

CONDITIONAL ZONING APPLICATION



TOWN OF CHAPEL HILL
Planning Department
405 Martin Luther King Jr. Blvd.
(919) 968-2728 fax (919) 969-2014
www.townofchapelhill.org

Parcel Identifier Number (PIN): 9789455646

Date: 06/20/2022

Section A: Project Information

Project Name: N Estes Townhomes
Property Address: 710 N Estes Drive Zip Code: 27514
Use Groups (A, B, and/or C): A Existing Zoning District: R-1
Project Description: Residential development including townhomes and multifamily buildings

Section B: Applicant, Owner, and/or Contract Purchaser Information

Applicant Information (to whom correspondence will be mailed):

Name: McAdams - Spencer Christiansen
Address: 2905 Meridian Pkwy
City: Durham State: NC Zip Code: 27713
Phone: 919-287-0722 Email: christiansen@mcadamsco.com

The undersigned applicant hereby certifies that, to the best of their knowledge and belief, all information supplied with this application and accurate.

Signature: *Spencer Christiansen* Date: 12/30/21

Owner/Contract Purchaser Information:

Owner

Contract Purchaser

Name: Lock7 Development - David Gorman
Address: 2201 Wisconsin Ave NW #200
City: Washington, DC State: _____ Zip Code: 20007
Phone: 202-922-6540 Email: dave@lock7.com

The undersigned applicant hereby certifies that, to the best of their knowledge and belief, all information supplied with this application and accurate.

Signature: *David Gorman* Date: 06/20/2022

Click [here](#) for application submittal instructions.



CONDITIONAL ZONING

TOWN OF CHAPEL HILL

Planning Department

Conditional Rezoning applications are reviewed by staff, Planning Commission, and Town Council. The application is part of an open public process that enables Town Council to discuss and decide on the key issues of a rezoning proposal. If a rezoning is approved, the applicant may then submit a detailed final plan application to staff for compliance review with the technical development standards and with the Council rezoning approval.

The establishment of a Conditional Zoning District shall be consistent with the Land Use Plan in the Comprehensive Plan. A proposed Conditional Zoning District is deemed consistent if the proposed District will be located in conformance with an adopted small area plan and/or in one of the following Land Use Categories:

- Medium Residential
- High Residential
- Commercial
- Mixed Use, Office/Commercial Emphasis
- Mixed Use, Office Emphasis
- Town/Village Center
- Institutional
- Office
- University
- Development Opportunity Area
- Light Industrial Opportunity Area

If the proposed conditional zoning districts is located in a Low Residential or a Rural Residential Land Use Category, the Town Council must approve a Land Use Plan amendment prior to proceeding.

SIGNED CONDITIONS: All conditions shall be in writing, prepared by the owner of the property or an attorney and must be signed by all property owners and contract purchasers, if applicable. The Town Attorney may require additional signatures if necessary and will determine whether or not the conditions statement is legally sufficient. Within thirty (30) days after receipt of the conditions the Planning Division Manager will notify the applicant of any deficiencies in the conditions statement or if any additional information is needed. The applicant may make changes to the written conditions statement provided it is submitted at least thirty (30) prior to Planning Commission meeting or thirty (30) days prior to Town Council public hearing.

RECORDATION OF CONDITIONS: After a rezoning has been approved by the Town Council, the conditions statement shall be recorded with the Register of Deeds Office. After a rezoning has been approved by Town Council and recorded by the Register of Deeds Office, the conditions may not be amended except through a new rezoning application.



PROJECT FACT SHEET

TOWN OF CHAPEL HILL

Planning Department

Section A: Project Information

Use Type: (check/list all that apply)

Office/Institutional Residential Mixed-Use Other: _____

Overlay District: (check all that apply)

Historic District Neighborhood Conservation District Airport Hazard Zone

Section B: Land Area

Net Land Area (NLA): Area within zoning lot boundaries		NLA=	319,365	sq. ft.
Choose one, or both, of the following (a or b), not to exceed 10% of NLA	a) Credited Street Area (total adjacent frontage) x ½ width of public right-of-way	CSA=	31,937	sq. ft.
	b) Credited Permanent Open Space (total adjacent frontage) x ½ public or dedicated open space	COS=		sq. ft.
TOTAL: NLA + CSA and/or COS = Gross Land Area (not to exceed NLA + 10%)		GLA=	351,302	sq. ft.

Section C: Special Protection Areas, Land Disturbance, and Impervious Area

Special Protection Areas: (check all those that apply)

Jordan Buffer Resource Conservation District 100 Year Floodplain Watershed Protection District

Land Disturbance	Total (sq. ft.)
Area of Land Disturbance (Includes: Footprint of proposed activity plus work area envelope, staging area for materials, access/equipment paths, and all grading, including off-site clearing)	287,496
Area of Land Disturbance within RCD	2,970
Area of Land Disturbance within Jordan Buffer	2,970

Impervious Areas	Existing (sq. ft.)	Demolition (sq. ft.)	Proposed (sq. ft.)	Total (sq. ft.)
Impervious Surface Area (ISA)	0	0	149,397	149,397
Impervious Surface Ratio: Percent Impervious Surface Area of Gross Land Area (ISA/GLA)%	0	0	43% (50% max)	43% (50% max)
If located in Watershed Protection District, % of impervious surface on 7/1/1993	n/a	n/a		



PROJECT FACT SHEET

TOWN OF CHAPEL HILL

Planning Department

Section D: Dimensions

Dimensional Unit (sq. ft.)	Existing (sq. ft.)	Demolition (sq. ft.)	Proposed (sq. ft.)	Total (sq. ft.)
Number of Buildings	0	0	10	10
Number of Floors	0	0	4	4
Recreational Space	0	0	17,600	17,600

Residential Space				
Dimensional Unit (sq. ft.)	Existing (sq. ft.)	Demolition (sq. ft.)	Proposed (sq. ft.)	Total (sq. ft.)
Floor Area (all floors – heated and unheated)	0	0	215,715	215,715
Total Square Footage of All Units	0	0	190,975	190,975
Total Square Footage of Affordable Units	0	0	20,625	20,625
Total Residential Density	0	0	11.8 du/ac	11.8 du/ac
Number of Dwelling Units	0	0	95	95
Number of Affordable Dwelling Units	0	0	14	14
Number of Single Bedroom Units	0	0	5	5
Number of Two Bedroom Units	0	0	34	34
Number of Three Bedroom Units	0	0	56	56

Non-Residential Space (Gross Floor Area in Square Feet)					
Use Type	Existing	Proposed	Uses	Existing	Proposed
Commercial	0	0			
Restaurant	0	0	# of Seats	0	0
Government	0	0			
Institutional	0	0			
Medical	0	0			
Office	0	0			
Hotel	0	0	# of Rooms	0	0
Industrial	0	0			
Place of Worship	0	0	# of Seats	0	0
Other	0	0			

Dimensional Requirements		Required by Ordinance	Existing	Proposed
Setbacks (minimum)	Street	20'	n/a	20'
	Interior (neighboring property lines)	6'	n/a	6'
	Solar (northern property line)	8'	n/a	8'
Height (maximum)	Primary	39'	n/a	39'
	Secondary	60'	n/a	60'
Streets	Frontages	40'	~1,000'	~1,000'
	Widths	50'	~450'	~450'



Section F: Adjoining or Connecting Streets and Sidewalks

Note: For approval of proposed street names, contact the Engineering Department.

Street Name	Right-of-Way Width	Pavement Width	Number of Lanes	Existing Sidewalk*	Existing Curb/Gutter
N Estes	70'	27.5'	2	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Somerset Dr	60'	28'	2	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes

List Proposed Points of Access (Ex: Number, Street Name):

*If existing sidewalks do not exist and the applicant is adding sidewalks, please provide the following information:

Sidewalk Information			
Street Names	Dimensions	Surface	Handicapped Ramps
N Estes	13'	concrete	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Section G: Parking Information

Parking Spaces	Minimum	Maximum	Proposed
Regular Spaces	19	25	21
Handicap Spaces	1	n/a	4
Total Spaces	19	25	25
Loading Spaces	0	0	0
Bicycle Spaces	4	n/a	8
Surface Type	asphalt		

Section H: Landscape Buffers

Location (North, South, Street, Etc.)	Minimum Width	Proposed Width	Alternate Buffer	Modify Buffer
North	10'	10'	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes
South (N Estes Dr)	30'	10'	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
East (Somerset Dr)	20'	10'-20'	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
West	10'	0'-10'	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes



Section I: Land Use Intensity

Existing Zoning District: R-1
 Proposed Zoning Change (if any): R-5-CZ

Zoning – Area – Ratio			Impervious Surface Thresholds			Minimum and Maximum Limitations	
Zoning District(s)	Floor Area Ratio (FAR)	Recreation Space Ratio (RSR)	Low Density Residential (0.24)	High Density Residential (0.50)	Non-Residential (0.70)	Maximum Floor Area (MFA) = FAR x GLA	Minimum Recreation Space (MSR) = RSR x GLA
R-5	.615	.05		.50	-	351,302	17,565
TOTAL							
RCD Streamside		0.01					
RCD Managed		0.019					
RCD Upland							

Section J: Utility Service

Check all that apply:

Water	<input checked="" type="checkbox"/> OWASA	<input type="checkbox"/> Individual Well	<input type="checkbox"/> Community Well	<input type="checkbox"/> Other
Sewer	<input checked="" type="checkbox"/> OWASA	<input type="checkbox"/> Individual Septic Tank	<input type="checkbox"/> Community Package Plant	<input type="checkbox"/> Other
Electrical	<input checked="" type="checkbox"/> Underground	<input type="checkbox"/> Above Ground		
Telephone	<input checked="" type="checkbox"/> Underground	<input type="checkbox"/> Above Ground		
Solid Waste	<input checked="" type="checkbox"/> Town	<input type="checkbox"/> Private		



**CONDITIONAL ZONING APPLICATION
SUBMITTAL REQUIREMENTS
TOWN OF CHAPEL HILL
Planning Department**

The following must accompany your application. Failure to do so will result in your application being considered incomplete. For assistance with this application, please contact the Chapel Hill Planning Department (Planning) at (919) 968-2728 or at planning@townofchapelhill.org.

X	Application fee (including Engineering Review fee) (refer to fee schedule)	Amount Paid \$	<input style="width: 90%;" type="text"/>
X	Pre-application meeting –with appropriate staff		
X	Digital Files – provide digital files of all plans and documents		
X	Recorded Plat or Deed of Property		
X	Project Fact Sheet		
x	Traffic Impact Statement – completed by Town’s consultant (or exemption)		
N/A	Description of Public Art Proposal , if applicable		
X	Statement of Justification		
X	Response to Community Design Commission and Town Council Concept Plan comments , if applicable		
X	Affordable Housing Proposal , if applicable		
X	Statement of Consistency with Comprehensive Plan or request to amend Comprehensive Plan		
X	Mailing list of owners of property within 1,000 feet perimeter of subject property (see GIS notification tool)		
X	Mailing fee for above mailing list (mailing fee is double due to 2 mailings)	Amount Paid \$	<input style="width: 90%;" type="text" value="\$202.00"/>
X	Written Narrative describing the proposal, including proposed land uses and proposed conditions		
X	Resource Conservation District, Floodplain, & Jordan Buffers Determination – necessary for all submittals		
N/A	Jurisdictional Wetland Determination – if applicable		
N/A	Resource Conservation District Encroachment Exemption or Variance (determined by Planning)		
N/A	Jordan Buffer Authorization Certificate or Mitigation Plan Approval (determined by Planning)		
N/A	Reduced Site Plan Set (reduced to 8.5” x 11”)		

Stormwater Impact Statement (1 copy to be submitted)

- a) Written narrative describing existing & proposed conditions, anticipated stormwater impacts and management structures and strategies to mitigate impacts
- b) Description of land uses and area (in square footage)
- c) Existing and proposed impervious surface area in square feet for all subareas and project area
- d) Ground cover and uses information
- e) Soil information (classification, infiltration rates, depth to groundwater and bedrock)
- f) Time of concentration calculations and assumptions
- g) Topography (2-foot contours)
- h) Pertinent on-site and off-site drainage conditions
- i) Upstream and/or downstream volumes
- j) Discharges and velocities
- k) Backwater elevations and effects on existing drainage conveyance facilities
- l) Location of jurisdictional wetlands and regulatory FEMA Special Flood Hazard Areas
- m) Water quality volume calculations
- n) Drainage areas and sub-areas delineated
- o) Peak discharge calculations and rates (1, 2, and 25-year storms)
- p) Hydrographs for pre- & post-development without mitigation, post-development with mitigation
- q) Volume calculations and documentation of retention for 2-year storm



**CONDITIONAL ZONING APPLICATION
SUBMITTAL REQUIREMENTS
TOWN OF CHAPEL HILL
Planning and Development Services**

- r) 85% TSS removal for post-development stormwater runoff
- s) Nutrient loading calculations
- t) BMP sizing calculations
- u) Pipe sizing calculations and schedule (include HGL & EGL calculations and profiles)

Plan Sets (10 copies to be submitted no larger than 24" x 36")

Plans should be legible and clearly drawn. All plan set sheets should include the following:

- Project Name
- Legend
- Labels
- North Arrow (North oriented toward top of page)
- Property boundaries with bearing and distances
- Scale (Engineering), denoted graphically and numerically
- Setbacks
- Streams, RCD Boundary, Jordan Riparian Buffer Boundary, Floodplain, and Wetlands Boundary, where applicable
- Revision dates and professional seals and signatures, as applicable

Cover Sheet

- a) Include Project Name, Project fact information, PIN, and Design Team

Area Map

- a) Project name, applicant, contact information, location, PIN, & legend
- b) Dedicated open space, parks, greenways
- c) Overlay Districts, if applicable
- d) Property lines, zoning district boundaries, land uses, project names of site and surrounding properties, significant buildings, corporate limit lines
- e) Existing roads (public & private), rights-of-way, sidewalks, driveways, vehicular parking areas, bicycle parking, handicapped parking, street names
- f) 1,000' notification boundary

Existing Conditions Plan

- a) Slopes, soils, environmental constraints, existing vegetation, and any existing land features
- b) Location of all existing structures and uses
- c) Existing property line and right-of-way lines
- d) Existing utilities & easements including location & sizes of water, sewer, electrical, & drainage lines
- e) Nearest fire hydrants
- f) Nearest bus shelters and transit facilities
- g) Existing topography at minimum 2-foot intervals and finished grade
- h) Natural drainage features & water bodies, floodways, floodplain, RCD, Jordan Buffers & Watershed boundaries



**CONDITIONAL ZONING APPLICATION
SUBMITTAL REQUIREMENTS
TOWN OF CHAPEL HILL
Planning and Development Services**

Detailed Site Plan

- a) Existing and proposed building locations
- b) Description & analysis of adjacent land uses, roads, topography, soils, drainage patterns, environmental constraints, features, existing vegetation, vistas (on and off-site)
- c) Location, arrangement, & dimension of vehicular parking, width of aisles and bays, angle of parking, number of spaces, handicapped parking, bicycle parking. Typical pavement sections & surface type.
- d) Location of existing and proposed fire hydrants
- e) Location and dimension of all vehicle entrances, exits, and drives
- f) Dimensioned street cross-sections and rights-of-way widths
- g) Pavement and curb & gutter construction details
- h) Dimensioned sidewalk and tree lawn cross sections
- i) Proposed transit improvements including bus pull-off and/or bus shelter
- j) Required landscape buffers (or proposed alternate/modified buffers)
- k) Required recreation area/space (including written statement of recreation plans)
- l) Refuse collection facilities (existing and proposed) or shared dumpster agreement
- m) Construction parking, staging, storage area, and construction trailer location
- n) Sight distance triangles at intersections
- o) Proposed location of street lights and underground utility lines and/or conduit lines to be installed
- p) Easements
- q) Clearing and construction limits
- r) Traffic Calming Plan – detailed construction designs of devices proposed & associated sign & marking plan

Stormwater Management Plan

- a) Topography (2-foot contours)
- b) Existing drainage conditions
- c) RCD and Jordan Riparian Buffer delineation and boundary (perennial & intermittent streams; note ephemeral streams on site)
- d) Proposed drainage and stormwater conditions
- e) Drainage conveyance system (piping)
- f) Roof drains
- g) Easements
- h) BMP plans, dimensions, details, and cross-sections
- i) Planting and stabilization plans and specifications

Landscape Protection Plan

- a) Rare, specimen, and significant tree survey within 50 feet of construction area
- b) Rare and specimen tree critical root zones
- c) Rare and specimen trees proposed to be removed
- d) Certified arborist tree evaluation, if applicable
- e) Significant tree stand survey
- f) Clearing limit line
- g) Proposed tree protection/silt fence location
- h) Pre-construction/demolition conference note
- i) Landscape protection supervisor note
- j) Existing and proposed tree canopy calculations, if applicable



**CONDITIONAL ZONING APPLICATION
SUBMITTAL REQUIREMENTS
TOWN OF CHAPEL HILL
Planning and Development Services**

Planting Plan

- a) Dimensioned and labeled perimeter buffers
- b) Off-site buffer easement, if applicable
- c) Landscape buffer and parking lot planting plan (including planting strip between parking and building, entryway planting, and 35% shading requirement)

Steep Slope Plan

- a) Classify and quantify slopes 0-10%, 10-15%, 15-25%, and 25% and greater
- b) Show and quantify areas of disturbance in each slope category
- c) Provide/show specialized site design and construction techniques

Grading and Erosion Control Plan

- a) Topography (2-foot contours)
- b) Limits of Disturbance
- c) Pertinent off-site drainage features
- d) Existing and proposed impervious surface tallies

Streetscape Plan, if applicable

- a) Public right-of-way existing conditions plan
- b) Streetscape demolition plan
- c) Streetscape proposed improvement plan
- d) Streetscape proposed utility plan and details
- e) Streetscape proposed pavement/sidewalk details
- f) Streetscape proposed furnishing details
- g) Streetscape proposed lighting detail

Solid Waste Plan

- a) Preliminary Solid Waste Management Plan
- b) Existing and proposed dumpster pads
- c) Proposed dumpster pad layout design
- d) Proposed heavy duty pavement locations and pavement construction detail
- e) Preliminary shared dumpster agreement, if applicable



**CONDITIONAL ZONING APPLICATION
SUBMITTAL REQUIREMENTS
TOWN OF CHAPEL HILL
Planning and Development Services**

Construction Management Plan

- a) Construction trailer location
- b) Location of construction personnel parking and construction equipment parking
- c) Location and size of staging and materials storage area
- d) Description of emergency vehicle access to and around project site during construction
- e) Delivery truck routes shown or noted on plan sheets

Energy Management Plan

- a) Description of how project will be 20% more energy efficient than ASHRAE standards
- b) Description of utilization of sustainable forms of energy (Solar, Wind, Hydroelectric, and Biofuels)
- c) Participation in NC GreenPower program
- d) Description of how project will ensure indoor air quality, adequate access to natural lighting, and allow for proposed utilization of sustainable energy
- e) Description of how project will maintain commitment to energy efficiency and reduced carbon footprint over time
- f) Description of how the project's Transportation Management Plan will support efforts to reduce energy consumption as it affects the community

Exterior Elevations

- a) An outline of each elevation of the building, including the finished grade line along the foundation (height of building measured from mean natural grade)

CZP Application Submittal

April 2022

710 N. Estes Drive

Chapel Hill, NC 27514

Project Narrative

Developer: Lock7 Development, LLC

Lock7 Development, LLC is a boutique real estate development firm with over fourteen years of development experience. We specialize in developing townhomes, multifamily buildings and mixed-use communities in North Carolina and Washington, DC. Our focus is on infill sites, targeting assets in robust, established communities with exceptional connectivity to urban cores. We create unique and exciting places to live and work with a strong emphasis on creative design, community input and environmentally friendly building techniques.

Site Location and Conditions

The proposed development site is a vacant piece of land located at 710 N. Estes Drive or PIN #9789455646 in the records of Orange County, North Carolina. The property is 7.33 acres in size with approximately 450 feet of frontage along N. Estes Drive, west of Somerset Drive and east of Martin Luther King Jr. Boulevard. The site is within the Town of Chapel Hill and is currently zoned R-1 with surrounding uses including multifamily and mixed use, single family residential and senior living. The site to the west was recently rezoned to OI-3-CZD and is known as The Aura Chapel Hill project, which will include apartments, townhomes and retail uses. The site to the east is the Azalea Estates Retirement Community and was rezoned to R-5-CZD. To the north is the Huntington-Somerset neighborhood and the southern border is N. Estes Drive.

The site slopes from 470' at the high point near the northeastern side of the property and down to a low point of about 400' at its south side along N. Estes Drive. A stream determination has been completed for this property and determined that segments of a perennial or intermittent stream are piped in the area. These segments have an associated Jordan Watershed Riparian Buffer and Chapel Hill RCD buffer. Relevant PINs: 9789-35-9617 (site visit 11-19-2018)

Overview of Proposed Development

The Future Land Use Map and the Central West Small Area Plan for this parcel call for multifamily residential development of three and four stories. The proposed site plan would provide a natural transition from the high-density Aura Development site towards the lower density single family neighborhoods on Huntington and Somerset, as well as the schools on N. Estes Drive. The developer's vision is to supply the market with 'missing middle' housing while providing an opportunity for home ownership as opposed to rental housing.

Lock7 Development is proposing the redevelopment of the subject site into a residential community with +/- 95 units. There will be approximately 10 buildings with a variety of unit types in each, including

typical front load townhomes, rear load townhomes, triplexes, and condos in stacked townhomes, also known as a 2 over 2 product. Each unit will have garage parking for at least one vehicle, depending upon the unit size. Guest parking will be distributed throughout the site. There will be a mix of one-, two-, three-, and four-bedroom units with a variety of square footages. Unit sizes will range from 1,000 square feet to 2,500 square feet to provide multiple price points for a large buyer pool. Amenities will include multiple green spaces, bicycle parking, dog park and a playground. Additionally, the developer intends to complete the multimodal path on N. Estes Drive. along the frontage of the site and connect to the adjacent Aura Development.

Vehicular connectivity will be improved in accordance with the Central West Plan as the main access will be on Somerset Drive and the developer intends to connect to the Aura site near the townhome portion of that project. To improve bicycle and pedestrian connectivity, the multimodal path along N. Estes will be completed and the existing sidewalk on Somerset Dr. will be maintained.

The design will be aligned with a contemporary aesthetic incorporating brick and cementitious siding with a variety of rooflines. The massing concept will encourage a residential scale of architecture with each townhome or condominium building having its own unique expression to the overall façade cluster.

March 16, 2022

Judy Johnson
Town of Chapel Hill Planning Department
405 Martin Luther King Jr Boulevard
Chapel Hill, North Carolina 27514

RE: 710 N Estes Townhomes Statements of Consistency with the Comprehensive Plan and Design Guidelines

STATEMENT OF JUSTIFICATION

The proposed zoning brings the subject parcel into greater conformance with the Town’s Comprehensive Plan and the Central West Small Area Plan. The property is currently zoned R-1, and R-5 zoning is requested to fulfill the themes and goals of the comprehensive plan elaborated on below. Both the Future Land Use Map South MLK Blvd Focus Area and Central West Small Area Plan designate this parcel as higher density to include multifamily and/or townhomes, which may be achieved under R-5 zoning. Rezoning to R-5 is consistent with surrounding developments while providing an appropriate transition from less dense development to the north. Statements below further support the case for the requested R-5 zoning district.

STATEMENT OF CONSISTENCY WITH COMPREHENSIVE PLAN

The Lock7 Townhome Development submittal is proposed in accordance with the CH2020 Comprehensive Plan and the Central West Small Area Plan. The proposed plan addresses the following themes with their corresponding goals: A Place for Everyone, Community Prosperity and Engagement, Getting Around, Good Places, New Spaces, Nurturing our Community, and Town and Gown Collaboration. Similarly, it addresses various principles of the Central West Plan tied to themes listed above.

THEME 1: A PLACE FOR EVERYONE

One of the goals of Theme 1 is to provide a range of housing options for current and future residents. The Central West Plan calls for multifamily development in this area (Northeast Quadrant) and approximately 150 residential units east of the future Aura development. Occupying roughly half of the Northeast Quadrant on the Central West Plan, this proposal calls for a mixture of townhomes, triplexes, and 2 over 2’s, meeting the density goals while providing an appropriate land use transition. The site is situated with single family to the north, Azalea Estates Gracious Retirement Living to the east, and future Aura mixed-use and multifamily development to the west. The listed housing products will provide a middle housing option amongst single family homes and apartments and a transition in densities.

THEME 2: COMMUNITY PROSPERITY AND ENGAGEMENT

A goal of Theme 2 is to promote a safe, vibrant and connected community as well as foster success of local businesses. The proposed development contributes to the range of housing options in the Central West Plan as mentioned above and will be well connected to the Town by transit and trails to provide easy access to local businesses in the area. The project will provide a mixed-use trail along Estes Dr, which allows easy access to the future BRT station nearby on MLK Jr. Blvd, therefore easy access to local Chapel Hill businesses and services.

THEME 3: GETTING AROUND

As noted above, the proposed multi-use trail on Estes Dr will enhance the walking and biking experience as a means of getting around in Chapel Hill. As trails connect to one another and become more widespread, they will promote a sustainable transportation system that makes walking and biking safer and more accessible, also furthering goals of the Chapel Hill Climate Action Plan. A dense development as this will also support use of transit and the future BRT along MLK Jr. Blvd. In order to minimize intersections and traffic impacts along Estes Dr, this site will be accessed from Somerset Dr and a connection from Aura. A future TIA will inform the team of additional improvements needed to ensure a development design that minimizes traffic impacts and does not subtract from the quality of life of existing neighbors and future residents.

