5	100	100	100	92.6	96.6	99.5	99.4	100	100	99.6	99.6	100	99.5	94.4	99.1	99.2
Trucks	0	0	5	2	7	0	0	0	4	4	1	1	0	0	2	4	0	1	8	13	26
% Trucks	0	0	0.4	3.8	0.5	0	0	0	7.4	3.4	0.5	0.6	0	0	0.4	0.4	0	0.5	5.6	0.9	0.8

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(Canal and Carl)
Site Code :
Start Date : 6/7/2024
Page No : 2

	Canal Drive Southbound					Parking Lot Access Westbound					Canal Drive Northbound					Carl Winner Drive 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 03:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:45 PM																					
05:45 PM	0	5	**84**	2	91	**2**	2	0	8	12	11	7	2	0	20	66	**6**	12	25	109	232
06:00 PM	**4**	6	73	0	83	1	2	2	4	9	10	12	2	**11**	35	72	2	**28**	14	116	243
06:15 PM	2	5	80	**12**	**99**	0	2	**4**	4	10	**17**	**13**	**4**	2	**36**	**80**	3	9	22	114	**259**
06:30 PM	1	**9**	53	12	75	1	**3**	0	**11**	**15**	9	12	0	10	31	78	1	11	**29**	**119**	240
Total Volume	7	25	290	26	348	4	9	6	27	46	47	44	8	23	122	296	12	60	90	458	974
% App. Total	2	7.2	83.3	7.5		8.7	19.6	13	58.7		38.5	36.1	6.6	18.9		64.6	2.6	13.1	19.7		
PHF	.438	.694	.863	.542	.879	.500	.750	.375	.614	.767	.691	.846	.500	.523	.847	.925	.500	.536	.776	.962	.940



File Name : CarolinaBeach(Canal and Carolina Beach)
Site Code :
Start Date : 6/7/2024
Page No : 1

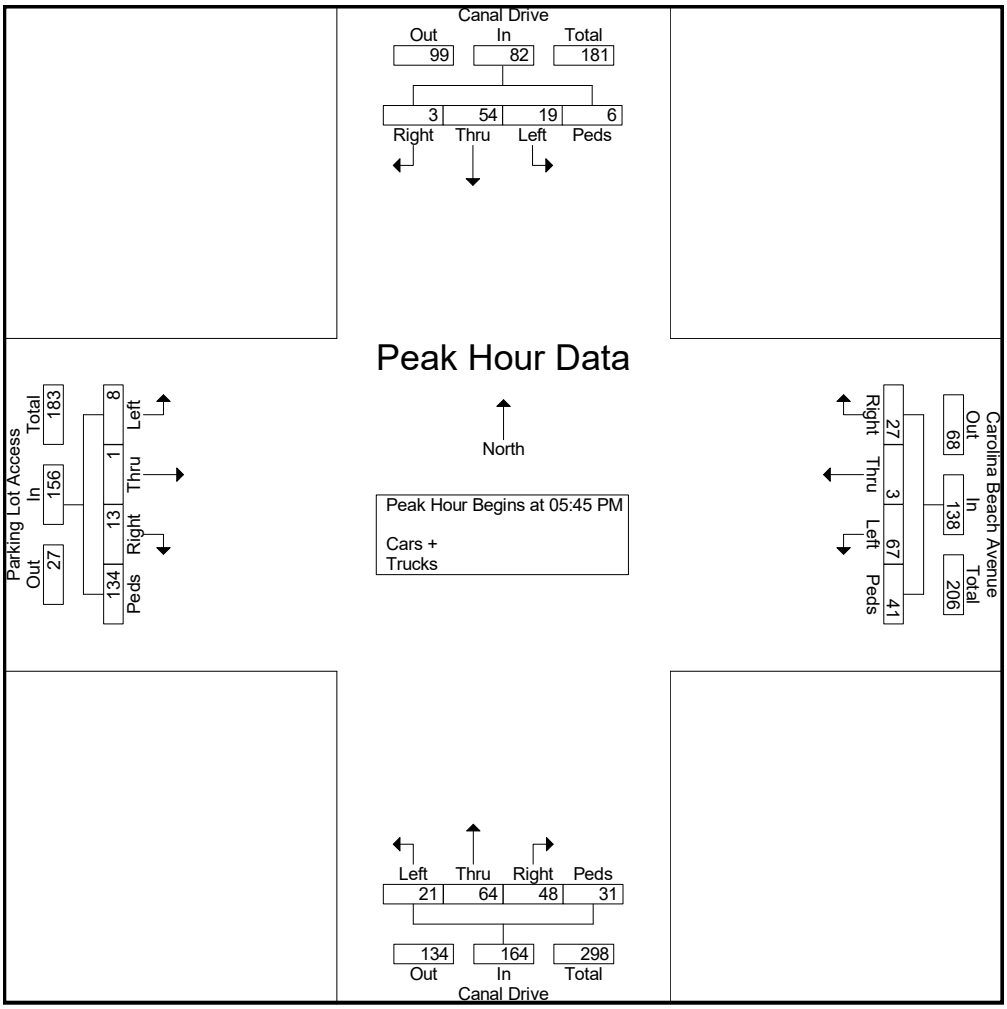
Groups Printed- Cars + - Trucks

	Canal Drive Southbound					Carolina Beach Avenue Westbound					Canal Drive Northbound					Parking Lot Access 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
03:00 PM	7	19	1	4	31	14	0	5	2	21	4	12	11	1	28	4	0	1	31	36	116
03:15 PM	3	14	2	0	19	12	0	4	2	18	4	19	15	7	45	5	0	1	37	43	125
03:30 PM	4	13	1	0	18	17	0	7	1	25	4	13	19	5	41	3	0	1	22	26	110
03:45 PM	7	13	0	5	25	15	1	3	6	25	4	22	16	9	51	5	0	3	38	46	147
Total	21	59	4	9	93	58	1	19	11	89	16	66	61	22	165	17	0	6	128	151	498
04:00 PM	4	17	0	3	24	16	0	5	3	24	1	11	9	0	21	4	0	2	14	20	89
04:15 PM	6	9	2	0	17	14	0	6	3	23	3	13	16	2	34	2	0	1	8	11	85
04:30 PM	6	9	2	1	18	15	0	6	6	27	6	9	13	6	34	1	0	3	12	16	95
04:45 PM	2	13	1	2	18	12	0	4	5	21	8	19	12	13	52	2	0	5	32	39	130
Total	18	48	5	6	77	57	0	21	17	95	18	52	50	21	141	9	0	11	66	86	399
05:00 PM	7	10	3	4	24	12	0	11	9	32	2	18	11	3	34	1	0	2	22	25	115
05:15 PM	5	12	1	0	18	12	1	6	0	19	1	21	14	4	40	5	1	2	25	33	110
05:30 PM	1	18	3	0	22	12	0	4	0	16	4	17	5	6	32	1	2	1	15	19	89
05:45 PM	5	12	1	3	21	14	0	3	17	34	3	13	8	6	30	3	0	3	58	64	149
Total	18	52	8	7	85	50	1	24	26	101	10	69	38	19	136	10	3	8	120	141	463
06:00 PM	5	16	0	0	21	15	0	10	12	37	6	16	14	2	38	1	0	2	28	31	127
06:15 PM	5	11	1	0	17	19	3	7	1	30	5	23	14	12	54	3	0	5	27	35	136
06:30 PM	4	15	1	3	23	19	0	7	11	37	7	12	12	11	42	1	1	3	21	26	128
06:45 PM	2	16	4	1	23	13	0	11	13	37	2	20	8	0	30	2	0	4	10	16	106
Total	16	58	6	4	84	66	3	35	37	141	20	71	48	25	164	7	1	14	86	108	497
Grand Total	73	217	23	26	339	231	5	99	91	426	64	258	197	87	606	43	4	39	400	486	1857
Apprch %	21.5	64	6.8	7.7		54.2	1.2	23.2	21.4		10.6	42.6	32.5	14.4		8.8	0.8	8	82.3		
Total %	3.9	11.7	1.2	1.4	18.3	12.4	0.3	5.3	4.9	22.9	3.4	13.9	10.6	4.7	32.6	2.3	0.2	2.1	21.5	26.2	
Cars +	73	217	23	26	339	231	5	98	89	423	64	257	196	87	604	43	4	39	388	474	1840
% Cars +	100	100	100	100	100	100	100	99	97.8	99.3	100	99.6	99.5	100	99.7	100	100	100	97	97.5	99.1
Trucks	0	0	0	0	0	0	0	1	2	3	0	1	1	0	2	0	0	0	12	12	17
% Trucks	0	0	0	0	0	0	0	1	2.2	0.7	0	0.4	0.5	0	0.3	0	0	0	3	2.5	0.9

