

SPECIAL USE PERMIT APPLICATION



TOWN OF CHAPEL HILL
Planning and Development Services
405 Martin Luther King Jr. Blvd.
Chapel Hill, NC 27514
phone (919) 969-5066 fax (919) 969-2014
www.townofchapelhill.org

Parcel Identifier Number (PIN): 9789297279 & 9789392409

Date: Rev. 04.17.2020

Section A: Project Information

Project Name: 1200 MLK

Property Address: 1200 & 1204 Martin Luther King Jr. Blvd. Zip Code: 27514

Use Groups (A, B, and/or C): C Existing Zoning District: NC & R-4

Project Description: Convenience Store and 12 gas pumps (replacing existing convenience store with 6 pumps)

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

Applicant Information (to whom correspondence will be mailed):


Name: Coulter Jewell Thames, PA – c/o Jeremy Anderson

Address: 111 West Main Street

City: Durham State: NC Zip Code: 27701

Phone: 919-682-0368 Email: JAnderson@cjtpa.com

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

Signature:  Date: 05-30-2019

Owner/Contract Purchaser Information:

Owner

Contract Purchaser

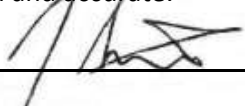
Name: Stackhouse Properties, LLC

Address: PO Box 14466

City: RTP State: NC Zip Code: 27709

Phone: 919-408-7150 Email: accounting@rentstackhouse.com

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

Signature:  Date: 05-30-2019

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



Section A: Project Information

Use Type: (check/list all that apply)

- Office/Institutional Residential Mixed-Use Other: Commercial (Convenience store & self storage)

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=	537,504 (OI-2) 68,740 (NC)	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=	16,250 (OI-2) 13,150 (NC)	sq. ft.
	b) Credited Permanent Open Space (total adjacent frontage) x ½ public or dedicated open space	COS=	n/a	sq. ft.
TOTAL: NLA + CSA and/or COS = Gross Land Area (not to exceed NLA + 10%)		GLA=	553,754 (OI-2) 81,890 (NC)	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)	244,335 sf
Area of Land Disturbance within RCD	37,464 sf
Area of Land Disturbance within Jordan Buffer	4,960 sf

Impervious Areas	Existing (sq. ft.)	Demolition (sq. ft.)	Proposed (sq. ft.)	Total (sq. ft.)
Impervious Surface Area (ISA)	185,732	Per SIA	Per SIA	271,416
Impervious Surface Ratio: Percent Impervious Surface Area of Gross Land Area (ISA/GLA)%		Per SIA	Per SIA	Per SIA
If located in Watershed Protection District, % of impervious surface on 7/1/1993				



Section D: Dimensions

Dimensional Unit (sq. ft.)	Existing (sq. ft.)	Demolition (sq. ft.)	Proposed (sq. ft.)	Total (sq. ft.)
Number of Buildings	57,100	4,742	5,000 + 134,400	139,400
Number of Floors	1		1 & 4	
Recreational Space				

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)	54,704	2,346	0	52,358
Total Square Footage of All Units	54,704	2,346		52,358
Total Square Footage of Affordable Units	54,704	2,346		52,358
Total Residential Density	5.9			5.9
Number of Dwelling Units	73		10	83
Number of Affordable Dwelling Units	73		10	83
Number of Single Bedroom Units				
Number of Two Bedroom Units				
Number of Three Bedroom Units				

Non-Residential Space (Gross Floor Area in Square Feet)					
Use Type	Existing	Proposed	Uses	Existing	Proposed
Commercial		139,400			
Restaurant			# of Seats		
Government					
Institutional					
Medical					
Office					
Hotel			# of Rooms		
Industrial					
Place of Worship			# of Seats		
Other					

Dimensional Requirements		Required by Ordinance	Existing	Proposed
Setbacks (minimum)	Street	22	65	33
	Interior (neighboring property lines)	8	36	31
	Solar (northern property line)	9	35	307.6
Height (maximum)	Primary	34		34
	Secondary	60		60
Streets	Frontages			
	Widths			



PROJECT FACT SHEET
TOWN OF CHAPEL HILL
 Planning and Development Services

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
Martin Luther King Jr. Blvd.	100'	66'	5	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
				<input type="checkbox"/> Yes	<input 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
Martin Luther King Jr. Blvd.	5 and 6	Conc.	<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	68	110	44
Handicap Spaces			2
Total Spaces	68	110	46
Loading Spaces	2		2
Bicycle Spaces	10		10
Surface Type	Concrete or asphalt		

Section H: Landscape Buffers

Location (North, South, Street, Etc.)	Minimum Width	Proposed Width	Alternate Buffer	Modify Buffer
West (MLK JR. BLVD.)	30'	30'	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
South	20'	20'	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
			<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
			<input type="checkbox"/> Yes	<input type="checkbox"/> Yes



PROJECT FACT SHEET
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Section I: Land Use Intensity

Existing Zoning District: **NC & R4**
 Proposed Zoning Change (if any): **NC & OI-2**

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
OI-2	.264	.046				146,191	25,473
N.C.	.264					21,619	
TOTAL						167,810	24,473
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 type="checkbox"/> Underground	<input checked="" type="checkbox"/> Above Ground		
Telephone	<input type="checkbox"/> Underground	<input checked="" type="checkbox"/> Above Ground		
Solid Waste	<input type="checkbox"/> Town	<input checked="" type="checkbox"/> Private		



**SPECIAL USE PERMIT APPLICATION
SUBMITTAL REQUIREMENTS
TOWN OF CHAPEL HILL
Planning and Development Services**

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) 969-5066 or at planning@townofchapelhill.org.