THEME 4: GOOD PLACES, NEW SPACES

The proposed development provides new housing options to the Central West area, while simultaneously allowing for transitions between existing and future residential and commercial uses. It will be consistent with the height recommendations in the Central West Plan to maintain the residential feel of neighboring communities. Additionally, vegetated buffers will be planted appropriately to separate existing neighborhoods from new development. Amenity area will be located central to the development, to offer a space for gathering and community development.

THEME 5: NURTURING OUR COMMUNITY

This project will protect and maintain environmentally sensitive RCD areas on the southwestern property boundary. The proposal also supports the Chapel Hill Climate Action Plan with the buildout of a multiuse path on the Estes Dr frontage. Providing connectivity and access to trails will promote active transportation via walking and biking to reduce vehicle use and emissions, therefore reducing carbon footprint and improving air quality.

THEME 6: TOWN AND GOWN COLLABORATION

By contributing to the range of housing options in the Central West area, a wider range of people will have the opportunity to live near the University and University Hospital, promoting access for residents to health care centers as noted in the goals of Theme 6 in the Comprehensive Plan.

STATEMENT OF COMPLIANCE WITH DESIGN GUIDELINES

The Lock7 Townhome Development will be built in compliance with the Town's Design Guidelines.

The architecture will be carefully designed with high-quality materials, contemporary design, and will have thoughtful transitions to properties along the subject site's boundaries. Parking will be provided for each unit with guest parking and amenity parking provided as parallel spots adjacent to the courtyard and clubhouse.

Landscape buffers will be designed in accordance with the Town's design manual and with the use of best practices to provide appropriate transitions between the building and streetscapes and adjacent land uses.

Vehicular connectivity will be provided from Somerset Dr and the future Aura development, and internal roadways will avoid dead-end streets as much as possible. Pedestrian connections will be provided to both Somerset and Aura and connect to the multi-use path along Estes Dr. Fire access shall be provided in accordance with code requirements.

Stormwater management facilities, water, sewer, and other utilities will be provided in accordance with the applicable guidelines, standards, and regulations.

Sincerely,

MCADAMS



Jessie Hardesty
Planner II, Planning + Design

CZP Application Submittal

September 2022

710 N. Estes Drive

Chapel Hill, NC 27514

Affordable Housing Proposal

Background

Lock7 Development received feedback from the Housing Advisory Board, Community Housing Trust, town officials and community members to develop the following affordable housing plan for the proposed project at 710 N. Estes Dr.

Proposal

In accordance with the Chapel Hill Inclusionary Zoning Ordinance, Lock7 Development is proposing 15% of the total unit count be designated as affordable, split evenly between 65% and 80% AMI. In Chapel Hill, the IZ ordinance is written to calculate the number of affordable units by multiplying 15% times the number of market rate units. Therefore, the applicant proposes 12/83 units be designated affordable, which equals 14.5%. In accordance with Section 3.10.2(b)2.C, the fraction of a unit shall be provided in the form of a payment in lieu of providing dwelling units, as described in Section 3.10.3.

Based on the feedback received during the concept plan application process, Lock7 Development added a greater variety of unit types and sizes including, traditional townhome and condominiums. The 12 units would be located within the condominium buildings. The unit mix will include 1-bedroom and 2-bedroom units. All units will have designated parking spaces, with the 1-bedroom being surface parked and the 2-bedroom units have 1-car garages and 1 surface parking space.

Lock7 Development plans to work closely with the Housing Advisory Board throughout the development process and intends to deed the affordable units to the Community Housing Trust for perpetual affordability.



McADAMS

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CONTACT

SPENCER CHRISTIANSEN, PE
christiansen@mcadamsco.com
PHONE: 919.361.5000

CLIENT

LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



PROJECT DIRECTORY

ARCHITECT
CI DESIGN INC.
414 FAYETTEVILLE STREET
RALEIGH, NORTH CAROLINA, 27601
PHONE: 410.384.4244

710 N ESTES TOWNHOMES

710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514

CONDITIONAL ZONING PERMIT

PROJECT NUMBER: LKD-21001

DATE: 12. 30. 2021

REVISED: 06. 21. 2022

SHEET INDEX

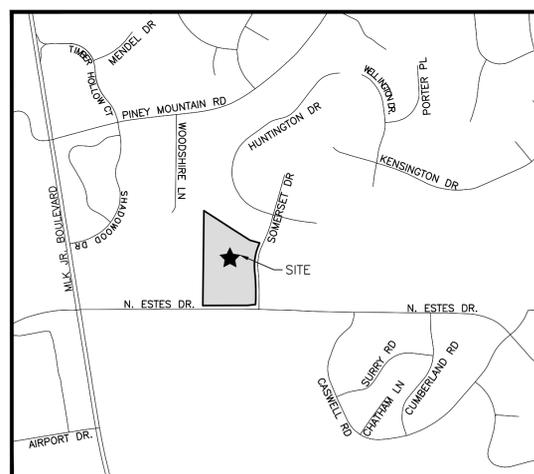
C0.00	PROJECT NOTES
C0.01	AREA MAP
C1.00	EXISTING CONDITIONS
C1.01	STEEP SLOPES PLAN
C2.00	SITE PLAN
C2.10	SOLID WASTE PLAN
C2.11	FIRE VEHICLE TRACKING
C3.00	GRADING PLAN
C4.00	UTILITY PLAN
C7.00	CONSTRUCTION MANAGEMENT PLAN
C8.00	SITE DETAILS
C9.00A	SCM A PLAN VIEW & DETAILS
C9.00B	SCM B PLAN VIEW & DETAILS
L5.00	LANDSCAPE PLAN
L5.01	LANDSCAPE DETAILS
L8.00	LANDSCAPE PROTECTION AND TREE COVERAGE PLAN

ADDITIONAL SHEETS BY OTHERS

020	RENDERED SITE PLAN
021	3-PLEX ELEVATIONS
022	STACKED TOWNHOME ELEVATIONS
023	INTERLOCKING TOWNHOME ELEVATIONS
024	REAR-LOAD TOWNHOME ELEVATIONS
024	FRONT-LOAD TOWNHOME ELEVATIONS

SITE DATA

PIN	9789455646
SITE AREA	319,365 SF / 7.33 AC
GROSS LAND AREA	319,365 SF + 10%(319,365 SF) = 351,302 SF / 8.06 AC
ZONING	EXISTING R-1 PROPOSED R-5-CZD
RIVER BASIN	CAPE FEAR
WATERSHED	JORDAN LAKE
WATERSHED PROTECTION	UNPROTECTED
EXISTING USE	VACANT
PROPOSED USE	RESIDENTIAL
IMPERVIOUS	EXISTING 0.00 AC (00.0%) MAX ALLOWED 4.03 AC (1275,651 SF) (50.0%) PROPOSED 3.43 AC (149,397 SF) (42.5%)
UNITS	PROPOSED 40 TOWNHOME UNITS 40 DUPLEX'S 15 TRIPLEX'S (5 1BR'S, 10 2BR'S) (15 UNITS) 95 TOTAL UNITS
DENSITY	MAXIMUM 15 UNITS/ACRE PROPOSED 11.8 UNITS/ACRE
VEHICULAR PARKING	REQUIRED N/A FOR TOWNHOME/DUPLEX TRIPLEX (MULTI-FAMILY) 5 1BR'S @ 1 SPACE MIN = 5 SPACES MIN @ 1.25 SPACE MAX = 7 SPACES MAX 10 2BR'S @ 1.4 SPACE MIN = 14 SPACES MIN @ 1.75 SPACE MAX = 18 SPACES MAX TOTAL REQUIRED - 19 SPACES TOTAL MAX - 25 SPACES PROPOSED 20 SPACES FOR THE TRIPLEX UNITS (10 GARAGE SPACES, 10 DRIVEWAY SPACES) 25 ADDITIONAL SPACES PROVIDED ON SITE
ACCESSIBLE PARKING	REQUIRED 1 SPACE (1 VAN) PROPOSED 4 SPACES (3 VAN)
BIKE PARKING	REQUIRED TRIPLEX (MULTI-FAMILY) 1 PER 4 UNITS * 15 UNITS = 4 SPACES PROPOSED 8 SPACES
BUILDING HEIGHT	ALLOWED 39'
SETBACK	PROPOSED 39'
BUILDING HEIGHT CORE	ALLOWED 60' PROPOSED 60'
RECREATION SPACE	REQUIRED 0.05 * 351,302 SF = 17,565 SF - FEE IN LIEU 17,565 SF * 1.55 * \$12.00 * 25% = \$81,677.25 PROPOSED 17,600 SF
SETBACKS	REQUIRED STREET = 20 FT MIN = N/A MAX INTERIOR = 6 FT SOLAR = 8 FT PROPOSED STREET = 20 FT (SOMERSET), 20 FT (N ESTES) MIN = N/A MAX INTERIOR = 6 FT SOLAR = 8 FT
BUFFERS	REQUIRED NORTH - 10' TYPE B SOUTH - 30' TYPE D EAST - 20' TYPE C WEST - 10' TYPE B PROPOSED NORTH - 10' TYPE C SOUTH - 10' TYPE A EAST - 10-20' TYPE C WEST - 0-10' MODIFIED TYPE. SEE SHEET L5.00 FOR DETAILS
DISTURBED AREA	6.60 AC (287,496 SF)



VICINITY MAP

N.T.S.



M:\Projects\LKD\21001\04-Production\Engineering\CAD Drawings\2 - ZCP Drawings\Current Drawings\LKD21001_CSI_Lowe_9/26/2022_4:20:06 PM_Spencer Christiansen



REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

CONDITIONAL ZONING PERMIT PLANS FOR:
710 N ESTES TOWNHOMES

710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514
PROJECT NUMBER: LKD-21001

ORANGE COUNTY SOLID WASTE STANDARD PLAN NOTES (CONSTRUCTION WASTE):

- 1. ALL EXISTING STRUCTURES 500 SQUARE FEET AND LARGER SHALL BE ASSESSED PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT TO ENSURE COMPLIANCE WITH THE COUNTY'S REGULATED RECYCLABLE MATERIALS ORDINANCE (RRMO) AND TO ASSESS THE POTENTIAL FOR DECONSTRUCTION AND/OR THE REUSE OF SALVAGEABLE MATERIALS. CONTACT THE ORANGE COUNTY SW ENFORCEMENT OFFICER AT 919-968-2788 TO ARRANGE FOR THE ASSESSMENT.
- 2. PURSUANT TO THE COUNTY'S RRMO, CLEAN WOOD WASTE, SCRAP METAL, AND CORRUGATED CARDBOARD PRESENT IN CONSTRUCTION OR DEMOLITION WASTE MUST BE RECYCLED.
- 3. PURSUANT TO THE COUNTY'S RRMO, ALL HAULERS OF MIXED CONSTRUCTION AND DEMOLITION WASTE WHICH INCLUDES ANY REGULATED RECYCLABLE MATERIALS SHALL BE LICENSED BY ORANGE COUNTY.
- 4. PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITY ON THE SITE, THE APPLICANT SHALL HOLD A PRE-DEMOLITION/PRE-CONSTRUCTION CONFERENCE WITH SOLID WASTE STAFF. THIS MAY BE THE SAME PRE-CONSTRUCTION MEETING HELD WITH OTHER DEVELOPMENT/ENFORCEMENT OFFICIALS.
- 5. THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS (ACM) AND/OR OTHER HAZARDOUS MATERIALS SHALL BE HANDLED IN ACCORDANCE WITH ANY AND ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES.

LANDSCAPE PROTECTION NOTES:

- 1. PLAN SHOWS RARE AND SPECIMEN TREES IN ACCORDANCE WITH THE ORDINANCE THAT WAS IN EFFECT AT THE TIME OF APPROVAL.
- 2. LANDSCAPING SHALL BE COORDINATED TO PRESERVE EXISTING TREES AS MUCH AS POSSIBLE. CONFLICTS BETWEEN PROPOSED PLANTINGS AND EXISTING TREES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR REMEDIATION.
- 3. ALL IRRIGATION SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLLERS THAT ACTIVATE THE SYSTEM ACCORDING TO A DESIRED FREQUENCY AND DURATION, AND SHALL ALSO BE EQUIPPED WITH RAIN OR SOIL MOISTURE SENSORS THAT WILL PREVENT IRRIGATION DURING PERIODS OF RAINFALL OR WHEN THERE IS SUFFICIENT MOISTURE IN THE GROUND FOR PLANT HEALTH AND SURVIVAL IN ACCORDANCE WITH THE LOCAL GOVERNMENT WATER CONSERVATION ORDINANCES.

PAVEMENT MARKING/SIGNAGE NOTES:

- 1. ALL SIGNAGE SHALL BE COORDINATED WITH THE TOWN OF CHAPEL HILL.
- 2. ALL SIGNAGE SHALL MEET MUTCD STANDARDS AND SPECIFICATIONS.
- 3. ALL SIGNAGE SHALL MEET NCDOT PEDESTRIAN SAFETY SPECIFICATIONS.
- 4. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) AND/OR TOWN OF CHAPEL HILL STANDARDS AND SPECIFICATIONS.
- 5. ALL SIGNS SHALL BE PRISMATIC AND ADHERE TO THE MINIMAL RETROREFLECTIVITY STANDARDS FOUND IN THE LATEST VERSION OF THE MUTCD.
- 6. ALL PAVEMENT MARKINGS ON PUBLIC STREETS SHALL BE THERMOPLASTIC AND ARE TO BE PLACED PER NCDOT STANDARDS (REFERENCE 2012 NCDOT DETAILS (1205.01-1205.12)
- 7. SIGN DESIGNS FOR STREET NAME SIGNS SHALL BE APPROVED BY TRANSPORTATION/ENGINEERING DEPARTMENT STAFF TO ENSURE COMPLIANCE WITH MUTCD SPECIFICATIONS. DESIGNS MUST BE APPROVED BY TOWN STAFF PRIOR TO ACCEPTANCE OF STREETS OR ISSUANCE OF 1ST CO.
- 8. ALL STREET NAME SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD INCLUDING MIXED CASE LETTERING, PROPPER LETTER HEIGHTS, AND RETROREFLECTIVITY.

RETAINING WALL NOTES

- 1. THE RETAINING WALL ALIGNMENT SHOWN ON THESE PLANS DEPICTS THE LOCATION OF THE FRONT FACE OF THE RETAINING WALL AT THE TOP OF THE WALL. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING RETAINING WALLS AND ASSOCIATED FOOTERS ARE NOT LOCATED IN ANY STREAM BUFFERS, AND THEIR CONSTRUCTION DOES NOT ENCROACH INTO ANY ADJACENT PROPERTIES DUE TO ANY BATTER INCORPORATED IN THE DESIGN OF THE WALLS.
- 2. RETAINING WALLS ARE TO BE DESIGN-BUILD PROJECTS BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FINAL CONSTRUCTION DRAWINGS FROM A REGISTERED ENGINEER AND GAIN ALL REQUIRED PERMITS NECESSARY PRIOR TO CONSTRUCTION OF THE RETAINING WALLS.
- 3. RETAINING WALLS SHALL BE ASSUMED TO BE BACKFILLED WITH OFF-SITE BORROW MATERIAL OR PROCESSED FILL, UNLESS THE CONTRACTOR CAN PROVIDE TO THE OWNER WITH CONFIRMATION FROM THE GEOTECHNICAL ENGINEER AND THE RETAINING WALL DESIGNER, THAT READILY AVAILABLE ON-SITE SOILS CAN BE USED.
- 4. THE TOP AND BOTTOM OF WALL ELEVATIONS SHOWN ON THESE PLANS IDENTIFY FINISHED GRADE ELEVATIONS ONLY. THE EXTENT THAT THE RETAINING WALL IS BELOW GRADE IS TO BE SHOWN IN THE FOOTING OR ABOVE GRADE TO THE TOP OF THE CAP BLOCK COURSE SHALL BE IDENTIFIED ON THE RETAINING WALL CONSTRUCTION DRAWINGS.
- 5. ALL RETAINING WALLS OVER 30" HIGH SHALL HAVE A SAFETY FENCE (DESIGN BY OTHERS).
- 6. ANY PART OF ANY RETAINING WALL THAT EXTENDS INTO THE RIGHT-OF-WAY WILL REQUIRE AN ENCROACHMENT AGREEMENT. ENCROACHMENT AGREEMENTS FOR RETAINING WALLS SHALL BE APPROVED PRIOR TO CONSTRUCTION DRAWING APPROVAL.
- 7. ANY TIEBACK SYSTEMS FOR THE RETAINING WALLS SHALL NOT BE ALLOWED WITHIN PUBLIC RIGHT-OF-WAY.
- 8. STORMWATER RUN-OFF SHALL BE DIRECTED AWAY FROM RETAINING WALLS. ANY RUN-OFF FLOWING TO AND OVER A RETAINING WALL SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND BROUGHT TO THE ATTENTION OF THE WALL DESIGNER PRIOR TO THEIR DESIGN.

CONSTRUCTION MANAGEMENT NOTES:

- 1. ALL LARGE TRUCKS AS RELATED TO VEHICULAR CONSTRUCTION TRAFFIC SHALL ENTER/LEAVE THE SITE THROUGH THE TEMPORARY CONSTRUCTION ENTRANCES & EXITS AS SHOWN ON THIS PLAN. LANE CLOSURES SHALL BE ESTABLISHED AS SHOWN ON THIS PLAN AND CONSTRUCTION PERSONNEL SHALL BE IN ATTENDANCE TO MANAGE AND DIRECT VEHICULAR AND PEDESTRIAN TRAFFIC.
- 2. ENTRANCE AND EXIT GATES SHALL BE CLOSED UNLESS CONSTRUCTION OR DELIVERY VEHICLES ARE ENTERING OR EXITING THE CONSTRUCTION SITE.
- 3. THE CONTRACTOR SHALL PROVIDE WORK ZONE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH ALL APPLICABLE NCDOT STANDARDS. REFER TO THE TRAFFIC AND PEDESTRIAN CONTROL PLAN FOR SPECIFIC NOTES AND DETAILS.
- 4. NO OPEN BURNINGS SHALL BE PERMITTED.
- 5. THE APPLICANT SHALL POST A CONSTRUCTION SIGN ON THE DEVELOPMENT SITE THAT LISTS THE FOLLOWING:
 - PROPERTY OWNER'S TELEPHONE NUMBER
 - CONTRACTOR'S REPRESENTATIVE & TELEPHONE NUMBER
 - TELEPHONE NUMBER FOR REGULATORY INFO AT TIME OF BUILDING PERMIT
 - SIGN MAY BE A MAXIMUM OF 32 SF AND A MAXIMUM HEIGHT OF 8 FT.
- 8. FENCING AROUND PROJECT SHALL INCLUDE ACCESS GATES WITH A 20-FOOT SWING OR SLIDE MOTION.
- 9. CONSTRUCTION FENCE SHALL BE MODIFIED AS REQUIRED DURING CONSTRUCTION PHASING FOR PEDESTRIAN CIRCULATION.
- 10. PRIOR TO ANY TRAFFIC LANE AND/OR SIDEWALK CLOSURES, THE APPLICANT SHALL CONTACT THE CHAPEL HILL TRAFFIC ENGINEERING OFFICE (919-968-5096 OR 919-968-3100) AT LEAST 5 WORKING DAYS BEFORE THE PROPOSED WORK TO APPLY FOR A LAND CLOSURE PERMIT.
- 11. ROAD CLOSURES ON PUBLIC STREETS MUST BE COORDINATED WITH AND APPROVED BY THE TOWN OF CHAPEL HILL.
- 12. TEMPORARY STREET ROAD SIGNS ARE REQUIRED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADS ALLOWS FOR THE PASSAGE OF VEHICLES. SIGNS SHALL BE OF APPROVED SIZE, WEATHER RESISTANT AND BE MAINTAINED UNTIL REPLACED BY PERMANENT SIGNS.
- 13. CONTRACTOR TO PROVIDE DEDICATED ONSITE PARKING SPACES FOR INSPECTORS AT EACH BUILDING AND NEAR THE JOB TRAILER FOR THE DURATION OF CONSTRUCTION
- 14. ROADS WITH CURB AND GUTTER AND THE FIRST LIFT OF ASPHALT WILL NEED TO BE CONSTRUCTED BEFORE COMBUSTIBLES ARE ON SITE IN ORDER TO MEET REQUIREMENTS FROM FIRE CODE, STORMWATER, AND OWASA. HYDRANTS SHALL BE ACTIVE IN THE AREAS FOR CONSTRUCTION.

GENERAL NOTES:

- 1. CONTRACTOR TO NOTIFY SURROUNDING PROPERTIES 7 DAYS PRIOR TO STARTING CONSTRUCTION.
- 2. CONTRACTOR TO PROVIDE NOTICE TO THE TOWN OF CHAPEL HILL REGARDING SPECIFIC DATES FOR ANY NECESSARY ROAD CLOSURES AND LANE REDUCTIONS.
- 3. GENERAL CONTRACTOR TO COORDINATE WITH SPECIFIC PROPERTIES AFFECTED BY THE PROPOSED ROAD CLOSURES IF REQUIRED TO ENSURE CONTINUOUS ACCESS TO THE AFFECTED PROPERTIES.
- 4. ALL SHOWN PARKING SPACE MARKINGS SHALL BE PER THE TOWN OF CHAPEL HILL CODE FOR PARKING LOTS.
- 5. MINIMUM CORNER CLEARANCES FROM THE CURBLINE OF INTERSECTING STREETS SHALL BE AT LEAST 20' FROM THE POINT OF TANGENCY. NO DRIVEWAYS OR PARKING SPACES SHALL ENCRACH ON THIS MINIMUM CORNER CLEARANCE.
- 6. WITHIN THE SIGHT DISTANCE TRIANGLES SHOWN, NO OBSTRUCTION BETWEEN 2' AND 8' IN HEIGHT ABOVE THE CURB LINE ELEVATION SHALL BE LOCATED IN WHOLE OR IN PART. OBSTRUCTIONS INCLUDE BUT ARE NOT LIMITED TO ANY BERM, FOLIAGE, FENCE, WALL, SIGN, OR PARKED VEHICLE.
- 7. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST TOWN OF CHAPEL HILL, NCDOT AND OWASA STANDARDS AND SPECIFICATIONS.
- 8. ALL DIMENSIONS SHOWN ON SITE PLAN ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- 9. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS: FINAL RULE 29CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING 5 (5) FEET IN DEPTH. EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRES THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER, PROVIDED BY CONTRACTOR RESPONSIBLE FOR EXCAVATION.
- 10. EQUIPMENT AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED PROVIDED APPROVAL HAS BEEN OBTAINED FROM THE OWNER IN WRITING PRIOR TO ORDERING OR INSTALLATION. THE CONTRACTOR SHALL WAIVE ANY CLAIM FOR ADDITIONAL COST RELATED TO THE SUBSTITUTION OR ALTERNATE EQUIPMENT.
- 11. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
- 12. CONTRACTOR IS RESPONSIBLE FOR COORDINATING CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE UTILITY COMPANIES FOR ANY REQUIRED RELOCATION (I.E. POWER POLES, TELEPHONE PEDESTALS, WATER METERS, ETC.).
- 13. PRIOR TO STARTING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL SCHEDULE AND HOLD A PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF CHAPEL HILL ENGINEERING DEPARTMENT, ORANGE COUNTY SOIL AND EROSION DEPARTMENT, ENGINEER, AN OWNER REPRESENTATIVE.
- 14. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- 15. ALL STREET NAME SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD INCLUDING MIXED CASE LETTERING, PROPER LETTER HEIGHTS, AND RETROREFLECTIVITY.
- 16. ALL ASPHALT EDGES SHALL BE SAW CUT TO PROVIDE A GOOD LONGITUDINAL JOINT. MILL 1.5 FEET AT 1.5 INCHES DEEP MINIMUM TO PROVIDE A LONGITUDINAL LAP JOINT FOR FINAL SURFACE LAYER. NO MILLING SHALL BE LEFT FOR A PERIOD OF TIME GREATER THAN 48 HOURS BEFORE A STREET IS TO BE REPAVED/RESURFACED.
- 17. SEPARATE BUILDING PERMITS ARE REQUIRED FOR RETAINING WALLS, DUMPSTER ENCLOSURES, MONUMENTS, SIGNS, OR OTHER ACCESSORY STRUCTURES OR ELEMENTS.
- 18. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND/OR RELOCATION OF ALL EXISTING UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY, AGENCY, OR COMPANY.
- 20. EXISTING CONTOURS ARE BASED ON SURVEY COMPLETED BY SUMMIT. EXISTING UTILITIES SHOWN ARE BASED ON SURVEY AND THE BEST AVAILABLE RECORDS. THE CONTRACTOR, HOWEVER, SHALL VERIFY CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE PLANS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. FOR NECESSARY PLAN OR GRADE CHANGES, NO EXTRA COMPENSATION SHALL BE PAID TO CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- 21. EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED/RESTORED TO THEIR ORIGINAL CONDITION OR TO THE SATISFACTION OF THE OWNER BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE.
- 22. MECHANICAL EQUIPMENT MUST BE PLACED AT OR ABOVE THE BASE FLOOD ELEVATION PLUS 2 FEET.
- 23. A ZONE FOR FIRE DEPARTMENT LADDERS AND FIREFIGHTING OPERATIONS MUST BE PROVIDED, REQUIRING ALL LINES TO BE BURIED SURROUNDING STRUCTURES.
- 24. IF APPLICABLE, BACK WASH WATER FROM THE POOL SHALL DISCHARGE INTO THE SANITARY SEWER SYSTEM, NOT STORM SEWER, AND SHALL NOT EXCEED 50 GALLONS PER MINUTE.
- 25. CONTRACTOR TO CONTACT THE CHAPEL HILL STORMWATER MANAGEMENT DIVISION AT 919-969-7246 TO SCHEDULE SITE INSPECTION AT LEAST TEN (10) DAYS IN ADVANCE OF REQUESTING THE CERTIFICATE OF OCCUPANCY.
- 26. IMPROVEMENTS, STRUCTURES, FIXTURES, SIGNS, TABLES, CHAIRS, PLANTERS, OR ANY OTHER OBJECT SHALL NOT BE PLACED IN SIDEWALK AREAS FOR ANY PERIOD OF TIME.
- 27. HVAC CONDENSATE AND FLOOR DRAINS FROM THE ROOFED PARKING AREA SHALL NOT BE CONNECTED TO THE STORM SEWER SYSTEM. NO ELEVATOR SUMP PUMP DISCHARGE MAY ENTER THE STORM SEWER SYSTEM.
- 28. ANY ROOF DRAINS OR OTHER PLUMBING INTENDED TO DISCHARGE TO THE STORM SEWER SYSTEM NOT SHOWN ON THE APPROVED PLANS ARE NOT APPROVED. ANY DISCHARGE DIRECTED TO THE STORM SEWER SYSTEM THAT IS NOT APPROVED WILL NEED TO APPROVAL FROM THE TOWN OF CHAPEL HILL STORMWATER MANAGEMENT DIVISION.
- 29. THE NORTH CAROLINA DEPARTMENT OF INSURANCE SHALL REVIEW AND APPROVE ANY PROJECTS LISTED IN TABLE 104.1 OF THE NORTH CAROLINA ADMINISTRATION AND POLICIES CODE BEFORE THE TOWN OF CHAPEL HILL WILL BEGIN ITS BUILDING PERMIT REVIEW.
- 30. A SINGLE ELECTRICAL SERVICE SHALL BE PROVIDED TO SERVE THE STRUCTURE WITH THE EXCEPTION OF THE FIRE PUMP, IN ACCORDANCE WITH ARTICLE 230.2(A) OF THE 2017 NORTH CAROLINA ELECTRICAL CODE.
- 31. CURB AND GUTTER AND ATLEAST THE FIRST LIFT OF ASPHALT FOR THE ROADS MUST BE PLACED PRIOR TO THE START OF CONSTRUCTION.
- 32. PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, THE APPLICANT SHALL PROVIDE THE MINIMUM REQUIRED HANDICAPPED PARKING SPACES AND DESIGN ALL HANDICAPPED PARKING SPACES, RAMPS, CROSSWALKS, AND ASSOCIATED INFRASTRUCTURE ACCORDING TO THE AMERICANS WITH DISABILITIES ACT STANDARDS, NORTH CAROLINA BUILDING CODE, AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) CODE, AND TOWN STANDARD.
 - A. THE NUMBER OF PARKING SPACES SHALL COMPLY WITH NCBC 2018 SECTION 1106.1, 1 PER 6 COMPLIANT SPACES OR PORTION THEREOF MUST BE VAN ACCESSIBLE. NO SLOPE SHALL EXCEED 2% IN ANY DIRECTION. SIGNAGE SHALL BE PLACED IN ACCORDANCE WITH NCBC 2018 REQUIREMENTS, MUTCD AND ACC A 117.1.
 - B. CURB CUTS AND ACCESSIBLE ROUTES PER ICC A117.1 2009 EDITION. CROSS SLOPE LIMITED TO 2%. CALL TOWN OF CHAPEL HILL BUILDING INSPECTIONS OFFICE FOR INSPECTION PRIOR TO PLACEMENT OF CONCRETE.
 - C. SLOPES GREATER THAN 5% REQUIRES CONSTRUCTION AS A RAMP.
- 33. FINAL LOCATION OF GAS LINE INSTALLED BY DOMINION ENERGY TO BE VERIFIED IN FIELD PRIOR TO THE INSTALLATION OF ANY FURNISHINGS REQUIRING GAS CONNECTIONS, INCLUDING BUT NOT LIMITED TO FIRE PITS, FIRE TABLES AND OUTDOOR GRILLING STATIONS. CONTRACTOR SHALL COORDINATE WITH DOMINION ENERGY, LANDSCAPE ARCHITECT, ARCHITECT AND OWNER FOR CONNECTIONS TO GAS LINE. CONNECTIONS TO BE PROVIDED BY A LICENSED GAS FITTER/TECHNICIAN AND SHALL CONFIRM TO ALL LOCAL AND STATE REGULATIONS.

