



CITY OF BELMONT

PLANNING & ZONING

Application number: MDP2022.04 – Oaks Commerce spec building

Applicant: Crow Holdings

Property owner: DMG Road Works, LLC (Agent: Quarles & Brady LLP)

Location: 630 Hickory Grove Rd, Gastonia NC 28056

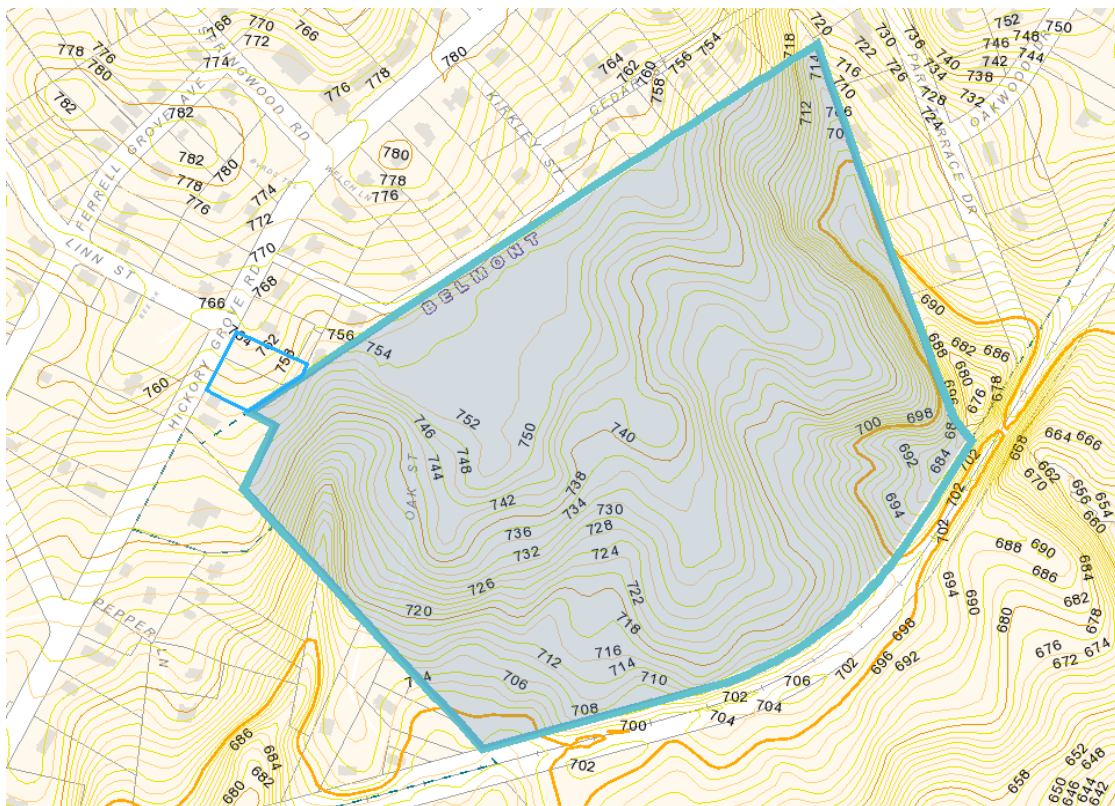
Zoning: Business Campus Development (BC-D)

Parcel ID# 306477

Request: The applicants are requesting that the planning and zoning board receive and consider a request to develop one 470,000-square-foot office warehouse within The Oaks Commerce Park to be accessed via Hickory Grove Rd.

Background:

The development site is comprised of one 43.7-acre parcel within city limits. The developer is also requesting annexation and conditional zoning on two adjacent parcels (.33 acres each), which are being shown in this report for analysis purposes only. All site requirements are fully contained on the subject property.

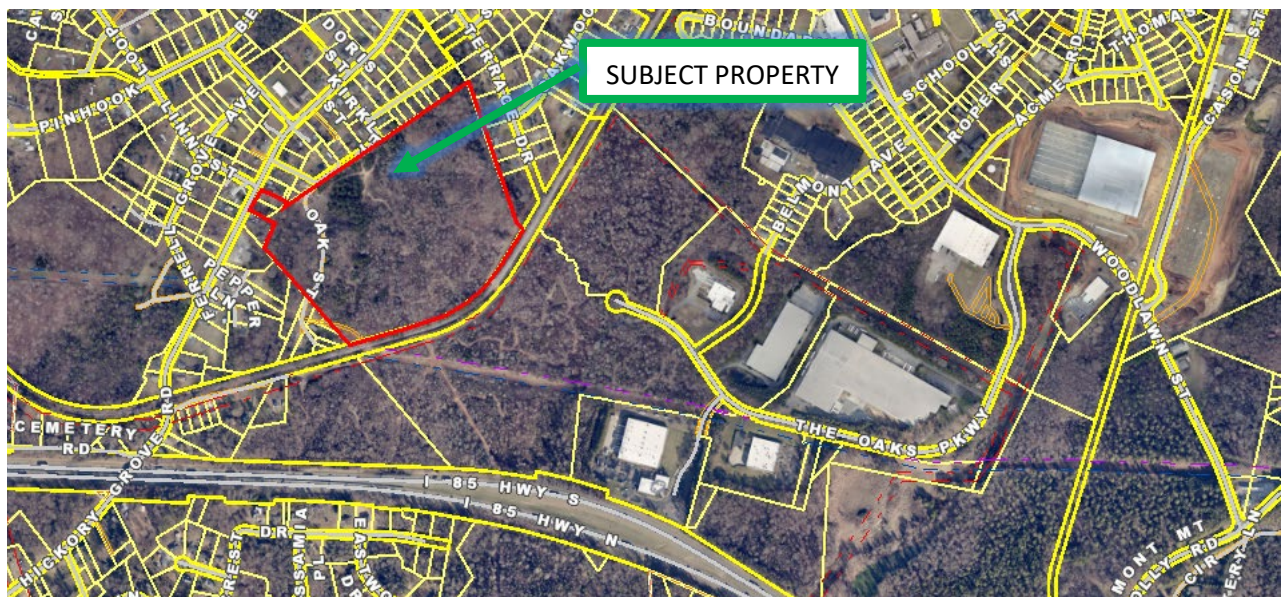


This site was formerly owned by RL Stowe Mills, and was platted for inclusion in the Oaks Commerce Park in 1995. It has remained largely wooded since 1968 according to historical photos. Participants at the community shared that a portion of the site was utilized as a baseball field. Topography on the property slopes approximately 80' down from the western corner to the eastern corner of the site.

Chapter 15 of the land development code (LDC) requires the applicant to process a major development plan for projects involving buildings that exceed 30,000 sq. ft. in gross floor area. This is considered a “by-right” development based on its existing zoning classification.

Access to the site is not contingent upon the filed annexation petition and zoning request for PID#183195 and 183196, as staff has confirmed that the road as designed could be reviewed and approved by Gaston County where located.

Staff analysis: The project site for this request is a 43.7-acre area within The Oaks Commerce Park, to the north of the NCDOT rail division right-of-way. The new building proposes access off Hickory Grove Rd., adding a new public right-of-way to the new warehouse building location. This new street would also serve the adjacent parcels that currently access their homes using an unplatted drive through the development site.



District and Building Type Requirements

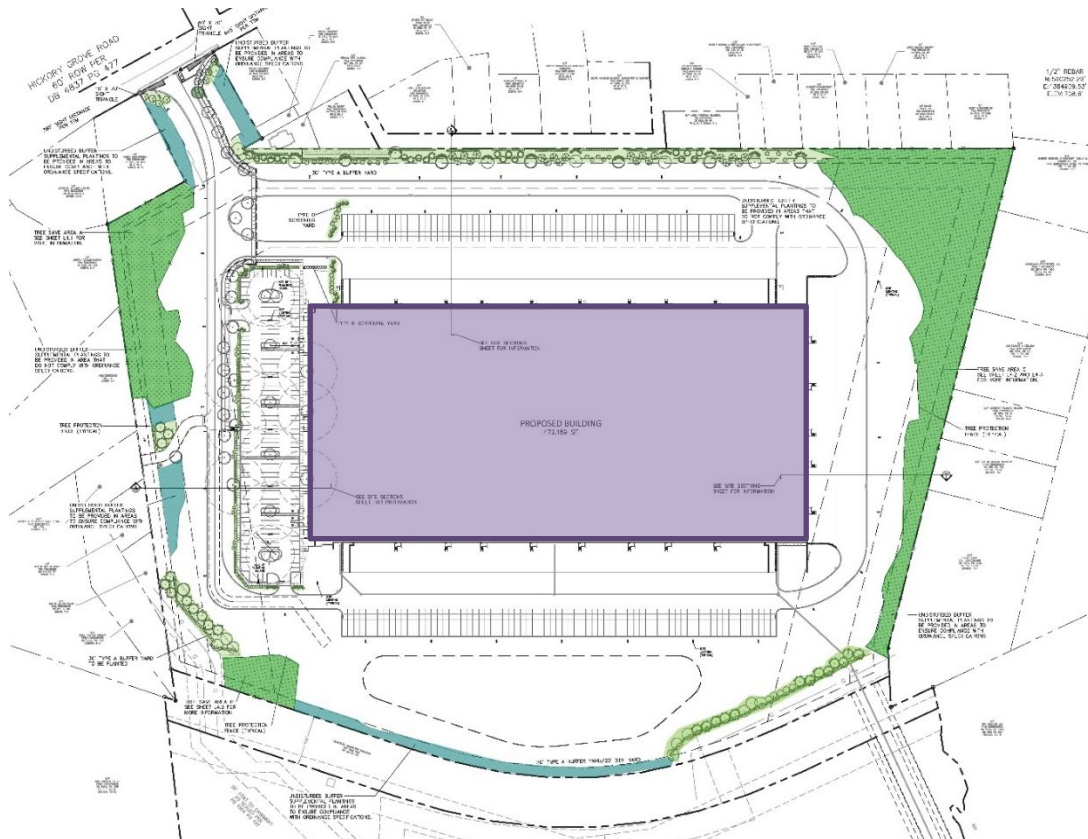
The intent of the BC-D zoning district is to permit the development of corporate office campus, light industrial uses, and heavy industrial uses. Workplace buildings allow for manufacturing and its related functions. Offices within the building should front the street. Loading is accommodated to the rear.

Specific provisions

	Allowed	Proposed
Maximum Building Height	5 stories or 60 ft.	1 story – 50'-2" ft.
District Setbacks	(measured from exterior District boundary) Parking: 80 ft. Light manufacturing: 200 ft.	Front: > 200 ft. from district boundary > 170 ft. from new ROW Sides: > 200ft. from district boundary Rear: > 200 ft. from district boundary
Workplace Building Setbacks	Front: 10-20 ft. Side: varies Rear: 10 ft.	Parking: > 80 ft.

Landscaping and tree protection

A 10% tree-save area (TSA) is required for industrial projects, which for this site is 4.4 acres. The calculation includes PID#183195 and 183196 as well for comprehensive planning purposes. A tree inventory was completed in April 2022, and three tree-save areas on the site were identified. The total TSA provided on the site using existing tree canopy is 6.13 acres, which is 39% more than required. In addition to the TSA, a 30' Type A buffer utilizes undisturbed existing on either side of the new public right-of-way (Crawford Oaks Lane) and along the western and southern property boundary. New plantings have been added along the northern property line adjacent to the platted right-of-way, on the southern side of the site adjacent to utility easements, and in the parking lot areas.



Site Access

The development site has access from Hickory Grove Rd through a platted 25'-30' right-of-way (Oak St), which is currently gravel and privately maintained. While enhancing this right-of-way is possible to meet the needs of the zoned use, doing so would result in disruption to the residential nature of Oak St. To minimize direct impacts to existing residents, the developer is under contract for two vacant adjacent parcels situated between an automotive business and residential home to provide new roadway connection (PID#183195 & 183196).

Initially, the developer reached out to the NCDOT Rail Division to determine the feasibility of extending the Oaks Parkway across the railroad corridor. An at-grade public road crossing was not supported at this location because it is an active rail line. Based on that information, access from Hickory Grove Rd is needed.

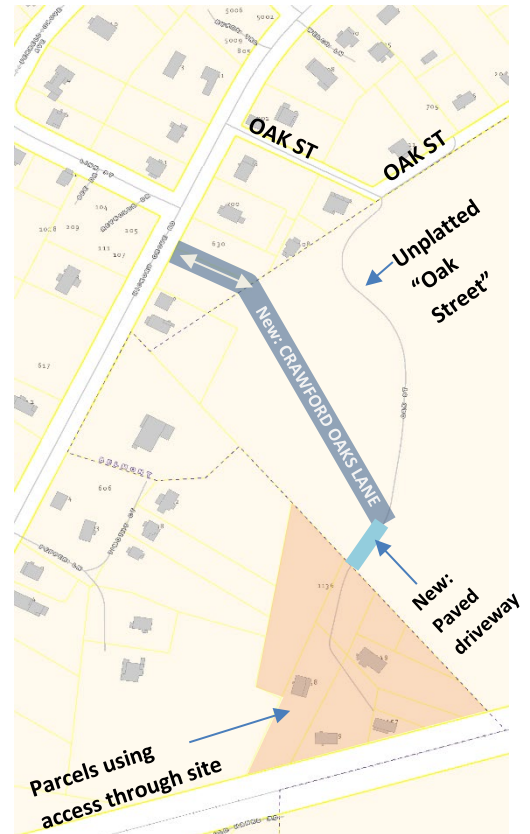
There is an unplatted gravel/dirt drive (referred to as Oak St) through the development site to the adjacent properties to the south. The developer met with NCDOT and Gaston County to discuss options for re-routing this access while allowing impacted residents to keep their current addresses.

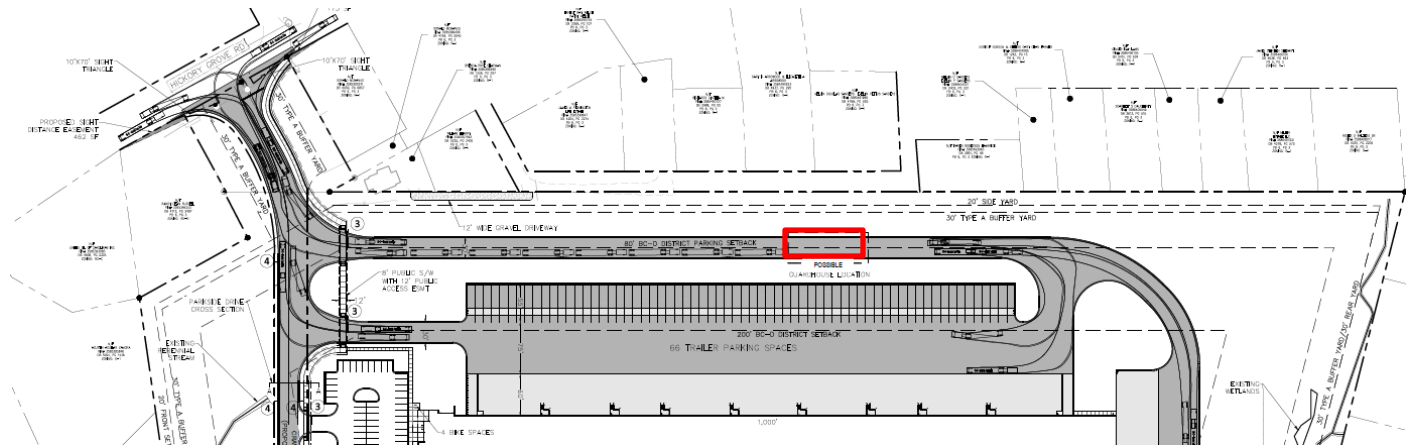
Ultimately, it was determined that providing access to these homes via a new street was preferred and supported to avoid confusion with the platted right-of-way also named Oak Street.

Based on feedback at the community meeting, the street name is proposed to be Crawford Oaks Lane to honor the Crawford family who will be re-addressed off the new roadway. The driveway leading to their properties will be paved to the property line, also serving as a T-type turnaround at the end of the public street. This will allow emergency service vehicles to access these parcels, which is not currently feasible.

Crawford Oaks Lane is designed to intersect Hickory Grove Rd. across from Linn St, utilizing PID#183195 and 183196 to connect to the site. The developer has filed a request for annexation and zoning for these parcels into the City of Belmont in hopes that the street can be fully developed within city limits and designed to Belmont's road standards. Road access can still be provided as located to serve the site even if these parcels are not annexed, however, Belmont would not be the reviewing agency--it would be processed by Gaston County.

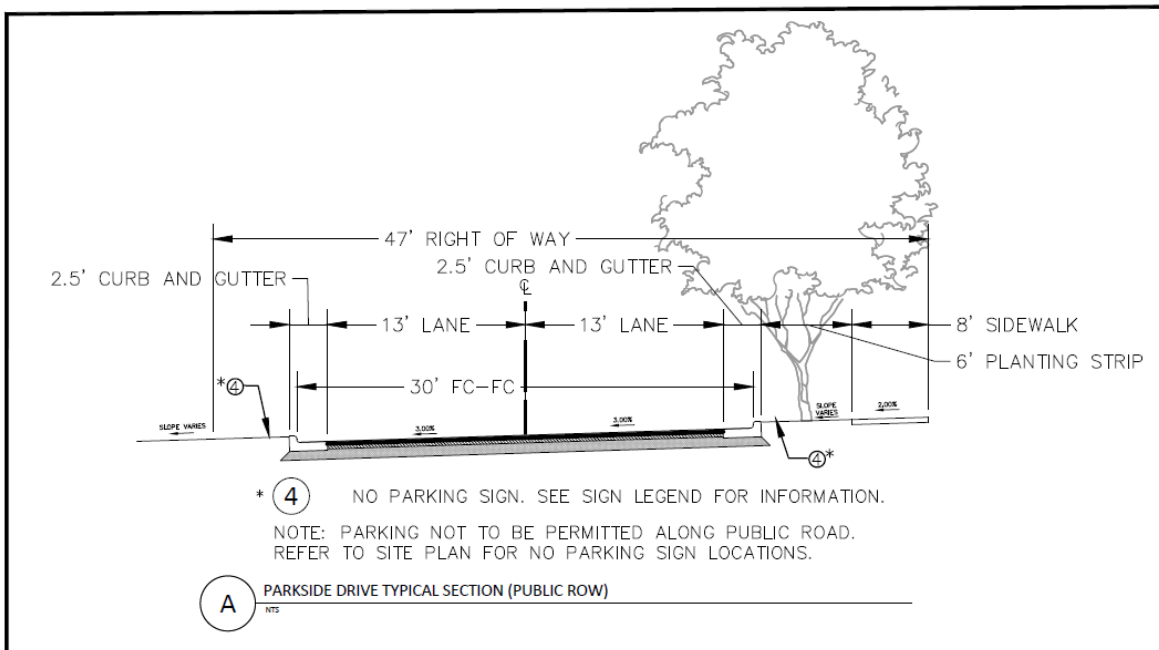
Beyond Crawford Oaks Lane, the site has a private drive loop that will allow for vehicular flow and circulation around the entire building. A possible guardhouse location has been noted along this loop to allow for tractor trailer queuing on-site, based on feedback at the community meeting—shown in red below.





Street design

The design of Crawford Oaks Lane complies with Belmont’s parkside drive street type identified in LDC Chapter 8.3, incorporating 8’ sidewalk on its eastern side and retaining natural area on its western side. The pavement width exceeds Belmont’s street standards in order to accommodate the larger vehicles accessing the site. On-street parking is restricted to ensure that the public right-of-way remains accessible at all times. This road is proposed to be a public right-of-way, privately maintained by the property owner of the industrial development on



PID#306477.

Traffic Analysis:

While the anticipated trips did not meet the city’s or NCDOT’s threshold for a traffic impact analysis (TIA), a Transportation Technical Memorandum (TTM) was required to look at the proposed site access to and from Hickory Grove Rd., which is one lane in either direction. The analysis determined that, based on a warehousing use, the project is not expected to have a

significant adverse impact on operations at the off-site study area intersections, and a dedicated turn lane is not required into the site. See Attachment C for the full analysis.