X	Application fee (including Engineering Review fee) (refer to fee schedule)	Amount Paid \$	<input type="text" value="See attached slip"/>
2/4	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		
n/a	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 type="text" value="286.40"/>
X	Written Narrative describing the proposal, including proposed land uses		
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)		
x	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
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- 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



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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



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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



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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)



Coulter Jewell Thames, PA

MAIN OFFICE
111 WEST MAIN STREET
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Planning for the Future

1200 MLK

Conditional Zoning

05.30.2019

08.06.2019 - revised

04.13.2020 - revised

06.18.2020 - revised

08.19.2020 - revised

DEVELOPER'S PROGRAM

This is a request for review of a Conditional Zoning applications by the Town of Chapel Hill.

Introduction

The '1200 MLK' project is the redevelopment of the existing Tar Heel Mobile Home Park and non-operational Marathon Service Station, on the east side of Martin Luther King Boulevard, across from the intersection with Northfield Drive. The project is proposing to modernize the service station, add a new self-storage building, and preserve or reposition all of the existing mobile home residential units onsite. The developer understands the significance that the existing affordable housing plays in the Towns variety of housing options, thus retaining as many of the existing units, while redeveloping a portion of the site, is important. The parcel addresses are 1200 and 1204 MLK Jr. Blvd.

The proposal is to enlarge the Commercial Neighborhood (NC) Zoning at the front of the site, and rezone the R-4 to O-I2 at the sides and rear of the site. The O-I2 portion at the rear of the site will include a PD(H) overlay, to allow for the existing mobile home park.

The project was previously submitted as a Concept Plan and reviewed by Town staff, the Housing Advisory Board and Town Council earlier this year. An outlined of the applicant responses to comments made at the Council meeting are attached to this application.

Site Description

The site consists of two parcels, totaling approximately 13.9 acres. The site is partially wooded, with the old Marathon service station at the front of the site, and approximately 73 existing mobile home residential units and 1 single family residence at the rear and sides of the site. The site has access via multiple access points off of MLK Jr. Blvd. Two of these access points are oddly positioned on either side of the signalized intersection with Northfield Drive. There are existing bus stops on both the east and west sides of MLK Jr. Blvd, adjacent to the site.

The project site is bounded by the Orange United Methodist Church to the north, an existing single family residential neighborhood to the east and south, and various commercial businesses on the west side of MLK Jr Blvd.

The site slopes gently from the front (west) to the rear (east). An existing OWASA lift station is positioned at the northeast corner of the project site.

Site Access and Circulation

The site is currently accessed via a split driveway spanning the across the signalized intersection at Northfield Drive. This pair of driveways will be reworked to align with the signalized intersection, improving access functionality and safety. There are two additional residential driveways off of MLK Jr Blvd. that will remain unchanged. The project will improve vehicular circulation into to the mobile home park via the reworked signalized intersection. Pedestrian sidewalk improvements will be provided along the frontage of the site, which currently does not have one. Adequate onsite parking will be provided for both of the proposed uses.

Per the Town of Chapel Hill LUMO, the combined parking requirement for the commercial components of the project is a minimum of 68 spaces and a maximum of 110 spaces. The proposed site plan shows 46 spaces, which based on the real market demands for the parking of these uses (30 for Gas/Convenience Store and 16 for Self-Storage), is adequate. See below for a modification request to reduce the minimum required spaces for the Self-Storage facility.

Building Orientation and Site Layout

The convenience store building will be oriented so that the parking is at the side or rear, with the fuel pump canopy positioned behind the building. The multi-story self-storage building will be located approximately 250' from the ROW, minimizing visibility, and serving a buffer to the existing mobile home units. Several of the existing mobile home units (~16) will have to be relocated for the proposed site redevelopment, but the developer has analyzed the units and opportunity rezoned within the existing property, to relocate all of the units that can physically be moved. The building architecture will meet or exceed the LUMO requirements.

Environmental and Landscaping

The 13.9 acre site contains 4.5 acres of protected RCD buffer area, extending 150' from the Kings Branch Stream along the northern property line. The existing mobile home park contains a variety of mature trees, with the majority of these to be retained. New landscaping and street trees will be provided for the redeveloped portion of the site. Required tree coverage, parking lot shading, and landscape buffers will provide screening and visual interest. The developer will continue to work with the existing residents to best utilize the open space areas onsite, including the open play field, the frontage RCD areas, and landscaping along the rear of the storage building.

Stormwater

The existing site currently doesn't have stormwater treatment. The proposed redevelopment will comply with the current stormwater quality and quantity regulations through the installation of Stormwater Control Measures, inlets and piping. The project will comply with all sedimentation and erosion control requirements utilizing on and offsite protection measures.

Utilities

The project site is currently served by OWASA water and sewer services. The new commercial buildings will have new water and sewer services designed to current standards and specifications. Water and sewer services to the existing and relocated residences will remain as is, or be reconnected to the new lines run as part of the commercial project. The existing OWASA pump station will remain.

PD-H Determination

Per LUMO section 6.18.1, the following points are provided in support of the location of the PD-H designation.

- The creation of this PD-H is unique in the fact that this is an established residential community that has existed at this location for over 30 years.
- The community is located with access to a major street, with pedestrian and bicycle access. This site is located along the route of the future BRT transportation improvements. The site does not require access through a residential neighborhood outside the development.
- The site has access to public water and sewer facilities, without requiring public extensions. The project will be incorporating new stormwater improvements, as the site currently does not have any.
- The proposal to keep the residential community in place means the current public infrastructure (schools, parks, etc.) will continue to serve the community and its residents. The site is within walking distance to Homestead Park, and well as the greenway trails within the Carolina North nature area. In addition to surrounding public amenities, the project is proposing a new playground within the site for the residents.

- The continuation of this residential community should cause an increase on maintenance or operation cost of the existing public facilities.

In summary, the developer finds that the existing residential community would continue to serve and be served by the adjacent public infrastructure, and not have an appreciable negative impact of the adjacent residential neighborhoods.