GRADING & STORM DRAINAGE NOTES:

- 1. CONTRACTOR SHALL NOTIFY NC 811 (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR TO CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF NC 811. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
- 2. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION CONFERENCE WITH THE ORANGE COUNTY SOIL AND EROSION CONTROL OFFICER, TOWN OF CHAPEL HILL STORM WATER MANAGEMENT DIVISION, AND OWNER'S REP/ENGINEER.
- 3. CONTRACTOR TO CONTACT ERNEST ODEI-LARBI WITH THE TOWN OF CHAPEL HILL AT 919-969-5084 TO POST EROSION CONTROL BOND, ALONG WITH A PERFORMANCE GUARANTEE PER, PRIOR TO ANY LAND DISTURBANCE.
- 4. GRADING AND CONTOURS ARE BASED ON NORTH AMERICAN VERTICAL DATUM 88 (NAVD88).
- 5. SOIL UNDER BUILDINGS AND PAVED AREAS SHALL BE APPROVED, PLACED AND COMPACTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND SHOULD MEET OR EXCEED TOWN OF CHAPEL HILL STANDARDS.
- 6. GRADING IN AREAS DESIGNATED AS "ACCESSIBLE" SHALL COMPLY WITH ALL FEDERAL AND LOCAL ACCESSIBILITY RULES AND GUIDELINES. EVEN THOUGH PLANS MAY NOT SHOW ALL SPOT ELEVATIONS IN THESE REGIONS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE AREAS ARE GRADED TO AMERICAN DISABILITY ACT (ADA) COMPLIANT SPECIFICATIONS.
- 7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AREAS WHERE SPILL CURBS IS NECESSARY TO CONVEY RUNOFF TO THE NEAREST CATCH BASIN OR DRAIN PILE. THE OWNER AND/OR ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR CURBING INSTALLED PRIOR TO PAVING THAT DOES NOT DRAIN PROPERLY.
- 8. ALL PROPOSED INLETS, CATCH BASINS, AND DROP INLETS SHALL BE PROTECTED BY EROSION CONTROL MEASURES AS SHOWN AND SPECIFIED ON THE EROSION CONTROL PLAN.
- 9. THE CURB INLETS AND YARD INLETS SHALL BE CONSTRUCTED IN THE LOCATIONS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR REPORTING ANY DISCREPANCIES IN THE CATCH BASIN ELEVATIONS OR THE PROPOSED PIPE SLOPES TO THE ENGINEER. THE CONTRACTOR IS ALSO RESPONSIBLE TO REPORT ANY CONFLICTS BETWEEN ANY UTILITY, STORM DRAIN LINE, WATER LINE, SEWER LINE OR ANY OTHER PROPOSED OR EXISTING STRUCTURE TO THE ENGINEER.
- 10. THE CONTRACTOR SHALL PROVIDE STORM DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS. THE CONTRACTOR SHALL FIELD VERIFY GRADES SURROUNDING ALL BUILDINGS PRIOR TO GRADING ACTIVITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
- 11. PIPE SPECIFIED AS RCP MAY BE SUBSTITUTED IF APPROVED BY THE TOWN OF CHAPEL HILL WITH APPROVED MATERIALS PER THE TOWN OF CHAPEL HILL STANDARDS AND SPECIFICATIONS OUTSIDE OF PUBLIC RIGHT OF WAY AND EASEMENTS. ALL BEDDING FOR ALTERNATE MATERIALS SHALL CONFORM TO NCDOT, AASHTO AND ASTM SPECIFICATIONS.
- 12. THE MINIMUM PIPE SIZE WITHIN A PUBLIC RIGHT-OF-WAY IS 15".
- 13. FOR ALL PIPE OUTLETS 60" AND GREATER (SINGLE) AND 36" (MULTIPLE) HEADWALLS/ENDWALLS SHALL BE USED AND A 4" HIGH BLACK POLY COATED CHAIN LINK FENCE PLACED OVER THE WALL.
- 14. FOR NPDES PERMIT COMPLIANCE: ALL SLOPES 3:1 AND STEEPER MUST BE STABILIZED WITHIN 7 DAYS, ALL OTHER AREAS MUST BE STABILIZED WITHIN 14 DAYS.
- 15. ALL STORM PIPE SPECIFIED AS REINFORCED CONCRETE (RCP) SHALL BE MINIMUM CLASS III PIPE.
- 16. ALL STORM PIPE SHALL BE LAID AT LEAST 10' HORIZONTALLY OR 18" VERTICALLY FROM ANY WATER MAIN AND 24" VERTICALLY FROM ANY SEWER MAIN. REFER TO NCACT QTR RULES FOR EXEMPTIONS.
- 17. GEOTEXTILE FABRIC OR APPROVED EQUIVALENT ARE REQUIRED AT ALL DISSIPATOR PADS.

FIRE DEPARTMENT NOTES:

- 1. SITE SHALL COMPLY WITH THE LATEST NATIONAL BUILDING AND FIRE CODES.
- 2. FUNCTIONAL FIRE PROTECTION SHALL BE PROVIDED PRIOR TO THE ARRIVAL OF COMBUSTIBLE MATERIALS ON THE SITE.
- 3. FIRE ACCESS ROUTE SHALL HAVE A MINIMUM RADIUS OF 28' (FACE OF CURB) TO ALLOW FIRE APPARATUS ACCESS THROUGHOUT SITE (IFC 503.2.4).
- 4. ANY GATES ACROSS FIRE APPARATUS ACCESS ROADS SHALL BE A MINIMUM WIDTH OF 20', BE OF SWINGING OR SLIDING TYPE AND HAVE AN EMERGENCY MEANS OF OPERATION. ALL GATES IN FIRE TRUCK APPARATUS ACCESS ROUTES SHALL BE OPERABLE BY EITHER FORCIBLE ENTRY OR KEYS AND MUST BE CAPABLE OF BEING OPERATED MY ONE PERSON. ALL GATES IN FIRE TRUCK APPARATUS ACCESS ROUTES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO UL375 AND ASTM F2200.
- 5. ALL PORTIONS OF THE FIRST FLOOR OF THE BUILDING MUST BE WITHIN 150' OF THE FIRE ACCESS ROUTE (IFC 503.1.1), UNLESS OTHERWISE APPROVED BY THE FIRE MARSHALL.
- 6. BUILDING ADDRESSES SHALL BE PLACED ON BOTH SIDES OF THE BUILDING ON A CLEARLY VISIBLE PLACARD FOR LOCATION PURPOSES.
- 7. ALL FIRE TRUCK ACCESSIBLE ROUTES SHALL BE RATED FOR 80,000 LB AND HAVE A MINIMUM CLEAR WIDTH OF 26" (IFC 503.2.1) UNLESS OTHERWISE APPROVED BY THE FIRE MARSHALL.
- 8. FIRE RISER ROOM SHALL BE EQUIPPED WITH AN EXTERNAL LOCK BOX.
- 9. RISER ROOM SHALL HAVE ADEQUATE DRAINAGE FOR EMERGENCY RPZ DISCHARGE.
- 10. PRIVATE FIRE SERVICE MAINS AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 24, NC FFC 507.2.1.
- 11. ALL CONSTRUCTION AND DEMOLITION CONDUCTED SHALL BE IN COMPLIANCE WITH THE CURRENT EDITION OF 2018 NC FIRE CODE CHAPTER 33.
- 12. OPEN BURNING OF TREES, LIMBS, STUMPS, AND CONSTRUCTION DEBRIS ASSOCIATED WITH THIS DEVELOPMENT IS PROHIBITED.
- 13. DURING CONSTRUCTION, VEHICLE ACCESS FOR FIRE FIGHTING SHALL BE PROVIDED. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION ALLOWS PASSAGE OF VEHICLES. SIGNS SHALL BE OF AN APPROVED SIZE, WEATHER RESISTANCE AND MAINTAINED UNTIL REPLACED BY PERMANENT SIGNS.
- 14. THE OWNER/DEVELOPER SHALL DESIGNATE ONE PERSON TO BE THE FIRE PREVENTION PROGRAM SUPERINTENDENT WHO SHALL BE RESPONSIBLE FOR ENFORCING CHAPTER 14 OF THE NCFPC AND THE ON-SITE FIRE PREVENTION PROGRAM AND ENSURE THAT IT IS CARRIED OUT THROUGH COMPLETION OF THE PROJECT.
- 15. A WORKING SPACE OF NOT LESS THAN 36" IN WIDTH AND DEPTH AND 78" IN HEIGHT SHALL BE PROVIDED ON ALL SIDS EXCEPT FOR WALL MOUNTED FDC'S UNLESS OTHERWISE APPROVED BY THE FIRE CODE OFFICIAL. THE FDC'S WHERE REQUIRED MUST BE PHYSICALLY PROTECTED BY AN APPROVES BARRIER FROM IMPACTS.
- 16. ANY REQUIRED FDC'S FOR ANY BUILDING SHALL MEET THE DESIGN AND INSTALLATION REQUIREMENTS FOR THE CURRENT, APPROVED EDITION OF NFPA 131, 13D, 13R, OR 14 OF THE NCFPC 2018 AND TOWN ORDINANCES; 7-38 FOR LOCATIONS. FDC'S SHALL BE INSTALLED ON THE STREET/ADDRESS SIDE OF THE BUILDING AND WITHIN 100' OF A HYDRANT OR UNLESS OTHERWISE APPROVED BY THE FIRE CODE OFFICIAL AND SHALL NOT BE OBSTRUCTED OR HINDERED BY PARKING OR LANDSCAPING.
- 17. WHERE A FIRE HYDRANT IS LOCATED ON A FIRE APPARATUS ACCESS ROAD, THE MINIMUM ROAD WIDTH SHALL BE 26 FEET (7925 mm), EXCLUSIVE OF SHOULDERS (SEE FIGURE D103.1).
- 18. FIRE APPARATUS ACCESS ROADS SHALL NOT BE OBSTRUCTED IN ANY MANNER, INCLUDING THE PARKING OF VEHICLES. THE MINIMUM WIDTHS AND CLEARANCES ESTABLISHED IN SECTIONS 503.2.1 AND 503.2.2 SHALL BE MAINTAINED AT ALL TIMES. 2018 NCFPC 503.4 (FIRE)
- 19. WHERE REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES OR MARKINGS THAT INCLUDE THE WORDS NO PARKING-FIRE LANE SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF. THE MEANS BY WHICH FIRE LANES ARE DESIGNATED SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION AT ALL TIMES AND BE REPLACED OR REPAIRED WHEN NECESSARY TO PROVIDE ADEQUATE VISIBILITY. 2018 NCFPC SECTION 503.3 AND APPENDIX D 103.6, D 103.6.1, D 103.6.2.
- 20. THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE THE INSTALLATION AND MAINTENANCE OF GATES OR OTHER APPROVED BARRICADES ACROSS FIRE APPARATUS ACCESS ROADS, TRAILS, OR OTHER ACCESSWAYS; NOT INCLUDING PUBLIC STREETS, ALLEYS, OR HIGHWAYS. ELECTRIC GATE OPERATORS, WHERE PROVIDED, SHALL BE LISTED IN ACCORDANCE WITH UL 325. GATES INTENDED FOR AUTOMATIC OPERATION SHALL BE DESIGNED, CONSTRUCTED, AND INSTALLED TO COMPLY WITH THE REQUIREMENTS OF ASTM F2200, 2018 NCFPC SECTION 503 AND APPENDIX D103.
- 21. THE GRADE OF THE FIRE APPARATUS ACCESS ROAD SHALL BE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS. 503.2.8 ANGLES OF APPROACH AND DEPARTURE. THE ANGLES OF APPROACH AND DEPARTURE FOR FIRE APPARATUS ACCESS ROADS SHALL BE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS. D 103.2 GRADE. FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE. EXCEPTION: GRADES STEEPER THAN 10 PERCENT AS APPROVED BY THE FIRE CHIEF. 2018 NCFPC SECTION 503 AND APPENDIX D.

ORANGE WATER AND SEWER AUTHORITY UTILITY NOTES:

- 1. STANDARDS AND SPECIFICATIONS - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH OWASA STANDARDS AND SPECIFICATIONS LATEST REVISED EDITION.
- 2. PRECONSTRUCTION CONFERENCE - A PRECONSTRUCTION CONFERENCE WITH THE OWASA CONSTRUCTION INSPECTOR IS REQUIRED BEFORE BEGINNING ANY UTILITY CONSTRUCTION.
- 3. PROJECT ACCEPTANCE - IN ADDITION TO A FINAL INSPECTION APPROVED BY THE OWASA CONSTRUCTION INSPECTOR, THE FOLLOWING DOCUMENTS MUST BE RECEIVED AND APPROVED BY OWASA BEFORE ACCEPTANCE OF THE PROJECT AND THE SETTING OF METERS:
 - ENGINEER'S CERTIFICATION OF PUBLIC SEWER - ORIGINAL DOCUMENT
 - ENGINEER'S CERTIFICATION OF PUBLIC WATER - ORIGINAL DOCUMENT
 - ASSET LETTER - ORIGINAL DOCUMENT
 - LETTER OF INDICATION - ORIGINAL DOCUMENT
 - AS BUILT DRAWINGS (INCLUDING 1"=100' SCALE SITE PLAN) AS BUILTS OF SEWER CONSTRUCTION SUBJECT TO REVIEW AND APPROVAL BY NCDENR DIVISION OF WATER QUALITY.
 - MANHOLE DATA SHEETS
 - RECORDED PLAT
 - ORIGINAL RECORDED WATER AND SEWER DEEDS OF EASEMENT - PREPARED USING OWASA'S STANDARD FORM.
- 4. SEWER STATEMENT - SEWER LINES UNDER CONSTRUCTION SHALL BE PLUGGED WITH A MECHANICAL PLUG AT THE FIRST MANHOLE UPSTREAM FROM THE POINT OF CONNECTION. PLUG SHALL BE PLACED IN THE OUTLET CONNECTION AND SECURED WITH STEEL CABLE. PLUG SHALL REMAIN IN PLACE UNTIL ACCEPTANCE OF LINES BY OWASA. WATER, STONE, DIRT, OR ANY OTHER DEBRIS SHALL NOT BE ALLOWED TO ENTER THE OWASA SANITARY SEWER SYSTEM DURING FLUSHING OPERATIONS OR AT ANY OTHER TIME. CONSTRUCTION TAKING PLACE IN THE VICINITY OF ANY EXISTING OWASA SEWER LINES OR MANHOLES SHALL NOT CAUSE ANY INFLOW OF SURFACE WATER OR DEBRIS TO ENTER THE REMAIN ACCESSIBLE AT ALL TIMES. THE OWNER AND/OR CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES INCURRED TO THE OWASA SANITARY SEWER SYSTEM AND FINES IMPOSED BY THE STATE OF NORTH CAROLINA DIVISION OF WATER QUALITY DUE TO SEWER SPILLS OR OVERFLOWS.
- 5. SEWER SERVICES - SEWER SERVICES LOCATED WITHIN PUBLIC RIGHT-OF-WAY OR OWASA SEWER EASEMENTS MUST BE CONSTRUCTED OF DUCTILE IRON PIPE FROM THE TAP UP TO AND INCLUDING THE FIRST CLEAN-OUT. EXCEPT FOR DEAD END MANHOLES, ALL 4" INCH SEWER SERVICES MUST BE TAPPED INTO THE SEWER MAIN. ALL 6" SERVICES MUST BE CONNECTED TO A MANHOLE. CLEANOUTS SHALL BE SPACED NO MORE THAN 75 FEET APART. CLEANOUTS LOCATED IN PAVEMENT AREAS SHALL BE HEAVY DUTY TRAFFIC RATED CONSTRUCTION.
- 6. BLOCKING AND RODDING - RETAINER GLANDS TO BE USED ON ALL MECHANICAL JOINTS IN ADDITION TO RODDING AND BLOCKING.
- 7. EXISTING VALVES - CONTRACTOR RESPONSIBLE FOR VERIFYING THAT EXISTING VALVE AT THE POINT OF CONNECTION TO THE OWASA SYSTEM IS ADEQUATE FOR PERFORMING AND PASSING HYDROSTATIC PRESSURE AND LEAKAGE TEST. CONTRACTOR, AT HIS EXPENSE, MAY OPTIONALLY REPLACE VALVE OR INSTALL A NEW VALVE FOR THE PURPOSE OF PERFORMING A PRESSURE TEST. EXISTING WATER VALVES IF CONTRACTOR ELECTS TO PRESSURE TEST AGAINST EXISTING VALVE, CONTRACTOR ACCEPTS RESPONSIBILITY FOR ENSURING PASSING PRESSURE TEST IN ACCORDANCE WITH OWASA REQUIREMENTS. IN ANY CASE, NO CLAIM WHATSOEVER SHALL BE MADE FOR FAILURE OF PRESSURE TEST. EXISTING WATER VALVES SHALL BE OPERATED BY OWASA PERSONNEL ONLY. VALVES THAT SEPARATE PURITY APPROVED WATER AND UNAPPROVED WATER ARE TO REMAIN CLOSED AT ALL TIMES. VALVES MAY BE TEMPORARILY OPENED FOR LOADING AND FLUSHING BY THE OWASA INSPECTOR ONLY.
- 8. DECHLORINATION REQUIREMENTS - THE CONTRACTOR SHALL BE RESPONSIBLE FOR NEUTRALIZATION OF CHLORINATED WATER AT THE POINT OF DISCHARGE FROM THE MAIN BEING TESTED. THIS SHALL OCCUR FOLLOWING CHLORINATION TO DISINFECT A MAIN OR ANY OTHER TIME WHEN ELEVATED LEVELS OF CHLORINE COULD POTENTIALLY BE DISCHARGED INTO THE ENVIRONMENT BY THE CONTRACTOR. AT THE TIME THE DISINFECTION AND PURITY TESTING PROCEDURES ARE DISCUSSED WITH THE OWASA CONSTRUCTION INSPECTOR, THE PROCEDURE FOR DECHLORINATION WILL BE COVERED. ABSOLUTELY NO FLUSHING, DISINFECTION, OR PURITY SAMPLING IS TO TAKE PLACE WITHOUT PRIOR APPROVAL OF A SAMPLING PLAN BY THE OWASA INSPECTOR.
- 9. PLEASE BE ADVISED THAT OWASA APPROVAL OF THIS PROJECT IS FOR COMPLIANCE WITH OWASA POLICIES, STANDARDS, AND SPECIFICATIONS ONLY. ALL OTHER MATTERS PERTAINING TO THIS PROJECT ARE THE RESPONSIBILITY OF THE DESIGN ENGINEER. OWASA APPROVAL DOES NOT PRECLUDE THE DEVELOPER, PROJECT ENGINEER, CONTRACTOR, OR OTHER AGENTS OR PARTIES ACTING ON THEIR BEHALF FROM FULL COMPLIANCE WITH OWASA CURRENT STANDARDS, SPECIFICATIONS, AND PROCEDURES OR FROM COMPLYING WITH ANY AND ALL STATUES, RULES, REGULATIONS, AND ORDINANCES WHICH MAY BE IMPOSED BY OTHER GOVERNMENT AGENCIES (LOCAL, STATE, AND FEDERAL) WHICH MAY HAVE JURISDICTION. VIOLATIONS WILL RESULT IN THE OWASA PROJECT APPROVAL BEING RESCINDED.
- 10. CONTACT NC 811 (811 OR 1-800-632-4949) AND OWASA (919-968-4421) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO ANY EXCAVATION OR CONSTRUCTION TO HAVE EXISTING UTILITIES LOCATED.
- 11. DISCHARGE FROM THIS PROJECT MUST BE IN COMPLIANCE WITH THE OWASA SEWER USE ORDINANCE. A GREASE INTERCEPTOR SHALL BE PROVIDED WHEN IN THE OPINION OF OWASA IT IS NECESSARY FOR THE PROPER HANDLING OF WASTEWATER CONTAINING EXCESSIVE AMOUNTS OF GREASE. ALL INTERCEPTION UNITS MUST BE OF THE TYPE AND CAPACITY WHICH IS CERTIFIED BY THE PROJECT ENGINEER AS MEETING THE REQUIREMENTS OF OWASA.
- 12. BACKFLOW PREVENTION WILL BE REQUIRED IN ACCORDANCE WITH OWASA CROSS-CONNECTION CONTROL ORDINANCE AND MANUAL.
- 13. DOMESTIC SERVICE TO INCLUDE REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY.
- 14. FIRE SERVICE TO INCLUDE RPDA BACKFLOW DEVICE.
- 15. FIRE PROTECTION SYSTEMS - PRESSURE TESTING, CHLORINATION, AND PURITY TESTING SHALL BE COMPLETED BEFORE THE INSTALLATION OF THE RPDA UNIT.
- 16. REMOTE READ-OUT DEVICES - RPDA AND RPZ DEVICES LOCATED INSIDE BUILDINGS MUST BE EQUIPPED WITH AN AMR METER TO BE PURCHASED FROM OWASA AND INSTALLED BY THE CONTRACTOR. CONTACT THE OWASA CONSTRUCTION INSPECTOR FOR DETAILS OF THIS INSTALLATION.
- 17. FOR FIRE SERVICE BACKFLOW DEVICES, USE A DOUBLE CHECK DETECTOR, REDUCED PRESSURE ZONE ASSEMBLY MEETING THE STANDARDS OF THE OWASA CROSS CONNECTION CONTROL ORDINANCE AND MANUAL. INSTALL THE DEVICE IN AN INTERNAL RISER ROOM WITH EXTERNAL ACCESS. CLEARANCES SHALL COMPLY WITH THE OWASA CROSS CONNECTION CONTROL ORDINANCES AND MANUAL. ACCESS TO RISER ROOM FROM OUTSIDE SHALL INCLUDE PROVISIONS FOR THE FIRE DEPARTMENT SUCH AS A KNOX BOX.
- 18. ALL BUILDINGS WITH FIRE SUPPRESSION LINES MUST HAVE BACKFLOW DEVICES LOCATED INSIDE THE BUILDING IN AN ABOVE GROUND LOCATION ADJACENT TO THE OUTSIDE WALL WHERE THE WATERLINE ENTERS THE BUILDING.
- 19. FOR IRRIGATION SERVICE BACKFLOW DEVICE, USE A REDUCED PRESSURE ZONE ASSEMBLY MEETING THE STANDARDS OF THE OWASA CROSS CONNECTION CONTROL ORDINANCE AND MANUAL. INSTALL THE IRRIGATION DEVICE INSIDE AN ABOVE GROUND HOT BOX.
- 20. UNDERGROUND VALVETS FOR METERS SHALL BE DRAINED BY PVC SCHEDULE 40 DRAINS TO DAYLIGHT INTO SLOPES. CONNECTION TO STORM STRUCTURES IS ONLY ALLOWED WITH THE CONSENT OF OWASA. DRAIN SIZES SHALL BE 2" DIAMETER FOR METERS OR DEVICES LESS THAN 2" AND SHALL BE 4" DIAMETER FOR DEVICES OVER 2".
- 21. CONNECTION OF SANITARY SEWER SERVICE TO AN EXISTING MANHOLE SHALL COMPLY WITH OWASA STANDARDS, INCLUDING: CORE DRILL FOR OPENING INTO MANHOLE AND INSTALL WITH FLEXIBLE BOOT. IF PAVEMENT CUT IS REQUIRED, CONTRACTOR SHALL PATCH PAVEMENT IN ACCORDANCE WITH TOWN OF CHAPEL HILL STANDARDS AND PROPER GEOTECHNICAL INFORMATION FOR SOIL LOADING.
- 22. IF HYDRAULIC ELEVATORS ARE USED THE SUMP MUST BE PLUMBED TO SANITARY SEWER LINES.
- 23. FIRE HYDRANTS MUST BE FULLY FUNCTIONAL AND PHYSICALLY APPROVED BY OWASA BEFORE COMBUSTIBLE MATERIALS CAN BE BROUGHT ON TO THE SITE.

