

# ADVANCE PRELIMINARY PLANNING 2014 COMMUNITY INVESTMENT PLAN

## PHASE 1 – FINAL DRAFT REPORT

Airport/West Corridor  
Extension of Garrison Rd and  
Widening of Dixie River Rd

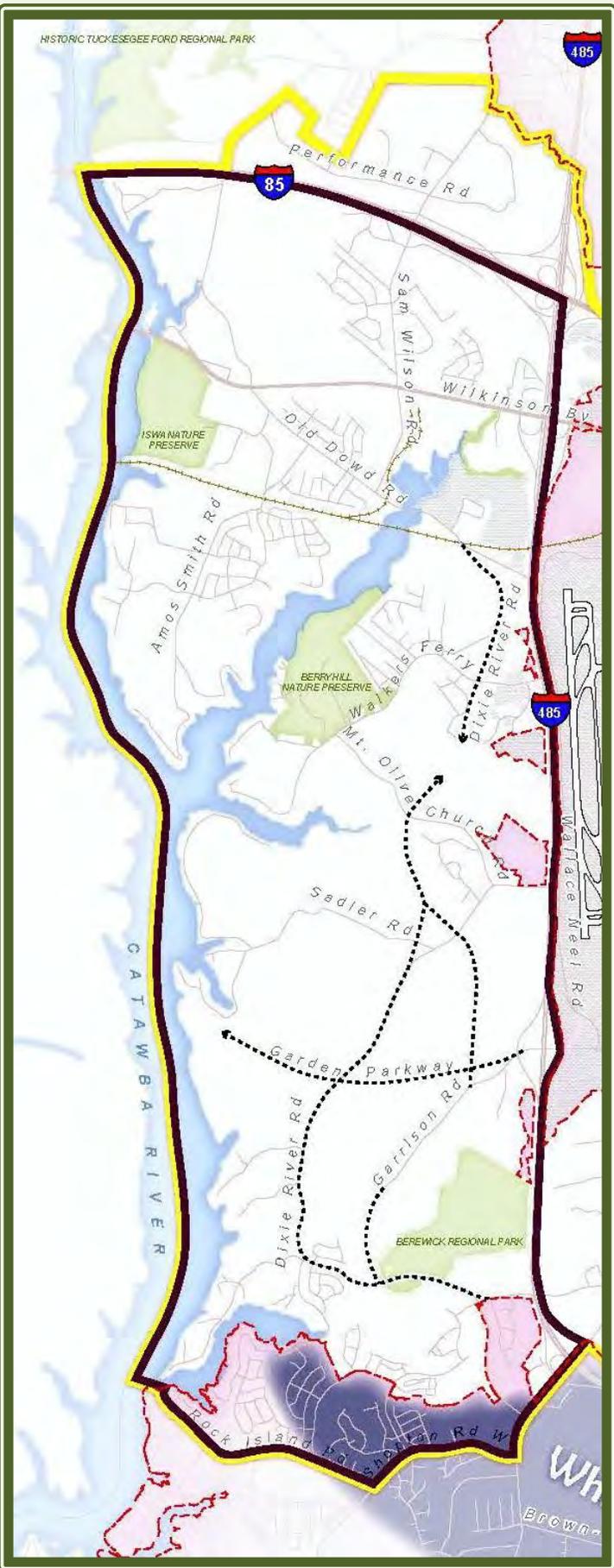
Prepared for:

**City of Charlotte Engineering & Property Management Department  
Charlotte, North Carolina**

Prepared by:

**HNTB, North Carolina, PC**

**August 2015**



## PREFACE

The contents within represent what is referred to as “Phase 1” of the Advanced Preliminary Planning for the *Extension of Garrison Road and Widening of Dixie River Road* included in the City’s 2014 Community Investment Plan (CIP). The CIP includes four bond referenda over four bond cycles: 2014, 2016, 2018, and 2020. Funding for the *Extension of Garrison Road and Widening of Dixie River Road* are currently included in the 2016 and 2018 cycles.

The purpose of this Phase 1 study was to only perform fact finding and discovery activities, and not to draw conclusions or recommend policy changes related to the 2014 Community Investment Plan. It is important to recognize that the contents within represent findings through a series of initial community engagement, GIS Mapping, and preliminary Market Analysis tasks. Therefore this document should not be considered a final report summarizing recommendations, but rather a collection of information gathered to help frame thoughts when developing future recommendations for the City to consider in Phase 2.

In Phase 2, conclusions and recommendations will be determined in a Comprehensive Investment Strategy (CIS) Summary Report. The Summary Report will summarize the results of a detailed Market Analysis, Project Concepts Analysis, Community Engagement, Project Priority and Ranking recommendations, and Cost Estimates for each Project that fulfills the Program Goals. Overall, at the conclusion of Phase 1, the project team agrees that the information in this report supports the City moving forward with Phase 2 based on the feedback received by the community, the current market, and the opportunity to improve the quality of life in the Airport/West Corridor by achieving the goals set for in the City’s Community Investment Plan.

The purpose of the initial Phase 1 community engagement and GIS mapping was to develop a basis of knowledge for the project team to begin to understand the opportunities and constraints in planning the *Extension of Garrison Road and Widening of Dixie River Road*. In Phase 2, the project team plans to utilize this information to further develop roadway alignment concepts and test the ideas through more comprehensive community engagement activities in public meetings, workshops, and meetings with stakeholders.

The purpose of the preliminary Phase 1 Market Analysis was to create a baseline understanding of current market conditions and the development/redevelopment potential in the area. This was done by analyzing the current real estate market, interviewing major developers/businesses and stakeholders in the area, and comparing the development potential of other East Coast Airports to the project area. In Phase 2, the project team plans to analyze the potential roadway alignments and determine market feasibility, fiscal impact analysis, return on investment (ROI), and implementation strategies.

The City envisions moving forward with Phase 2 of the project at a later date, with a potential to start at the conclusion of the Charlotte Airport’s Strategic Development Plan Update that is planned to be completed in February 2016.

## EXECUTIVE SUMMARY

### Project Overview

On June 10, 2013, the Charlotte City Council approved and adopted an \$816.4 million General Community Investment Plan (CIP) which includes four bond referenda over four bond cycles: 2014, 2016, 2018, and 2020. The first bond referendum in November 2014 focused on investing in corridors, increasing connections among neighborhoods, and community enhancement. The investments include several transportation infrastructure projects throughout the City forming the CIP with the goal to improve the quality of life in Charlotte by:

- Creating jobs and growing the tax base
- Leveraging public and private investment
- Enhancing public safety
- Enhancing transportation choices and mobility
- Ensuring housing diversity
- Providing integrated neighborhood improvements

The City contracted with HNTB in December 2014 to perform “Advance Preliminary Planning Services” for a the *Extension of Garrison Road and Widening of Dixie River Road* CIP project located in the Airport/West Corridor through community engagement and market analysis activities. The analysis studied the entire 7,500 acre Airport/West Corridor as well as additional market analysis to include Charlotte Airport’s (CLT) defined Strategic Development Area. The Airport Strategic Development Area both overlaps the entire Airport/West Corridor and extends eastward covering nearly 17,800 total acres.

### Scope of Work

Due to limited funding for advanced planning activities the project was broken up into two (2) phases, Phase 1 and Phase 2. HNTB was contracted to perform Phase 1 tasks including GIS Mapping/Focus Groups, Market Analysis, and Cost Projections which are included in this report. Phase 2 would later include additional community engagement, detailed market analysis, project identification & prioritization, all included in a Comprehensive Investment Strategy Report. The overall project team included members from several city departments as well as Neighboring Concepts and Michael Gallis & Associates under HNTB. Throughout Phase 1 of the project monthly coordination meetings were held and documented.

### Work Task Summary

#### GIS Mapping/Focus Groups

The goal of the GIS Mapping task in this initial phase was to identify the physical opportunities and constraints that could impact development in the project area. A series of GIS based maps were developed by Neighboring Concepts of constraints in the area including environmental assets, cultural assets, utility corridors, steep slopes, and stable development. Through analysis it was found that 55% of the area (4,100 acres) is relatively unconstrained, which represents a tremendous opportunities for development potential in the area.

A list of stakeholders were identified through resourcing past studies in the area, an understating of constraints in the area and discussion with City staff. A list of over 70 participants was developed and from this list eight focus groups were developed including Residents and Local Businesses; Churches; Public Schools and Parks; Economic Development; Environmental Conservation; Environmental Permitting; Transportation Planning; and Private Utilities. The focus groups provided a lot of feedback

to help inform the study. Areas of focus included environmental issues, especially water quality; a desire for roadway to resemble Ballantyne Commons Parkway with bike lanes; a desire for more development and public services to serve the neighborhoods; responsible development; and avoiding non-residential development close to the river. Discussion related to the method behind the planned alignment revealed that it was based on development opportunities and environmental constraints at the time of its creation.

The primary discovery items from GIS Mapping/Focus Groups task:

- 55% of the area (4,100 acres) is relatively unconstrained
- There is a high level of expectation and excitement around transportation investment in the study area
- Protecting the environment during the development of the area is a key concern for the stakeholders
- Based on the participation during the focus group meetings, the project has a solid base for future engagement in public meetings

#### Market Analysis Task

Michael Gallis & Associates was tasked with completing a key component of the study by creating a baseline understanding of the current commercial and residential real estate market conditions in the Airport/West Corridor and the Charlotte-Douglas International Airport (CLT) Strategic Development Study Area (CLT Area).

Prior to this study, in March of 2013, Michael Gallis and Associates completed a Demand Impact Analysis using a Market-Based approach for the City of Charlotte for only the Airport/West Corridor. The report concluded that the planned Garrison Road and Dixie River Road projects would translate into a \$942M in direct and synergetic economic development for Charlotte resulting in 6,910 jobs.

The purpose of this Market Report was to expand on the 2013 Demand Impact Analysis. This expansion of the 2013 report included enlarging the study area geographically to include the entire CLT Area. In addition, this study was to determine the competitive relationship of the land surrounding CLT to other East Coast Airports, assess stakeholder interest in the Area, analyze the development potential of the Area, and create a baseline understanding of current market conditions in the CLT Area based on the current commercial and residential real estate market within the CLT Area. By evaluating each of these components a framework for optimizing the potentials and opportunities for the CLT Area could be created.

The primary discovery items from the Market Analysis task:

- 95% of the area (3,900 acres) has strong development & redevelopment potential
- The planned alignment of the roadway does not always provide access to the land that had the highest potential for development.
- The topography and watershed overlays present a unique challenge for development in the area when considering the types of development.
- The planned roadway will redefine the perception and character of the area, acting as a dividing line between River Oriented Development area, Transportation Oriented Development, an Intermediate Zone that will have its own character as the proposed roads create a new development pattern
- Opportunities exist to modify the likely development pattern in the area by altering the alignment to maximize value and a branding identify.

- There are other areas to study beyond the corridor that may impact development, such as the West Boulevard interchange with I-485. This is an example of transportation infrastructure that could incur a high mix of heavy industrial and residential traffic which could be viewed as a negative for development.
- At minimum, the Market Research supports the findings of the 2013 Proposed CIP Demand Impact Analysis that projected the economic impact to many times greater than the initial infrastructure investment.

### Cost Projections

HNTB developed a baseline cost for the current planned alignment currently included in the adopted CRTPO Thoroughfare Plan to use as a comparison with future alternative alignments that will be developed as part of Phase 2 of the Advanced Planning Stage. For consistency with other Charlotte projects, the cost estimate was developed using the same estimating methods that CRTPO uses to estimate project costs for planning purposes. The total estimate of the probable cost to construct the *Extension of Garrison Road and Widening of Dixie River Road* project totaled \$130M in 2015 dollars, as outlined in the Detailed Estimated Cost sheet.

The probable cost estimate was developed under the assumption that the project would include up to 10 miles of new location, 4-lane roadway mainline and side roads, including bike lanes and sidewalks on both sides of the roadway. In addition, the construction cost included 10 miles of water line construction, new reinforced concrete box culverts and culvert extensions. No bridges are anticipated on this project. A 30% construction contingency and 9% preliminary engineering contingency were included in the overall construction cost estimate. HNTB also utilized the same method used by CRTPO to estimate the costs for right of way, utility relocations and environmental mitigation.

In addition to the overall cost estimate, HNTB took the further step of breaking the project up into six specific segments based on logical termini that would allow each segment to be constructed independently from each other to have separate utility. The cost estimate for each of the 6 segments was strictly based on the length of the segment. These segments could be constructed in a programmatic way to maximize the City's return on investment, adhere to potential funding limitations, and meet the goals of the CIP. For example, if segments 1 and 2, Garrison Road extension and Dixie River Road extension, respectively, were constructed today the combined cost would be approximately \$42M. Alternatively, Segments 3, 4, and 5 at the north end of the corridor could be constructed for approximately \$41M. Whereas Segment 6, the widening of Dixie River Road on the south end of the project could be constructed for approximately \$47M.

Lastly, a schedule analysis was developed to get a better understanding of the duration to construct this project. Consideration was given to the time for planning, design, permitting, annexation, ROW acquisition and construction. The analysis revealed that the project will take an estimated 10 year to complete.

It should be noted that Charlotte Water has planned two (2) water line & sewer line projects for Dixie Berryhill, Project ID 13W04 and 13S01, respectively. These projects are funded in their 5-year CIP in FY 2017, and impact project schedule and prioritization for constructing each segment.

### **Future Activities/Next Steps**

The City envisions moving forward with Phase 2 of the project at a later date, with a potential to start at the conclusion of the Charlotte Airport's Strategic Development Plan Update that is scheduled for completion in February 2016.

The information gathered and completed in Phase I will be used as the foundation for Phase II which will focus on:

- Building consensus through community engagement activities through workshops and public meetings.
- Determining what will happen in the area if current trends continue without major capital investments (Plan/Trend);
- Determining what would happen under the impact of new major capital investments and a unifying plan development concept to guide future development of commercial and residential real estate in the Area (Value Optimization Scenarios).
- A recommended implementation strategy for building transportation infrastructure in the corridor that improves the quality of life for Charlotte by meeting the goals of the CIP and coordinates with other City CIP funded projects.

### **Summary**

In Summary, the Advance Preliminary Planning for the Extension of Garrison Road and Widening of Dixie River Road resulted in three key discovery items based on the Market Analysis, Community Engagement, and preliminary work on the Airport Strategic Development Plan:

- **There is a high level of expectation and excitement around transportation investment in the study area.** Through focus group and developer interviews it was apparent that there has been a high level of expectation for the construction of a corridor in the Dixie Berryhill area. The residents have anticipated this since plans began in 1998 and have been preparing for its construction for many years, which has created an excitement. Developers are also very interested in what the City plans to build in the area as they anticipate taking advantage of a corridor and the assists in the area, such as the river, airport, and access to the interstate system.
- **There are 3,900 acres with a strong development/redevelopment potential.** Through an analysis of physical and environmental constraints, land conversation patterns, and transportation characteristics the project area is some of the strongest development/redevelopment potential.
- **The project cost is ~\$130M, which can be built in logical segments and can yield multiple times its value in development.** The project would include up to 10 miles of new location, 4-lane roadway mainline and side roads, including bike lanes and sidewalks on both sides of the roadway per the USDG. There are at least six segments in the project corridor that can be constructed in a programmatic way to maximize the City's return on investment, adhere to potential funding limitations, and meet the goals of the CIP.

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\*in lieu of Tasks 1.08 (Project Newsletters) & 1.10 (Initial Plan Concepts for Charrette)

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# Project Overview & Administration

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Airport/West Corridor -  
Extension of Garrison Rd &  
Widening of Dixie River Rd

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# Introduction

## **Project Overview**

On June 10, 2013, the Charlotte City Council approved and adopted an \$816.4 million General Community Investment Plan (CIP) which includes four bond referenda over four bond cycles: 2014, 2016, 2018, and 2020. The first bond referendum in November 2014 focused on investing in corridors, increasing connections among neighborhoods, and community enhancement.

The City has emphasized the importance of enhanced community engagement that focuses on the education and empowerment of citizens in order to increase citizen participation in the City's decision-making process and implementation of the goals of the CIP. Under this approach, the public is informed of and engaged in proposed City projects in the project advanced preliminary planning activities. These activities include robust and innovative community engagement techniques. The activities also include advanced market and trend analysis in order to develop public/private partnerships. The goal of the Community Investment Plan is to improve the quality of life in Charlotte by:

- Creating jobs and growing the tax base
- Leveraging public and private investment
- Enhancing public safety
- Enhancing transportation choices and mobility
- Ensuring housing diversity
- Providing integrated neighborhood improvements

On February 17, 2014 the City of Charlotte requested qualifications for a professional engineering consultant firm for "Advance Preliminary Planning Services" to include community engagement and market analysis activities, for a variety of new Capital Projects. Under this RFQ the HNTB team was selected to study the *Extension of Garrison Road and Widening of Dixie River Road* within the Airport/West Corridor.

The City developed a work plan to include the following activities:

- Coordinate with the city to create a Project Specific Community Engagement Plan;
- Providing a market analysis for the project study area;
- Identify potential projects within the project's study area;
- Prioritize potential transportation infrastructure projects;
- Prepare an Order of Magnitude Cost Estimate for constructing the prioritized potential transportation infrastructure projects;
- Prepare a Comprehensive Investment Strategy (CIS) Report and an Executive Summary; and
- Perform Administrative Responsibilities to perform the contracted scope of work

## **Scope of Work**

The HNTB team received notice to proceed on December 15, 2014 to conduct the Phase 1 scope of work in concurrence with the project initiation document (page9). The duration of the project was December 2014 through July 2015. The overall project team included members from several city departments

including the CRTPO. During the course of the project monthly coordination meetings were held and documented throughout Phase 1.

Due to limited funding for advanced planning activities the project was broken up into two (2) phases, Phase 1 and Phase 2. This report documents tasks completed in Phase 1 only:

Phase 1 and Phase 2\* - Scope of work:

1. Community Engagement:
  - Communication Plan
  - GIS Mapping & Opportunities & Constraints analysis
  - Focus Group interviews
  - *Preparation of Initial Plan concepts for public meetings\**
  - *2 Public Meetings, including a 3-day Charrette\**
2. Market Analysis
  - Competitive Airport Analysis
  - Airport Area Analysis
  - Market Analysis (preliminary)
  - *Population & Growth Trends\**
  - *Implementation Strategies\**
3. Project Identification
  - Probable Cost Estimate by Segment of planned alignment
  - Detailed Estimated Cost of planned alignment
  - *Design criteria and typical section design for preferred alignment\**
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  - *Cost estimating for preferred alignment \**
2. *Project Prioritization\**
  - *Develop a priority rating system\**
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**Content 6. Program Timeline (Task 1.05)**

**Content 7. Project Coordination Meeting Agendas & Meeting Summaries**

**(Task 6.01 & 6.02)**

## Engineering and Property Management Initiation Document

**Date:** November 11, 2014

**Client Department's Project Sponsor:** City Manager's Office/Economic Development

**Project Name:** Garrison Road / Dixie River Road

**Project Number:** PM51214044

**Program:** N/A

**Fund/Center:** 2010/ 0047552

Funding for the Garrison Road Extension and for Dixie River Road Widening will be included in the 2016 (\$31.20M) and 2018 (\$13.52M) Transportation Bonds Referendum respectively.

**Federal Funding Expected (Yes/No):** No

**Project Description:** The existing section of Garrison Road is a narrow unmarked pavement serves farm lands in west Mecklenburg County. This road extends from West Boulevard / I-485 Interchange and dead ends at a private farm approximately one mile south west of the interchange. The project will mainly focus on reconstructing or relocating existing Garrison Road and extend it south to intersect Dixie River Road near Berwick Elementary School, and extend it north to Sam Wilson Road. The project will include consideration to the traffic and developments around the Airport. Community engagement and market analysis will be a major part of this project and will have a significant effect on the final outcome of the project.

**Project Purpose:** The Garrison Road-Dixie River Road project supports economic development and leverage the Airport Intermodal Facility for development that provides quality jobs for the City. This infrastructure investment will facilitate economic development as recommended in the Dixie-Berryhill Area Plan and the Westside Strategy Plan.

**Business Plan Linkages:** Westside Strategy, Dixie-Berryhill, and the Airport's Strategic Development Plans.

**Project Selection Criteria:** The selection criteria include innovative and creative approaches to leverage limited resources into projects along the corridor that can transform the community and strengthen competitiveness regionally, nationally and globally.

**Historic Information:** Historically, the City has approached community investments by identifying projects that fulfill a community need. Many projects are components of a long-term strategy, such as the Housing Trust fund, the Airport Master Plan, two-year Water and Sewer System Evaluations, Transportation Action Plan, Area Plans and the long-range Generalized Land Use Plan. Other community projects are on-going programs to maintain and enhance the City's infrastructure, such as repairing sidewalks, stream restoration, road projects, neighborhood improvements and new facilities. While the past three bond packages centered on Transportation, Neighborhood Improvements and Affordable Housing, the proposed CIP collectively groups capital projects for a more holistic approach toward investment areas, to better reflect the infrastructure needs of the community.

### Team Definition:

Role	Responsibility
Program Manager	Tim Greene – E&PM
Project Manager	Imad Fakhreddin – E&PM
Consultant	Greg Boulanger / Eric Seckinger – Consultants, HNTB
Client Rep	Todd DeLong – N&BS, Economic Development
Team Rep –	Veronica Wallace – E&PM
Team Rep –	Johnathan Wells - Planning
Team Rep –	Johanna Quinn - CDOT
Team Rep –	Ashley Landis - CDOT

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### Potential Project Stakeholders

The Airport, NCDOT, business owners, residents/neighborhood associations, Developers, City Council, Mecklenburg County, Charlotte Housing Partnership, Charlotte Housing Authority, Charlotte Regional Partnership, Other City Departments

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### Project Goals:

The overall goal of this program is to invest in projects that generate the most benefit and impact to our entire community in the following ways:

- Creating jobs and growing the tax base
- Leveraging public and private investments
- Enhancing public safety
- Enhancing transportation choices and mobility
- Providing integrated neighborhood improvements

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**Drivers:**

- Promote Job Growth
- Broaden City's Tax Base
- Attract Potential Developers
- Enhance Transportation Choices
- Enhance Livability

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**Operating Guidelines:**

- Urban Street Design Guidelines
- Westside Strategy Plan
- Community Engagement Process

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**Signatures:** (represents acceptance of the project & authorization to proceed)

**Project Manager:** \_\_\_\_\_ **Date** \_\_\_\_\_

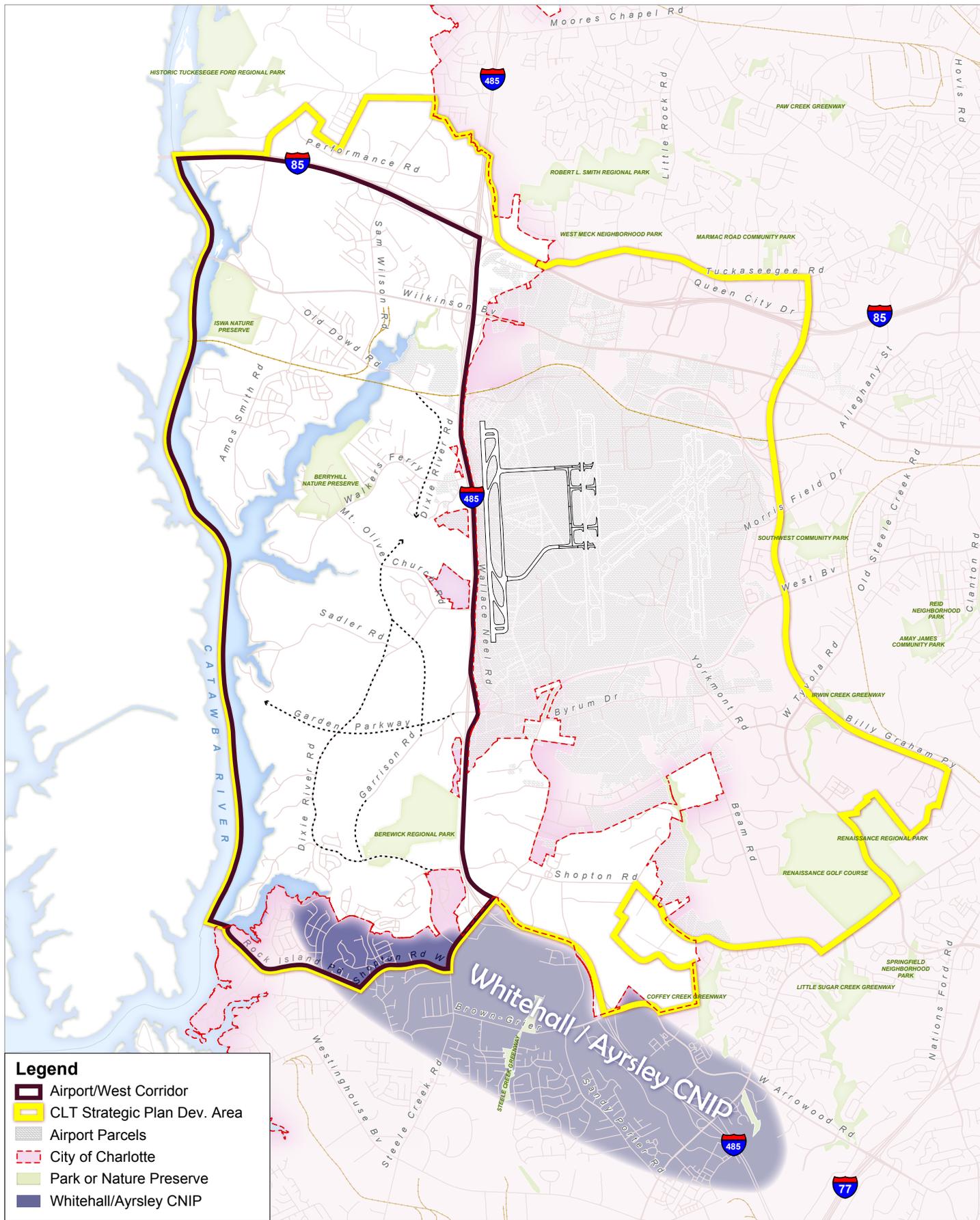
**PM's Supervisor:** \_\_\_\_\_ **Date** \_\_\_\_\_

**Client's Project Sponsor:** \_\_\_\_\_ **Date** \_\_\_\_\_

**Engineering Services Manager:** \_\_\_\_\_ **Date** \_\_\_\_\_

**>>>> ROUTE TO PROJECT PROCESS MANAGER FOR PROJECT SPONSOR SIGNOFF <<<<**

**E&PM Project Sponsor:** \_\_\_\_\_ **Date** \_\_\_\_\_



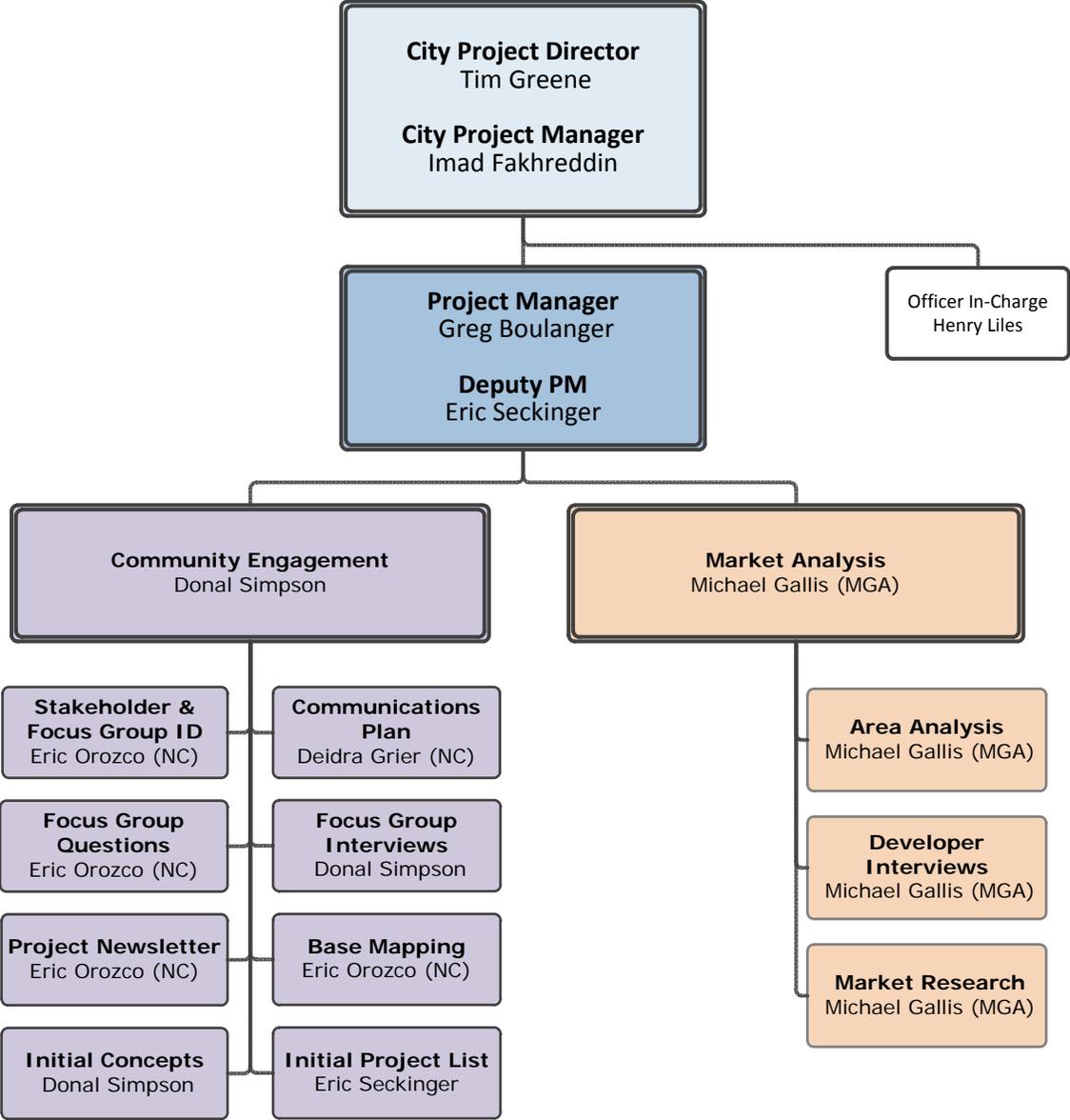
December 17, 2014



Airport West Corridor Project Org-Chart:

HNTB Team

11/13/14



MGA – Michal Gallis & Associates  
NC – Neighboring Concepts

## Airport/West Corridor: Project Contact List

Project Role	Name	Organization	Phone	Email
Project Director/Program Manager	Tim Greene	City Engineering & PM	(704) 336-3649	<a href="mailto:tlgreene@ci.charlotte.nc.us">tlgreene@ci.charlotte.nc.us</a>
Project Manager	Imad Fakreddin	City Engineering & PM	(704) 336-7926	<a href="mailto:ifakreddin@ci.charlotte.nc.us">ifakreddin@ci.charlotte.nc.us</a>
West Strategy Team Leader	Veronica Wallace	City Engineering & PM	(704) 336-7401	<a href="mailto:vwallace@ci.charlotte.nc.us">vwallace@ci.charlotte.nc.us</a>
Design Section - Eng. Project Manager	Ashley Landis	CDOT	(704) 432-2674	<a href="mailto:alandis@ci.charlotte.nc.us">alandis@ci.charlotte.nc.us</a>
CDOT Program Manager	Johanna Quinn	CDOT	(704) 336-5606	<a href="mailto:jquinn@ci.charlotte.nc.us">jquinn@ci.charlotte.nc.us</a>
West Strategy Team Rep for Planning	Jonathan Wells	City Planning	(704) 336-4090	<a href="mailto:jwells@ci.charlotte.nc.us">jwells@ci.charlotte.nc.us</a>
City Economic Development Leader	Todd DeLong	City Neighborhood & Business Services		<a href="mailto:tdejong@ci.charlotte.nc.us">tdejong@ci.charlotte.nc.us</a>
CLT Planner	Kathy Dennis	Charlotte Airport	(704) 359-4840	<a href="mailto:kpdennis@cltairport.com">kpdennis@cltairport.com</a>
Engineering Communications	Kristen Behlke	City Engineering & PM		<a href="mailto:kbehlke@ci.charlotte.nc.us">kbehlke@ci.charlotte.nc.us</a>
City GIS West Strategy Team Member	Keri Shearer	City Engineering & PM		<a href="mailto:kshearer@ci.charlotte.nc.us">kshearer@ci.charlotte.nc.us</a>
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Consultant Deputy PM	Eric Seckinger	HNTB	(704) 208-5351	<a href="mailto:eseckinger@HNTB.com">eseckinger@HNTB.com</a>
Community Engagement Task Lead	Donal Simpson	DRS	(704) 906-0360	<a href="mailto:drsfaia@gmail.com">drsfaia@gmail.com</a>
Market Analystist- Task Lead	Michael Gallis	Gallis & Assoc.	(704) 332-6677	<a href="mailto:gallis@mgallis.com">gallis@mgallis.com</a>
Market Analystist	Erik Kreh	Gallis & Assoc.	(704) 332-6677	<a href="mailto:kreh@mgallis.com">kreh@mgallis.com</a>
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Community Engagement Support	Deidra Grier	Neighboring Concepts	(704) 374-0916	<a href="mailto:Deidra@neighboringconcepts.com">Deidra@neighboringconcepts.com</a>
Community Engagement Support	Judy Dellert-O'Keef	CDOT	(704) 432-0105	<a href="mailto:jdellert-okeef@charlotte.nc.gov">jdellert-okeef@charlotte.nc.gov</a>
Community Engagement Support	Darrel Williams	Neighboring Concepts	(704) 374 0916	<a href="mailto:darrel@neighboringconcepts.com">darrel@neighboringconcepts.com</a>
CRTPO Representative	Candice Leonard	CRTPO		<a href="mailto:cleonard@ci.charlotte.nc.us">cleonard@ci.charlotte.nc.us</a>
Charlotte Water Resource	Regina	Charlotte Water		
NCDOT Resource		NCDOT		

**EXHIBIT A**  
**SCOPE OF SERVICES**  
**ADVANCE PLANNING- Airport/West Corridor**

**INTRODUCTION**

*The City of Charlotte recognizes the importance of long-range capital investment planning to maintain the growth and vitality of the community. The City's Community Investment Plan (CIP) has traditionally been a multi-year infrastructure plan which matches the City's highest priority capital needs with a financing schedule. The plan includes investments in neighborhoods, housing, storm water projects, roads, transit, water and sewer projects, the airport, and government facilities.*

*The mission of the City of Charlotte, and the foundation of the current Community Investment Plan, is to improve the quality of life of its citizens. The Plan's goal is to maintain or replace high priority infrastructure to not only meet the needs of our growing populace, but also to transform our community and strengthen our competitiveness as a modern, urban city.*

*For the FY2014-2018 CIP, the City took a comprehensive, holistic view of neighborhood and community needs and evaluated projects that:*

- *Leverage investment*
- *Increase collaboration*
- *Best serve as catalysts for transformative change*
- *Place an emphasis on larger rather than smaller capital projects*
- *Have long term impacts that address systemic issues*
- *Provide measurable outcomes of the City's investment*
- *Align with City Council's Vision for Charlotte 2020*

*In addition, the FY2014-2018 Community Investment Plan was developed in accordance with the City's Corporate Scorecard objectives of:*

- *Strengthening neighborhoods*
- *Providing transportation choices*
- *Safeguarding the environment*
- *Promoting economic opportunity*
- *Developing collaborative solutions*
- *Investing in infrastructure*
- *Maintaining the City's AAA credit rating*

*In response to the City's corporate objectives, on June 10, 2013, the Charlotte City Council approved an \$816.4 million Capital Investment Plan (CIP) focused on enhancing infrastructure and leveraging private investments in order to create jobs and housing, resulting in thriving neighborhoods that are economically diverse.*

*The City has assigned greater value to approved capital projects that approach the City's infrastructure needs with a long-term, sustainable emphasis on: 1) investing in corridors, 2) increasing connections, and 3) improving communities. As the CIP Program has evolved, the emphasis of the program has been refined to include an enhanced approach to the City's infrastructure need with a long-term, sustainable emphasis on: 1) livability, 2) getting around, and 3) job growth.*

*The City of Charlotte's long-term health, vitality, and distinction as a competitive city is predicated upon its ability to utilize national and local best practices to create and sustain communities of choice for living, working, and recreation. The intent of the CIP pre-planning process is to develop a Work Plan for each project with the intent of providing the transformation needed to support and catalyze this vision.*

*This Work Plan shall include the following activities:*

- *Coordinate with the city to create a Project Specific Community Engagement Plan;*
- *Provide a market analysis for the project study area;*
- *Identify potential projects within the project's study area;*
- *Prioritize potential transportation infrastructure projects;*
- *Prepare an Order of Magnitude Cost Estimate for constructing the prioritized potential transportation infrastructure projects;*
- *Prepare a Comprehensive Investment Strategy (CIS) Report and an Executive Summary (details in Task 5.0); and*
- *Perform Administrative Responsibilities to perform the scope of work outlined below.*

## 1.0 COMMUNITY ENGAGEMENT

*The City has developed a Community Engagement Strategy designed to increase and enhance opportunities for the community to engage in informed discussion with local government and community partners. Community Engagement will transform the development of infrastructure, in part, by incorporating the following practices:*

<i>Developing Collaborative Solutions</i>	<i>Elevate citizen service above department customer service. Develop internal and external partnerships to solve problems and share control in leadership, planning, accountability, risk, and reward.</i>
<i>Expanding Tax Base &amp; Revenues</i>	<i>Increase available revenues by expanding the tax base through residential and business development. Seek funding partnerships and other revenue sources to lessen reliance on property taxes.</i>
<i>Investing in Infrastructure</i>	<i>Support priorities by optimizing existing infrastructure and creating new infrastructure, including streets, technology, equipment, and facilities. Ensure capital and land use investments are consistent with Smart Growth principles.</i>

*The City will serve as the primary project representative for all community engagement activities and will lead, conduct and guide interactions with the public. The Consultant will assist the City by providing the data and services necessary to enhance the community engagement process, including but not limited to the preparation of exhibits, renderings and maps as required, and making public meeting arrangements, including facility reservations and setup, in addition to supporting and assisting City personnel as required in the performance of the following activities:*

- *Identifying Project Stakeholders and Community Partners*
- *Retaining and developing meaningful engagement with stakeholders*
- *Using collected data to connect with and inform citizens of potential infrastructure developments*
- *Creating resident-centered forums and focus groups early in the project decision-making process*
- *Conducting meetings with residential and non-residential developers, realtors, business owners, renters, and existing and new homebuyers, segregated by residential area*

- *Conducting online surveys and obtaining public feedback*
- *Utilizing a centralized location for citizens to obtain current project information*
- *Providing the public with balanced and objective information*
- *Utilizing new and creative ways to enhance and encourage public participation*
- *Identifying potential project issues or concerns*
- *Making recommendations for the resolution of issues identified by citizens*
- *Enhancing the engagement and participation of citizens in determining which investments meet the collective aspirations of the community and the City*
- *Informing the public of how their input effected project outcomes*

*The community engagement efforts should include innovative methods and tools to obtain feedback from individual stakeholders, encourage dialogue within the community, and share information with the community stakeholders. One such tool is the Charrette. The Charrette is a highly engaging, collaborative public interaction containing exercises that result in shared principles and visualized strategies. A Charrette focuses on creating a public environment that can better respond to evolving market demands while simultaneously creating a resilient and cherished community. The Consultant is encouraged to utilize at least one Charrette with a variety of stakeholders to develop a vision, action steps and a strategic investment plan with the goal of stabilizing and increasing property values, as well as identifying those catalytic projects that create a sense of community.*

The Airport/West Corridor Plan Community Engagement process will utilize the following Tasks:

### **1.01 Stakeholder Identification**

The CONSULTANT will develop a list of stakeholders utilizing recent previous studies and stakeholder lists for the project area. The list will be sent out to the Project Team to review and comment on prior to the project kick-off meeting where comments will be discussed. Once the list is finalized, the CONSULTANT will gather contact info for confirmed stakeholders and contact them to confirm their interest in participating in the project.