Outline of Modifications requested

The following is list of Modifications to the LUMO that are being requested as part of this Conditional Zoning Application:

1. *Per LUMO section 6.23, self-storage is only allowed on the same zoning lot as other office, commercial, or institutional.*

A Modification to regulations is requested to allow Self-Storage to be on the same zoning lot and accessory to a Mobile Home Park (in terms of land area)

2. *Per LUMO section 6.23, self-storage facilities shall not be permitted on property located at an intersection with any arterial street.*

The applicant contends that the Self-Storage building is not located at an intersection, but across from the intersection of MLK Jr. Blvd and Northfield.

A Modification to regulations is requested to allow a Self-Storage building to be located across from an intersection, but not on a corner lot created by two intersecting streets.

3. *Per LUMO section 6.12, a service station/convenience store shall not be located within three hundred (300) feet of any intersecting street or within seven hundred fifty (750) feet of driveways intersecting the same street and serving another existing or approved service station.*

A Modification to regulations is requested to allow a service station / convenience store to be located within the thresholds listed above if an existing service station / convenience store was previous approved and permitted on this site.

4. *Per LUMO section 3.6.3-2, Permitted Uses within Resource Conservation District*

The applicant requests a modification to allow mobile home residences to remain in or be moved into the RCD, to preserve the residence onsite, within the existing mobile home park.

5. *Per LUMO section 5.9.7, Minimum and maximum parking space requirements*

The applicant requests a modification to the required minimum number of parking spaces for a Conditioned Self Storage Facility. Based on the LUMO calculation of a minimum of 1 space per 2,500 sf, the minimum requirement

would be 90 spaces. The Developer feels this is almost 5x the actual requirement. Based market experience of other facilities, this facility would require 16-20 spaces during a peak period.

6. *Per LUMO section 3.7.3, Use Groups*

The applicant requests a modification to the Use Group Table that would allow existing Class B manufactured homes to be allowed within a PD-H. The existing mobile home community consists of Class B units, and this modification would allow the existing units to remain onsite, as outlined elsewhere in this Developer Narrative.

ENERGY MANAGEMENT PLAN

1200 MLK – CONDITIONAL ZONING
CHAPEL HILL, NORTH CAROLINA

Prepared by: CJTpa

The current Town of Chapel Hill Energy Management Plan Section list of requests are included below, accompanied by the applicants response:

1. Description of how project will be 20% more energy efficient than ASHRAE Standards

- a. While final designs are still being developed and construction costs evaluated, areas of consideration to increase the energy efficiency of the building will be:
 - i. Tight building envelope construction.
 - ii. Explore energy recovery HVAC systems with variable speed motors.
 - iii. High-efficiency domestic hot water system, utilizing condensing water.
 - iv. Heat-absorbing, low-emissivity or energy-star window strategies.
 - v. Use of energy star appliances and equipment will be used for all appliance as practical.
 - vi. Use of masonry walls and concrete floors that increase the thermal mass of the building to reduce the temperature swings in the building.
 - vii. Use of energy efficient LED lighting for interior and exterior.
 - viii. Occupancy sensors for light controls provided in areas as required per ASHRAE 90.1
 - ix. Programmable mechanical systems controls.

2. Description of utilization of sustainable forms of energy (Solar, Wind, Hydroelectric, and Biofuels)

- a. The possible use of a solar energy source hot water system is the only current option to explore.

3. Participation in NC GreenPower program

- a. Participation in the program will be explored through either a probable contribution or solar array.

4. Description of how project will ensure indoor air quality, adequate access to natural lighting, and allow for proposed utilization of sustainable energy

- a. The project will investigate appropriate ways to achieve these goals through use of the following methods:
 - i. An outdoor air make-up system beyond industry standards.
 - ii. Paints, sealants, fabrics and finishes to have low VOC content.
 - iii. The common space areas to utilize large exterior windows to bring daylight into interior spaces, balance energy needs and views.
 - iv. Mechanical systems will be designed to operate with controllable fresh air intakes and economizers.

5. Description of how project will maintain commitment to energy efficiency and reduced carbon footprint over time

- a. While this project is not pursuing LEED certification, the research and use of green oriented products, materials and equipment will provide for long-term reduction in carbon footprint.
- b. Light Pollution Reduction: The proposed light fixtures are dark sky friendly and the project will utilize LEED-compliant forms of light pollution reduction design practices to improve nighttime visibility and reduce the consequences of development for wildlife and people
- c. White roofing materials to promote reflectivity.

- d.* Outdoor Water Use Reduction: through LEED-compliant forms of outdoor water use reduction design practices involving selective irrigation areas and careful choice of planting materials that should thrive in years of normal rainfall
- e.* Indoor Water Use Reduction: through LEED-compliant forms of indoor water use reduction design practices involving specification of low flow, water-saving plumbing fixtures
- f.* Fundamental Refrigerant Management: through LEED-compliant forms of fundamental refrigerant management design practices to reduce stratospheric ozone depletion.
- g.* Construction and Demolition Waste Management Planning: through LEED-compliant forms of demolition and construction waste management planning and practices.
- h.* Through education of staff of building utilization to maintain awareness of energy usage and reduction.
- i.* Indoor Environmental quality: through LEED-compliant forms of minimum indoor air quality performance compliance, environmental tobacco smoke control and minimum acoustic performance strategies

6. Description of how the project's Transportation Management Plan will support efforts to reduce energy consumption as it affects the community

- a.* Proposed project siting provides LEED-compliant access to bus routes for guests and employees and accommodations for bike riders

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

- a.* Height from mean natural grade indication is provided on the Drawings

1200 MLK REDEVELOPMENT

TRAFFIC IMPACT STUDY

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

June 2019



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EXECUTIVE SUMMARY

Project Overview

A redevelopment of an existing site parcel, known as the 1200 MLK Redevelopment, is being proposed along NC 86 (Martin Luther King Jr. Boulevard) at its intersection with Northfield Drive in Chapel Hill, NC. The project proposes to redevelop an existing gas station/convenience mart site with a new, larger 5,700 square foot facility along with a 100,000 square foot indoor storage facility. The site also currently features residential mobile homes which will continue to occupy existing areas in the rear of the property. **Figure ES-1** shows the general location of the site. The overall project is anticipated to be fully complete and occupied by 2021. This report analyzes the build-out scenario for the year 2022 (one year after anticipated completion), the no-build scenario for 2022, as well as 2019 existing year traffic conditions.