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

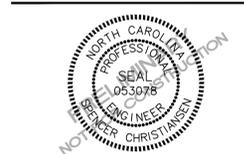
www.mcadamsco.com

CLIENT

LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

NO.	DATE	REVISED PER
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO.	LKD-21001
FILENAME	LKD21001-N1
CHECKED BY	SJC / ZNB
DRAWN BY	WHM
SCALE	N/A
DATE	12.30.2021

SHEET

PROJECT NOTES

C0.00

N:\Projects\1401\14012021001\04_Production\Engineering\CAD Drawings\12 - CDP Drawings\Current Drawings\14012021001-N1.dwg, 6/27/2022 3:21:10 PM, Spencer, Christopher

Know what's below.
Call before you dig.

CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.



McADAMS

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919.361.5000
fax 919.361.2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360

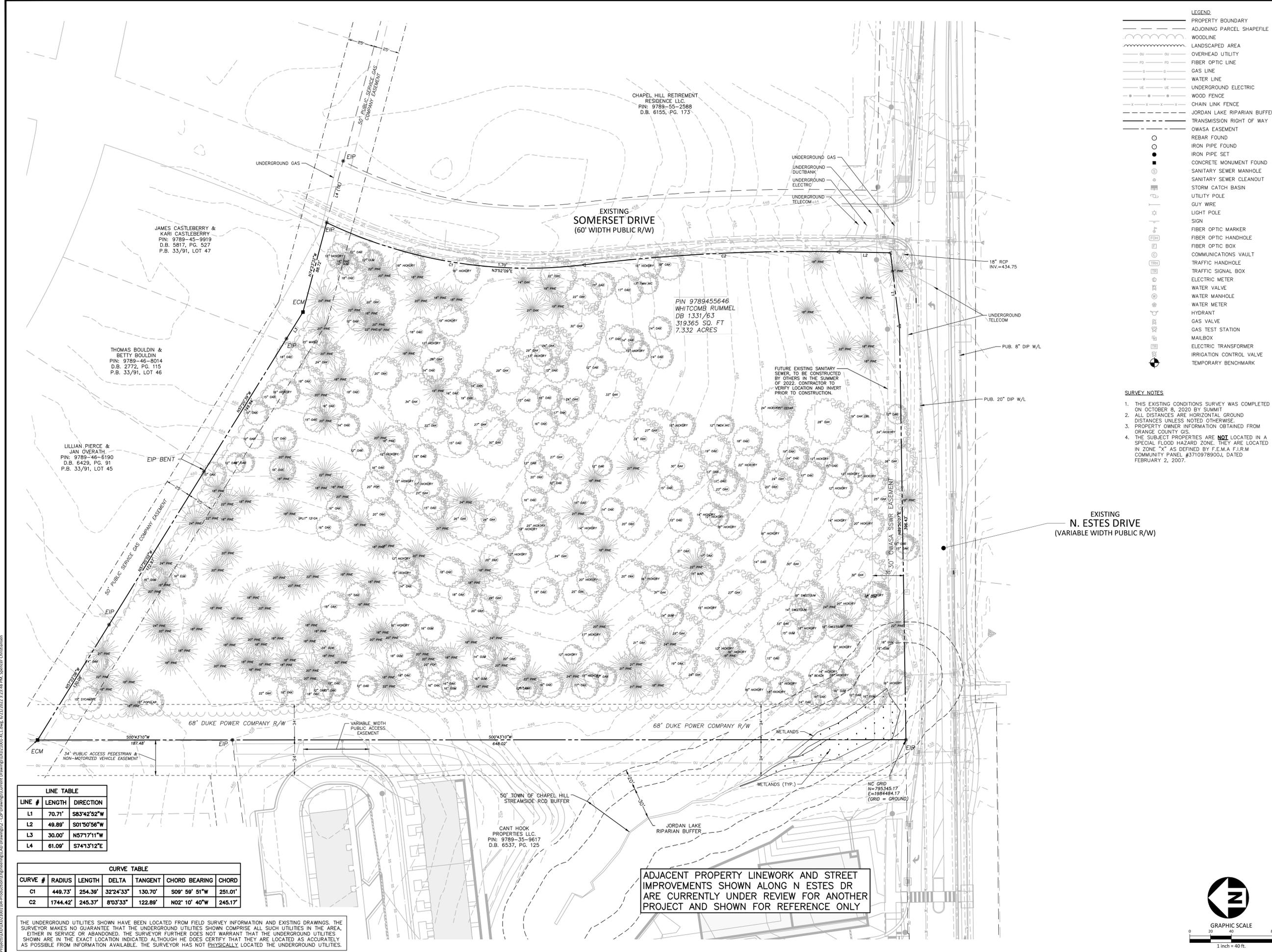


710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PARCEL SHAPEFILE
- WOODLINE
- LANDSCAPED AREA
- OVERHEAD UTILITY
- FIBER OPTIC LINE
- GAS LINE
- WATER LINE
- UNDERGROUND ELECTRIC
- WOOD FENCE
- CHAIN LINK FENCE
- JORDAN LAKE RIPARIAN BUFFER
- TRANSMISSION RIGHT OF WAY
- OWASA EASEMENT
- REBAR FOUND
- IRON PIPE FOUND
- IRON PIPE SET
- CONCRETE MONUMENT FOUND
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- STORM CATCH BASIN
- UTILITY POLE
- GUY WIRE
- LIGHT POLE
- SIGN
- FIBER OPTIC MARKER
- FIBER OPTIC HANDHOLE
- FIBER OPTIC BOX
- COMMUNICATIONS VAULT
- TRAFFIC HANDHOLE
- TRAFFIC SIGNAL BOX
- ELECTRIC METER
- WATER VALVE
- WATER MANHOLE
- WATER METER
- HYDRANT
- GAS VALVE
- GAS TEST STATION
- MAILBOX
- ELECTRIC TRANSFORMER
- IRRIGATION CONTROL VALVE
- TEMPORARY BENCHMARK

- SURVEY NOTES
1. THIS EXISTING CONDITIONS SURVEY WAS COMPLETED ON OCTOBER 8, 2020 BY SUMMIT
 2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES UNLESS NOTED OTHERWISE.
 3. PROPERTY OWNER INFORMATION OBTAINED FROM ORANGE COUNTY GIS.
 4. THE SUBJECT PROPERTIES ARE **NOT** LOCATED IN A SPECIAL FLOOD HAZARD ZONE. THEY ARE LOCATED IN ZONE "X" AS DEFINED BY F.E.M.A. F.I.R.M. COMMUNITY PANEL #3710978900J, DATED FEBRUARY 2, 2007.



LINE TABLE

LINE #	LENGTH	DIRECTION
L1	70.71'	S83°42'52"W
L2	49.89'	S01°50'56"W
L3	30.00'	N57°17'11"W
L4	61.09'	S74°3'12"E

CURVE TABLE

CURVE #	RADIUS	LENGTH	DELTA	TANGENT	CHORD BEARING	CHORD
C1	449.73'	254.39'	32°24'33"	130.70'	S09°59'51"W	251.01'
C2	1744.42'	245.37'	8°03'33"	122.89'	N02°10'40"W	245.17'

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

ADJACENT PROPERTY LINEWORK AND STREET IMPROVEMENTS SHOWN ALONG N ESTES DR ARE CURRENTLY UNDER REVIEW FOR ANOTHER PROJECT AND SHOWN FOR REFERENCE ONLY

GRAPHIC SCALE
1 inch = 40 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
 FILENAME LKD21001-XC1
 CHECKED BY SJC / ZNB
 DRAWN BY WHM
 SCALE 1" = 40'
 DATE 12.30.2021

SHEET

EXISTING CONDITIONS

C1.00



McADAMS

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

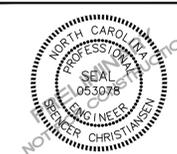
www.mcadamsco.com

CLIENT

LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



**710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514**



REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
FILENAME LKD21001-SS1
CHECKED BY SJC / ZNB
DRAWN BY WHM
SCALE 1" = 40'
DATE 12.30.2021

SHEET

STEEP SLOPES PLAN

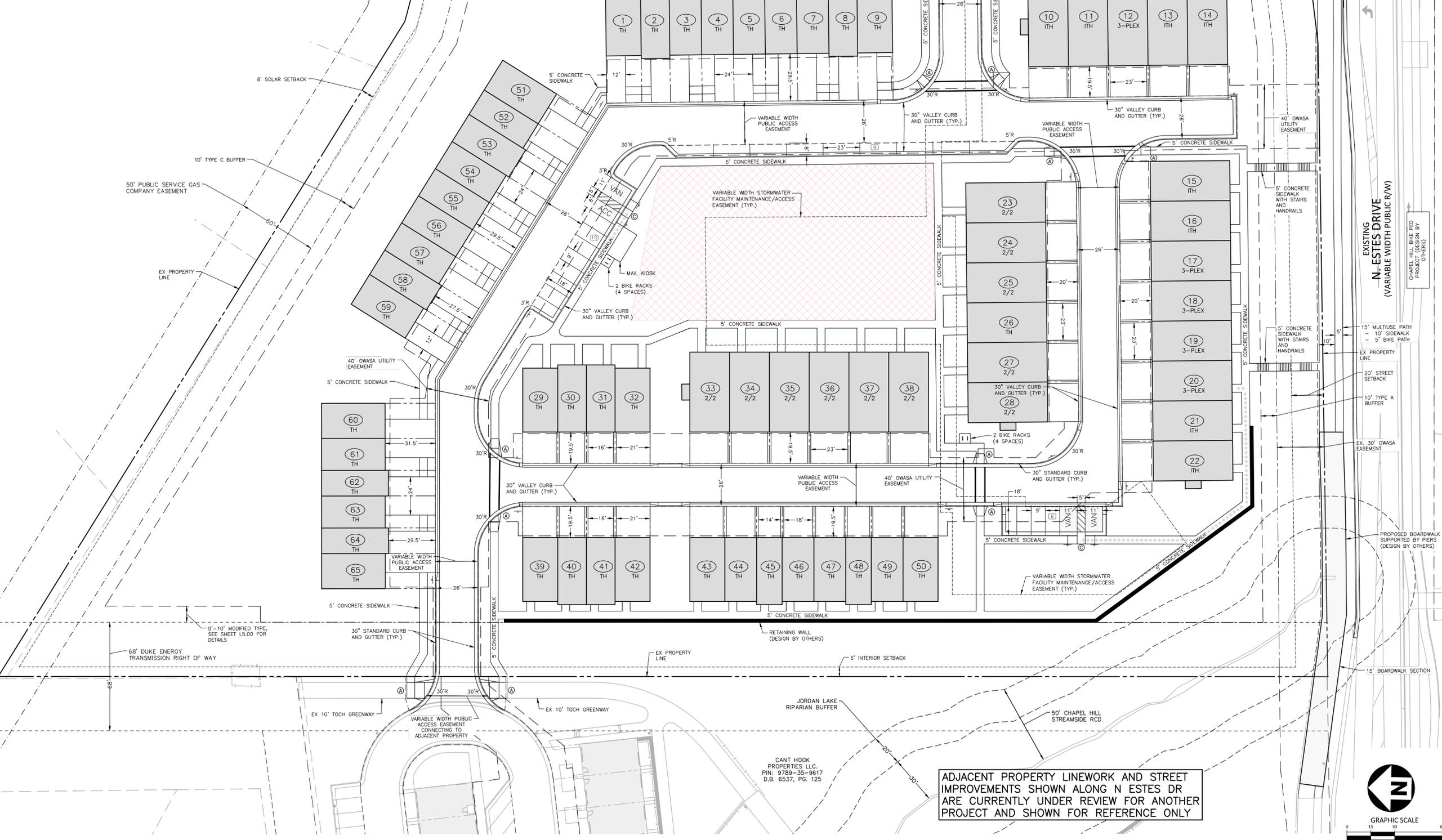
C1.01



M:\Projects\LU021001\04-Production\Engineering\CAD Drawings\2 - CDP Drawings\Current Drawings\LU021001-SS1.dwg, 6/21/2022 3:19:53 PM, Spencer Christianisen

SITE LEGEND

-  SIGNAGE
-  YARD LIGHTS
-  LIGHT POLE
-  POWER POLE
-  TRAFFIC DIRECTIONAL ARROW
-  ACCESSIBLE PARKING STALL
-  VAN ACCESSIBLE PARKING STALL
-  PARKING SPACE COUNT
-  ACCESSIBLE RAMPS
-  ACCESSIBLE ROUTE
-  PROPERTY LINE
-  RIGHT-OF-WAY LINE
-  LOT LINE
-  RECREATIONAL AREA
17,600 SF



CHAPEL HILL RETIREMENT
RESIDENCE LLC.
PIN: 9789-55-2588
D.B. 6155, PG. 173

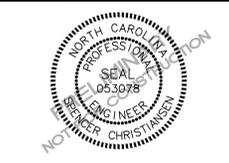


McADAMS
The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713
phone 919.361.5000
fax 919.361.2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT
LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

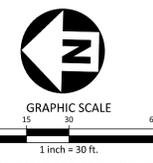
NO.	DATE	DESCRIPTION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
FILENAME LKD21001-OAS1
CHECKED BY SIC / ZNB
DRAWN BY WHM
SCALE 1" = 30'
DATE 12.30.2021
SHEET

SITE PLAN
C2.00

ADJACENT PROPERTY LINWORK AND STREET IMPROVEMENTS SHOWN ALONG N ESTES DR ARE CURRENTLY UNDER REVIEW FOR ANOTHER PROJECT AND SHOWN FOR REFERENCE ONLY

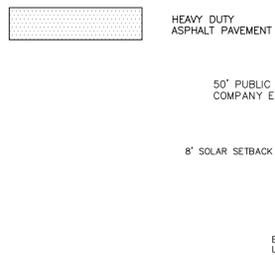


M:\Projects\LKD\21001\04-Production\Engineering\CAD Drawings\3 - CZP Drawings\Current Drawings\LKD21001-OAS1.dwg, 5/21/2022 3:32:07 PM, Spencer Christensen

GENERAL NOTES:

- BY ORANGE COUNTY ORDINANCE, CLEAN WOOD WASTE, SCRAP METAL, AND CORRUGATED CARDBOARD PRESENT IN CONSTRUCTION OR DEMOLITION WASTE MUST BE RECYCLED.
- BY ORANGE COUNTY ORDINANCE, ALL HAULERS OF MIXED CONSTRUCTION AND DEMOLITION WASTE THAT INCLUDES ANY REGULATED RECYCLABLE MATERIALS SHALL BE LICENSED BY ORANGE COUNTY.
- PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITY ON THE SITE THE APPLICANT SHALL HOLD A PRE-DEMOLITION/PRE-CONSTRUCTION CONFERENCE WITH THE SOLID WASTE STAFF (919-968-2788). THIS MAY BE THE SAME PRE-CONSTRUCTION MEETING HELD WITH OTHER DEVELOPMENT/ENFORCEMENT OFFICIALS.
- THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS (ACM) AND/OR OTHER HAZARDOUS MATERIALS IN CONSTRUCTION AND DEMOLITION WASTE SHALL BE HANDLED IN ACCORDANCE WITH ANY AND ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES.
- IF ANY VEHICLES ARE PARKED IN THE REFUSE OR RECYCLABLES COLLECTION VEHICLE ACCESS AREA, THE CONTAINERS WILL NOT RECEIVE SERVICE UNTIL THE NEXT SCHEDULED COLLECTION DAY.
- THE OWNER, OR THEIR DESIGNEE, SHALL BE RESPONSIBLE FOR MAINTAINING A FIRE WATCH DURING CONSTRUCTION AND DEMOLITION WHERE MATERIALS SUBJECT TO SPONTANEOUS COMBUSTION OR OTHER HAZARDOUS CONSTRUCTION OR DEMOLITION IS OCCURRING.
- ALL CONSTRUCTION AND DEMOLITION SHALL BE CONDUCTED IN COMPLIANCE WITH THE CURRENT EDITION OF CHAPTER 14 OF THE NC FPC.
- ITEMS TO BE RECYCLED WILL INCLUDE ALL MATERIALS ACCEPTED BY ORANGE COUNTY SOLID WASTE (INCLUDED BUT NOT LIMITED TO):
 - GLASS (CLEAR, BROWN AND GREEN)
 - PLASTIC
 - NEWSPAPERS, MAGAZINES AND OTHER PAPER
 - METAL CANS
 - CARDBOARD
- ADEQUATE SITE LIGHTING SHALL BE PROVIDED IN/AROUND THE SOLID WASTE AND RECYCLING STORAGE AREAS.
- HEAVY DUTY ASPHALT AND CONCRETE SECTIONS ARE PROVIDED ON SHEET C3.00. THESE SECTIONS APPLY UNLESS AN APPROVED GEOTECHNICAL ENGINEER HAS DESIGN SPECIFIC FOR THIS PROJECT.

LEGEND



RECYCLING NOTES

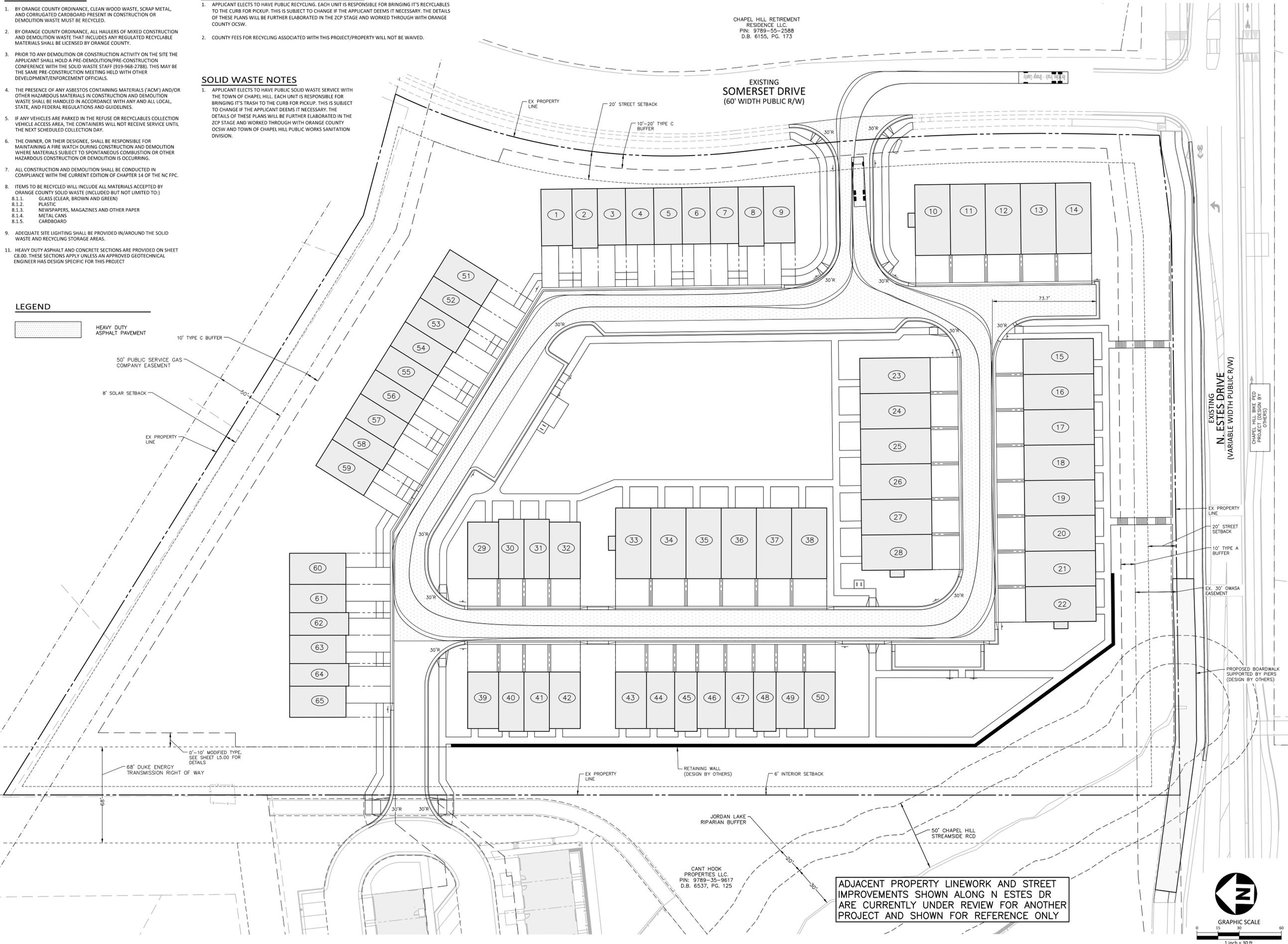
- APPLICANT ELECTS TO HAVE PUBLIC RECYCLING. EACH UNIT IS RESPONSIBLE FOR BRINGING ITS RECYCLABLES TO THE CURB FOR PICKUP. THIS IS SUBJECT TO CHANGE IF THE APPLICANT DEEMS IT NECESSARY. THE DETAILS OF THESE PLANS WILL BE FURTHER ELABORATED IN THE ZCP STAGE AND WORKED THROUGH WITH ORANGE COUNTY OCSW.
- COUNTY FEES FOR RECYCLING ASSOCIATED WITH THIS PROJECT/PROPERTY WILL NOT BE WAIVED.

SOLID WASTE NOTES

- APPLICANT ELECTS TO HAVE PUBLIC SOLID WASTE SERVICE WITH THE TOWN OF CHAPEL HILL. EACH UNIT IS RESPONSIBLE FOR BRINGING ITS TRASH TO THE CURB FOR PICKUP. THIS IS SUBJECT TO CHANGE IF THE APPLICANT DEEMS IT NECESSARY. THE DETAILS OF THESE PLANS WILL BE FURTHER ELABORATED IN THE ZCP STAGE AND WORKED THROUGH WITH ORANGE COUNTY OCSW AND TOWN OF CHAPEL HILL PUBLIC WORKS SANITATION DIVISION.