#### **Deliverables:**

- a) The CONSULTANT will provide a list of stakeholders for the project.

### **1.02 Identify Focus Groups**

The CONSULTANT will identify focus groups by interest or affiliation/area, and align interested stakeholders with the focus group that most closely meets their interests. The focus group list will be sent out to the Project Team to review and comment on prior to the project kick-off meeting where comments will be discussed. Ten (10) focus groups are anticipated. The CONSULTANT will coordinate and send invitations and schedule to potential focus group participants.

#### **Deliverables:**

- a) The CONSULTANT will provide a list of focus groups for the project.

### **1.03 Stakeholder & Focus Groups Interview Questions**

The CONSULTANT will develop a set of guiding questions for Project Team members to use in conducting the stakeholder and focus groups interviews with the CONSULTANT. The purpose of the guiding questions is not to be followed literally, but to provide thoroughness in addressing key issues and to enable preparation of a cohesive synopsis at the conclusion of the focus group meetings.

#### **Deliverables:**

- a) The CONSULTANT will provide a list of questions to use in conducting the stakeholder and focus groups interviews

### **1.04 Communications Plan**

The CONSULTANT will develop a Communications Plan designed to keep the public, stakeholders, and local government agencies (MPO, County, NCDOT, etc.) informed of the Work Plan activities and how to engage in-person or remotely during and after community engagement workshops and meetings. The Communications Plan will include a timeline of activities corresponding to the project schedule and public meetings. Tasks will include assisting City with the content of postcard announcements for the City to mail prior to the workshop; flyers to be posted by City staff (at locations such as libraries, shopping centers, convenience stores, and community centers) to increase awareness of the project and to promote involvement in the public workshop; and PDF files of the notices for posting on Charlotte's social media.

**Deliverables:**

- a) The CONSULTANT will provide a draft and final Public Communications Plan for the project.
- b) The CONSULTANT will assist City with the content of the postcard announcements

**1.05 Kick-Off Meeting**

The CONSULTANT team will hold a project kick-off meeting with the City Project Team to review the contracted scope and schedule, team member roles and responsibilities, and additional relevant issues. As part of the meeting, a review of the planning limits for the Study Area will be conducted for purposes of data collection and GIS mapping. The Project Team will discuss the draft a list of project Stakeholders and focus groups as well as a draft list of questions for stakeholder & focus group interviews. The CONSULTANT will provide and review a list of data needs for developing the existing conditions report and market analysis. CONSULTANT will provide and review a draft Public Communications Plan for communicating with the stakeholders and public throughout the duration of the project. CONSULTANT will provide meeting minutes.

**Deliverables:**

- a) The CONSULTANT will provide a project management plan that includes scope and schedule, team member roles and responsibilities, and other relevant info.
- b) The CONSULTANT will provide study area maps developed in Task 1.06
- c) The CONSULTANT will provide kick-off meeting minutes.
- d) The CONSULTANT will provide a draft of the Communications Plan for review
- e) The CONSULTANT will provide a list of data needs for the existing conditions report development and market analysis

**1.06 Base Mapping Opportunities and Constraints Analysis (for the Airport Strategic Development Planning Area)**

Site Visit and Photographic Documentation

After the Planning Area has been finalized in Task 1.05, a site visit will be conducted. Land use and traffic patterns will be documented, key destinations will be identified, and potential development/redevelopment opportunities will be noted. Photographs of various areas within the overall Planning Area will be taken. If the opportunity arises, informal discussions with local residents and business owners will take place.

#### Current plans

Upon receiving from the City all available current and previous master plans, comprehensive plans, and thoroughfare plans, capital and infrastructure plans from public agencies, zoning ordinances, etc.; the CONSULTANT will review to obtain background information which will be applicable to the Study Area. This includes studies conducted by the City of Charlotte, Charlotte Douglas International Airport, Mecklenburg County, Charlotte-Mecklenburg Schools, NCDOT/NC Turnpike Authority and neighboring municipalities that might affect the study area.

#### GIS Data

Coordinate with the City of Charlotte to obtain GIS data in ArcView Shape file format for the entire study area. The CONSULTANT will provide a list of data needs to the City and will work closely to gather that information in desirable format. The list of GIS layers may include, but not be limited to:

#### Property Ownership Analysis (Section 1.1 from Airport Scope)

- Ownership pattern & background (public, private, tax value, assembly opportunities, etc.);
- Planned, developed, redevelopment (likely to change), and undeveloped properties;
- Airport operations and development related property (parking facilities, rental car storage, terminal expansion, etc.);
- Airport/City controlled developable property (with overlay of constraints).
- Property the airport intends to acquire (but hasn't yet acquired)

#### Environmental Analysis (Section 1.2 from Airport Scope)

- Topographic/steep slope, grading constraints;
- Lower Lake Wylie Watershed Overlays (Critical & Protected);

- Creek systems and greenways;
- Storm Water (planned and future);
- Landform/soils, soil contamination & landfills;
- Historic resources.

Utility Analysis (Section 1.3 from Airport Scope)

- Wastewater treatment & sewer expansion;
- Water supply and transmission;
- Electric power supply.

Regulatory & Land Use Analysis (Section 1.4 from Airport Scope)

- Current land use & Zoning Data;
- Future Land Use & Area Plans;
- Schools & Community Facilities;
- Parks & Open Space.
- Demographic Data

Transportation Analysis (Section 1.5 from Airport Scope)

- Intermodal facility with future phases, rail access, and associated freight truck traffic;
- All known existing and planned transportation improvement projects, including:
  - Airport access related projects;
  - Transit (CATS West Corridor, High Speed Rail Corridor).
  - Existing City and CRTPO Transportation Plans,
  - NCDOT TIP list for the area
  - Approved development plans that include transportation improvements
- Latest version of the Metrolina Travel Demand Model,
- Traffic studies for the area
- Traffic count data from NCDOT and the City.

### Opportunities and Constraints Analysis

After reviewing all existing plans, reports, and documents; analyzing GIS data through maps; evaluating current demographic and market conditions; listening to stakeholders; and visually inspecting the site area the CONSULTANT will conduct a preliminary land analysis and produce an Opportunities and Constraints memorandum with assistance from the project team that will document key issues, findings and recommendations.

#### **Deliverables:**

- a) The CONSULTANT will develop a series of parcel-specific base maps will be prepared in ArcGIS format, using GIS data from the City and/or Mecklenburg County. The list of maps will include, but not limited to, Context Map, Aerial Map, Existing Land Use Map, Environmental Features Map, Transportation Map, and Planimetric Base Map and an Opportunities and Constraints memorandum for the Airport Strategic Development Planning Area.

### **1.07 Media/Social Media/Electronic Communications/Project Website**

The City will appoint a Social Media Coordinator for the Project to update popular social media outlets on the project's status. The City will be responsible for distributing email alerts and Notify Me for pertinent project information. The City will initiate contacts with major newspapers and television news stations in the area, and create a media list that will be maintained for coverage of public involvement events. News releases will be submitted by the City to area newspapers and television news stations to update them on the progress of the Plan, and of upcoming events.

#### **Deliverables:**

- a) The City will develop and maintain any and all media outlets for the project.

### **1.08 Project Newsletters**

The CONSULTANT will develop one (1) project newsletter containing project information and updates for the City to mail or e-mail to citizens and post to the project social media.

#### **Deliverables:**

- a) The CONSULTANT will provide one separate draft and final project newsletter.

### **1.09 Conduct Stakeholder Focus Group Interviews**

The CONSULTANT will conduct ten (10) interviews with individual study area stakeholders & focus groups, which may consist of public officials as identified by the City in Task 1.01. These interviews will help determine the goals, perceptions and issues related to the future growth and character of the Airport/West Corridor. The City will assist the CONSULTANT in arranging for focus group meeting space and accommodation, as well as provide light refreshments. Each meeting is estimated to be 2 hours. Both Project Team and Consultant Team members will participate and prepare thorough notes of each focus group meeting.

#### **Deliverables:**

- a) The CONSULTANT will conduct 10 interviews and provide an summary of all interviews
- b) The CONSULTANT will coordinate focus group meeting space and light refreshments and be present at the interviews to help identify and record opportunities and constraints delineated with focus group input.

### **1.10 Initial Plan Concepts for Charrette**

The CONSULTANT will prepare up to five (5) initial plan concepts for the Study Area to include in the Charrette discussions. The initial plan concepts will include alternatives for generalized land use, vehicular and transit circulation, pedestrian connectivity and development mix. These scenarios may include the following:

- The Airport’s Strategic Development Plan (most current)
- The Dixie Berryhill Plan & Westside Strategy Plan
- Mecklenburg County’s Strategic Vision Plan (if available)
- The Lincoln-Harris Master Plan
- A hybrid alternative based on the four plans above

#### **Deliverables:**

- a) The CONSULTANT will provide up to five (5) initial plan concepts

## **2.0 MARKET ANALYSIS**

*The City believes that strong and vibrant business corridors are the cornerstones of healthy neighborhoods. For over twenty years, the City has invested in these corridors because of the*

*critical role each plays in supplying basic needs and opportunities to their communities.*

*For example, on March 21, 2007, the Business Corridor Revitalization Strategic Plan was released with the following policy statement:*

*The City will take a leadership role in developing and implementing public and private collaborative strategies and investments that aim to 1) Attract private sector investment to grow jobs, businesses and services; 2) Expand the tax base in the business corridors; and 3) Support the revitalization of the corridors into mixed use areas promoting the adjacent neighborhoods as safe, viable and sustainable.*

*As part of the City's continued efforts to focus on creating strong and vibrant business corridors, the Consultant shall develop baseline information, conduct market studies, and develop preliminary strategies for improving the targeted geography:*

*The Consultant shall determine and report on the market impacts of each of the Projects to achieve the Program Goals including trade area demographic trends and forecasts, the market potential for retail, office, institutional, and residential uses at each; and the spatial distribution of competition for supermarkets and other neighborhood retail that could service the Airport West Corridor. The Consultant may recommend additional projects to achieve the Program Goals.*

*The Market Analysis (to be completed after 1.0 existing conditions is completed and the Land Utilization component is finished) shall:*

- Identify specific parcel(s) or locations with the greatest potential for redevelopment. Consider the catalyst sites as identified in the local Area Plan. Develop a strategy for parcel acquisition.*
- Provide guidance on opportunities/strategies for nodal development and identify specific parcels for acquisition achieves nodal development within the corridor.*
- Identify the sites whose current land use has greatest contrast with community or **program goals**; or the current land use represents the greatest impediment to further redevelopment and revitalization of the Airport West Corridor. Provide a definition for blight and identify parcels that meet the definition*
- Identify environmental impediments (site remediation and lack of adequate access to public infrastructure exist for successful redevelopment in the Airport West Corridor.*
- Identify geographic areas that are un-served or under-served, thereby serving as prohibitions or disincentives to development (concentrating on utilities and roadway access).*

- *Identify infrastructure recommendations for the area that focus upon serving future key redevelopment sites. Also include potential locations for regional stormwater facilities.*
- *Assess economic opportunities for local farmers and businesses, and foster entrepreneurship;*
- *Identify strategies to improve access to healthy local food, particularly among disadvantaged groups with limited access to fresh fruits and vegetables; and*
- *Identify potential locations to support supporting farmers' markets, food hubs, community gardens, community kitchens, and other kinds of local food enterprises to help provide people with affordable choices for accessing those amenities, such as walking, biking, or taking transit.*

Airport/West Corridor CIP Market Analysis process will utilize the following Tasks:

## **Market Analysis (for the Airport Strategic Development Planning Area)**

### **2.1 Area Analysis (Section 1.6 from Airport Scope)**

The CONSULTANT will review the base mapping developed in Task 1, and overlay and integrate data to understand land, regulatory and existing and planned development patterns.

#### **Deliverable:**

- a) The CONSULTANT will construct preliminary land analysis memorandum generated from spatial data inputs from the City's GIS database

### **2.2 Developer Interviews**

The CONSULTANT will conduct ten (10) interviews with individual developers. These interviews will help determine the goals, perceptions and issues related to the future growth and character of the Airport/West Corridor from a developer perspective.

#### **Deliverable:**

- a) The CONSULTANT will provide a summary of all developer interviews

### **2.3 Market Research and Development Opportunities**

The CONSULTANT will provide Market Analysis Report that includes the following:

#### **Deliverables:**

- a) The CONSULTANT will research the distinguishing characteristics of CDIA and surrounding development opportunities. The CONSULTANT will research the competitive hubs on the East Coast of North America to determine the unique characteristics and opportunities that CLT has in relationship to these other Eastern US airports. The CONSULTANT will research and analyze the possible effects of the merger of US Air and American, which expanded the competitive landscape. (Section 2.1, bullet 1, from Airport Scope)
- b) The CONSULTANT will outline a set of key marketing messages and identify the regional and global audiences; (Section 2.1, bullet 2, from Airport Scope)

**3.0 PROJECT IDENTIFICATION AND CONCEPT DEVELOPMENT**

Reserved

**4.0 PROJECT PRIORITIZATION AND RANKING**

Reserved

**5.0 COMPREHENSIVE INVESTMENT STRATEGY (CIS) SUMMARY REPORT and EXECUTIVE SUMMARY**

Reserved

**6.0 ADMINISTRATIVE RESPONSIBILITIES**

*The CONSULTANT shall perform all services in accordance with the current version of the City of Charlotte CADD standards, Land Development Standards Manual, the “Charlotte-Mecklenburg Storm Water Design Manual”, the Urban Street Design Guidelines, Charlotte-Mecklenburg Utilities design standards, and Landscape Management standards. At the time work commences under this Contract, the Consultant shall use the 2012 edition of NCDOT Standard Specifications for Roads and Structures and Roadway Standard Drawings. The Consultant shall perform all services using English units.*

*The Consultant shall establish a regular meeting schedule to review project information with the City in accordance with direction provided by the City Project Manager, which shall include, at a minimum:*

*Monthly Status Meetings*

*Monthly status meetings shall be held between the City Project Manager, Project Team members, Community Investment Plan Strategy Team lead and the Consultant during*

*the course of the Project. The CONSULTANT shall prepare and submit minutes of these meetings to the City Project Manager within ten (10) calendar days. The CONSULTANT or the City Project Manager shall schedule the meetings.*

#### Monthly Status Reports

*The CONSULTANT shall prepare monthly status reports and deliver the reports to the City Project Manager a minimum of three (3) business days prior to the monthly status meeting or by the 15<sup>th</sup> of every month if no meeting is scheduled. The status report shall summarize work completed and percent complete for the current month and the work scheduled to be completed for the upcoming month. The CONSULTANT shall make all plans and Project work available for review and examination by City staff.*

Airport/West Corridor Administrative Responsibilities will utilize the following Tasks:
---

#### **6.1 Project Coordination Meetings**

The CONSULTANT will attend five (5) project coordination meetings with City Staff; all meetings will include CONSULTANT's Project Manager, Deputy, and Community Outreach Leader. Assume two (2) hours each per meeting. As applicable team members will participate in coordination meetings via conference call, web meeting or video conference as available.

##### **Deliverables:**

- a) The CONSULTANT will provide monthly coordination meeting minutes

#### **6.2 Progress Reports and Meeting Minutes**

The CONSULTANT will provide monthly written reports on previous month's activities and progress; provide written copies of minutes of all project related meetings attended by members of the consultant planning team. A five (5) month schedule has been assumed.

##### **Deliverables:**

- a) The CONSULTANT will provide monthly progress reports

### **6.3 Project Administration**

The CONSULTANT will provide project related administrative tasks such as scope development, sub-consultant contract preparation, invoicing, budgeting and tracking, etc. A five (5) month schedule has been assumed.

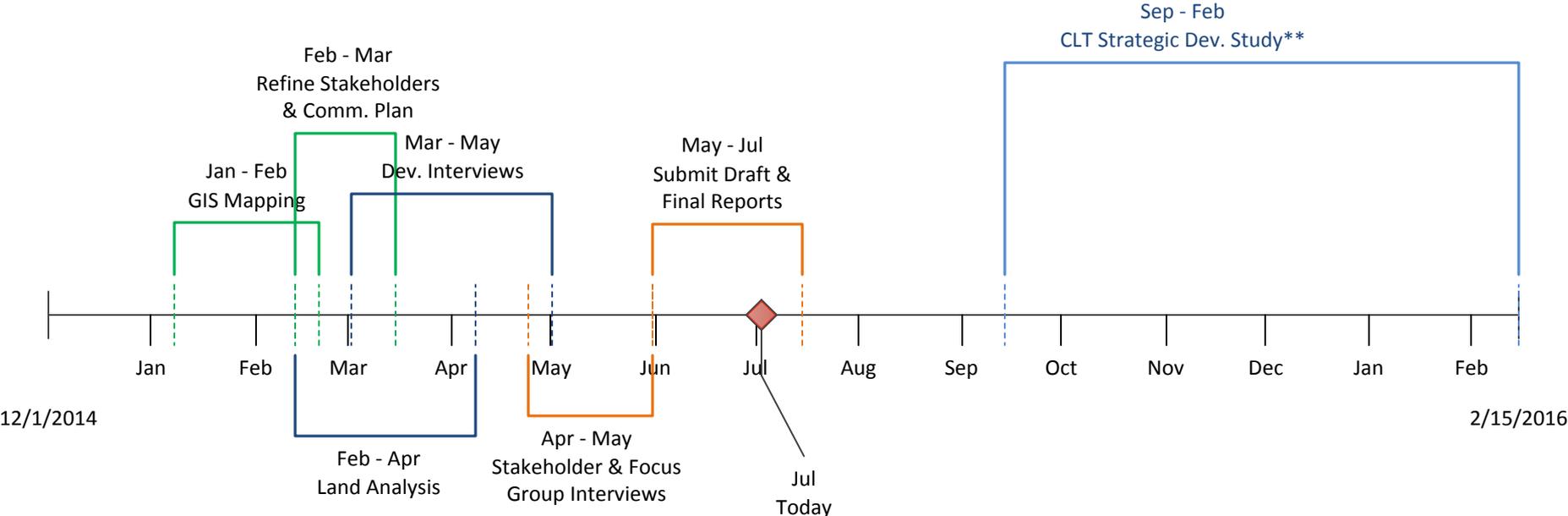
#### **Deliverables:**

- a) The CONSULTANT will provide monthly invoices

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# Airport/West Corridor Program

## Timeline (7/2/15)



Note:  
\*\* assumed schedule

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
12/18/2014



**HNTB Project #**  
58349

**Location**  
CMGC – 12<sup>th</sup> Floor

**Purpose of Meeting**  
Kick-Off meeting

**Time**  
9am-11am

## **MEETING AGENDA**

- I. Introductions / Roles & Responsibilities**
- II. Project Overview & Updates**
- III. Review of Project Management Plan**
- IV. Study Area Map Boundary**
- V. Review of Draft List of Project Stakeholders & Focus Groups**
- VI. Market Analysis Overview & any data needs**
- VII. Discuss current list of Developers & plan for interviews**
- VIII. Review Action Items & set next meeting date.**

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
12/18/2014



**HNTB Project #**  
58349

**Location**  
CMGC – 12<sup>th</sup> Floor

**Purpose of Meeting**  
Kick-Off meeting Minutes

**Time**  
9am-11am

**Invited Attendees** (*did not attend*):

Tim Greene, PE – City

Imad Fakhreddin, PE – City

Ashley Landis, PE – City

Veronica Wallace - City

Johanna Quinn - City

Jonathan Wells - City

Kristin Behlke – City

*Katherine Dennis - CLT*

Todd DeLong - City

Greg Boulanger, PE – HNTB

Eric Seckinger, PE – HNTB

Michael Gallis – MGA

Erik Kreh – MGA

Darrel Williams - NC

Eric Orozco – NC

Donal Simpson - DSA

*Keri Shearer - City*

**MEETING AGENDA**

**I. Introductions / Roles & Responsibilities**

a. Each team member was introduced and indicated his or her role. *Team members who were not present indicated in italics*

- i. Tim Greene, City Program Manager
- ii. Imad Fakhreddin, City Project Manager
- iii. Veronica Wallace, City West Strategy Leader
- iv. Ashley Landis, CDOT PM
- v. Johanna Quinn, CDOT Program Manager
- vi. Jonathan Wells, City West Strategy Team Representative for Planning
- vii. Todd DeLong – City Economic Development Leader
- viii. Kristin Behlke – City Engineering communications
- ix. Judy Dellert-O’Keef – CDOT communications
- x. *Kathy Dennis – CLT Planner*
- xi. *Candice Leonard – CRTPO resource*
- xii. *Keri Shearer – City GIS West Strategy Team Member*
- xiii. Greg Boulanger – HNTB project manager
- xiv. Eric Seckinger – HNTB deputy project manager, engineer
- xv. Michael Gallis – MGA, sub to HNTB, Market Analysis Lead
- xvi. Erik Kreh – MGA, sub to HNTB, market analysis
- xvii. Darrel Williams – Neighboring Concepts, sub to HNTB, communications
- xviii. Eric Orozco – Neighboring Concepts, sub to HNTB, GIS and communications
- xix. Donal Simpson – HNTB, Community Engagement Lead

**II. Project Overview & Updates**

a. The Airport/West project includes the widening and extension of Dixie River and New Garrison Roads.

i. New Garrison Road is included in the 2016 bond and has a budget of \$31,200,000

ii. Dixie River Road is included in the 2018 bond and has a budget of \$13,250,000

b. The project is currently outside the city limit.

i. The area will have to be annexed for the City to pay for construction

- ii. The project will likely be completed in segments as the City is able to annex certain areas. Look for willing property owners
  - iii. The City will prioritize areas with the most intense development interest
  - iv. At this time, the City will not pursue involuntary annexation, only voluntary annexation
- c. Economic development goal for project is to leverage projects to maximize return on investment
  - d. CDOT communication is responsible for policy communication and communication with council. E&PM communication is responsible for project specific issues.
  - e. All project communications should be funneled through Imad.

### **III. Review of Project Management Plan**

- a. Greg Boulanger distributed folders containing the project management plan and other key documents.
- b. Greg indicated to the team that each member's folder will be updated with additional and/or new information at each meeting.
  - i. The folders will contain all of the documents required in the project management plan, including, but not limited to the following
    - Project initiation document
    - Study area map
    - Project team org chart
    - Team member contact info
    - Contract scope
    - Action item list
    - Status of deliverables
    - Gantt chart
    - Project timeline
    - Agendas and meeting minutes
    - Deliverables and other documents

### **IV. Study Area Map Boundary**

- a. Greg described the study area for the project
  - i. Greg and Michael Gallis described the differences between the City project and the Airport project
- b. Greg distributed copies of the study area maps
- c. Eric Orozco gave an overview of the study area map
- d. Greg suggested that the study area boundary should be extended north from the current boundary of Wilkinson Blvd to I-85, and the City agreed
  - i. HNTB will extend the study limits to I-85
- e. The City directed HNTB to add and highlight the Whitehall study area to the project map.
  - i. HNTB will highlight the Whitehall study area to the map.

### **V. Review of Draft List of Project Stakeholders & Focus Groups**

- a. HNTB asked CDOT to provide a steering/management org chart
  - i. The City agreed to provide a steering/management org chart
- b. HNTB provided the City with a draft list of stakeholder groups
- c. The team discussed individuals and groups to include as stakeholders, including but not limited to
  - i. CRTPO
  - ii. CMUD, now Charlotte Water
  - iii. NCDOT
  - iv. Lower Lake Wylie Watershed

- v. CNIP/ Whitehall
  - The City directed HNTB to coordinate with Imad to keep the CNIP website up to date
  - Use the CNIP stakeholder list for the Whitehall project or other adjacent projects as a base to further supplement this project's list
  - Keith Carpenter is the City PM and will provide schedule and plan for Whitehall
- vi. Add schools, parks, libraries as one focus group
- vii. Add Duke Energy and other utilities as stakeholders
- viii. The City informed HNTB that the stakeholder list will change throughout the life of the project
- d. The City directed HNTB not to overtax stakeholders that may be stakeholders in many other projects.
  - i. The results of earlier stakeholder outreach may be used in this project to avoid over taxing stakeholders
  - ii. HNTB indicated that it will add a column in the stakeholder list to identify stakeholder activity on other projects
  - iii. Veronica indicated that she will provide notes and meeting minutes from West Strategy Team meetings with stakeholders
  - iv. The City indicated that Parks and Recreation has already gone through master planning, which included stakeholder meetings.

**VI. Market Analysis Overview & any data needs**

- a. HNTB provided the City with a list of data needs for market analysis
- b. Michael Gallis gave an overview of the submarket area within this project
- c. Leverage opportunities created by local assets to maximize the value of the area.

**VII. Discuss current list of Developers & plan for interviews**

- a. HNTB provided the City with a draft list of developers and proposed questions for the City's review

**VIII. Review Action Items & set next meeting date.**

- a. HNTB team to coordinate all action items and correspondence through Imad throughout the project.
- b. HNTB team will expand the study area to extend north to I-85.
- c. HNTB team to coordinate with the Whitehall Study Team regarding project status and stakeholder lists.
- d. HNTB team to add the Whitehall Study area to the project maps.
- e. HNTB team to add CLT/Kathy Dennis to the meeting minute distribution list.
- f. HNTB team to add Charlotte Water to the list of stakeholders
- g. Imad to send HNTB to develop a steering committee/management organizational chart for the team's use.
- h. Imad to schedule reoccurring monthly project meetings
- i. Imad to provide HNTB with notes from past stakeholder meetings in the area particularly regarding prior discussion on the bond projects so HNTB team can utilize this info for reference or for follow up meetings with these stakeholders and avoid asking the same questions.

*The foregoing constitutes our understanding of the matters discussed and the conclusions reached. If there are any questions, corrections, omissions, or additional comments please advise Eric Seckinger (HNTB) within five working days after receipt of these minutes.*

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
01/27/2015



**HNTB Project #**  
58349

**Location**  
CMGC – 8<sup>th</sup> Floor

**Purpose of Meeting**  
Monthly Progress meeting

**Time**  
3:00-4:30PM

## **MEETING AGENDA**

### **I. Review of Action items**

- a. HNTB team to coordinate all action items and correspondence through Imad throughout the project.
- b. HNTB team will expand the study area to extend north to I-85.
- c. HNTB team to coordinate with the Whitehall Study Team regarding project status and stakeholder lists.
- d. HNTB team to add the Whitehall Study area to the project maps.
- e. HNTB team to add CLT/Kathy Dennis to the meeting minute distribution list.
- f. HNTB team to add Charlotte Water to the list of stakeholders
- g. Imad to send HNTB to develop a steering committee/management organizational chart for the team's use.
- h. Imad to schedule reoccurring monthly project meetings
- i. Imad to provide HNTB with notes from past stakeholder meetings in the area particularly regarding prior discussion on the bond projects so HNTB team can utilize this info for reference or for follow up meetings with these stakeholders and avoid asking the same questions.

### **II. Review Communication Plan Outline**

### **III. Review of Updated List of Project Stakeholders, Focus Groups, and Questions**

### **IV. Discuss current list of Developers, questions & plan for interviews**

### **V. Review of Project Management Plan Updates**

### **VI. Review Action Items & set next meeting date.**

**Project Name**  
Airport/West Corridor

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Tim Greene, PE – City  
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Veronica Wallace - City  
Johanna Quinn - City  
Jonathan Wells - City  
*Kristin Behlke – City*  
*Katherine Dennis – CLT*  
Lori Quinn - City

*Todd DeLong - City*  
Greg Boulanger, PE – HNTB  
Eric Seckinger, PE – HNTB  
Michael Gallis – MGA  
Erik Kreh – MGA  
Maria Floren - NC  
Eric Orozco – NC  
Donal Simpson - DSA  
Keri Shearer - City

**MEETING AGENDA**

- I. Greg reviewed that status of the action items from the previous meeting**
  - a. HNTB team to coordinate all action items and correspondence through Imad throughout the project. – *HNTB will continue to copy Imad on all project correspondence.*
  - b. HNTB team will expand the study area to extend north to I-85. – *HNTB provided a map showing the new study area limits extending north to I-85.*
  - c. HNTB team to coordinate with the Whitehall Study Team regarding project status and stakeholder lists. – *HNTB met with the Whitehall Study Team, attended a meeting with them at CLT, and gathered stakeholder lists for that project.*
  - d. HNTB team to add the Whitehall Study area to the project maps. – *HNTB added the Whitehall Study area to the project map.*
  - e. HNTB team to add CLT/Kathy Dennis to the meeting minute distribution list. – *HNTB provided and will continue to provide Kathy Dennis with meeting minutes.*
  - f. HNTB team to add Charlotte Water to the list of stakeholders – *HNTB added Regina Cousar of CMUD to the meeting minute distribution list.*
  - g. Imad to send HNTB to develop a steering committee/management organizational chart for **the team's use.** – *Imad provided HNTB with a project org chart.*
  - h. Imad to schedule reoccurring monthly project meetings – *Imad scheduled a recurring monthly meeting for the fourth Tuesday of every month.*
  - i. Imad to provide HNTB with notes from past stakeholder meetings in the area particularly regarding prior discussion on the bond projects so HNTB team can utilize this info for reference or for follow up meetings with these stakeholders and avoid asking the same questions. – *HNTB has access to the Whitehall stakeholder information and Imad will provide HNTB with stakeholder meeting notes that were gathered during by the steering committee last year.*
- II. Review Communication Plan Outline**

Greg described HNTB's vision for developing the communications plan and how it affects the project schedule

  - a. Keep City staff involved in stakeholder, focus group and developer interview and meetings

- b. Eric Orozco described updates to project area maps
- c. City indicated that it was working to gather GIS files for HNTB
- d. Working to prepare and complete mapping by mid-February to help refine stakeholder and communications plan.
- e. Donal described plan for gathering stakeholder lists from adjacent projects to not overtax stakeholders involved in other projects in the area.
- f. The work occurring now is all in preparation for a charette to be held in the next phase of the projects
- g. NC is working on an opportunities and constraints model
- h. Michael Gallis has begun developing market analysis
- i. GIS mapping, land analysis will lead to development of high level roadway alignments
  - i. This mapping and alignments will be used in developer interviews to get feedback
  - ii. Will help with project phasing
- j. Michael Gallis described criteria used to develop alignments and land utilization based on computer models
- k. Greg indicated that the City should coordinate which staff members need to be involved with stakeholder, focus group and developer meetings.
  - i. Tim Greene and Imad will be involved on City side, along with others from the West Strategy Team
  - ii. City management wants City staff to be the face of the community engagement effort

### **III. Review of Updated List of Project Stakeholders, Focus Groups, and Questions**

- a. Sections III and IV were discussed concurrently. See Section IV for summary.

### **IV. Discuss current list of Developers, questions & plan for interviews**

- a. Michael Gallis provided a list of developers and potential questions and gave a brief description of the list
- b. Michael Gallis provided a set of maps that will be used to communicate with developers.
  - i. Identified 5 major development zones and sub zones in the airport area
  - ii. Current contract focuses in zone 1, which includes the Airport/West area
- c. Tim Greene asked why the developer list did not include Peter Pappas
  - i. Donal explained that Pappas was already interviewed as part of an adjacent project.
- d. Tim asked about questions #9. Asked if we want to use the term Garden Parkway in our questions, due to the negative connotation with the project. Suggested that we refer to it as another crossing of the River.
- e. Several City staff members expressed concern that some questions were leading. Particularly 9, 10 and 11.
  - i. HNTB will update questions to be less leading.
- f. Jonathan Wells directed HNTB to consider other groups as potential developers, including:
  - i. Mecklenburg County Parks and Rec.
- g. Jonathan also suggested that HNTB ask a question of developers if there will be conditional development plans, For example, developers will only develop if the City provides certain other developments to support the private development.
- h. Imad directed HNTB to add CMS as a developer
  - i. Greg indicated that the list of developers and focus groups will be reviewed as the project develops.
- i. Veronica expressed concern that asking about projects either proposed by other's or proposed by the project team may confuse the stakeholders/developers and imply support by the City for those projects.

- j. HNTB gave a description of the developers on the list
  - i. Marc Silverman – industrial developer, warehouse developer in the West area.
    - Name provided by Jack Christine
  - ii. Phil Bleumenthal – environmental stakeholder
  - iii. HNTB will update list based on County/City departments
  - iv. Many developers/stakeholders will be identified after GIS mapping phase is complete
  - v. List will include many developers/stakeholders from adjacent studies, including the Airport planning study
  - vi. Greg explained the role of Landrum and Brown at CLT
    - L&B is creating a noise contour map
    - Not related to this project
  - vii. Imad asked if questions should only be related to the specific project (Garrison Rd/Dixie River Road).
    - Greg explained that we would have 3 alternative alignments to get feedback for during the developer interviews.
  - viii. Tim asked if our schedule fits within the airport development plan
    - Greg will check with Kathy Dennis
  - ix. Greg explained the colors on the timeline.
    - Red text was for future work
    - Color lines were for which subconsultant was responsible for which work
  - x. Jonathan requested that HNTB review any alignment alternatives with Candice Leonard with CRTPO

**V. Review of Project Management Plan Updates**

- a. Greg explained updates for project folders
- b. Regina Cousar is the Charlotte Water contact for the project (part of West Strategy Team)
- c. Greg indicated that we do not have an NCDOT resource identified
- d. Packet contained
  - i. Updated contact list
  - ii. Updated Gant chart

**VI. Review Action Items & set next meeting date.**

- a. Imad will set up a recurring monthly meeting.
  - i. The next meeting is scheduled for February 24, 2015.
- b. Tim will provide the noise study from CLT.
- c. HNTB team to add Charlotte Water to the list of stakeholders.
- d. HNTB team will update the questions for developers to be more general and not project specific.
- e. HNTB team will add a question in the developer's question list to ask about conditional development.
- f. HNTB team will update the developers list to include County departments such as Parks and Rec, CMS, etc.
- g. HNTB team will verify that this project's schedule is compatible with the Airport's development schedule.

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
03/24/2015



**HNTB Project #**  
58349

**Location**  
CMGC – 12<sup>th</sup> Floor

**Purpose of Meeting**  
Monthly Progress meeting

**Time**  
3:00-4:30PM

## **MEETING AGENDA**

### **I. Review of Action items**

- a. Imad will set up a recurring monthly meeting.
- b. Tim will obtain the noise study from CLT.
- c. HNTB team to add Charlotte Water to the list of stakeholders.
- d. HNTB team will update the questions for developers to be more general and not project specific.
- e. HNTB team will add a question in the developer's question list to ask about conditional development.
- f. HNTB team will update the stakeholder (previously developer) list to include County departments such as Parks and Rec, CMS, etc.
- g. HNTB team will verify that this project's schedule is compatible with the Airport's development schedule.

### **II. GIS Mapping Results Discussion (Neighboring Concepts)**

- a. Data gathering process
- b. Opportunities
- c. Constraints

### **III. Discuss the Developer interviews (Gallis)**

- a. Process
- b. Status
- c. What we are heard.