Identified mitigation includes:

- A full movement, stop-controlled access with a single egress lane and single ingress lane off Hickory Grove Rd.
- A 100-foot internal protected stem (IPS) along Crawford Oaks Lane.
- Sight distance easements to ensure no landscaping, vegetation, fencing, structures, parking area, or other obstructions encroach at the intersection with Hickory Grove Rd.

Since this is planned as a speculative building, any changes in the proposed use would require an update of the TTM and any additional mitigation identified would be required prior to occupancy.

Parking

The parking as provided on the site plan complies with ordinance requirements based on industry standard ratios for office to warehouse uses in the proposed building. The developer has submitted a request to exceed the maximum parking ratio to allow for some flexibility when leasing the space to allow for normal business operations. This request is permissible by ordinance as long as parking does not exceed 200% of the minimum parking ratio.

Utilities

The developer has secured letters of intent to provide utility easements from the NCDOT Rail Division as well as the adjacent property owner of PID #306476 to allow for the extension of utilities to serve the site. Water and sewer capacity will be verified during construction plan review. The city engineer has reviewed the plan and identified any related infrastructure needed to service the site is based on the building's water/sewer usage. Any improvements will be reverified during the construction plan review process as well as building permit plan review at Gaston County. A lighting plan will be evaluated during the construction plan review phase.

Architectural design

Architectural requirements for industrial buildings are in Section 4.6 (2) of the LDC. "Building walls visible from the public street shall be brick, cast concrete, stucco, stone, marble, decorative masonry unit, or other materials similar in appearance and durability." The building walls are proposed to be tilt-up concrete wall panels which is the most commonly used material used for large-scale warehouses and distribution centers. The full set of elevations and renderings may be found in attachment B.



Neighborhood Meetings

The applicant team held two community meetings to discuss the project in its entirety (subject properties and adjacent property). The first meeting was held on August 2, 2022, and the second meeting was held on September 12, 2022 (please see attachment D for minutes). Approximately twenty people attended the initial meeting. The questions and answers focused on:

- Annexation – adjacent property owners were concerned their property would be annexed by the city.
- Buffers and grading.
- Traffic impacts on Hickory Grove Road.
- Access to homes that currently use a dirt road through the proposed development site and new addresses for those homes.

Eighteen people attended the second meeting held on September 12, 2022. The topics discussed:

- Traffic – details of the TTM were shared with the attendees.
- Community benefits
- Timing of the project
- Potential for tractor trailer parking on proposed new road.

Project changes resulting from the community meeting:

1. Crow Holdings agreed to post signage on Crawford Oaks Lane (coming off Hickory Grove Road) stating there is no parking allowed.
2. Crow Holdings will show an area where a guardhouse could be placed and showing tractor trailers queuing.
3. Crow Holdings agreed to coordinate with Gaston County and the Crawford family to name the new public road.

Major development process

The intent of the major development process is to provide a fair and equitable process to all interests including the petitioners, affected neighbors, city staff, the planning board, and the city council. A schematic plan review has been completed by staff, project notification has been sent to adjacent property owners, a community meeting was held, and the planning board is now tasked with review and a recommendation of the schematic plan to the city council.

Planning and Zoning Board: The board considered this request at its October 20, 2022 public meeting. Public comments focused on the potential traffic impacts associated with the proposed adjacent use (office-warehouse facility) and security of the facility. After a lengthy discussion, a motion was made to recommend approval. By a 5-1 vote, the board found the schematic plan in compliance with city ordinances and recommends the council approve as presented. This project is a “by-right” project, therefore, consistency findings are not required.

For clarification purposes following the Planning Board meeting, the following notes have been added onto the project plans:

1. The Transportation Technical Memorandum (TTM) approved on August 23, 2022 is based on a speculative warehousing end-user (ITE Land Use Category 150).
 - a. All mitigation currently identified must be in place prior to approval of construction documents for the development.
 - b. Verification of the user type is required prior to approval of a zoning upfit permit, change of use permit, or signage permit by the City of Belmont and/or Gaston County.
 - c. Any increase in intensity of the ITE land use category proposed for the building on-site, whether by the initial or any subsequent occupants, will require an updated transportation analysis to be completed. Any changes to mitigation identified in the updated analysis will require approval by City Council as an amendment to the Major Development Plan.
2. The new public right-of-way identified as Crawford Oaks Lane shall be privately maintained by the owner of the subject site (PID#306477). The developer agrees to prohibit on-street parking on Crawford Oaks Lane, and shall install associated signage that meets MUTCD standards.

Attachment A: Application

Attachment B: Schematic Plan, Elevations, and Site Sections

Attachment C: Transportation Technical Memorandum

Attachment D: Community meeting documents



CITY OF BELMONT

PLANNING & ZONING

Major Development Plan Application

Date: 06/21/2022

Site Address / Owner

Site Address:	OAK ST	Owner Name:	DMG ROAD WORKS LLC
City, State, Zip:	, 0	Address:	14600 SW 136 ST
Parcel ID#:	306477	City, State, Zip:	MIAMI, FL 33186
Subdivision:		Phone:	
Lot:		Email:	mailto:curquhart@crowholdings.com

Applicant / Alternative Owner

Applicant Name:	CROW HOLDINGS	Owner Name:	same as above
Applicant Role:	.Developer	Address:	605 Lexington Avenue
Applicant Address:	4064 Colony Road, Suite 405	City, State, Zip:	Charlotte
City, State, Zip:	Charlotte, NC 28211	Phone:	7047491432
Phone:	704-236-2440	Email:	
Email:	curquhart@chindustrial.com		

Project

Site Address:		Grading/Demo:	
Project Name:	Oaks Commerce	Lot Disturbance Area:.	0
Use Type:	Non-Residential	Parcel ID#s:	306477, 183195, 183196
Project #:	MDP2022.04	Floodway Review:	
Plan Type:	MDP- Major Development Plan Review	Watershed Protection Review:	
Total Site Area:	44		
# of Lots:	3		
Project Description: Industrial Warehouse			

Consultant

Consultant Firm:	Orsborn Engineering	Point of Contact:	Lin Leslie
Type:	Engineer	Consultant Email:	lleslie@orsborn-eng.com
Consultant Mailing:	605 Lexington Avenue	Consultant Phone:	704-749-1432

By checking the "I agree" box below, you agree and acknowledge that 1) your application will not be signed in the sense of a traditional paper document, 2) by signing in this alternate manner, you authorize your electronic signature to be valid and binding upon you to the same force and effect as a handwritten signature, and 3) you may still be required to provide a traditional signature at a later date.

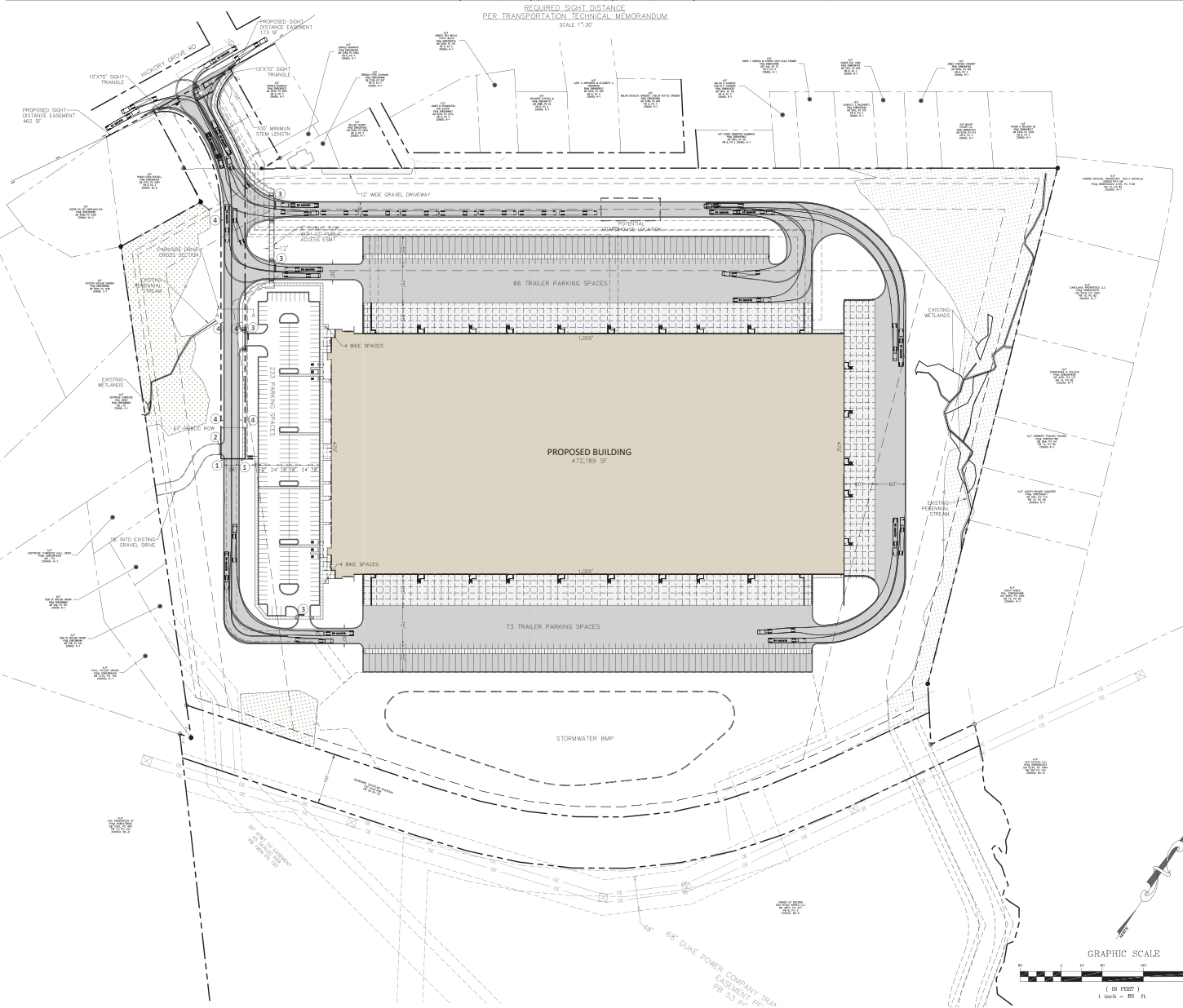
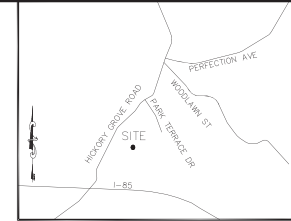
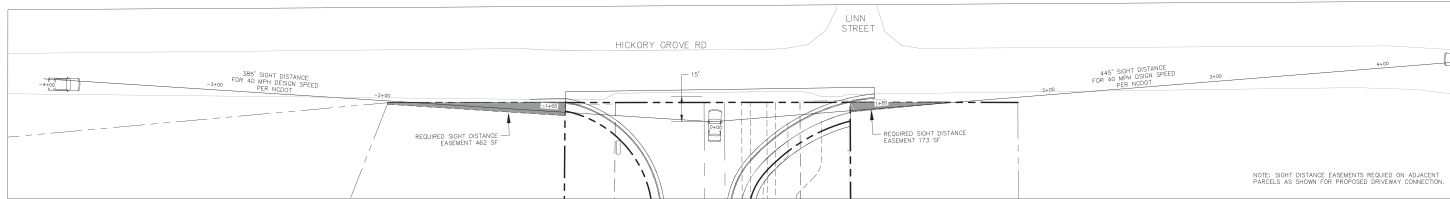
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06/21/2022

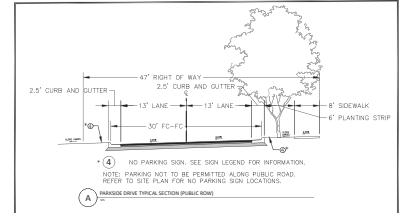
Name

Date

ATTACHMENT B



VICINITY MAP NOT TO SCALE



SIGN LEGEND			
1	PUBLIC ROAD ENDS	3	STOP R1-1 30" x 30"
2	PRIVATE ROAD	4	NO PARKING R1-3 12" x 6"

ZONING CODE SUMMARY

PROJECT NAME: THE OAKS COMMERCE
 PROJECT ADDRESS: BELMONT, NORTH CAROLINA
 OWNER: CROW HOLDINGS INDUSTRIAL
 OWNER ADDRESS: 4064 COLONY ROAD, SUITE 405, CHARLOTTE, NC 28211
 PLANS PREPARED BY: ORSBORN ENGINEERING GROUP
 ZONING: BC-D
 PROPOSED USE: LIGHT INDUSTRIAL/MANUFACTURING

AVERAGE BUILDING HEIGHT: 59 FEET
 BUILDING COVERAGE: 472,189 SF
 LOT SIZE: 44,232 SF
 YARD REQUIREMENTS:
 SETBACK (FRONT): 20 FT FROM R/W
 SETBACK (DISTRICT): 80 FT PARKING, 200 FT BUILDING
 SIDE YARD: 20 FT
 REAR YARD: 30 FT

ALLOWABLE:
 WAREHOUSE (NON-OFFICE) SPACE
 MINIMUM REQUIRED: 0.25 PER 1,000 SF OF NON-OFFICE SPACE
 (0.25 x 472,189 SF) = 118,047 SF MINIMUM SPACES
 MAXIMUM ALLOWED: 112 SPACES = 150 MAXIMUM SPACES

OFFICE SPACE
 MINIMUM REQUIRED: 1/200 SF OF OFFICE SPACE
 (1/200 x 472,189 SF) = 2,361 SPACES

MAXIMUM ALLOWED: 75 SPACES = 125% = 93 MAXIMUM SPACES

TOTAL MAXIMUM ALLOWED: 145 WAREHOUSE (NON-OFFICE SPACES) + 93 OFFICE SPACES = 238 MAXIMUM ALLOWED SPACES

TOTAL PROPOSED SPACES: 233 SPACES PROPOSED

SHOULD OFFICE/WAREHOUSE USE RATIO BY SQUARE FOOTAGE CHANGE, OWNER SHALL COMPLY WITH 9:1 EXISTING MAXIMUM PARKING RATIO.

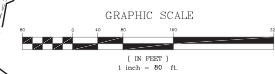
BIKECYCLE:
 PROPOSED: 4 BIKECYCLE SPACES PROPOSED

LOADING:
 REQUIRED: NO LOADING SPACES REQUIRED
 PROPOSED: 150 TRAILER SPACES PROPOSED

OPEN SPACE: N/A - NON RESIDENTIAL DEVELOPMENT PROPOSED

TREE SAVE AREA:
 REQUIRED: 10% OF 44,232 AC = 4,423 AC REQUIRED
 PROPOSED: 4.13 AC PROPOSED

- PROJECT SUMMARY NOTES:**
- THE TRANSPORTATION TECHNICAL MEMORANDUM (TMM) APPROVED ON AUGUST 23, 2022 IS BASED ON A SPECULATIVE WAREHOUSING INCLUDING (E) LAND USE CATEGORY TOOL.
 - ALL MITIGATION CURRENTLY IDENTIFIED MUST BE IN PLACE PRIOR TO APPROVAL OF CONSTRUCTION DOCUMENTS FOR THE DEVELOPMENT.
 - VERIFICATION OF THE USER THIS IS REQUIRED PRIOR TO APPROVAL OF A ZONING UPSET PERMIT, CHANGE OF USE PERMIT, OR SIGNAGE PERMIT BY THE CITY OF BELMONT AND/OR GASTON COUNTY.
 - ANY PROPOSED OR FUTURE USE OF THE LAND USE CATEGORY PROPOSED FOR THE BUILDING ON-SITE, WHETHER BY THE INITIAL OR ANY SUBSEQUENT OCCUPANTS, WILL REQUIRE AN UPDATED TRANSPORTATION ANALYSIS TO BE COMPLETED. ANY CHANGES TO MITIGATION IDENTIFIED IN THE UPDATED ANALYSIS WILL REQUIRE APPROVAL BY CITY COUNCIL AS AN AMENDMENT TO THE MAJOR DEVELOPMENT PLAN.
 - THE NEW PUBLIC RIGHT-OF-WAY IDENTIFIED AS DRAWFORD DOWNS LANE SHALL BE PRIVATELY MAINTAINED BY THE USER. THE USER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE PARKING ON-STREET PARKING ON DRAWFORD DOWNS LANE AND SHALL INSTALL ASSOCIATED SIGNAGE THAT MEETS MUTED STANDARDS.



OVERALL SITE PLAN FOR THE OAKS COMMERCE BELMONT, NORTH CAROLINA

CROW HOLDINGS INDUSTRIAL 4064 COLONY ROAD, STE. 405 CHARLOTTE, NC 28211



NO. 1	DATE	DESCRIPTION
NO. 2		
NO. 3		
NO. 4		
NO. 5		
NO. 6		
NO. 7		
NO. 8		
NO. 9		
NO. 10		

JOB # 22011
 DATE: 07/22/22
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 DRAWN BY: JF
 APPROVED BY: DLS

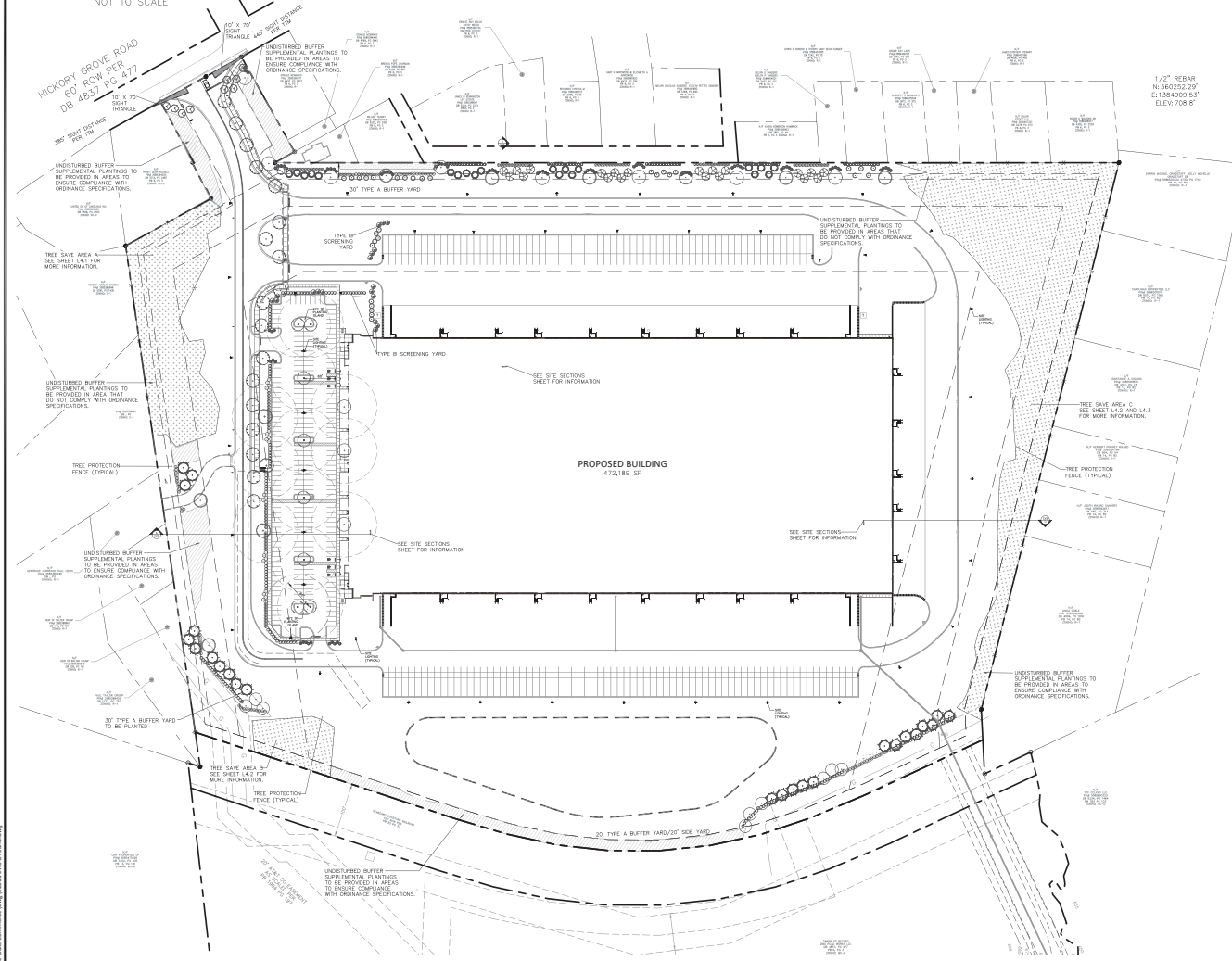
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October 26, 2022 10:51 AM
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PROFESSIONAL ENGINEER AND ARCHITECTS ACT AS AN INSTRUMENT OF SERVICE. A FEE IS CHARGED FOR THIS SERVICE. THE FEE DOES NOT INCLUDE THE COST OF REVISIONS. THE USER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE PARKING ON-STREET PARKING ON DRAWFORD DOWNS LANE AND SHALL INSTALL ASSOCIATED SIGNAGE THAT MEETS MUTED STANDARDS.