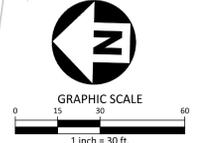
CHAPEL HILL RETIREMENT RESIDENCE LLC
 PIN: 9789-55-2588
 D.B. 6155, PG. 173

EXISTING SOMERSET DRIVE
 (60' WIDTH PUBLIC R/W)



CANT HOOK PROPERTIES LLC
 PIN: 9789-35-9617
 D.B. 6537, PG. 125

ADJACENT PROPERTY LINework AND STREET IMPROVEMENTS SHOWN ALONG N ESTES DR ARE CURRENTLY UNDER REVIEW FOR ANOTHER PROJECT AND SHOWN FOR REFERENCE ONLY



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



McADAMS

The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713

phone 919. 361. 5000
 fax 919. 361. 2269
 license number: C-0293, C-187

www.mcadamsco.com

CLIENT
 LOCK7 DEVELOPMENT
 1101 CONNECTICUT AVENUE NW #450
 WASHINGTON, DC 20036
 DAVID GORMAN
 PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
 CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

NO.	DATE	DESCRIPTION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
 FILENAME LKD21001-SWST1
 CHECKED BY SJC / ZNB
 DRAWN BY WHM
 SCALE 1" = 30'
 DATE 12.30.2021

SHEET

SOLID WASTE PLAN

C2.10

M:\Projects\LKD\21001\01-Production\Engineering\CAD Drawings\2 - ZCP Drawings\Current Drawings\LKD21001-SWST1.dwg, 6/21/2022 3:31:24 PM, Spencer Christensen



McADAMS

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

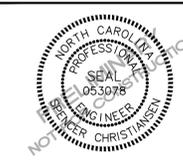
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT
LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
 FILENAME LKD21001-AT1
 CHECKED BY SJC / ZNB
 DRAWN BY WHM
 SCALE 1" = 30'
 DATE 12.30.2021

SHEET
FIRE VEHICLE TRACKING

C2.11

CHAPEL HILL RETIREMENT
RESIDENCE LLC
PIN: 9789-55-2588
D.B. 6155, PG. 173

EXISTING
SOMERSET DRIVE
(60' WIDTH PUBLIC R/W)

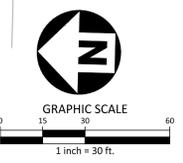
EXISTING
N. ESTES DRIVE
(VARIABLE WIDTH PUBLIC R/W)

EX. PROPERTY LINE
20' STREET SETBACK
10' TYPE A BUFFER
EX. 30' OWASA EASEMENT

PROPOSED BOARDWALK
SUPPORTED BY PIERS
(DESIGN BY OTHERS)

ADJACENT PROPERTY LINework AND STREET
IMPROVEMENTS SHOWN ALONG N ESTES DR
ARE CURRENTLY UNDER REVIEW FOR ANOTHER
PROJECT AND SHOWN FOR REFERENCE ONLY

CANT HOOK
PROPERTIES LLC.
PIN: 9789-35-9617
D.B. 6537, PG. 125



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

FIRE LANE SIGNAGE

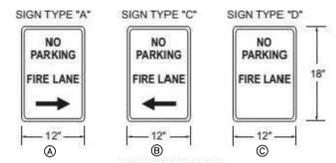


FIGURE D103.6
FIRE LANE SIGNS

LEGEND



GENERAL NOTES:

- 1. OUTER PATH IS TRUCK OVERHANG, INNER PATH IS TIRE TRACKING

8' SOLAR SETBACK
 10' TYPE C BUFFER
 50' PUBLIC SERVICE GAS
COMPANY EASEMENT

EX. PROPERTY LINE

68' DUKE ENERGY
TRANSMISSION RIGHT OF WAY

0'-10' MODIFIED TYPE,
SEE SHEET L5.00 FOR
DETAILS

VARIABLE WIDTH PUBLIC
ACCESS EASEMENT
CONNECTING TO
ADJACENT PROPERTY

RETAINING WALL
(DESIGN BY OTHERS)

6' INTERIOR SETBACK

50' CHAPEL HILL
STREAMSIDE RCD

JORDAN LAKE
RIPARIAN BUFFER

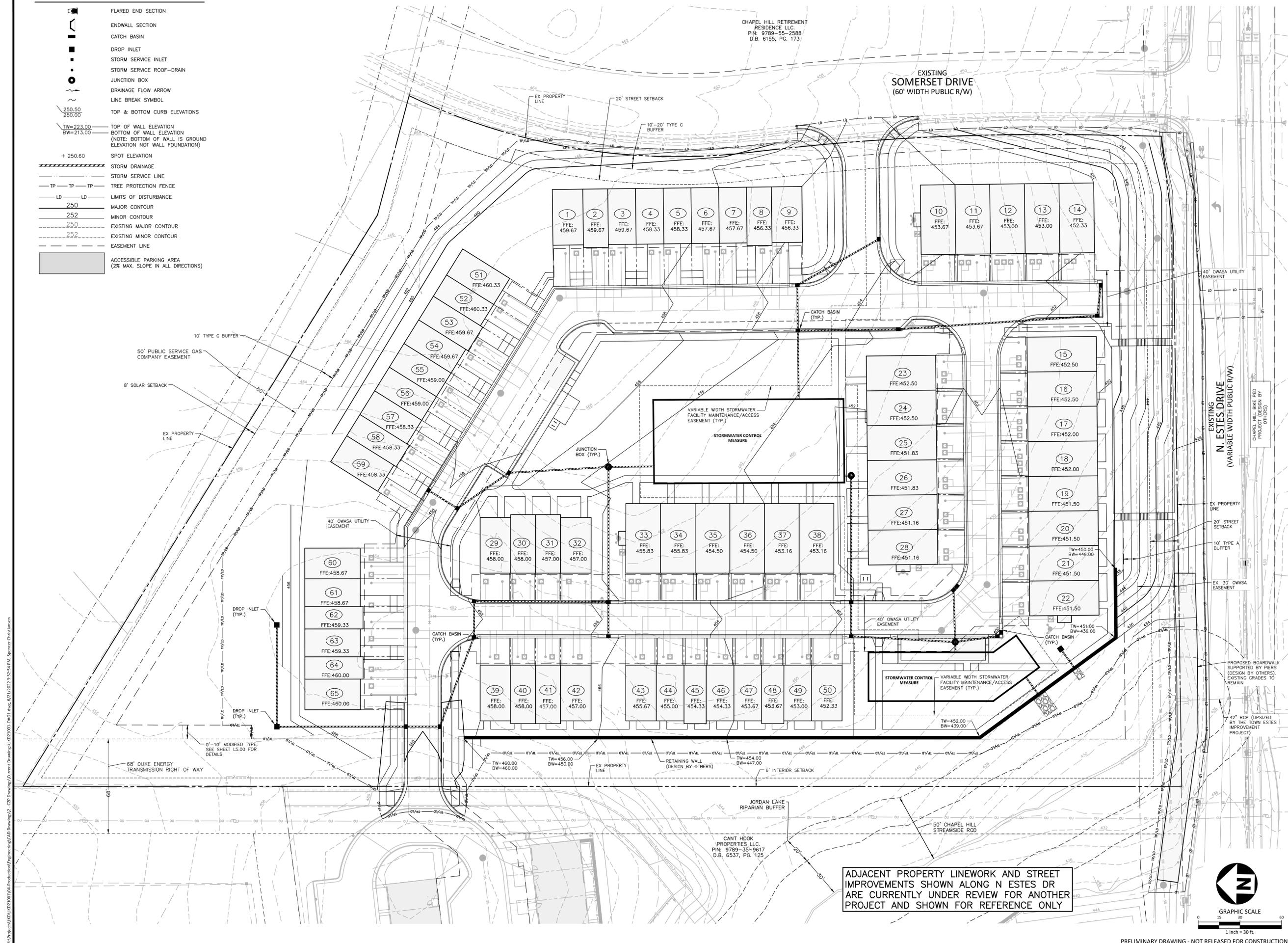
EX. PROPERTY LINE

VARIABLE WIDTH
PUBLIC ACCESS
EASEMENT

<

GRADING LEGEND

-  FLARED END SECTION
-  ENDWALL SECTION
-  CATCH BASIN
-  DROP INLET
-  STORM SERVICE INLET
-  STORM SERVICE ROOF-RAIN
-  JUNCTION BOX
-  DRAINAGE FLOW ARROW
-  LINE BREAK SYMBOL
-  TOP & BOTTOM CURB ELEVATIONS
-  TOP OF WALL ELEVATION
-  BOTTOM OF WALL ELEVATION
(NOTE: BOTTOM OF WALL IS GROUND ELEVATION NOT WALL FOUNDATION)
-  SPOT ELEVATION
-  STORM DRAINAGE
-  STORM SERVICE LINE
-  TREE PROTECTION FENCE
-  LIMITS OF DISTURBANCE
-  MAJOR CONTOUR
-  MINOR CONTOUR
-  EXISTING MAJOR CONTOUR
-  EXISTING MINOR CONTOUR
-  EASEMENT LINE
-  ACCESSIBLE PARKING AREA
(2% MAX. SLOPE IN ALL DIRECTIONS)



CHAPEL HILL RETIREMENT RESIDENCE LLC
PIN: 9789-55-2588
D.B. 6155, PG. 173

CANT HOOK PROPERTIES LLC
PIN: 9789-35-9617
D.B. 6537, PG. 125

ADJACENT PROPERTY LINework AND STREET IMPROVEMENTS SHOWN ALONG N ESTES DR ARE CURRENTLY UNDER REVIEW FOR ANOTHER PROJECT AND SHOWN FOR REFERENCE ONLY



McADAMS
The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT
LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



**710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514**



REVISIONS

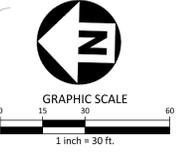
NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
FILENAME LKD21001-OAG1
CHECKED BY SJC / ZNB
DRAWN BY WHM
SCALE 1" = 30'
DATE 12.30.2021

SHEET

GRADING PLAN
C3.00



M:\Projects\LU021001\01-Production\Engineering\CAD Drawings\2 - CIP Drawings\Current Drawings\LU021001-OAG1.dwg, 6/21/2022 3:32:54 PM, Spencer Christensen

UTILITY LEGEND

	FIRE HYDRANT ASSEMBLY
	FIRE DEPARTMENT CONNECTION (FDC)
	WATER METER
	WATER VALVE
	POST INDICATOR VALVE
	VALVE IN MANHOLE
	METER & VAULT
	BACKFLOW PREVENTER
	REDUCER
	PLUG
	BLOW-OFF ASSEMBLY
	SANITARY SEWER MANHOLE
	SEWER CLEAN-OUT
	SEWER FLOW DIRECTION ARROW
	YARD LIGHTS
	LIGHT POLE
	POWER POLE
	LINE BREAK SYMBOL
	WATERLINE
	WATER SERVICE LINE
	UTILITY SLEEVE
	SANITARY SEWER
	SEWER SERVICE LINE
	SEWER FORCE MAIN
	GAS LINE
	OVERHEAD UTILITY
	UNDERGROUND ELECTRIC
	TELEPHONE
	EASEMENT LINE

CHAPEL HILL RETIREMENT RESIDENCE LLC
 PIN: 9789-55-2588
 D.B. 6155, PG. 173

EXISTING SOMERSET DRIVE
 (60' WIDTH PUBLIC R/W)

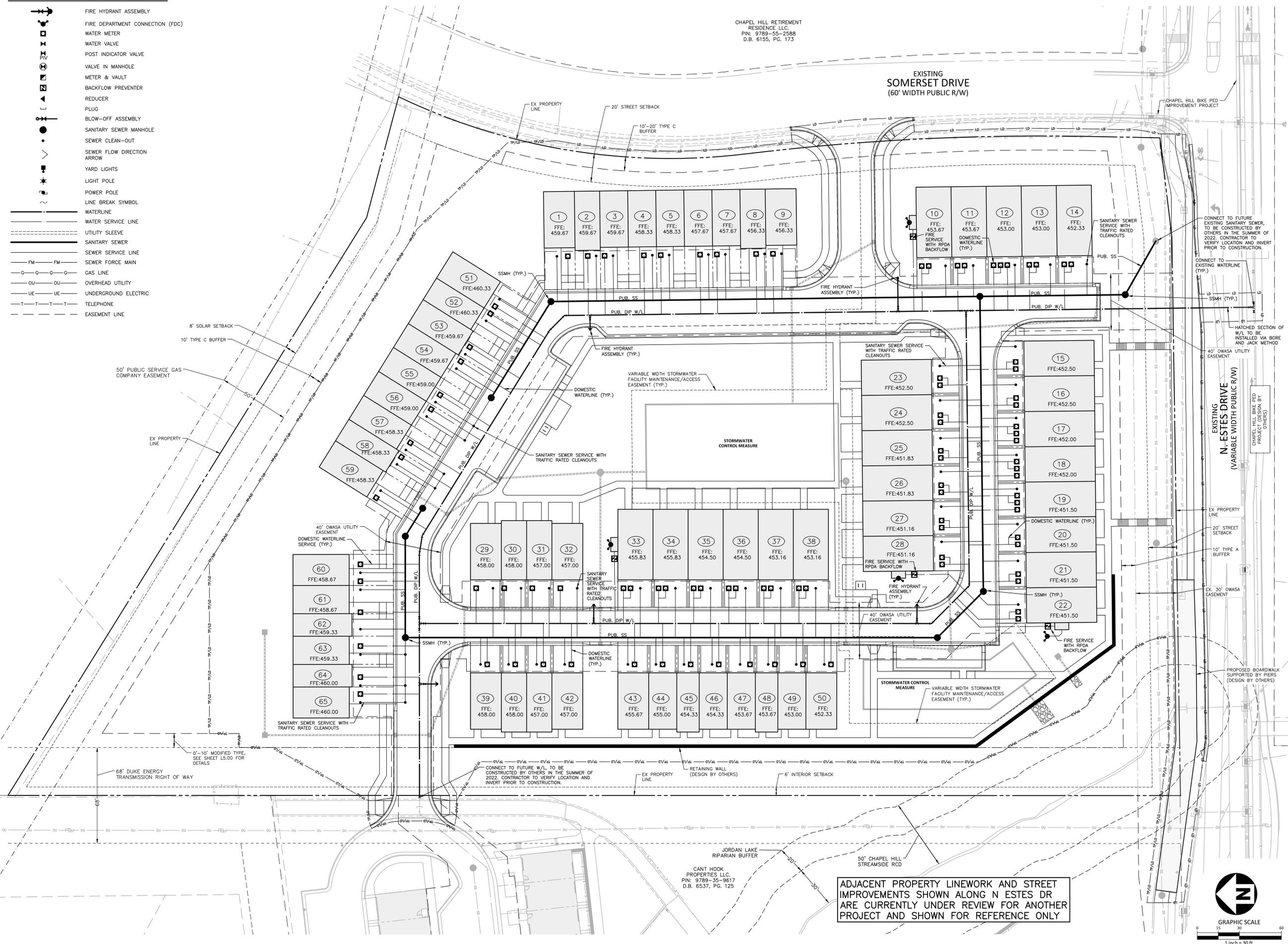


McADAMS
 The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713
 phone 919.361.5000
 fax 919.361.2269
 license number: C-0293, C-187
 www.mcadamsco.com

CLIENT
 LOCK7 DEVELOPMENT
 1101 CONNECTICUT AVENUE NW #450
 WASHINGTON, DC 20036
 DAVID GORMAN
 PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
 710 N ESTES DR
 CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

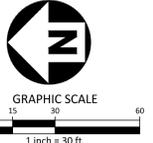
PLAN INFORMATION

PROJECT NO. LKD-21001
 FILENAME LKD21001-0AU1
 CHECKED BY SJC / ZNB
 DRAWN BY WHM
 SCALE 1" = 30'
 DATE 12.30.2021

SHEET

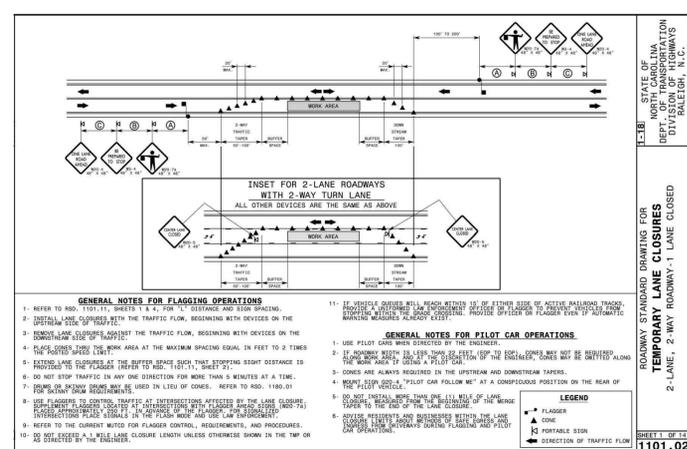
UTILITY PLAN

C4.00



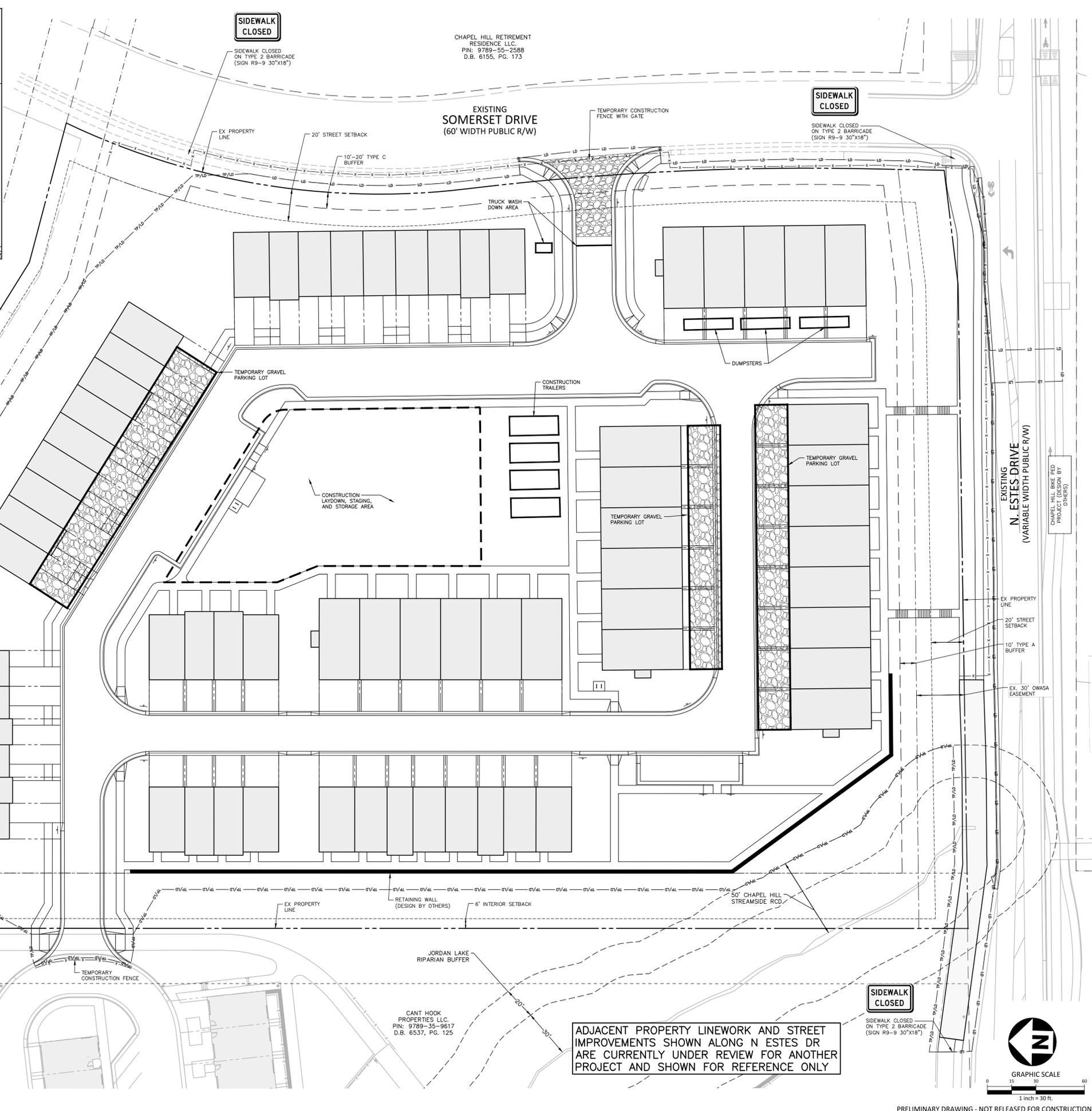
ADJACENT PROPERTY LINWORK AND STREET IMPROVEMENTS SHOWN ALONG N ESTES DR ARE CURRENTLY UNDER REVIEW FOR ANOTHER PROJECT AND SHOWN FOR REFERENCE ONLY

M:\Projects\LU021001\01-Production\Engineering\CAD Drawings\2 - CIP Drawings\Current Drawings\LU021001-0AU1.dwg, 6/21/2022 3:33:35 PM, Spencer Christianisen



CONSTRUCTION MANAGEMENT NOTES:

- SEE SHEET C0.00 FOR CONSTRUCTION MANAGEMENT NOTES.



CLIENT

LOCK7 DEVELOPMENT
 1101 CONNECTICUT AVENUE NW #450
 WASHINGTON, DC 20036
 DAVID GORMAN
 PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
 CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

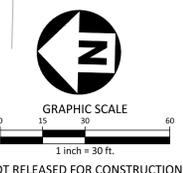
NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

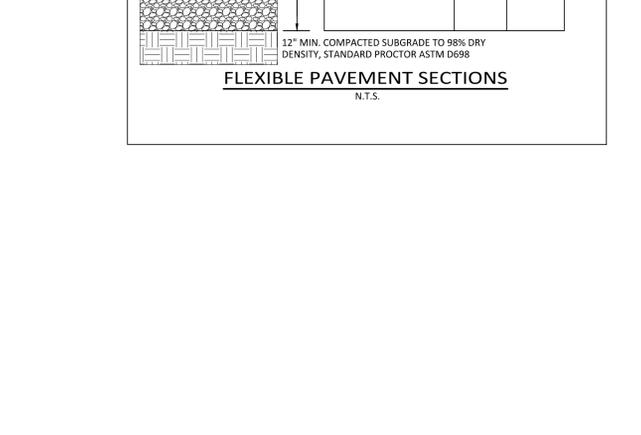
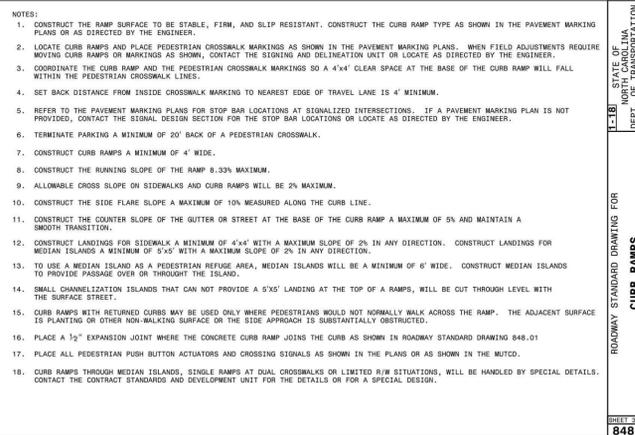
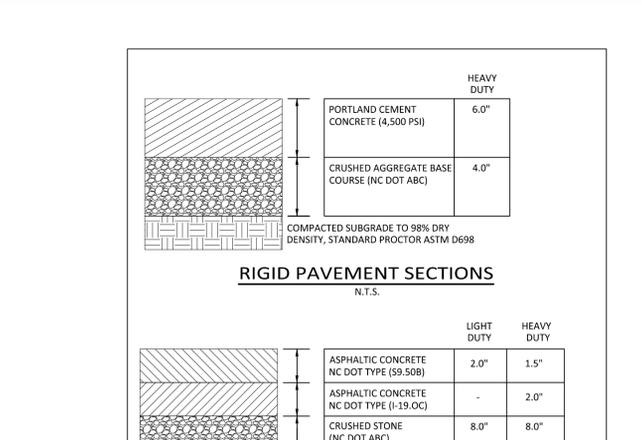
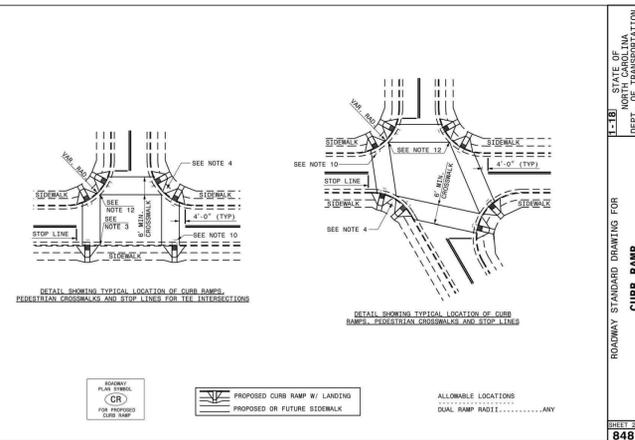
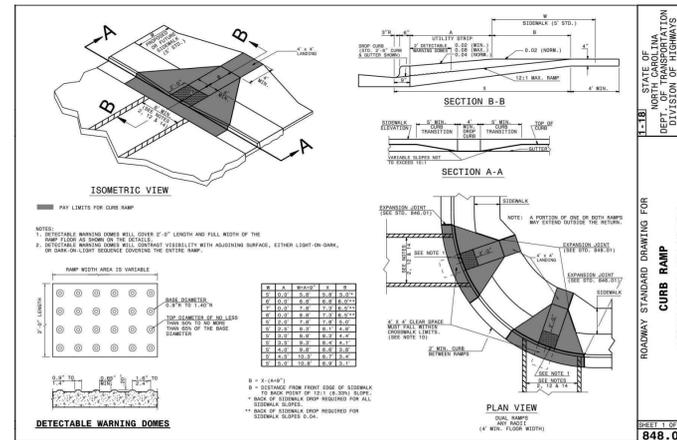
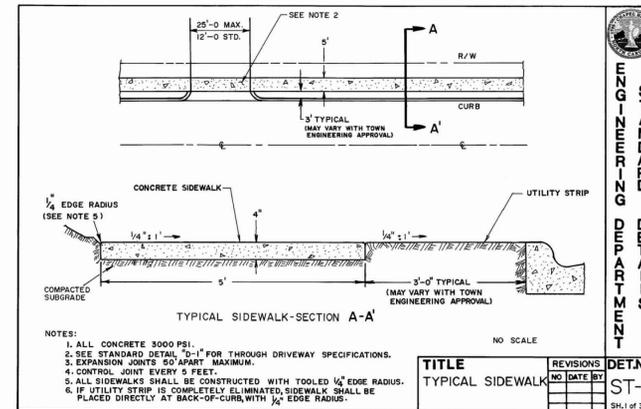
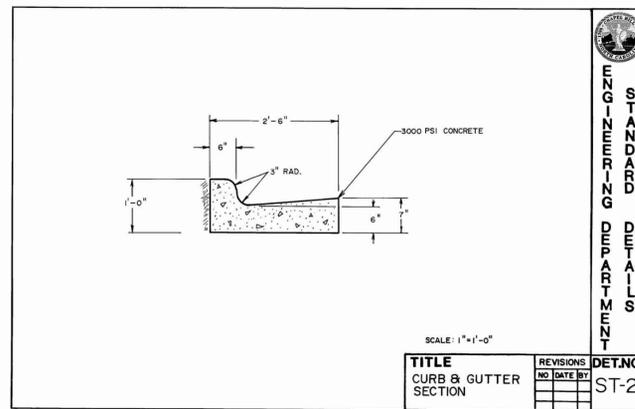
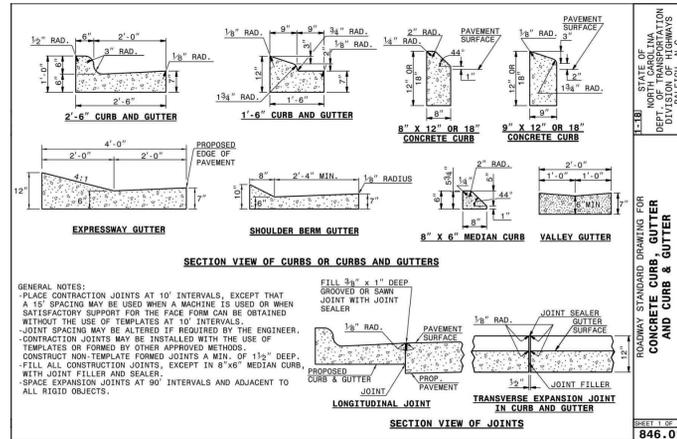
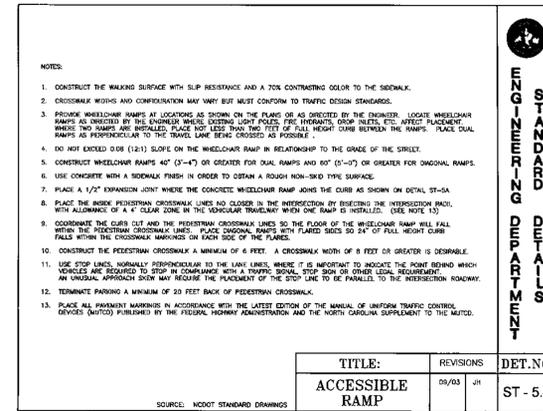
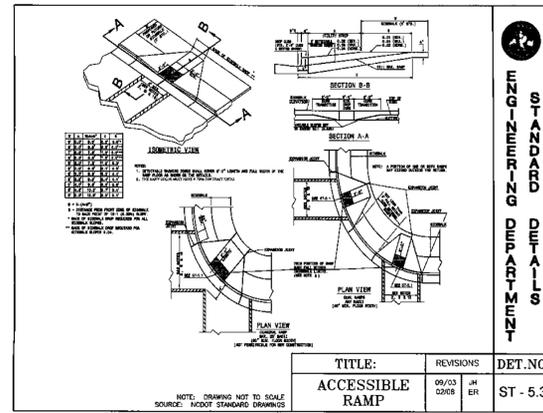
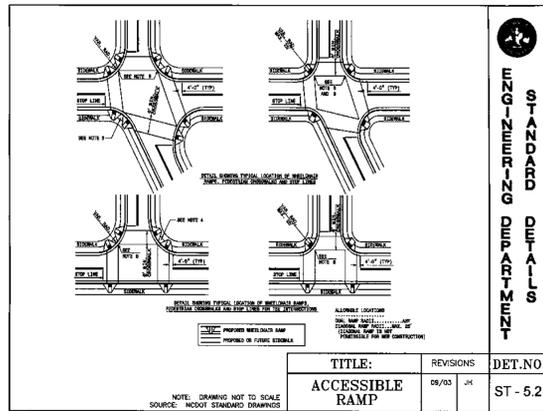
PLAN INFORMATION