The proposed site concept plan shows a provision for two access driveways, one full movement and one right-turn in/right-turn out only (RIRO) that connect to NC 86 (Martin Luther King, Jr. Boulevard). The full movement driveway will form the fourth leg of the NC 86 signalized intersection with Northfield Drive. No other external vehicular access connections are proposed. The site driveways are proposed to have internal connectivity with on-site buildings and their respective parking areas as well as existing driveway aisles that serve the mobile home park. **Figure ES-2** displays the preliminary concept plan of the 1200 MLK Redevelopment and nearby land uses and roadways. The site is expected to provide approximately 75 parking spaces on surface lots. This report analyzes and presents the transportation impacts that the 1200 MLK Redevelopment will have on the following intersections in the project study area:

- NC 86 (Martin Luther King, Jr. Boulevard) and Homestead Road / Church Driveway
- NC 86 (Martin Luther King, Jr. Boulevard) and Proposed Right-In/Right-Out Site Driveway
- NC 86 (Martin Luther King, Jr. Boulevard) and Northfield Drive / Proposed Main Site Driveway
- NC 86 (Martin Luther King, Jr. Boulevard) and Piney Mountain Road / Municipal Drive

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 NC 86 (Martin Luther King, Jr. Boulevard) corridor. The study area contains three signalized intersections along NC 86 at Homestead Road, Northfield Drive and Piney Mountain Road. All future site traffic is expected use the two proposed site driveways along NC 86. Internal driveways shown on the preliminary site plan will circulate site traffic to designated parking areas and fuel pump locations. NC 86 is a principal north-south arterial providing connectivity throughout Chapel Hill and points beyond in Orange County. Homestead Road is a minor arterial street for access to areas in western 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* and the most conservative estimates of potential trip generation yield taken from information on potential development land use types included in the *ITE Trip Generation Manual*.



Table ES-1. Weekday Vehicle Trip Generation Summary

TRIP TYPE	Daily			AM Peak Hour			Noon Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
NEW SITE TRIPS	935	935	1,870	85	83	168	66	66	132	84	85	169
PASS-BY SITE TRIPS	1,235	1,235	2,470	129	129	258	84	84	168	97	97	194
TOTAL TRIPS	2,170	2,170	4,340	214	212	426	150	150	300	181	182	363

Trip generation estimates account for both new site trips and “pass-by” type trips that occur at the driveway entrances/exits and do not add new trips to the traffic stream. Existing trip generation data was also collected for the mobile home park and was included in the 2022 analysis year traffic volumes.

Background Traffic

Background traffic growth for the 2022 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 2019 traffic volumes, along with the inclusion of four nearby specific background traffic generating projects to estimate 2022 background traffic on study area roadways.

Impact Analysis

Peak Hour Intersection Level of Service

Existing 2019 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 2022, but not cause any intersection to operate at deficient levels in any peak hour. With the addition of peak hour site-generated trips to the projected 2022 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 Level-of-Service (LOS) is shown in **Table ES-2** on the following page.

Access Analysis

Vehicular site access is to be accommodated at two proposed access driveways connecting to NC 86 (Martin Luther King, Jr. Blvd). The southern (main) site driveway will connect as a fourth leg to the NC 86 (Martin Luther King, Jr. Blvd) signalized intersection with Northfield Drive. The other driveway connection will be a limited access RIRO driveway located to the north of the signalized intersection. The main driveway connection would have a throat length of approximately 175 feet and the RIRO driveway would have a throat length of 50 feet prior to internal parking lot connections. Throat lengths are acceptable, based on 50 foot minimum throat length standards found on Page 69 of the 2019 *Town of Chapel Hill Public Works Design Manual*. 2003 *NCDOT Policy on Street and Driveway Access to North Carolina Highways* throat length recommendations are 100 feet, which is not provided for the RIRO driveway.

The distance between the proposed driveway connections is approximately 225 feet. Driveway connection separations from an intersection are acceptable, based on recommendations of 100 foot minimum corner clearance as set forth in the 2003 *NCDOT Policy on Street and Driveway Access to*



Table ES-2. Peak Hour Intersection Capacity Analysis Summary

Intersections	Peak Hour	2019 Existing		2022 No-Build		2022 Build		2022 Build – Mitigated	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
NC 86 (Martin Luther King, Jr. Boulevard) & Homestead Road / Church Driveway	AM	C	24.5	C	26.2	C	25.6	N/A	N/A
	NOON	C	23.2	C	24.9	C	24.0	N/A	N/A
	PM	C	21.8	C	24.1	C	23.5	N/A	N/A
NC 86 (Martin Luther King, Jr. Boulevard) & Proposed RIRO Driveway#	AM	N/A	N/A	N/A	N/A	B	14.4	N/A	N/A
	NOON	N/A	N/A	N/A	N/A	B	12.8	N/A	N/A
	PM	N/A	N/A	N/A	N/A	D	26.6	N/A	N/A
NC 86 (Martin Luther King, Jr. Boulevard) & Northfield Drive / Proposed Main Site Driveway	AM	A	3.6	A	3.6	B	19.6	B	16.4
	NOON	A	4.2	A	4.0	B	15.4	B	14.1
	PM	A	9.9	B	10.6	B	18.8	B	16.7
NC 86 (Martin Luther King, Jr. Boulevard) & Piney Mountain Road / Municipal Drive	AM	B	12.7	B	12.7	B	11.6	N/A	N/A
	NOON	A	8.9	A	8.7	A	8.7	N/A	N/A
	PM	B	12.1	B	13.0	B	12.9	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

North Carolina Highways and the recommended 150 foot spacing between a driveway and an intersection along arterial roadways found in Table 3.2 – Street Standards in the Town Design Manual. The driveway separation distance is less than the 500 foot minimum along arterial streets specified in the Town Design Manual, but the proposed design improves the current parcel driveway access alignment, where the two existing driveways are full access, separated by only 125 feet and do not align with the current signalized intersection at Northfield Drive.