VICINITY MAP
NOT TO SCALE



TREE SAVE AREA:

TREE SAVE AREA REQUIRED: 10% OF 44.22 AC = 4.42 AC
 TREE SAVE PROVIDED: 6.13 AC

Area	TSA CREDIT IN SF
Area A	72,566.95 SF
Area B	4,536.40 SF
Area C	189,919.75 SF

Total TSA Provided: 267,023.10 SF 6.13 AC

SEE SHEETS L4.2, L4.3 AND L4.4 FOR INDIVIDUAL TREE SAVE AREA CALCULATIONS AND INFORMATION.

STREET TREE CANOPY REQUIRED:

HICKORY RIDGE ROAD
 170 LF OF R/W ALONG HICKORY RIDGE ROAD
 5 SMALL ORNAMENTAL TREE PER 20 LF = 9 SMALL MATURING TREES REQUIRED
 9 SMALL MATURING TREES PROVIDED

OAK STREET
 NONE REQUIRED

OAKS CROSSING LANE
 782 LF OF R/W ALONG OAK STREET
 18 LARGE MATURING TREE PER 45 LF = 18 LARGE MATURING TREES REQUIRED
 (ONE SIDE OF STREET ONLY - PARKSIDE DRIVE)
 18 LARGE MATURING TREES PROVIDED

TYPE A BUFFER YARD REQUIRED:

BUFFER YARD PLANTING SPECIFICATIONS:

- 1. Buffer yards shall be established in accordance with the following specifications:
 - a. Buffer yards shall be established in areas where the proposed building height is greater than 10 feet at the time of construction.
 - b. Buffer yards shall be established in areas where the proposed building height is greater than 10 feet at the time of construction.
 - c. Buffer yards shall be established in areas where the proposed building height is greater than 10 feet at the time of construction.

TYPE B BUFFER YARD REQUIRED:

BUFFER YARD PLANTING SPECIFICATIONS:

- 1. Buffer yards shall be established in accordance with the following specifications:
 - a. Buffer yards shall be established in areas where the proposed building height is greater than 10 feet at the time of construction.
 - b. Buffer yards shall be established in areas where the proposed building height is greater than 10 feet at the time of construction.
 - c. Buffer yards shall be established in areas where the proposed building height is greater than 10 feet at the time of construction.



OVERALL LANDSCAPE PLAN
FOR
THE OAKS COMMERCE
BELMONT, NORTH CAROLINA

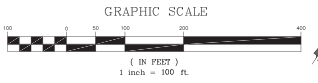
CROW HOLDINGS
INDUSTRIAL
4064 COLONY ROAD, SUITE 405,
CHARLOTTE, NC 28211



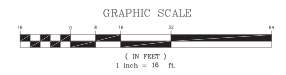
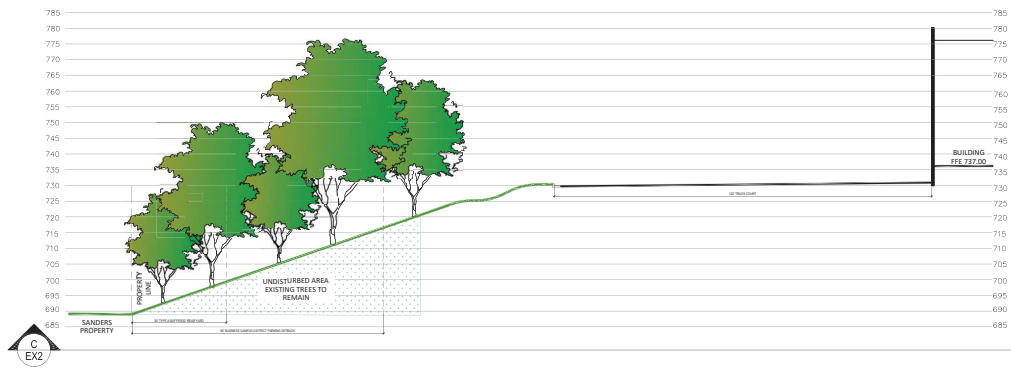
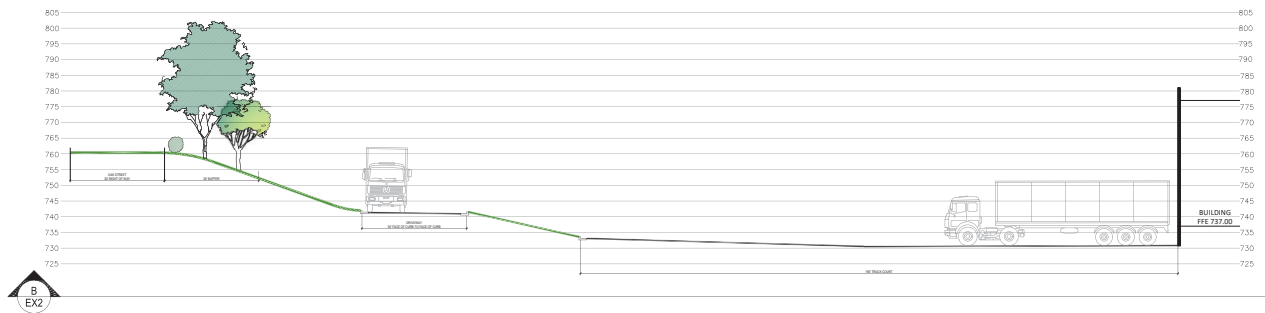
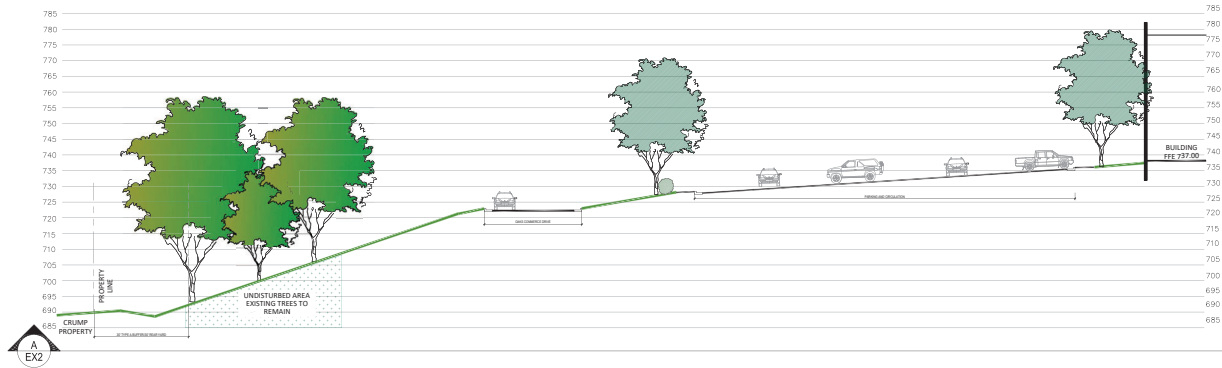
NO.	DATE	REVISIONS
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3	03/24/22	REVISED PER COMMENTS
4	03/24/22	REVISED PER COMMENTS
5	03/24/22	REVISED PER COMMENTS
6	03/24/22	REVISED PER COMMENTS
7	03/24/22	REVISED PER COMMENTS
8	03/24/22	REVISED PER COMMENTS
9	03/24/22	REVISED PER COMMENTS
10	03/24/22	REVISED PER COMMENTS

JOB # 22011
 DATE: 03/24/22
 SCALE: 1" = 100'
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 APPROVED BY: HCO

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Project No. 22011 - 12/16/21 - 12/16/21
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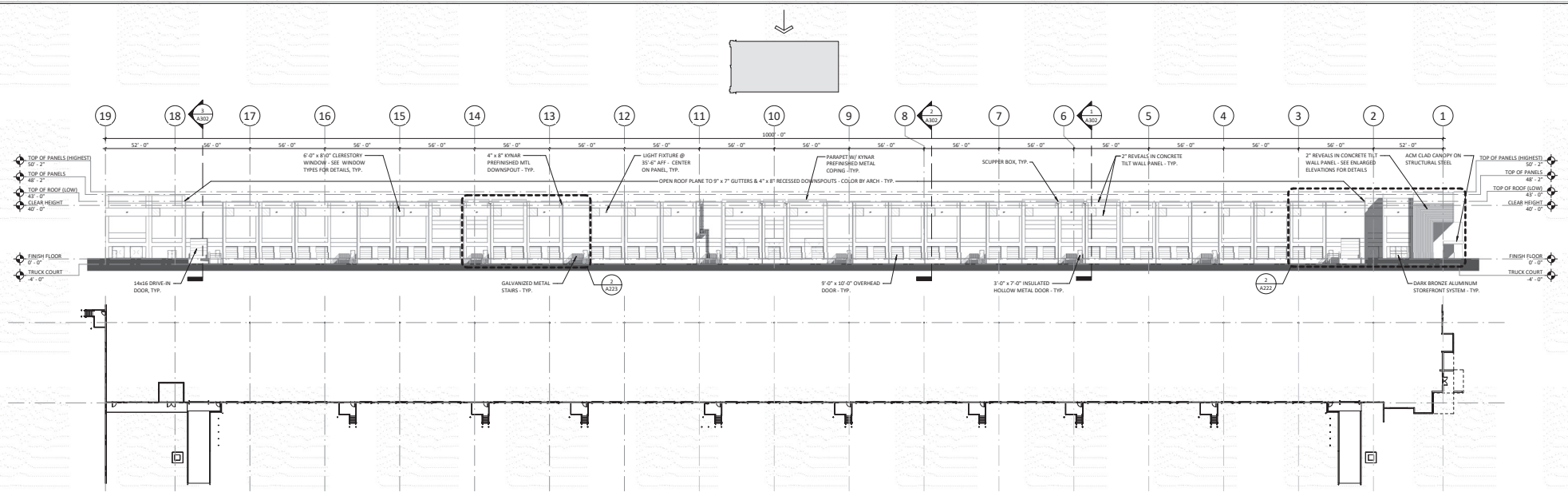


SITE SECTIONS
 OAKS COMMERCE CENTER
 BELMONT, NC
 SEPTEMBER 12, 2022

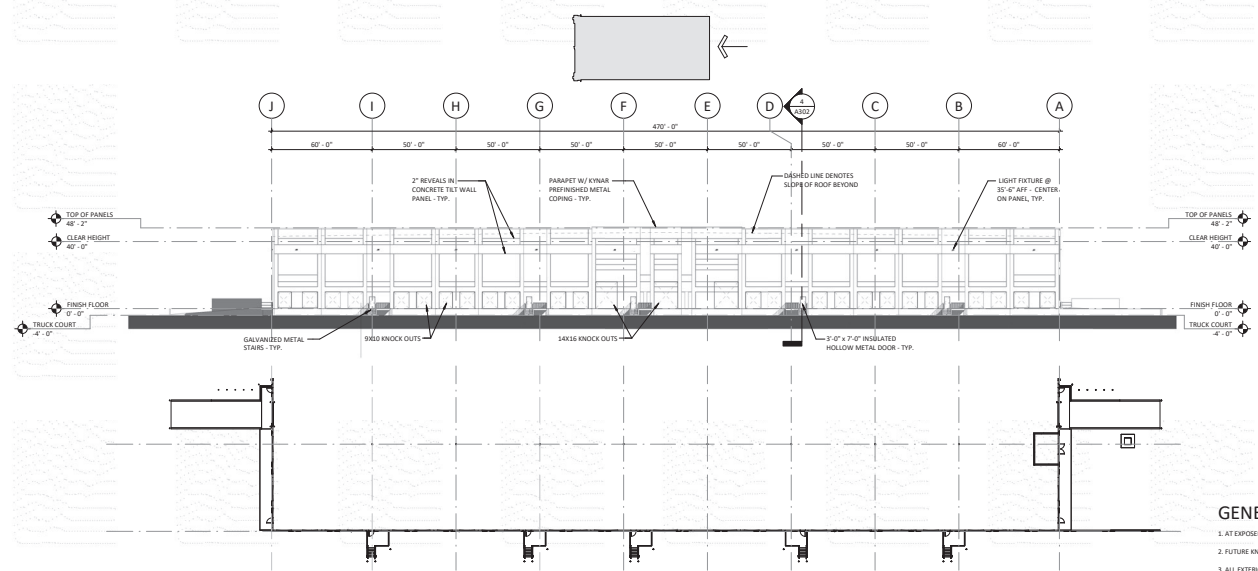
CROW HOLDINGS
 INDUSTRIAL

ORSBORN
 ENGINEERING GROUP
 606 LEXINGTON AVENUE, SUITE 301
 CHARLOTTE, NC 28203
 704-749-1433
 www.orsborn-eng.com

09/12/2022 11:53 AM
 C:\Users\jdoyle\OneDrive\Documents\2022\Oaks Commerce Center\Site Sections.dwg



① OVERALL ELEVATION - TRUCK COURT - PLAN NORTH
1" = 30'-0"



② OVERALL SIDE ELEVATION - PLAN EAST
1" = 30'-0"

GENERAL NOTES:

1. AT EXPOSED EDGE OF PANELS, TURN AND CONTINUE REVEALS TO MATCH FRONT OF PANEL, U.N.O.
2. FUTURE KNOCK-OUT LOCATIONS ARE SHOWN WITH DASHED LINES. THEY ARE TO BE FORMED OUT AS REVEALS IN THE PANELS, U.N.O.
3. ALL EXTERIOR WALL SURFACES TO RECEIVE MEDIUM SAND TEXTURE - SHERWIN WILLIAMS TEXTURE COATING OR APPROVED EQUAL. COLOR TBD
4. ACCENT COLORS AND LOCATIONS TBD AND APPROVED IN WRITING BY OWNER
5. GROUT SOLID ALL LARGE PENETRATIONS THROUGH CONCRETE WALLS. CAULK WITH BACKER ROD AT SMALL PENETRATIONS.

ms2 ARCHITECTS
CONSULTANTS
GENERAL CONTRACTOR
OWNER

Crow HOLDINGS
INDUSTRIAL

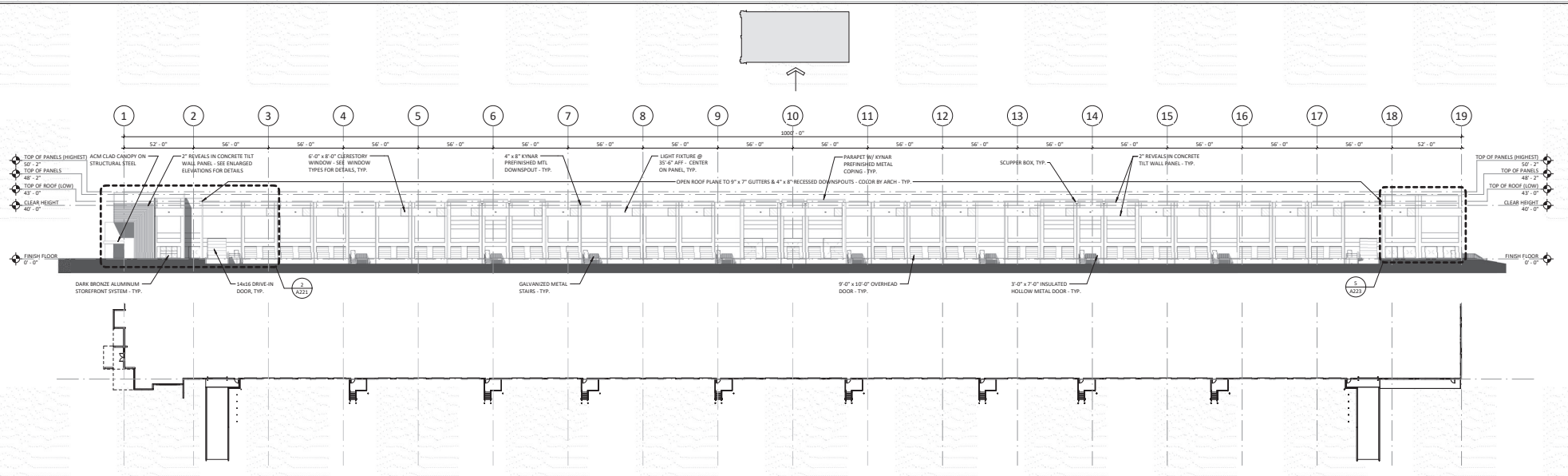
OAK COMMERCE CENTER
UNCONDITIONED STORAGE BUILDING PERIODICALLY OCCUPIED

BELMONT, NORTH CAROLINA

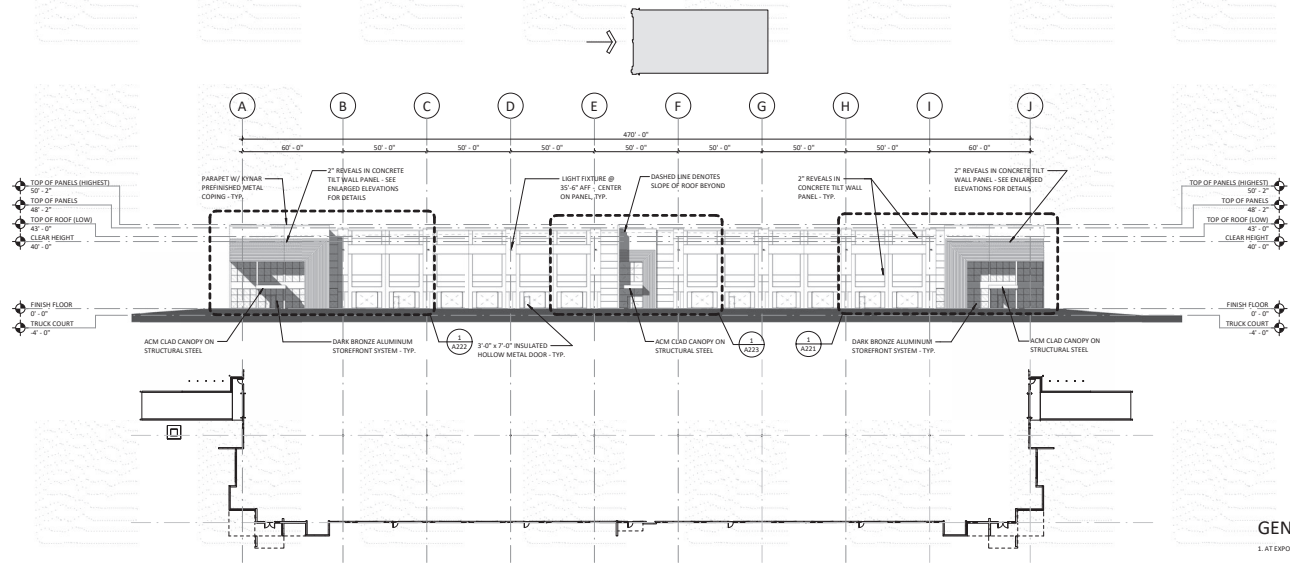
NO.	REVISION	DATE
1	ISSUE FOR CONSTRUCTION	08/20/2024

PROJECT NUMBER: 21190
PROJECT NAME: OAK COMMERCE CENTER
SHEET NUMBER: A201

DATE: 08/20/2024



1 OVERALL ELEVATION - TRUCK COURT PLAN SOUTH
1" = 30'-0"



2 OVERALL SIDE ELEVATION - PLAN WEST
1" = 30'-0"

- GENERAL NOTES:**
1. AT EXPOSED EDGE OF PANELS, TURN AND CONTINUE REVEALS TO MATCH FRONT OF PANEL, U.N.O.
 2. FUTURE KNOCK-OUT LOCATIONS ARE SHOWN WITH DASHED LINES. THEY ARE TO BE FORMED OUT AS REVEALS IN THE PANELS, U.N.O.
 3. ALL EXTERIOR WALL SURFACES TO RECEIVE MEDIUM SAND TEXTURE - SHERWIN WILLIAMS TEXTURE COATING OR APPROVED EQUAL, COLOR TBD
 4. ACCENT COLORS AND LOCATIONS TBD AND APPROVED IN WRITING BY OWNER
 5. GROUT SOLID ALL LARGE PENETRATIONS THROUGH CONCRETE WALLS. CAULK WITH BACKER ROD AT SMALL PENETRATIONS.