PROJECT NO. LKD-21001
 FILENAME LKD21001-CM1
 CHECKED BY SJC / ZNB
 DRAWN BY WHM
 SCALE 1" = 30'
 DATE 12.30.2021

SHEET

CONSTRUCTION MANAGEMENT PLAN
C7.00



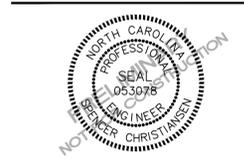


McADAMS
 The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713
 phone 919. 361. 5000
 fax 919. 361. 2269
 license number: C-0293, C-187
 www.mcadamsco.com

CLIENT
 LOCK7 DEVELOPMENT
 1101 CONNECTICUT AVENUE NW #450
 WASHINGTON, DC 20036
 DAVID GORMAN
 PHONE: 202.670.1360



710 N ESTES TOWNHOMES
 CONDITIONAL ZONING PERMIT
 710 N ESTES DR
 CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
 FILENAME LKD21001-D1
 CHECKED BY SJC / ZNB
 DRAWN BY WHM
 SCALE N/A
 DATE 12.30.2021
SHEET

SITE DETAILS

C8.00

STORMWATER CONTROL MEASURE 'B' CONSTRUCTION SPECIFICATIONS

GENERAL NOTES

- PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.
- PRIOR TO ANY CONSTRUCTION OR PLACEMENT OF ANY BACKFILL, THE ON-SITE GEOTECHNICAL ENGINEER SHALL INSPECT THE EXCAVATION AREA FOR THE UNDERGROUND SCM WITHIN THIS AREA TO ASSESS WHETHER SUITABLE SOILS EXIST AT THE SUBGRADE LEVEL. IF THE CONTRACTOR CONSTRUCTS AND COVERS UP THE UNDERGROUND SCM PRIOR TO INSPECTION, THEN THIS AREA SHALL BE UNCOVERED AND TESTED (TO THE ENGINEER'S AND OWNER'S APPROVAL) AT THE CONTRACTOR'S EXPENSE.
- THE FACILITY SHALL NOT BE USED AS A TEMPORARY EROSION CONTROL DEVICE (I.E. SEDIMENT TRAP OR SEDIMENT BASIN) DURING CONSTRUCTION.
- PRIOR TO PLACING STORMFILTER CARTRIDGES WITHIN THE UNDERGROUND SYSTEM, THE CONTRACTOR SHALL REQUEST AN ON-SITE MEETING WITH THE DESIGN ENGINEER AND THE EROSION CONTROL INSPECTOR TO ENSURE THE UPSTREAM DRAINAGE AREA IS COMPLETELY STABILIZED (I.E. GOOD VEGETATIVE COVER). IF THE CONTRACTOR DECIDES TO PLACE THE STORMFILTER CARTRIDGES PRIOR TO APPROVAL FROM THE DESIGN ENGINEER AND THE EROSION CONTROL INSPECTOR, THEN THE CONTRACTOR SHALL EXCAVATE/REPLACE, AS NECESSARY, THE COMPONENTS NEEDED FOR THE SYSTEM TO FUNCTION PROPERLY AT HIS / HER EXPENSE SHOULD THE STORMFILTER CARTRIDGES NOT FUNCTION PROPERLY (I.E. WILL NOT DRAIN DUE TO SEDIMENT DEPOSITION) DUE TO AN UNSTABILIZED UPSTREAM DRAINAGE AREA.
- ONCE CONSTRUCTED, THE STORMFILTER CARTRIDGES SHALL NOT RECEIVE STORMWATER RUNOFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE UNDERGROUND SYSTEM HAS BEEN COMPLETELY STABILIZED AND SITE CONSTRUCTION IS COMPLETE.
- ALL COMPONENTS OF THE UNDERGROUND SCM SYSTEM (STORMFILTER MANHOLE, CONCRETE VAULT, JOINT / RISER CONNECTIONS, ENDCAPS, ACCESS MANHOLES, ETC.) SHALL BE DESIGNED BY OTHERS. ANY VARIATIONS OR CHANGES MADE FROM THESE SPECIFICATIONS AND DRAWINGS DURING THE ORDERING AND/OR INSTALLATION OF ALL COMPONENTS MUST BE APPROVED BY THE DESIGN ENGINEER. THE STRUCTURAL DESIGN OF THE UNDERGROUND SCM, ALONG WITH ITS ASSUMPTIONS, IS ALSO BY OTHERS. THE JOHN R. McADAMS COMPANY, INC. AND ITS EMPLOYEES ASSUME NO LIABILITY WITH RESPECT TO ANY ASPECT OF THE STRUCTURAL DESIGN FOR THE UNDERGROUND SCM SYSTEM.
- ALL PIPE / RISER CONNECTIONS AND JOINTS ASSOCIATED WITH THE UNDERGROUND SCM SYSTEM SHALL BE WATER TIGHT. THE MECHANISM FOR ACHIEVING THIS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW.
- THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE UNDERGROUND SCM SYSTEM SITE. IT IS ANTICIPATED THAT PUMPING WILL BE NECESSARY IN THE EXCAVATION AREAS DURING PLACEMENT OF FILL WITHIN THIS AREA (OR OTHER AREAS AS NECESSARY). THE CONTRACTOR SHALL KEEP THE WATER LEVEL BELOW THE BOTTOM OF THE EXCAVATION. THE MANNER IN WHICH THE WATER IS REMOVED SHALL BE SUCH THAT THE EXCAVATION BOTTOM AND SIDE SLOPES ARE STABLE.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADHERE TO ALL CURRENT OSHA REGULATIONS FOR CONFINED SPACE ENTRY AND PROVIDE SUCH DURING ENGINEER WALK-THROUGH/INSPECTION.
- ALL PIPE PENETRATIONS THROUGH A CONCRETE STRUCTURE (I.E. STORMFILTER CARTRIDGE / DETENTION SYSTEM, STORM DRAINAGE MANHOLES, ETC.) SHALL BE MADE WATERTIGHT USING NON-SHRINK CEMENTITIOUS GROUT.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

STORMWATER MANAGEMENT SYSTEM MATERIAL SPECIFICATIONS

- THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM IS TO BE DESIGNED BY OTHERS. ANY CHANGES TO THE PLANS SHALL BE PROVIDED TO THE DESIGN ENGINEER FOR REVIEW. PRIOR TO INSTALLATION, SHOP DRAWINGS OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE PROVIDED TO THE DESIGN ENGINEER AND TO THE TOWN OF CHAPEL HILL FOR REVIEW.
- FILTER CARTRIDGES SHALL BE CONTECH STORMFILTERS WITH PHOSPHOSORB MEDIA. INSTALLATION OF THE STORMWATER DEVICE SHALL BE PER THE MANUFACTURER'S INSTALLATION GUIDELINES AND SPECIFICATIONS.
- ACCESS RISERS SHALL BE INSTALLED PER STRUCTURAL SPECIFICATIONS. ACCESS STEPS / LADDERS SHALL BE ATTACHED TO THE RISERS TO ALLOW FOR ACCESS INTO THE STORMWATER MANAGEMENT SYSTEM.
- THE 24" Ø DIP OUTLET BARREL OF THE DETENTION SYSTEM SHALL BE CLASS 350 DIP, MEETING THE REQUIREMENTS OF ASTM A716. THE PIPE JOINTS SHALL BE LOCKING JOINTS PER ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53 STANDARDS.
- THE CONTRACTOR SHALL INSTALL THE STORMFILTER SYSTEM PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR TO PROVIDE A LETTER FROM MATERIAL SUPPLIER(S) STATING MATERIALS MEET THE SPECIFIED STANDARDS PRIOR TO INSTALLATION.
- COVER AND REVIEW OF SITE CONDITIONS TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE SYSTEM TO BE THE RESPONSIBILITY OF THE MANUFACTURER.

STATEMENT OF RESPONSIBILITY

- ALL REQUIRED MAINTENANCE AND INSPECTIONS OF THIS FACILITY SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER, PER THE EXECUTED OPERATION AND MAINTENANCE AGREEMENT FOR THIS FACILITY.

FOUNDATION NOTES

- ONCE THE EXCAVATION IS COMPLETE AND PRIOR TO INSTALLATION OF THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM, THE ON-SITE GEOTECHNICAL ENGINEER SHALL VERIFY THE BEARING CAPACITY OF THE UNDERLYING SOILS TO SERVE AS A FOUNDATION FOR THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM. IF THE ON-SITE GEOTECHNICAL ENGINEER DEEMS THE FOUNDATION SOILS AS UNSUITABLE, THEN THE UNSUITABLE MATERIAL SHOULD BE REMOVED DOWN TO A SUITABLE DEPTH AND THEN BUILT BACK UP TO THE CORRECT ELEVATION WITH A COMPACTED BACKFILL MATERIAL THAT IS APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER. THE APPROVED BACKFILL MATERIAL SHOULD HAVE A GRADATION THAT WILL NOT ALLOW THE MIGRATION OF FINES, WHICH COULD CAUSE SETTLEMENT OF THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM. IF NECESSARY, A GEOTEXTILE FABRIC CAN BE USED TO SEPARATE THE UNDERLYING SOILS AND THE BACKFILL MATERIAL. THIS GEOTEXTILE FABRIC (IF USED) IS TO BE SPECIFIED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- PLEASE NOTE THAT IF THE CONTRACTOR CONSTRUCTS AND COVERS UP THE EXCAVATION FOR THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM PRIOR TO INSPECTION, THEN THIS AREA SHALL BE UNCOVERED AND TESTED (TO THE ENGINEER'S AND OWNER'S APPROVAL) AT THE CONTRACTOR'S EXPENSE.
- THE FOUNDATION SUBGRADE SHALL BE GRADED TO A UNIFORM OR SLIGHTLY SLOPING GRADE PRIOR TO PLACEMENT OF THE BEDDING MATERIAL. IF THE FOUNDATION SUBGRADE WILL BE EXPOSED FOR AN EXTENDED PERIOD OF TIME DURING CONSTRUCTION, THEN IT SHOULD BE GRADED TO A SLIGHT SLOPE SUCH THAT SATURATION OF THE SUBGRADE DOES NOT OCCUR.
- THE BEDDING MATERIAL FOR THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM SHALL BE SPECIFIED BY THE ON-SITE GEOTECHNICAL ENGINEER. TYPICALLY, A WELL-GRADED GRANULAR MATERIAL WILL BE USED FOR THE BEDDING. PLEASE NOTE THAT IF CONSTRUCTION EQUIPMENT WILL BE OPERATING FOR AN EXTENDED PERIOD OF TIME ON THE BEDDING, THEN THE APPROPRIATE MEASURES (E.G. ENGINEERED FABRIC, STIFF GEOTGRID, ETC.) SHALL BE TAKEN TO ENSURE THE INTEGRITY OF THE BEDDING IS NOT COMPROMISED.
- THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM THE EXCAVATION. IT IS BEST TO BEGIN THE CONSTRUCTION OF THE DETENTION SYSTEMS AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR WATER TO ESCAPE.
- THE ON-SITE GEOTECHNICAL ENGINEER SHALL DETERMINE IF FOUNDATION DRAINS ARE REQUIRED FOR THE UNDERGROUND SCM SYSTEM. THE DESIGN ENGINEER SHALL BE NOTIFIED FOLLOWING THIS DETERMINATION. IF REQUIRED, THE FOUNDATION DRAINS ARE TO BE DESIGNED ENTIRELY BY THE ON-SITE GEOTECHNICAL ENGINEER. THE FOUNDATION DRAIN SYSTEMS SHALL TIE TO THE NEAREST STORM SEWER INLET / JUNCTION BOX WITH INVERT LOWER THAN THE INVERT OF THE FOUNDATION DRAIN. FOUNDATION DRAIN SYSTEM SHALL NOT TIE INTO THE UNDERGROUND SCM AT ANY POINT.

BEDDING NOTES

- THE EXCAVATION SUB GRADE MUST BE TRANSIT LEVEL.
- THE EXCAVATION PIT SHALL BE LINED (ON THE BOTTOM AND ALL FOUR SIDES) WITH A NON-WOVEN GEO-TEXTILE (GEOTEX 401 OR APPROVED EQUIVALENT). THE ON-SITE GEOTECHNICAL ENGINEER SHALL APPROVE FABRIC FOR USE.
- THE SUBGRADE FOR THE DETENTION SYSTEM CAN BE A CONCRETE SLAB, OR CLEAN GRANULAR MATERIAL WITH A MAXIMUM AGGREGATE SIZE OF 3/4". THE BEDDING SHALL BE FREE FROM ROCK FORMATIONS, PROTRUDING STONES, FROZEN LUMPS, ROOTS, AND OTHER FOREIGN MATERIAL.
- PREPARE THE SUBGRADE PER THE ON-SITE GEOTECHNICAL ENGINEER'S DIRECTION (APPROXIMATELY 5'-6" BELOW GRADE ON WHICH SLAB WILL SET). THE BEDDING MATERIAL SHOULD BE GRADED SUCH THAT A SMOOTH UNIFORM GRADE IS ESTABLISHED TO ALLOW FOR OPTIMUM PLACEMENT OF THE SAND FILTER.
- THE SUBGRADE MUST SUPPORT THE DETENTION SYSTEM WITHOUT DIFFERENTIAL SETTLEMENT BETWEEN PIECES.
- IF CONSTRUCTION EQUIPMENT WILL BE OPERATING FOR AN EXTENDED PERIOD OF TIME ON THE BEDDING, THEN THE APPROPRIATE MEASURES (E.G. STIFF GEOTGRID, ETC.) SHALL BE TAKEN TO ENSURE THE INTEGRITY OF THE BEDDING IS NOT COMPROMISED.

BACKFILL MATERIAL NOTES

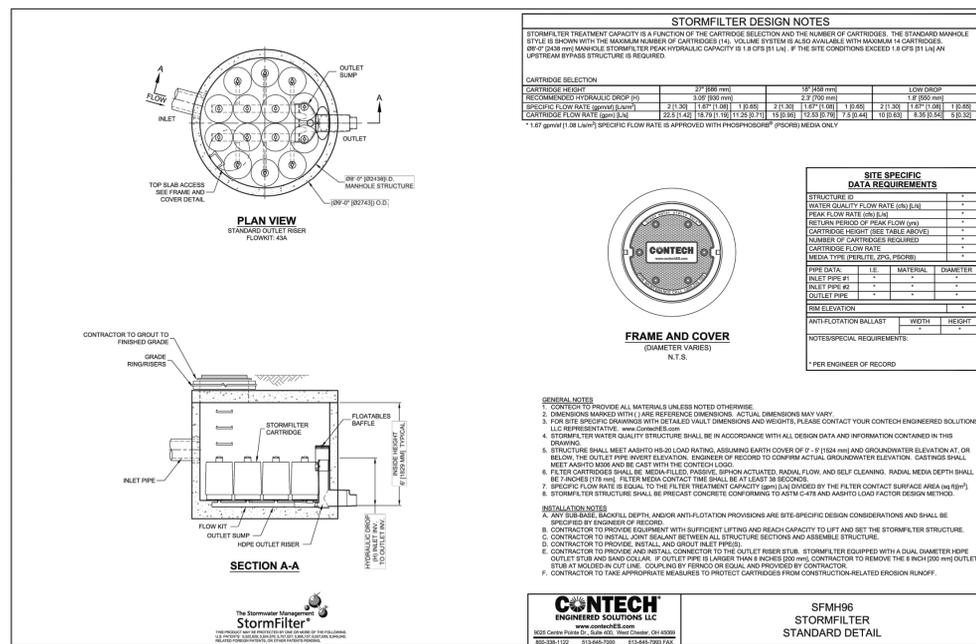
- THE ON-SITE GEOTECHNICAL ENGINEER SHALL SPECIFY THE BACKFILL MATERIAL FOR THE STORMWATER MANAGEMENT SYSTEM.
- THE BACKFILL MATERIAL SHOULD BE FREE OF ROCKS, FROZEN LUMPS, AND OTHER FOREIGN MATTER THAT COULD CAUSE HARD SPOTS WITHIN THE BACKFILL MATERIAL, OR THAT COULD DECOMPOSE AND CREATE VOIDS.
- HIGHLY PLASTIC SILTS, HIGHLY PLASTIC CLAYS, ORGANIC SILTS, ORGANIC CLAYS, AND PEATS SHOULD NOT BE USED AS A BACKFILL MATERIAL.
- THE BACKFILL MATERIAL SHOULD BE PLACED IN 6" LOOSE LIFTS AND COMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM-D698). THE FILL SOILS SHALL BE COMPACTED AT A MOISTURE CONTENT WITHIN +/- TWO PERCENT OF ITS OPTIMUM MOISTURE CONTENT.
- ANY MATERIAL STOCKPILED ON TOP OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE APPROVED BY THE STRUCTURAL DESIGN ENGINEER OR DETENTION SYSTEM MANUFACTURER.

UNDERGROUND VAULT CONSTRUCTION NOTES

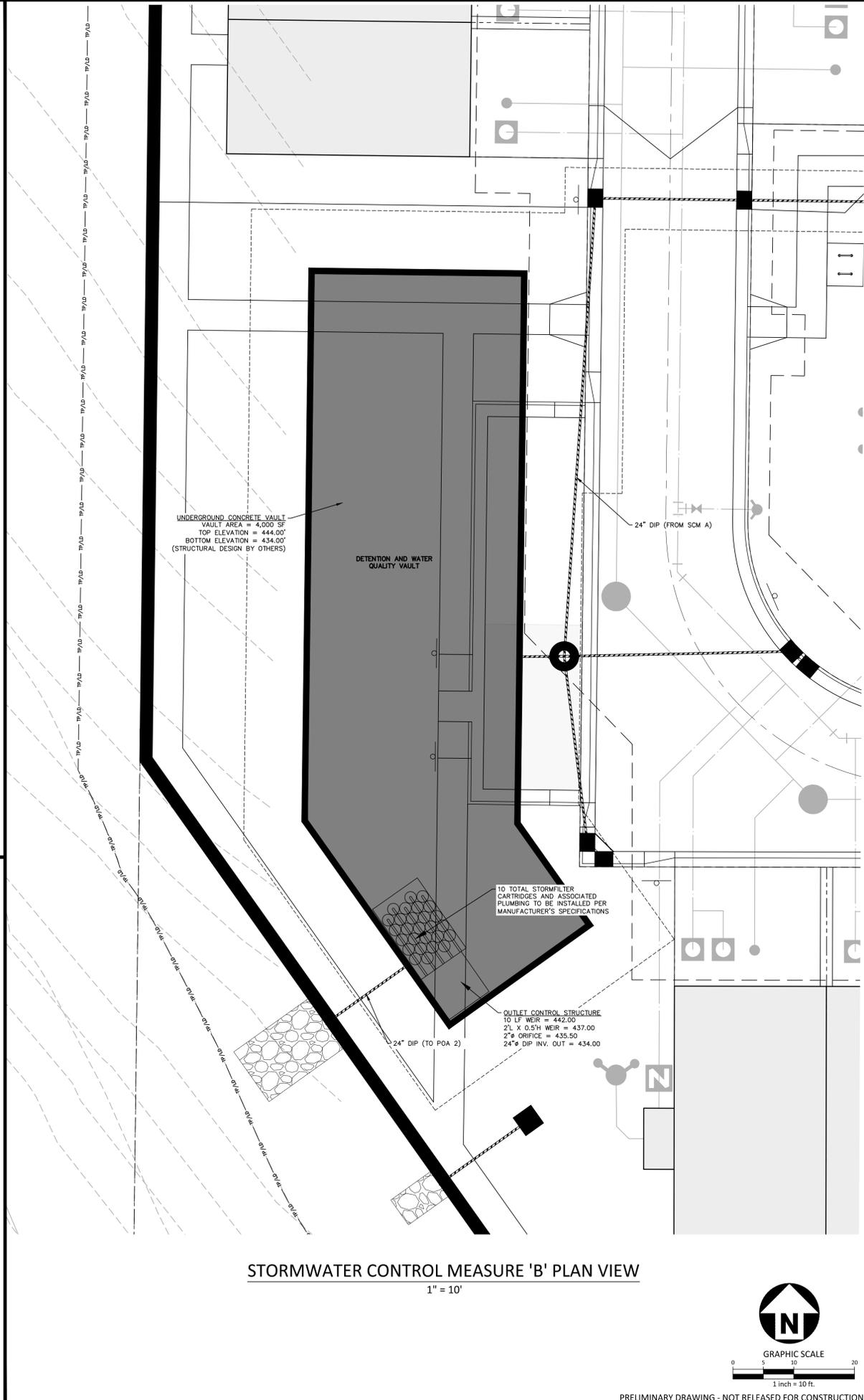
- UNDERGROUND VAULT CONFIGURATION IS TO BE DESIGNED AND PROVIDED BY OTHERS.
- ABSOLUTELY NO RUNOFF SHALL ENTER THE UNDERGROUND VAULT UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
- MANHOLE ACCESS SHALL BE PROVIDED FOR THE UNDERGROUND VAULT. MANHOLES SHALL BE IN COMPLIANCE WITH TOWN OF CHAPEL HILL STANDARD DETAILS BUT SHALL BE A MINIMUM OF 24 INCHES IN DIAMETER TO COMPLY WITH OSHA CONFINED SPACE REQUIREMENTS (OR MINIMUM OSHA REQUIREMENTS APPLICABLE AT TIME OF CONSTRUCTION). CONTRACTOR SHALL PROVIDE ACCESS LADDERS FOR ACCESS BELOW ALL MANHOLES. MANHOLE COVERS SHALL ALLOW FOR PROPER VENTILATION.