Access for pedestrians and bicycles is lacking connectivity in the project study area. Sidewalk is present along the NC 86 (Martin Luther King, Jr. Blvd) corridor, but not continuously along both sides of the road south of Homestead Road. Bicycle lanes are present along the segment of NC 86 (Martin Luther King, Jr. Blvd) in the project study area north of Homestead Road, but no other bicycle facilities exist in the project study area.

Crash Analysis

A crash analysis of the NC 86 (Martin Luther King, Jr. Boulevard) corridor was completed using the NCDOT TEAAS crash data base for the last five years 2014-2019. Analysis results indicate that the study area corridor segment of NC 86 has lower crash rates for all reported crash types/categories than similar five-lane undivided urban North Carolina routes.

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 Synchro and HCM 95 th percentile (max) queue length estimates for all analyzed scenarios. At the intersection of NC 86 (Martin Luther King, Jr. Blvd) and Northfield Drive/Main Site Driveway, projected 95 th percentile queue lengths may exceed the driveway stem length in the 2022 AM and PM peak hours for with site redevelopment. A recommended improvement to provide separate left-turn and through/right-turn lanes would mitigate this issue.
Appropriateness of Acceleration / Deceleration Lanes	The site concept plan shows no specific related to new acceleration/deceleration lanes along NC 86. It is assumed that the existing two-way center left-turn lane would be utilized for southbound left-turns into the site at the Northfield Drive intersection. Auxiliary turn lanes are provided at most locations along NC 86 (Martin Luther King, Jr. Blvd) and at select minor street approaches. No other specific acceleration or deceleration lane issues were analyzed in the project study area
Pedestrian and Bicycle Analysis	Existing pedestrian access and connectivity currently lacking along NC 86 on the east side of the road adjacent to the site, but some pedestrian connections and crosswalk/pedestrian signals are present along the NC 86 corridor. Striped bicycle lanes are present along the facility, but only to the north of Homestead Road. Pedestrian sidewalk is shown along a portion of the site frontage with NC 86, but additional sidewalk connections should be considered along the entirety of the site frontage as well as to areas internal to the site to connect to the mobile home park and directly to the convenience store site.
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.

Mitigation Measures/Recommendations

Planned Improvements

There are no planned transportation improvement projects by NCDOT or the Town of Chapel Hill expected to be complete between 2019 and 2022 in the immediate project study area. 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.

Background Committed Improvements

There are no specific transportation network improvements to study area roadway intersections related to background private development projects that are expected to be completed between 2019 and 2022.

Applicant Committed Improvements

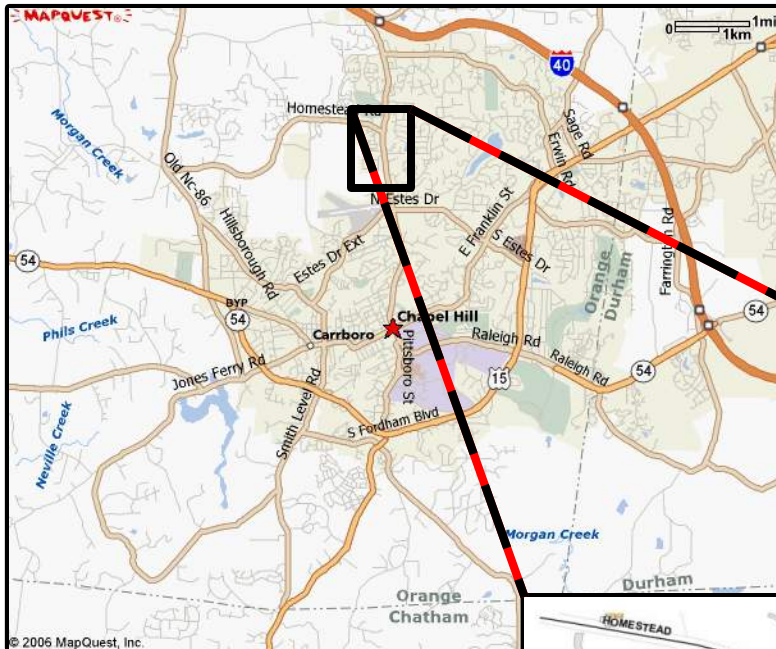
Based on the preliminary site plans and supporting development information provided, the Applicant is proposing to reconfigure driveways that access the site. The two existing full access driveways will be closed, and a full access driveway is proposed to align with Northfield Drive and utilize the existing traffic signal. A second proposed RIRO driveway is to be located to the north of the signalized intersection. Additional reconfiguration of existing internal driveways that serve the mobile home park are also proposed to allow better traffic circulation throughout the site development. The two proposed site driveways along NC 86 and initial laneage assumptions are schematically shown in **Figure ES-3**, based on the preliminary concept plans shown in **Figure ES- 2**.



Necessary Improvements

Based on traffic capacity analyses for the 2022 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**).