### **IV. Review of Upcoming Next Steps & Deliverables**

- a. Focus Group Meetings
- b. Market Analysis Report / Developer summaries / Land Analysis
- c. Opportunities & Constraints Memo
- d. Conceptual Alignments

### **V. Review Action Items.**

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
03/24/2015



**HNTB Project #**  
58349

**Location**  
CMGC – 12<sup>th</sup> Floor

**Purpose of Meeting**  
Monthly Progress Meeting

**Time**  
3:00-4:30PM

**Attendees:** (\* invited / did not attend.)

Tim Greene, PE – City  
Imad Fakhreddin, PE – City  
Ashley Landis, PE – City  
Veronica Wallace – City  
Johanna Quinn – City  
Jonathan Wells – City  
Todd DeLong – City  
Keri Shearer – City  
Greg Boulanger, PE – HNTB  
Jeff Hess, PE – HNTB

Eric Orozco – NC  
Donal Simpson – DSA  
Michael Gallis – MGA  
Erik Kreh – MGA  
Amy Rowland – MGA  
\*Maria Floren – NC  
\*Kristin Behlke – City  
\*Lori Quinn – City  
\*Katherine Dennis – CLT  
\*Eric Seckinger, PE – HNTB

**MEETING MINUTES**

**I. HNTB reviewed that status of the action items from the previous meeting**

- a. Imad to schedule reoccurring monthly project meetings – *Imad scheduled a recurring monthly meeting for the fourth Tuesday of every month.*
- b. Tim will obtain the noise study from CLT. – *Tim has not received the study yet. Keri will check with Haley from CLT to see if she has or can get a copy.*
- c. HNTB Team to add Charlotte Water to the list of stakeholders – *HNTB added Regina Cousar of Charlotte Water to the meeting minute distribution list.*
- d. HNTB Team will update the questions for developers to be more general and not project specific. – *HNTB updated the questions accordingly.*
- e. HNTB Team will add a question in the developer’s question list to ask about conditional development. – *HNTB added the question to the list.*
- f. HNTB Team will update the stakeholder (previously developer) list to include County departments such as Parks and Rec, CMS, etc. – *Ongoing. HNTB will distribute an updated stakeholder list to the project team soon.*
- g. HNTB Team will verify that this project’s schedule is compatible with the Airport’s development schedule. – *Ongoing. HNTB has not received a response from the Airport.*
  - i. Jonathan asked if the Airport has a Master Plan. Greg said that he does not have a copy but has seen it on multiple occasions. It includes an airfield and gate expansion, which has been presented to City Council and a fifth runway to make five parallel runways. It does not include any improvements west of I-485 or on the landside.

**II. GIS Mapping Results Discussion (Neighboring Concepts, NC)**

- a. Data gathering process – Eric Oronzo of Neighboring Concepts (NC) described that NC has been coordinating with the City and County to obtain GIS mapping and parcel information.
- b. Opportunities – Eric stated that approximately 45% of the project area is highly constrained and that the remaining 55% could potentially be used for new roadways. Large parcels, owned primarily by Crescent Communities, exist along the west side. Crescent is in favor of

annexation. Greg added that a highly constrained area of only 45% provides many relatively unconstrained opportunities to shift the roadway alignments if deemed appropriate.

- c. Constraints Maps – Eric displayed a map showing the Highly Constrained Areas and then displayed individual maps that were used to develop it
  - i. The Maps are attached to the meeting minutes.
- d. HNTB will distribute the constraints maps to the project team for review.
- e. Greg stated that Lincoln Harris is currently acquiring more parcels in the project area.
- f. Greg stated that the Airport has acquired parcels in the past but to his knowledge they do not have current plans to acquire more parcels.

### **III. Discuss the Developer Interviews**

- a. MGA distributed a draft report summarizing the developer interview process and results.
- b. Michael highlighted a few items from the draft report:
  - i. The City has a unique opportunity to capitalize on the project area's potential; no other city on the east coast has this amount of available land adjacent to its airport.
  - ii. The current roadway alignment does not maximize value creation.
  - iii. An updated alignment requires a partnership of all stakeholders (City, County, State, developers, current residents and land owners)
- c. Status – Michael stated that interviews have been conducted with 7 parties. Phone interviews were conducted too; MGA will add the phone interviews to the report.
- d. What we heard:
  - i. The area has a stigma of being undesirable due to crime, airport noise, and poor schools.
  - ii. Most envisioned industrial and commercial development adjacent to I-485 with residential development along the river. However, Greg noted that the topography adjacent to I-485 is not favorable for industrial or commercial development. Michael noted that modern industrial needs about 30 acres of "level" land.
  - iii. Providing a parallel service road to the west of I-485, similar to Wallace Neel Road to the east has received interest in the developer interviews.
  - iv. One industrial developer whose customers are trucking companies tends to avoid sites that require trucks to traverse roundabouts.
  - v. Learn from Ballantyne's mistakes in terms of a lack of multi-modal connectivity.
  - vi. The type of access and roadway typical section is important.
  - vii. What does the City want? Most developers ask this question because they recognize the type of roadway will dictate the type of development.
  - viii. The developers that we spoke with are generally intrigued to work with the City on maximizing land value through a roadway design process.
- e. Jonathan asked about the importance of NCDOT's planned Garden Parkway. Greg stated that there were mixed opinions on providing a river crossing, but easy access to I-485 is important. Tolls were viewed as a negative.
- f. Greg added that interviews are planned with Norfolk Southern and CLT Air Freight Carriers.
- g. Greg stated that SteelFab is willing to move provided they still have rail access. However, they do have a site in South Carolina with rail access that they could move to. They also do not see the benefit for being annexed. They indicated that they have water and sewer services already.
- h. All agreed that an interview should be scheduled with Lincoln Harris and Land Design to view their conceptual plans. MGA cannot finish the Market Analysis Report without first meeting with them.
- i. The City requested that Todd Delong be included in the focus group/stakeholder interviews.

- j. Tim Greene stated that Johnny Harris was planning to meet with Danny Pleasant and other City managers to discuss his development plans in the Airport West Corridor

**IV. Review of Upcoming Next Steps & Deliverables**

- a. Focus Group Meetings
- b. Market Analysis Report / Developer Summaries / Land Analysis – MGA
- c. Opportunities & Constraints Memo – NC
- d. Conceptual Alignments – HNTB. Veronica stressed that the original alignment needs to be fully understood prior to revising it. We don't want to overlook something that influenced the original alignment. Greg stated that the project team needs to coordinate with CRTPO when developing alternate alignments. Also, there is a new Bill that is under review by legislators that could influence the cost of ROW.
- e. Public Meetings (included in the next phase of this planning contract future scope)

**V. Review Action Items**

- a. Tim will obtain the noise study from CLT. Keri will check with Haley for Tim.
- b. HNTB Team will update the stakeholder (previously developer) list to include County departments such as Parks and Rec, CMS, etc.
- c. HNTB Team will verify that this project's schedule is compatible with the Airport's development schedule.
- d. HNTB Team will update the constraints maps for the parcel that is leased by the City.
- e. HNTB Team to distribute the constraints maps to the project team for review.
- f. HNTB Team to include phone interview responses in the report.
- g. Tim and Ashley to determine who at the City has been coordinating with Lincoln Harris.
- h. HNTB Team to include Todd DeLong in the developer/stakeholder interviews.
- i. HNTB to coordinate with CRTPO and Stuart Basham (NCDOT) to investigate origin of alignments and the rationale behind them.
- j. Tim will find out what outcomes came from the recent Lincoln-Harris discussion and City management.

*The foregoing constitutes our understanding of the matters discussed and the conclusions reached. If there are any questions, corrections, omissions, or additional comments please advise Greg Boulanger (HNTB) within five working days after receipt of these minutes.*

cc: Invited Attendees, CRTPO, & Project File

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
05/18/2015



**HNTB Project #**  
58349

**Location**  
CMGC – 12<sup>th</sup> Floor

**Purpose of Meeting**  
Monthly Progress meeting

**Time**  
10:30-12:00PM

## **MEETING AGENDA**

- I. Review of Prior Action items (3/24/15)**
  - a. Kerri will check with Haley at CLT to obtain the latest noise study & maps.
  - b. HNTB team will verify that this project's schedule is compatible with the Airport's development schedule.
  - c. HNTB Team will update the constraints maps for the parcel that is leased by the City.
  - d. HNTB Team to distribute the constraints maps to the project team for review.
  - e. HNTB Team to include phone interview responses in the report.
  - f. Tim and Ashley to determine who at the City has been coordinating with Lincoln Harris and any outcomes from their meetings with city management.
  - g. HNTB Team to include Todd Delong in the developer/stakeholder interviews.
  - h. HNTB to coordinate with CRTPO and Stuart Basham (NCDOT) to investigate origin of alignments and the rationale behind them.
- II. Market Analysis Discussion (Gallis & Associates)**
  - a. Present market analysis findings and conclusions
- III. Stats of focus group meetings (Neighboring Concepts)**
  - a. Schedule for remaining meetings
  - b. Findings to date (Donal)
- IV. Airport Strategic Development Plan Update (Kathy Dennis)**
  - a. Discussion of Airport's strategy for undertaking this study and how it relates to Airport West
- V. Review of Upcoming Next Steps & Deliverables**
  - a. Finalize Market Analysis Report / Developer summaries / Land Analysis
  - b. Finalize Opportunities & Constraints Memo
  - c. Finish Focus Group meetings
  - d. Develop Conceptual Alignments
- VI. Review New Action Items.**

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
05/18/2015



**HNTB Project #**  
58349

**Location**  
CMGC – 12<sup>th</sup> Floor

**Purpose of Meeting**  
Monthly Progress Meeting

**Time**  
10:30AM-12:00 PM

**Attendees:** (\* invited / did not attend.)

\*Tim Greene, PE – City  
Imad Fakhreddin, PE – City  
Ashley Landis, PE – City  
\*Veronica Wallace – City  
\*Johanna Quinn – City  
Jonathan Wells – City  
Todd DeLong – City  
\*Keri Shearer – City  
Greg Boulanger, PE – HNTB  
Deidra Grier – Neighboring Concepts

Eric Orozco – Neighboring Concepts  
Donal Simpson – HNTB  
Michael Gallis – MGA  
Erik Kreh – MGA  
Amy Rowland – MGA  
\*Kristin Behlke – City  
Katherine Dennis – CLT  
Eric Seckinger, PE – HNTB  
Stuart Hair – CLT

**MEETING MINUTES**

**I. HNTB reviewed that status of the action items from the previous meeting**

- a. Kerri will check with Haley at CLT to obtain the latest noise study & maps.  
*Kathy Dennis informed the group that the newest noise maps are not yet complete. There is a public hearing scheduled for Summer 2015. There is currently an issue with the FAA noise forecast that must be resolved prior to the public hearing and the release of the final noise maps. However, Kathy did offer to provide the group with the draft noise contour maps, which are not likely to change much. If there is any change, it is likely that the noise contours will shrink.*
- b. HNTB team will verify that this project's schedule is compatible with the Airport's Strategic Development project schedule.  
*The team discussed Airport/West project's schedule relative to the Airport's Strategic Plan. Kathy Dennis and Stuart Hair indicated that the Airport project would be advertised this week. Kathy indicated that the Airport's project public involvement activities will be dependent on the Airport West public involvement process, and likely supplement those activities. Greg indicated that Debra Campbell stressed that she wanted the public meetings for Airport/West to be coordinated with the CLT project. Kathy and Stuart indicated that the Airport's study would begin in September 2015 and last approximately 180 days.*
- c. HNTB Team will update the constraints maps for the parcel that is leased by the City.  
*The team updated the constraint maps for this area.*
- d. HNTB Team to distribute the constraints maps to the project team for review.  
*The team distributed the maps previously.*

- e. HNTB Team to include phone interview responses in the report.  
*The team will include phone interview responses in the report.*
- f. Tim and Ashley to determine who at the City has been coordinating with Lincoln Harris and any outcomes from their meetings with city management.  
*The answer to this item was covered in a meeting with Debra Campbell, HNTB, Lincoln-Harris, and MGA on May 11<sup>th</sup> further discussed in the 'General Discussion' below.*
- g. HNTB Team to include Todd Delong in the developer/stakeholder interviews.  
*Todd Delong was added to the developer/stakeholder list. However, his schedule did not allow him to attend the interviews.*
- h. HNTB to coordinate with CRTPO and Stuart Basham (NCDOT) to investigate origin of alignments and the rationale behind them.  
*The team discussed the origin of the alignments, with the understanding that further discussion would happen with Stuart Basham and Candice Leonard at the Transportation Focus Group meeting on 5/18/15. Jonathan Wells indicated that the roadway alignments were developed as part of the Dixie Berryhill plan and then incorporated into the Thoroughfare Plan. The group did agree that the alignments would likely need to change. The group discussed that this project's public involvement effort may be sufficient to update the Thoroughfare Plan if advertised correctly. Also, the area plan may need to be updated; however the Airport's plan may be sufficient to updating the area plan.*

## **II. General Discussion**

- a. The group discussed Lincoln-Harris's (LH) interest in the area per a meeting held in the City Manager's office on 5/11/15. LH has been working closely with the City Manager's office (Debra and Ron Kimble) for the past year on a vision for the area, per LH. Also noted:
  - LH is very interested in the Airport West project outcomes for their planned development north of Berwick neighborhood
  - The LH plan shows a crossing of the Catawba River, and a roadway network described as not having major roads but several smaller roads designed to disperse traffic per a plan created by Land Design.
  - The group agreed that we need to gather more information from LH on their overall plan, including the river crossing and roadway network.
- b. The group discussed public involvement for this project.
  - i. Debra Campbell wants to align this project's public involvement efforts with LH and CLT.
  - ii. Kathy/CLT wants the Airport's public involvement plan to come up with creative ways to engage the public
  - iii. Kathy/CLT wants to "complement" Airport/West community engagement strategy

## **III. Michael Gallis Presented the Draft Market Analysis to the Group**

- a. Michael presented the draft market study presentation to the group describing the market issues and opportunities for development in the project area based on his findings, as well as a comparison to other airports studied on the east coast.
- b. The group provided the following comments:
  - i. Verify that the airfield is not counted as undeveloped land
  - ii. Add runway protection zone (RPZ) to the maps. The land in these areas cannot be developed.
  - iii. Kathy will provide the updated ALP with RPZs for inclusion in the market analysis

**IV. Review of Upcoming Next Steps & Deliverables**

- a. Complete Focus Group Meetings, and summaries.
- b. Finalize the Market Report / Developer Summaries / Land Analysis – MGA
- c. Conceptual Alignments – HNTB will coordinate with CRTPO at the next focus group meeting to understand the origin of the alignments.
- d. Public Meetings (included in the next phase of this planning contract future scope)

**V. Review Action Items**

- a. Eric Orozco will coordinate with Kathy Dennis to obtain draft noise contours, and an updated ALP with RPZs for inclusion in the market analysis
- b. HNTB Team will coordinate with CRTPO to understand original alignment development.
- c. MGA/HNTB Team will update the market study based on comments.
- d. HNTB Team will continue to coordinate with the CLT Plan as it progresses.
- e. HNTB Team to coordinate with Planning and CRTPO on how to advertise public meetings to ensure that they communicate properly plans to update the Thoroughfare plan and or the Small Area Plan.

*The foregoing constitutes our understanding of the matters discussed and the conclusions reached. If there are any questions, corrections, omissions, or additional comments please advise Greg Boulanger (HNTB) within five working days after receipt of these minutes.*

cc: Invited Attendees, CRTPO, & Project File

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
06/23/2015



**HNTB Project #**  
58349

**Location**  
CMGC – 12<sup>th</sup> Floor

**Purpose of Meeting**  
Final Monthly Progress meeting

**Time**  
3:00PM-4:30PM

## **MEETING AGENDA**

- I. Review of Prior Action items**
  - a. Eric Orozco will coordinate with Kathy Dennis to obtain draft noise contours, and an updated ALP with RPZs for inclusion in the market analysis
  - b. HNTB Team will coordinate with CRTPO to understand original alignment development.
  - c. MGA/HNTB Team will update the market study based on comments.
  - d. HNTB Team will continue to coordinate with the CLT Plan as it progresses.
  - e. HNTB Team to coordinate with Planning and CRTPO on how to advertise public meetings to ensure that they communicate properly plans to update the Thoroughfare plan and or the Small Area Plan.
  
- II. Stakeholder Focus Group Discussion (Donal)**
  - a. Summary of findings
  
- III. Opportunities and Constraints (Eric O/NC)**
  - a. Summary of findings
  
- IV. Probably Cost estimate of Planned Alignment (Eric/HNTB)**
  - a. Cost analysis by segment.
  
- V. Market Analysis (Michael/MG&A)**
  - a. Review of conclusions, as needed.
  
- VI. Review of Upcoming Next Steps & Deliverables**
  - a. Submit final deliverables
  
- VII. Review New Action Items.**

**Project Name**  
Airport/West Corridor

**Date of Meeting**  
06/23/2015



**HNTB Project #**  
58349

**Location**  
CMGC – 12<sup>th</sup> Floor

**Purpose of Meeting**  
Monthly Progress Meeting

**Time**  
3:00PM-4:30 PM

**Attendees:** (\* invited / did not attend.)

Tim Greene, PE – City  
Imad Fakhreddin, PE – City  
Ashley Landis, PE – City  
\*Veronica Wallace – City  
\*Johanna Quinn – City  
Jonathan Wells – City  
\*Todd DeLong – City  
\*Keri Shearer – City  
Greg Boulanger, PE – HNTB

Eric Orozco – Neighboring Concepts  
Donal Simpson – HNTB  
Michael Gallis – MGA  
Erik Kreh – MGA  
Amy Rowland – MGA  
\*Kristin Behlke – City  
\*Katherine Dennis – CLT  
Eric Seckinger, PE – HNTB

**MEETING MINUTES**

**I. HNTB reviewed that status of the action items from the previous meeting**

- a. Eric Orozco will coordinate with Kathy Dennis to obtain draft noise contours, and an updated ALP with RPZs for inclusion in the market analysis.  
*Eric Orozco has received the draft noise contours in a pdf format. Ashley Landis has requested that NC send her the RPZ maps.*
- b. HNTB Team will coordinate with CRTPO to understand original alignment development.  
*During the transportation focus group meeting, HNTB discussed the alignment with Candice Leonard (CRTPO) and Stuart Basham (NCDOT, former MUMPO). The alignments in the thoroughfare plan were developed based on the alignments of the existing roadway network in the area and the desire to avoid impacting existing developments and other constraints. The biggest issues are topography and water.*
- c. MGA/HNTB Team will update the market study based on comments.  
*MGA updated the Market Analysis and presented the findings at this meeting.*
- d. HNTB Team will continue to coordinate with the CLT Plan as it progresses.  
*HNTB has met with CLT staff and have determined that the CLT study is to be completed in February of 2016. The plan may be subject to City Council adoption, which will likely occur after the February 2016 date. Stuart Hair at CLT is managing the Airport's Plan. The focus of the CLT study is different than the City's Airport West project.*
- e. HNTB Team to coordinate with Planning and CRTPO on how to advertise public meetings to ensure that they communicate properly plans to update the Thoroughfare plan and or the Small Area Plan.

*During the transportation focus group meeting, HNTB discussed the alignment with Candice Leonard of CRTPO. Candice indicated that the public involvement for Airport West could also satisfy the CRTPO process if the Airport West meetings are advertised as MTP/Thoroughfare Plan updates and then the alignments later presented to TCC and CRTPO.*

## **II. Project Update - (Tim Greene)**

*Tim explained to the group that the City has elected to put the planning and design of this project on hold until the Airport completes their Airport Strategic Development plan in February 2016. This decision was told to Tim by Debra Campbell. Therefore Tim asked that the group submit all the final deliverables as part of this project.*

*The group discussed that there is currently an expectation by the Airport that the public meetings for this project will be supplemented by the public involvement for the Airport's project, and that there will need to be some coordination with the Airport on moving forward. This change may also impact the scope as to what they Airports study is planning to accomplish given the expectation that both studies would be moving forward in parallel.*

*Lastly, the group discussed the current expectation of the developer and stakeholder groups interviewed for the project that there would be public meetings in the next phase needing their participation. There would need to be sensitivity as to how this is messaged to the public, particularly if the Airport holds public meetings about the development plan, while the public is expecting to hear about the potential roadway alignments.*

*The group discussed a potential solution would be to send out a letter/note to all the participants that attended the interviews and provide them a project update and status. This would also be a good opportunity to share with them the upcoming meetings for the Airport's plan.*

## **III. Stakeholder Focus Group Discussion - Highlights (Donal/HNTB)**

*The residential focus group was attended by over 50 people assuming the meeting was to see the preliminary design for the road. Ashley Landis indicated that some residents did not want to be annexed but still wanted the road.*

*CRTPO did an opportunities and constraints analysis and selected the alignment based on the existing roadway network, minimizing impacts to residential areas, and minimizing impacts to water and the existing topography.*

*Environmental groups and residents communicated the sensitive areas to the project team. These areas will likely impact development and the road alignment. There seems to be little opposition to development, but want the development to be sensitive to the environment. Many thought that Berewick was too dense and not a good example of ideal development. Ballantyne Commons Parkway was cited as an example of what the focus groups would want to see.*

*NCDOT no longer has Garden Parkway included in the 10 year plan. Some focus groups still want to see another crossing of Lake Wylie.*

*The next steps will be to take the Opportunities and Constraints report and determine what the theoretical maximum development can be. It is likely that the area west of the Dixie River Road alignment will be residential and the area east will be commercial/industrial.*

*All meeting summaries will be detailed in the final report.*

## **IV. Opportunities and Constraints (Eric O/NC)**

*Eric Orozco described the maps included in the Opportunities and Constraints (O&C) report. The area is very fragmented. The O&C outlines the areas that may be developed.*

*Alignment specific considerations include the topography, including areas with over a 100' grade differences. The area between Mount Olive Church Road and Dixie River Road is the most topographically challenging. There are some historic and cultural resource areas and also wetlands near the current alignment.*

*Maps outlining these constraints will be included in the final report.*

**V. Probable Cost estimate of Planned Alignment (Eric/HNTB)**

*Eric Seckinger described the development of the estimate of the approximately \$129 M probable cost of the project. The cost was developed using the same methodology that MUMPO, now CRTPO uses to estimate project costs at the planning level. At this level much of that project cost is included in the planning level contingency. The estimate includes approximately \$95M for construction, \$25M for right of way, \$9M for utilities, and \$500K for environmental. The costs also include professional services for design and permitting.*

*HNTB provided a display that divided the project into 6 segments based on geographic logical termini. Each segment has an interpolated cost based on its length. This figure could be used to determine the segments that could be constructed with the \$44M included in the bond package.*

**VI. Market Analysis (Michael/MG&A)**

*Michael Gallis recapped the Market Analysis results. Michael described the graphic showing the land around the other comparable airports and gave an analysis of the amount of undeveloped land, which would be suitable for development. Zone 1 of the study is in the Airport West study area.*

*Charlotte has a much larger area of potentially developable land near the airport than its competition. There is undeveloped land on each side of the airport, not just Zone 1. Zones 4 and 3 have larger percentages of land undeveloped or underdeveloped than Zone 1. Each area needs to be developed with tying to all areas in mind.*

*Michael described the areas with low, medium and high potential for development or redevelopment. Medium and high predominate in Airport area.*

*Harris, Childress Klein and Norfolk Southern already have plans for Zone 1. Any realignment of the proposed roadway would need to be further studied for its impact on potential development. The future study should include recommendations for additional infrastructure needs to maximize the development potential of the area.*

**VII. Review of Upcoming Next Steps & Deliverables**

*Tim directed HNTB to submit the draft for management review, and to provide it to the public after review.*

**VIII. Review New Action Items**

- a. NC will send Ashley Landis the noise contour maps
- b. Submit draft of study for review

*The foregoing constitutes our understanding of the matters discussed and the conclusions reached. If there are any questions, corrections, omissions, or additional comments please advise Greg Boulanger (HNTB) within five working days after receipt of these minutes.*

cc: Invited Attendees, CRTPO, & Project File

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# Community Engagement

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Airport/West Corridor -  
Extension of Garrison Rd &  
Widening of Dixie River Rd

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## Introduction

The goal of the community engagement task in this initial phase was to identify the constraints affecting the planned *Extension of Garrison Road and Widening of Dixie River Road* and recognize opportunities to mitigate the constraints that improve the overall alignment characteristics of the planned project.

Primarily two methods were utilized to understand the constraints in the area (1) Geographic information system (GIS) mapping analysis of the study area led by Neighboring Concepts and (2) conducting focus group interviews organized into eight (8) distinct groupings.

The GIS mapping utilized County, City and Regional data. When analyzed together provided a high level view of several constraints in the area to consider related to as Hydrology and Topography, wildlife, Archaeology, and Private Utilities. This information led to a number of opportunities and constraints to consider for analyzing potential changes to the current alignment. For example, up to 55% of the Airport/West Corridor (4,100 acres) is virtually “unconstrained” to development (ready for grading or redevelopment); however, the entire study area is in a Critical and or Protected Watershed with challenging topography that could impact the types of development.

The information gathered through the mapping analysis was utilized during the facilitation of focus groups as a reference and to develop questions. The focus groups were classified in eight focus areas: Residents and Local Businesses; Churches; Public Schools and Parks; Economic Development; Environmental Conservation; Environmental Permitting; Transportation Planning; and Private Utilities. The members of each group were selected through discussion with the City project team, identified as stakeholders during the mapping analysis, and participants identified in prior studies in the area (page 95). With nearly 70 participants providing feedback on the project area the team was able to discover many issues and concerns in the area to consider in planning the *Extension of Garrison Road and Widening of Dixie River Road*. The issues consisted mainly around the roadway type, multi-use needs on the roadway, the types of development the project would attract, sensitivity to the environment, and types of amenities the project would provide in the area.

# **Table of Contents**

## **Content 1. Communications Plan (Task 1.04)**

## **Content 2. Mapping/Opportunities & Constraints (Task 1.06)**

- Opportunities and Constraints Highlights
- Opportunities and Constraints Narrative
- Opportunities and Constraints Mapping Analysis

## **Content 3. Focus Group Activities (Tasks 1.01, 1.02, 1.03 & 1.09)**

- Focus Group Contact List
- Focus Group Highlights
- Focus Group Meeting Summaries

## **Airport/West Corridor Communications Plan**

### **Project Description**

The project is for the widening and extension of Dixie River Road to provide a connection between NC 160 (Steele Creek Road) in the south and I-85 in the north, and the widening and extension of Garrison Road to provide a second connection from Dixie River Road near Berewick Elementary School and Dixie River Road near the West Boulevard/I-485 interchange. These roads are intended to serve the anticipated growth in the area bounded by I-85 in the north, I-485 in the east, the new Berewick development in the south, and the Catawba River/Lake Wylie in the west. The anticipated development is described in the Small Area Plan adopted by the City of Charlotte in 2003, but may have changed to some extent over the last twelve years.

### **Level of Public Concern or Interest**

As they become aware of the project, residents in the study area can be expected to have a moderately high level of interest in the project, both because of the benefits the improved roads can have on mobility and safety, but also because of concerns over the potential disruption of new alignments in the area. Because of the potential of this area to experience substantial growth, the project will also have a regional interest to the economic development community and businesses in the adjacent airport vicinity.

### **Public Participation Goals**

The overall goals for public participation will be to:

- Provide the public with balanced and objective information to assist them in understanding the problems, alternatives, opportunities and solutions;
- Obtain public feedback on analysis, alternatives and decisions;
- Work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered;
- Partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution; and
- Place final decision-making in the hands of the public.

### **PHASE I**

Phase I of the project will focus on understanding the context of the project, from an economic, environmental and civic perspective. The nature and extent of development that will take place in the study area over the next twenty years will dictate the nature of the road alignment, cross-section, capacity and traffic mix that will best serve the area. The communication goal for this phase will be to listen carefully to the broad range of the public that has an interest in the study area to enhance the project team's understanding and insight into the issues and opportunities for roadway development.

## **Public Participation Tools**

- Stakeholder focus group interviews
- Developer interviews

## **Stakeholder Identification**

The stakeholder groups will reflect the broad interests of people living and working in the area, organizations concerned with the environmental sensitivity of the area, groups who see the regional significance of economic development opportunities here, and those who will oversee infrastructure development in the study area, including:

- Residents and Local Businesses
- Churches
- Public Schools and Parks
- Economic Development
- Environmental Conservation
- Environmental Permitting
- Transportation Planning
- Private Utilities

## **Developer Identification**

Interviewees will include developers that either own property or would likely buy and develop property in the area. Probable interviewees include:

- Alan Shaw - Norfolk Southern, Vice President of Intermodal Operations
- CLT Air Freight Carrier
- Johnny Harris - Lincoln Harris, President
- Landon Wyatt and Chris Thomas – Childress Klein, Partners
- Keith Glenn – Crescent Communities, Senior Vice President
- Wayne Cooper - Land Owner
- Louis Stephens - Jones Lang LaSalle, Managing Director
- Marc Silverman- industrial developer; M. David Properties, Founder & Owner
- Shannon Binns – Sustain Charlotte, Founder & Executive Director

The notes from the stakeholder and developer interviews will be summarized in a report that will inform the preparation of the Phase II Public Involvement Plan. The contacts from the interviews will be added to an e-mail notification list that will be used to inform participants about opportunities for further involvement during Phase II. Phase I participants will also be encouraged to inform colleagues, neighbors and other interested parties about the Phase II participation opportunities and to encourage their participation.

## **Phase II**

Phase II will develop road alignments and cross sections based on the contextual analysis of Phase I and input from a more robust public involvement process. A series of workshops or charrettes and public meetings will allow for public input and feedback. In combination with broader public communication through the City's website, a proposed alignment, cross-section and phasing plan for Dixie River Road and Garrison Road that has consensus support will be developed.

## **Public Participation Tools**

- Public meeting announcement bulletins
- Public charrette to develop alternatives
- Public meeting to describe developed alternatives
- Public meeting to describe final alternative
- Project newsletter
- Posting of project analysis and findings on City website at key milestones
- E-mail distribution to keep participants and interested parties informed

## **Public Meeting Announcement Bulletins**

Announcements of the Charrette and Public Meetings will be prepared in a format suitable for posting in area restaurants, stores, churches, libraries and other locations to inform area residents and interested parties who do not have e-mail or have not been added to e-mail lists about upcoming events for public involvement.

## **Project Newsletter**

A project newsletter containing project information and updates will be developed for the City to mail or e-mail to citizens and post to the project social media.

## **Charrette**

A three day “Charrette,” or on-site workshop, will be conducted. This Charrette will be fully accessible to the public, and will produce preliminary plan concepts for the Study Area. The Charrette will be conducted in space within the general vicinity of the Study Area,

## **Public Meetings**

A public meeting will be held to present the two refined scenarios developed in the Charrette and the comparative evaluations, and to suggest a “Recommended Concept.” A second public meeting will present the final alternative for public review and comment.

## **City Website Postings and E-mail Distribution**

Project analysis and concepts will be provided to the City in a format suitable for posting to the City’s website. The list of participants and interested parties developed in Phase I and during the Charrette and public meetings will be provided to the City for e-mail distribution.

## **Phase III**

Phase III will be a Preliminary Engineering process that will prepare the initial engineering design of Dixie River Road and Garrison Road, focusing on the initial phases. This will be a more technical process. Public communications will focus on public meeting presentations and postings on the City’s website to

assure that the engineering design is consistent with the conceptual design that received consensus support during Phase II.

## **Public Participation Tools**

- Public meeting announcement bulletins
- Public meetings
- Periodic newsletter
- Posting of project design on City website at key milestones
- E-mail distribution to keep participants and interested parties informed

## **Public Meeting Announcement Bulletins**

Announcements of the Charrette and Public Meetings will be prepared in a format suitable for posting in area restaurants, stores, churches, libraries and other locations to inform area residents and interested parties who do not have e-mail or have not been added to e-mail lists about upcoming events for public involvement.

## **Project Newsletter**

The project newsletter containing project information and updates will be continued during Phase III for the City to mail or e-mail to citizens and post to the project social media.

## **Public Meetings**

Two or three public meetings, as appropriate, will be held to present the ongoing development of the preliminary engineering design, to assure that it is consistent with the final alternative that had consensus support.

## **City Website Postings and E-mail Distribution**

Project analysis and concepts will be provided to the City in a format suitable for posting to the City's website. The list of participants and interested parties developed in Phase I and during the Charrette and public meetings will be provided to the City for e-mail distribution.

# AIRPORT/WEST CORRIDOR OPPORTUNITIES AND CONSTRAINTS

## GENERAL CONSIDERATIONS

- Except for the small portion within Berewick Regional Park, none of the parcels on the Dixie River/Garrison Thoroughfare Plan Alignment (“alignment”) have been annexed – the remainder will require the owners to request annexation
- Up to 55% of the Airport/West Corridor is virtually “unconstrained” to development (ready for grading or redevelopment); however, all of it is in Critical and Protected Watershed and much of it has rolling topography that will challenge development
- Over a sixth of the 7,500-acre area is protected open space, including (round nos.): 300 acres of Nature Preserves, a 200 acre park, almost 300 acres of reserved utility right-of-ways, 700 acres of total stream buffers and other hydrological constraints
- Up to 28% of the Corridor is stable development, including churches, homes, subdivisions and new construction.

## ALIGNMENT SPECIFIC CONSIDERATIONS

### Hydrology and Topography

- The alignment makes (9) new stream or water body crossings, including crossing (2) streams with 100-foot PCO/SWIM Buffers
- One of the crossings is an impact to an existing 3-acre USGS freshwater pond on Wayne Cooper’s land
- Beaverdam Creek crossing impacts a USGS forest/shrub wetland area and an N.C. Ecosystem Enhancement Program easement
- Options to reduce tributary crossings exist by moving the alignment to different parcels upstream or downstream
- The alignment between Dixie River Rd. and Mt. Olive Church Rd. crosses through an area with many steep slopes

### Wildlife

- The Garrison Road extension near Berewick Regional Park skirts an unprotected area with “local species of concern”: Prairie Warbler, Red-headed Woodpecker, Louisiana Waterthrush, American Woodcock, Swainson’s Warbler and Northern Bobwhite
- No N.C. Natural Heritage Program Element Occurrences or Natural Areas occur along the alignment

### Archaeology

- The (2) properties designated as a historic landmark by the Charlotte-Mecklenburg Historic Landmarks Commission are not near the alignment (the 1850s Thomas T. Sandifer House located on Moore's Chapel Road and the 1780s-90s Cooper Log House located at the intersection of the Dixie River Rd. and the Mt. Olive Church Rd.)
- However, there is reportedly an unlisted pre-Revolutionary War stone wall between Sadler Road and Mt. Olive Church Road that may be on or near the alignment
- There are (3) cemeteries in the Corridor to be mindful of:
  - The Mt. Olive Presbyterian Church and Cemetery located on Mt. Olive Church Road was founded in 1860. This is very, very close to the alignment and will need to be avoided.
  - The Berry Hill Baptist Church was organized in 1895 as the Friendship Baptist Church. The historic cemetery, separate from the church, is on the east end of Walkers Ferry Road and is not near the alignment.
  - Ramoth A.M.E. Zion Church on Dixie River Road, on the existing portion to be widened, was also likely founded in the 19<sup>th</sup> century and has a small cemetery behind its present building.

### Private Utility Easements

- The alignment crosses a 200-ft wide Duke Energy easement near Berewick Regional Park, a 100-ft wide ATT easement on the Fletcher/Phillips property on Dixie River Road, and a 50-ft wide Piedmont Natural Gas easement near Dillard Valley Road

### Development Considerations

- The Thoroughfare Plan alignments for Dixie River Road and Garrison Road are almost completely within the areas designated underutilized or vacant; the existing Dixie River Road alignment will grant better access to these parcels in the south
- The alignment in the Walkers Ferry Rd. area, Goodman Road and the upper area of Garrison Road crosses a lot of small parcels; moving the alignment westward north of Dixie River Road, closer to the river, could grant options that cross through larger lots or major landholdings (the timing of voluntarily annexations into the City will determine how quickly the alignment can be realized - the smaller the holdings, the greater the risk is to stall the project because of owners who do not see as much benefit)
- Below Dixie River Road, the Garrison Road alignment, according to adopted land use, would only serve non-residential development; this ridge is very narrow and topographically challenged to provide much room for that kind of development
- As it presently exists, the alignment also squeezes the non-residential designated area just south of Old Dowd Road

# Airport/West Corridor Opportunities and Constraints Memorandum

## Purpose of the Memorandum

This memorandum documents the geographic conditions of the Airport/West Corridor to identify land development constraints and opportunities that will impact the future development in the Corridor. First, current land and ownership conditions of the Corridor are assessed in map “overlays” to compile the regulatory and geographic constraints evinced by geographic data collected at the beginning of 2015. It will then delineate the primary land control, utilization and ownership factors that will steer the preservation and managed growth of the Corridor. This memorandum documents the methodology and data used to derive the alignment considerations for these geographic conditions. Several preliminary observations provided by this study may impact phasing and alignments in the proposed extension of Garrison Road and widening of Dixie River Road and are summarized in the “Summary of Alignment Considerations” at the end of the memorandum.

## Methodology

This study first combines a series of “constraint” overlays to produce an aggregated constraints overlay of “All Highly Constrained Land” (Figure 8.0) based on GIS data compiled in January to February of 2015. The first seven maps depict the classes of constraints that are aggregated. These identify the *predicted* limits of geographic conditions that highly constrain growth according to such factors as the hydrological regulation in place, the permanently protected and publicly owned areas, the environmental and topographic characteristics, and the existing infrastructure and development conditions of the Corridor. Next, the total area of the remaining “relatively unconstrained land” is identified and sorted by several categories of factors that can be used to predict the development potential of these areas. The study identifies the base development “opportunity”, based in total land area, for five of these factors, which will lay the basis for comparing the benefits and deficits of alignment options later in the process.