SYSTEM TESTING NOTES

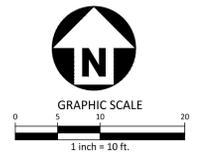
- PRIOR TO PLACEMENT OF THE BACKFILL MATERIAL AND STORM FILTER CARTRIDGES, CONTRACTOR SHALL TEST FOR WATER TIGHTNESS. ENTRANCES AND EXITS SHALL BE PLUGGED AND THE SYSTEM COMPLETELY FILLED WITH WATER TO DEMONSTRATE WATER TIGHTNESS. WATER TIGHTNESS MEANS NO SIGNIFICANT FLOW FOR A PERIOD OF 24 HOURS. SIGNIFICANT LEAKAGE TO BE DETERMINED BY THE CERTIFYING ENGINEER. CONTRACTOR SHALL CALL AND SCHEDULE THE FIELD TESTING OF THE SYSTEM (WATER TIGHTNESS) WITH THE ENGINEER AT LEAST 2 WORKING DAYS PRIOR TO THE TEST. THE CONTRACTOR SHALL PROVIDE WRITTEN REPORTS TO THE ENGINEER VERIFYING THE WATER TIGHTNESS OF THE STORMWATER VAULT.



STORMFILTER MANHOLE
N.T.S.



STORMWATER CONTROL MEASURE 'B' PLAN VIEW
1" = 10'



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

McADAMS
The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT
LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
FILENAME LKD21001-SCM B
CHECKED BY KEG
DRAWN BY TAP
SCALE 1" = 10'
DATE 12.30.2021

SHEET

SCM B PLAN VIEW & DETAILS

C9.00B



McADAMS

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

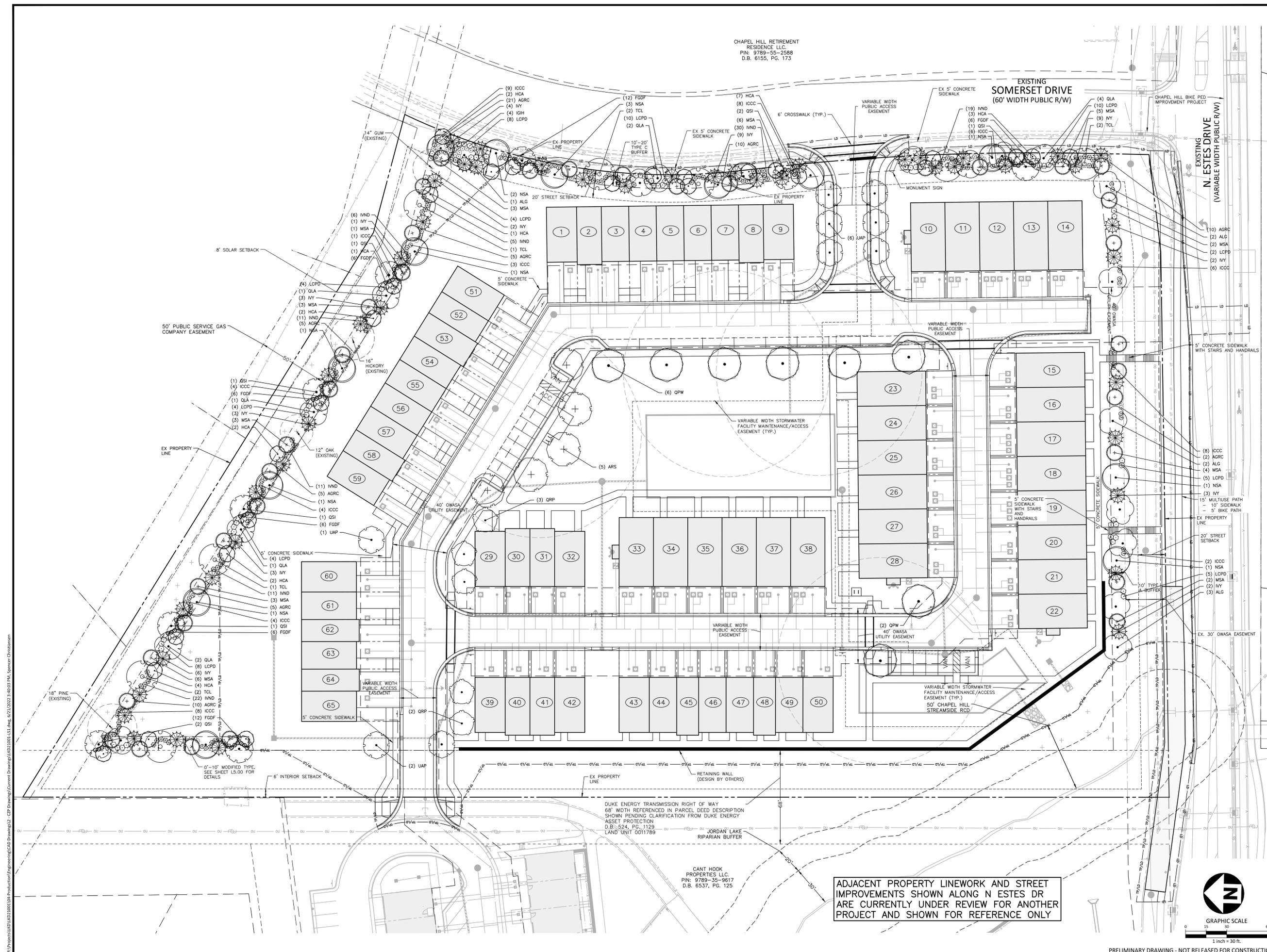
PLAN INFORMATION

PROJECT NO. LKD-21001
FILENAME LKD21001-L51
CHECKED BY SRD
DRAWN BY CMXY
SCALE 1"=30'
DATE 12.30.2021

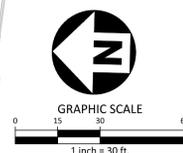
SHEET

LANDSCAPE PLAN

L5.00



ADJACENT PROPERTY LINWORK AND STREET IMPROVEMENTS SHOWN ALONG N ESTES DR ARE CURRENTLY UNDER REVIEW FOR ANOTHER PROJECT AND SHOWN FOR REFERENCE ONLY



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

M:\Projects\LU021001\04-Production\Engineering\CAD Drawings\2 - CDP Drawings\Current Drawings\LU021001-L51.dwg, 6/21/2022 3:40:03 PM, Spencer Christensen

PLANT SCHEDULE

LARGE TREES	CODE	QTY	COMMON NAME	BOTANICAL NAME	CAL	HEIGHT
	ARS	5	Summer Red Red Maple	Acer rubrum 'Summer Red'	2.5"	min
	ALG	8	Legacy Sugar Maple	Acer saccharum 'Legacy'	2.5"	min
	NSA	14	Black Gum	Nyssa sylvatica	2.5"	min
	QLA	11	Highbeam Overcup Oak	Quercus lyrata 'QLFTB' TM	2.5"	min
	QPW	8	Willow Oak	Quercus phellos	2.5"	min
	QSI	9	Shumard Oak	Quercus shumardii	2.5"	min
	QRP	5	Regal Prince Oak	Quercus x warei 'Long' TM	2.5"	min
	TCL	8	Littleleaf Linden	Tilia cordata	2.5"	min
	UAP	9	American Elm	Ulmus americana 'Princeton'	2.5"	min
SMALL TREES	CODE	QTY	COMMON NAME	BOTANICAL NAME	CAL	HEIGHT
	HCA	24	Silverbell	Halesia carolina	1.5"	8' min
	IVY	47	Yaupon Holly	Ilex vomitoria	1.5"	8' min
	MSA	38	Sweetbay Magnolia	Magnolia virginiana	1.5"	8' min
SHRUBS	CODE	QTY	COMMON NAME	BOTANICAL NAME	HEIGHT	SPACING
	AGRC	73	Rose Creek Abelia	Abelia x grandiflora 'Rose Creek'	18"	
	FQDF	54	Dwarf Fothergilla	Fothergilla gardenii	18"	
	ICCC	63	Carissa Holly	Ilex cornuta 'Carissa'	18"	
	IGIH	4	Inkberry Holly	Ilex glabra	18"	
	IVND	115	Dwarf Yaupon	Ilex vomitoria 'Nana'	18"	
	LCPD	64	Fringe Flower	Loropetalum chinense 'Purple Diamond'	18"	

LANDSCAPE CALCULATIONS:

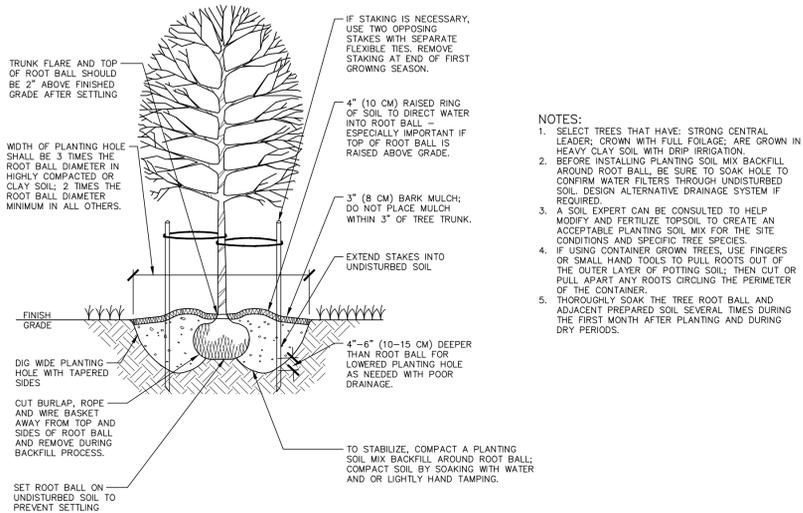
PARKING LOT SHADING		EAST 10' - 20' TYPE 'C' BUFFER REQUIREMENT:		CANOPY REPLACEMENT CALCULATIONS REQUIREMENT:	
PARKING LOT AREA:	4,692 SF	(5 LARGE TREES, 10 SMALL TREES, 36 SHRUBS / 100 LF)		(ONE LARGE TREE PER 500 SF OF TREE CANOPY COVERAGE DEFICIT)	
LARGE TREES REQUIRED:	3 (1/2,000 SF)	LINEAR FOOTAGE:	475'	TREE CANOPY COVERAGE DEFICIT:	39,204 SF (0.90 AC)
TREES PROVIDED:	4	LESS UTILITY EASEMENT:	-22'		39,204/500
		TOTAL LINEAR FOOTAGE:	453'	LARGE TREES REQUIRED:	79 TREES
				LARGE TREES PROVIDED:	79 TREES
BUFFER CALCULATIONS					
NORTH 10' TYPE 'C' BUFFER REQUIREMENT:		LARGE TREES REQUIRED:		22	
(4 LARGE TREES, 8 SMALL TREES, 30 SHRUBS / 100 LF)		LARGE TREES PROVIDED:		22	
TOTAL LINEAR FOOTAGE:		SMALL TREES REQUIRED:		45	
500'		SMALL TREES PROVIDED:		45	
LARGE TREES REQUIRED:		SHRUBS REQUIRED:		163	
LARGE TREES PROVIDED:		SHRUBS PROVIDED:		163	
SMALL TREES REQUIRED:		WEST 0' - 10' TYPE 'C' BUFFER REQUIREMENT:			
SMALL TREES PROVIDED:		(4 LARGE TREES, 8 SMALL TREES, 30 SHRUBS / 100 LF)			
SHRUBS REQUIRED:		LINEAR FOOTAGE:		100'	
SHRUBS PROVIDED:					
SOUTH 10' TYPE 'A' BUFFER REQUIREMENT:		LARGE TREES REQUIRED:		4	
(2 LARGE TREES, 4 SMALL TREES, 6 SHRUBS / 100 LF)		LARGE TREES PROVIDED:		4	
LINEAR FOOTAGE:		SMALL TREES REQUIRED:		8	
LESS UTILITY EASEMENT:		SMALL TREES PROVIDED:		8	
TOTAL LINEAR FOOTAGE:		SHRUBS REQUIRED:		30	
335'		SHRUBS PROVIDED:		30	
LARGE TREES REQUIRED:					
LARGE TREES PROVIDED:					
SMALL TREES REQUIRED:					
SMALL TREES PROVIDED:					
SHRUBS REQUIRED:					
SHRUBS PROVIDED:					

LANDSCAPE CALCULATION NOTES:

- SEE SHEET L8.00, LANDSCAPE PROTECTION & TREE COVERAGE PLAN, FOR SITE TREE CANOPY COVERAGE CALCULATIONS.
- TREE CANOPY CALCULATIONS ARE SUBJECT TO CHANGE, FINAL TREE REPLACEMENT REQUIREMENT TO BE DETERMINED WITH FINAL SIGNED PLANS.
- TREE REPLACEMENT TO BE PROVIDED VIA TREE PLANTING, RESERVE AREA, PAYMENT-IN-LIEU, OR A COMBINATION OF THOSE OPTIONS.

LANDSCAPE NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF CHAPEL HILL, THE BLUE HILL FORM DISTRICT AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE SITE INSPECTION BEFORE LANDSCAPE CONSTRUCTION AND INSTALLATION IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE BEGINNING DEMOLITION OR INSTALLATION.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE NOTES, SPECIFICATIONS, DRAWINGS OR SITE CONDITIONS FOR RESOLUTION PRIOR TO INSTALLATION.
- ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THIS PLAN IS FOR PLANTING PURPOSES ONLY. FOR INFORMATION REGARDING BUILDINGS, GRADING, WALLS, ETC., REFER TO ARCHITECTURE, SITE AND GRADING PLANS.
- VERIFICATION OF TOTAL PLANT QUANTITIES AS SHOWN IN THE PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
- CONTRACTOR TO ENSURE PROPER STABILIZATION AND SEEDING OF THE SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- LANDSCAPE MATERIAL SHALL BE WELL FORMED, VIGOROUS, GROWING SPECIMENS WITH GROWTH TYPICAL OF VARIETIES SPECIFIED AND SHALL BE FREE FROM DAMAGE, INSECTS AND DISEASES. MATERIAL SHALL EQUAL OR SURPASS #1 QUALITY AS DEFINED IN THE CURRENT ISSUE OF "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
- ALL PLANT MATERIAL IS TO BE CAREFULLY HANDLED BY THE ROOT BALL, NOT THE TRUNK, BRANCHES AND/OR FOLIAGE OF THE PLANT. MISHANDLED PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIAL IS TO BE WELL ROOTED, NOT ROOT BOUND, SUCH THAT THE ROOT BALL REMAINS INTACT THROUGHOUT THE PLANTING PROCESS. DEFICIENT PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
- ALL PLANTS TO BE A MINIMUM OF WHAT IS SPECIFIED IN THE PLANT SCHEDULE. ANY CHANGES OR SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND GOVERNING JURISDICTION PRIOR TO ANY HOLE BEING DUG.
- CONTRACTOR TO COORDINATE WITH OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT TO ESTABLISH THE EXTENTS OF MULCH/SEED/SOD IF NOT SPECIFICALLY SHOWN ON PLANS.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL PLANTING AREAS.
- PROPOSED TREES TO BE PLANTED A MINIMUM 30 FEET FROM ANY LIGHT POLE AS MEASURED FROM TRUNK OF THE TREE TO THE POLE.
- PROPOSED TREES TO BE PLANTED A MINIMUM 5 FEET FROM ANY FIRE HYDRANT AS MEASURED FROM TRUNK OF THE TREE TO THE HYDRANT.
- CONTRACTOR SHALL COMPLETE SOIL TEST IN ALL PLANTING AREAS TO DETERMINE SOIL AMENDMENT REQUIREMENTS UNLESS WAIVED BY OWNER'S REPRESENTATIVE. CONTRACTOR SHALL ADJUST PH AND FERTILITY BASED UPON THE SOIL TEST RESULTS.
- TOPSOIL SHALL BE FREE OF MATERIAL LARGER THAN 1.0 INCH IN DIAMETER OR LENGTH AND SHALL NOT CONTAIN SLAG, CINDERS, STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH, OR OTHER EXTRANEOUS MATERIAL.
- LOOSEN SUBGRADE / SURFACE SOIL TO A MINIMUM DEPTH OF 6 INCHES. APPLY SOIL AMENDMENTS AND FERTILIZERS AS REQUIRED BY THE SOIL TEST RESULTS TO ACHIEVE A HEALTHY GROWING MEDIA AND MIX THOROUGHLY INTO TOP 4 INCHES OF SOIL. SPREAD PLANTING SOIL MIX TO A DEPTH OF 6 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
- IF IMPORTED TOPSOIL IS REQUIRED, THE SUBGRADE SHALL BE SCARIFIED OR TILLED TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO INSTALLATION OF IMPORTED TOPSOIL. FOLLOWING INSTALLATION OF IMPORTED TOPSOIL, THE TOPSOIL SHALL BE TILLED TO INTEGRATE THE SOIL PROFILES.
- PLANT MATERIALS ARE TO BE GUARANTEED FOR A PERIOD OF 12 MONTHS. PLANT MATERIALS WHICH REMAIN UNHEALTHY WILL BE REPLACED BY THE LANDSCAPE CONTRACTOR BEFORE THE EXPIRATION OF THE GUARANTEE PERIOD OR IMMEDIATELY IF SO DIRECTED BY THE OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT.
- ALL TREE PLANTINGS SHALL BE MULCHED TO A DEPTH OF 3 INCHES, AND WITH A MINIMUM 3 FOOT RADIUS FROM BASE OF TREE OR TO DRILLPILE. MULCH SHALL BE FREE OF TRASH AND MAINTAINED WEED FREE. MULCH SHALL NOT COVER THE ROOT FLARE. CONFIRM MULCH SPECIFICATIONS WITH OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT.
- DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DRYING, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND THE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERING OF EXTERIOR PLANTS DURING DELIVERY. DO NOT DROP EXTERIOR PLANTS DURING DELIVERY AND HANDLING.
- DELIVER EXTERIOR PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND INSTALL IMMEDIATELY. IMMEDIATELY AFTER UNLOADING, STAND THE TREES UP TO REDUCE THE RISK OF SUN SCALD. PROPERLY STAGED TREES ARE STANDING, UNTIED AND SPACED, UNLESS IMMEDIATELY INSTALLED. SET EXTERIOR PLANTS AND TREES IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.
- SEE LANDSCAPE DETAILS FOR TREE STAKING REQUIREMENTS.
- EXCAVATE EDGES OF ALL PLANTING BEDS TO 2 INCH DEPTH TO FORM A NEAT AND CRISP DEFINITION.
- CONTRACTOR SHALL REMOVE DEBRIS AND FINE GRADE ALL PLANTING AREAS PRIOR TO INSTALLATION.
- REMOVE GUY WIRES AND STAKES AT END OF WARRANTY PERIOD OR ESTABLISHMENT.
- FINISH GRADING: GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/2 INCH OF FINISH ELEVATION. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINISHED GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE.



01 TREE PLANTING

SCALE: 3/8"=1'-0"

02 SHRUB PLANTING

SCALE: 3/8"=1'-0"



The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514



REVISIONS

NO.	DATE	REVISION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

PROJECT NO. LKD-21001
FILENAME LKD21001-L51
CHECKED BY SRD
DRAWN BY CMXY
SCALE 1"=30'
DATE 12.30.2021

SHEET

LANDSCAPE DETAILS

L5.01



McADAMS

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919.361.5000
fax 919.361.2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

LOCK7 DEVELOPMENT
1101 CONNECTICUT AVENUE NW #450
WASHINGTON, DC 20036
DAVID GORMAN
PHONE: 202.670.1360



**710 N ESTES TOWNHOMES
CONDITIONAL ZONING PERMIT
710 N ESTES DR
CHAPEL HILL, NORTH CAROLINA 27514**



REVISIONS

NO.	DATE	DESCRIPTION
1	04.13.2022	REVISED PER 1ST ZCP COMMENTS
2	06.21.2022	REVISED PER 2ND ZCP COMMENTS
3		
4		
5		
6		

PLAN INFORMATION

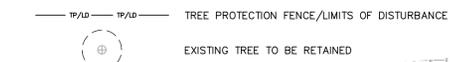
PROJECT NO.	LKD-21001
FILENAME	LKD21001-TC1
CHECKED BY	SRD
DRAWN BY	AAL
SCALE	1"=30'
DATE	12.30.2021

SHEET

**LANDSCAPE PROTECTION
AND TREE COVERAGE PLAN**

L8.00

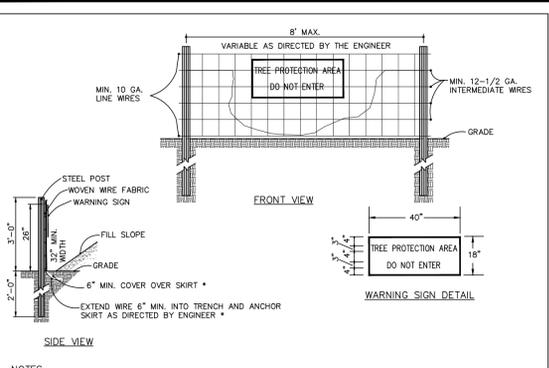
SITE LEGEND



CHAPEL HILL RETIREMENT
RESIDENCE LLC.
PIN: 9789-55-2588
D.B. 6155, PG. 173

EXISTING
SOMERSET DRIVE
(60' WIDTH PUBLIC R/W)

EXISTING
N. ESTES DRIVE
(VARIABLE WIDTH PUBLIC R/W)



STANDARD TREE PROTECTION FENCE

**TREE CANOPY COVERAGE
CALCULATIONS:**

REQUIREMENT:
(30% MINIMUM TREE CANOPY COVERAGE OF NET LAND AREA)

NET LAND AREA

GROSS LAND AREA:	8.06 AC
UTILITY AND ACCESS EASEMENTS:	- 3.44 AC
NET LAND AREA:	4.62 AC

30% TREE CANOPY COVERAGE

NET LAND AREA:	4.62 AC
30%:	1.39 AC
MIN. TREE CANOPY COVERAGE REQUIREMENT:	1.39 AC

TREE CANOPY COVERAGE DEFICIT

TREE CANOPY COVERAGE REQUIREMENT:	1.39 AC (30.00%)
AREA TO REMAIN UNDISTURBED:	- 0.49 AC (10.60%)
TREE CANOPY COVERAGE DEFICIT:	0.90 AC (19.48%)

CANOPY REPLACEMENT CALCULATIONS
REQUIREMENT:
(ONE LARGE TREE PER 500 SF OF TREE CANOPY COVERAGE DEFICIT)

TREE CANOPY COVERAGE DEFICIT:	39,204 SF (0.90 AC)
39,204/500	78.41
LARGE TREE REPLACEMENT REQUIRED:	79 TREES

LANDSCAPE NOTES:

- TREE CANOPY CALCULATIONS ARE SUBJECT TO CHANGE. FINAL TREE REPLACEMENT REQUIREMENT TO BE DETERMINED WITH FINAL SIGNED PLANS.
- TREE REPLACEMENT TO BE PROVIDED VIA TREE PLANTING, RESERVE AREA, PAYMENT-IN-LIEU, OR A COMBINATION OF THOSE OPTIONS.
- A LANDSCAPE PROTECTION SUPERVISOR WHO IS REGISTERED WITH THE TOWN OF CHAPEL HILL WILL BE PRESENT ON SITE AT ALL TIMES WHEN THE FOLLOWING ACTIVITIES ARE TAKING PLACE: CLEARING, GRUBBING, EXCAVATION, GRADING, TRENCHING, MOVING OF SOIL, INSTALLATION AND REMOVAL OF TREE PROTECTION FENCING, AND THE DELIVERY TRANSPORTING AND PLACEMENT OF CONSTRUCTION MATERIALS AND EQUIPMENT.
- PRIOR TO ANY SITE DISTURBANCE A TREE PROTECTION SEMINAR MUST BE ATTENDED BY THE CONTRACTOR W/ THE TOWN'S URBAN FORESTER. PLEASE CALL ADAM NICHOLSON AT 919.969.5006 FOR DETAILS.
- TREE SURVEY COMPLETED BY SOIL AND ENVIRONMENTAL CONSULTANTS, PA.

ADJACENT PROPERTY LINWORK AND STREET IMPROVEMENTS SHOWN ALONG N ESTES DR ARE CURRENTLY UNDER REVIEW FOR ANOTHER PROJECT AND SHOWN FOR REFERENCE ONLY



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

M:\Projects\LU021001\04-Production\Engineering\CAD Drawings\2 - CDP Drawings\Current Drawings\LU021001-TC1.dwg, 6/21/2022 3:41:07 PM, Spencer, Christensen

710 N. ESTES TOWNHOMES

TRANSPORTATION IMPACT ANALYSIS

EXECUTIVE SUMMARY



Prepared for:

The Town of Chapel Hill
Public Works Department - Engineering

Prepared by:

HNTB North Carolina, PC

*343 East Six Forks Road
Suite 200
Raleigh, NC 27609*

NCBELS License #: C-1554

April 2022



710 N. ESTES TOWNHOMES

TRANSPORTATION IMPACT ANALYSIS

EXECUTIVE SUMMARY



Prepared for:

The Town of Chapel Hill
Public Works Department - Engineering

Prepared by:

HNTB North Carolina, PC

*343 East Six Forks Road
Suite 200
Raleigh, NC 27609*

NCBELS License #: C-1554

April 2022



4-12-22



EXECUTIVE SUMMARY

Project Overview

A residential development, known as 710 N. Estes Townhomes, is being proposed along Estes Drive near its intersection with Somerset Drive in Chapel Hill, NC. The project proposes to develop the existing vacant wooded site with 92 townhomes. **Figure ES-1** shows the general location of the site. The overall project is anticipated to be fully complete and occupied by 2024. This report analyzes the build-out scenario for the year 2025 (one year after anticipated completion), the no-build scenario for 2025, as well as 2022 existing year traffic conditions.