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(Canal and Carolina Beach)
Site Code :
Start Date : 6/7/2024
Page No : 2

	Canal Drive Southbound					Carolina Beach Avenue Westbound					Canal Drive Northbound					Parking Lot Access 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 03:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:45 PM																					
05:45 PM	**5**	12	**1**	**3**	21	14	0	3	**17**	34	3	13	8	6	30	**3**	0	3	**58**	**64**	**149**
06:00 PM	5	**16**	0	0	21	15	0	**10**	12	**37**	6	16	**14**	2	38	1	0	2	28	31	127
06:15 PM	5	11	1	0	17	**19**	**3**	7	1	30	5	**23**	14	**12**	**54**	3	0	**5**	27	35	136
06:30 PM	4	15	1	3	**23**	19	0	7	11	37	**7**	12	12	11	42	1	**1**	3	21	26	128
Total Volume	19	54	3	6	82	67	3	27	41	138	21	64	48	31	164	8	1	13	134	156	540
% App. Total	23.2	65.9	3.7	7.3		48.6	2.2	19.6	29.7		12.8	39	29.3	18.9		5.1	0.6	8.3	85.9		
PHF	.950	.844	.750	.500	.891	.882	.250	.675	.603	.932	.750	.696	.857	.646	.759	.667	.250	.650	.578	.609	.906



File Name : CarolinaBeach(Canal and Pelican)
Site Code :
Start Date : 6/7/2024
Page No : 1

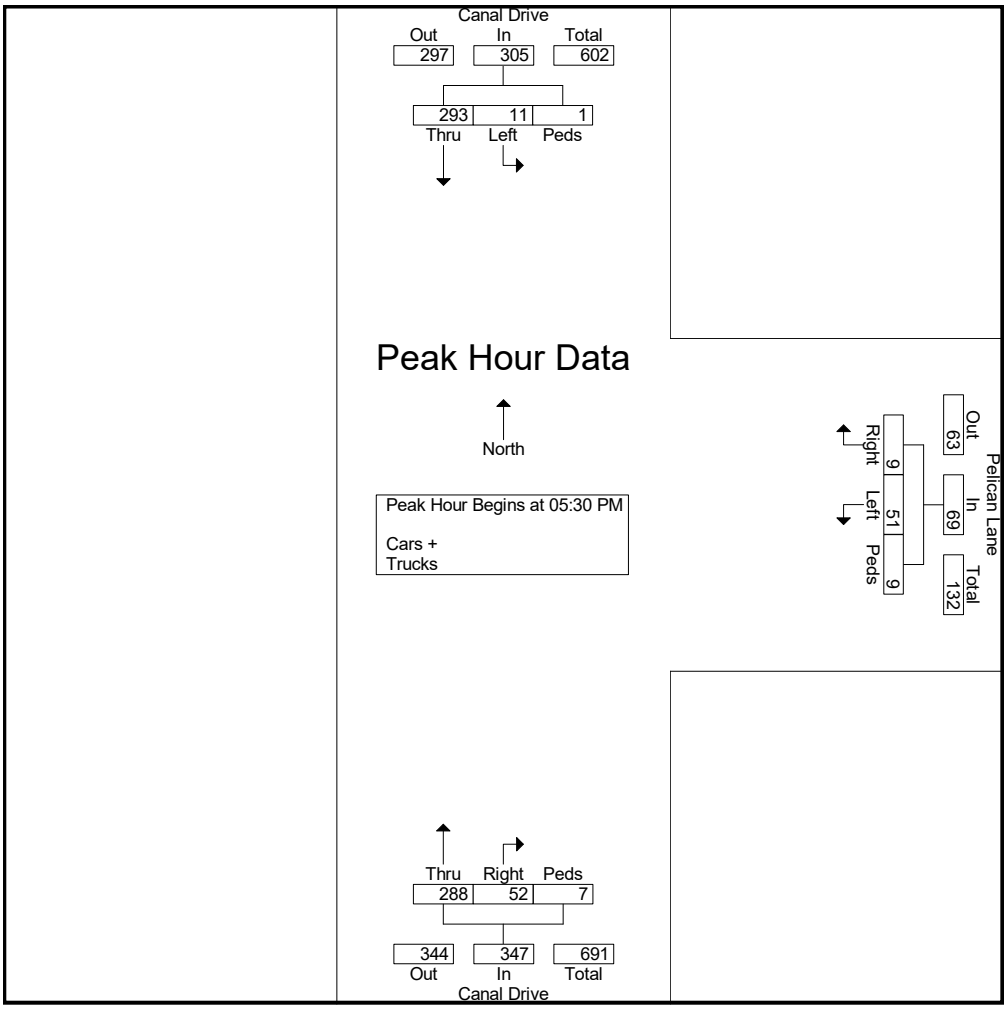
Groups Printed- Cars + - Trucks

	Canal Drive Southbound				Pelican Lane Westbound				Canal Drive Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	3	60	0	63	15	2	0	17	63	11	0	74	154
03:15 PM	0	52	0	52	19	1	0	20	72	14	0	86	158
03:30 PM	1	58	0	59	14	2	0	16	54	10	0	64	139
03:45 PM	0	67	0	67	12	2	0	14	59	12	0	71	152
Total	4	237	0	241	60	7	0	67	248	47	0	295	603
04:00 PM	2	63	1	66	13	2	1	16	71	17	0	88	170
04:15 PM	2	49	0	51	10	4	0	14	57	15	0	72	137
04:30 PM	0	72	0	72	13	4	2	19	61	13	2	76	167
04:45 PM	0	63	0	63	14	2	0	16	76	10	0	86	165
Total	4	247	1	252	50	12	3	65	265	55	2	322	639
05:00 PM	0	45	0	45	11	2	0	13	71	11	0	82	140
05:15 PM	3	70	0	73	17	5	1	23	65	9	0	74	170
05:30 PM	1	77	0	78	11	3	0	14	75	15	1	91	183
05:45 PM	2	72	1	75	15	2	6	23	69	7	4	80	178
Total	6	264	1	271	54	12	7	73	280	42	5	327	671
06:00 PM	3	70	0	73	12	1	3	16	65	17	2	84	173
06:15 PM	5	74	0	79	13	3	0	16	79	13	0	92	187
06:30 PM	1	51	0	52	12	3	0	15	69	15	4	88	155
06:45 PM	0	68	0	68	8	4	4	16	49	13	0	62	146
Total	9	263	0	272	45	11	7	63	262	58	6	326	661
Grand Total	23	1011	2	1036	209	42	17	268	1055	202	13	1270	2574
Apprch %	2.2	97.6	0.2		78	15.7	6.3		83.1	15.9	1		
Total %	0.9	39.3	0.1	40.2	8.1	1.6	0.7	10.4	41	7.8	0.5	49.3	
Cars +	23	1007	2	1032	208	42	17	267	1053	199	13	1265	2564
% Cars +	100	99.6	100	99.6	99.5	100	100	99.6	99.8	98.5	100	99.6	99.6
Trucks	0	4	0	4	1	0	0	1	2	3	0	5	10
% Trucks	0	0.4	0	0.4	0.5	0	0	0.4	0.2	1.5	0	0.4	0.4