The first land control factor, the watershed overlays in regulation, will be used to predict the density and open area characteristics of future land development (Figures 10.0 and 10.1). Other factors considered in this study are the jurisdictional control (Figures 11.0 and 11.1) and the general utilization of land (Figure 12.0), which will help pinpoint the areas of vacant and underutilized land available that can actually be developed in the near term to support a return on the City’s investments. Both of these factors, represented in the second and third set of maps, can be useful in prioritizing land for annexation when considering the characteristics of land holdings. With the help of the watershed overlay information, the potential yield of future development types can be characterized by the City’s present, generalized land use policy for the Corridor, depicted in the fourth set of maps (Figures 13.0 and 13.1). Finally, a fifth set of maps (Figures 14.0 and 14.1) depicts all the land holdings in the Corridor, identified by sorting ownership data on Mecklenburg County’s Tax Data Parcel GIS shapefile. These maps represent holdings by the size of the holding, both by total area as well as by area suitable for development, and will help inform the project team on the potential of ownership patterns to galvanize development. They are also a record of the extent of efforts underway in early 2015 at land assembly. Going forward and as they are updated, all five of these primary land control and ownership factors – watershed overlay, jurisdictional control, existing land utilization, land use policy, and ownership pattern

– will be mindfully considered with the public in evaluating roadway and infrastructure development options, including phasing and alignment options.

The reader is advised to bear in mind that as new inputs are considered in Advance Planning, the predicted extent of “constraint” and “opportunity” conditions is dynamic and will fall out, in minor ways, out of the pattern predicted initially by this memorandum. More importantly, the “constraints” of this study are not all constrained by public controls (although some are representing current regulation), but as with threatened habitat for “local species of concern” and Natural Heritage element occurrences, they are “constraints” predicted for the purposes of this evaluation, since they are anticipated to steer compelling public interests in all future development. Resources like this may in fact be “unconstrained” to loss by private development in the regulatory domain. The existence of a pre-Revolutionary War site, not noted by historic site registries or otherwise known regulatory record, surfaced at the last focus group meeting and is an example of a new data point that will need to be located and evaluated in the future.

Below is an item by item description of the predicted constraint and opportunity conditions considered in the study.

### **Hydrological Constraints (Figure 1.0)**

Slightly less than 10% of the Corridor study area, excluding Lake Wylie, is constrained by several hydrological factors. These include ponds, wetlands, floodplains, SWIM (Surface Water Improvement and Management) buffers, and PCO (Post-Construction Stormwater Ordinance) buffers.

SWIM buffer widths range from 35 to 50 ft., depending on the property size. In addition to buffers, SWIM is an on-going, strategic, long-range effort that includes:

- pollution reduction
- erosion control
- water quality monitoring
- watershed planning
- public information
- stream restoration and enhancement projects.

In general, the Post-Construction Stormwater Ordinance requires:

- No-build zones and undisturbed natural buffers of varying widths along streams,
- A portion of the site be left as undisturbed natural area,
- Installation of approved, on-site storm water Best Management Practices such as rain gardens, detentions ponds, and wetlands to collect and treat storm water, and
- Construction of storm water detention measures that reduce flooding risks for downstream properties and streets.

### **Ecologically Sensitive/Significant Areas (Figure 2.0)**

Ecologically sensitive and significant areas in the Corridor include North Carolina Natural Heritage Program designated Natural Areas and locations where there is an element occurrence. These make up about 4% of the Corridor land area.

The North Carolina Natural Heritage Program is part of the Office of Land and Water Stewardship within the N.C. Department of Environment and Natural Resources. The program serves as an information clearinghouse in support of conservation of the rarest and most outstanding elements of natural diversity in the state. These elements of natural diversity include plants and animals which are so rare or the natural communities which are so significant that they merit special consideration as land-use decisions are made. The Natural Heritage Program follows methodology developed by The Nature Conservancy and the Natural Heritage Network and maintained by NatureServe. By consolidating information about hundreds of rare species and natural communities, the program ensures that the public is able to get the information that is needed to weigh the ecological significance of various sites, and to evaluate ecological impacts. This information helps project planners and landowners make land use decisions that have the most benefit for society and the economy, while having the least ecological impact. This information facilitates the establishment of priorities for the protection of North Carolina's most significant natural areas.

Wildlife species of special concern have been identified in four locations within the Corridor. North Carolina Special Concern include any species of wild animal native or once native to North Carolina that is determined by the Wildlife Resources Commission to require monitoring but that may be taken under adopted regulations. New construction should observe a 500 foot area around these areas to avoid impacts.

There is also a North Carolina Ecosystem Enhancement Program Element along Beaver Dam Creek, where a stream restoration and enhancement program is underway as mitigation for development impacts from other major construction projects nearby (probably I-485 and/or Charlotte-Douglas International Airport expansion construction projects). This program includes deed-restricted conservation easements.

### **Designated Open Space (Figure 3.0)**

There are four designated open space areas in the Corridor that comprise about 7% of the Corridor land area.

Berewick Regional Park is a Mecklenburg County Parks and Recreation regional park currently under development. Its approximately 195 acres will have roughly 50% active recreation and 50% open space. It includes some areas with deed-restricted conservation easements. It is adjacent to Berryhill Elementary School.

Iswa Nature Preserve and Berryhill Nature Preserve are also Mecklenburg County Parks and Recreation properties that are to remain open space. Iswa Nature Preserve is a 137 acre nature preserve Berryhill Nature Preserve is a 160 acre preserve. Both preserves are protected in perpetuity for watershed protection, natural communities' protection, and the provision of passive recreation opportunities. The shoreline and adjacent 500' buffer of each preserve comprise North Carolina Natural Heritage Sites.

The Paw Creek Greenway is designated in the ten year priority plan of The Mecklenburg County Park and Recreation master plan which identified 34 stream-based greenway corridors.

### **Infrastructure (Figure 4.0)**

Infrastructure in the Corridor consists of NCDOT roads and rights-of-way, Duke Power transmission line rights-of-way from the Allen Steam Plant on the west side of the Catawba River (Lake Wylie) and substations, and Piedmont Natural Gas rights-of-way. These comprise about 5% of the Corridor land area.

Dixie River Road is NCDOT State Road 1155 and Garrison Road is SR 1148.

### **Historic Properties (Figure 5.0)**

There are two historic properties and two historic cemeteries in the Corridor.

The Thomas T. Sandifer House located on Moore's Chapel Road was built in the 1850's and is one of the few ante-bellum houses remaining in this section of Mecklenburg County. It has been designated as a historic landmark by the Charlotte-Mecklenburg Historic Landmarks Commission and the Board of Commissioners of Mecklenburg County.

The property known as the Cooper Log House is located at the intersection of the Dixie River Rd. and the Mt. Olive Church Rd. The log house was built in the 1780's or 1790's by William Cooper (1758-1834), and is one of the few 18th-century structures which survives in Mecklenburg County. It has been designated as a historic landmark by the Charlotte-Mecklenburg Historic Landmarks Commission and the Board of Commissioners of Mecklenburg County.

The Mt. Olive Presbyterian Church and Cemetery located on Mt. Olive Church Road was founded in 1860.

The Berry Hill Baptist Church was organized in 1895 as the Friendship Baptist Church and located on Walker's Ferry Road on land donated by R.M. Walker. It relocated to the present site in 1947 and changed name to Berryhill Baptist Church. The cemetery is located on Walker's Ferry Road

There is also reportedly a pre-revolutionary stone wall between Sadler Road and Mt. Olive Church Road.

### **Stable Development (Figure 6.0)**

Stable development is considered to be properties or developments which are unlikely to change to other types of land use over the next several decades. About 28% of the land uses in the Corridor are considered stable. Non-residential uses include churches, other community uses, County uses other than Parks and Recreation, public schools, state owned properties and existing residential subdivisions.

Hydrological constrained, ecologically sensitive/significant, designated open space, infrastructure, and historic properties are considered in addition to stable development for purposes of evaluating opportunities and constraints in the Corridor.

### **Steep Slopes (Figure 7.0)**

Slopes over 25% are generally considered undevelopable. About 38 acres in the Corridor, or about 0.5%, consist of steep slopes. These are mostly associated with streams and tributaries of the Catawba River/Lake Wylie.

### **All Highly Constrained Land (Figure 8.0)**

All of the preceding categories of land and land use are considered highly constrained from new development, either because they are protected, are stable existing land uses, or are unsuitable for development. The highly constrained land and parcels account for about 45% of the total Corridor land area, leaving about 55%, or approximately 4,100 acres suitable and available for future development.

### **Other Potential Constraints (Figure 9.0)**

In addition to the land identified as highly constrained in this analysis, there are some other factors in the Corridor which potentially could be constraints on future development. These include:

- A large parcel of land owned by the City of Charlotte, but not currently annexed into the City limits, which may have been acquired due to soot impacts from Duke Power's Allen Steam Plan on the opposite side of the Catawba River/Lake Wylie;
- A portion of one parcel contains a Manufactured Home Overlay, which places minor restrictions that bear on the compatibility of a manufactured home in the property with the underlying residential district, but otherwise offers no further constraints on development;
- Properties rezoned since 2000 for subdivision development which have not yet been developed but are presumed to be developed in the future; and
- Land affected by the Charlotte-Douglas International Airport noise disclosure overlay (which is currently undergoing revision)

### **Watershed Overlays (Figure 10.0)**

In addition to the highly constrained land within the Corridor, the entire Corridor is included in one of four Watershed Protection Overlay Districts, which place limitations on development that occurs within those areas: the Catawba River/Lake Wylie Critical Area, the Catawba River/Lake Wylie Protected Area, the Lower Lake Wylie Critical Area, and the Lower Lake Wylie Protected Area. The High Density Development Permit allows properties in these overlay districts the option to develop a greater portion of the property as impervious "built upon area" by constructing and maintaining structural BMPs. The limitations on development in these areas generally are:

- Catawba River/Lake Wylie Critical Area: the allowable built upon area must be less than 24% with a 100 foot lake/stream buffer; for properties seeking a High Density Development Permit, the built upon area must be less than 50% with a 100 foot lake/stream buffer.
- Catawba River/Lake Wylie Protected Area: the allowable built upon area must be less than 24% with a 40 foot lake/stream buffer; for properties seeking a High Density Development Permit, the built upon area must be less than 50% with a 100 foot lake/stream buffer.

- Lower Lake Wylie Critical Area: the allowable built upon area must be less than 20% with a 50 foot lake/stream buffer; for properties seeking a High Density Development Permit, the built upon area must be less than 50% with a 100 foot lake/stream buffer.
- Lower Lake Wylie Protected Area: the allowable built upon area must be less than 24% with a 40 foot lake/stream buffer; for properties seeking a High Density Development Permit, the built upon area must be less than 70% with a 100 foot lake/stream buffer.

Additionally, the North Carolina Catawba River Basin Riparian Buffers adopted by the State of North Carolina apply to the entire main stem of the Catawba River from Lake James to the South Carolina border. This includes the entire shoreline of Lake Wylie.

Other limitations on watershed overlay development are summarized in Table 10.3.

### **Watershed Overlay Areas Relatively Unconstrained (Figure 10.1)**

The watershed protection overlay districts will determine the amount of development that the 4,100 acres of relatively unconstrained land can support. Figure 10.3 demonstrates that 83% of the Corridor's suitable land for development is in the Lower Lake Wylie (LLW) Watershed Overlay areas, a little more than half of that in the LLW Protected Area. The size of the land holding assembled by developers will have a great impact on their decisions to build under the low density or high density options, since structural BMPs and the difficult topography of the corridor may necessitate larger scale projects to recover the associated land development costs.

Figure 10.1 and Table 10.3 provide a good basis to confirm the merits of the present alignments, which provide access to the land areas with the most flexibility for development in the Lower Lake Wylie Protected Area overlay. Note that the LLW Critical Area is the most restrictive overlay area in the Corridor and the alignments stay mostly out of it. In the north, the extension alignment roughly skirts the divide between the Critical Area and Protected Area, thus also providing access to both areas.

### **Jurisdictional Control and Publicly Owned Land (Figure 11.0)**

Most of the land in the Corridor is in Mecklenburg County. A relatively small amount of land has been annexed into the City of Charlotte and falls within their jurisdictional control. Some of the land is owned by Charlotte-Mecklenburg Schools, Charlotte-Douglas International Airport, other City of Charlotte departments, or Mecklenburg County, and is under the jurisdictional control of those entities.

### **Jurisdictional Control and Publicly Owned Land in Relatively Unconstrained Areas (Figure 11.1)**

Of the land in relatively unconstrained areas, only a small portion is within the Charlotte city limits or is owned by the City of Charlotte. Since City funds can only be spent on projects within the city limits, virtually none of the bond funds for the Dixie River Road widening and Garrison Road extension can be spent until the land where they are included in the Thoroughfare Plan is annexed into the City. Since annexation into the City must be voluntary annexation, the City will have to wait until requests for voluntary annexation are received to undertake the road improvements. Such requests are most likely to come from new development, major land owners, or a combination of both.

### **Underutilized or Vacant Land in Constrained and Relatively Unconstrained Areas (Figure 12.0)**

New development or major land owners that might request to voluntarily be annexed into the City will most likely be in the relatively unconstrained areas of the Corridor. These areas are shown in Map A/U-02 (Figure 12.0) in dark blue for underutilized properties that are relatively unconstrained and in dark green for vacant properties that are relatively unconstrained.

The Thoroughfare Plan alignments for Dixie River Road and Garrison Road are primarily within these areas. However, future study should carefully inspect the several places along the alignment where the alignment crosses parcels consider well utilized. The utilization of the properties on the map in Figure 12.0 begins to suggest alternate paths that may support the alignment through areas that may be better prospects for development based on the comparative ease to build on or redevelop what is there today. For example, the area north of Walkers Ferry Road might provide an attractive alternate alignment to the west of the current alignment if SteelFab, Inc. decides to relocate its facility on Old Dowd Road.

In general, the development of underutilized and vacant land within relatively unconstrained areas, when it occurs and is annexed into the City, will determine four key factors for determining appropriate alignments and cross sections of Dixie River Road and Garrison Road:

- The volumes of traffic that will be generated by the ultimate development of the area,
- The mix of traffic that will use the roads, especially the amount of truck traffic that might be anticipated,
- The location of major non-residential traffic generators within the area, and
- The locations where there might be the potential for private developer participation in the cost of the roads.

The adopted future land use is the best guide for the potential development of the area.

### **Generalized Adopted Future Land Use (Figure 13.0)**

The adopted future land use was determined by the Dixie-Berryhill Strategic Plan, which was adopted by the Charlotte City Council in 2003. The generalized land use of this plan is shown in Map A-03 (Figure 13.0).

Summaries of the key land use recommendations of the plan are:

#### ***Transit Oriented Community Future Land Use Recommendations***

This sub-area is bounded on the north by Interstate I-485 and on the south by Paw Creek Cove and Old Dowd Road. It encompasses the western end of the Wilkinson Boulevard corridor that was identified in the 2025 Transit/Land Use Plan as one of the region's five transit corridors.

- Higher intensity employment/mixed use developments along the major transportation corridors (Wilkinson Boulevard, a portion of Old Dowd Road, I-485, and Sam Wilson Road.).
- Multi-family mixed use in the area generally between Sam Wilson Road and Amos Smith Road.
- Lower intensity development along a network of interconnected secondary roads generally west of Sam Wilson and Amos Smith Roads. Residential uses would be allowed up to (4) dwelling units per acre between Sam Wilson and Moores Chapel Road and five (5) dwelling units per acre west of Moores Chapel Road and Amos Smith Road.

- A “Gateway Park” site of about 140 acres, located on the Catawba River, on the south side of Wilkinson Boulevard.

***Mixed-Use Community A Land Use Recommendations***

This area is bound on the north by Paw Creek Cove and Little Paw Creek on the south. This area includes the established communities of Dixie and Berryhill.

- Higher intensity employment mixed-use development along the major transportation corridors (I-485 and the area generally east of the proposed, new north/south thoroughfare).
- Lower intensity development of up to 4 -5 dwelling units to the acre along a network of interconnected secondary roads west of the proposed north/south connector near Walkers Ferry Road.
- Multi-family/retail mixed use developments just east of the new north-south thoroughfare.
- The approximately 100 acres Berryhill Park site located on the south side of Paw Creek Cove.
- A park site of approximately 200 acres south of Berryhill Elementary School.

***Mixed-Use Community B and C Land Use Recommendations***

Community B is bound on the north by Little Paw Creek, to the south by the proposed western extension of West Boulevard, to the west by the Catawba River, and the east by Interstate I-485.

Community C is bound on the north by the proposed western extension of West Boulevard, to the south by lower Dixie River Road, to the west by the Catawba River, and to the east by I-485.

The major land use recommendations for Mixed-Use Community B and C are:

- The eastern side of the area generally east of the proposed north/south thoroughfare is proposed primarily for employment/mixed-use developments. Higher intensity employment is proposed along the major transportation corridors (Interstate 485, the proposed north/south thoroughfare and Garrison Road, Dixie River Road, and West Boulevard extension. The majority of Mixed Use Community C is located in the airport noise contour of 65.
- Lower intensity residential developments up to four (4) dwelling units per acre, are recommended generally east of Walkers Ferry Road and five (5) dwelling units are recommended along a network of interconnected secondary roads generally west of Walkers Ferry Road and Dixie River Road.

***Mixed-Use Community D Land Use Recommendations***

Community D is bound on the north side by Dixie River Road and Beaver Dam Creek, on the south by Rock Island Road/Shopton road, and Steele Creek Road, to the west by the Catawba River, and to the east by Interstate I-485.

The major land use recommendations for Mixed-Use Community D, as shown on Map A-03 (Figure 13.0) are:

- A mixed-use employment center between Interstate I-485 and the proposed north/south thoroughfare, near Dixie River Road. This center is envisioned to provide a focal point with high intensity employment uses

- A mixed-use employment center has been approved as a compact/walkable community with a mix of neighborhood scale retail, a mix of housing types and styles including single family detached housing, attached multi-family and townhomes.
- Residential uses, up to four (4) dwelling units per acre, along the western and central part of this sub-area.
- A district park of approximately (215) acres along the eastern border of Community D just north of Dixie River Road.

### **Generalized Adopted Future Land Use in Relatively Unconstrained Areas (Figure 13.1)**

Since the 2003 adoption of the Dixie-Berryhill Strategic Plan, some development has taken place in the Corridor, especially in the Berewick development. The remaining relatively unconstrained areas are indicated in Map U-03 (Figure 13.1) with the future land uses described in the Dixie-Berryhill Strategic Plan.

An evaluation of the acreages in these areas compared with the Strategic Plan land uses would yield the ultimate development capacity of the Corridor. This would enable a traffic analysis based on the future land uses.

### **Major Land Holdings in the Corridor (Figure 14.0)**

The major land holdings may be the earliest parcels to develop, since they require the least land assembly. These are indicated on Map A-04 (Figure 14.0) by size:

- 300 to 1,000 acres
- 110 to 300 acres
- 60 to 110 acres
- 30 to 60 acres
- 10 to 30 acres
- Less than 10 acres

### **Relatively Unconstrained Development Opportunity for Major Land Holdings in the Corridor (Figure 14.1)**

The largest relatively unconstrained parcels, between 300 and 1,000 acres, are mostly close to the Catawba River/Lake Wylie, where the Dixie-Berryhill Strategic Plan indicates single family residential land uses. The parcels indicated in the Strategic Plan as non-residential mixed use or non-residential and residential mixed use are nearly all less than 300 acres, suggesting they might require more land assembly by a developer and thus might not develop as quickly.

The timing of the development in these areas will affect when they might request to be voluntarily annexed into the City, which will determine the phasing of Dixie River Road widening and Garrison Road extension projects.

## Summary of Alignment Considerations

Considering the existing alignment for the Garrison Road Extension and Widening of Dixie River Road, the following general considerations pertain from inspection of the set of maps produced in this study:

- Except for the small portion within Berewick Regional Park, none of the parcels on the Dixie River/Garrison Thoroughfare Plan Alignment (“alignment”) have been annexed – the remainder will require the owners to request annexation.
- Up to 55% of the Airport/West Corridor is virtually “unconstrained” to development (ready for grading or redevelopment); however, all of it is in Critical and Protected Watershed and much of it has topography that will challenge development.

The following are local considerations that will that may impact the Thoroughfare Plan and its alignment:

### Hydrology and Topography

- The alignment makes (9) new stream or water body crossings, including the crossing of two (2) streams with 100-foot PCO/SWIM Buffers.
- One of the crossings is an impact to an existing, 3-acre USGS freshwater pond on Wayne Cooper’s land.
- The Beaverdam Creek crossing impacts a USGS forest/shrub wetland area and an N.C. Ecosystem Enhancement Program easement.
- Options to reduce tributary crossings exist by moving the alignment to different parcels upstream or downstream.
- The alignment between Dixie River Road and Mt. Olive Church Road crosses through an area with many steep slopes.

### Wildlife Habitat

- The Garrison Road extension near Berewick Regional Park skirts an unprotected area with “local species of concern”: Prairie Warbler, Red-headed Woodpecker, Louisiana Waterthrush, American Woodcock, Swainson’s Warbler and Northern Bobwhite.
- No N.C. Natural Heritage Program Element Occurrences or Natural Areas occur along the alignment.

### Archaeology

- The two (2) properties designated as a historic landmark by the Charlotte-Mecklenburg Historic Landmarks Commission are not near the alignment (the 1850s Thomas T. Sandifer House located on Moore’s Chapel Road and the 1780s-90s Cooper Log House located at the intersection of the Dixie River Road and the Mt. Olive Church Road).
- However, there is reportedly an unlisted pre-Revolutionary War stone wall between Sadler Road and Mt. Olive Church Road that may be on or near the alignment.
- There are three (3) cemeteries in the Corridor to be mindful of:
  - The Mt. Olive Presbyterian Church and Cemetery located on Mt. Olive Church Road was founded in 1860. This is very close to the alignment and will need to be avoided.
  - The Berry Hill Baptist Church was organized in 1895 as the Friendship Baptist Church. The historic cemetery, separate from the church, is on the east end of Walkers Ferry Road and is not near the alignment.

- Ramoth A.M.E. Zion Church on Dixie River Road, on the existing portion to be widened, was also likely founded in the 19th century and has a small cemetery behind its present building.

#### Private Utility Easements

- The alignment crosses a 200-foot wide Duke Energy easement near Berewick Regional Park, a 100-foot wide AT&T easement on the Fletcher/Phillips property on Dixie River Road, and a 50-foot wide Piedmont Natural Gas easement near Dillard Valley Road.

#### Development Considerations

- The Thoroughfare Plan alignments for Dixie River Road and Garrison Road are almost completely within the areas designated underutilized or vacant; the existing Dixie River Road alignment will grant better access to these parcels in the south.
- The alignment in the Walkers Ferry Road area, Goodman Road and the upper area of Garrison Road crosses a lot of small parcels; moving the alignment westward north of Dixie River Road, closer to the river, could grant options that cross through larger lots or major landholdings (the timing of voluntarily annexations into the City will determine how quickly the alignment can be realized - the smaller the holdings, the greater the risk is to stall the project because of owners who do not see as much benefit).
- Below Dixie River Road, the Garrison Road alignment, according to adopted land use, would only serve non-residential development; this ridge is very narrow and topographically challenged to provide much room for that kind of development. Keep in mind that maximum allowable built upon area here under the Lower Lake Wylie Protected Area watershed overlay is 24% without building structural BMPs. The smaller sized properties here may make it hard for developers to get enough return for a yield with the high density option, allowing 70% built upon area with structural BMPs (see Table 10.3).
- As it presently exists, the alignment also squeezes the non-residential designated area just south of Old Dowd Road.

# **Airport/West Corridor Constraints Mapping Analysis**

Neighboring Concepts

DRAFT March 24, 2015

Figure 1.0

Map C-01 Hydrological Constraints

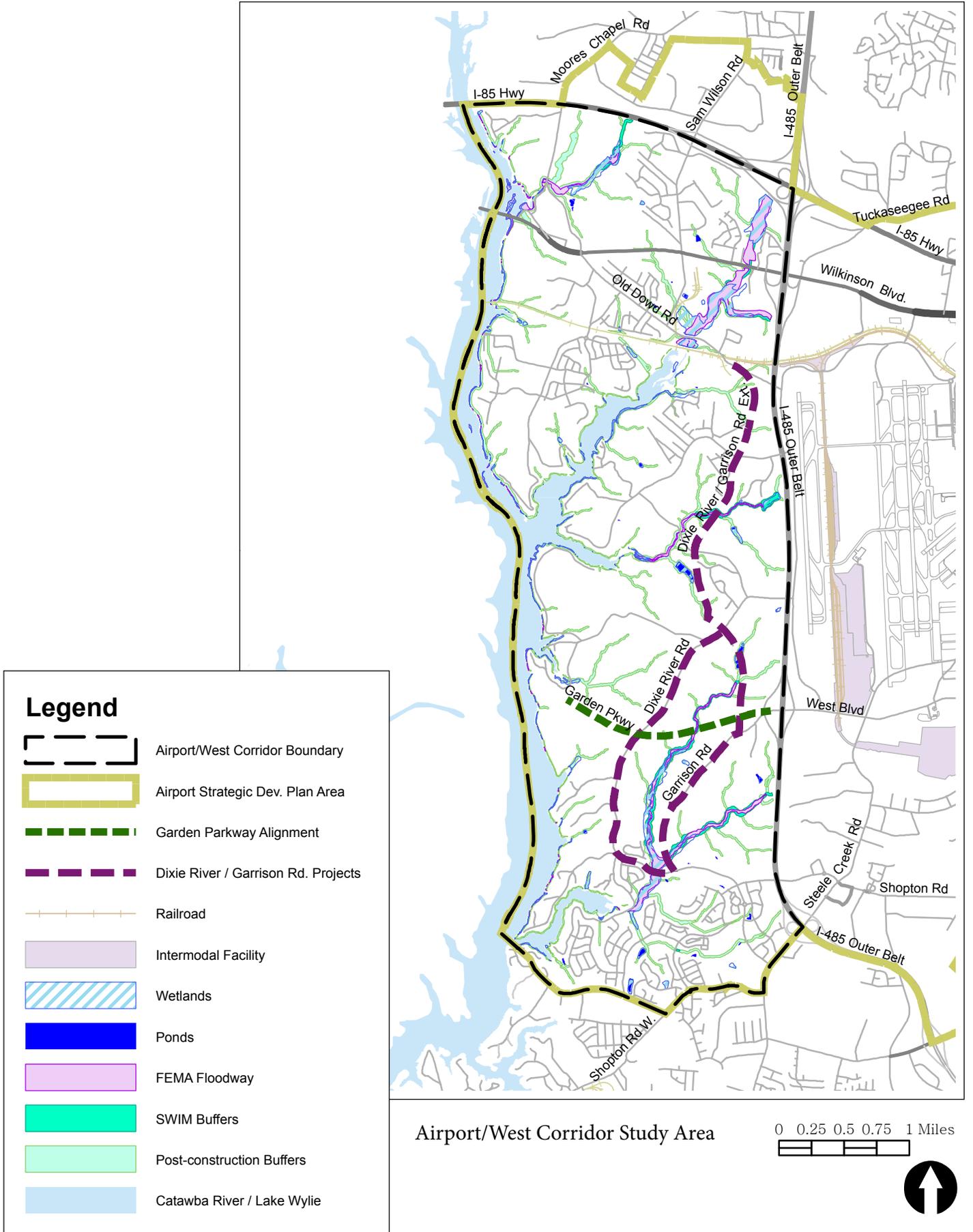


Table 1.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
All Hydrologically Constrained Parcel Area (Excluding Lake)	698.292 ACRES
Airport/West Corridor Parcel Area Without the Constraints (Excluding Lake)	6762.692 ACRES

Figure 1.1

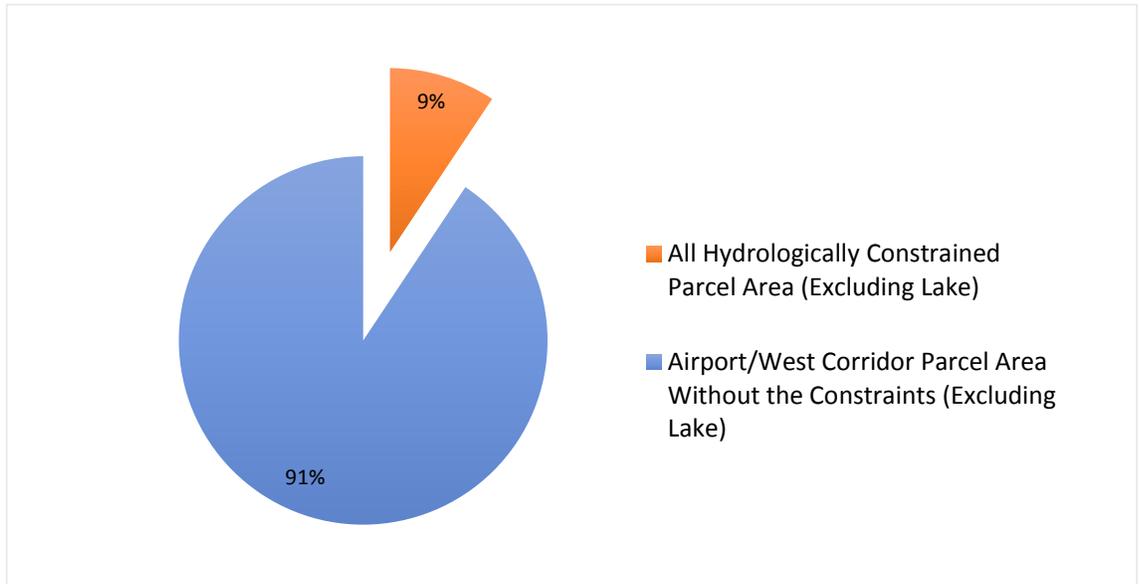


Table 1.2

Constraints	Total Parcel Area (Acres)
Ponds	20.134
Wetlands	201.700
FEMA Floodplains	146.161
SWIM Buffers	110.742
PCO Buffers	601.296
All Non-Lake Constraints	698.292

Figure 1.2

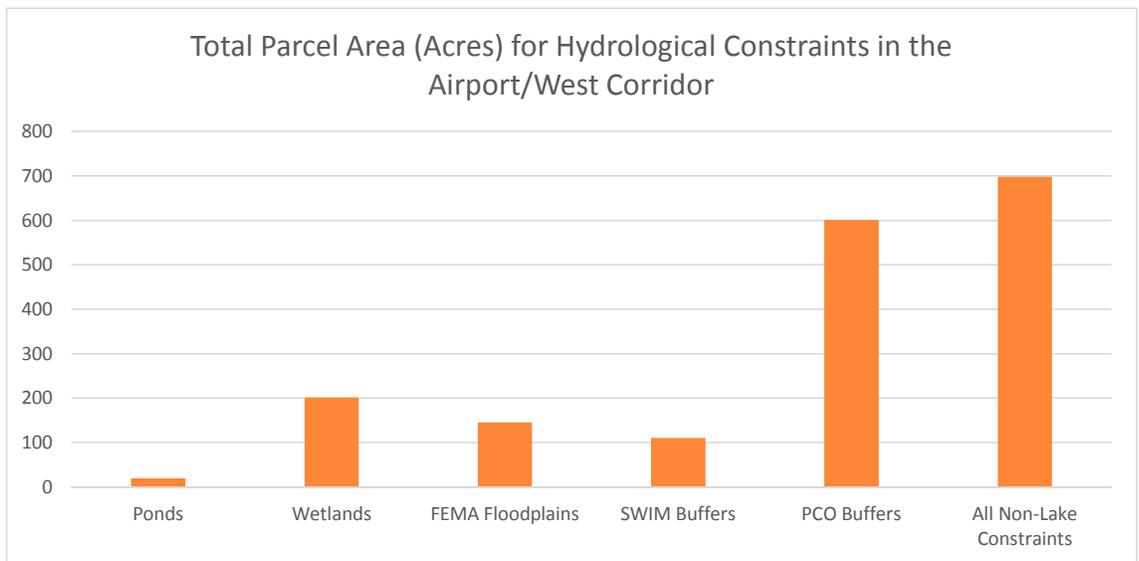


Figure 2.0

Map C-02 Ecologically Sensitive/Significant Areas

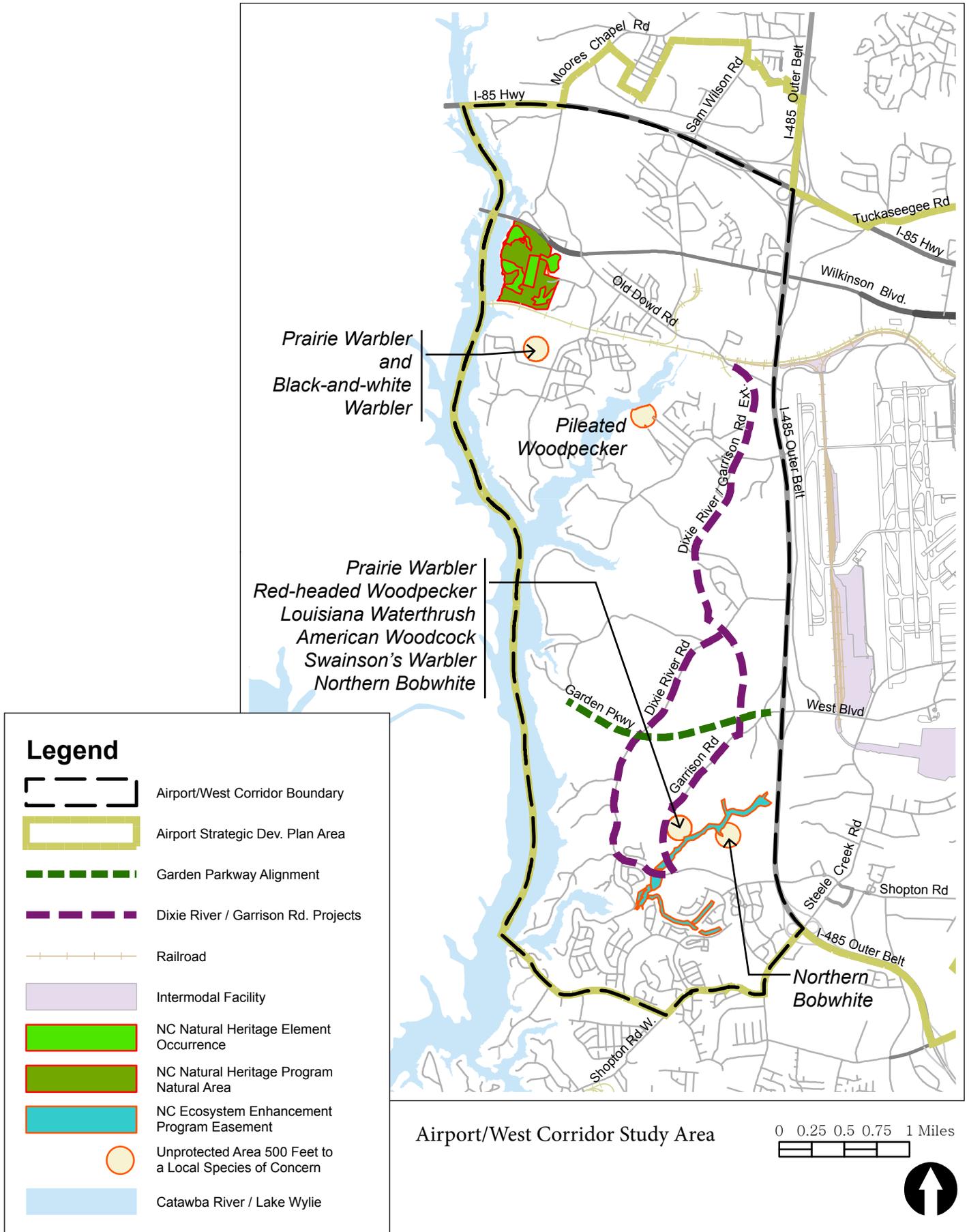


Table 2.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
All Ecologically Sensitive or Significant Parcel Area	269.643 ACRES
Airport/West Corridor Parcel Area Without the Occurrences	7191.341 ACRES

Figure 2.1

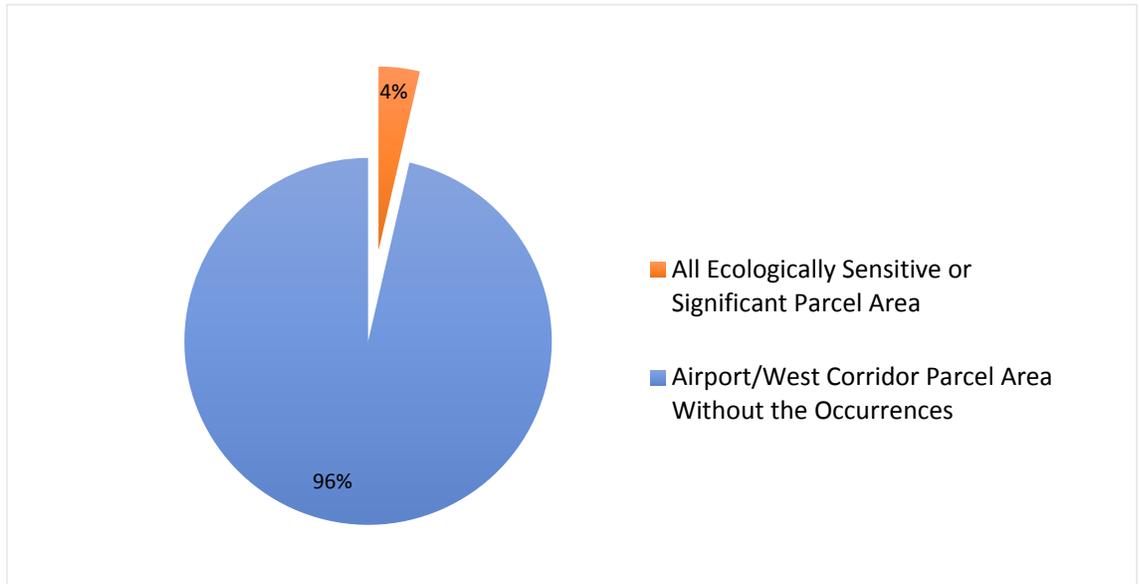


Table 2.2

Constraints	Total Parcel Area (Acres)
Natural Heritage Element Occurrence	51.726
Natural Heritage Program Natural Area	136.392
NC Ecosystem Enhancement Prog. Easement	57.990
Area 500 Feet to a Local Species of Concern	102.850
All Ecologically Significant Areas	269.643