NO.	REVISION	DATE
1	ISSUE FOR CONSTRUCTION	08/14/2024

NO.	REVISION
1	ISSUE FOR CONSTRUCTION

SHEET TITLE	
ELEVATIONS	
SHEET NUMBER	
A202	



msa merriam schmitt ARCHITECTURAL ARCHITECTS

CONSULTANTS

GENERAL CONTRACTOR

OWNER

CROW HOLDINGS
INDUSTRIAL

OAK COMMERCE CENTER
UNCONDITIONED STORAGE BUILDING PERIODICALLY OCCUPIED

DATE:

PROJECT NUMBER

NO.	REVISION	DESCRIPTION

NOTE:
 1. REFER TO ALL DRAWINGS UNDER THIS PROJECT NUMBER FOR ALL DETAILS AND NOTES.
 2. CHECK FOR CONSTRUCTION
 3. VALUE FOR BIDDING
 4. VALUE FOR CONSTRUCTION

SHEET TITLE
ELEVATIONS
 SHEET NUMBER
A201
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Technical Memorandum

To: Tiffany Faro, CZO
City of Belmont

From: Brady Finklea, PE
Kimley-Horn

Re: *Oaks Commerce Center*
Transportation Technical Memorandum
Hickory Grove Road, Belmont, North Carolina

Date: August 23, 2022



The purpose of this Transportation Technical Memorandum (TTM) is to evaluate the incremental impacts on the surrounding transportation infrastructure as a result of the proposed Oaks Commerce Center located east of Hickory Grove Road and north of I-85 and the Piedmont & Northern Railroad in Belmont, North Carolina (<https://goo.gl/maps/DuJxYhhcxtgVQP1Z8>). The primary objectives of the study are:

- To estimate trip generation and distribution for the proposed development.
- To perform intersection capacity analyses for each of the identified study intersections.
- To determine the potential transportation impacts of the proposed development.
- To identify potential improvements to mitigate the proposed development's transportation impacts.
- To evaluate intersection sight distance for the proposed site driveway.

Kimley-Horn was retained to determine the potential transportation impacts of this development (in accordance with the traffic study guidelines in the [NCDOT Policy on Street and Driveway Access to North Carolina Highways](#) and set forth by the [City of Belmont Land Development Code – Section 16.14 Transportation Impact Analysis](#)) and to identify transportation improvements that may be required to mitigate these impacts. This technical memorandum presents trip generation, distribution, capacity analyses, crash analyses, sight distance evaluation and identified transportation improvements required to mitigate anticipated transportation demands produced by the subject development.

Executive Summary

Based on the capacity analyses performed at each of the identified study intersections, along with review of the auxiliary turn-lane warrants and crash analyses contained herein, **the proposed Oaks Commerce Center is not expected to have a significant adverse impact on operations at the off-site study area intersections; therefore, no additional mitigation improvements beyond the necessary laneage and appropriate sight distance required for site access (as discussed on the following page) is identified for the proposed Oaks Commerce Center.** Given the planned transportation improvement identified as mitigation for the approved RiverWest development in combination with the relatively low trip generation potential of the proposed site (less than 100 site trips in each peak hour), the proposed development is not expected to have a significant adverse impact on operations at offsite study area intersections. Note that as the end user of the development becomes identified, the applicant should coordinate with City of Belmont and North Carolina Department of Transportation (NCDOT) staff to determine if turn lanes are warranted to accommodate projected truck traffic and/or if an updated traffic study is required depending on the type of industrial user that ultimately occupies this building.

Driveway access improvements identified herein include:

Int #4. Hickory Grove Road and Access 1

- Construction of Access 1 as a full movement, stop-controlled driveway with a single egress lane and single ingress lane
- Provide a 100-foot internal protected stem (IPS) along Access 1

Sight Distance Easements (Hickory Grove Road and Access 1)

- Based on a horizontal and vertical sight distance analysis, no immediate vertical conflicts were found; however, any obstructions located above ground level within the limits of the sight distance triangles (as shown on the sight distance profile included in the **Attachments**) will need to be cleared. Four (4) parcels, two (2) of which appear to be developer-owned, will require sight distance easements. No landscaping, vegetation, fencing, structures, parking areas, or other obstructions shall encroach within the sight distance easements.

The mitigation improvements identified within the study area are subject to approval by NCDOT and the City of Belmont. All additions and attachments to the State and City roadway system shall be properly permitted, designed, and constructed in conformance to standards maintained by the agencies.

Project Overview

The proposed Oaks Commerce Center is located east of Hickory Grove Road and north of I-85 and the Piedmont & Northern Railroad in Belmont, North Carolina (<https://goo.gl/maps/DujxYhhcxtgVQP1Z8>). The 44-acre site is currently undeveloped and zoned as BC-D (Business Campus Development). Based on the site plan provided by the applicant and shown in **Figure 1** (attached), the proposed development is currently envisioned to include a single industrial building with approximately 470,000 square feet of warehousing space.

For the purposes of this TTM, the development is assumed to be built-out in 2023 and accessed via one (1) access point along Hickory Grove Road:

- **Access 1** – full-movement connection to Hickory Grove Road approximately 125’ south of Linn Street

Note that discussion occurred at the TTM Scoping Meeting to endeavor to align proposed Access 1 with Linn Street; however, the applicant has indicated that right-of-way is unable to be acquired to align Access 1 with Linn Street.

A TTM Scoping Meeting was held with the City of Belmont, NCDOT, Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) and representatives of the applicant on April 19, 2022, to establish the scope and parameters to be included in this TTM. The City’s Memorandum of Understanding (MOU) was developed based on discussions from this meeting and was reviewed and agreed upon by the City, NCDOT and applicant. The approved MOU is included in the **Attachments**.

The following AM and PM peak-hour scenarios were analyzed to determine the proposed development’s transportation impacts on the surrounding network:

- 2023 Background Conditions
- 2023 Build-out Conditions

Based on the expected site trip generation and discussions of projected travel patterns for the proposed site trips in context with the surrounding area, this TTM evaluated operations under each of the AM and PM peak-hour scenarios above for the following study area intersections as agreed upon at the TTM Scoping Meeting (and shown in the MOU and **Figure 2** (attached):

1. Hickory Grove Road and Woodlawn Street

2. Hickory Grove Road and Linn Street
3. Hickory Grove Road and Riverside Drive (NC 7)
4. Hickory Grove Road and Access 1 (*build-out conditions*)

Note that the signalized intersection of Hickory Grove Road and Perfection Avenue was also included in the Synchro model analysis to properly reflect the operational impact of this signal along the Hickory Grove corridor, specifically at the adjacent Woodlawn Street intersection; however, as determined at the TTM Scoping Meeting, no mitigation analysis was performed for this intersection.

For the purposes of this TTM, Hickory Grove Road is considered to run north/south with the intersecting streets assumed to be east/west.

Traffic Volume Development

2023 Background Traffic Volumes

Existing AM (6:30-8:30) and PM (4:30-7:00) peak-period intersection turning-movement, heavy-vehicle, pedestrian and bicycle counts were collected by Quality Counts, LLC on Tuesday, April 26, 2022 (when Gaston County Schools were in session) at the study intersections listed above.

The projected 2023 background AM and PM peak-hour traffic volumes include both non-specific general growth based on usage increases in local traffic volumes along with and/or change in traffic volumes caused by approved off-site developments within the vicinity of the study area that were not yet fully constructed at the time of the counts. As shown in the approved MOU, an annual growth rate of one-half percent (0.5%) was applied to the 2022 existing peak-hour traffic volumes to calculate base 2023 background traffic volumes. This growth rate was determined based on review of historical NCDOT annual average daily traffic (AADT) maps specifically along Hickory Grove Road between 2008 and 2019, in coordination with NCDOT and City of Belmont, along with consideration of the additional specific traffic being added by the approved off-site development discussed below.

Based on input from City and NCDOT staff, one (1) nearby approved development expected to impact traffic volumes within the study area was included in the background traffic volumes for this TTM and is summarized in **Table 1** below.

Table 1: Approved Developments

Development	Land Use/Intensity	% Build-out	TIA Included?	Required Improvements
RiverWest (Woodlawn Industrial Park)	620,000 SF Industrial	0%	Yes	<u>Woodlawn St/Hickory Grove Rd</u> - WBL w/ 125'

The RiverWest development is located north of Woodlawn Street in the vicinity of Cason Street (<https://goo.gl/maps/pNb52HgBdLVpAfUQ9>). Site traffic volume figures from the TIA for this site are included in the **Attachments**.

The existing laneage for the study area intersections is shown in **Figure 3** (attached) and the 2023 background AM and PM peak-hour traffic volumes are shown in **Figures 4 and 5**, respectively (attached).

2023 Build-out Traffic Volumes

The traffic generation potential of the proposed development was determined using the trip generation equations published in *Trip Generation* (Institute of Transportation Engineers (ITE), Eleventh Edition, 2021).

Table 2 summarizes the projected trip generation for the proposed development, showing the projected vehicle split between passenger cars and trucks as provided by truck trip generation data plots for land-use code 150 in ITE's *Trip Generation Supplement*. During a typical weekday, the proposed development has the potential to generate 80 and 83 net new external trips during the AM and PM peak hours, respectively, with 11-17% truck traffic during the peak hours.

ITE LUC	Land Use	Intensity	Daily	AM Peak Hour			PM Peak Hour			Peak Hour Type/ Data Source
				Total	In	Out	Total	In	Out	
150	Warehousing	470,000 SF	781	80	62	18	83	23	60	Adj Street/ITE Eqn
	Passenger Cars		499	71	57	14	69	16	53	
	Trucks*		282	9	5	4	14	7	7	Adj Street/ITE Rate
Subtotal			781	80	62	18	83	23	60	
Total - Passenger Cars			499	71	57	14	69	16	53	
Total - Trucks			282	9	5	4	14	7	7	

*Vehicle type split determined using Truck Trip Generation Data Plots (average rate) provided in ITE's *Trip Generation Supplement, 10th Edition*

The proposed development's trips were assigned to the surrounding network based on the distribution approved as part of the MOU by the City of Belmont, NCDOT and applicant and is shown in **Figures 6 and 7** (attached). Given expected differences in travel characteristics, separate trip distributions were developed for the passenger cars and truck traffic.

The 2023 build-out traffic volumes include the assignment of the projected site traffic generation added to the 2023 background traffic volumes. The projected 2023 build-out traffic volumes for the AM and PM peak hours are shown in **Figures 8 and 9**, respectively (attached). Intersection volume development worksheets for all intersections are included in the **Attachments**.

Capacity Analysis

Synchro Version 11 software along with SimTraffic microsimulation analysis were used to evaluate the AM and PM peak-hour operating characteristics of the study intersections. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level-of-service (LOS), measured in average delay per vehicle and describes motorists' perceptions within a traffic stream. The Transportation Research Board's Highway Capacity Manual (HCM) defines six (6) levels of service, LOS A through LOS F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions).

The LOS grades shown below quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating for unsignalized and signalized intersections can be found in **Table 3**.

LOS	Avg Control Delay [sec/veh]			Description
	Unsignalized	Signalized		
A		≤ 10	≤ 10	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Short Delays	> 10 – 15	> 10 – 20	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C		> 15 – 25	> 20 – 35	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower avg travel speeds.
D	Moderate Delays	> 25 – 35	> 35 – 55	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E		> 35 – 50	> 55 – 80	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Long Delays	> 50	> 80	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

LOS for a two-way stop-controlled (TWSC) intersection is determined by the control delay and is reported for the side-street approaches, typically during the highest volume periods of the day, the AM and PM peak periods. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. With respect to field measurements, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time the vehicle departs from the stop line. It is typical for stop sign-controlled side streets and driveways intersecting major streets to experience long delays during peak hours, particularly for left-turn movements. The majority of the traffic moving through the intersection on the major street experiences little or no delay.

LOS for signalized intersections is reported for the intersection as a whole and typically during the highest volume periods of the day, the AM and PM peak periods. One or more movements at an intersection may experience a low level-of-service, while the intersection as a whole may operate acceptably.

Based on the requirements set forth by the [City of Belmont Land Development Code – Section 16.14 Transportation Impact Analysis](#) and in accordance with the traffic study guidelines in the [NCDOT Policy on Street and Driveway Access to North Carolina Highways](#), capacity analyses were performed at the study area intersections for each of the following AM and PM peak-hour scenarios:

- 2023 Background Conditions
- 2023 Build-out Conditions

NCDOT provided the signal geometric plans for each of the following signalized intersections (each of which are isolated), which were used in the development of the background conditions Synchro network:

- Hickory Grove Road and Woodlawn Street
- Hickory Grove Road and Riverside Drive (NC 7)
- Hickory Grove Road and Perfection Avenue

Based on the provided signal plans, all signalized study intersections operate as isolated signals; therefore, cycle lengths and splits were optimized individually given the timing inputs and in accordance with [NCDOT Congestion Management Capacity Analysis Guidelines](#). Cycle lengths and splits were maintained throughout the build-out scenarios. Signal geometric plans are included in the **Attachments**.

The following modifications from the background data collected were applied to the capacity analyses to meet [NCDOT Congestion Management Capacity Analysis Guidelines](#):

- Right-turn-on-red (RTOR) operations were not allowed.
- Lost time adjust was added to the yellow and all-red times provided in the existing signal plans to maintain a total lost time of five (5) seconds for each movement.
- Protected-only left-turn phasing was used for analysis for future operations where protected/permitted left-turn phasing exists or is planned (which includes the southbound left-turn movement at both signalized study intersections).

A 0.9 peak-hour factor was used in all conditions in accordance with [NCDOT Congestion Management Capacity Analysis Guidelines](#). Heavy-vehicle percentages collected with the counts were used in the background conditions analysis, subject to a two-percent (2%) minimum. A weighted heavy-vehicle percentage was calculated under build conditions to account for the added truck traffic by utilizing field-observed heavy-vehicle percentages for the background traffic combined with the passenger car/truck split for each intersection movement within the study area.

Mitigation for transportation impacts caused by the proposed development were identified based on City of Belmont mitigation requirements. When determining the proposed development’s transportation impact to the study area intersections, the 2023 background and 2023 build-out conditions were compared. Based on the [City of Belmont Land Development Code – Section 16.14 Transportation Impact](#)

Analysis, “the applicant shall be required to identify mitigation improvements to the roadway network if at least one of the following conditions exists when comparing future year background conditions to future year build-out conditions:

- the total average delay at an intersection or individual approach increases by 25% or greater, while maintaining the same LOS,
- the LOS degrades by at least one level,
- or the LOS is “D” or worse in background conditions and the proposed project shows a negative impact on the intersection or approach”.

Capacity analysis reports generated by Synchro Version 11 software are included in the **Attachments** along with queuing and blocking reports generated by the SimTraffic microsimulation model.

Int #1. Hickory Grove Road and Woodlawn Street

As shown in the existing signal included in the **Attachments**, this cluster intersection operates under a single signal controller with the adjacent Perfection Avenue intersection with timed overlaps that are intended to flush out the traffic from one intersection to the other. However, note that the results provided below reflects the anticipated operations specifically for the Woodlawn Street study area intersection. As discussed at the TTM Scoping Meeting, the Perfection Avenue intersection was not evaluated for mitigation analysis but was included in the Synchro model given its proximity and impact to the adjacent Woodlawn Street intersection).

Table 4 - Hickory Grove Road and Woodlawn Street								
Condition	Measure	WB		NB		SB		Intersection
		WBL	WBR	NBT	NBR	SBL	SBT	LOS (Delay)
AM Peak Hour								
2023 Background	LOS (Delay)	C (27.8)		D (44.5)		B (18.5)		C (27.6)
	Synchro 95th Q	67'	99'	#440'	-	#390'	9'	
2023 Build-out	LOS (Delay)	C (29.1)		D (48.5)		B (19.8)		C (29.7)
	Synchro 95th Q	89'	99'	#464'	-	#391'	9'	
2023 Build-out IMP NBR	LOS (Delay)	C (25.9)		D (39.7)		B (16.6)		C (24.9)
	Synchro 95th Q	89'	93'	344'	87'	344'	9'	
PM Peak Hour								
2023 Background	LOS (Delay)	E (61.8)		D (50.3)		B (12.8)		D (39.9)
	Synchro 95th Q	#147'	#349'	#560'	-	m136'	m7'	
2023 Build-out	LOS (Delay)	E (65.1)		D (53.8)		B (13.5)		D (42.5)
	Synchro 95th Q	#162'	#349'	#606'	-	m135'	m7'	
2023 Build-out IMP NBR	LOS (Delay)	E (56.6)		D (46.5)		B (12.0)		D (36.9)
	Synchro 95th Q	#151'	#329'	#503'	52'	m138'	7'	
Background Storage		125'						
# 95th percentile volume exceeds capacity, queue may be longer								
m Volume for 95th percentile queue is metered by upstream signal								

As previously shown in **Table 1**, the following mitigation improvement is required to be installed at this intersection as part of the approved RiverWest industrial development and was assumed to be in place under future-year conditions:

- Westbound left-turn lane along Woodlawn Street with 125 feet of storage

With this improvement in place, **Table 4** shows that the signalized intersection is expected to operate at LOS C during the AM peak hour and LOS D during the PM peak hour under 2023 background conditions.

When the proposed site traffic is added to the 2023 background traffic volumes, the overall intersection is expected to continue to operate at LOS C during the AM peak hour and LOS D during the PM peak hour with similar operations and minor increases in delay as compared to 2023 background conditions. However,

given the increased delay on multiple approaches already operating at LOS D or worse, potential mitigation was considered.

With turn lanes already provided along the southbound and westbound approaches (with the westbound left-turn lane required as mitigation for the approved RiverWest development), a potential northbound right-turn lane was considered. As shown in **Table 4**, the operational impact to this intersection caused by the proposed site is projected to be fully mitigated with the approach and intersection delays improved beyond background conditions during both peak hours; however, the improvement is not expected to provide significant capacity improvements to this intersection, decreasing the overall intersection delay by less than six (6) seconds per vehicle during both peak hours while also maintaining the same LOS as the projected operations without the turn lane.

As shown below in the aerial image adjacent to a field photo collected on June 1, 2022, widening the northbound approach to provide a northbound right-turn lane would likely require relocation of the existing signal pole, ditch and associated stormwater infrastructure, as well as potential removal of the large mature tree currently located adjacent to the northbound travel lane along Hickory Grove Road.