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(Canal and Pelican)
Site Code :
Start Date : 6/7/2024
Page No : 2

	Canal Drive Southbound				Pelican Lane Westbound				Canal Drive Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	1	**77**	0	78	11	**3**	0	14	75	15	1	91	183
05:45 PM	2	72	**1**	75	**15**	2	**6**	**23**	69	7	**4**	80	178
06:00 PM	3	70	0	73	12	1	3	16	65	**17**	2	84	173
06:15 PM	**5**	74	0	**79**	13	3	0	16	**79**	13	0	**92**	**187**
Total Volume	11	293	1	305	51	9	9	69	288	52	7	347	721
% App. Total	3.6	96.1	0.3		73.9	13	13		83	15	2		
PHF	.550	.951	.250	.965	.850	.750	.375	.750	.911	.765	.438	.943	.964



File Name : CarolinaBeach(Carolina Beach and Pelican)
Site Code :
Start Date : 6/7/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Carolina Beach Avenue Southbound					Parking Lot Access Westbound					Carolina Beach Avenue Northbound					Pelican Lane 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
03:00 PM	1	12	11	3	27	1	5	2	1	9	0	11	1	0	12	10	3	2	0	15	63
03:15 PM	0	19	13	8	40	0	4	1	0	5	4	15	0	0	19	12	0	1	0	13	77
03:30 PM	0	14	7	5	26	0	1	0	0	1	0	16	1	4	21	10	4	0	0	14	62
03:45 PM	1	16	9	3	29	1	5	1	0	7	0	15	0	2	17	8	1	2	3	14	67
Total	2	61	40	19	122	2	15	4	1	22	4	57	2	6	69	40	8	5	3	56	269
04:00 PM	1	16	6	6	29	1	4	0	9	14	0	9	4	1	14	12	3	6	0	21	78
04:15 PM	0	14	7	2	23	1	7	1	5	14	1	12	0	6	19	12	3	1	5	21	77
04:30 PM	1	21	7	11	40	2	4	1	5	12	2	13	0	0	15	11	0	3	0	14	81
04:45 PM	1	21	8	7	37	0	4	1	4	9	1	10	0	2	13	9	0	0	0	9	68
Total	3	72	28	26	129	4	19	3	23	49	4	44	4	9	61	44	6	10	5	65	304
05:00 PM	1	15	6	8	30	2	1	0	4	7	5	9	1	3	18	6	3	3	0	12	67
05:15 PM	1	14	13	7	35	3	5	0	10	18	1	18	1	2	22	7	0	2	0	9	84
05:30 PM	0	16	9	10	35	1	1	0	25	27	2	7	0	4	13	16	0	3	2	21	96
05:45 PM	0	19	8	0	27	0	2	0	14	16	1	6	0	5	12	8	1	1	1	11	66
Total	2	64	36	25	127	6	9	0	53	68	9	40	2	14	65	37	4	9	3	53	313
06:00 PM	0	18	11	8	37	2	1	0	9	12	1	15	0	2	18	21	1	2	1	25	92
06:15 PM	0	25	7	6	38	0	2	0	11	13	1	12	0	0	13	11	1	5	0	17	81
06:30 PM	0	22	8	10	40	1	2	2	20	25	3	14	0	1	18	12	2	3	0	17	100
06:45 PM	1	19	9	10	39	0	0	0	20	20	0	8	0	5	13	11	1	3	2	17	89
Total	1	84	35	34	154	3	5	2	60	70	5	49	0	8	62	55	5	13	3	76	362
Grand Total	8	281	139	104	532	15	48	9	137	209	22	190	8	37	257	176	23	37	14	250	1248
Apprch %	1.5	52.8	26.1	19.5		7.2	23	4.3	65.6		8.6	73.9	3.1	14.4		70.4	9.2	14.8	5.6		
Total %	0.6	22.5	11.1	8.3	42.6	1.2	3.8	0.7	11	16.7	1.8	15.2	0.6	3	20.6	14.1	1.8	3	1.1	20	
Cars +	8	281	139	104	532	15	47	9	135	206	22	189	8	37	256	175	22	36	14	247	1241
% Cars +	100	100	100	100	100	100	97.9	100	98.5	98.6	100	99.5	100	100	99.6	99.4	95.7	97.3	100	98.8	99.4
Trucks	0	0	0	0	0	0	1	0	2	3	0	1	0	0	1	1	1	1	0	3	7
% Trucks	0	0	0	0	0	0	2.1	0	1.5	1.4	0	0.5	0	0	0.4	0.6	4.3	2.7	0	1.2	0.6

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(Carolina Beach and Pelican)
Site Code :
Start Date : 6/7/2024
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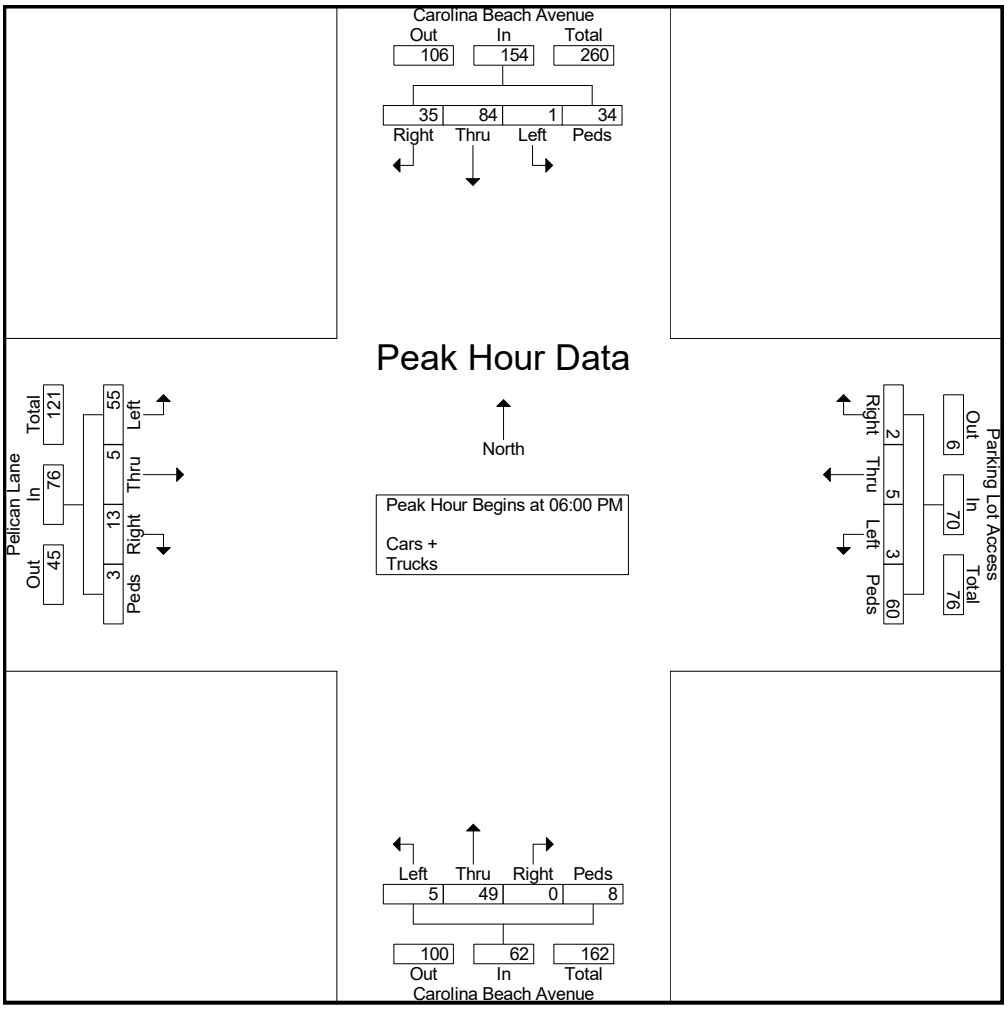
	Carolina Beach Avenue Southbound					Parking Lot Access Westbound					Carolina Beach Avenue Northbound					Pelican Lane Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:00 PM																					
06:00 PM	0	18	**11**	8	37	**2**	1	0	9	12	1	**15**	0	2	**18**	**21**	1	2	1	**25**	92
06:15 PM	0	**25**	7	6	38	0	**2**	0	11	13	1	12	0	0	13	11	1	**5**	0	17	81
06:30 PM	0	22	8	**10**	**40**	1	2	**2**	**20**	**25**	**3**	14	0	1	18	12	**2**	3	0	17	**100**
06:45 PM	**1**	19	9	10	39	0	0	0	20	20	0	8	0	**5**	13	11	1	3	**2**	17	89
Total Volume	1	84	35	34	154	3	5	2	60	70	5	49	0	8	62	55	5	13	3	76	362
% App. Total	0.6	54.5	22.7	22.1		4.3	7.1	2.9	85.7		8.1	79	0	12.9		72.4	6.6	17.1	3.9		
PHF	.250	.840	.795	.850	.963	.375	.625	.250	.750	.700	.417	.817	.000	.400	.861	.655	.625	.650	.375	.760	.905