Figure 2.2

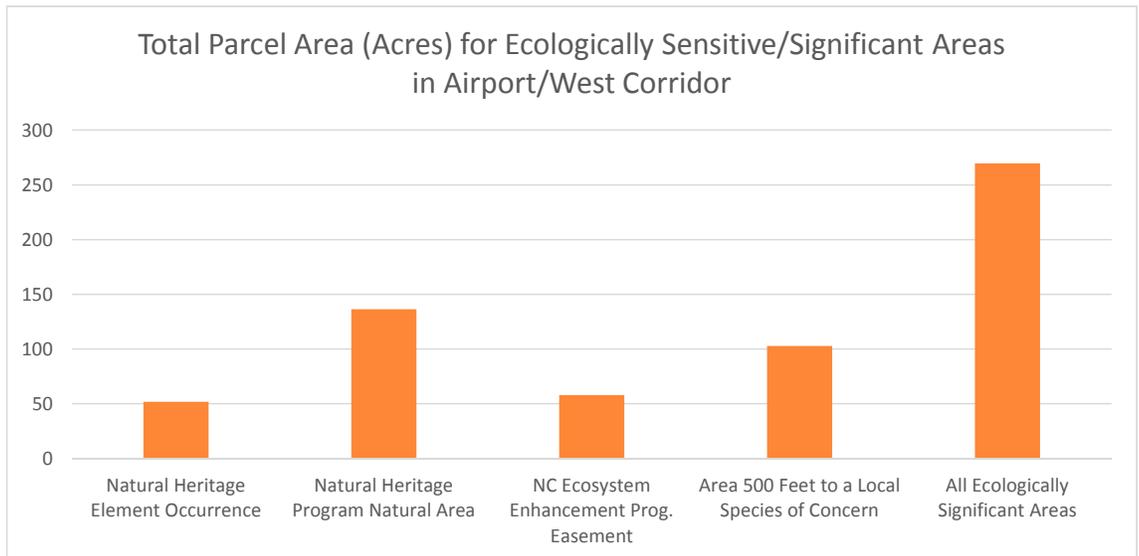


Figure 3.0

Map C-03 Designated Open Space

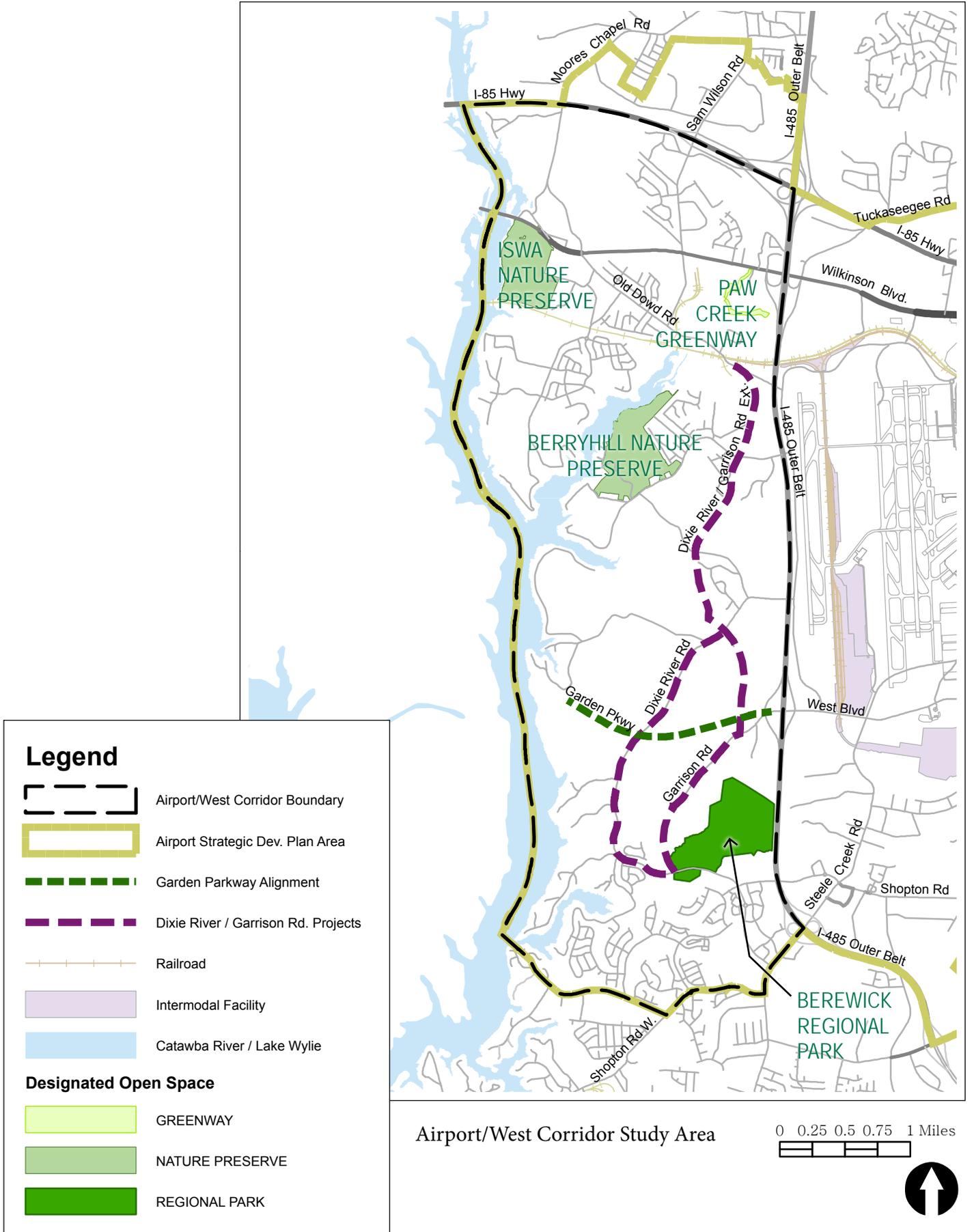


Table 3.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
All Publicly Owned, Designated Open Space	527.944 ACRES
Airport/West Corridor Parcel Area Without the Constraints	6933.040 ACRES

Figure 3.1

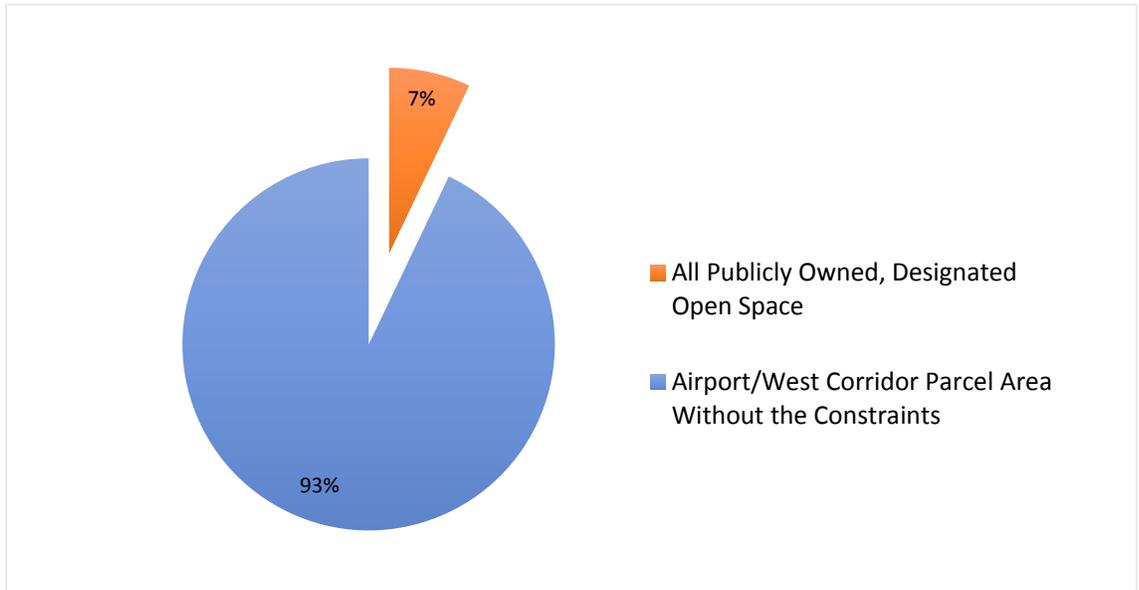


Table 3.2

Constraints	Total Parcel Area (Acres)
Nature Preserves	304.698
Regional Park	209.938
County Owned Greenway	13.308
All Publicly Owned, Designated Open Space	527.944

Figure 3.2

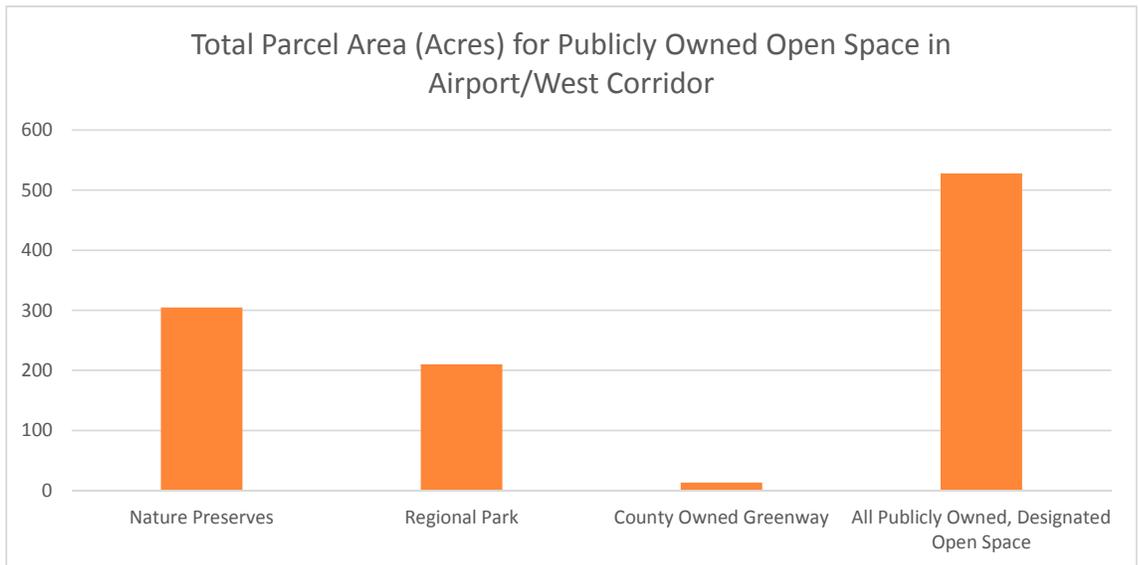


Figure 4.0 Map C-04 Infrastructure

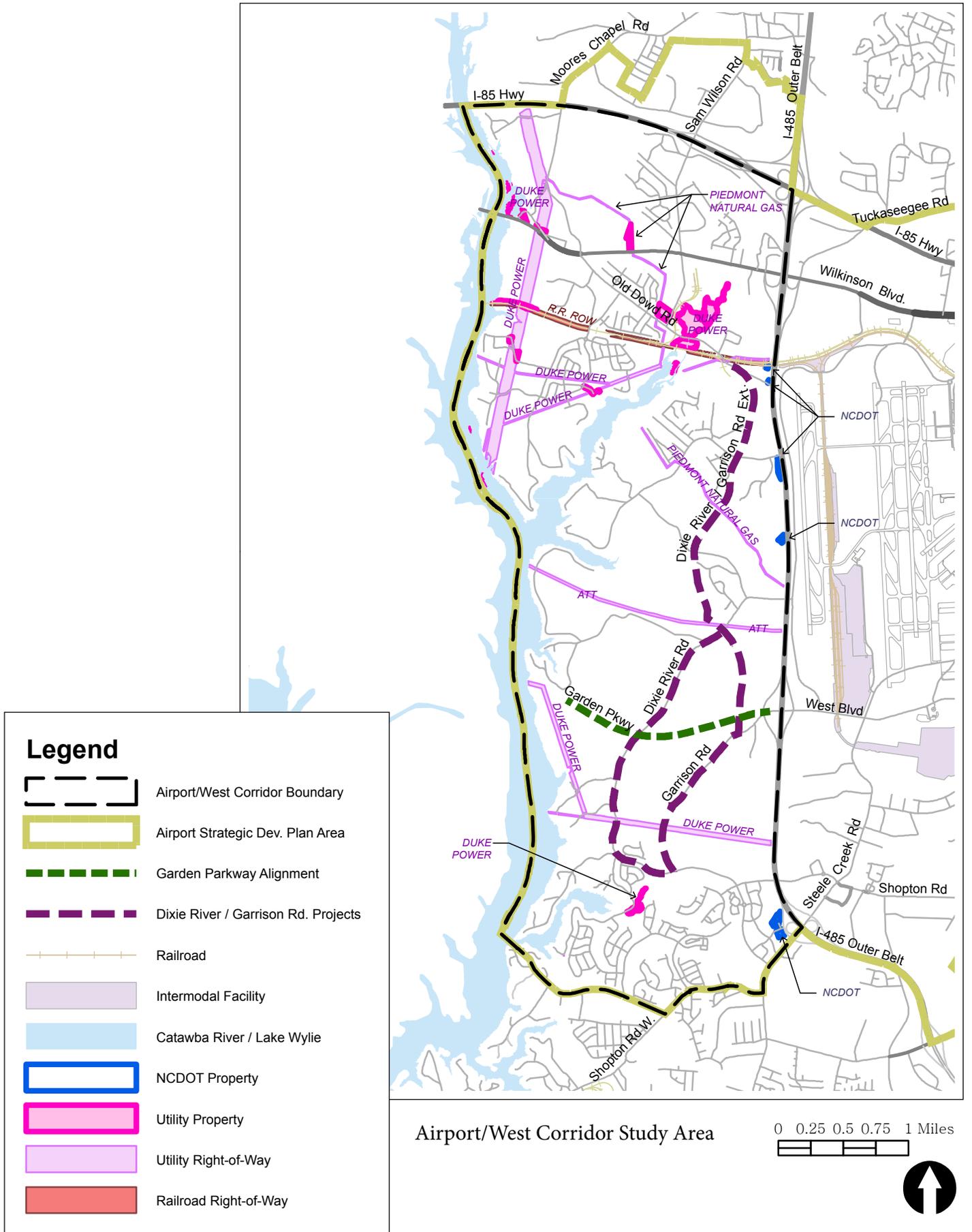


Table 4.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
All Parcel Area with Infrastructural Constraints	366.101 ACRES
Airport/West Corridor Parcel Area Without the Constraints	7094.883 ACRES

Figure 4.1

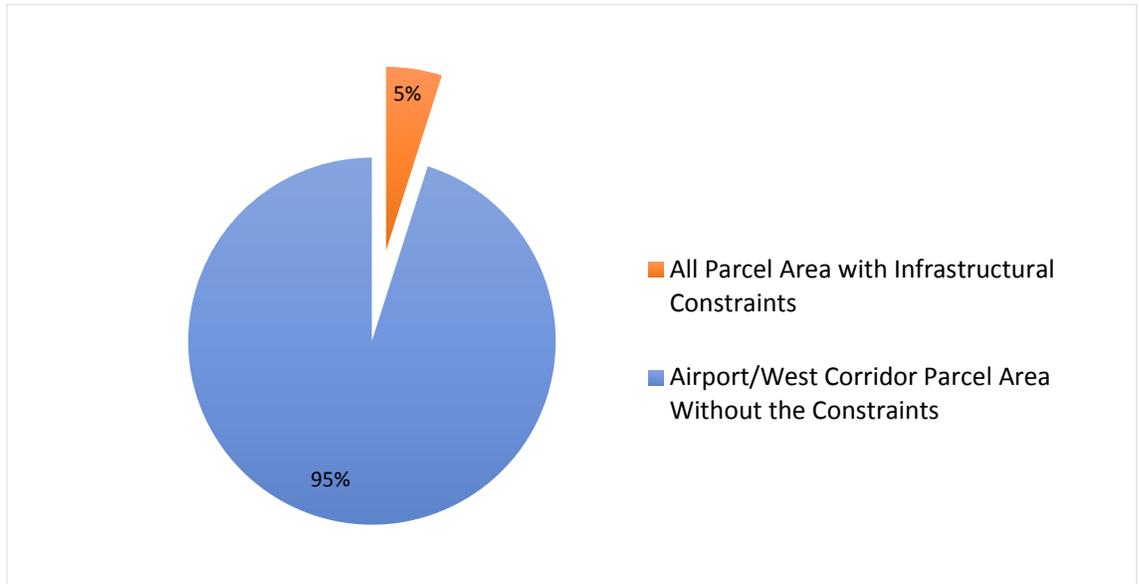


Table 4.2

Constraints	Total Parcel Area (Acres)
NCDOT Owned Property	6.560
Utility Owned Property	56.250
Total Parcel Area in Utility Rights-of-Way	274.493
Total Parcel Area in Railroad Rights-of-Way	13.308
All Parcel Area with Infrastructural Constraints	366.101

Figure 4.2

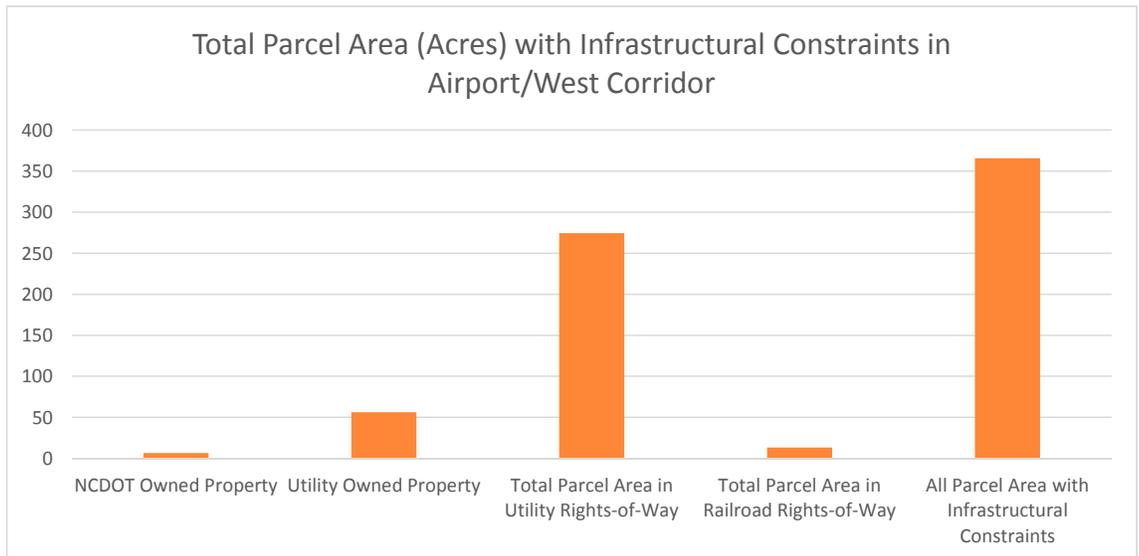


Figure 5.0

Map C-05 Historic Properties

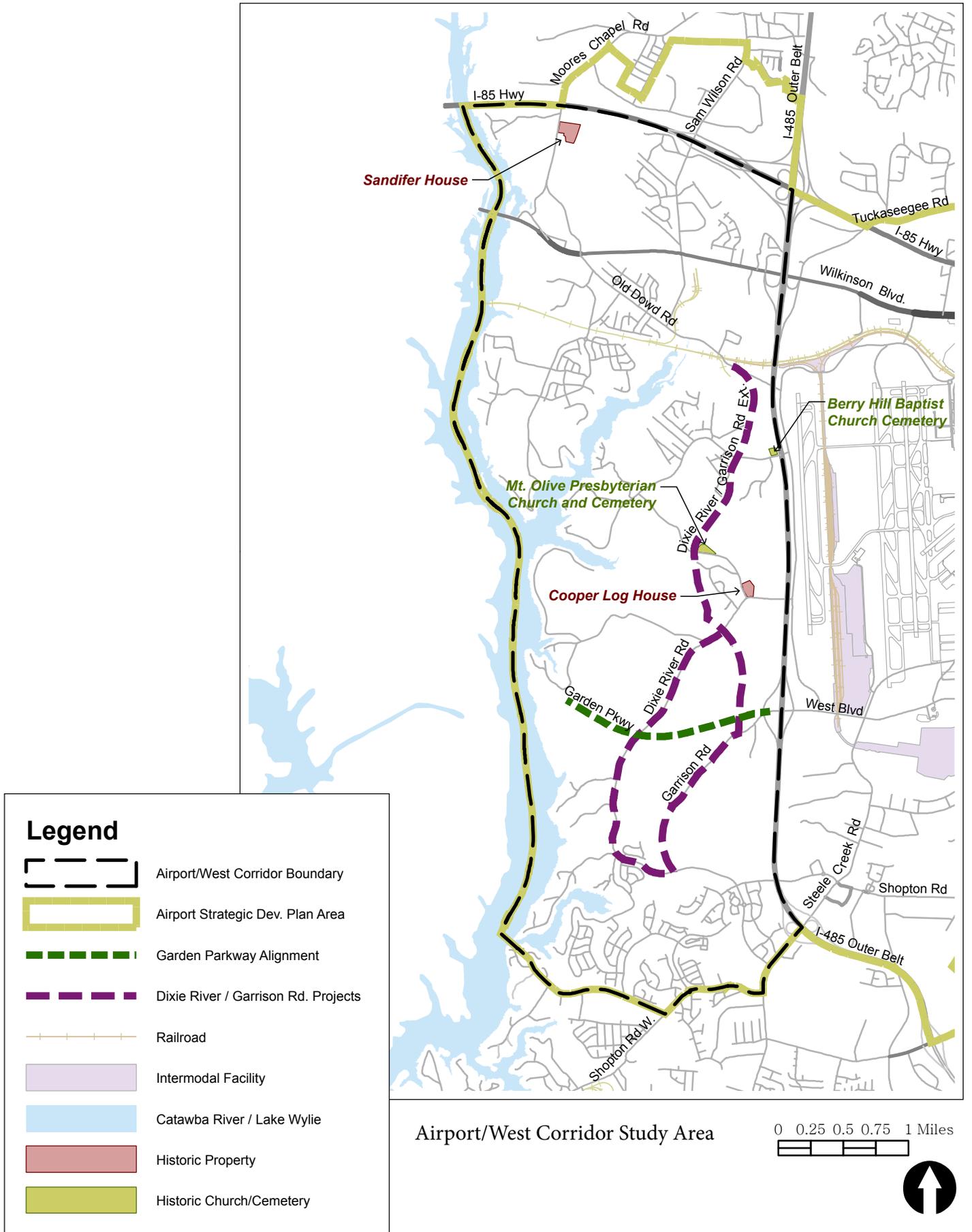


Table 5.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
All Historic Properties	22.393 ACRES
Airport/West Corridor Parcel Area Without the Constraints	7438.591 ACRES

Figure 5.1

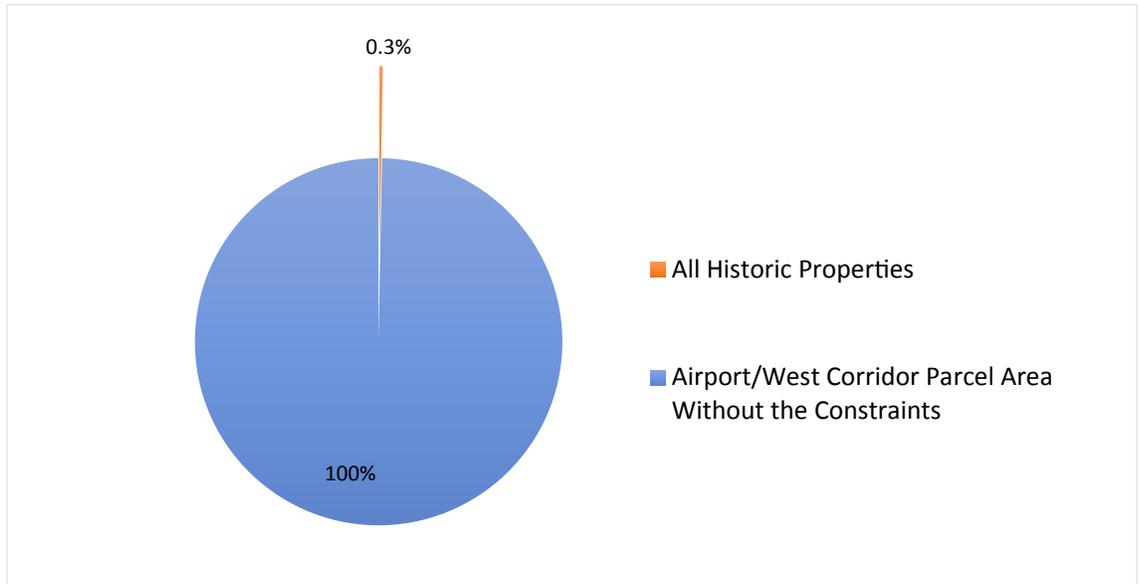


Table 5.2

Constraints	Total Parcel Area (Acres)
Sandifer House Property	11.393
Cooper Log House Property	5.298
Berry Hill Baptist Church Cemetery	1.697
Mt. Olive Presbyterian Church and Cemetery	4.005
All Historic Properties	22.393

Figure 5.2

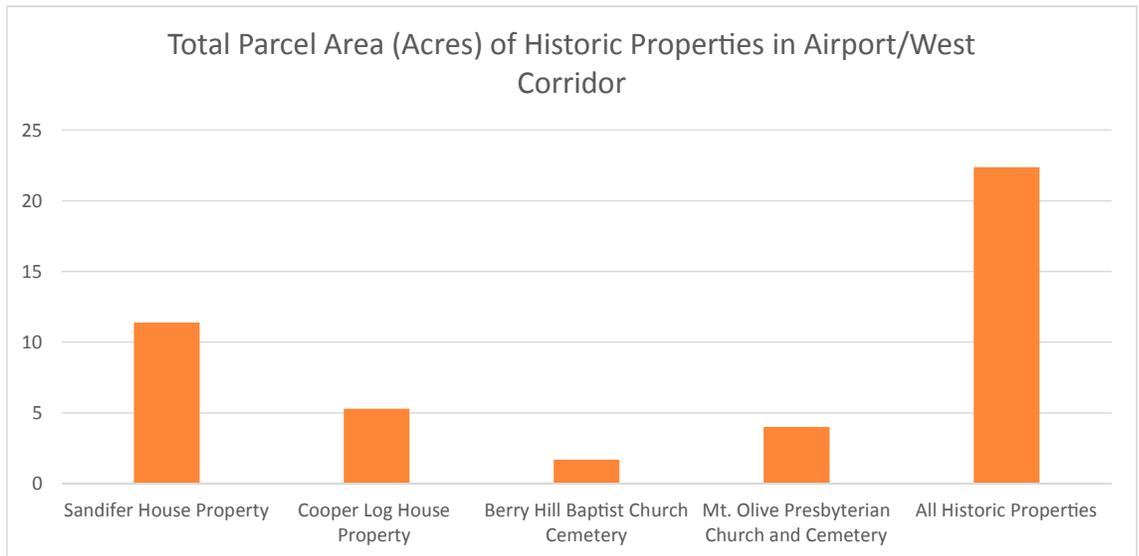


Figure 6.0 Map C-06 Stable Development

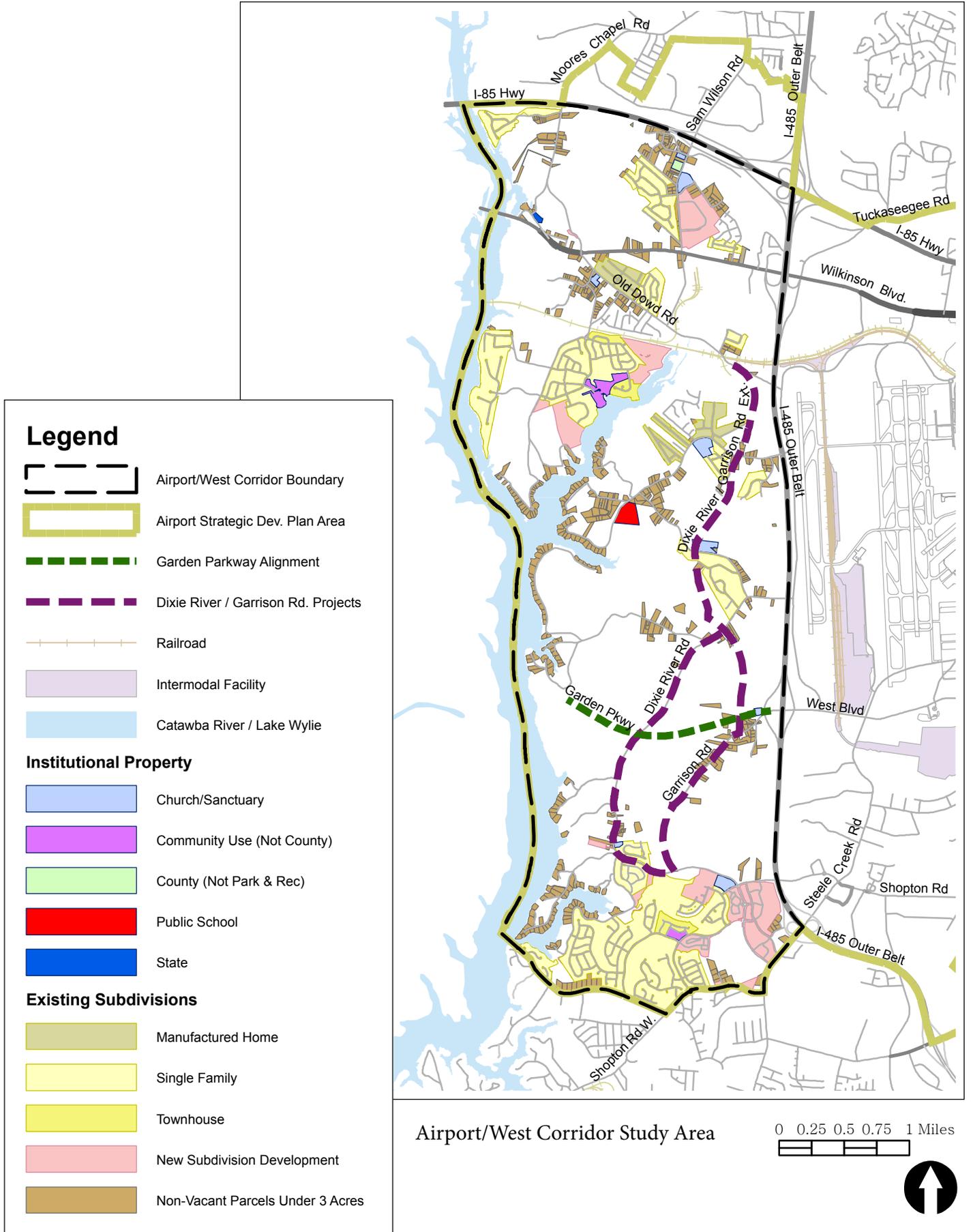


Table 6.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
All Parcel Area of Stable Development	2056.341 ACRES
Airport/West Corridor Parcel Area Without the Constraints	5404.643 ACRES

Figure 6.1

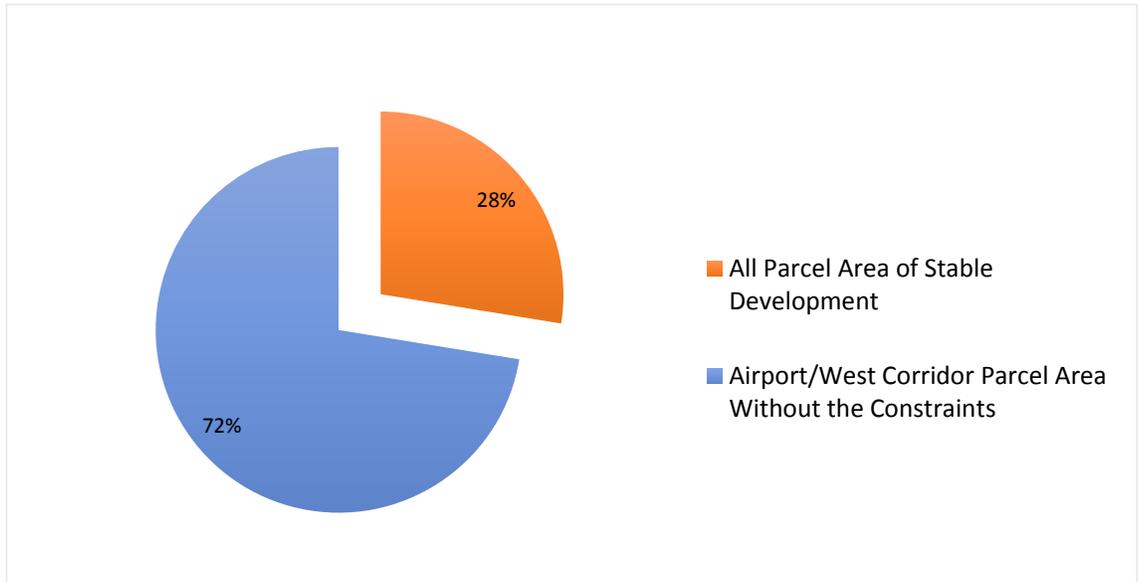


Table 6.2

Constraints	Total Parcel Area (Acres)
Subdivision - Manufactured Home (Lots Owned Individually)	94.272
Subdivision - Single Family	955.027
Subdivision - Town House	49.341
New Subdivision (In Construction / Partially Completed)	316.473
Non-Vacant Parcels Under 3 Acres	1202.626
Institutional Property	89.375
All Parcel Area of Stable Development	2056.341

Figure 6.2

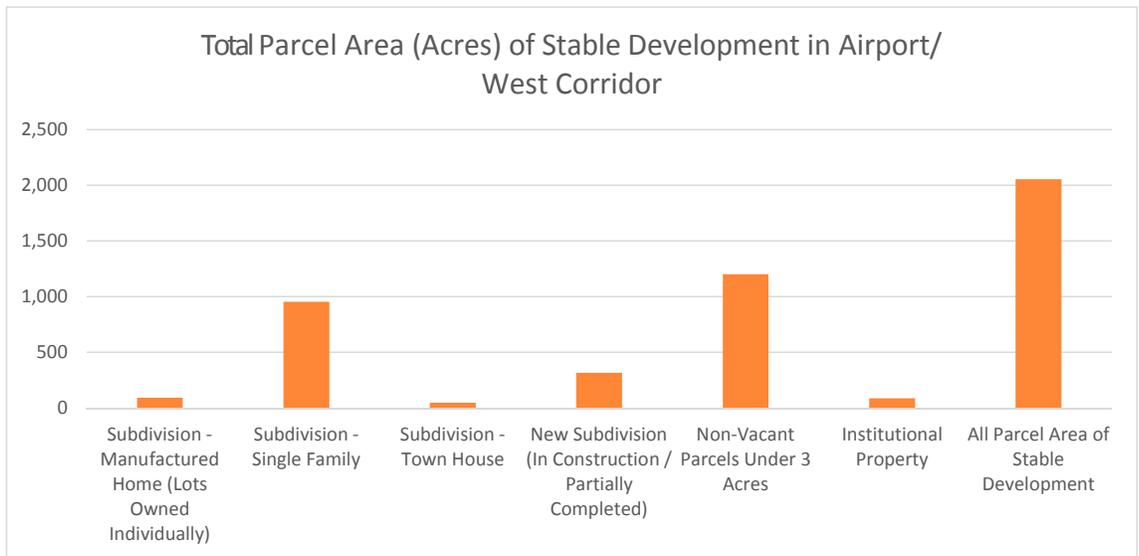
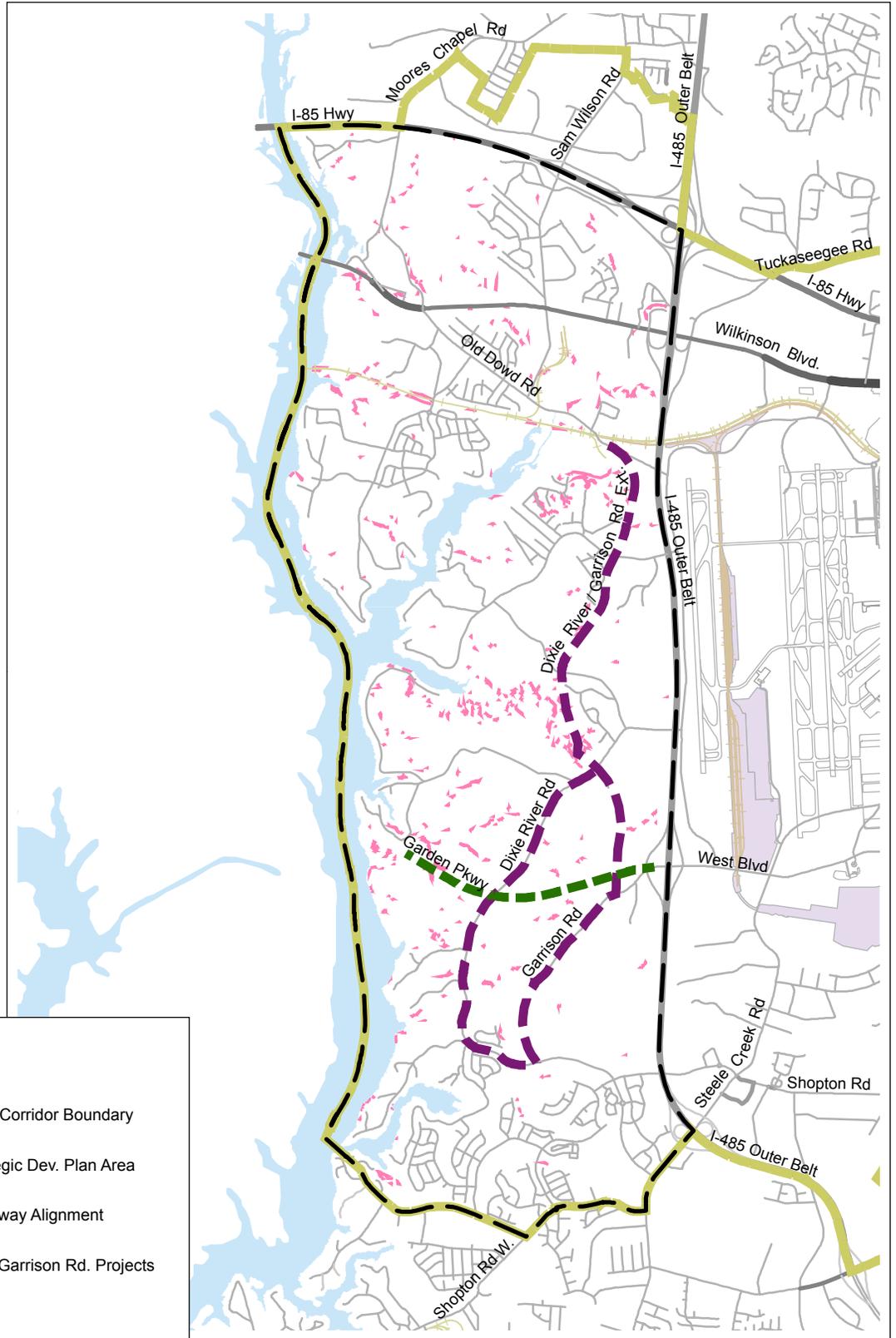