Based on the relatively minor delay increases caused by the proposed site while maintaining the same LOS for all approaches and overall intersection during both peak hours, along with consideration for the constraints and projected operational benefit discussed above for a potential northbound right-turn lane, **no mitigation improvements are recommended for the proposed Oaks Commerce Center.**

Also note that Woodlawn Street and Riverside Drive (NC 7) both provide alternative routing options for the proposed Oaks Commerce Center site traffic to access I-85. If drivers experience undue delay at this intersection, some drivers will likely reroute and utilize Riverside Drive (NC 7), which is shown in **Table 6** to operate at LOS B during both peak hours with the southbound approach projected to operate at LOS A.

Int #2. Hickory Grove Road and Linn Street

Table 5 shows that the stop-controlled eastbound approach of Linn Street is expected to operate with short delays during both peak hours under 2023 background conditions.

When the proposed site traffic is added to the 2023 background traffic volumes, the stop-controlled eastbound approach is expected to continue to operate with similar operations as compared to 2023 background conditions with minimal increases in approach delay. Note that the LOS degradation shown for the eastbound

approach during the AM peak hour is a result of the background delay hovering just below the LOS B/C demarcation at 15 seconds, in which the site traffic pushes the delay less than 0.1 second beyond this demarcation. **Since the proposed development is not expected to have a significant adverse impact on operations at this intersection, no mitigation improvements are recommended for the proposed Oaks Commerce Center.**

Note that discussion occurred at the TTM Scoping Meeting to endeavor to align proposed Access 1 with Linn Street; however, the applicant has indicated that right-of-way is unable to be acquired to align Access 1 with Linn Street. As shown in the aerial image to the right, Access 1 is proposed to be constructed approximately 125 feet south of Linn Street. Based on discussions at the TTM Scoping Meeting, it was determined that the proximity and offset of Access 1 to the adjacent intersection at Linn Street may create a safety concern if queues extended from each intersection and created left-turn conflicts. Based on review of SimTraffic simulation, the maximum northbound left-turn queue from Linn Street and the maximum southbound left-turn queue from Access 1 are not projected to conflict. Additionally, as further described in the auxiliary turn-lane warrant section of this TTM, a southbound left-turn lane is not warranted at Access 1, which could have also potentially created a left-turn conflict along Hickory Grove Road between the two (2) intersections.

Table 5 - Hickory Grove Road and Linn Street					
Condition	Measure	EB	NB		SB
		EBLR	NBL*	NBT	SBTR
AM Peak Hour					
2023 Background	LOS (Delay)	B (14.6)	A (8.5)	A (0.0)	A (0.0)
	Synchro 95th Q	10'	0'	0'	0'
2023 Build-out	LOS (Delay)	C (15.0)	A (8.6)	A (0.0)	A (0.0)
	Synchro 95th Q	13'	0'	0'	0'
PM Peak Hour					
2023 Background	LOS (Delay)	B (14.1)	A (8.5)	A (0.0)	A (0.0)
	Synchro 95th Q	5'	3'	0'	0'
2023 Build-out	LOS (Delay)	B (14.4)	A (8.5)	A (0.0)	A (0.0)
	Synchro 95th Q	5'	3'	0'	0'

*Conflicting left-turn movements are broken out per NCDOT guidelines



Int #3. Hickory Grove Road and Riverside Drive (NC 7)

Table 6 shows that the signalized intersection of Hickory Grove Road and Riverside Drive (NC 7) is expected to operate at LOS B during both peak hours under 2023 background conditions.

When the proposed site traffic is added to the 2023 background volumes, the overall intersection is expected to continue to operate at LOS B during both

peak hours with similar operations and minimal increases in delay as compared to 2023 background conditions. **Since the proposed development is not expected to have a significant adverse impact on operations at this intersection, no mitigation improvements are recommended for the proposed Oaks Commerce Center.**

Table 6 - Hickory Grove Road and Riverside Drive (NC 7)							
Condition	Measure	WB		NB	SB		Intersection LOS (Delay)
		WBL	WBR	NBTR	SBL	SBT	
AM Peak Hour							
2023 Background	LOS (Delay)	C (22.1)		B (15.0)	A (8.8)		B (12.8)
	Synchro 95th Q	58'	37'	305'	112'	71'	
2023 Build-out	LOS (Delay)	C (21.7)		B (15.3)	A (9.1)		B (13.1)
	Synchro 95th Q	60'	53'	324'	120'	71'	
PM Peak Hour							
2023 Background	LOS (Delay)	B (18.8)		B (13.7)	A (6.2)		B (11.3)
	Synchro 95th Q	69'	50'	256'	57'	92'	
2023 Build-out	LOS (Delay)	B (19.2)		B (14.0)	A (7.2)		B (11.8)
	Synchro 95th Q	70'	56'	269'	73'	97'	
Background Storage		100'		275'			

Int #4. Hickory Grove Road and Access 1

Based on the site plan and input from the applicant, Access 1 is proposed to serve as a full-movement connection to Hickory Grove Road located approximately 125 feet south of Linn Street. The westbound egress was assumed to operate unsignalized with single-lane approaches.

Table 7 shows that the stop-controlled westbound approach of Access 1 is expected

to operate with short delays during both peak hours under 2023 build-out conditions. **Therefore, no additional improvements beyond construction of Access 1 with a single egress and single ingress lane with a minimum internal protected stem (IPS) of 100 feet are recommended at this intersection for capacity purposes.**

Table 7 - Hickory Grove Road and Access 1					
Condition	Measure	WB	NB	SB	
		WBLR	NBTR	SBL*	SBT
AM Peak Hour					
2023 Build-out	LOS (Delay)	C (18.6)	A (0.0)	A (8.4)	A (0.0)
	Synchro 95th Q	5'	0'	3'	0'
PM Peak Hour					
2023 Build-out	LOS (Delay)	C (21.6)	A (0.0)	A (9.1)	A (0.0)
	Synchro 95th Q	23'	0'	0'	0'

*Conflicting left-turn movements are broken out per NCDOT guidelines

Note that the recommended IPS length is based on review of the SimTraffic maximum queue lengths and NCDOT minimum requirements. The IPS is defined as the length required to be protected along the driveway stem from Hickory Grove Road before any crossing or left-turn conflicts are allowed. Based on the attached site plan, it appears a 100-foot IPS is provided.

Review of auxiliary turn-lane warrants at this intersection is described on the following page.

Auxiliary Turn Lane Warrants

Warrants for additional turn-lane improvements for unsignalized driveways beyond those necessary for capacity were determined based on a review of the figure titled ‘Warrant for Left and Right-Turn Lanes’ found on page 80 in the [NCDOT Policy on Street and Driveway Access to North Carolina Highways](#).

The results of the warrants for left- and right-turn lanes under 2023 build-out conditions indicate that turn lanes are not warranted along Hickory Grove Road at the proposed Access 1. Turn-lane warrant figures are included in the **Attachments**.

Note that as the end user of the development becomes identified, the applicant should coordinate with the City of Belmont and NCDOT staff to determine if turn lanes are warranted to accommodate projected truck traffic and/or if an updated traffic study is required depending on the type of industrial user that ultimately occupies this building.

Crash Data Analysis

Crash data was obtained at the study intersections for crashes that occurred between May 1, 2019, and April 30, 2022. Over this three (3)-year period, 19 total crashes were reported at the existing study intersections. The breakdown of the crashes at these study intersections by severity, frequency, and crash type are shown in the tables below.

Crash Type	Number of Crashes
Fatal Crashes	0
Class A	0
Class B	0
Class C	6
Property Damage Only	13
Total	19

Table 8.1 above shows the total number of crashes by severity type from most to least severe. As shown, 68% of the crashes over the past three (3) years at the study intersections had no injury reported. The crash types are defined as follows:

- Class A - crashes where serious injury is suspected and can include significant loss of blood or broken bones.
- Class B - crashes where minor injury is suspected, such as bruises or minor cuts.
- Class C - crashes wherein possible injuries occur, which are injuries reported by the person or indicated by his/her behavior, but no wounds or injuries are physically present, such as limping or complaint of neck pain.
- Property Damage Only (PDO) – crashes where no injury is reported.

Location	Crashes/100 MEV
1. Hickory Grove Rd and Woodlawn St	69.73
2. Hickory Grove Rd and Linn St	15.74
3. Hickory Grove Rd and Riverside Dr (NC 7)	39.00
Average	44.45

Table 8.2 shows the crash rates at the study area intersections resulted in a weighted average crash rate of 44.45 crashes per 100 million entering vehicles (MEV), with the highest rate occurring at the cluster

signalized intersection of Hickory Grove Road and Woodlawn Street. There have been 12 total crashes reported over this three (3)-year period at this intersection.

Table 8.3 – Crash Type Summary			
Crash Type	1. Hickory Grove Rd and Woodlawn St	2. Hickory Grove Rd and Linn St	3. Hickory Grove Rd and Riverside Dr (NC 7)
Angle	0	0	2
Fixed Object	0	1	0
Head On	0	0	0
Left-Turn, Different Roadways	0	0	1
Left-Turn, Same Roadway	1	0	0
Overturn/Rollover	0	1	0
Parked Motor Vehicle	1	0	0
Ran off Road - Right	0	0	1
Rear End, Slow or Stop	6	0	1
Right-Turn, Different Roadways	1	0	0
Right-Turn, Same Roadway	1	0	0
Sideswipe, Same Direction	2	0	0
Unknown	0	0	0
Total	12	2	5

The most common crash type within the study area was rear-end collisions caused by slowing or stopping vehicles, contributing to 7 of the 19 total crashes. As shown in **Table 8.3**, rear-end collisions were most prevalent at the signalized intersection of Hickory Grove Road and Woodlawn Street.

Rear-end collisions are often associated with higher levels of congestion at signalized intersections and lack of available turn-lane storage at signalized or unsignalized intersections. As noted in **Section 1** under the **Capacity Analysis**, a westbound left-turn lane is required to be installed at this intersection as part of the approved RiverWest industrial development.

Additionally, as discussed through the **Capacity Analysis**, the proposed Oaks Commerce Center is not expected to significantly increase congestion at these intersections, and therefore is not expected to have a significant impact on safety at these intersections upon build-out of the proposed site.

Crash data provided by NCDOT is included in the **Attachments**.

Sight Distance Review

A horizontal and vertical sight distance analysis was performed for proposed Access 1 along Hickory Grove Road at the request of NCDOT and was based on survey provided by the applicant. Based on the existing 35 mph speed limit on Hickory Grove Road (SR-2000), a design speed of 40 mph was used for this analysis in accordance with NCDOT guidelines. The analysis found no immediate vertical conflicts; however, any obstructions located above ground level within the limits of the sight distance triangles (as shown on the sight distance profile included in the **Attachments**) will need to be cleared. Four (4) parcels, two (2) of which appear to be developer-owned, will require sight distance easements. No landscaping, vegetation, fencing, structures, parking areas, or other obstructions shall encroach within the sight distance easements.

A combination of field photos collected on June 1, 2022, is shown on the following page and reflects the current view from the approximate location of proposed Access 1. The photo on the left is a view looking left toward the south along Hickory Grove Road, while the photo on the right is a view looking right toward the north along Hickory Grove Road.



Conclusions

Based on the capacity analyses performed at each of the identified study intersections, along with review of the auxiliary turn-lane warrants and crash analyses contained herein, **the proposed Oaks Commerce Center is not expected to have a significant adverse impact on operations at the off-site study area intersections; therefore, no additional mitigation improvements beyond the necessary laneage and appropriate sight distance required for site access (as discussed below) is identified for the proposed Oaks Commerce Center.** Given the planned transportation improvement identified as mitigation for the approved RiverWest development in combination with the relatively low trip generation potential of the proposed site (less than 100 site trips in each peak hour), the proposed development is not expected to have a significant adverse impact on operations at offsite study area intersections. Note that as the end user of the development becomes identified, the applicant should coordinate with City of Belmont and North Carolina Department of Transportation (NCDOT) staff to determine if turn lanes are warranted to accommodate projected truck traffic and/or if an updated traffic study is required depending on the type of industrial user that ultimately occupies this building. Driveway access improvements identified herein include:

Int #4. Hickory Grove Road and Access 1

- Construction of Access 1 as a full movement, stop-controlled driveway with a single egress lane and single ingress lane
- Provide a 100-foot internal protected stem (IPS) along Access 1

Sight Distance Easements (Hickory Grove Road and Access 1)

- Based on a horizontal and vertical sight distance analysis, no immediate vertical conflicts were found; however, any obstructions located above ground level within the limits of the sight distance triangles (as shown on the sight distance profile included in the **Attachments**) will need to be cleared. Four (4) parcels, two (2) of which appear to be developer-owned, will require sight distance easements. No landscaping, vegetation, fencing, structures, parking areas, or other obstructions shall encroach within the sight distance easements.

The mitigation improvements identified within the study area are subject to approval by NCDOT and the City of Belmont. All additions and attachments to the State and City roadway system shall be properly permitted, designed, and constructed in conformance to standards maintained by the agencies.

Attachments

1. Figures 1-9 (under same cover)
2. Access 1 Sight Distance Profile (under same cover)
3. Memorandum of Understanding
4. Intersection Volume Development Worksheets
5. Signal Geometric Plans
6. Synchro Capacity Analysis Reports
7. Queueing and Blocking Reports
8. Auxiliary Turn Lane Warrants

Cc:	Shelley DeHart, AICP	City of Belmont
	Blake Guffey	NCDOT
	Chris Urquhart	CHI Acquisitions, LLC
	Matt Cochrane	Crow Holdings
	Elizabeth Richard	Kimley-Horn



SKETCH PLAN
FOR
THE OAKS COMMERCE
BELMONT, NORTH CAROLINA

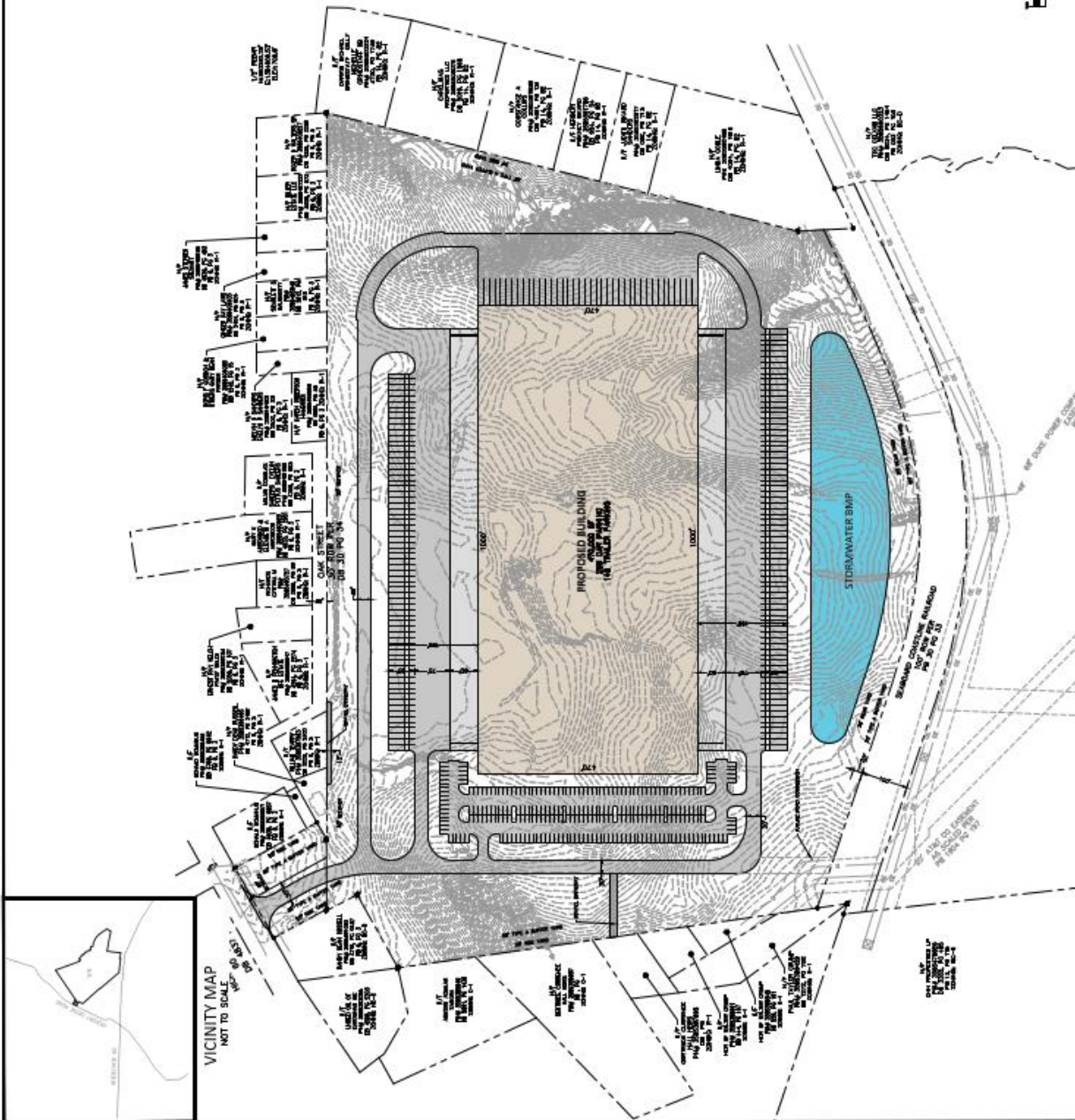
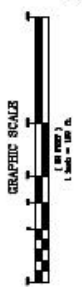
CROW HOLDINGS, DBA
CH/ACQUISITIONS, L.P.
CHARLOTTE, NC 28211
4064 COLONY ROAD, SUITE 405



DATE	12-15-22
SCALE	AS SHOWN
PROJECT	OAKS COMMERCE CENTER
DESCRIPTION	PROPOSED INDUSTRIAL WAREHOUSE

S-1

SITE DEVELOPMENT DATA
PARCEL ID NO: 206477, 183195, 183196
SITE AREA: 64.22 AC
EXISTING ZONING: I-CD
PROPOSED USE: INDUSTRIAL WAREHOUSE