File Name : CarolinaBeach(US 421 and Carl)
Site Code :
Start Date : 6/7/2024
Page No : 1

Groups Printed- Cars + - Trucks

	US 421 Southbound				Carl Winner Drive Westbound				US 421 Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	76	143	0	219	9	77	8	94	174	13	1	188	501
03:15 PM	65	149	0	214	9	70	2	81	187	15	7	209	504
03:30 PM	69	159	0	228	13	72	0	85	173	18	6	197	510
03:45 PM	68	183	0	251	10	81	0	91	162	5	5	172	514
Total	278	634	0	912	41	300	10	351	696	51	19	766	2029
04:00 PM	92	137	0	229	7	87	1	95	197	12	0	209	533
04:15 PM	73	138	0	211	6	66	1	73	165	14	1	180	464
04:30 PM	67	150	0	217	16	80	3	99	136	14	6	156	472
04:45 PM	78	137	0	215	12	75	4	91	156	19	1	176	482
Total	310	562	0	872	41	308	9	358	654	59	8	721	1951
05:00 PM	79	140	0	219	17	61	1	79	155	15	2	172	470
05:15 PM	71	142	3	216	16	78	0	94	142	15	4	161	471
05:30 PM	76	140	0	216	8	81	5	94	161	17	13	191	501
05:45 PM	75	116	0	191	23	83	3	109	143	13	9	165	465
Total	301	538	3	842	64	303	9	376	601	60	28	689	1907
06:00 PM	79	159	0	238	6	74	2	82	113	15	0	128	448
06:15 PM	76	128	0	204	29	81	4	114	134	18	8	160	478
06:30 PM	73	137	0	210	15	51	8	74	120	17	12	149	433
06:45 PM	49	119	0	168	15	54	4	73	111	14	2	127	368
Total	277	543	0	820	65	260	18	343	478	64	22	564	1727
Grand Total	1166	2277	3	3446	211	1171	46	1428	2429	234	77	2740	7614
Apprch %	33.8	66.1	0.1		14.8	82	3.2		88.6	8.5	2.8		
Total %	15.3	29.9	0	45.3	2.8	15.4	0.6	18.8	31.9	3.1	1	36	
Cars +	1165	2268	3	3436	211	1166	37	1414	2415	233	74	2722	7572
% Cars +	99.9	99.6	100	99.7	100	99.6	80.4	99	99.4	99.6	96.1	99.3	99.4
Trucks	1	9	0	10	0	5	9	14	14	1	3	18	42
% Trucks	0.1	0.4	0	0.3	0	0.4	19.6	1	0.6	0.4	3.9	0.7	0.6

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(US 421 and Carl)
Site Code :
Start Date : 6/7/2024
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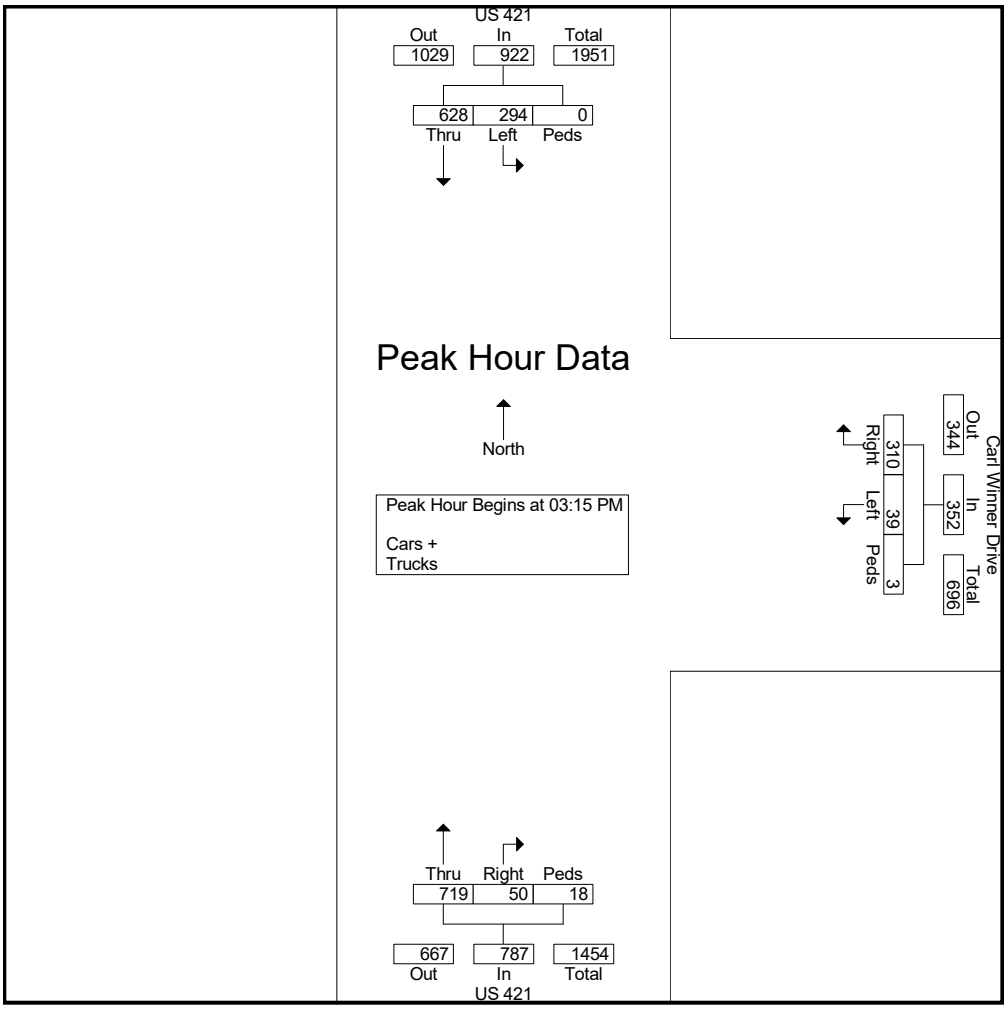
	US 421 Southbound				Carl Winner Drive Westbound				US 421 Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:15 PM													
03:15 PM	65	149	0	214	9	70	**2**	81	187	15	**7**	**209**	504
03:30 PM	69	159	0	228	**13**	72	0	85	173	**18**	6	197	510
03:45 PM	68	**183**	0	**251**	10	81	0	91	162	5	5	172	514
04:00 PM	**92**	137	0	229	7	**87**	1	**95**	**197**	12	0	209	**533**
Total Volume	294	628	0	922	39	310	3	352	719	50	18	787	2061
% App. Total	31.9	68.1	0		11.1	88.1	0.9		91.4	6.4	2.3		
PHF	.799	.858	.000	.918	.750	.891	.375	.926	.912	.694	.643	.941	.967