Figure 7.0 Map C-07 Steep Slopes



**Legend**

-  Airport/West Corridor Boundary
-  Airport Strategic Dev. Plan Area
-  Garden Parkway Alignment
-  Dixie River / Garrison Rd. Projects
-  Railroad
-  Intermodal Facility
-  Catawba River / Lake Wylie
-  Area of Slope Greater Than 25%

Airport/West Corridor Study Area

0 0.25 0.5 0.75 1 Miles



Table 7.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
All Parcel Area with Slope Greater than 25%	37.526 ACRES
Airport/West Corridor Parcel Area Without the Constraints	7423.458 ACRES

Figure 7.1

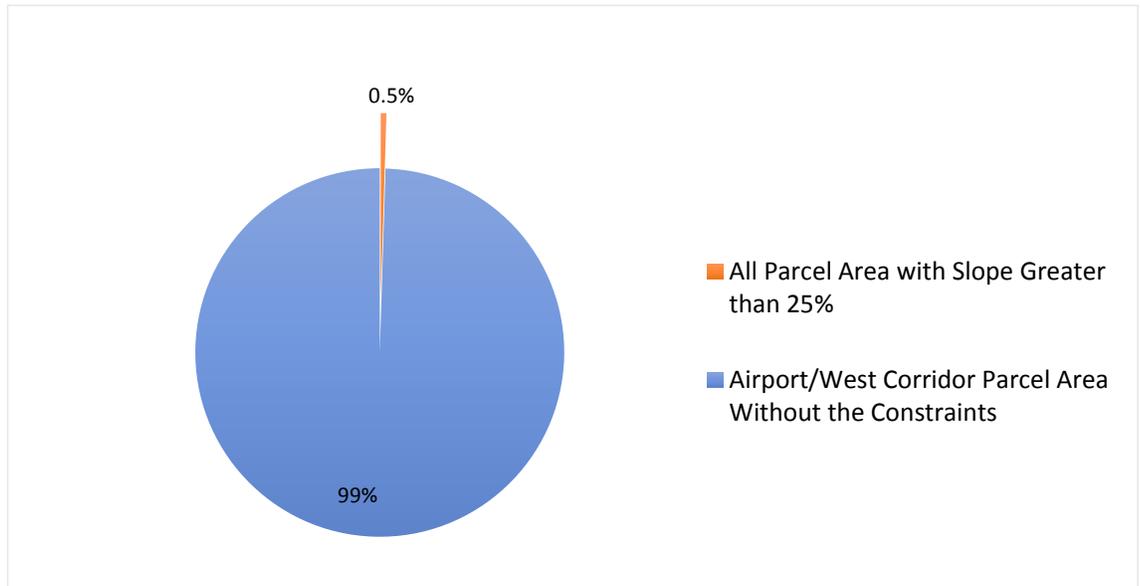


Figure 8.0

Map C-08 All Highly Constrained Land (from Maps C-01- C-07)

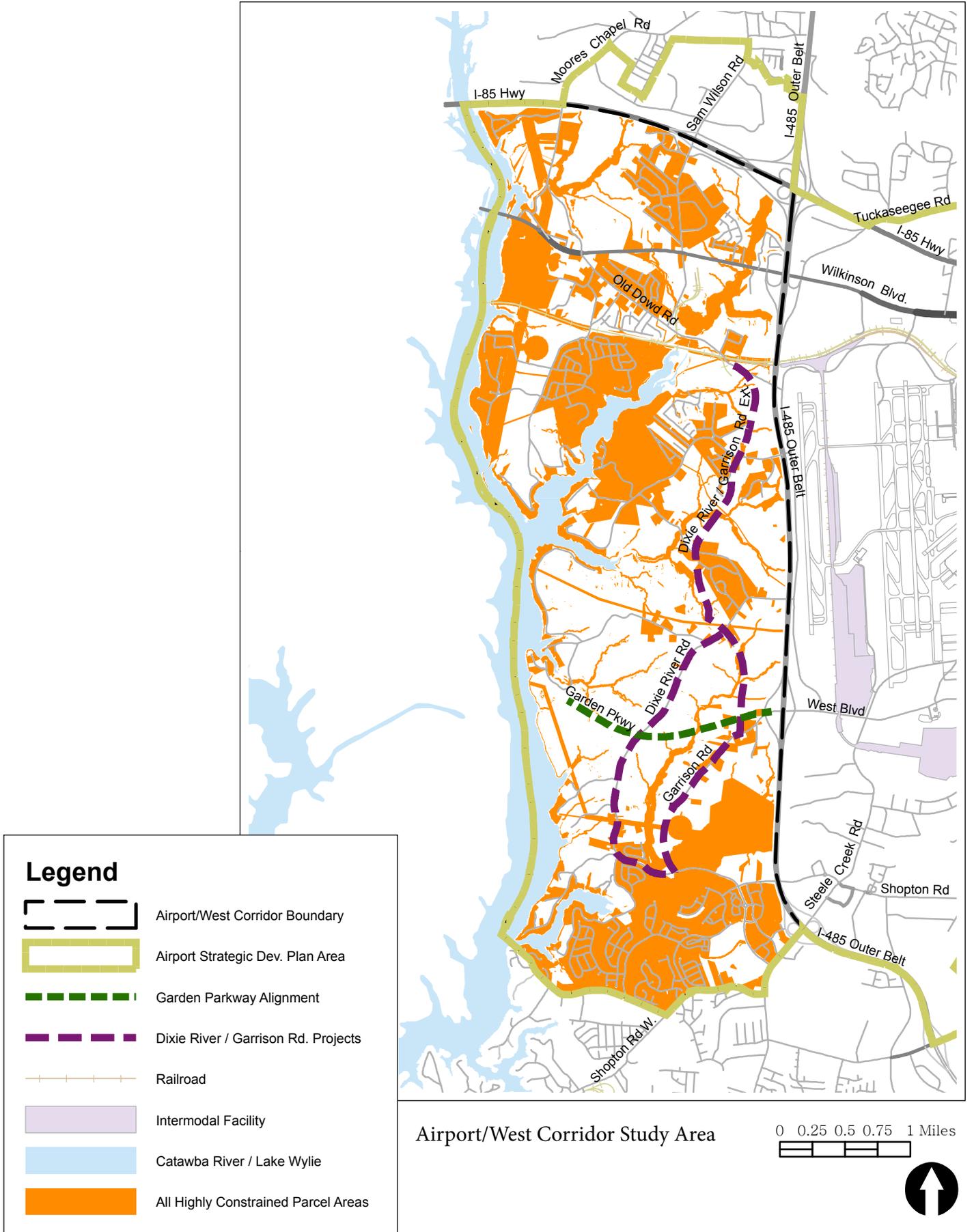


Table 8.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
All Highly Constrained Parcel Area	3362.381 ACRES
Airport/West Corridor Parcel Area Relatively Unconstrained	4098.603 ACRES

Figure 8.1

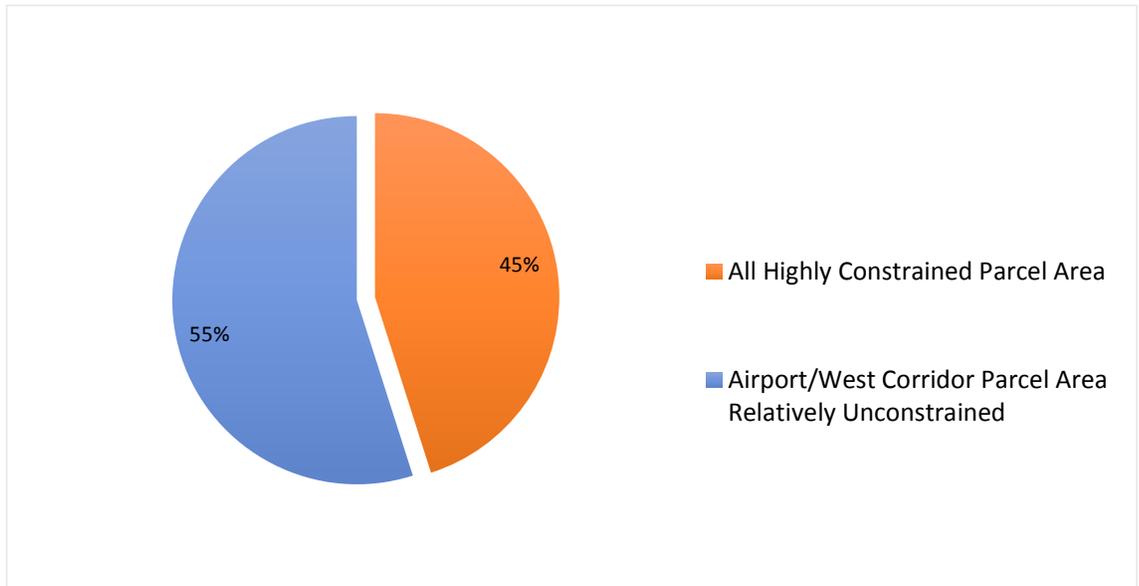
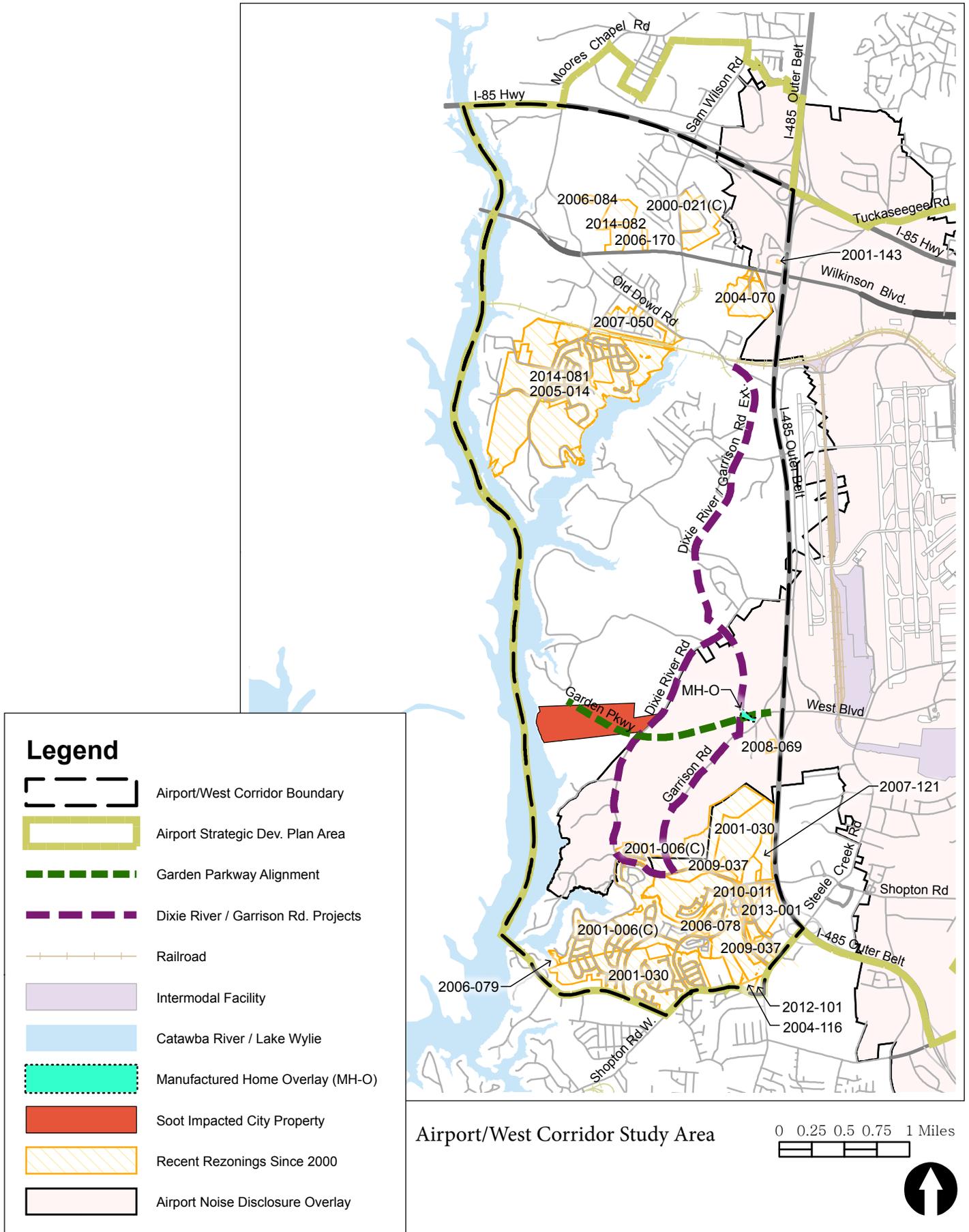


Figure 9.0

Map C-09 Other Potential Constraints Not Included in Analysis



**Legend**

-  Airport/West Corridor Boundary
-  Airport Strategic Dev. Plan Area
-  Garden Parkway Alignment
-  Dixie River / Garrison Rd. Projects
-  Railroad
-  Intermodal Facility
-  Catawba River / Lake Wylie
-  Manufactured Home Overlay (MH-O)
-  Soot Impacted City Property
-  Recent Rezoning Since 2000
-  Airport Noise Disclosure Overlay

Airport/West Corridor Study Area

0 0.25 0.5 0.75 1 Miles

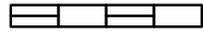


Figure 10.0

Map C-10 Watershed Overlays

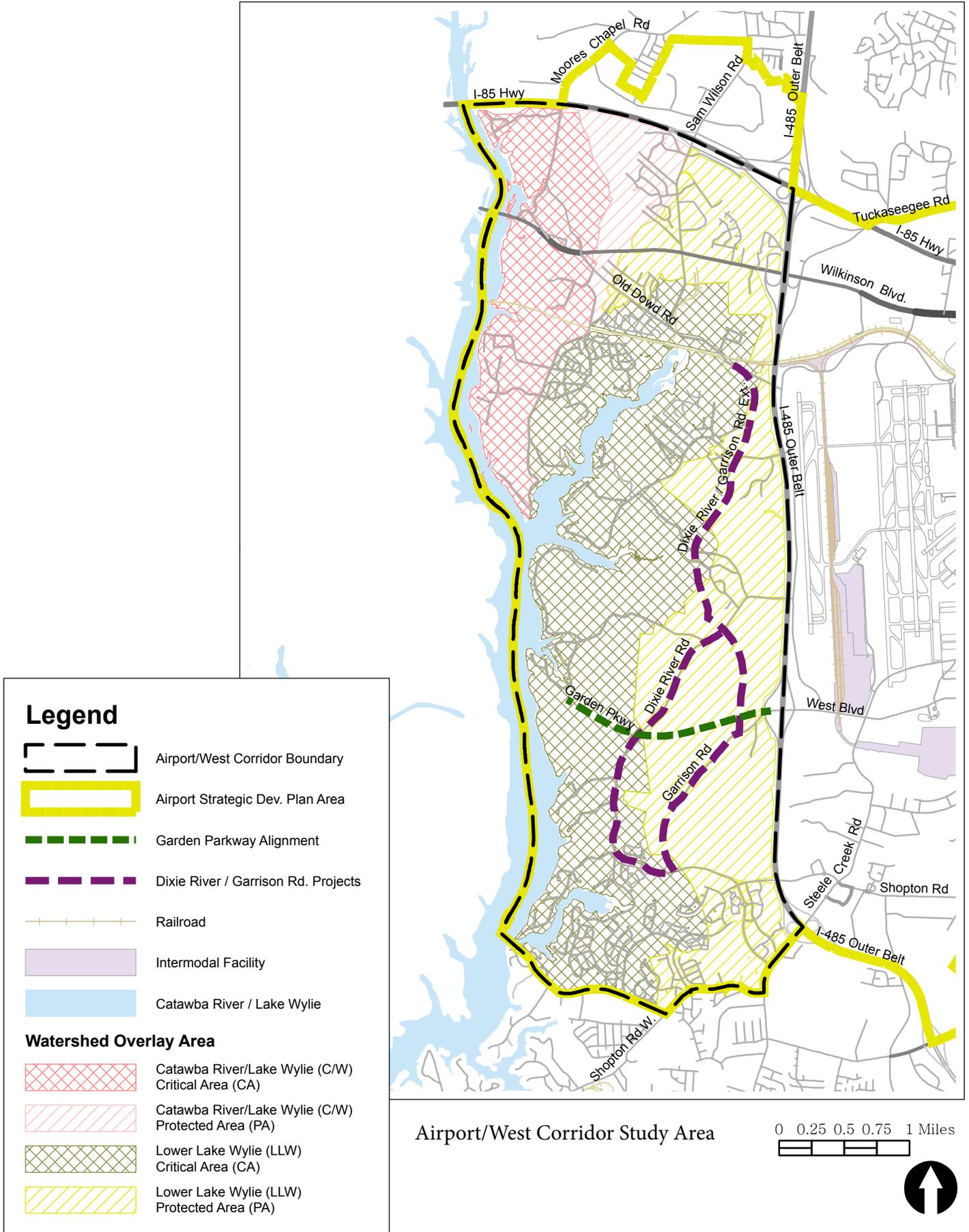


Figure 10.1

Map C/U-10 Watershed Overlay Areas Relatively Unconstrained

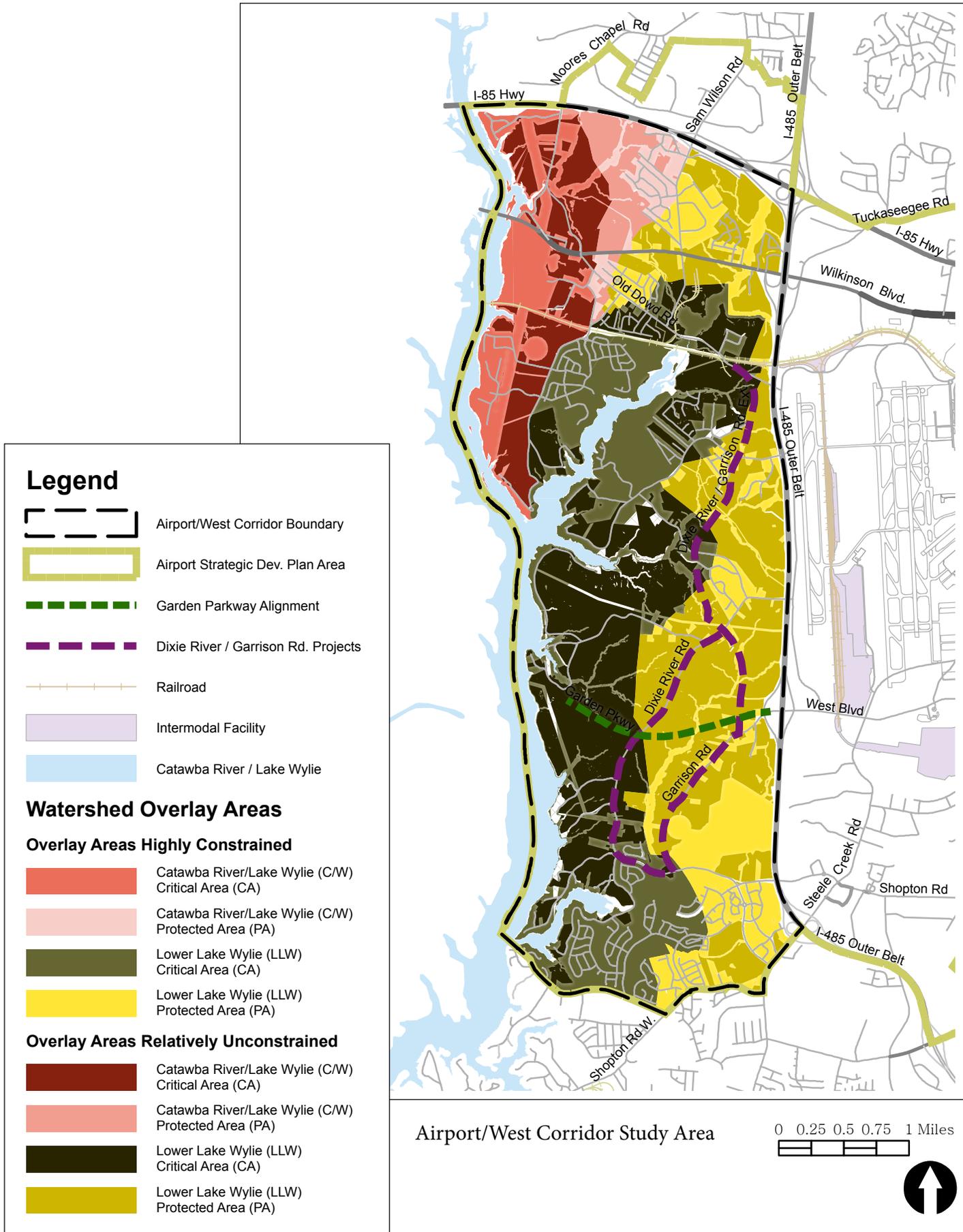


Table 10.1

Total Airport/West Corridor Parcel Area	7460.984 ACRES
Catawba/Lake Wylie Watershed (C/W) - Critical Area	1061.755 ACRES
Catawba/Lake Wylie Watershed (C/W) - Protected Area	362.302 ACRES
Lower Lake Wylie Watershed (LLW) - Critical Area	3228.610 ACRES
Lower Lake Wylie Watershed (LLW) - Protected Area	2808.181 ACRES

Figure 10.2

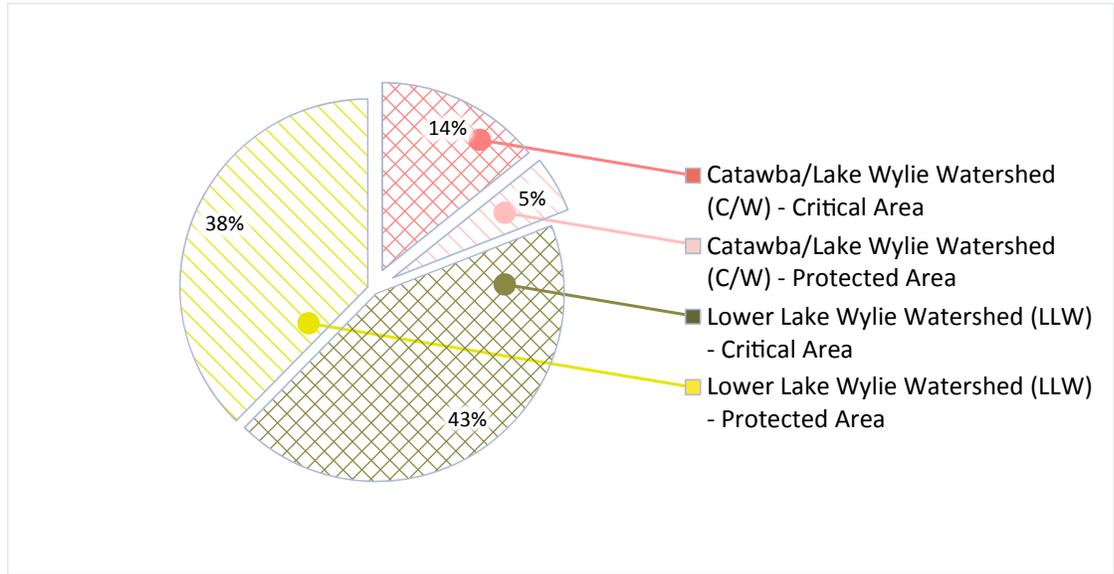


Table 10.2

Total Relatively Unconstrained Parcel Area	4098.604 ACRES
Relatively Unconstrained Area in C/W Critical Area	498.756 ACRES
Relatively Unconstrained Area in C/W Protected Area	216.574 ACRES
Relatively Unconstrained Area in LLW Critical Area	1667.544 ACRES
Relatively Unconstrained Area in LLW Protected Area	1715.730 ACRES

Figure 10.3

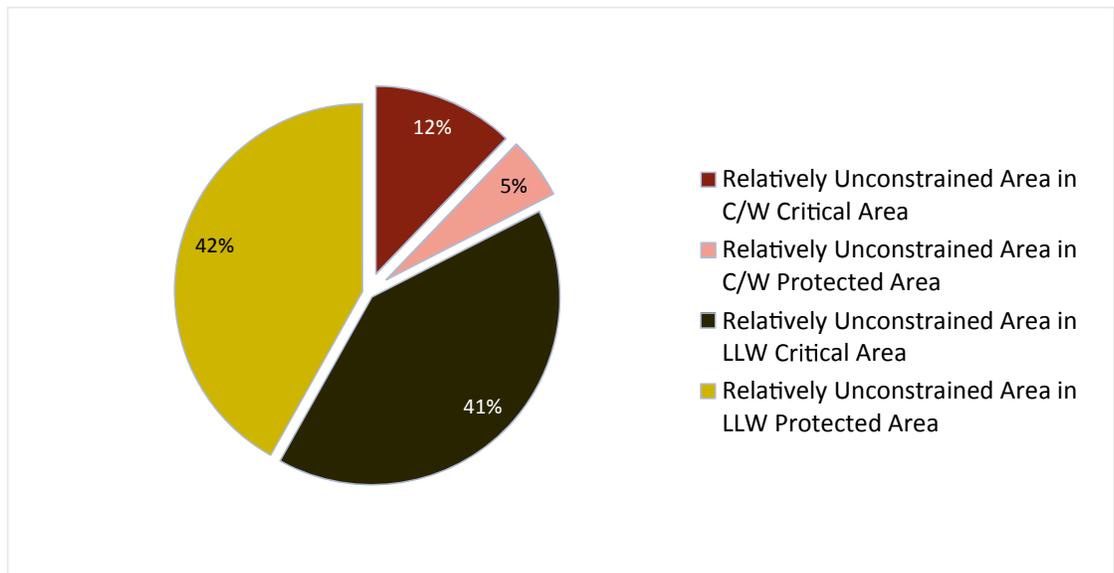


Figure 10.4

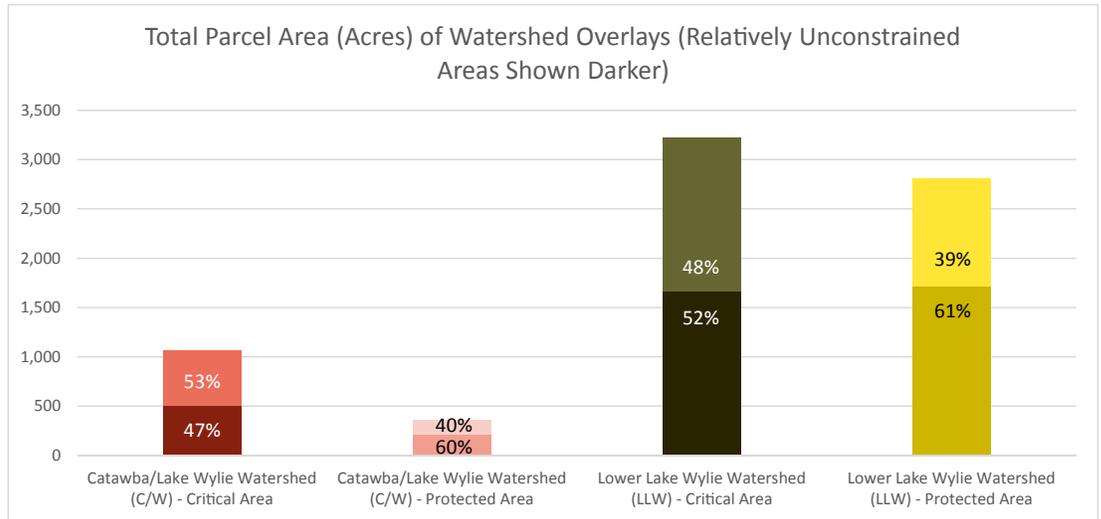


Table 10.3

MAJOR WATERSHED OVERLAY CONSTRAINTS		CATAWBA RIVER / LAKE WYLIE WATERSHED OVERLAY (C/W)		LOWER LAKE WYLIE WATERSHED OVERLAY (LLW)	
		Critical Area (CA)	Protected Area (PA)	Critical Area (CA)	Protected Area (PA)
Maximum Allowable Built Upon Area for Residential	Low Density Option	24%	24%	20%	24%
	High Density Option	50%	70%	50%	70%
Maximum Allowable Built Upon Area for Non-Residential	Low Density Option	24%	24%	20%	24%
	High Density Option	50%	70%	50%	70%
Minimum Vegetative Buffer (to top of bank)	Low Density Option	100'-0"	40'-0"	50'-0"	40'-0"
	High Density Option	100'-0"	100'-0"	100'-0"	100'-0"
Prohibited Uses		1. Landfills, sanitary 2. Petroleum Contaminated Soils, Treatment or Disposal 3. Sludge Applications 4. Wastewater Treatment Plants, new privately owned or operated for domestic waste requiring NPDES permit	Wastewater Treatment Plants, new privately owned or operated for domestic waste requiring NPDES permit.	1. Landfills, sanitary, construction & demolition, land clearing & inert debris 2. Petroleum Contaminated Soils, Treatment or Disposal 3. Sludge Applications 4. Wastewater Treatment Plants, new privately owned or operated for domestic waste requiring NPDES permit 5. Land application for treatment and disposal of domestic or industrial waste	1. Landfills, sanitary, construction & demolition, land clearing & inert debris 2. Petroleum Contaminated Soils, Treatment or Disposal 3. Sludge Applications 4. Wastewater Treatment Plants, new privately owned or operated for domestic waste requiring NPDES permit 5. Land application for treatment and disposal of domestic or industrial waste

Figure 11.0

Map A-01 Jurisdictional Control and Publicly Owned Land

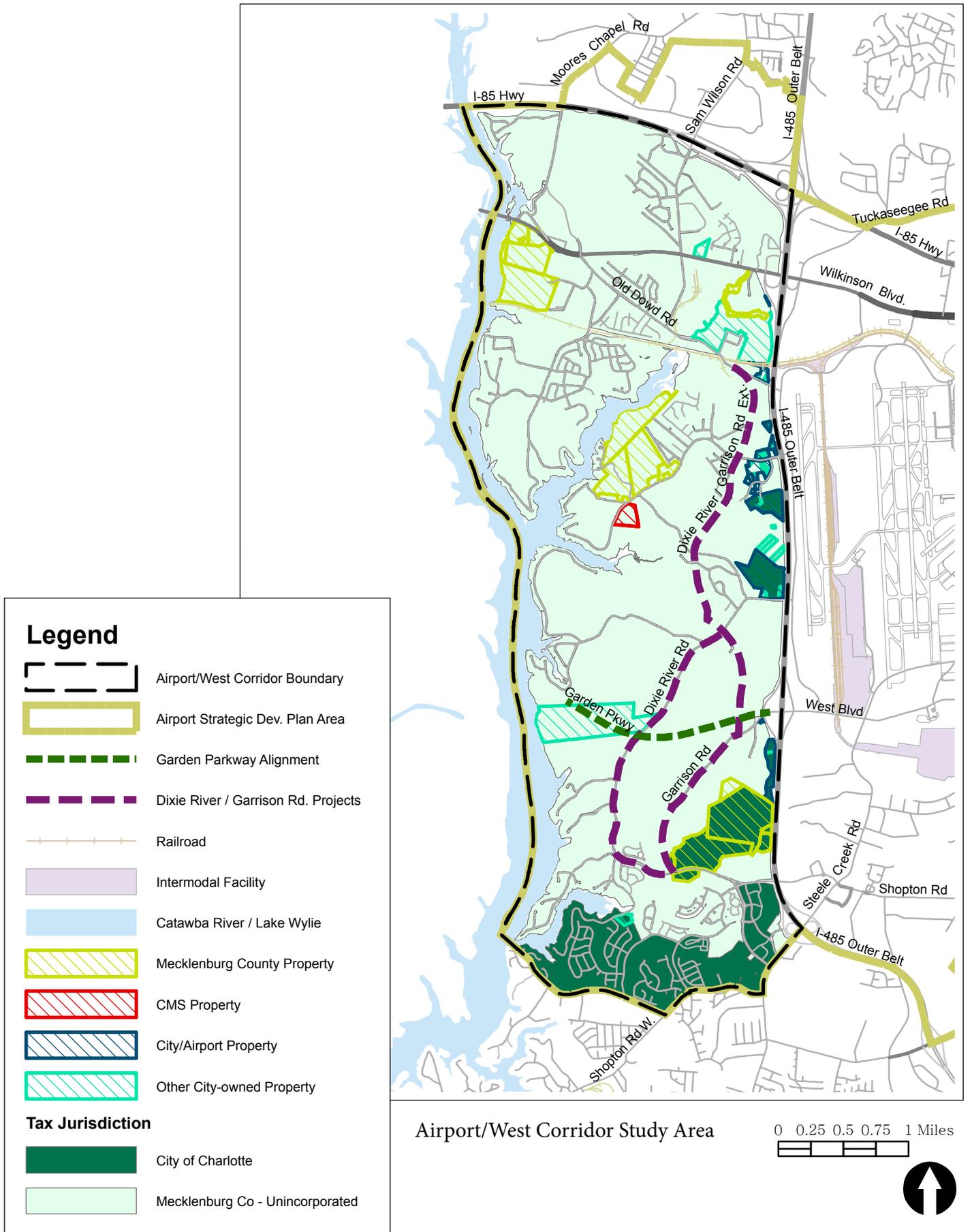


Figure 11.1

Map U-1 Jurisdictional Control and Publicly Owned Land in Relatively Unconstrained Areas

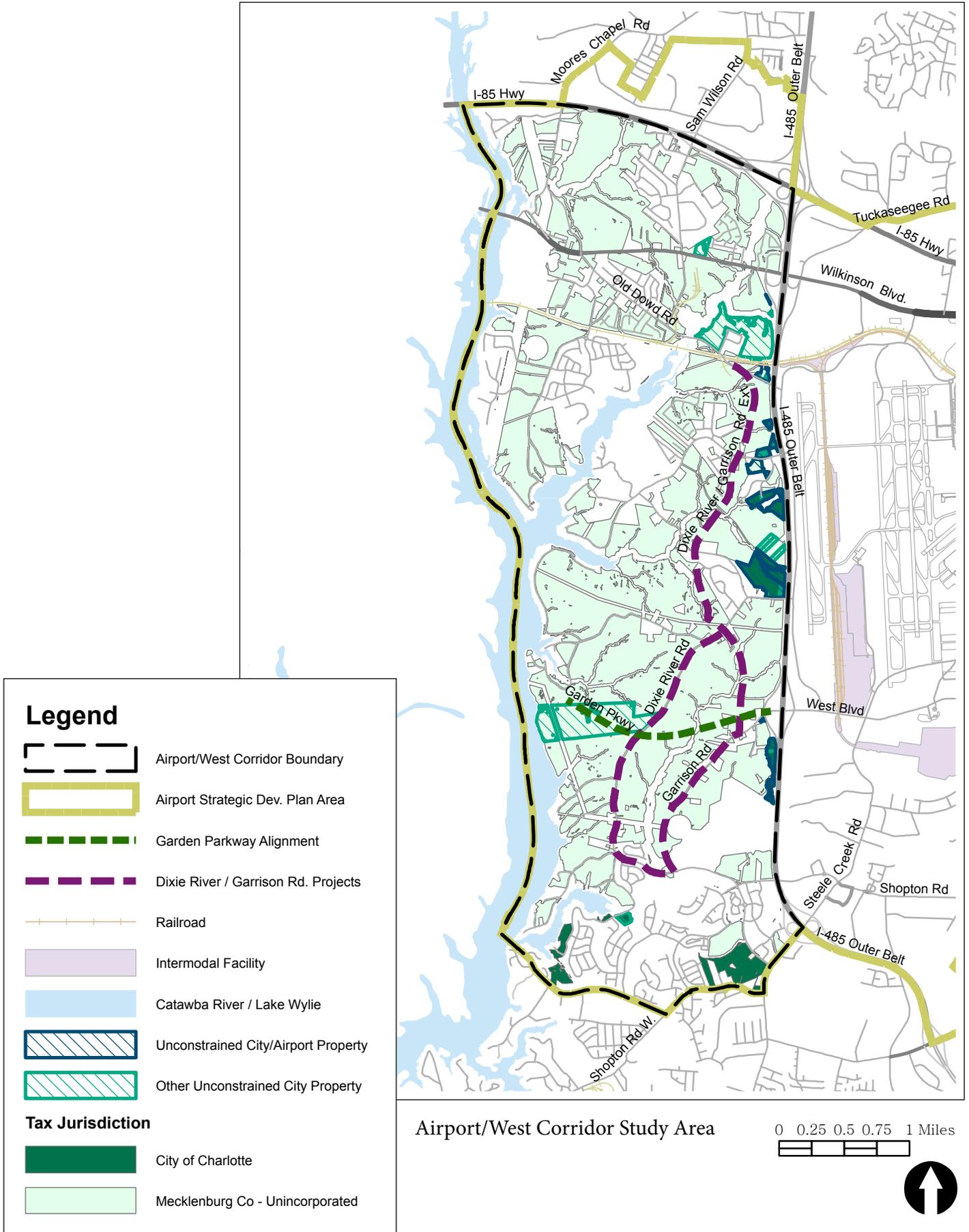


Figure 12.0

Map A/U-02 Underutilized or Vacant Land in Constrained and Relatively Unconstrained Areas