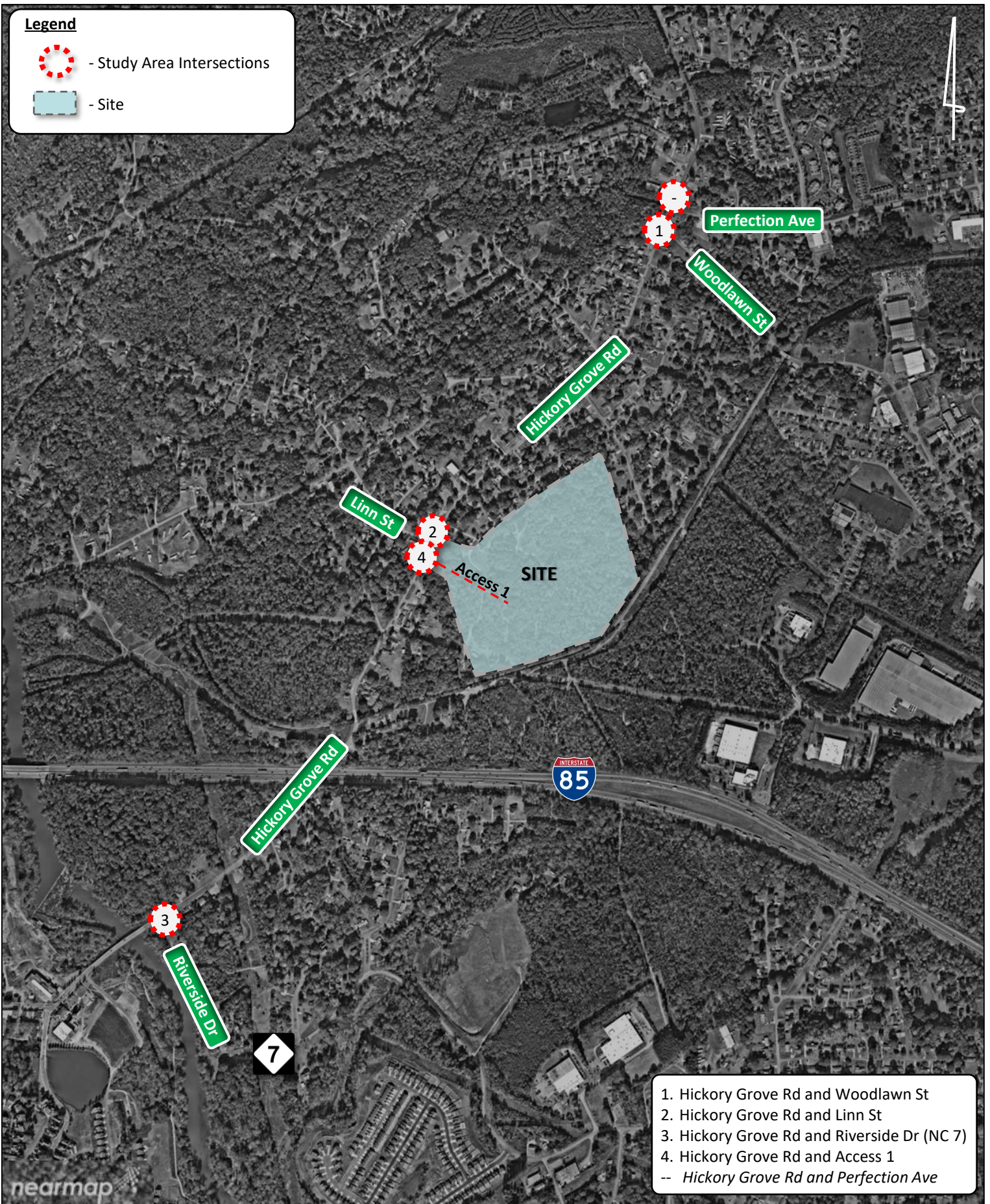
Legend



- Study Area Intersections



- Site

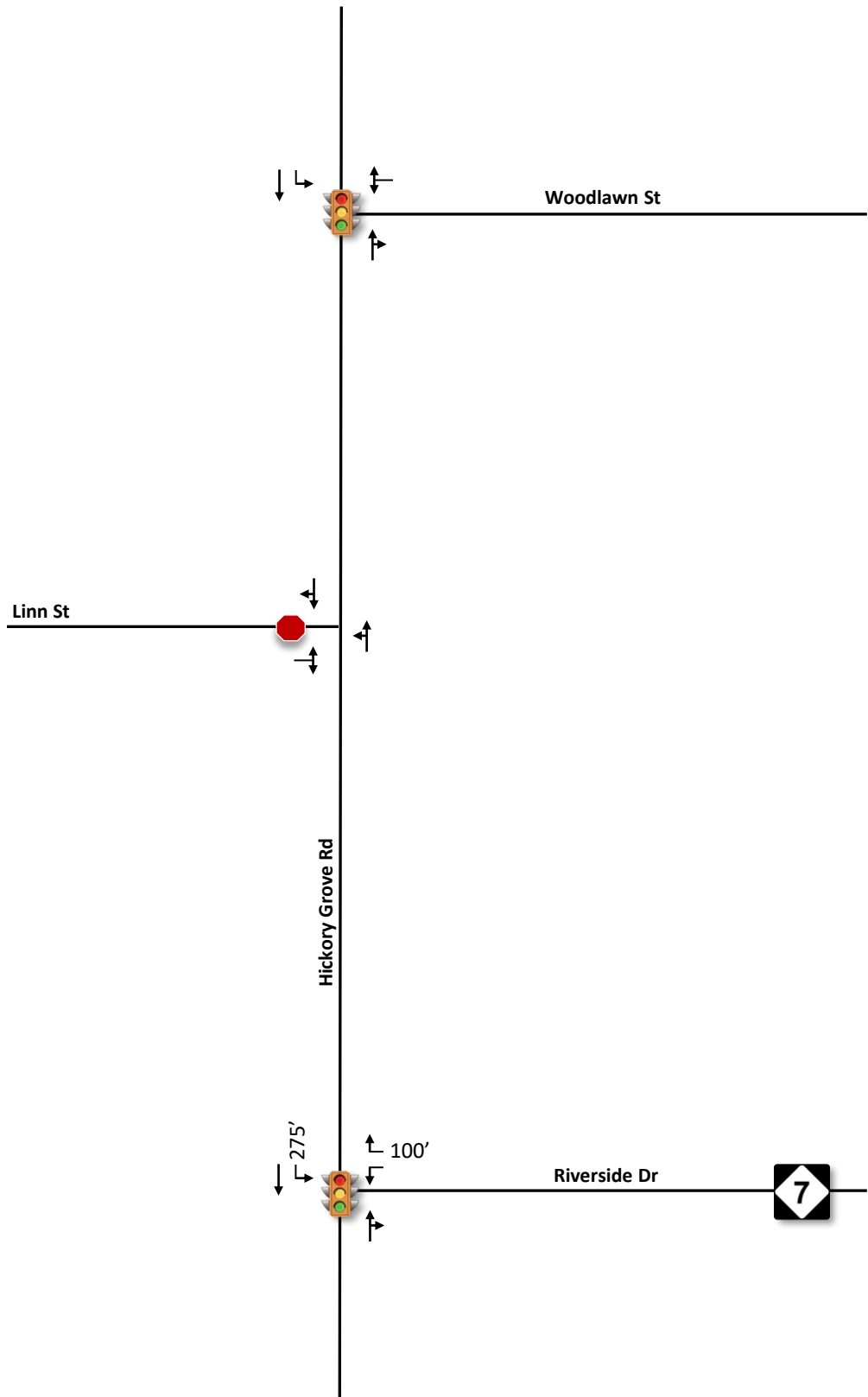


- 1. Hickory Grove Rd and Woodlawn St
- 2. Hickory Grove Rd and Linn St
- 3. Hickory Grove Rd and Riverside Dr (NC 7)
- 4. Hickory Grove Rd and Access 1
- Hickory Grove Rd and Perfection Ave

nearmap



NOT TO SCALE

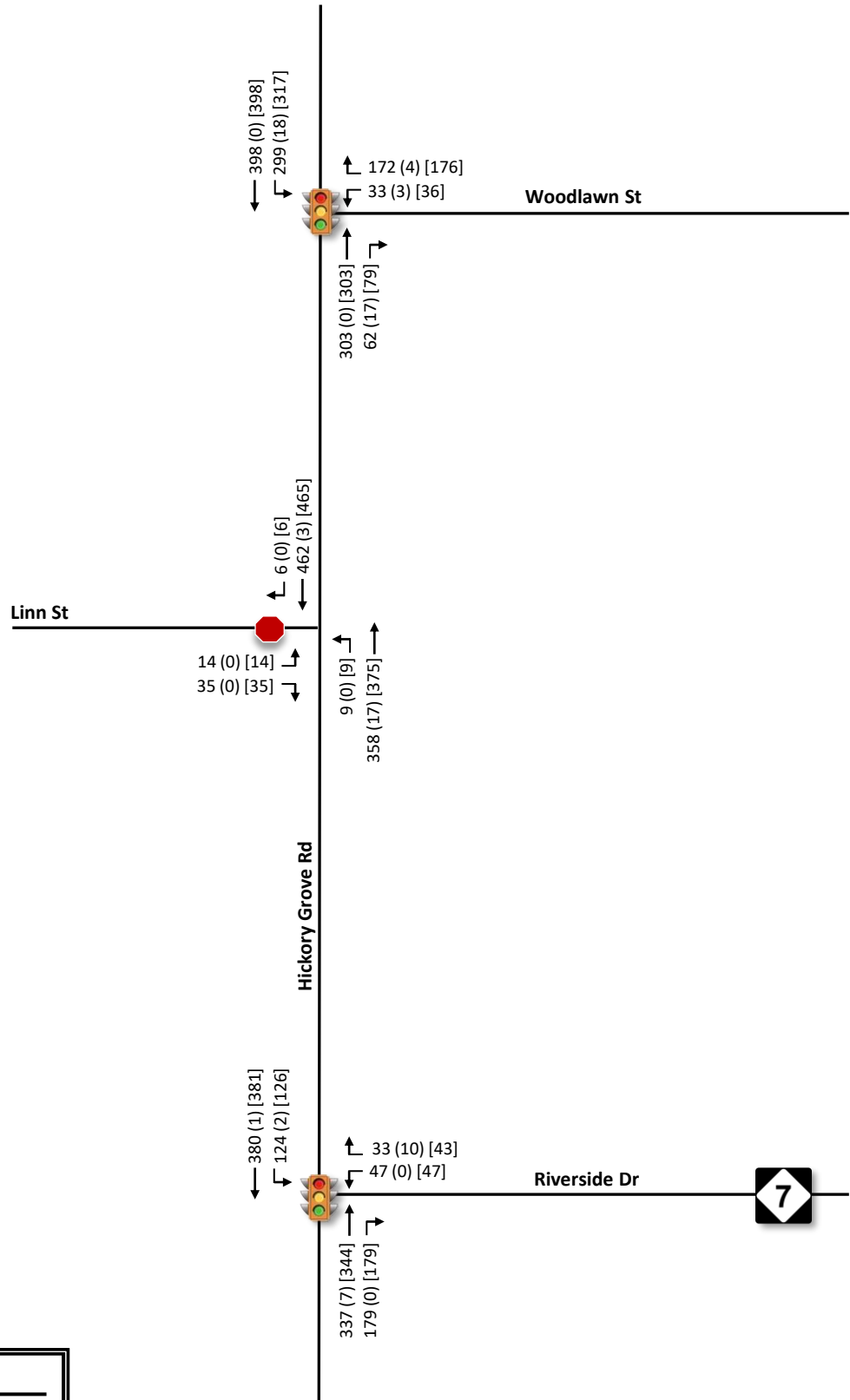


LEGEND

- Existing Lane
- X' Storage Length
- Traffic Signal
- Stop Control



NOT TO SCALE

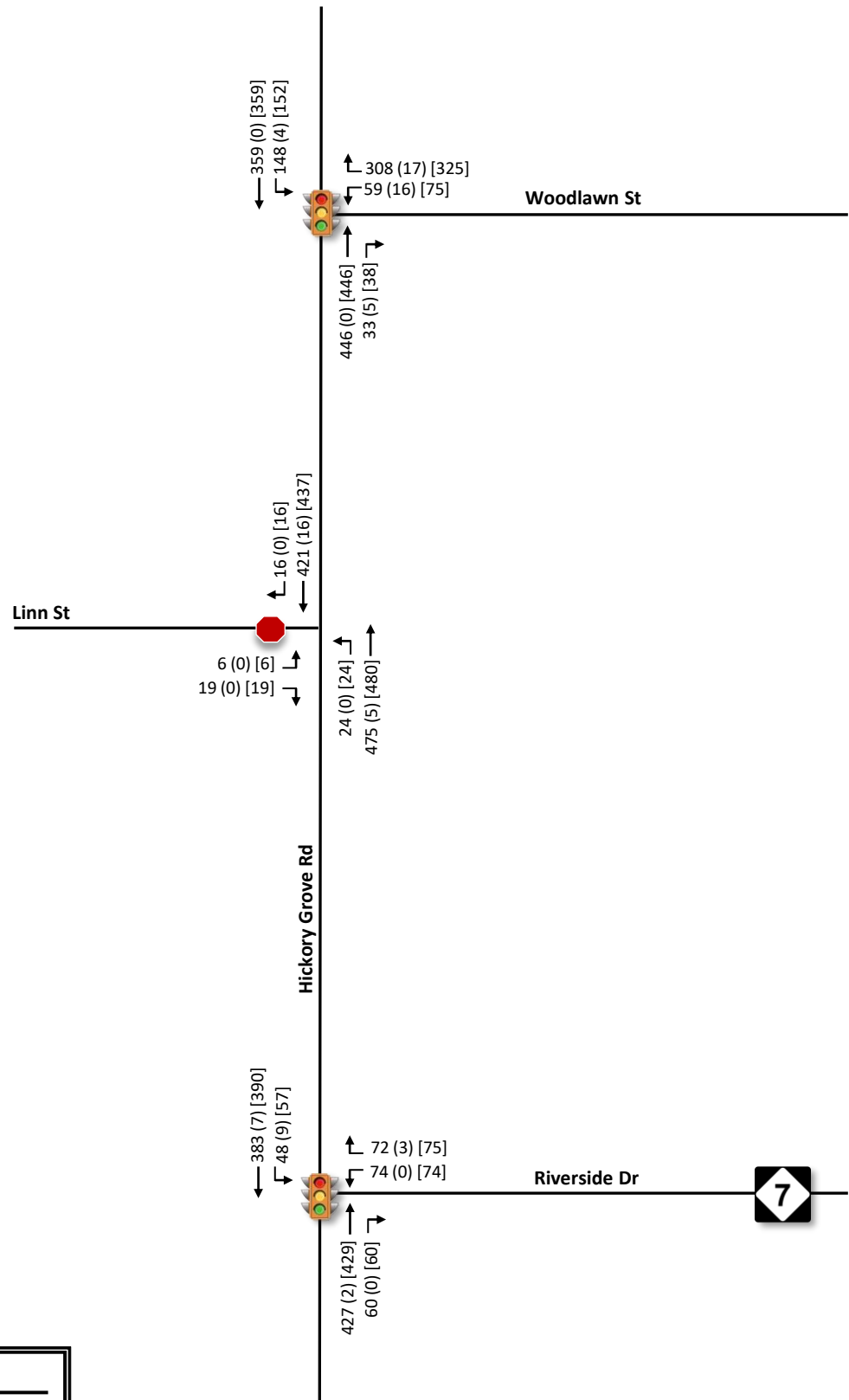


LEGEND

- XX Historic Growth Traffic
- (XX) Approved Development Trips
- [XX] Background Traffic Volumes



NOT TO SCALE

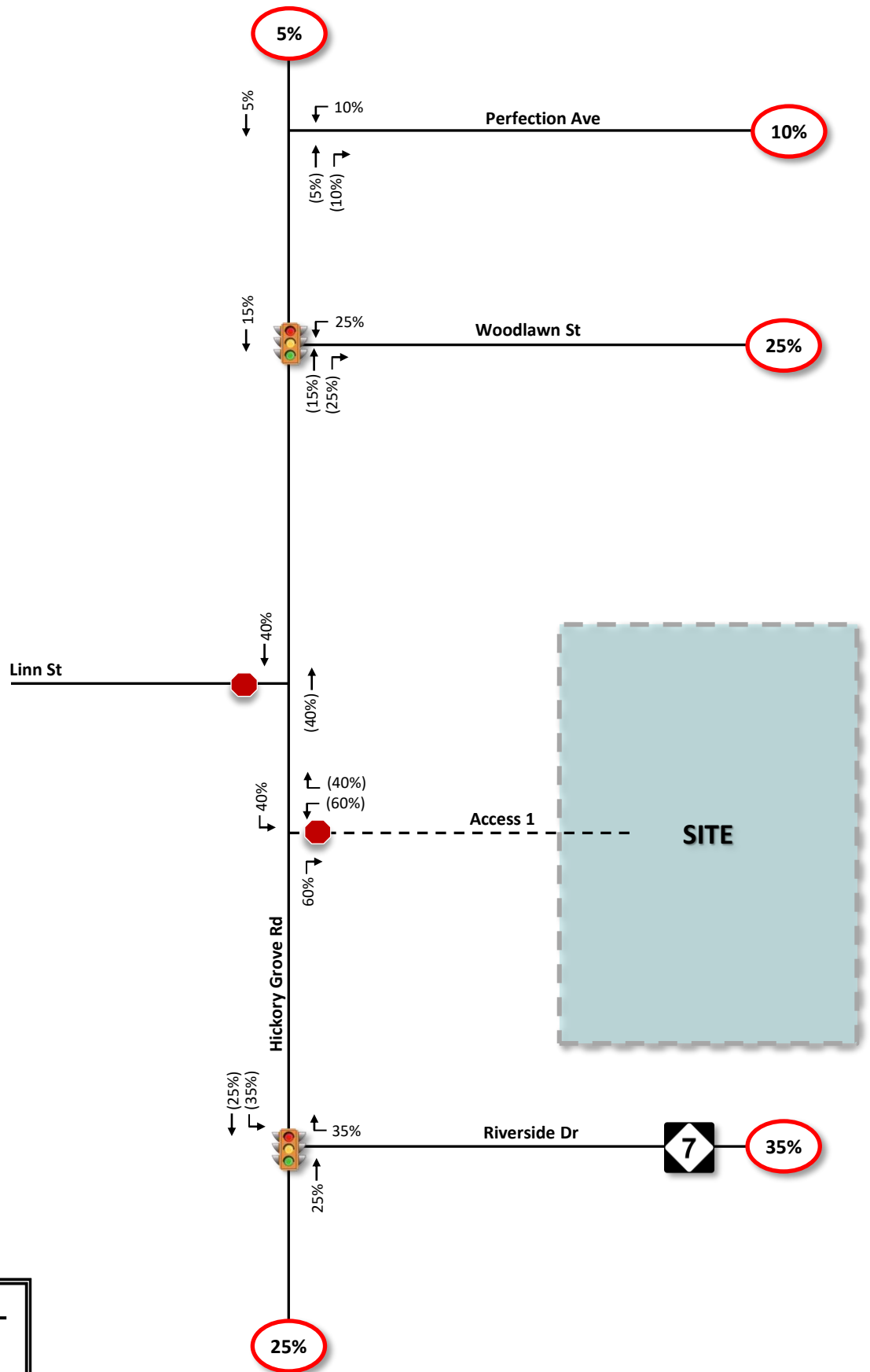


LEGEND

- XX Historic Growth Traffic
- (XX) Approved Development Trips
- [XX] Background Traffic Volumes



NOT TO SCALE

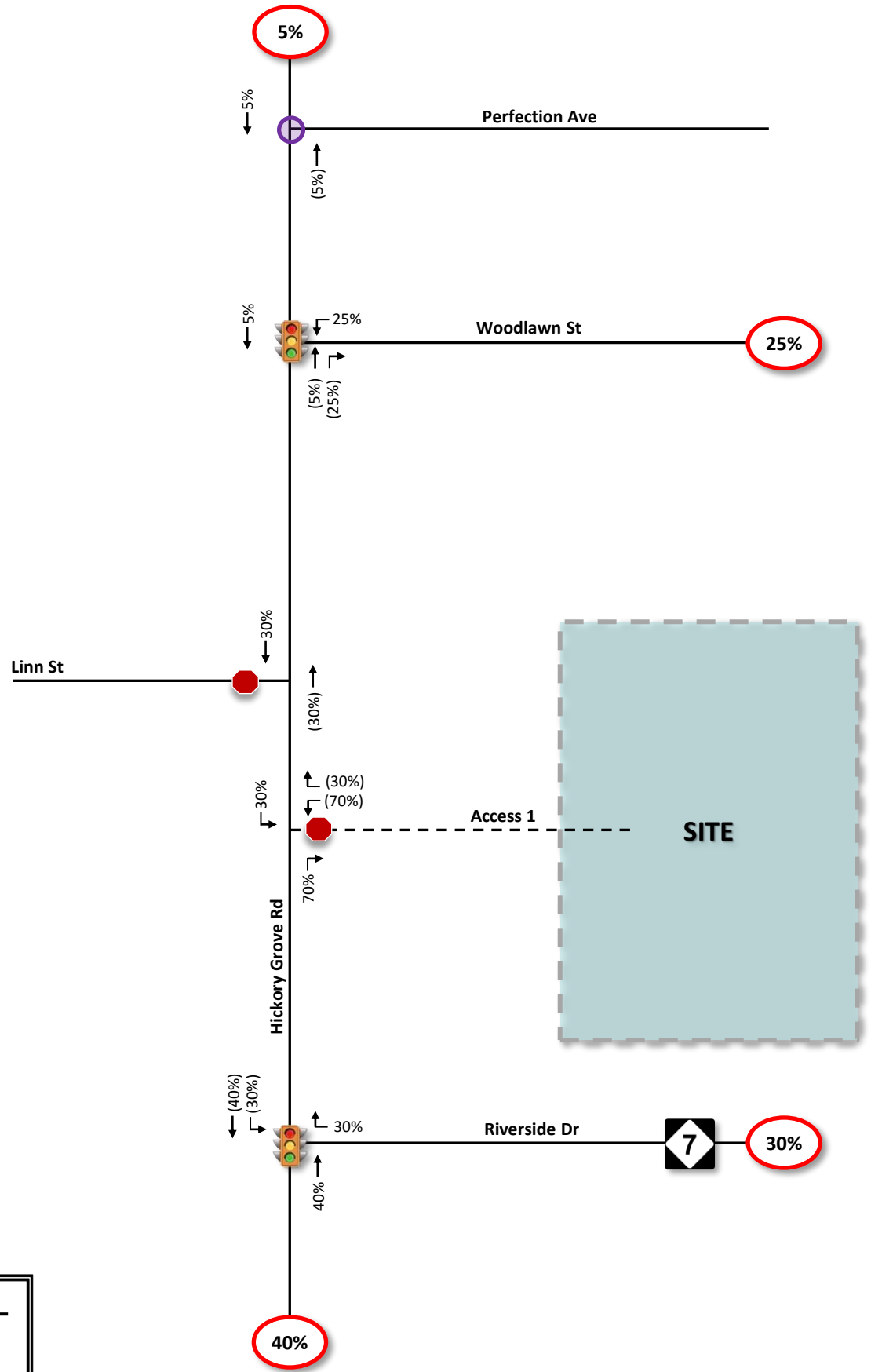


LEGEND

- XX%** Site Traffic Distribution
- XX% Inbound Assignment
- (XX%) Outbound Assignment