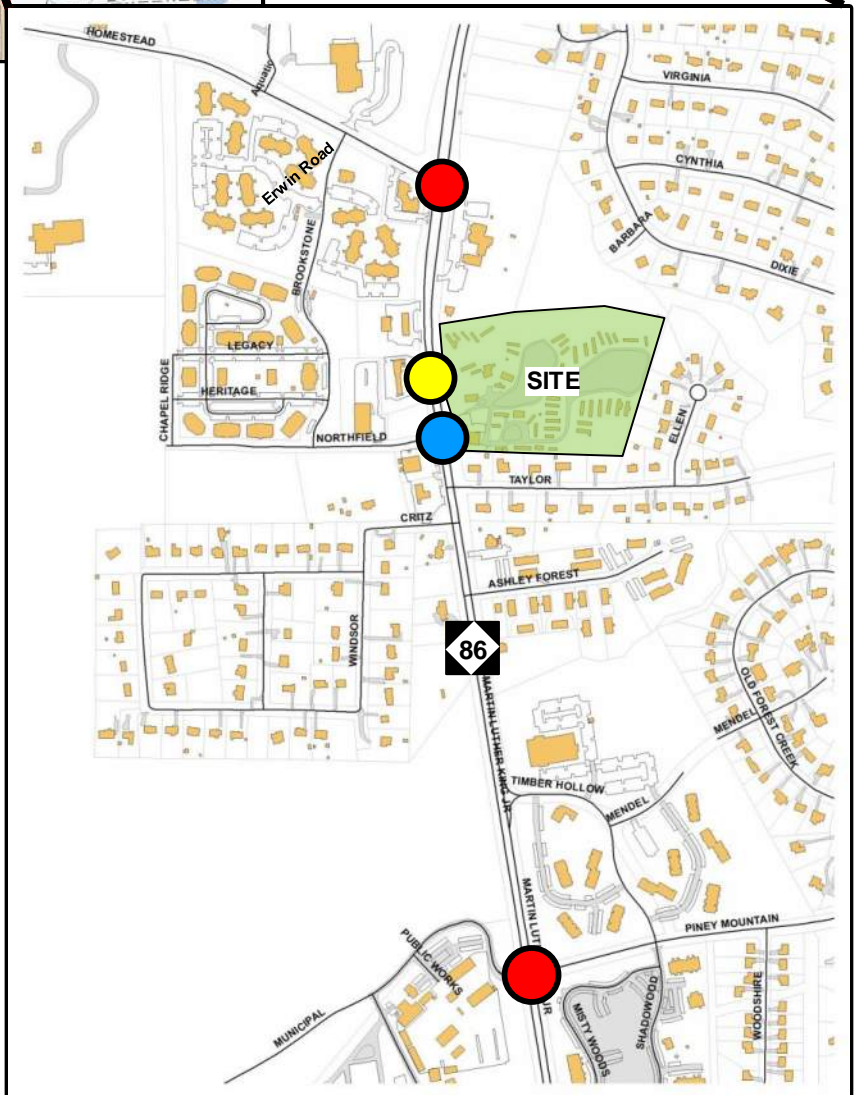
- 1) To provide adequate traffic operations and improve pedestrian safety and connectivity, the existing traffic signal at NC 86 and Northfield Drive should be upgraded to allow the Main Site Driveway to operate as a concurrent signal phase with Northfield Drive. The southbound and westbound approaches at the intersection include crosswalk and pedestrian signalization. The northbound and southbound left-turn lanes along NC 86 should operate with protected+permitted signal phasing. The signal should be retimed for all peak periods to maximize efficiency along the NC 86 corridor. These improvements are recommended for the 1200 MLK Redevelopment project.
- 2) Capacity analysis results indicate that a single westbound lane exiting at the Main Site Driveway may have maximum queues that exceed the proposed driveway stem length in 2022 AM and PM peak hours. To mitigate this issue, separate westbound left-turn and through/right-turn lanes are recommended to improve overall queue storage. This improvement is recommended for the 1200 MLK Redevelopment project.
- 3) The concept plan design for the RIRO driveway along NC 86 has limited driveway stem length and the nearby driveway aisle along the frontage of the convenience store may cause safety issues with turning traffic into/exiting this driveway in the vicinity of the external RIRO driveway. To mitigate this issue, extension of the proposed concrete median island at the RIRO driveway past the adjacent internal driveway is recommended, along with making this driveway aisle a one-way southbound movement. **Figure ES-4** schematically shows these proposed changes. This improvement is recommended for the 1200 MLK Redevelopment project.
- 4) An extension of sidewalk along the site frontage with NC 86 north of the proposed RIRO Driveway will allow better pedestrian connectivity along the corridor. In addition, provision of a sidewalk connection from the NC 86 sidewalk directly to the convenience store would improve safety. This improvement is recommended for the 1200 MLK Redevelopment project.



LEGEND

- = Existing Building Footprint
- = Proposed Site Parcel
- = Existing Study Area Intersection
- = Proposed Full Access Site Driveway
- = Proposed Future RIRO Driveway