File Name : CarolinaBeach(Canal and Carl) Saturday
Site Code :
Start Date : 6/8/2024
Page No : 1

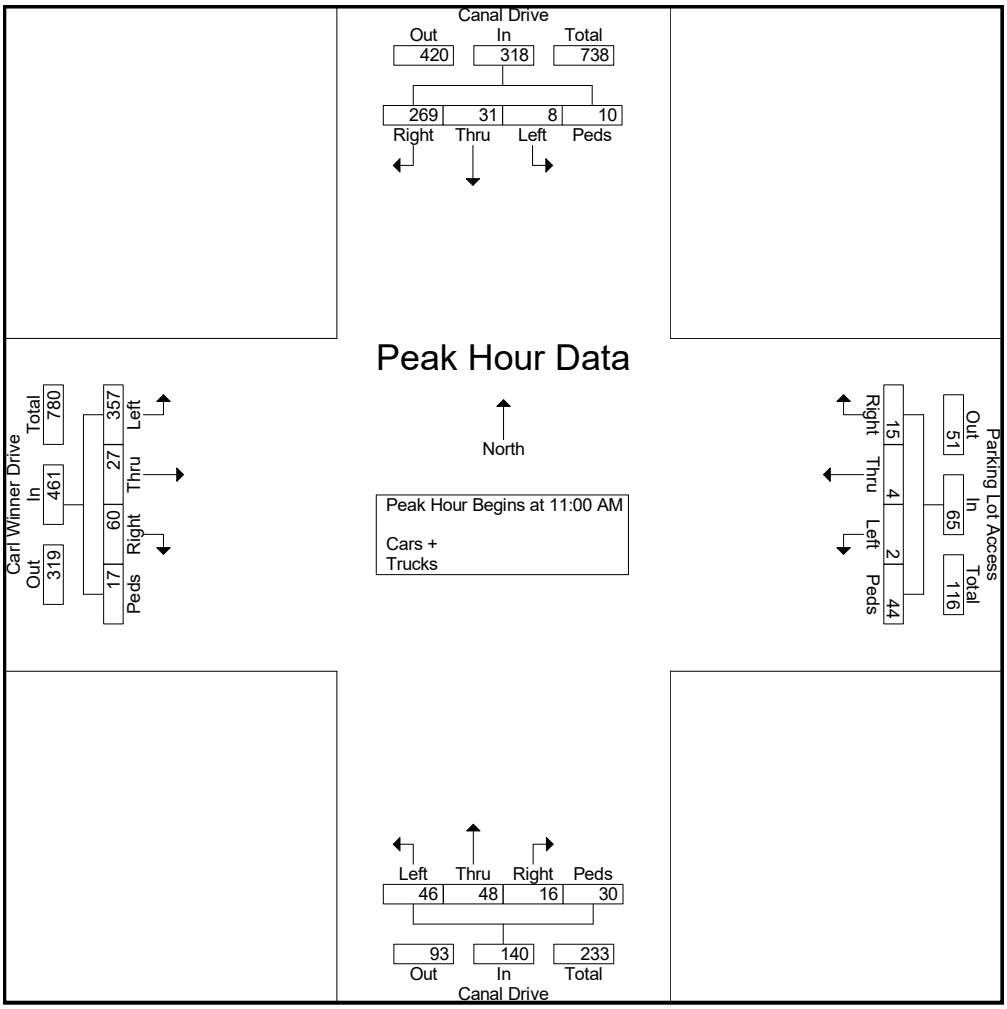
Groups Printed- Cars + - Trucks

	Canal Drive Southbound					Parking Lot Access Westbound					Canal Drive Northbound					Carl Winner Drive 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
11:00 AM	2	9	62	8	81	0	0	4	12	16	13	16	5	5	39	95	5	12	7	119	255
11:15 AM	1	8	62	1	72	0	0	5	3	8	9	8	2	6	25	90	10	17	0	117	222
11:30 AM	1	9	72	1	83	1	1	3	10	15	10	12	5	8	35	86	3	12	4	105	238
11:45 AM	4	5	73	0	82	1	3	3	19	26	14	12	4	11	41	86	9	19	6	120	269
Total	8	31	269	10	318	2	4	15	44	65	46	48	16	30	140	357	27	60	17	461	984
12:00 PM	0	9	60	2	71	2	1	3	17	23	11	11	2	14	38	79	5	15	2	101	233
12:15 PM	2	7	58	4	71	3	0	1	8	12	13	18	4	8	43	67	6	18	10	101	227
12:30 PM	2	3	64	1	70	1	3	9	17	30	6	11	4	10	31	75	6	11	2	94	225
12:45 PM	1	6	65	4	76	0	5	7	10	22	19	12	8	5	44	80	5	21	9	115	257
Total	5	25	247	11	288	6	9	20	52	87	49	52	18	37	156	301	22	65	23	411	942
Grand Total	13	56	516	21	606	8	13	35	96	152	95	100	34	67	296	658	49	125	40	872	1926
Apprch %	2.1	9.2	85.1	3.5		5.3	8.6	23	63.2		32.1	33.8	11.5	22.6		75.5	5.6	14.3	4.6		
Total %	0.7	2.9	26.8	1.1	31.5	0.4	0.7	1.8	5	7.9	4.9	5.2	1.8	3.5	15.4	34.2	2.5	6.5	2.1	45.3	
Cars +	13	56	514	20	603	8	13	35	95	151	94	100	34	67	295	657	49	125	38	869	1918
% Cars +	100	100	99.6	95.2	99.5	100	100	100	99	99.3	98.9	100	100	100	99.7	99.8	100	100	95	99.7	99.6
Trucks	0	0	2	1	3	0	0	0	1	1	1	0	0	0	1	1	0	0	2	3	8
% Trucks	0	0	0.4	4.8	0.5	0	0	0	1	0.7	1.1	0	0	0	0.3	0.2	0	0	5	0.3	0.4

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(Canal and Carl) Saturday
Site Code :
Start Date : 6/8/2024
Page No : 2