NOT TO SCALE

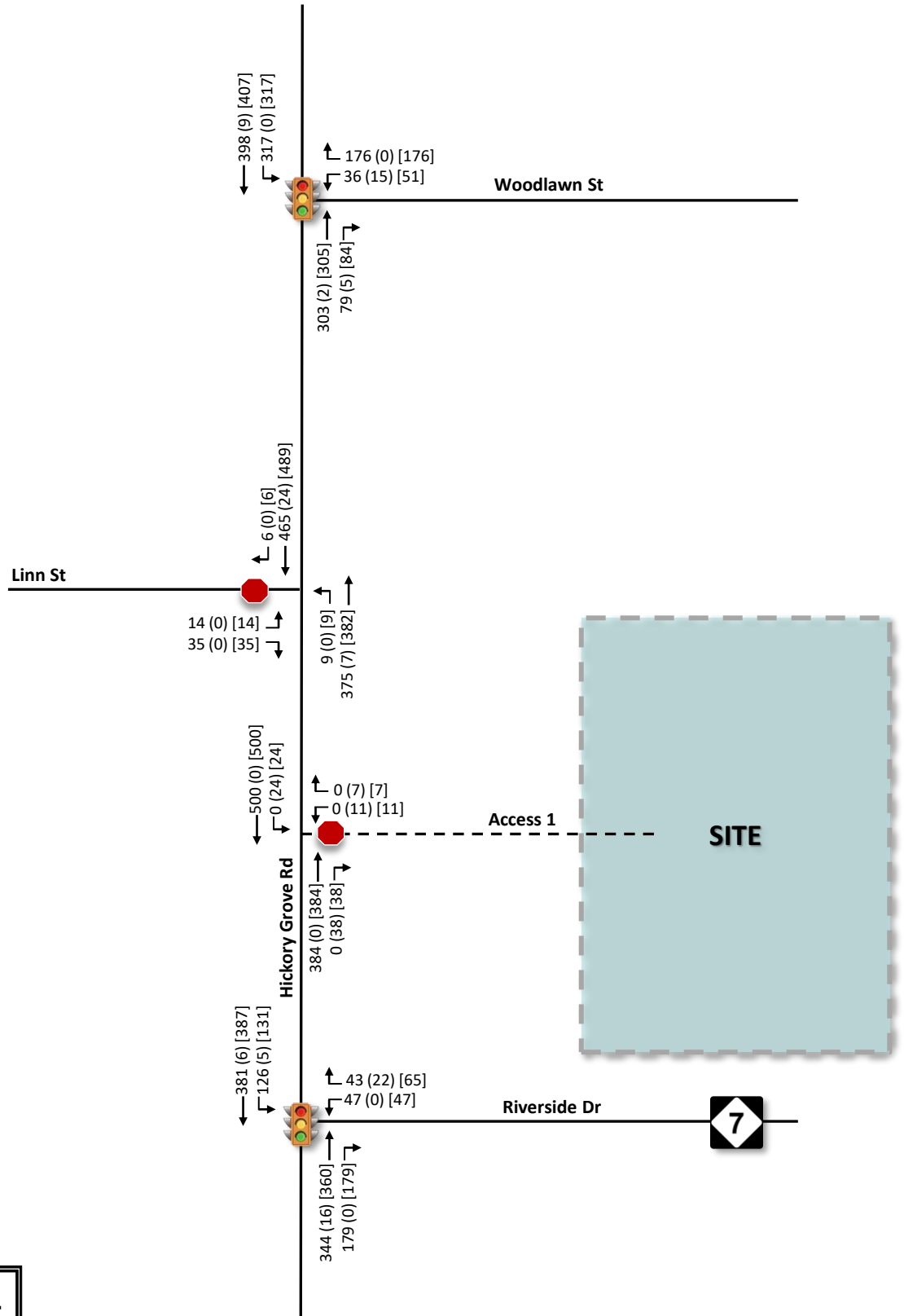


LEGEND

- XX% Site Traffic Distribution
- XX% Inbound Assignment
- (XX%) Outbound Assignment



NOT TO SCALE

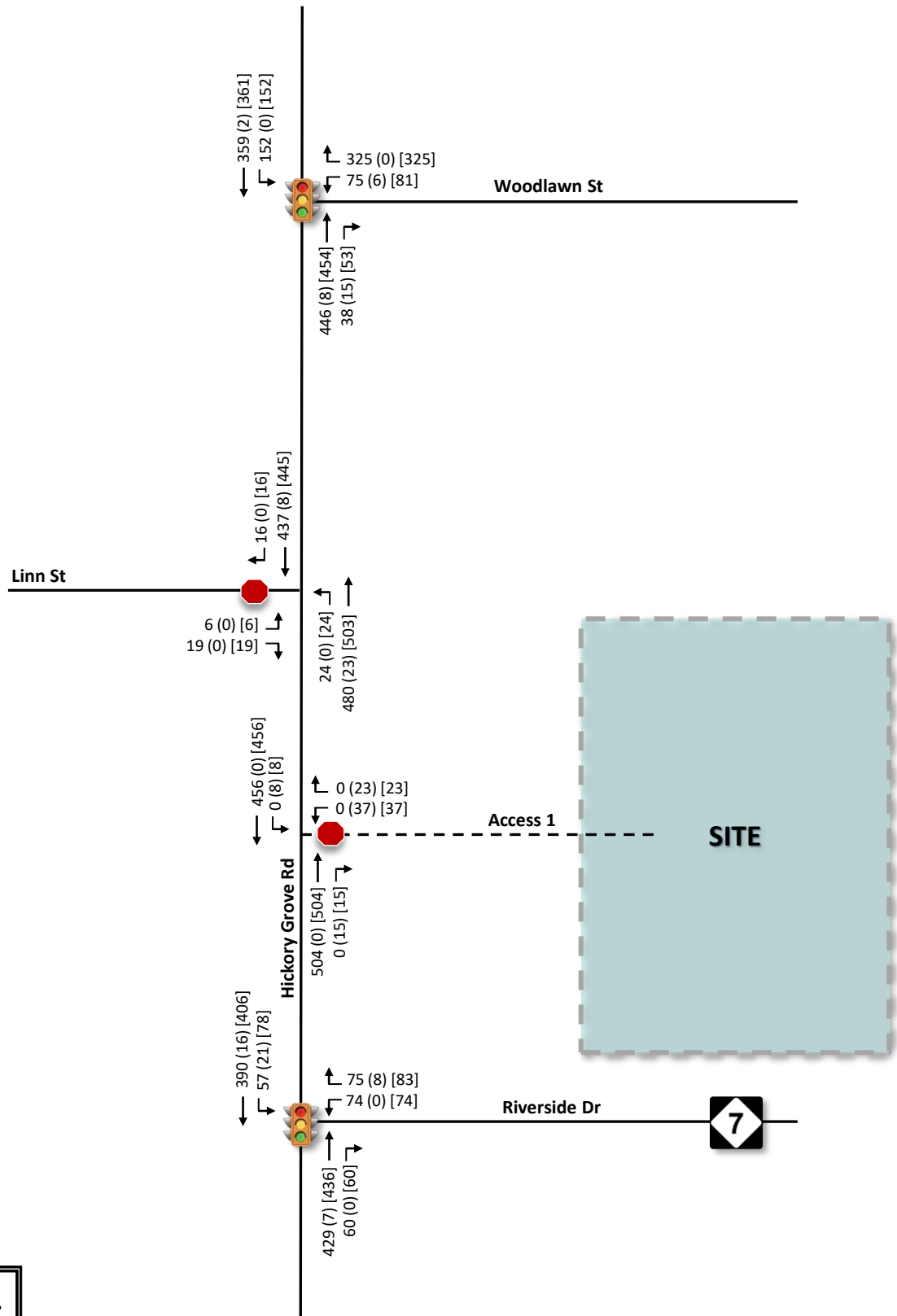


LEGEND

XX Background Traffic
 (XX) Site Trips
 [XX] Build-out Traffic

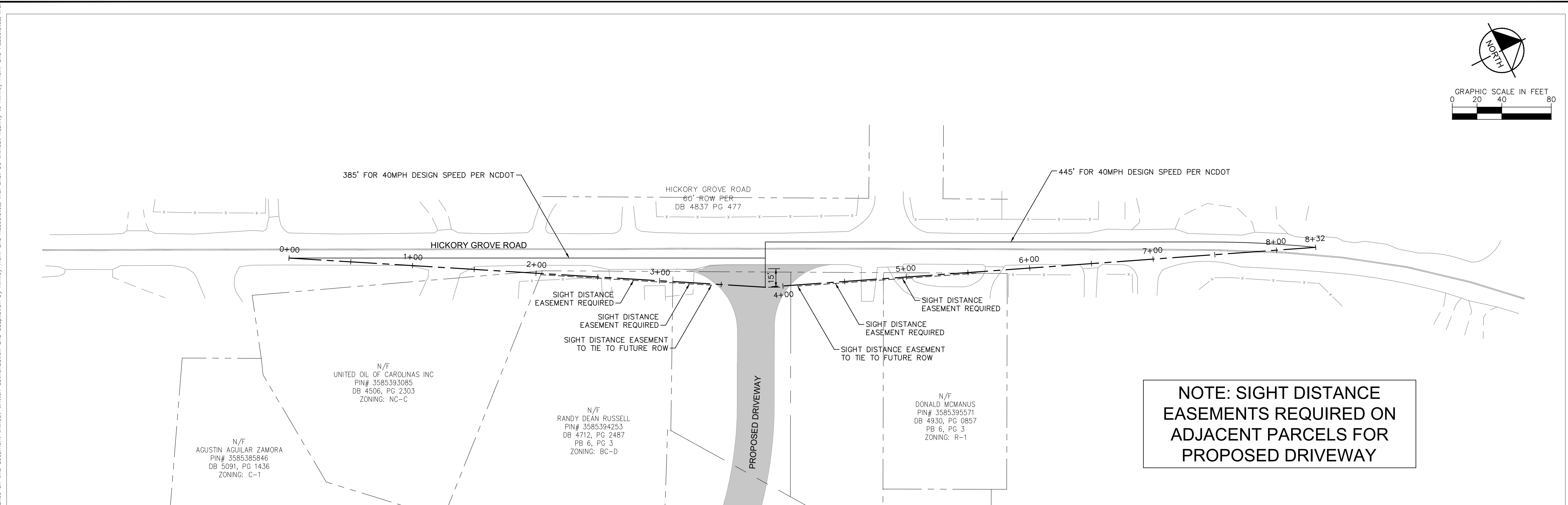


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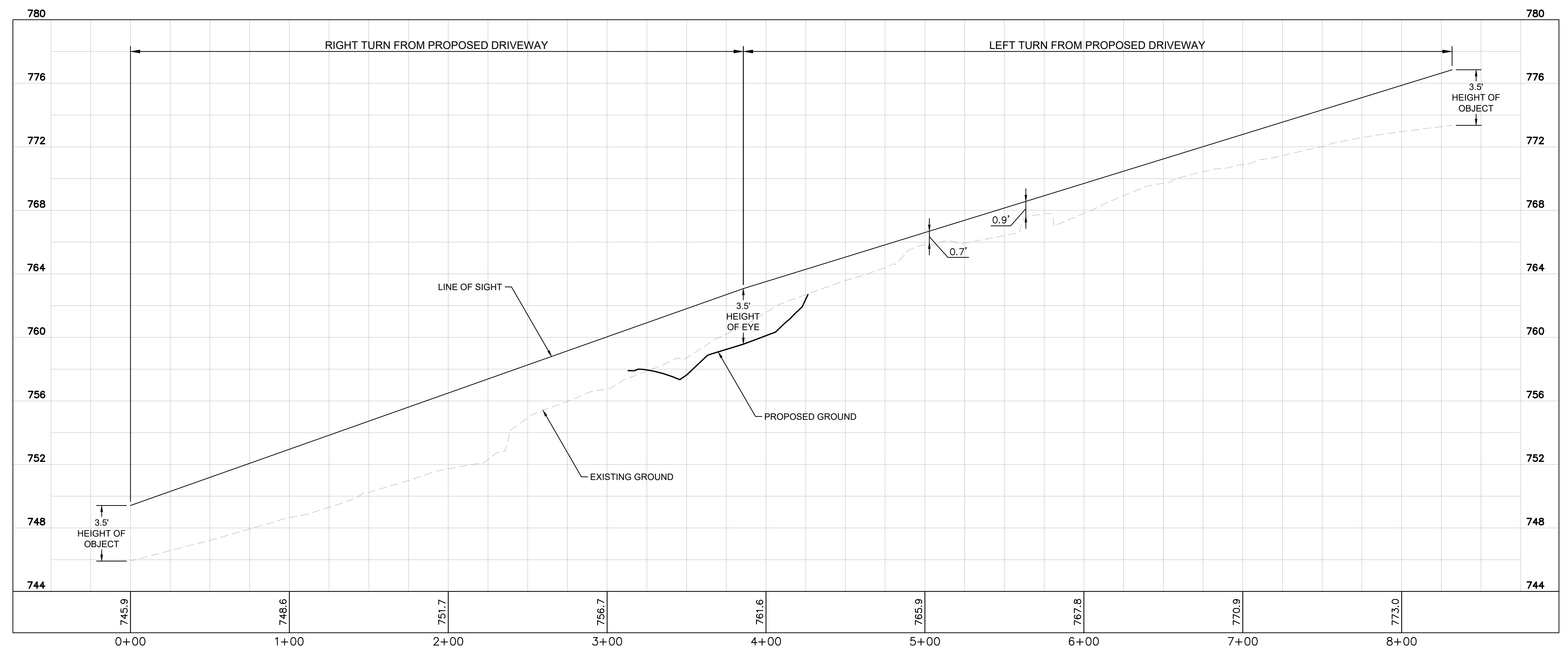


LEGEND	
XX	Background Traffic
(XX)	Site Trips
[XX]	Build-out Traffic

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SIGHT DISTANCE PROFILES



No.	REVISIONS	DATE	BY

Kimley-Horn

© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
200 SOUTH TRYON ST., SUITE 200, CHARLOTTE, NC 28202
WWW.KIMLEY-HORN.COM
NC LICENSE #F-0102

NOT FOR CONSTRUCTION

KHA PROJECT	015020023
DATE	JUNE 2022
SCALE	AS SHOWN
DESIGNED BY	SHA
DRAWN BY	SHA
CHECKED BY	JMR

SIGHT DISTANCE PROFILES

OAKS COMMERCE CENTER
PREPARED FOR
CROW HOLDINGS

GASTONIA NC

SHEET NUMBER
1

ATTACHMENT D

Oaks Commerce Open Forum Community Meeting

Major Development Plan #: 2022-04

Date: 8/2/2022

Location: Crossfix Church, 6131 Wilkinson Blvd., Belmont, NC

Project Representatives:

- Crow Holdings
 - Matt Cochrane
 - Nick Thornton
 - Christina Conkle
- Orsborn Engineering
 - Lin Leslie

Attendance: 19 neighbors (see attached)

Introduction:

Mr. Matt Cochrane opened the meeting with introductions and an overview of the project, noting it would be a 470,000 SF distribution/light manufacturing facility that is accessed off Hickory Grove Road. Mr. Cochrane gave a general overview of the property zoning status, with the main parcel being in Belmont's jurisdiction and zoned BC-D while the two parcels fronting Hickory Grove Road are in Gaston County's jurisdiction and will be annexed into Belmont and zoned BC-D.

Mr. Cochrane noted that Crow Holdings has been working closely with the City of Belmont on the building and site design as well access routes for neighbors whose roads will be impacted.

Questions/Comments asked by residents:

- **Annexation** – as CHI discussed annexation of the 2 parcels, several attendees had questions about the annexation process and asked if their properties would also be annexed.

Mr. Cochrane clarified that CHI can only annex the two parcels at the front of their development and is only pursuing annexation of said parcels. Mr. Thornton called on an attendee who had reached out to the City to discuss annexation and said attendee communicated to the group that the City clarified no neighboring parcels would be annexed as a direct result of this project.

- Buffers and Grading -

- neighbors were curious how the property line adjacent to Park Terrace Drive this edge would be impacted by the project.

Mr. Cochrane identified the eastern boundary as a targeted tree save area and the Crow Holdings team will include the landscaping plan in the next round of materials.

- neighbors asked about stormwater, erosion control, and stream impacts

Mr. Cochrane noted we are responsible for coordinating with appropriate governing bodies and cannot start work on the site until such authorities have approved drawings and issued permits. Mr. Thornton and Mrs. Leslie clarified that projects are responsible for controlling and mitigating stormwater and pointed out the stormwater pond at the south end of the site.

- **Traffic** – will trucks back up on Hickory Ridge?

Mr. Cochrane noted the plan has been designed for trucks to be able to queue within the site and operators would face fines for sitting idle on public roads.

- will there be turn lanes into the site?

Mr. Cochrane noted a Transportation Technical Memorandum is a requirement for a development of this scale and the City commissioned study should be finalized later this month and will be discussed at a follow-up meeting.

- **Crawford family in attendance.** They are the family living on parcels A-D that will receive a new paved access. Questions/discussion with the family and group:

- How will we access our property during construction?

Mr. Cochrane noted that CHI will provide a temporary drive to said properties during construction, when CHI will construct a paved road from Hickory Grove Road to the eastern boundary of their property line, as outlined in the site plan.

- How will storm water runoff be handled on the driveway?

CHI will actively mitigate the impact of all stormwater runoff with curb and gutter in the paved area and grade around the new drive to divert water to the sides.

- We discussed the new addressing that will occur through Gaston County.