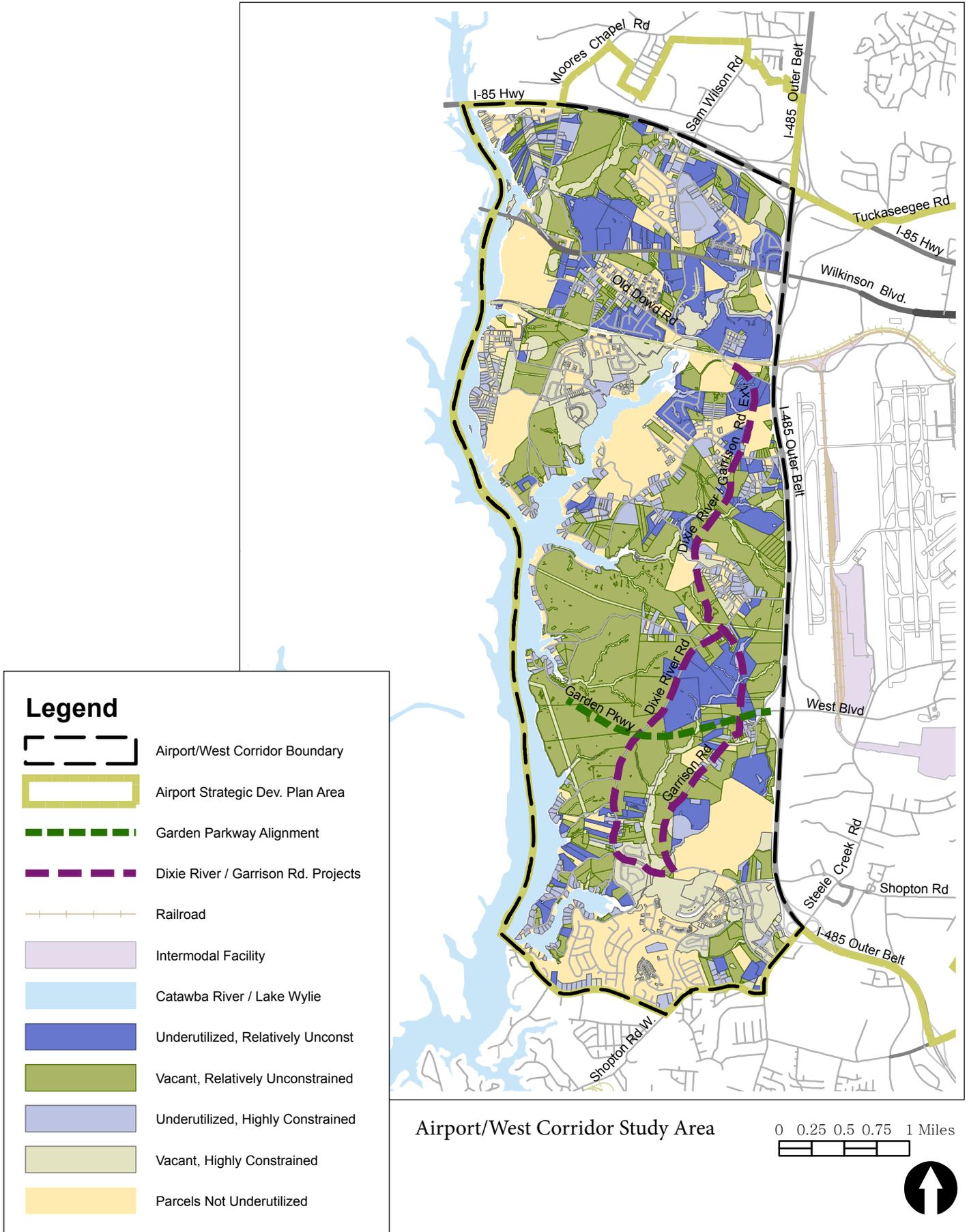


Figure 13.0

Map A-03 Generalized Adopted Future Land Use

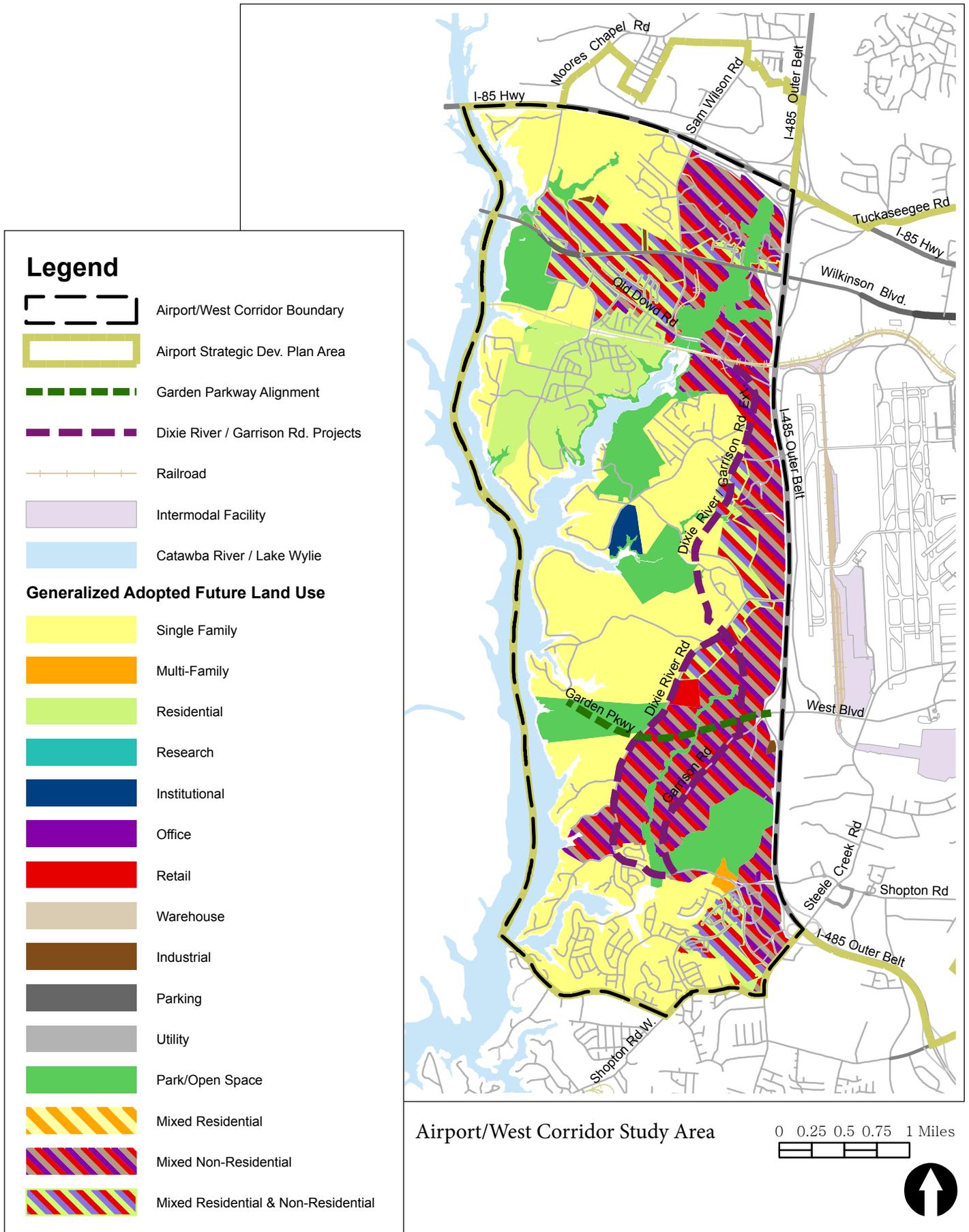


Figure 13.1

Map U-03 Generalized Adopted Future Land Use in Relatively Unconstrained Areas

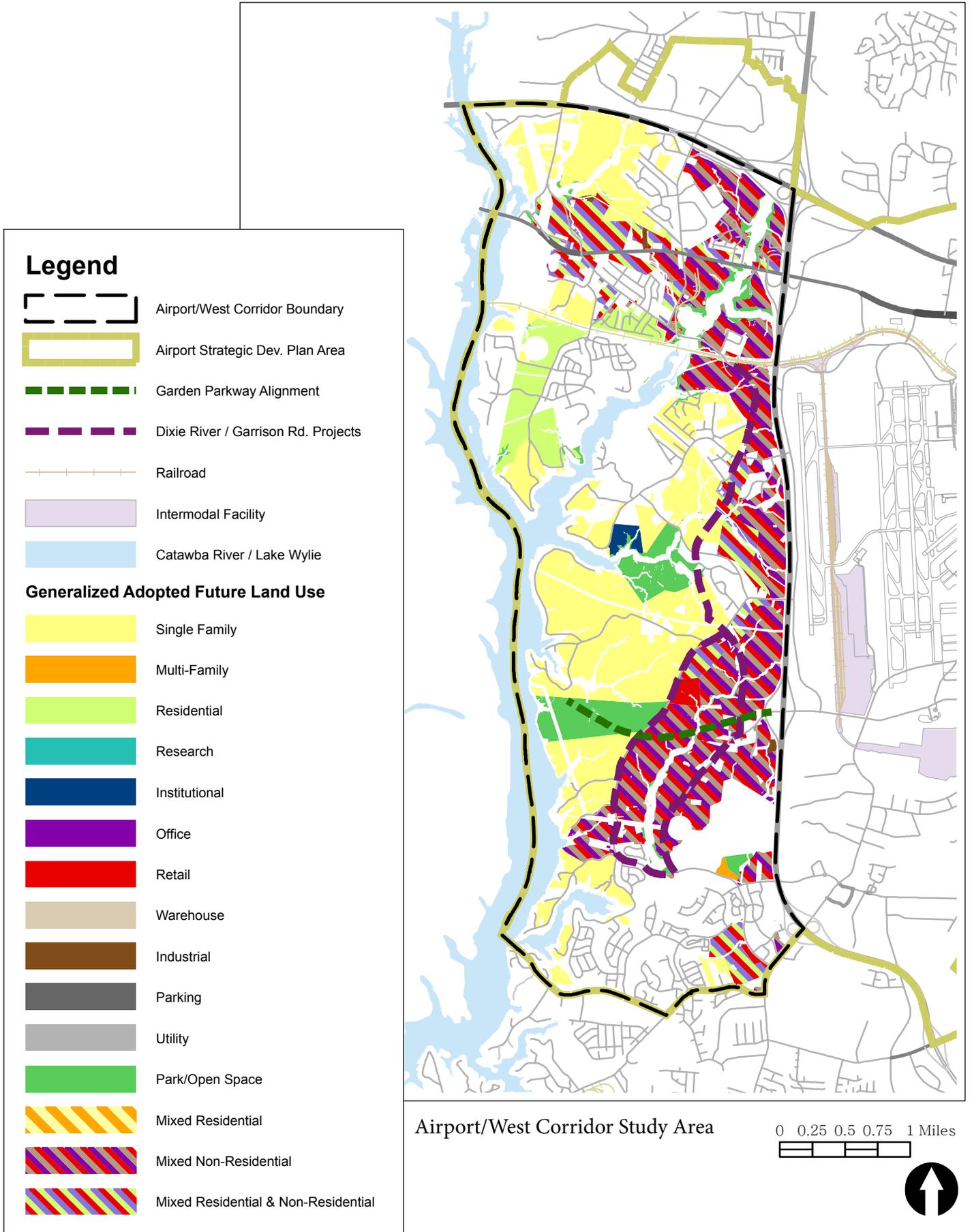


Figure 14.0

Map A-04 Major Land Holdings in the Corridor

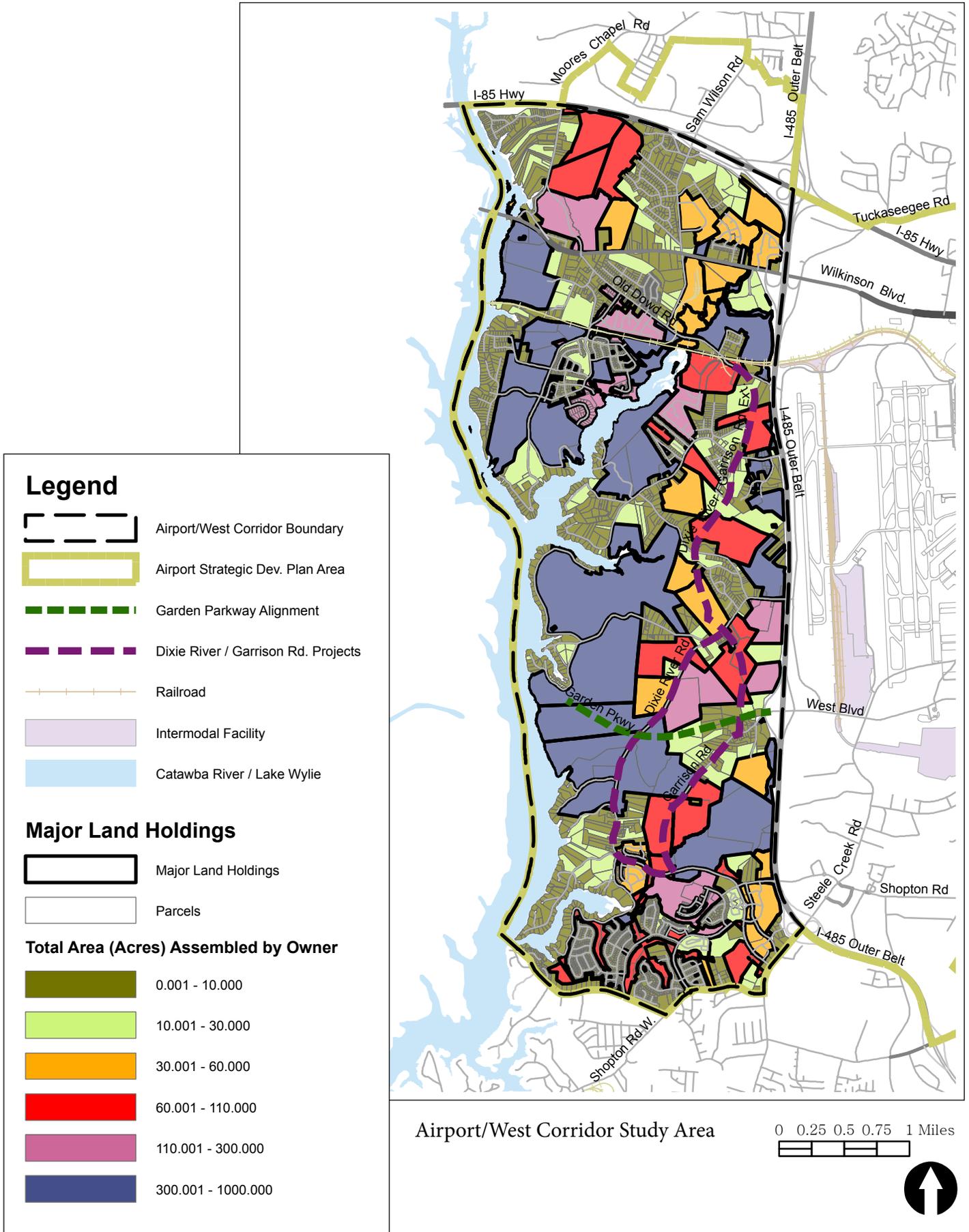
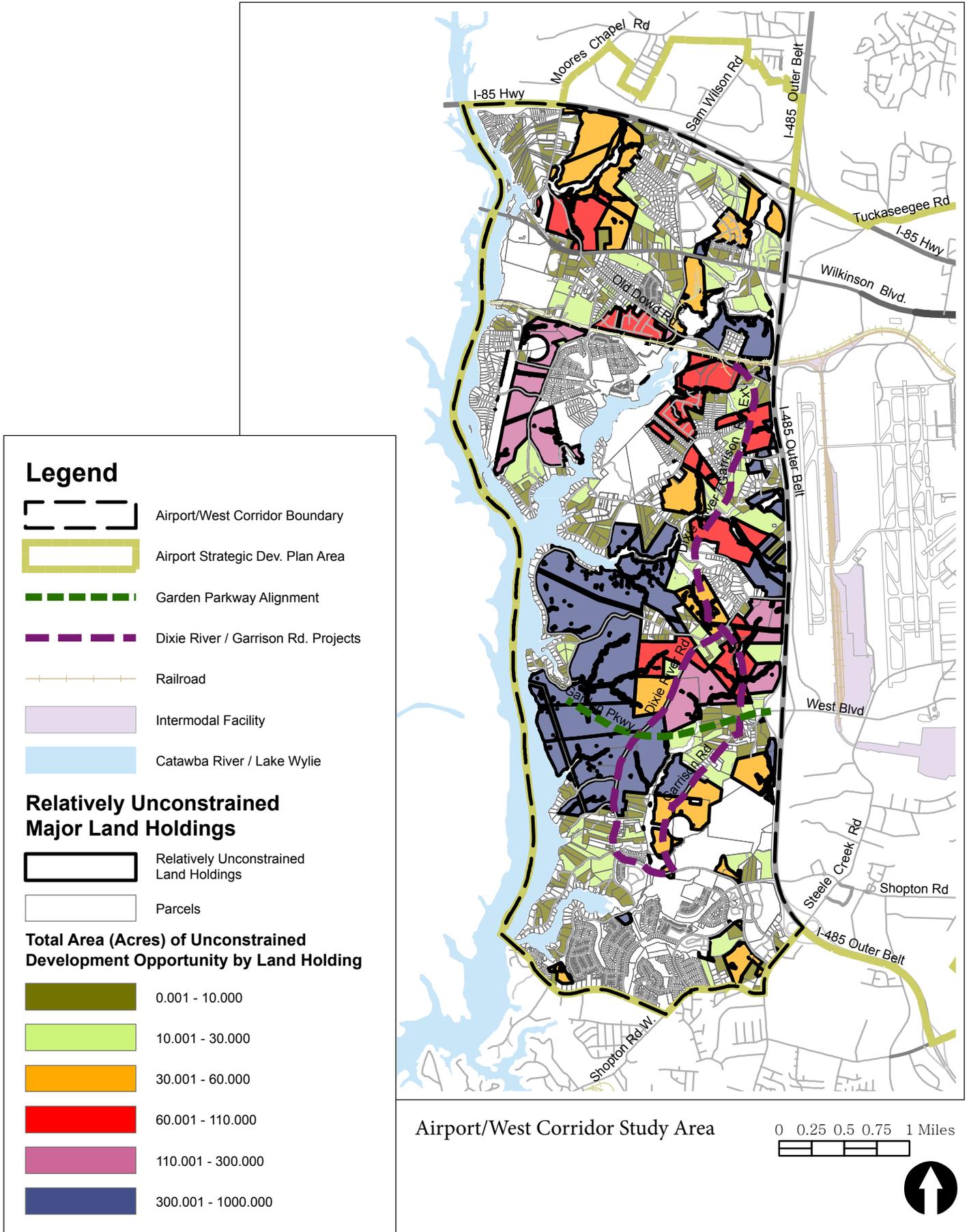


Figure 14.1

Map U-04 Relatively Unconstrained Development Opportunity for Major Land Holdings in the Corridor



## **Airport/West Corridor Advance Planning Focus Group Contact List**

Updated: 4/8/2015

### **Focus Groups**

- 1. Residents and Local Businesses**
- 2. Churches**
- 3. Public Schools and Parks**
- 4. Economic Development**
- 5. Environmental Conservation**
- 6. Environmental Permitting**
- 7. Transportation Planning**
- 8. Private Utilities**

### **Previously Interviewed Stakeholders**

- **Interviewed by Michael Gallis & Associates:**
  - Childress Klein - Landon Wyatt, R. Christopher Thomas
  - CLT Air Freight Carriers - Joe Cartafalsa
  - Crescent Communities, LLC - Keith Glenn
  - Jones Lang LaSalle - Louis Stephens
  - Lincoln Harris, LLC - Jubal Early
  - M. David Properties - Marc Silverman, Lorin Stiefel
  - Norfolk Southern
  - SteelFab, Inc. - Brian Schlenker
  - Sustain Charlotte - Shannon Binns
  - Wayne Cooper (resident and landowner)
  
- **Interviewed by the Whitehall/Ayrsley CNIP Project Team:**
  - Arrowood Business Associations Board
  - Cole, Jenest & Stone - Sue Freyler (for Berewick Developments)
  - Charlotte Area Transit System (CATS) - Brian Horton
  - Charlotte Department of Transportation (CDOT) - Tom Sorrentino, Angel Berry, Charles Abel, Shawn Dowdell, Ben Miller, Mike Davis, Dennis Rorie
  - Charlotte Neighborhood and Business Services - Eugene Bradley

- Charlotte Mecklenburg Schools (CMS) - Eric Ward, LeDuan Pratt & Mike Realdon (Olympic H.S.), Deitra Johnson (Intern)
- Charlotte Water - Fred Hunter, Ron Weathers, Chuck Bliss
- Indoff, Inc.
- Decision Path HR
- Motis
- New Forum
- Pappas Properties - Peter Pappas, Shannon Stanley (for Berewick Developments)
- Premium Outlet Mall
- Siemens
- Southwood Corporation
- Steele Creek Printing
- Whitehall Corporate Park
- YMCA

## Focus Group Members

<b>Focus Group 1 - Residents &amp; Local Businesses</b>				
<i>Entity</i>	<i>Representative</i>	<i>Title/Role</i>	<i>Contact</i>	<i>Notes</i>
<i>Resident</i>	Sydney Elder (and W. Dana Elder, Jr.)	Midsomer Rd resident (Western area near Vineyards on L. Wylie)	5916 Midsomer Rd; Charlotte, NC 28208	Previously served in the 2003 DBSP
<i>Resident</i>	Sue Friday	Dixie Drive resident; owns 31 acres crossed by the presently proposed alignment	704-392-5019  8700 Dixie Dr; Charlotte, NC 28208	Previously served in the 2003 DBSP  -Contacted the Project Team for an update
<i>Resident</i>	Robert & Colleen Grier	Mt. Olive Church Rd resident	4600 Mt. Olive Church Rd; Charlotte, NC 28208	Previously served in the 2003 DBSP
<i>Resident</i>	Bill Shaw	Garrison Road resident; owns 70(+) acres	10813 Garrison Rd; Charlotte, NC 28278	Previously served in the 2003 DBSP
<i>Resident</i>	Catherine (Cathy) Thigpen	Harbor Dr resident (North-west area)	10207 Harbor Dr; Charlotte, NC 28214	Previously served in the 2003 DBSP
<i>Resident</i>	Sheila Kay Washington	Dixie River Rd resident; co-owns (w/ Priscilla Potts) a 7 acre property on Horton Rd	704-588-6765  6925 Dixie River Rd; Charlotte, NC 28208	-Contacted the Project Team for an update
<i>Resident</i>	Loretta F. White	Dixie River Rd resident	704-588-6872  7015 Dixie River Rd; Charlotte, NC 28208	-Contacted the Project Team for an update
<i>Resident</i>  Cheryl Simerly & Asso. Inc.	Cheryl Simerly	Sadler Rd resident and local business owner	<a href="mailto:cheryl@csimerly.com">cheryl@csimerly.com</a>  704-391-2857	

Dixie Grill and Grocery	Peggy	Store Manager, Boston Native	704-392-8828 9115 Dixie River Road; Charlotte, NC 28278	
<i>Resident</i> R.E. Sifford Utility Inc.	Robert E. Sifford	Mt Olive Church Rd resident and local business owner; also owns a land-locked property near Garrison Road along the proposed alignment and near the Garden Pkwy alignment	<a href="mailto:robertsifford@hotmail.com">robertsifford@hotmail.com</a> 704-309-0212 4528 Mt. Olive Church Rd; Charlotte, NC 28208	
Victoria Villa Bed & Breakfast Inn	Todd and Liz Hutcheson	Owners	<a href="mailto:manager@victorianvillainn.com">manager@victorianvillainn.com</a> 704-394-5545	
West Mecklenburg Volunteer Fire Department	Scott Hunter	Fire Chief	704-393-3100	

## Focus Group 2 - Churches

<i>Entity</i>	<i>Representative</i>	<i>Title/Role</i>	<i>Contact</i>	<i>Notes</i>
Berryhill Baptist Church	Rev. Alan Beard	Pastor	704-399-1870	
Liberty Baptist Church	Dr. Gary Berry	Pastor	<a href="mailto:dr.berry.liberty@gmail.com">dr.berry.liberty@gmail.com</a> 704-399-0142	
McClintock Presbyterian Church	Rev. Dr. Arthur W. Canada	Pastor	<a href="mailto:McClintockPC@aol.com">McClintockPC@aol.com</a> 704-588-2733	
Garrison Road Community Center	Dennis Foust	Senior Minister of St. John's Baptist Church	<a href="mailto:dfoust@sicharlotte.org">dfoust@sicharlotte.org</a> 704-333-2041	Owned by St. John's Baptist Church on Hawthorne Lane
Hope Community Church of Metrolina	Rev. L. Todd Marlow	Lead Pastor / Teacher	<a href="mailto:Churchoffice@hopemetrolina.org">Churchoffice@hopemetrolina.org</a> 704-398-0303	Formerly called Westmoreland Baptist Church
Mount Olive Presbyterian Church	Rev. Herbert R. Shackelford	Pastor	<a href="mailto:mtolivepres@bellsouth.net">mtolivepres@bellsouth.net</a> 704-394-8814	Previously served in the 2003 DBSP
Radiant Church	Christian Chapman	Pastor	<a href="mailto:info@RadiantChurchCharlotte.com">info@RadiantChurchCharlotte.com</a> 704-898-4208	
Ramoth AME Zion Church	Terrence Jones	Pastor	704-588-0315	
Steele Creek Presbyterian Church	Dr. William Jeffrey Pinkston	Pastor and Head of Staff	<a href="mailto:Jeff@steelecreekpres.org">Jeff@steelecreekpres.org</a> 704-588-1290	
West Mecklenburg Baptist Church	Rev. Lester Bledsoe	Pastor	704-399-5152	

### Focus Group 3 - Public Schools and Parks

<i>Entity</i>	<i>Representative</i>	<i>Title/Role</i>	<i>Contact</i>	<i>Notes</i>
Mecklenburg County Park and Recreation	James Garges, Director  W. Lee Jones, Division Director of Capital Planning and Alliance Development Services		<a href="mailto:James.Garges@MecklenburgCountyNC.gov">James.Garges@MecklenburgCountyNC.gov</a> 980-314-1012  <a href="mailto:Lee.Jones@MecklenburgCountyNC.gov">Lee.Jones@MecklenburgCountyNC.gov</a> 980-314-1015	
Charlotte Mecklenburg Schools (CMS)	Peggy Hey	Executive Director of Facilities	<a href="mailto:peggy.hey@cms.k12.nc.us">peggy.hey@cms.k12.nc.us</a>  980-343-6880	

### Focus Group 4 - Economic Development

<i>Entity</i>	<i>Representative</i>	<i>Title/Role</i>	<i>Contact</i>	<i>Notes</i>
Central Piedmont Community College	Jay Potter	Dean, Harper Campus/ Applied Technologies and Construction Institute	<a href="mailto:Jay.Potter@cpcc.edu">Jay.Potter@cpcc.edu</a> 704-330-4409	-Contact for CPCC's business partnerships & economic development strategy
Charlotte Chamber	Jeff Edge	Senior Vice President, Economic Development	<a href="mailto:jedge@charlottechamber.com">jedge@charlottechamber.com</a> 704-378-1307	
Charlotte Regional Partnership	Ronnie Bryant	President and CEO	<a href="mailto:rbryant@charlotteusa.com">rbryant@charlotteusa.com</a> (704) 347-8942 550 South Caldwell Street Suite 760 Charlotte, NC	
Charlotte Regional Visitors Association	Brandy Larrick	Director of Business Development & Tourism	<a href="mailto:brandy.larrick@visitcharlotte.com">brandy.larrick@visitcharlotte.com</a> 704-331-2749	
Emerald Performance Materials, LLC			(704) 393-0089 8309 Wilkinson Blvd, Charlotte, NC 28214	

### Focus Group 5 - Environmental Conservation

<i>Entity</i>	<i>Representative</i>	<i>Title/Role</i>	<i>Contact</i>	<i>Notes</i>
Catawba Lands Conservancy	Tom Okel	Executive Director	<a href="mailto:tom@catawbalands.org">tom@catawbalands.org</a>	
Catawba Riverkeeper Foundation	Rick Gaskins - Executive Director (will leave post in June; Emilee Syrewicze will be future Executive Director)		<a href="mailto:rick@catawbariverkeeper.org">rick@catawbariverkeeper.org</a> 704-408-3487	
Catawba-Wateree Relicensing Coalition	Vicky Taylor	Executive Coordinator	<a href="mailto:vetaylor@compuserve.com">vetaylor@compuserve.com</a>	
Catawba-Wateree Water Management Group	Barry Gullet	Chair	<a href="mailto:bgullet@charlottenc.gov">bgullet@charlottenc.gov</a> 704-336-4962	
Charlotte Public Tree Fund	Rick Roti	Chairman and President	<a href="mailto:rick@charlottetreefund.org">rick@charlottetreefund.org</a> <a href="mailto:rickroti@gmail.com">rickroti@gmail.com</a> 704-957-8660	
Centralina Council of Governments	Jason Wager	Planning Program Supervisor, Centralina Clean Fuels Coalition Coordinator, CONNECT	<a href="mailto:jwager@centralina.org">jwager@centralina.org</a> 704-348-2707	
Duke Energy Corporation	Mark Oakley	Catawba- Wateree Relicensing Project Manager	<a href="mailto:Mark.Oakley@duke-energy.com">Mark.Oakley@duke-energy.com</a>	
Envision Charlotte	Amy Aussieker	Executive Director	<a href="mailto:aaussieker@envisioncharlotte.org">aaussieker@envisioncharlotte.org</a>  320 E 9th St, Suite 707-B Charlotte, NC 28202  704-919-0901	
Mecklenburg County	Heidi Pruess	Community Plan and Sustainability Officer	<a href="mailto:heidi.pruess@mecklenburgcountync.gov">heidi.pruess@mecklenburgcountync.gov</a> 704-336-5597	

## Focus Group 6 - Environmental Permitting

<i>Entity</i>	<i>Representative</i>	<i>Title/Role</i>	<i>Contact</i>	<i>Notes</i>
Charlotte-Mecklenburg Storm Water Services	Rusty Rozzelle	Meck. Co. Water Quality Program Manager	<a href="mailto:rusty.rozzelle@mecklenburcountync.gov">rusty.rozzelle@mecklenburcountync.gov</a> 704-336-5449	(NPDES permitting in County & Towns)
Mecklenburg County	Dave Canaan	Water & Land Resources Director	<a href="mailto:dave.canaan@mecklenburcountync.gov">dave.canaan@mecklenburcountync.gov</a> 704-336-3736	
NC Wildlife Resources Commission	Ken Knight	Piedmont Region Regional Supervisor	<a href="mailto:ken.knight@ncwildlife.org">ken.knight@ncwildlife.org</a> Office: 704-982-8260 Cell: 704-985-6277	
NC Division of Energy, Mineral and Land Resources	Steve McEvoy	State Dam Safety Engineer	919-707-9220	-Contact for coal ash ponds
NC Division of Waste Management	Ellen Lorscheider	Planning and Programs Branch Head	<a href="mailto:Ellen.Lorscheider@ncdenr.gov">Ellen.Lorscheider@ncdenr.gov</a> 919-707-8245	-Contact for coal ash solid waste permitting and reuse
NC Division of Water Resources, Mooresville Regional Office	Marcia Allocco	Coordinator of wastewater NPDES program and sewer extension permitting in Mecklenburg	<a href="mailto:marcia.allocco@ncdenr.gov">marcia.allocco@ncdenr.gov</a> 704-235-2204	
NC Division of Water Resources, Mooresville Regional Office	Mark Hahn	Drinking Water Senior Environmental Specialist, Municipal drinking water in Mecklenburg	<a href="mailto:mark.hahn@ncdenr.gov">mark.hahn@ncdenr.gov</a> 704-235-2125	
NC Ecosystem Enhancement Program	Nancy Daly	Watershed Planning Supervisor	<a href="mailto:Nancy.Daly@ncdenr.gov">Nancy.Daly@ncdenr.gov</a> 919-707-8315	-Contact for Beaverdam Creek Restoration
NC Office of Land and Water Stewardship	John Finnegan	Conservation Information Manager, Natural Heritage Program	<a href="mailto:john.finnegan@ncdenr.gov">john.finnegan@ncdenr.gov</a> 919-707-8630	
US Army Corps of Engineers, Wilmington District	William Elliott	County Staff Rep., Asheville Regulatory Field Office	William.A.Elliott@usace.army.mil 828-271-7980, ext 224	

### Focus Group 7 - Transportation Planning

Entity	Representative	Title/Role	Contact	Notes
Charlotte Regional Transportation Planning Organization (CRTPO)	Robert Cook - CRTPO Secretary  <i>Potential to include:</i> Curtis Bridges - Principal Planner Neil Burke - Senior Principal Planner Candice Leonard - Transportation Planning Engineer		<a href="mailto:rwcook@ci.charlotte.nc.us">rwcook@ci.charlotte.nc.us</a> 704-336-2205  <a href="mailto:cbridges@ci.charlotte.nc.us">cbridges@ci.charlotte.nc.us</a>  <a href="mailto:nburke@ci.charlotte.nc.us">nburke@ci.charlotte.nc.us</a>  <a href="mailto:cleonard@ci.charlotte.nc.us">cleonard@ci.charlotte.nc.us</a>	Interviewed in W/Ay CNIP - NEED MINUTES
City of Charlotte Bicycle Advisory Committee	Chris Gladora	BAC member who is a frequent cyclist of the Airport/West Corridor	<a href="mailto:cgladora@hotmail.com">cgladora@hotmail.com</a>	
NC Dept. of Transportation (NCDOT) Division 10	Scott Cole - Deputy Division Engineer  <i>Potential to include:</i> Stuart L. Basham - Div. Planning Engineer  Brett Canipe - District Engineer  Anil Panicker - CTP Contact  Warren Cooksey - Director of Outreach and Community Affairs		<a href="mailto:scole@ncdot.gov">scole@ncdot.gov</a> 704-983-4400  <a href="mailto:sbasham@ncdot.gov">sbasham@ncdot.gov</a> 704-845-1151  <a href="mailto:bcanipe@ncdot.gov">bcanipe@ncdot.gov</a> 980-523-0000  <a href="mailto:atpanicker@ncdot.gov">atpanicker@ncdot.gov</a> 704-336-5738  <a href="mailto:rwcooksey@ncdot.gov">rwcooksey@ncdot.gov</a> 704-849-0832	W. Cooksey previously served in the 2003 DBSP while he was a Planning Commissioner

### Focus Group 8 - Private Utilities

<i>Entity</i>	<i>Representative</i>	<i>Title/Role</i>	<i>Contact</i>	<i>Notes</i>
AT & T	Todd Lanham - Regional Director, External Affairs  Eric Allen  Jamie Riggins		<a href="mailto:tl0785@att.com">tl0785@att.com</a> 704 417-8141  <a href="mailto:ea5498@att.com">ea5498@att.com</a> 704-424-1220  <a href="mailto:jr9080@att.com">jr9080@att.com</a> 704-424-1145)	-Eric Allen and Jamie Riggins may be AT&T staff with knowledge of this study area
Google Fiber	Jess George	Recently hired to become Community Impact Manager (active from April 17); currently Executive Director of Latin American Coalition	<i>Temporary (until April 16):</i>  <a href="mailto:jgeorge@latinamericancoalition.org">jgeorge@latinamericancoalition.org</a>  704-531-3845	-One Fiber Hut location is proposed in the study area on a City property  -Sandy D'Elosua (CC&M) is City's Google Fiber Coordinator  -She may be a candidate for FG #4 Economic Development instead because of interest in community and poverty issues
Duke Energy Corporation	A. R. Mullinax	Executive Vice President - Strategic Services	704-382-3853	Previously served in the 2003 DBSP
Piedmont Natural Gas	Tim Greenhouse	Managing Director, Safety and Community Relations	<a href="mailto:timothy.greenhouse@piedmontng.com">timothy.greenhouse@piedmontng.com</a>	
Time Warner Cable	Michael Tanck	Director of Government Relations	<a href="mailto:michael.tanck@twcable.com">michael.tanck@twcable.com</a>  704-378-2717 704-519-5400	