	Canal Drive Southbound					Parking Lot Access Westbound					Canal Drive Northbound					Carl Winner Drive 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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	2	**9**	62	**8**	81	0	0	4	12	16	13	**16**	**5**	5	39	**95**	5	12	**7**	119	255
11:15 AM	1	8	62	1	72	0	0	**5**	3	8	9	8	2	6	25	90	**10**	17	0	117	222
11:30 AM	1	9	72	1	**83**	**1**	1	3	10	15	10	12	5	8	35	86	3	12	4	105	238
11:45 AM	**4**	5	**73**	0	82	1	**3**	3	**19**	**26**	**14**	12	4	**11**	**41**	86	9	**19**	6	**120**	**269**
Total Volume	8	31	269	10	318	2	4	15	44	65	46	48	16	30	140	357	27	60	17	461	984
% App. Total	2.5	9.7	84.6	3.1		3.1	6.2	23.1	67.7		32.9	34.3	11.4	21.4		77.4	5.9	13	3.7		
PHF	.500	.861	.921	.313	.958	.500	.333	.750	.579	.625	.821	.750	.800	.682	.854	.939	.675	.789	.607	.960	.914



File Name : CarolinaBeach(Canal and Carolina Beach) Saturday
Site Code :
Start Date : 6/8/2024
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Groups Printed- Cars + - Trucks

	Canal Drive Southbound					Carolina Beach Avenue Westbound					Canal Drive Northbound					Parking Lot Access 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
11:00 AM	2	14	2	2	20	16	0	6	16	38	7	27	22	2	58	5	0	2	26	33	149
11:15 AM	4	16	4	0	24	17	0	6	3	26	7	21	22	0	50	5	0	6	12	23	123
11:30 AM	3	17	1	0	21	15	1	3	14	33	1	21	13	2	37	3	0	1	23	27	118
11:45 AM	3	18	1	0	22	11	1	8	14	34	8	21	23	4	56	6	0	3	20	29	141
Total	12	65	8	2	87	59	2	23	47	131	23	90	80	8	201	19	0	12	81	112	531
12:00 PM	8	16	4	4	32	12	0	5	11	28	11	22	13	12	58	12	0	2	13	27	145
12:15 PM	12	16	1	9	38	15	0	6	10	31	7	28	18	10	63	8	1	2	8	19	151
12:30 PM	5	10	3	5	23	18	0	4	24	46	9	26	23	4	62	4	0	6	16	26	157
12:45 PM	1	15	2	4	22	14	0	8	14	36	10	34	18	6	68	7	0	3	38	48	174
Total	26	57	10	22	115	59	0	23	59	141	37	110	72	32	251	31	1	13	75	120	627
Grand Total	38	122	18	24	202	118	2	46	106	272	60	200	152	40	452	50	1	25	156	232	1158
Apprch %	18.8	60.4	8.9	11.9		43.4	0.7	16.9	39		13.3	44.2	33.6	8.8		21.6	0.4	10.8	67.2		
Total %	3.3	10.5	1.6	2.1	17.4	10.2	0.2	4	9.2	23.5	5.2	17.3	13.1	3.5	39	4.3	0.1	2.2	13.5	20	
Cars +	38	122	18	24	202	118	2	45	99	264	60	200	151	40	451	50	1	25	151	227	1144
% Cars +	100	100	100	100	100	100	100	97.8	93.4	97.1	100	100	99.3	100	99.8	100	100	100	96.8	97.8	98.8
Trucks	0	0	0	0	0	0	0	1	7	8	0	0	1	0	1	0	0	0	5	5	14
% Trucks	0	0	0	0	0	0	0	2.2	6.6	2.9	0	0	0.7	0	0.2	0	0	0	3.2	2.2	1.2

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(Canal and Carolina Beach) Saturday
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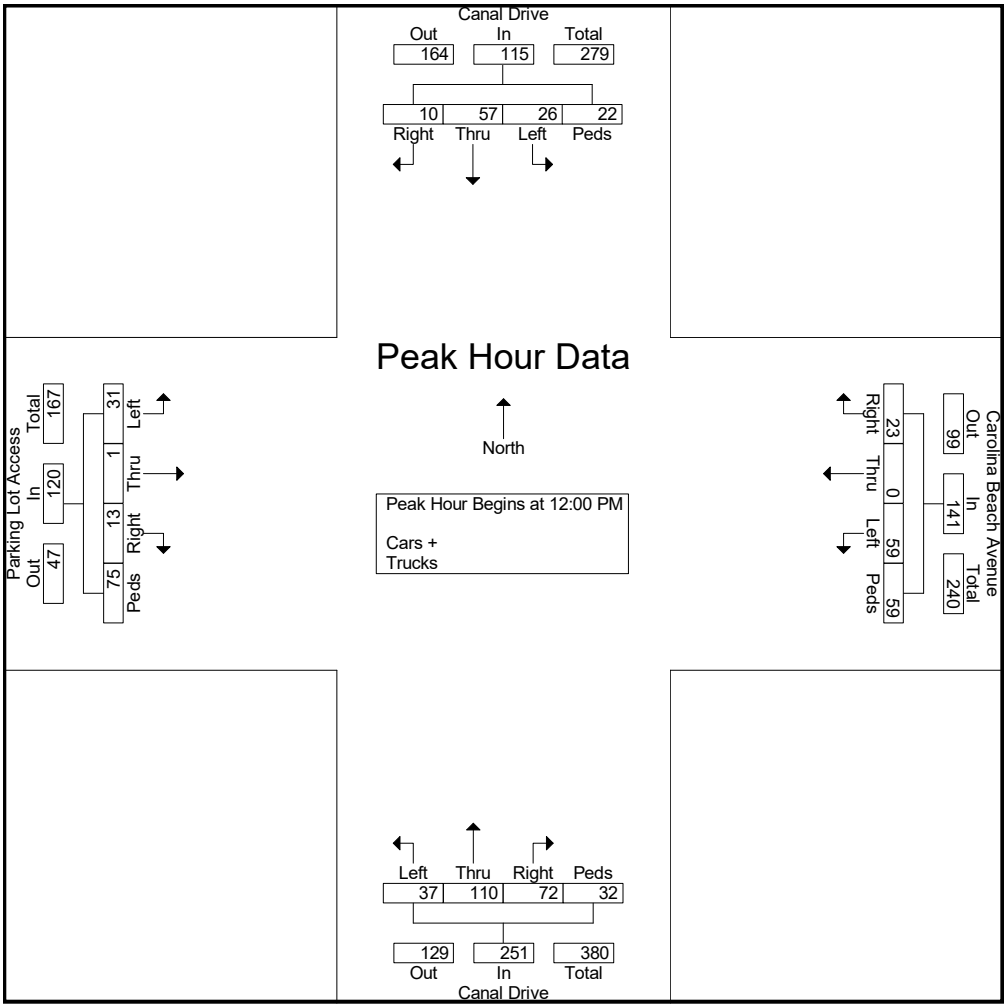
	Canal Drive Southbound					Carolina Beach Avenue Westbound					Canal Drive Northbound					Parking Lot Access Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	8	**16**	**4**	4	32	12	0	5	11	28	**11**	22	13	**12**	58	**12**	0	2	13	27	145
12:15 PM	**12**	16	1	**9**	**38**	15	0	6	10	31	7	28	18	10	63	8	**1**	2	8	19	151
12:30 PM	5	10	3	5	23	**18**	0	4	**24**	**46**	9	26	**23**	4	62	4	0	**6**	16	26	157
12:45 PM	1	15	2	4	22	14	0	**8**	14	36	10	**34**	18	6	**68**	7	0	3	**38**	**48**	**174**
Total Volume	26	57	10	22	115	59	0	23	59	141	37	110	72	32	251	31	1	13	75	120	627
% App. Total	22.6	49.6	8.7	19.1		41.8	0	16.3	41.8		14.7	43.8	28.7	12.7		25.8	0.8	10.8	62.5		
PHF	.542	.891	.625	.611	.757	.819	.000	.719	.615	.766	.841	.809	.783	.667	.923	.646	.250	.542	.493	.625	.901