**NOT
TO
SCALE**



1200 MLK Redevelopment Traffic Impact Study

PROJECT STUDY AREA MAP

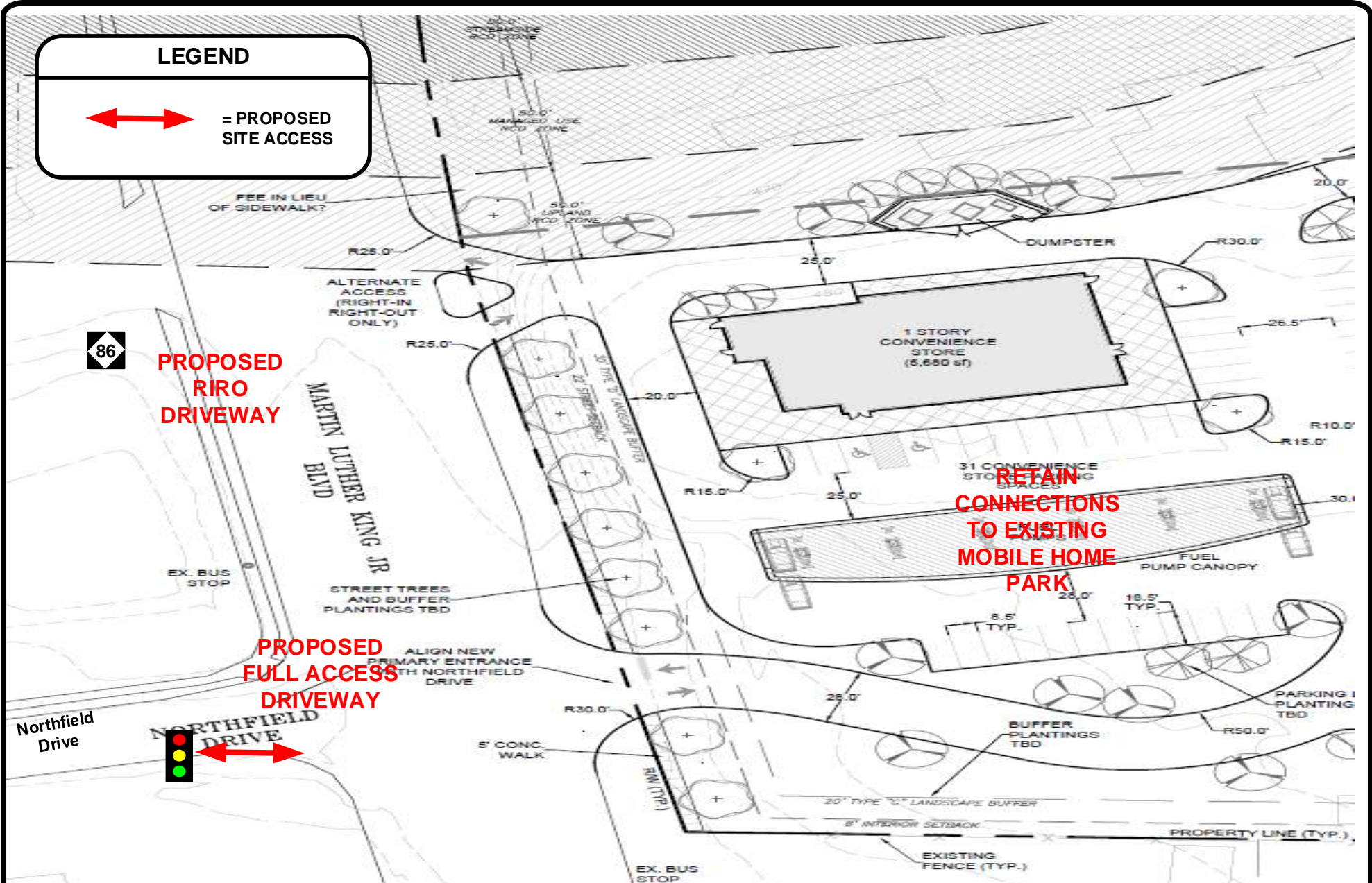
DATE: June 2019

FIGURE ES-1

LEGEND



= PROPOSED SITE ACCESS



HNTB



NOT TO SCALE

**1200 MLK Redevelopment
Traffic Impact Study**

DATE: June 2019

SITE CONCEPT PLAN

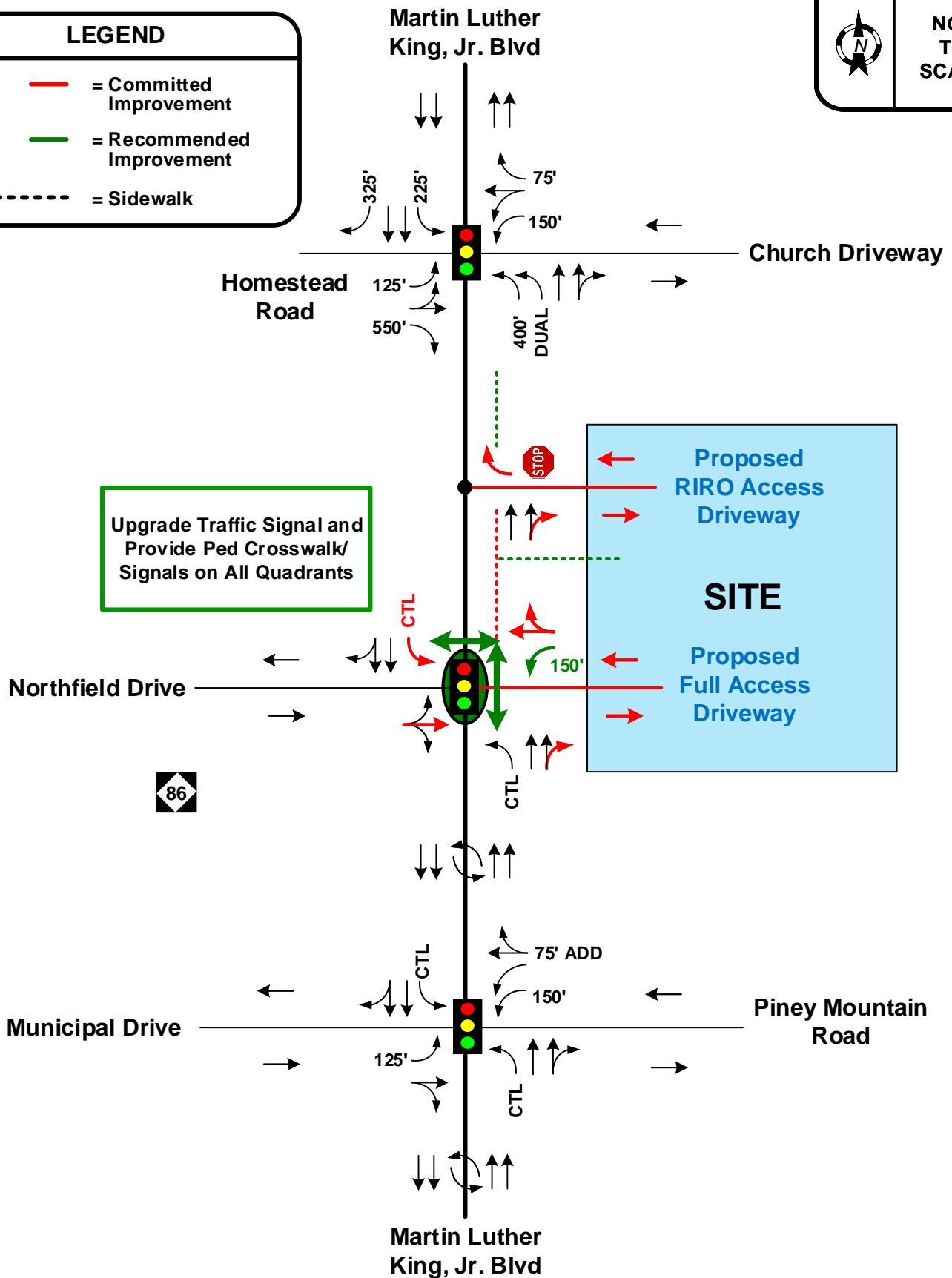
FIGURE ES-2

LEGEND

-  = Committed Improvement