The proposed site concept plan shows a provision for two access driveways, one will be a full movement driveway connection to Somerset Drive directly adjacent to the site and one connecting to the proposed Aura development immediately to the west of the site that will link to an external connection as a right-turn in/right-turn out only (RIRO) driveway to NC 86 (Martin Luther King, Jr. Boulevard). No other external vehicular access connections are proposed. The site driveways are proposed to have internal connectivity with on-site townhome units and their respective parking areas for each unit, along with several on-street parallel parking spaces provided. **Figure ES-2** displays the preliminary concept plan of the 710 N. Estes Townhomes project and nearby land uses and roadways. This report analyzes and presents the transportation impacts that the 710 N. Estes Townhomes will have on the following intersections in the project study area:

- Estes Drive and NC 86 (Martin Luther King, Jr. Blvd)
- Estes Drive and Somerset Drive
- Estes Drive and Caswell Road
- Estes Drive and E. Franklin Street
- Somerset Drive and Proposed Site Driveway
- Estes Drive and Proposed Aura Development Full Access Driveway
- NC 86 (Martin Luther King, Jr. Blvd) and Proposed Aura Development Right-Turn In/Right-Turn Out Only (RIRO) Driveway

The impacts of the proposed site at the study area intersections will be evaluated during the AM, noon, and PM peak hours of an average weekday.

Existing Conditions

Study Area

The site is located in north Chapel Hill along the Estes Drive corridor east of NC 86. The study area contains three signalized intersections along Estes Drive at NC 86, Caswell Road, and E. Franklin Street. All future site traffic is expected use the two proposed site driveways along NC 86 or Somerset Drive. NC 86 is a principal north-south arterial providing connectivity throughout Chapel Hill and points beyond in Orange County. Estes Drive is a minor arterial east-west street for access to areas throughout Chapel Hill and Carrboro. Remaining study area network roadways are local neighborhood/commercial/institutional access streets.

Site Traffic Generation

With the addition of new peak hour trips during the weekday AM, noon, and PM peak hours, there are potential site traffic impacts to the study area intersections. **Table ES-1** shows the site trip generation details, with generation rates taken from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Version 10*.



Table ES-1. Weekday Vehicle Trip Generation Summary

Land Use	ITE LUC	Units	Daily			AM Peak Hour			Noon Peak Hour*			PM Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Multi-family Low-Rise	220	92	328	328	656	10	34	44	23	27	50	35	20	55
Transit/Ped/Bike (5% Reduction)			-16	-16	-32	-1	-2	-3	-1	-1	-2	-2	-1	-3
Net Vehicle Trips			312	312	624	9	32	41	22	26	48	33	19	52
TOTALS			312	312	624	9	32	41	22	26	48	33	19	52

* Noon Peak - Uses 75% of Average of AM/PM Peak Hours

Background Traffic

Background traffic growth for the 2025 analysis year is expected to come from two sources - ambient regional traffic growth and specific development-related traffic growth. Historic growth patterns taken from daily traffic volume information do not indicate substantial increases in the project study area, however a number of development projects are occurring or are expected to occur just outside the project study area, which may contribute to future area-wide traffic growth. To conservatively account for this potential, a 0.5 percent per year ambient growth rate was applied to 2022 traffic volumes, along with the inclusion of four nearby specific background traffic generating projects to estimate 2025 background traffic on study area roadways.

Impact Analysis

Peak Hour Intersection Level of Service

Existing 2022 traffic operations at all study area intersections are acceptable during all three peak hours analyzed. Projected ambient and background development traffic growth will increase impacts in the study area by 2025 and cause the Estes Drive signalized intersections with NC 86 and E. Franklin Street to operate at deficient levels in the 2025 PM peak hour, even with proposed Town and development-related improvements. With the addition of peak hour site-generated trips to the projected 2025 background traffic volumes, no additional study area intersections are expected to experience deficient traffic operations in any peak hour. A summary of the traffic operations for each intersection, related to vehicular delays (intersection average as a whole if signalized, critical movement if stop-controlled) and the corresponding traffic simulation Level-of-Service (LOS_s) is shown in **Table ES-2** on the following page.

Access Analysis

Vehicular site access is to be accommodated at two proposed access driveways. One full access driveway connection is located along Somerset Drive, the other will form an internal connection to the internal driveway network for the proposed adjacent Aura project to the west of the site, which will allow right-turn in/out access to NC 86 (Martin Luther King, Jr. Blvd). Driveway separation from existing intersections, corner clearances, and internal throat lengths are acceptable, based on standards found in the 2017 *Town of Chapel Hill Public Works Design Manual* and 2003 *NCDOT Policy on Street and Driveway Access to North Carolina Highways*.

Access for pedestrians and bicycles is currently lacking connectivity in the project study area. Sidewalk is present along the NC 86 (Martin Luther King, Jr. Blvd) and Estes Drive corridors, but not continuously along both sides of the road. Bicycle sharrows are present along the segment of NC 86 (Martin Luther



King, Jr. Blvd) in the project study area south of Estes Drive and a paved shoulder exists along the southbound lanes north of Estes Drive, but no other bicycle facilities exist in the project study area

Table ES-2. Peak Hour Intersection Capacity Analysis Summary

Intersections	Peak Hour	2022 Existing		2025 No-Build		2025 Build		2025 Build – Mitigated	
		LOS _s	Delay	LOS _s	Delay	LOS _s	Delay	LOS _s	Delay
Estes Drive and NC 86 (Martin Luther King, Jr. Blvd)	AM	C	33.9	D	36.6	D	36.4	C	33.3
	NOON	C	33.9	C	26.5	C	26.6	C	26.0
	PM	D	51.5	E	67.7	E	71.0	D	46.9
Estes Drive and Somerset Drive [#]	AM	B	10.7	B	12.4	B	12.4	N/A	N/A
	NOON	A	8.6	A	5.9	B	10.1	N/A	N/A
	PM	C	16.3	B	12.1	C	15.7	N/A	N/A
Estes Drive and Caswell Road	AM	B	13.8	B	12.4	B	12.0	N/A	N/A
	NOON	B	10.8	A	8.7	A	9.0	N/A	N/A
	PM	B	17.2	B	14.4	B	14.5	N/A	N/A
Estes Drive and E. Franklin Street	AM	C	30.1	D	40.6	D	40.2	D	36.2
	NOON	C	30.1	D	38.8	D	38.3	C	29.8
	PM	D	41.8	E	55.5	E	55.8	D	50.5
Somerset Drive and Proposed Site Driveway [#]	AM	N/A	N/A	N/A	N/A	A	4.4	N/A	N/A
	NOON	N/A	N/A	N/A	N/A	A	4.3	N/A	N/A
	PM	N/A	N/A	N/A	N/A	A	4.3	N/A	N/A
Estes Drive and Proposed Aura Full Access Driveway [#]	AM	N/A	N/A	C	16.2	C	17.0	N/A	N/A
	NOON	N/A	N/A	B	13.7	B	15.0	N/A	N/A
	PM	N/A	N/A	D	30.3	D	26.2	N/A	N/A
NC 86 (Martin Luther King, Jr. Blvd) and Proposed Aura (RIRO) Driveway [#]	AM	N/A	N/A	A	7.0	A	6.9	N/A	N/A
	NOON	N/A	N/A	A	6.4	A	6.4	N/A	N/A
	PM	N/A	N/A	C	15.7	C	17.1	N/A	N/A

N/A – Not Applicable or No Improvements Necessary

BOLD/ITALICS – Critical Movement or Overall Intersection Requires Mitigation Analysis Per Town TIS Guidelines

- Worst-Case LOS/Delay for Two-Way Unsignalized/Stop-Controlled Critical Movement

Crash Analysis

A crash analysis of the NC 86 (Martin Luther King, Jr. Boulevard) and Estes Drive corridors was completed as part of the Aura Chapel Hill TIA and used for this study. Analysis results indicate that the study area corridor segments of NC 86 and Estes Drive near the project site have higher crash rates for all reported crash types/categories than similar urban North Carolina facilities, with the preponderance of crashes reported at the NC 86 / Estes Drive intersection.

Other Transportation-Related Analyses

Other transportation-related analyses relevant to the 2001 Town of Chapel Hill Guidelines for the preparation of Traffic Impact Studies were completed, as appropriate. The following topics listed in **Table ES-3** are germane to the scope of this study.



Table ES-3. Other Transportation-Related Analyses

Analysis	Comment
Turn Lane Storage Requirements	Storage bay lengths at study area intersections were analyzed using TransModeler maximum queue length estimates for all analyzed scenarios. At the intersection of NC 86 (Martin Luther King, Jr. Blvd) and Estes Drive, even with proposed improvements from the Town Estes Drive project and Aura project, queues may exceed turn bay storage for the eastbound left-turn and southbound left-turn. Additional laneage improvements for these movements are recommended. At the Estes Drive and E. Franklin Street intersection, additional laneage improvements and signal re-optimization is necessary to prevent queue spillbacks for the Estes Drive approaches.
Appropriateness of Acceleration / Deceleration Lanes	The site concept plan shows no specific related to new acceleration/deceleration lanes along Estes Drive or Somerset Drive. Somerset Drive is a low volume, low speed neighborhood street that would not require auxiliary lanes. The Town's Estes Drive Improvements project and the adjacent Aura project will add new auxiliary turn lanes or extend existing turn lanes. No other specific acceleration or deceleration lane issues were analyzed in the project study area.
Pedestrian and Bicycle Analysis	Existing pedestrian access and connectivity is currently provided along the NC 86 and Estes Drive corridors but will be substantially enhanced with the Town Estes Drive Improvements project and Aura project. Bicycle facilities will be included in the Town project but are limited beyond the project improvements area. A marked pedestrian crossing with rectangular rapid flashing beacons (RRFB) will be included at the Somerset Drive and Estes Drive intersection.
Public Transportation Analysis	Public transportation service to the study area, and to the proposed site is excellent, with bus stops directly serving the site parcel and multiple local CHT T bus routes along NC 86 (Martin Luther King, Jr. Blvd) in both directions proximate to the site that will be accessible through pedestrian connections within the Aura development.

Mitigation Measures/Recommendations

Planned Improvements

There are no planned transportation improvement projects by NCDOT expected to be complete between 2022 and 2025 in the immediate project study area. The Town has two projects planned in the project study area, as described below:

- **Estes Drive Bicycle and Pedestrian Improvements**
This project will enhance pedestrian and bicycle connectivity along the Estes Drive corridor on both sides of the facility with sidewalks, bike lanes and additional pedestrian crossings. It will also provide improvements to auxiliary turn lanes at the NC 86 and Estes Drive intersection. It is expected to be complete prior to the 2025 analysis year.
- **North-South Bus Rapid Transit Project (N-S BRT)**
The Town is currently moving forward on planning for bus rapid transit (BRT) service along the NC 86 corridor but no specific changes or improvements to the facility were analyzed for this study, as the proposed completion date is after the 2025 analysis year.

Background Committed Improvements

There are several specific transportation network improvements to study area roadway intersections related to the Aura Chapel Hill private development project that are expected to be completed between 2022 and 2025. These are shown in combination with the Town's Estes Drive Improvement project on **Figure ES-3**.



- The Aura site plans include a limited access driveway connection to NC 86 north of Estes Drive with stop-control. This access point includes a northbound deceleration lane along NC 86 and concrete islands to prevent both left-turn out of the site and into it. The 701 N. Estes Townhomes site has a proposed street connection with internal Aura roadways that will provide access to the NC 86 driveway, as well as the full access Aura Driveway along Estes Drive.
- Along the Aura site frontage on Estes Drive, improvements to westbound Estes Drive auxiliary lanes and pedestrian/bicycle facilities are planned. A primary, full access driveway will be created with stop-control for the southbound approach with left and right-turn lanes, an eastbound left-turn lane and a protected pedestrian crosswalk with Rapid-Rectangular Flashing Beacons (RRFBs).

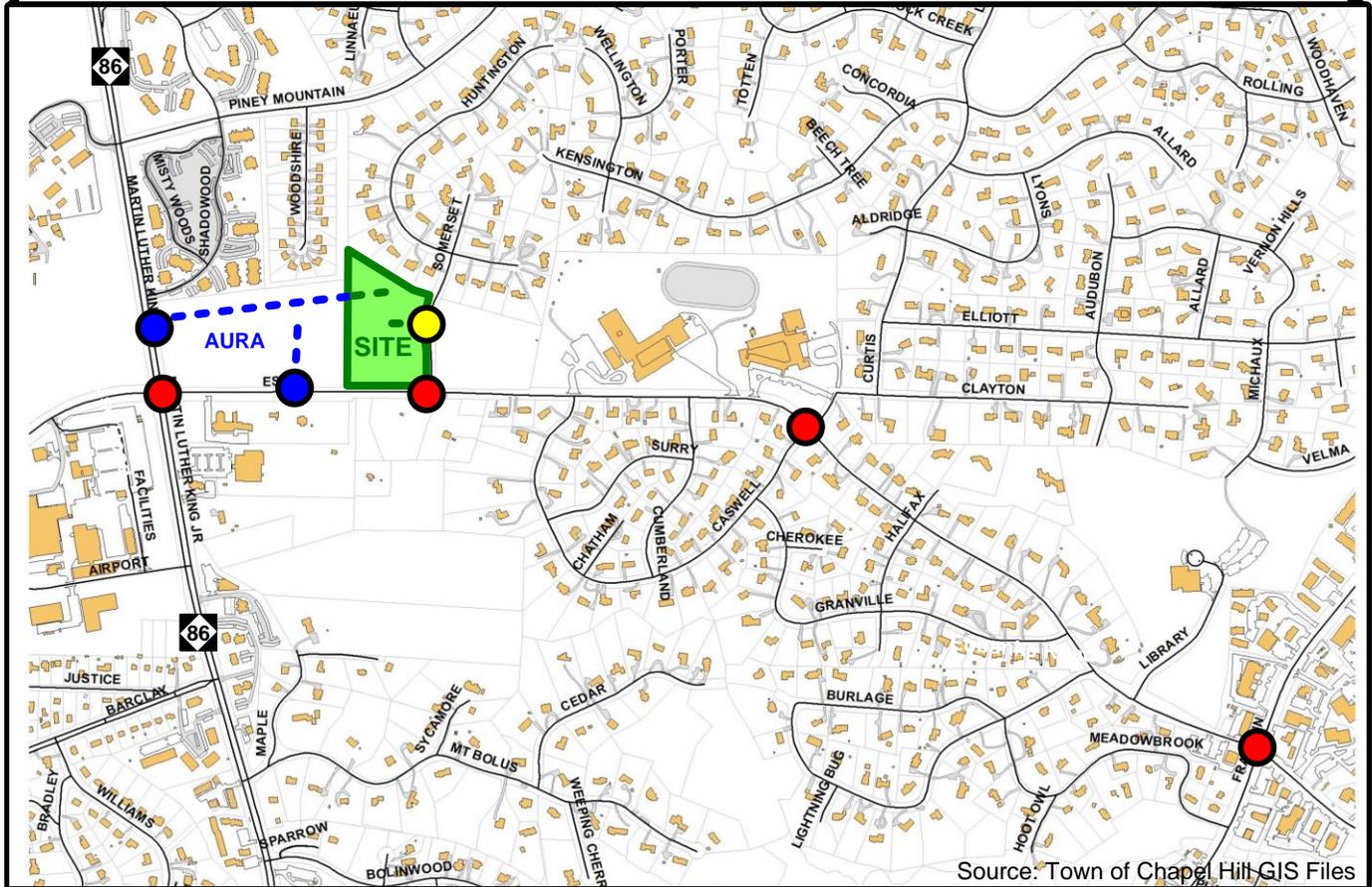
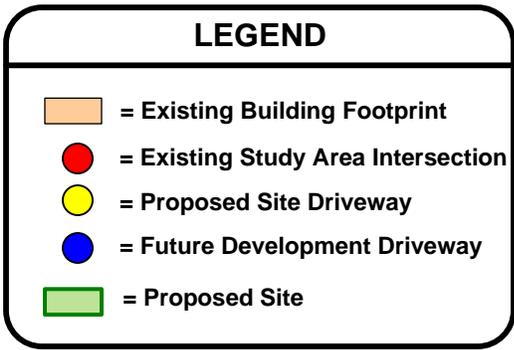
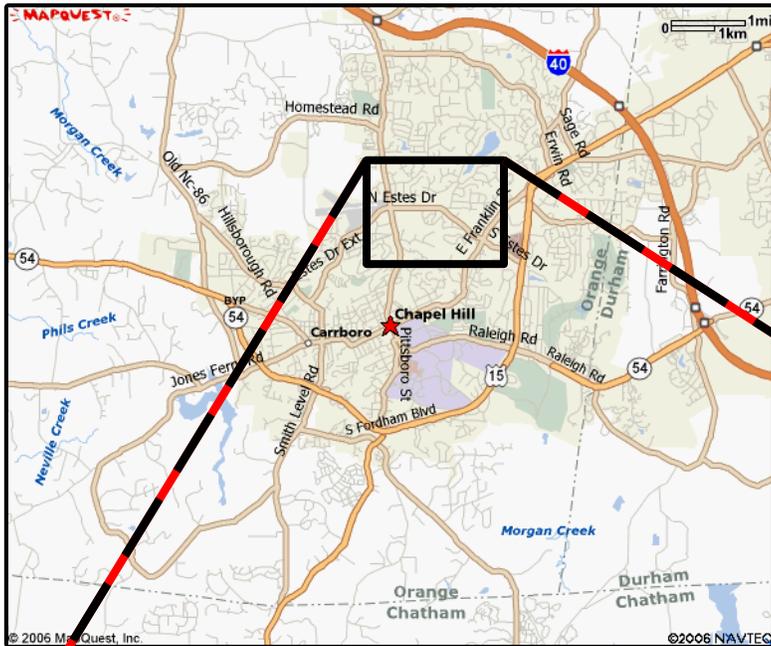
Applicant Committed Improvements

Based on the preliminary site plans and supporting development information provided, the Applicant is proposing to provide two access connections – one to Somerset Drive and one to tie into the Aura development internal roadway plans. The two proposed site driveways and initial laneage assumptions are schematically shown in **Figure ES-3**, based on the preliminary concept plans shown in **Figure ES-2**. The site will also provide sidewalk connection to the Town’s Estes Drive Improvement Project and a sidewalk along the frontage with Estes Drive to tie into sidewalk improvements for the Aura project.

Necessary Improvements

Based on traffic capacity analyses for the 2025 design year, and analyses of existing study area turning bay storage lengths and site access, the following improvements are recommended as being necessary for adequate transportation network operations (see **Figure ES-3**).

- 1) To provide adequate traffic operations and reduce projected vehicle queuing, the future improvements at NC 86 and Estes Drive should be augmented with an additional eastbound left-turn lane to provide dual left-turn lanes with at least 225 feet of storage each. The signal should be retimed for all peak periods to maximize efficiency of both corridors and feature protected-only left-turn phasing for both eastbound and westbound approaches. These improvements are recommended whether or not the 710 N. Estes Townhomes project is constructed.
- 2) Maximum projected queue results indicate that the southbound approach at the NC 86 and Estes Drive intersection may spillback into through travel lanes if the proposed median island constructed for the proposed Aura development RIRO driveway connection is extended beyond the proposed driveway location. It is recommended that the design of the median island allow as much southbound left-turn storage downstream as possible downstream of the driveway location. This improvement is recommended whether or not the 710 N. Estes Townhomes project is constructed.
- 3) The intersection of Estes Drive and E. Franklin Street, even with proposed signal re-optimization is expected to operate at or over capacity in the 2025 PM peak hour with or without site-related traffic from the 710 N. Estes Townhomes project. To address high volume existing and future traffic demands for the southbound E. Franklin Street right-turn movement, it is recommended to construct a right-turn auxiliary lane with at least 350 feet of storage at this approach. This lane can feature a right-turn overlap signal phase which will help with overall signal efficiency and reduce queues for other movements. This improvement is recommended whether or not the 710 N. Estes Townhomes project is constructed.

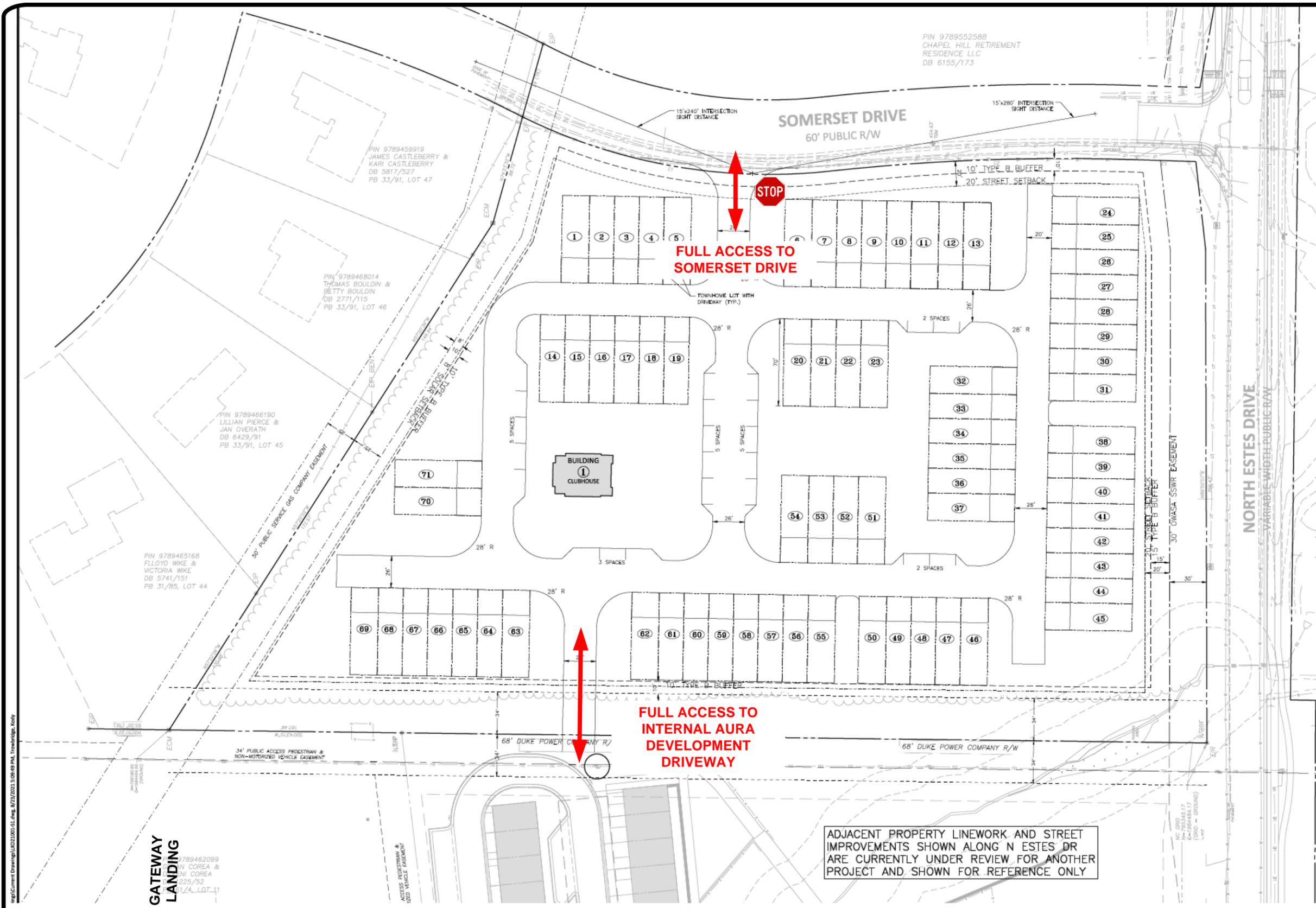


710 N Estes Townhomes Transportation Impact Analysis

PROJECT STUDY AREA

DATE: April 2022

FIGURE ES-1



- LEGEND**
- SIGNAGE
 - YARD LIGHTS
 - LIGHT POLE
 - POWER POLE
 - TRAFFIC DIRECTIONAL ARROW
 - ACCESSIBLE PARKING STALL
 - VAN ACCESSIBLE PARKING STALL
 - PARKING SPACE COUNT
 - ACCESSIBLE RAMPS
 - TYPE A
 - TYPE B
 - TYPE C
 - ACCESSIBLE ROUTE
 - PHASE LINE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - LOT LINE
 - EASEMENT LINE
 - CENTERLINE
 - HEAVY DUTY ASPHALT PAVEMENT

LEGEND

= PROPOSED SITE ACCESS

ADJACENT PROPERTY LINEWORK AND STREET IMPROVEMENTS SHOWN ALONG N ESTES DR ARE CURRENTLY UNDER REVIEW FOR ANOTHER PROJECT AND SHOWN FOR REFERENCE ONLY

HNTB

TOWN OF CHAPEL HILL

NOT TO SCALE

710 N Estes Townhomes
 Transportation Impact Analysis

PRELIMINARY SITE PLAN

DATE: April 2022

FIGURE ES-2

reg:\current\Drawings\10021001-01_117.dwg, 8/27/2021, 5:09:49 PM, T:\work\kcoy