File Name : CarolinaBeach(Canal and Pelican) Saturday
Site Code :
Start Date : 6/8/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Canal Drive Southbound				Pelican Lane Westbound				Canal Drive Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	1	70	2	73	11	7	0	18	87	25	4	116	207
11:15 AM	1	65	0	66	12	4	1	17	79	23	5	107	190
11:30 AM	2	71	1	74	14	4	4	22	71	27	8	106	202
11:45 AM	0	69	0	69	16	2	0	18	69	25	4	98	185
Total	4	275	3	282	53	17	5	75	306	100	21	427	784
12:00 PM	2	57	3	62	14	3	5	22	72	20	1	93	177
12:15 PM	2	63	3	68	8	4	5	17	70	17	2	89	174
12:30 PM	0	54	0	54	15	4	3	22	66	17	11	94	170
12:45 PM	2	49	0	51	22	5	2	29	75	18	1	94	174
Total	6	223	6	235	59	16	15	90	283	72	15	370	695
Grand Total	10	498	9	517	112	33	20	165	589	172	36	797	1479
Apprch %	1.9	96.3	1.7		67.9	20	12.1		73.9	21.6	4.5		
Total %	0.7	33.7	0.6	35	7.6	2.2	1.4	11.2	39.8	11.6	2.4	53.9	
Cars +	10	495	8	513	112	32	14	158	588	172	36	796	1467
% Cars +	100	99.4	88.9	99.2	100	97	70	95.8	99.8	100	100	99.9	99.2
Trucks	0	3	1	4	0	1	6	7	1	0	0	1	12
% Trucks	0	0.6	11.1	0.8	0	3	30	4.2	0.2	0	0	0.1	0.8

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(Canal and Pelican) Saturday
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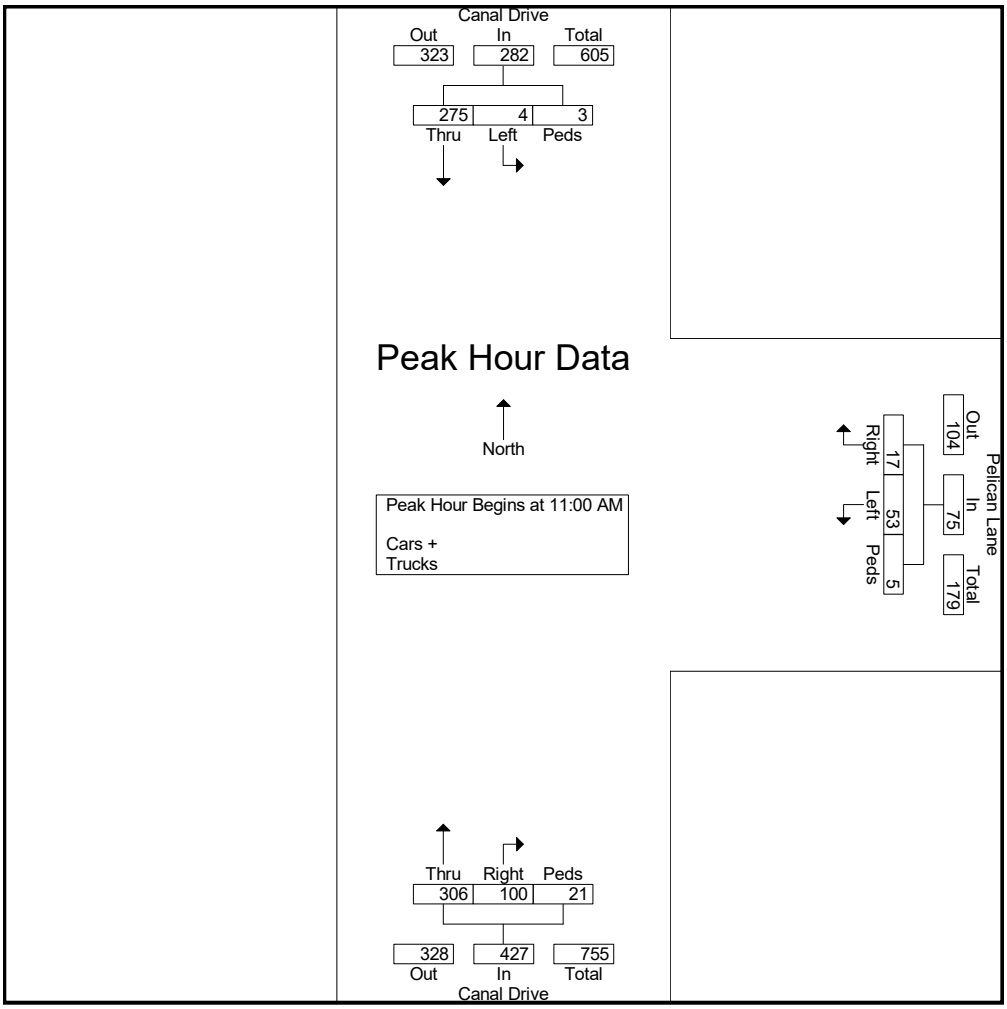
	Canal Drive Southbound				Pelican Lane Westbound				Canal Drive Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:00 AM													
11:00 AM	1	70	**2**	73	11	**7**	0	18	**87**	25	4	**116**	**207**
11:15 AM	1	65	0	66	12	4	1	17	79	23	5	107	190
11:30 AM	**2**	**71**	1	**74**	14	4	**4**	**22**	71	**27**	**8**	106	202
11:45 AM	0	69	0	69	**16**	2	0	18	69	25	4	98	185
Total Volume	4	275	3	282	53	17	5	75	306	100	21	427	784
% App. Total	1.4	97.5	1.1		70.7	22.7	6.7		71.7	23.4	4.9		
PHF	.500	.968	.375	.953	.828	.607	.313	.852	.879	.926	.656	.920	.947



File Name : CarolinaBeach(Carolina Beach and Pelican) Saturday
Site Code :
Start Date : 6/8/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Carolina Beach Avenue Southbound					Parking Lot Access Westbound					Carolina Beach Avenue Northbound					Pelican Lane 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
11:00 AM	2	16	5	12	35	0	3	2	8	13	1	18	4	5	28	16	13	1	6	36	112
11:15 AM	1	17	10	1	29	1	1	0	7	9	1	19	2	0	22	18	6	3	1	28	88
11:30 AM	0	17	8	11	36	0	4	0	8	12	0	13	0	0	13	17	7	4	0	28	89
11:45 AM	2	16	9	3	30	1	4	0	8	13	1	23	3	9	36	14	11	3	0	28	107
Total	5	66	32	27	130	2	12	2	31	47	3	73	9	14	99	65	37	11	7	120	396
12:00 PM	0	16	7	6	29	1	7	1	2	11	4	11	1	17	33	7	7	9	1	24	97
12:15 PM	1	13	4	10	28	0	2	2	12	16	2	18	3	7	30	12	8	1	1	22	96
12:30 PM	0	20	10	7	37	0	4	1	15	20	3	24	1	19	47	7	8	1	3	19	123
12:45 PM	1	19	9	10	39	1	9	0	3	13	0	16	0	12	28	13	5	4	3	25	105
Total	2	68	30	33	133	2	22	4	32	60	9	69	5	55	138	39	28	15	8	90	421
Grand Total	7	134	62	60	263	4	34	6	63	107	12	142	14	69	237	104	65	26	15	210	817
Apprch %	2.7	51	23.6	22.8		3.7	31.8	5.6	58.9		5.1	59.9	5.9	29.1		49.5	31	12.4	7.1		
Total %	0.9	16.4	7.6	7.3	32.2	0.5	4.2	0.7	7.7	13.1	1.5	17.4	1.7	8.4	29	12.7	8	3.2	1.8	25.7	
Cars +	7	133	62	60	262	4	34	6	63	107	12	140	14	69	235	104	65	26	15	210	814
% Cars +	100	99.3	100	100	99.6	100	100	100	100	100	100	98.6	100	100	99.2	100	100	100	100	100	99.6
Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Trucks	0	0.7	0	0	0.4	0	0	0	0	0	0	1.4	0	0	0.8	0	0	0	0	0	0.4