-  = Recommended Improvement
-  = Sidewalk



NOT TO SCALE

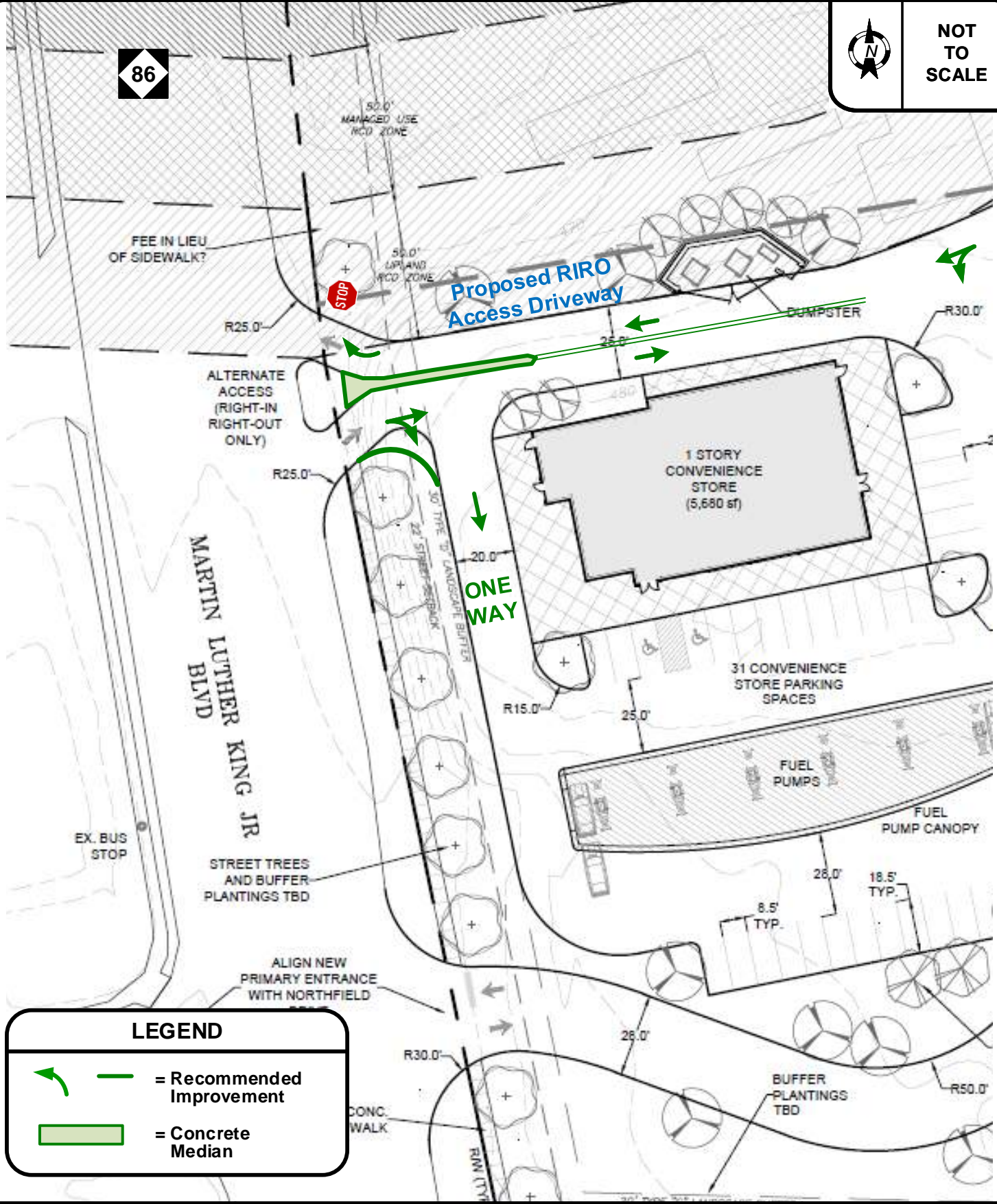


**1200 MLK Redevelopment
Traffic Impact Study**

DATE: June 2019

COMMITTED & RECOMMENDED IMPROVEMENTS

FIGURE ES-3



LEGEND

- = Recommended Improvement
- = Concrete Median



**1200 MLK Redevelopment
Traffic Impact Study**

DATE: June 2019

**RECOMMENDED RIRO DRIVEWAY
IMPROVEMENTS SCHEMATIC**

FIGURE ES-4