First Name	Last Name	Address	City, State	Telephone	Email
Judy	Sanders	314 PK. Terrace Dr.	Belmont, NC	Not provided	Not provided
Linda	Hunt	1110 Oakwood Dr.	Belmont, NC	Not provided	Not provided
Jerry	Hunt	1110 Oakwood Dr.	Belmont, NC	Not provided	Not provided
Constance	Collins	306 Park Terrace Dr.	Belmont, NC	Not provided	Not provided
Randy	Russell	622 Hickory Grove Rd.	Gastonia, NC	704-718-5695	Not provided
Tony	Rikard	121 Burton Hill	Gastonia, NC	704-879-4604	Not provided
Freddie	Rikard	4402 Derrydowne Ln.	Gastonia, NC	704-813-7282	Not provided
Cynthia	Richards	906 Hickory Grove Rd.	Gastonia, NC	Not provided	Not provided
Tom	Hord	1000 Hickory Grove Rd.	Gastonia, NC	Not provided	Not provided
Melanie	Brafford	808 Hickory Grove Rd.	Gastonia, NC	704-898-1074	Not provided
Mable	Crawford	1159 Oak St.	Gastonia, NC	704-351-7863	Not provided
Dwayne	Graham	1158 Oak St.	Gastonia, NC	704-923-1726	Not provided
Patrick	Williams	1159 Oak St.	Gastonia, NC	704-650-3863	Not provided
William	Tearry	1012 Oak St.	Gastonia, NC	910-336-1423	Teddytasha1@gmail.com
C.	Crump	1156 Oak St.	Gastonia, NC	704-891-5461	Not provided
Pruett	Black	264 Bess Rd.	Kings Mountain, NC	704-435-5725	blackpruett3@gmail.com
Teresa	Black	264 Bess Rd.	Kings Mountain, NC	704-435-5725	blackpruett3@gmail.com
Doug	Sanders	3106 Cedar St.	Gastonia, NC	980-721-5976	Not provided
June	Sanders	3106 Cedar St.	Gastonia, NC	980-721-5976	Not provided

Oaks Commerce Open Forum Community Meeting

Major Development Plan #: 2022-04

Date: 9/12/2022 6:30 PM – 8:15 PM

Location: Centerview Baptist Church, 2300 Acme Road, Belmont, NC

Project Representatives:

- Crow Holdings
 - Matt Cochrane
 - Nick Thornton
- Orsborn Engineering
 - Lin Leslie
- City of Belmont
 - Tiffany Faro

Attendance: 18 neighbors (see attached)

Introduction:

Crow Holdings opened the meeting with introductions and an overview of the project, noting it would be an approximately 470,000 SF distribution/light manufacturing facility that is accessed off Hickory Grove Road. Mr. Cochrane gave a general overview of the development area, property zoning status, views of the development from plan east, west, and north, and traffic improvements/recommendations.

Following the overview, Crow Holdings opened the floor for a question-and-answer session. Note the questions and responses are categorized.

- Traffic

- What improvements will be made to roads to address additional traffic from this project?

Crow Holdings noted the traffic generated based on the proposed use did not warrant improvements to roads in the immediate area. This question was brought up again later in the meeting and Crow Holdings noted the daily traffic counts provided in Kimley Horn's report (781 total trips for passenger cars and tractor trailers). Ms. Faro noted that if the end user's end results in more intensive counts, the transportation technical memorandum (TTM) will need to be revised.

- What is the source of the traffic information that was accounted for in the transportation technical memorandum?

Crow Holdings noted the TTM was commissioned by the City of Belmont and prepared by Kimley Horn (a national engineering firm). Crow Holdings noted that Kimley Horn took traffic counts to establish a baseline and used historical data to project new traffic counts resulting from the project.

- Will there be enough time for vehicles to turn out of the project and onto Hickory Grove Road?

Crow Holdings noted Kimley Horn took sight distances and speed limits into account when preparing their recommendations.

- How will this project impact improvements to the I-85 overpass at Hickory Grove Road?

Crow Holdings noted they did not have knowledge of how Oaks Commerce would impact NCDOT projects for the overpass. Ms. Faro commented the plans are currently in a public outreach period and noted information would be sent to participants who provided an email address.

- How will tractor trailers be kept from parking on public streets?

Crow Holdings noted that tractor trailers cannot park on public streets and could be subject to fines for doing such. Crow Holdings agrees to post signage on what is currently shown as Oaks Crossing Lane (coming off Hickory Grove Road) stating there is no parking allowed.

- How will tractor trailer traffic be mitigated?

Crow Holdings noted there are areas on the western side of the site and on the northern side of the site that allow for tractor trailer queuing. Crow Holdings will show an area where guard shack could be placed and demonstrate tractor trailers queuing.

- How will traffic on the new public road be controlled?

Crow Holdings noted there will be a stop sign at the intersection of the new public road and Hickory Grove Road. Kimley Horn outlined the installation of a stop sign at the new road which will have one inbound, one outbound lane, and should provide a 100' internal stem. Kimley Horn did not call for additional improvements to Hickory Grove Road. Crow Holdings noted they would update building plans to show stop signs.

- Community Benefit

- How will neighbors benefit?

Crow Holdings noted the project will create jobs for the community, add to Belmont's tax base to fund public projects, and provide better access to numerous families on Oak Street with a paved road.

Crow Holdings agreed to coordinate with Gaston County and the Crawford family on naming the new public road.

Crow Holdings noted there will be site lighting and the future tenant will have security systems in place that will deter loitering/dumping at the property.

Crow Holdings noted the stormwater management system will benefit neighbors who are currently experiencing runoff.

- *Crow Holdings noted the development has been designed to preserve existing trees and streams to preserve the natural environment where possible. How do we know this project will be successful when there is an empty industrial park nearby (RiverWest)?*

Crow Holdings noted there has been strong leasing activity throughout the Charlotte metro and vacancies are at an all-time low. Additionally, Crow Holdings noted that one of the two buildings referenced is fully leased but the tenants haven't taken occupancy.

- Additional Questions

- How has trash at the property been documented?

Crow Holdings noted there was both environmental and geotechnical testing performed at the site and trash was not of concern. Additionally, if there are areas with significant debris Crow Holdings and consultants will ensure the area is over-excavated so the development will be structurally sound.

- Will the railroad allow an at-grade crossing for the development?

Crow Holdings noted there has been correspondence with the railroad and while they would allow us to bore underneath the railroad to get utilities to the property, they would not permit an at-grade crossing.

- Can a bridge be built over the railroad?

Crow Holdings noted this would be prohibitively costly.

- How will home values be impacted?

Crow Holdings noted this is an unknown given different factors that influence home pricing.

When is the project expected to break ground?

Crow Holdings noted there is an approval process with the City of Belmont for the project in addition to a permitting process but would hope the project could start before the end of the year. Ms. Faro noted there will be a planning board meeting in October to address the project.

- How will the project get access to water and sewer?

Crow Holdings has worked with engineers, landowners, and the railroad to design an extension from the back of The Oaks Commerce Center to the southwest corner of the property and Crow will fund the extension.

POST MEETING NOTES: Belmont is performing tests to quantify capacity of the utility lines. All utility extensions would be reviewed with the City's Water and Sewer Extension Policy (see "W&S Extension Policy Revised...." attachment).

- How will soil/water issues be dealt with?

Crow Holdings noted no concerns were raised during the environmental study completed by ECS. . Crow Holdings will comply with local, state, and federal mandated practices and all site erosion control and grading activity will meet North Carolina Department of Environmental Quality (NCDEQ) requirements.

POST MEETING NOTES: The Hickory Grove Landfill is not located on the site.

- How will access be provided to Russell land given ROW on Oak Street?

Crow Holdings noted their title search and surveying did not indicate an access easement to the Russell property on Oak Street. Russell to work with the Gaston County Register of Deeds.

Project changes resulting from the community meeting:

1. Crow Holdings agrees to post signage on what is currently shown as Oaks Crossing Lane (coming off Hickory Grove Road) stating there is no parking allowed.
2. Crow Holdings will show an area where guard shacks could be placed and showing tractor trailers queuing.
3. Crow Holdings proposed coordinating with Gaston County and the Crawford family on naming the new public road.

CROW HOLDINGS

DEVELOPMENT

OAKS COMMERCE PUBLIC MEETING 9/12/22

SIGN-IN SHEET

	First Name	Last Name	Address	City	Zip Code	Telephone	Email
1	Cynthia	Richards	906 Hickorybrow Rd	Gastonia	28056	7047064785	crichards57@gmail.com
2	Melvin	Evelyn	3106 Cedar St	Gastonia	28056	980721-5976	
3	Linda	Bolin	623 Jasin Dr	Gastonia	28054	7048069968	
4	Randy	Russell	812 Honeywood Lane	Gastonia, NC	28056	704-718-5695	
5	Carolina	Crump	1057 Capel Court	Gastonia	28056	704-891-5461	
6	Patricia	Williams	3215 mintleaf Dr.	Charlotte NC	28269		pwilliams33@gmail.com
7	Ron C.	Crawford	3535 Shaw Ave	Gastonia NC	28054		
8	Dennis	Bolin	623 Jasin Dr	Gastonia NC	28054		
9	Denise	Bolin			28054	7048069968	
10	Prueett	Black	264 Bess Rd.	King mtn, NC	28086	704-435-5725	
11	Teresa	Black	264 Bess Rd.	King mtn, NC	28086	704-435-5725	
12	Tom	Horel	3109 Cedar St.	Gastonia		304-268-1653	
13	Joan	Horel	3109 Cedar	St Gastonia		704-506-0889	
14	Mable	Crawford	1159 oak st	Gastonia NC	28056		
15	Dwayne + Dianne	Graham	1158 oak st	Gastonia NC	28056		
16	Lon	Pore					alexdamianmon@gmail.com
17	Melvin + Evelyn	Sanders	P.O. Box 427	Wk Adenville, NC	28101	980721-5976	
18	Carolina	Crump					Emul pesterump@gmail.com
19	Ron	Crawford					000@gmail.com

MAILING LIST FOR COMMUNITY MEETING NOTICE

PID#	PROPERTY ADDRESS	CURR_NAME1	CURR_NAME2	MAILING ADDRESS	CURR_ADDR2	CURR_CITY	CURR_STATE	CURR_ZIPCODE
223077	706 HICKORY GROVE RD	ACOSTA ALEJANDRA ARRIOLA		706 HICKORY GROVE RD		GASTONIA	NC	28056
183208	NO ASSIGNED ADDRESS							
183210	912 HICKORY GROVE RD	ADAMS GEORGE T	ADAMS JESSIE C	912 HICKORY GROVE RD		GASTONIA	NC	280560000
222742	115 PEPPER LN	ANDRES JESUS RAMIREZ	DARIO INDRA SANCHEZ	115 PEPPER LN		GASTONIA	NC	28056
183207	908 HICKORY GROVE RD	ARROWOOD GARY K &	ARROWOOD ELIZABETH A	908 HICKORY GROVE RD		GASTONIA	NC	280569419
183348	NO ASSIGNED ADDRESS	BANNER JAMES H	BANNER MARGIE L	203 PARK TERRACE DR		BELMONT	NC	280120000
183350	203 PARK TERRACE DR	BANNER MARGIE L		203 PARK TERRACE DR		BELMONT	NC	280120000
183187	617 HICKORY GROVE RD	BLACK TERESA DIANE		264 BESS RD		KINGS MTN	NC	280869374
183213	808 HICKORY GROVE RD	BRAFFORD MELANIE BEACH		808 HICKORY GROVE RD		GASTONIA	NC	28056
183354	220 PARK TERRACE DR	CAROLINAS PROPERTIES LLC		9520 ALICE MCGINN DR		CHARLOTTE	NC	28277
183349	217 PARK TERRACE DR	CHANEY STEVE M	CHANEY PATSY	217 PARK TERRACE		BELMONT	NC	280120000
183200								
223075	1108 OAK ST	CHAPMAN BRENDA POPE		P O BOX 83		MCADENVILLE	NC	281010083
185041	NO ASSIGNED ADDRESS	CHH PROPERTIES LP		1030 HEATHERLOCH DR		GASTONIA	NC	280540000
183363	1102 OAKWOOD DR	CHILDERS CYNTHIA HOFFMAN		1102 OAKWOOD DRIVE		BELMONT	NC	28012
183355	306 PARK TERRACE DR	COLLINS CONSTANCE A		306 PARK TERRACE		BELMONT	NC	280120000
183161	1159 OAK ST	CRAWFORD PATRICIA		3215 MINTLEAF DR		CHARLOTTE	NC	28269
183334	100 SPRINGWOOD DR	CRIDER SALLY SUE LIFE EST		100 SPRINGWOOD DR		BELMONT	NC	28012
183162								
183163	1157 OAK ST	CRUMP CAROLINA C & OTHERS	CRAWFORD RON C	C/O EDNA HARRISON	3110 DUNN AVE	CHARLOTTE	NC	28205
183166	1149 OAK ST	CRUMP PAUL TAYLOR		PO BOX 839		MC ADENVILLE	NC	281010839
183165								
183167	NO ASSIGNED ADDRESS	CRUMP WALTER HEIR OF		C/O PATRICIA BEST	7001 LUDWIG DR	CHARLOTTE	NC	28215
183317	3112 CEDAR ST	DAUGHTERY SCARLETT S		3112 CEDAR ST		GASTONIA	NC	28056
183361								
183362	313 PARK TERRACE DR	DAVENPORT JOEY L	DAVENPORT MEREDITH C	2655 CASTLEHILL RD		GASTONIA	NC	280525078
183195	NO ASSIGNED ADDRESS	DMG ROAD WORKS LLC		14600 SW 136 ST		MIAMI	FL	33186
183196	630 HICKORY GROVE RD	DMG ROAD WORKS LLC		14600 SW 136 ST		MIAMI	FL	33186
306476	2021 THE OAKS PKWY	DMG ROAD WORKS LLC		14600 SW 136 ST		MIAMI	FL	33186
183351	200 PARK TERRACE DR	FREEMAN BETTY J		200 PARK TERRACE		BELMONT	NC	280120000
183193	100 REYNOLDS DR	FRETWELL MARK S	FRETWELL ROBIN S	104 DAVIS ST		BELMONT	NC	280120000
183359	NO ASSIGNED ADDRESS	GOBLE LINDA		623 JASIN DR		GASTONIA	NC	280545916
183316	3108 CEDAR ST	GORDON DORIS F & OTHERS	FARMER GARY DEAN .0417	301 WALK A LONG WAY		MT HOLLY	NC	281200000
183164	1158 OAK ST	GRAHAM DWAYNE N & OTHERS		1158 OAK STREET		GASTONIA	NC	28054
183353	214 PARK TERRACE DR	GRINDSTAFF DARRIN MICHAEL	GRINDSTAFF KELLY MICHELLE	214 PARK TERRACE DR		BELMONT	NC	280122113
183310	3105 CEDAR ST	GRISSMAN JOANIE M		PO BOX 104		MT HOLLY	NC	281200000
183159								
183160	1136 OAK ST	HALL GERTRUDE CURRENCE HEIRS		11110 SANDBOAR ST		CHARLOTTE	NC	282158900
183314	205 KIRKLEY ST	HAMBRICK KAREN ROBERSON		1112 OLLIS LANE		GASTONIA	NC	280560000
183189	623 HICKORY GROVE RD	HARRIS SALLIE JANE		623 HICKORY GROVE RD		GASTONIA	NC	28056
183312	1000 HICKORY GROVE RD	HORD JOAN M	HORD THOMAS A	PO BOX 104		MOUNT HOLLY	NC	28120
183311	3109 CEDAR ST	HORD THOMAS A		PO BOX 104		MOUNT HOLLY	NC	28120
183360	NO ASSIGNED ADDRESS	HUNT JERRY H	HUNT LINDA H	1110 OAKWOOD DR		BELMONT	NC	280120000
183215	801 HICKORY GROVE RD	KANNON ISACC MITCHELL		924 CATHEDRAL DR		BELMONT	NC	280122870
183305	3113 CEDAR ST	KMA PROPERTIES ONE LLC		2015 SOUTH POIN RD		BELMONT	NC	28012
183318	3114 CEDAR ST	LAWS GINGER KAY		3114 CEDAR ST		GASTONIA	NC	28056
183217	701 HICKORY GROVE RD	LEIGH EVELYN		701 HICKORY GROVE RD		GASTONIA	NC	28056
222744								
183155	604 HICKORY GROVE RD	MASON STEVE P	MASON MARIA R	4210 SPRINGVIEW DR		DALLAS	NC	280347717
183198	700 HICKORY GROVE RD	MCMANUS DONALD		700 HICKORY GROVE RD		GASTONIA	NC	280569417
183313	201 KIRKLEY ST	MEYERS GILBERT	GILCHRIST ANGELA D	201 KIRKLEY ST		GASTONIA	NC	28056
183320	3118 CEDAR ST	MILLER ESTATE LLC		245 W MAIN AVE		GASTONIA	NC	28052
183218	206 LINN ST	MOORE KENNETH		206 LINN ST		GASTONIA	NC	28056
183304	3115 CEDAR ST	PEGUES PAXTON LANIER	PEGUES EMILY NAUMAN	1217 MORNINGSIDE DR UNIT 102		CHARLOTTE	NC	28205
183203	1011 OAK ST	PENNINGTON JAMES M LIFE ESTATE		1011 OAK ST		GASTONIA	NC	28056
183202	800 HICKORY GROVE RD	PRICE JOHNNY M	PRICE TERESA L	800 HICKORY GROVE RD		GASTONIA	NC	28056
183352	208 PARK TERRACE DR	PROPTST JERRY DEAN		208 PARK TERRACE DR		BELMONT	NC	280120000
183204	906 HICKORY GROVE RD	RICHARDS CYNTHIA M		906 HICKORY GROVE RD		GASTONIA	NC	280560000
183357	NO ASSIGNED ADDRESS	RIKARD HERBERT PINKNEY		314 PARK TERRACE		BELMONT	NC	28012
183216	707 HICKORY GROVE RD	RUDISELL WILLIE R JR		920 MCDONALD ROAD		CHARLOTTE	NC	28214
305058	622 HICKORY GROVE RD	RUSSELL RANDY DEAN		812 HONEYWOOD LN		GASTONIA	NC	28056
183192	201 LINN ST	SALAZAR GERARDO		3316 PINEY GROVE RD		CHARLOTTE	NC	282126534
183358	314 PARK TERRACE DR	SANDERS JUDITH RIKARD		314 PARK TERRACE		BELMONT	NC	280120000
183209	200 KIRKLEY ST							
183315	3106 CEDAR ST	SANDERS MELVIN D	SANDERS EVELYN P	PO BOX 427		MCADENVILLE	NC	28101
183347	1107 OAKWOOD DR	SELLERS TED HERBERT		3703 POND PINE CT		SOUTHPORT	NC	28461
183205	902 HICKORY GROVE RD	STARR JAMES JR		902 HICKORY GROVE RD		GASTONIA	NC	280569419
183319	3116 CEDAR ST	STEWART JAMES STEPHEN		3116 CEDAR ST		GASTONIA	NC	280569143
183157	108 TIMOTHY CT	STRICKLAND PAULA C		PO BOX 1431		BELMONT	NC	280120000
183188	1020 FERRELL GROVE AVE	TEAGUE JOHN L	TEAGUE ANITA S	119 HARMONY HILL DR		ALEXIS	NC	280060000
183201	1012 OAK ST	TEARRY WILLIAM		1012 OAK STREET		GASTONIA	NC	28056
305366	2022 THE OAKS PKWY	TKC CCLXXIII LLC		4500 CAMERON VALLEY PARKWAY	SUITE 400	CHARLOTTE	NC	28211
183153	612 HICKORY GROVE RD	UNITED OIL OF CAROLINAS INC		PO BOX 68		GASTONIA	NC	280530000
183301	3121 CEDAR ST	WALDEN TRENT D	WALDEN DEBRA A	109 PINWOOD CIRCLE		BELMONT	NC	280120000
183300								
183321	1032 HICKORY GROVE RD	WALTERS ROGER D SR		1032 HICKORY GROVE RD		GASTONIA	NC	280560000
183211	709 WELCH LN							
183212	900 HICKORY GROVE RD	WELCH PATSY C		PO BOX 526		BELMONT	NC	280120526
183185	611 HICKORY GROVE RD	WILCOX RICKY &	WILCOX JOAN C	611 HICKORY GROVE RD		GASTONIA	NC	280560000
183156	112 TIMOTHY CT	ZAMORA AGUSTIN AGUILAR		1503 POSTON CIR		GASTONIA	NC	28054