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(Carolina Beach and Pelican) Saturday
Site Code :
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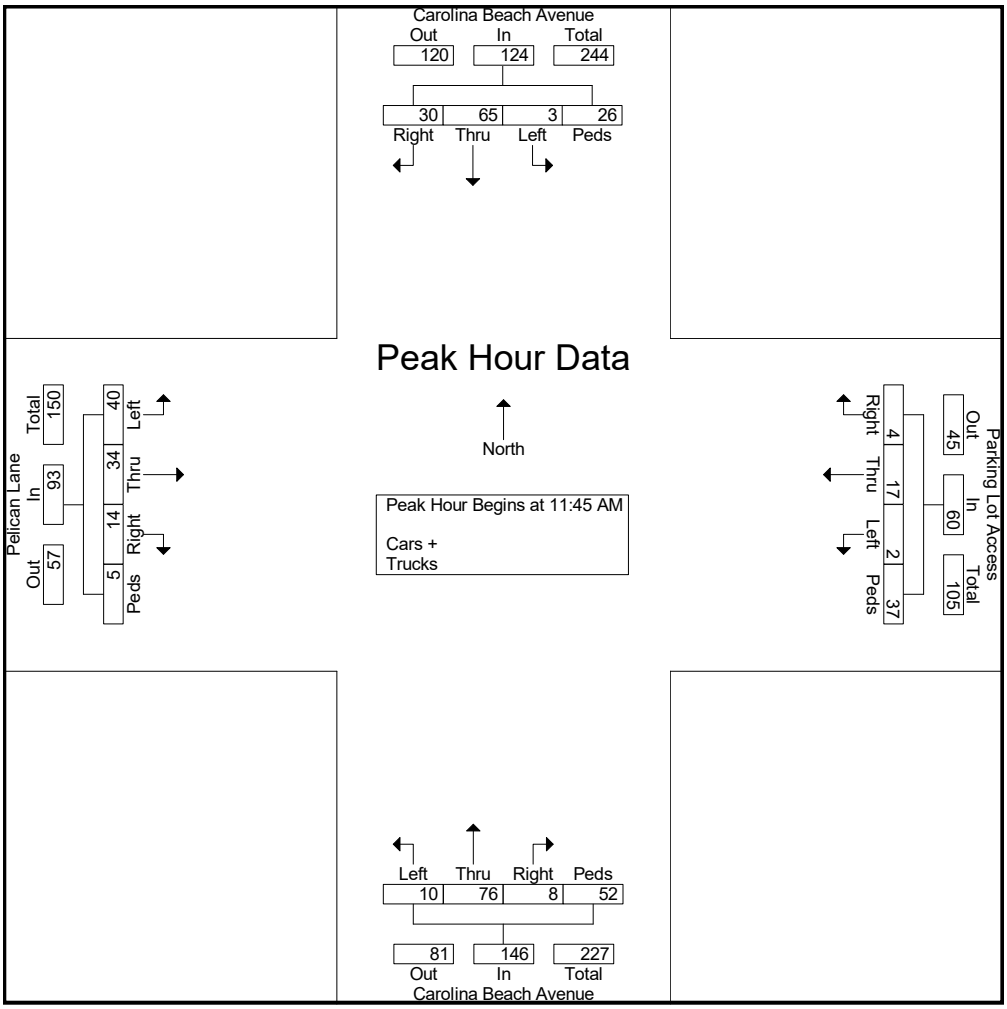
	Carolina Beach Avenue Southbound					Parking Lot Access Westbound					Carolina Beach Avenue Northbound					Pelican Lane Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	**2**	16	9	3	30	**1**	4	0	8	13	1	23	**3**	9	36	**14**	**11**	3	0	**28**	107
12:00 PM	0	16	7	6	29	1	**7**	1	2	11	**4**	11	1	17	33	7	7	**9**	1	24	97
12:15 PM	1	13	4	**10**	28	0	2	**2**	12	16	2	18	3	7	30	12	8	1	1	22	96
12:30 PM	0	**20**	**10**	7	**37**	0	4	1	**15**	**20**	3	**24**	1	**19**	**47**	7	8	1	**3**	19	**123**
Total Volume	3	65	30	26	124	2	17	4	37	60	10	76	8	52	146	40	34	14	5	93	423
% App. Total	2.4	52.4	24.2	21		3.3	28.3	6.7	61.7		6.8	52.1	5.5	35.6		43	36.6	15.1	5.4		
PHF	.375	.813	.750	.650	.838	.500	.607	.500	.617	.750	.625	.792	.667	.684	.777	.714	.773	.389	.417	.830	.860



File Name : CarolinaBeach(US 421 and Carl) Saturday
Site Code :
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Groups Printed- Cars + - Trucks

	US 421 Southbound				Carl Winner Drive Westbound				US 421 Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	98	195	0	293	12	56	21	89	130	21	24	175	557
11:15 AM	97	203	0	300	14	56	3	73	135	31	10	176	549
11:30 AM	85	223	0	308	19	64	2	85	130	24	4	158	551
11:45 AM	92	206	0	298	14	81	3	98	139	25	5	169	565
Total	372	827	0	1199	59	257	29	345	534	101	43	678	2222
12:00 PM	99	204	0	303	9	62	3	74	145	13	10	168	545
12:15 PM	86	216	0	302	17	45	14	76	118	19	8	145	523
12:30 PM	91	186	0	277	16	62	8	86	148	23	8	179	542
12:45 PM	82	182	1	265	20	67	5	92	133	21	9	163	520
Total	358	788	1	1147	62	236	30	328	544	76	35	655	2130
Grand Total	730	1615	1	2346	121	493	59	673	1078	177	78	1333	4352
Apprch %	31.1	68.8	0		18	73.3	8.8		80.9	13.3	5.9		
Total %	16.8	37.1	0	53.9	2.8	11.3	1.4	15.5	24.8	4.1	1.8	30.6	
Cars +	728	1613	1	2342	120	491	52	663	1074	177	75	1326	4331
% Cars +	99.7	99.9	100	99.8	99.2	99.6	88.1	98.5	99.6	100	96.2	99.5	99.5
Trucks	2	2	0	4	1	2	7	10	4	0	3	7	21
% Trucks	0.3	0.1	0	0.2	0.8	0.4	11.9	1.5	0.4	0	3.8	0.5	0.5

TRAFFIC DATA COLLECTION

File Name : CarolinaBeach(US 421 and Carl) Saturday
Site Code :
Start Date : 6/8/2024
Page No : 2

	US 421 Southbound				Carl Winner Drive Westbound				US 421 Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:00 AM													
11:00 AM	**98**	195	0	293	12	56	**21**	89	130	21	**24**	175	557
11:15 AM	97	203	0	300	14	56	3	73	135	**31**	10	**176**	549
11:30 AM	85	**223**	0	**308**	**19**	64	2	85	130	24	4	158	551
11:45 AM	92	206	0	298	14	**81**	3	**98**	**139**	25	5	169	**565**
Total Volume	372	827	0	1199	59	257	29	345	534	101	43	678	2222
% App. Total	31	69	0		17.1	74.5	8.4		78.8	14.9	6.3		
PHF	.949	.927	.000	.973	.776	.793	.345	.880	.960	.815	.448	.963	.983