**Interviewed by Michael Gallis & Associates**

<i>Interview Groups</i>	<i>Entities/Representatives Interviewed</i>	<i>Notes</i>
Sustain Charlotte	Shannon Binns - Founder and Executive Director	3/4/2015, 2:00 pm
Jones Lang LaSalle	Louis Stephens - Senior Vice President	3/6/2015, 3:00 pm
M. David Properties	Marc Silverman - Founder & Owner Lorin Stiefel - Manager	3/9/2015, 3:00 pm
Crescent Communities, LLC	Keith Glenn - Senior Vice President	3/11/2016, 10:00 am
Land Owner & Lincoln Harris Land Broker	Wayne Cooper (resident and landowner) Jubal Early - Senior Vice President at Lincoln Harris, LLC	3/11/2015, 2:00 pm
SteelFab, Inc.	Brian Schlenker - Plant Manager	3/13/2015, 1:30 pm
Childress Klein	Landon Wyatt - Partner specializing in industrial markets R. Christopher Thomas - Partner specializing in retail markets	3/19/2015, 2:00 pm
CLT Air Freight Carriers	Joe Cartafalsa - Owner	3/26/2015, 9:00 am
Norfolk Southern	Grant Cothran, Manager - Intermodal Development Cary Booth, Assistant Vice President – Intermodal Service Development Steve Portnell, Director - Real Estate Alan Shaw, Vice President- Intermodal Operations	4/15/2015, 2:00 pm
Lincoln Harris, LandDesign Development Team	Tracy Dodson – Vice President, Brokerage & development, Lincoln Harris Dale Stewart – Partner, LandDesign Keith Glenn – Senior Vice President, Crescent Communities	5/11/2015, 10:00 am

### Interviewed in Whitehall/Ayrsley CNIP

<i>Interview Groups</i>	<i>Entities/Representatives Interviewed</i>	<i>Notes</i>
Berewick development	Sue Freyler (Cole Jenest & Stone) Peter Pappas and Shannon Stanley (Pappas Properties)	
Business & Private Groups	Arrowood Business Associations Board (need minutes) Indoff, Inc. Decision Path HR Mottis New Forum Premium Outlet Mall (need minutes) Siemens (need minutes) Southwood Corporation Steele Creek Printing Whitehall Corporate Park (need minutes) YMCA (need minutes)	Need minutes from W/Ay CNIP team for some of these
CMS Staff	CMS: Eric Ward, LeDuan Pratt & Mike Realdon (Olympic H.S.), Deitra Johnson (Intern)	
CATS Staff	Brian Horton (Planning)	
CDOT Staff	Tom Sorrentino (Design), Angela Berry (Traffic Safety), Charles Abel and Shawn Dowdell (Transportation Systems), Ben Miller, Mike Davis (Development Services), Dennis Rorie (Land Development Services)	
Charlotte Water Staff	Fred Hunter, Ron Weathers, Chuck Bliss	
Neighborhood & Business Services Staff	Eugene Bradley	
Other groups that may be or may have been interviewed...	Berewick Community Management, Steele Creek Residents Association, Charlotte Housing Authority, Charlotte-Mecklenburg Housing Partnership... Others may be added.	NEED MINUTES

# AIRPORT/WEST CORRIDOR STAKEHOLDER INTERVIEWS: WHAT WE HEARD

## GENERAL ISSUES/CONCERNS

- The Thoroughfare Plan alignment follows Dixie River Road. The Small Area Plan alignment basically followed what was already on the Thoroughfare Plan. The alignment in the Area Plan came from the opportunities and constraints analysis and 4 things: public involvement, delineate the land uses, take advantage of existing rights of way and avoid residential communities
- The big issues for transportation development in the area are topography and water
- The future Garden Parkway is uncertain.
- Environmental issues are very important, and extensively regulated
- There is concern for both water supply and recreation values of the Catawba River/Lake Wylie

## LOCATION SPECIFIC ISSUES/CONCERNS

### Roadway

- Roads in the area need to be better, but not stimulate development.
- This is a unique area; roads and development should respect the environment and people in the area.
- Neighbors would like Dixie River Road to be a parkway, like Ballantyne Commons Parkway or Queens Road.
- Charlotte Mecklenburg Schools' concern will mostly be Dixie River Road at Berryhill Elementary.
- Ramoth AME Zion Church has been there about 100 years; widening Dixie River Road would help them.
- The Thoroughfare Plan alignment is near the Mt. Olive Church Cemetery.
- Any new alignment for Dixie River Road would mean new alignments for utilities.
- Dixie River Road, south of Ramoth, has enough right-of-way for a parkway cross section, with lanes at different elevations

### Mobility

- While some see an additional river crossing as presenting economic development opportunities many are opposed to it.
- There are a lot of bicycles on weekends
- CATS' Transit System Plan needs updating, but Wilkinson Boulevard transit will probably end at the airport

### Development

- There is a very aggressive movement to make the airport and intermodal facility a global center for trade
- Longer term residents consider Berewick as too dense.
- Residents know development is going to come, but they want it to be responsible and attractive.
- Some in the area might welcome change to improve infrastructure and create jobs; others don't want change.
- Much of Steele Creek Church's congregation lives in the area; they would like to see the area stay the same, especially those who live on the Catawba River
- More shopping centers and grocery stores are needed
- Charlotte Meck Stormwater is concerned about Small Area Plan non-residential development close to the Catawba River.
- There is a potential conflict between Norfolk Southern's plans at West Boulevard and Lincoln Harris's plans west of I-485 on an extension of West Boulevard

### Environment

- The study area has increased protection for water quality; Charlotte Water would like to see further protections; a lot of damage to the Catawba River water quality was done by the airport expansion, I-485 construction, and Berewick development.
- Low Impact Development would be desirable in the study area: treat stormwater, provide stream buffers, use pervious pavement for sidewalks and parking lots; the percentage of impervious cover is very important
- Dispersed flow is preferred for road runoff; swales are better in this area for runoff; use Low Impact Development techniques

### Amenities

- Street lights would be beneficial: it is very dark at night.
- Berewick Regional Park's long range master plan is a future regional park and sports complex and joint use with the school.
- Berryhill Nature Preserve will be a series of trails and an interpretative center.
- Iswa Nature Preserve is a Natural Heritage Program managed area.
- Mecklenburg Co. Park & Recreation would like to provide greenway connections along creeks.
- Land close to the River has more natural and animal life, so Park & Rec prefers that as nature preserves.

CIP Advance Planning - Garrison Rd and Dixie River Road

## Focus Group #1 Meeting Summary - Residents and Local Businesses

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Meeting Time/Date: 7:00 PM - 8:15 PM, May 21, 2015

Location: Mt. Olive Presbyterian Church  
(5125 Mt. Olive Church Rd., Charlotte, NC 28278)

Summary by: Eric Orozco (from meeting notes by Deidra Grier and Donal Simpson)

### Interviewed Residents:

Name	Area/Representing	Phone	E-mail
Ursula Barnette	Mt. Olive Church Rd.	704-737-2419	ursulabarnette@hotmail.com
Viola Brewton	Mt. Olive Church Rd.	704-394-5533	
David Burris	Garrison Rd.	704-618-0405	
Terry Burris	Garrison Rd.	704-618-0405	tburris@bellsouth.net
Ann Coleman	Mt. Olive Church Rd.	980-200-5260	anncoleman007@bellsouth.net
Carl Frazier	Dixie River Rd.	704-588-0161	
Sue Friday	Dixie Drive (Mt. Olive Church)	704-392-5019	tsfriday@aol.com
Billy Grier	Mt. Olive Presbyterian Church	704-394-8135	berg7620@aol.com
Robert Grier	Mt. Olive Church Rd.	704-392-5531	
Andrew Griffith	Sadler Rd.	704-395-8676	
Sheryl Griffith	Sadler Rd.	704-395-8676	
Evelyn Herron	Mt. Olive Church Rd.	704-392-3875	
Benjamin Hoover	Sadler Rd.	704-399-1780	staylor57@carolina.rr.com
Kathy Marshall	Mt. Olive Presbyterian Church	704-394-8135	mtolivepres@bellsouth.net
Leonard E. Mauney	Mt. Olive Church Rd.	704-399-6002	
Patricia G. Mauney	Mt. Olive Church Rd.	704-563-7504	trishagrace59@gmail.com
Derrick McClain	(not known)	704-606-5827	
Toba McCollie	Dixie River Rd.	704-588-1257	
W. A. Shaw	Garrison Rd.	704-840-8044	
Cheryl Simerly	CSA, Inc./Sadler Rd.	704-507-9294	cheryl@csimerly.com
Carol Smith	Dixie Grill & Grocery	704-588-4535	ces7440@bellsouth.net
Eugenia Smith	Garrison Rd.	980-729-1141	gds374@yahoo.com
Mary D. Smith	Garrison Rd.	704-605-7758	
Peggy Smith	Dixie Grill & Grocery	704-588-4535	
Rebecca Smith	Garrison Rd.	980-729-1142	msgenia33@aol.com
Sheila Washington	Dixie River Rd.	704-588-6765	
Graham Watt	Mt. Olive Church Rd.	704-392-3875	gwatt626@gmail.com
James Watt	Sadler Rd.	704-689-3541	
LaFreda Watt	Sadler Rd.	980-254-3490	
Loretta White	Dixie River Rd.	704-588-6872	lorettawhite07@bellsouth.net
Billy Winecuff	(not known)	704-390-5597	billywinecuff@gmail.com
John Winecuff	Sharyn Dr. (Walkers Ferry)	(not known)	

## Participants:

Name	Representing	E-mail
Ashley Landis	Charlotte Dept. of Transp. (CDOT)	alandis@ci.charlotte.nc.us
Johanna Quinn	Charlotte Dept. of Transp.	jquinn@ci.charlotte.nc.us
Greg Boulanger	HNTB	gboulanger@hntb.com
Donal Simpson	Donal Simpson, FAIA AICP	drsfaia@gmail.com
Deidra Grier	Neighboring Concepts	deidra@neighboringconcepts.com
Eric Orozco	Neighboring Concepts	<a href="mailto:eric@neighboringconcepts.com">eric@neighboringconcepts.com</a>

## SUMMARY OF KEY FINDINGS

The feedback received from the focus group participants at the meeting provided the following main points about opportunities and constraints in the Airport/West Corridor...

### Key Constraints and Challenges:

1. Issues with transportation:
  - 1-a. One resident claimed "they are 10 years behind on roads", mainly in reference to the problems with NC-160 and Dixie River Road. The perception of several was that the project was "entirely too small" to address the needs for the growth around the area, such as at Berewick. Dixie River Road is thought too narrow for the amount of traffic and new development now coming in.
  - 1-b. On the other hand, another resident mentioned that nothing warrants the road projects now since they don't want the area to end up like Berewick. While most other attendees thought roads in the area need to be better, they did not want them to stimulate intense development either. Residents considered Berewick to be "too dense".
  - 1-c. There are a lot of bicycles on weekends.
  - 1-d. Gravel mining on Sadler Road has damaged the roads. Jay Wilson, Erosion Control Administrator of the City's land development services, stopped the truck and mining activity. Apparently, the "dirt robbers" didn't have sedimentation control in place.
2. Issues with recent changes to the area:
  - 2-a. They can hear the intermodal and airplane noise at night. Activity at the intermodal facility never stops.
  - 2-b. Some residents feel that they are getting "squeezed" with the airport and new road and the environment and the lake.
  - 2-c. Berewick is considered too dense.
3. Important heritage sites and matters of community:
  - 3-a. There is a pre-revolutionary wall between Sadler Road and Mt. Olive Church Road.
  - 3-b. Crescent owns property that has Catawba tribal graves (this came from Crescent's research); at one time, the Catawbans had a claim on the land.

- 3-c. This is a unique natural area. There has to be some respect for the environment. Any roads and development has to have respect for the environment and people in the area, not just serve developers and investors. Consider wetlands, streams, cemeteries, etc. before we build. Don't impact the river and kill animals. The river is one of the most polluted waterways in the US. The responsibilities are on the City to do the environmental impact analysis to show what will happen with the environment.
- 4. Issues with the process:
  - 4-a. Many residents are senior citizens and have been waiting 10 years for the alignment that was approved a while back to happen. One resident has gone to stakeholder meetings and gave input on traffic and water and "nothing" has been done. The perception is that the alignment had already been determined and that deliberating it again will be taking it back a step. They haven't been able to do anything with their property.
  - 4-b. Charlotte Water "needs to be involved". Utilities need to be discussed more centrally with the process. Many want to get off well water. They get a sewer bill every month and feel this is unfair. "People are on a fixed income and want to see a benefit for their tax dollars."
  - 4-c. Several feel the City has been respecting the developers too much and not heeding the needs of residents. For example, because the recent impacts to roads appear to be neglected, due to intermodal traffic and the growth of Berewick, the perception of an individual at the meeting was that the City is pushing the project mainly for the interest of developers and not to address the area's real needs. This resident's argument was that there needs to be a balance struck between the local improvements to support development and the area's needs for mobility, e.g. the intersections and NC-160. The improvement planning needs to "act responsibly" to pre-emptively address the long-range performance of the area roads before development comes.
  - 4-d. A resident asked what plans the airport will be doing with the addition of the new run way and new signals/stop signs.
  - 4-e. In sum, they are very concerned with the types of developments that may be coming in, that they are going to be done "tastefully" and "responsibly". This includes what is going to be done to protect the environment and who is going to be responsible for that. They are expecting the project team to bring more research, particularly with respect to traffic analysis and environmental impacts.

#### Key Opportunities:

- 1. Community desires:
  - 1-a. Preserve "Dixie" in the new road name - very important to the area and history.
  - 1-b. One resident suggested the new road should be a "parkway" that will bring nicer development, like Ballantyne Commons Parkway or Queens Road. They all know development is going to come, but they want it to be to be good quality. She mentioned Ballantyne Commons Parkway in reference to the quality of

- development they want to see: it is attractive and pretty with minimal development (in contrast with Berewick), and it has connectivity for bikes and pedestrians. "Pretty is important."
- 1-c. A resident on Garrison Road has been trying to subdivide and sell his property but has not been able to do so due to the small area plan's non-residential land use designation brought about by the airport's old noise contours. Revisiting the land use designations due to the update to the airport's Noise Program may be looked on positively by landowners in the same situation.
  2. Agreement with project objectives:
    - 2-a. "Does everybody agree that this area needs new roadways?" Response: Yes (everybody agrees).
    - 2-b. "Do you all think this area needs a major roadway between I-85 and Berewick?"  
Response: It depends on where it's placed.
    - 2-c. Since the area has not grown, they do want some form of economic development, especially in adding grocery stores and restaurants. They understand topography is a major challenge to this type of development and it may not be feasible to have everything they want. They would support development (even a zoo) so long as it is done "respectably".
  3. Public outreach tips:
    - 3-a. Contact Debbie Sutton for our charrette. She will spread the word to residents who are interested in providing feedback. She organized a community meeting last year with Debra Campbell.
    - 3-b. The best way to notify neighbors about upcoming meetings would be bulletins posted at the Dixie Grill & Grocery and at the churches, and mailers.  
Note: Dixie Grill & Grocery currently displays a map of the proposed alignments.
    - 3-c. Not many really use social media in the area.
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CIP Advance Planning - Garrison Rd and Dixie River Road

## Focus Group #2 Meeting Summary - Churches

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Meeting Time/Date: 9:30 AM - 10:30 AM, May 21, 2015

Location: Panera Bread at Whitehall Commons  
(8152 South Tryon St., Charlotte, NC 28273)

Summaries by: Eric Orozco (from meeting notes by Deidra Grier and Donal Simpson)

### Interviewed Participants:

Name	Representing	E-mail
Billy Grier	Mount Olive Presbyterian Church (pastor)	berg7620@aol.com
Christian Chapman	Radiant Church (pastor)	ChristianChapman777@icloud.com
Shomas Ann Robinson	Ramoth AME Zion Church (member)	
David W. Robinson	Ramoth AME Zion Church (member)	
Jeff Pinkston	Steele Creek Presbyterian Church (pastor)	jeff@steelecreekpres.org

### Participants:

Tim Greene	Charlotte Eng. & Prop. Management (E&PM)	tlgreene@ci.charlotte.nc.us
Imad Fakhreddin	Charlotte Eng. & Prop. Management (E&PM)	ifakhreddin@ci.charlotte.nc.us
Greg Boulanger	HNTB	gboulanger@hntb.com
Donal Simpson	Donal Simpson, FAIA AICP	drsfaia@gmail.com
Deidra Grier	Neighboring Concepts	deidra@neighboringconcepts.com
Eric Orozco	Neighboring Concepts	<a href="mailto:eric@neighboringconcepts.com">eric@neighboringconcepts.com</a>

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### SUMMARY OF KEY FINDINGS

The feedback received from the focus group participants at the meeting provided the following main points about opportunities and constraints in the Airport/West Corridor...

#### Key Constraints and Challenges:

1. Ramoth AME Zion Church (or "Dixie River Road Church"):
  - 1-a. Their church is historic to the area and they have been there at least a century. Their membership is based on retaining long-time members with family roots in the area, most of whom no longer live nearby.
  - 1-b. They have an unpaved parking area between the road and the church.
  - 1-c. They have a cemetery on their property.
2. Steele Creek Presbyterian Church:
  - 2-a. Much of their congregation lives in the area; in general, their congregation would like to see the area stay the same, especially those who live on along the shoreline.

- 2-b. They are located on NC 160, which is “a disaster” in terms of traffic between I-485 and West Boulevard.
- 2-c. They might eventually be forced to move because of the airport expansion. They are expecting to move within the next five years.
- 2-d. Their church is on the historic register.
- 2-e. The church has been there since 1760, and the present sanctuary dates to 1889.
- 2-f. They have a historic cemetery on the church property.
- 2-g. The whole area around them is developing - inside I-485 is becoming increasingly industrial/freight related.
- 3. Mt. Olive Presbyterian Church:
  - 3-a. A lot of their congregants in the area are the last ones left of their community and are not happy with the industrialization of the area. The residential area around Walkers Ferry Road is very old and has been there a long time.
  - 3-b. Some of their members in the area might welcome change (improved infrastructure, jobs created); others don't want change.
  - 3-c. The Mt. Olive Church Cemetery is very close to the Thoroughfare Plan alignment.
- 4. Radiant Church:
  - 4-a. There has been tension with the Berewick developer (Pappas) concerning signage matters.
  - 4-b. They expect to eventually have a school and the quality of the local school system (see Item “5”) is a factor driving the demand from both within and without the congregation (they have been approached by Berewick families interested in private schools). They would like to start the school as early as this Fall with 100 children anticipated. Pastor Chapman claimed that several teachers in his congregation are ready to teach for less than their current pay in public schools.
  - 4-c. Pastor Chapman mentioned numbers of 1,500-2,000 that he is anticipating his congregation to reach. Their current capacity as shown by the parking on site is not much over 100 spaces/400 people per service. It is hard to see that the site will be able to accommodate that growth considering the rough plans he depicted, especially with the need to relocate parking somewhere and to provide the needed detention (at the meeting, he wondered if structured parking over the basin could be done). If the church does indeed continue to grow, the likelihood that they will relocate is strong.
- 5. Existing issues with schools in the area:
  - 5-a. Berewick Elementary School has about 700-800 students and the perception is that they are near capacity.
  - 5-b. Berewick has a turnover of families. Many are moving out of the area to Fort Mill because of the schools - overcrowding and bad influences from improper behavior being some of the main motivators. The fights and behavior issues at Olympic H.S. are a big concern.
- 6. Experiences with traffic/access:
  - 6-a. Dixie River Road is currently too narrow, which makes two-way traffic difficult. It is also very dark at night.

- 6-b. Difficulties with back-ups have produced many complaints about the Wallace Neel Road and West Boulevard intersection; traffic just “stacks up”. Because of traffic to/from I-485 and NC 160/West Blvd., people who want to turn left from E.B. West Boulevard to Wallace Neel Road force a back-up since there is no turn lane there. Consequently, those coming down Wallace Neel are sometimes there a really long time because of those waiting to turn left on to West Blvd.
- 7. Other issues and needs:
  - 7-a. More shopping centers and grocery stores are needed (currently there is just the Dixie Grill & Grocery).

### Key Opportunities:

- 1. Ramoth AME Zion Church (or “Dixie River Road Church”):
  - 1-a. Widening Dixie River Road would help them because the road is very narrow in front of their church and north of it.
  - 1-b. Their well water was cut off for the past two weeks in a row. They want to extend a water line to the church. Bringing in water and sewer would help them a lot, as they are always having these kinds of interruptions.
  - 1-c. They welcome adding streetlights as well because it is so dark at night.
  - 1-d. They are also hoping that the above improvements will attract new membership.
- 2. Plans for expansion:
  - 2-a. Radiant Church has a rapidly growing, diverse congregation in the “melting pot of Charlotte” and expects to become a very large church. They were given the \$3 million property in Berewick next to Tanger Outlet Mall by Lighthouse Baptist Church a year and half ago and they are already over 300 members. Many of the people who are moving into Berewick are joining. They consider the condo and townhouse developments coming in and the potential road improvements positively in improving traffic conditions and in helping drive their growth.
  - 2-b. Radiant Church is at capacity now and has begun working on plans to expand. They will add offices and a children’s facility (i.e. school) within 3 years. Then they will build a new sanctuary and use the existing sanctuary as a gym. At the meeting, Pastor Chapman appeared interested only in expanding inside their current 7-acre property.
  - 2-c. Aside from Radiant Church, the other churches represented at the meeting currently do not have plans for expansion.
- 3. Other potential community leaders and/or spokespersons include:
  - 3-a. Vanessa Parker, who is a big leader at Ramoth AME Zion Church (she sent the two members who attended).
  - 3-b. Rev. Herbert Shackelford, the retired Mt. Olive Presbyterian minister. While retired, he is still involved with the church and has an extensive knowledge of the community (he was planning to attend this meeting but had to attend a funeral).
  - 3-c. Kelvin Smith, the pastor of Steele Creek Church of Charlotte (he is a mentor to Pastor Chapman). He has lived in the area his whole life and is very committed to diversity and the issues with poverty in the area; he revamped Jackson Park

Baptist Church on West Boulevard through the formation of Jackson Park Ministries, which helps provide transformational housing.

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CIP Advance Planning - Garrison Rd and Dixie River Road

## Focus Group #3 Meeting Summary - Public Schools and Parks

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Meeting Time/Date: 1:00 PM - 2:30 PM, May 11, 2015

Location: Neighboring Concepts office (1230 W. Morehead, Suite 204)

Summary by: Eric Orozco (from meeting notes by Deidra Grier and Donal Simpson)

### Interviewed Participants:

Name	Representing	E-mail
W. Lee Jones	Mecklenburg Co. Park & Recreation	Lee.Jones@MecklenburgCountyNC.gov
Peggy Hey	Charlotte Mecklenburg Schools (CMS)	peggyh.hey@cms.k12.nc.us

### Participants:

Tim Greene	Charlotte Eng. & Prop. Management (E&PM)	tlgreene@ci.charlotte.nc.us
Imad Fakhreddin	Charlotte Eng. & Prop. Management (E&PM)	ifakhreddin@ci.charlotte.nc.us
Greg Boulanger	HNTB	gboulanger@hntb.com
Donal Simpson	Donal Simpson, FAIA AICP	drsfaia@gmail.com
Deidra Grier	Neighboring Concepts	deidra@neighboringconcepts.com
Eric Orozco	Neighboring Concepts	<a href="mailto:eric@neighboringconcepts.com">eric@neighboringconcepts.com</a>

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### SUMMARY OF KEY FINDINGS

The feedback received from the focus group participants at the meeting provided the following main points about opportunities and constraints in the Airport/West Corridor...

### Key Constraints and Challenges:

1. Mecklenburg Co. Park and Recreation ("Park and Rec"):
  - 1-a. Park and Rec is not willing to swap out any land from Berewick Regional Park. It has a school and indoor facility with a long-range master plan to add play fields clustered in "terraces", two play grounds (one for school, one for local area), walking trails, and a separate 7-10 acre parcel for passive use on the other side of Dixie River Road. Currently two baseball diamonds on play meadow are being built. Increasing regulatory requirements will probably limit the originally planned buildout of the 2004 master plan.
  - 1-b. They aren't looking at relocating play fields or active uses elsewhere in the corridor but prefer to optimize the amenities of the regional park.
  - 1-c. There are several conservation easements on the Berewick park property, and they want to keep and protect natural areas as much as possible, something the County

- has been recently recognized nationally for. Their master plan also reflects their goal to preserve as much of the tree canopy as possible, leaving 50% undisturbed to meet the City's overall goal of achieving 50% tree canopy by 2050.
- 1-d. While they have plenty of land close to the river, it is important to them to keep these undisturbed due to natural areas with hardwoods and more wildlife. They would not look to put facilities in these preserves, except for those related to trails, interpretive education and boating.
  - 1-e. Park and Rec does not look favorably on the thought of splitting the Berewick property with a thoroughfare for a combination of the reasons above.
  2. Charlotte Mecklenburg Schools (CMS):
    - 2-a. Planning for new CMS facilities generally follows population growth. For the new Renaissance preK-8, for example, the capacity at Reid Park Academy was a trigger. CMS appears to not have a process in play to get ahead of residential development with land acquisition in this area. Sometimes acquisitions are developer driven, but meeting residential demand is not the sole basis of acquisitions as other needs are in play and capital funding plays a huge deciding factor. Their acquisitions planning is tied to getting bond money (right now there is not a separate "bucket" at CMS for land acquisition).
    - 2-b. With concern to land that a developer may potentially sell or donate upfront to CMS, Peggy Hey (CMS) is to check on how long they can hold on to property before building a school.
    - 2-c. CMS requests to be kept informed of the Dixie River Road and Garrison Road design work near Berewick Elementary. CMS is concerned about the impact to their schools (Peggy Hey referred to the recent negative impacts with the University Point Boulevard new bridge connection over 85 near Ikea). CMS will be most concerned about future traffic near the school interfering with their car riders and bus maneuvers in and out, the sight distances required for their buses, and the impact to children's safety around the facility.

### Key Opportunities:

1. Mecklenburg Co. Park and Recreation:
  - 1-a. Lee Jones discussed generally Park & Rec's park goals/guidelines for selecting land:
    - 24,000 acres of land is currently under County stewardship, and about 50% of which is reserved as nature preserve.
    - General park types:
      - Neighborhood Parks are typically 1-20 acres in size, assume a "walk-to" experience for nearby residents. They try to incorporate a playground and shelters but do not always have restrooms and parking.
      - Community Parks, usually 20-100 acres, include what's in a Neighborhood Park but have more amenities: tennis, indoor shelter, striped fields, spray grounds, etc.

- Regional Parks, such as Berewick, are 100+ acres in size and include a grouping of fields to facilitate amateur sports use (sportsplexes).
  - Special facilities - they leased land to the Whitewater Center (USNWC) as a "specialty regional park".
  - There's also a joint use classification that can be added with CMS, Berewick Regional Park being an example. The Citizens Capital Budget Advisory Committee guideline is to share property jointly when available.
  - Their acquisition goal will be to have everyone eventually within a 6 block walk (1/2 mile) of a park, with a certain number of acres required per 1,000 residents. They are trying to get \$6.5 million per year for land acquisition approved by the County Commissioners. Their overall policy in land swaps is no net loss of open space and they will do it only when it is advantageous to parks.
- 1-b. About 10 acres of Berewick Regional Park is separated from the main park property by Dixie River Road. They currently plan to use the parcel for passive recreation with a dog park and it needs a pedestrian connection to the D. R. Horton development south. If Dixie River Road can be realigned to combine their properties (if that can be done), Park and Rec would look favorably on that - note how this might grant an extra option (or room to talk with CMS and Park and Rec) with regard to the Garrison Road tie-in to Dixie River Road.
  - 1-c. Berryhill Nature Preserve is planned as a series of trails and perhaps an area for interpretive education.
  - 1-d. Iswa Nature Preserve - formerly the "gateway property" on the east bank of Lake Wylie - currently has no amenities, but at one point they wanted to build a conference center and possibly residential. "Iswa" is the Catawba word for "river". It has been approached by several entities interested in acquiring it for development and they have all been rejected. They are going to put in a canoe/kayak launch at the river and are working with NCDOT to use the old weigh station on Wilkinson to provide the access to the reserve.
  - 1-e. In the rest of the study area, they would like to provide greenway connections along creeks. There is a Greenway Master Plan online ([Appendix 2 of the 10 Year Master Plan](#)). This plan shows two planned trails: (1) an overland connector in the northwest on the Duke right-of-way near the river, connecting to Iswa Nature Preserve, and (2) the Paw Creek Greenway further east. Both will cross I-85 and connect northwards to the Lakewood Greenway (and USNWC system).
  - 1-f. There could be potential for tournament fields at Berewick. They are currently building championship fields in Matthews - 12 fields - for tournaments in order to try to meet the demand. They won't push for too many fields at Berewick and will first look to meet demand by modifying existing fields to synthetic turf, which improves surface quality and drainage and lowers maintenance costs. You are able to get better play on them and allow Park and Rec to program continuous use on them.
2. Charlotte Mecklenburg Schools (CMS):

- 2-a. Demand for public schools appears to be met in the area for now, with campus groupings nearby north and south of the Corridor. Berryhill School (K-8) may get some relief from overcrowding with the future Renaissance preK-8 (at West Boulevard and Billy Graham Parkway), and Berewick Elementary is new and doing okay right now, so they are not considering any additional schools in the study area. If population increased there's a possibility to purchase and develop. Money for acquisition would be asked for in future bond referendums (next one is 2017). They would most likely purchase land for this (donated land usually has severe limitations).
  - 2-b. Dixie River Road at Berewick is currently 2-lanes but has right-of-way for 4 lanes with a wide median. This capacity could address CMS's safety, traffic and circulation concerns.
  3. Park & Rec and CMS have a process to match plans, and they work together on developments wherever those opportunities happen to align.
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CIP Advance Planning - Garrison Rd and Dixie River Road

## Focus Group #4 Meeting Summary - Economic Development

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Meeting Time/Date: 10:30 AM - 12:00 PM, May 5, 2015

Location: CMGC, 12<sup>th</sup> Floor Large Conference Room

Summary by: Eric Orozco (from meeting notes by Deidra Grier and Donal Simpson)

### Interviewed Participants:

Name	Representing	E-mail
Bill Dillon	Central Piedmont Community College (CPCC)	bill.dillon@cpcc.edu
Laura Foor	Charlotte Regional Partnership	lfoor@charlotteusa.com
Bill McMillan	CRVA - Visit Charlotte	bill.mcmillan@crva.com
Mary Ellen Player	Gooble Fiber	merp@google.com
Jess George	Gooble Fiber	jessgeorge@google.com

### Participants:

Tim Greene	Charlotte Eng. & Prop. Management (E&PM)	tlgreene@ci.charlotte.nc.us
Imad Fakhreddin	Charlotte Eng. & Prop. Management (E&PM)	ifakhreddin@ci.charlotte.nc.us
Veronica Wallace	Charlotte Eng. & Prop. Management (E&PM)	vwallace@ci.charlotte.nc.us
Jonathan Wells	Charlotte-Mecklenburg Planning	jwells@ci.charlotte.nc.us
Ashley Landis	Charlotte Dept. of Transp. (CDOT)	alandis@ci.charlotte.nc.us
Candice Leonard	Charlotte Reg. Transp. Planning Org. (CRTPO)	cleonard@ci.charlotte.nc.us
Greg Boulanger	HNTB	gboulanger@hntb.com
Donal Simpson	Donal Simpson, FAIA AICP	drsfaia@gmail.com
Deidra Grier	Neighboring Concepts	deidra@neighboringconcepts.com
Eric Orozco	Neighboring Concepts	<a href="mailto:eric@neighboringconcepts.com">eric@neighboringconcepts.com</a>

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### SUMMARY OF KEY FINDINGS

The feedback received from the focus group participants at the meeting provided the following main points about opportunities and constraints in the Airport/West Corridor...

#### Key Constraints and Challenges:

1. The Global Vision Leaders Group (which includes Charlotte Regional Partnership (CRP), CPCC and others) sees this area a center of global commerce for distribution and light manufacturing and doesn't have same vision for putting corporate centers out here as the developers might. How that vision is balanced with the unique natural resources, water quality constraints and difficult topography is an open question (the latter acknowledged by CRP).

2. Currently, West Blvd is the main intermodal access. The access to this facility from West Boulevard would need deliberation due to the bunching of different kinds of demand and how that integrates with intermodal and distribution center traffic. Most of the park traffic for amateur sports events will be on weekends (Fri evening - Sun afternoon).
3. Google Fiber's focus is on residential and small business customers within the City of Charlotte limits, so the role of annexation would be important to them. While annexation isn't necessary they would need a separate agreement with jurisdictions outside the City. They would also need to consider the infrastructure being planned, as they follow right-of-ways.
4. Google Fiber's decision to go underground or aerial depends on who owns the right of way. They do about 50/50 above and underground. Telecommunications underground requires more construction time. They don't install fiber far in advance of development, but they prefer to go where construction is happening ("dig once"). Since service revenue typically depends on density, the number of housing units that would be built and when is important.

#### Key Opportunities:

1. Charlotte Regional Partnership and CPCC discussed the following points about the plans to develop this area:
  - 1-a. The Global Vision Leaders Group has a vision for this area. The Group is led by Tony Zeiss of CPCC (Bill Dillon of CPCC, attending, offered to connect the project team to this group). Wayne Cooper (already interviewed) is involved and can be a resource of information on this topic. There's a task force put together and they are deliberating how to market the area. It's a high level of vision at this point and there have been no conversations on the details such as how to deal with truck access in the Corridor or the West Boulevard interchange with I-485.
  - 1-b. Charlotte Regional Partnership sees airport related development as being primarily warehousing/distribution and light industry. The study area is perceived as having too much difficult topography for development as distribution uses. Their focus is mainly on how logistics-related industry will tie in with the intermodal facility.
  - 1-c. Anywhere in the region would be a good target for logistics - no specific targets are set yet.
2. All saw opportunities for recreation and residential development along the Catawba River.
  - 2-a. The study area does present an opportunity to add housing situated closely to employment, with about 20,000 jobs at the airport and the potential for more employment being generated with new development.
  - 2-b. CRVA's interest in this area would be primarily parks, athletic activities, things to do that would bring visitors to Charlotte and the region.
  - 2-c. CRVA: parks are an economic generator. Local parks are more desirable for nearby residents, and would be most suitable along the Catawba River. There are not good connections to the River now. For tournament related athletic fields, access

to I-485 is most important rather than access to the River. Tournaments support hotels, restaurants, shops, etc., so being close to I-485 is important. 50% of the Charlotte room nights are from amateur sports tournaments, mostly on weekends. The opportunity here is thus ideal for a tournament-style sports complex in order to draw in those regional and national users that recreational facilities with few fields cannot serve.

- 2-d. In terms of traffic impacts, safety, maintenance and programming, there is a synergy in parks and schools being close together.
  3. The benefit of Google Fiber, in terms of economic development, is that it can be a great recruitment tool for the worker population, enabling work from home and entrepreneurial startups. This has been the experience in Kansas City. Laura Foor (CRP) concurs that this is how they are recruiting with the potential of Fiber to attract talent. Mary Ellen Player related that a recent study showed an increase of %1 GDP in gigabit fiber communities. Another reason they focus on the residential market is that studies have shown that internet access at home has a beneficial effect on the academic performance of students.
  4. The history of the area could be appealing if we can preserve parts of it.
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CIP Advance Planning - Garrison Rd and Dixie River Road

## Focus Group #5 Meeting Summary - Environmental Conservation

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Meeting Time/Date: 2:00 PM - 3:00 PM, May 7, 2015

Location: CMGC, Conference Room #601

Summary by: Eric Orozco (from meeting notes by Deidra Grier and Donal Simpson)

### Interviewed Participants:

Name	Representing	E-mail
Kim LeNeave	Browns Cove	lene5633@bellsouth.net
Matt Covington	Catawba Lands Conservancy (CLC)	matt@catawbalands.org
Rick Gaskins	Catawba Riverkeeper Foundation (CRF)	rick@catawbariverkeeper.org
Charles McRorie	Catawba Riverkeeper Foundation	cmcrorie@aol.com
Emilee Syrewicze	Catawba Riverkeeper Foundation	emilee@catawbariverkeeper.org
Vicki Taylor	Catawba-Wateree Relicensing Coalition	vetaylor@roadrunner.com
Jason Wager	Centralina Council of Governments (CCOG)	jwager@centralina.org
Rick Roti	Charlotte Public Tree Fund	RickRoti@gmail.com
Tim Gause	Duke Energy	Tim.Gause@duke-energy.com
Joe Hall	Duke Energy	Joe.Hall@duke-energy.com
Mark Oakley	Duke Energy	Mark.Oakley@duke-energy.com
Marla Chambers	N.C. Wildlife Resources Commission (NCWRC)	marla.chambers@ncwildlife.org
Mary Newsom	UNCC Urban Institute	mnewsom@uncc.edu

### Participants:

Tim Greene	Charlotte Eng. & Prop. Management (E&PM)	tlgreene@ci.charlotte.nc.us
Imad Fakhreddin	Charlotte Eng. & Prop. Management (E&PM)	ifakhreddin@ci.charlotte.nc.us
Ashley Landis	Charlotte Dept. of Transp. (CDOT)	alandis@ci.charlotte.nc.us
Greg Boulanger	HNTB	gboulanger@hntb.com
Eric Seckinger	HNTB	eseckinger@hntb.com
Donal Simpson	Donal Simpson, FAIA AICP	drsfaia@gmail.com
Deidra Grier	Neighboring Concepts	deidra@neighboringconcepts.com
Eric Orozco	Neighboring Concepts	<a href="mailto:eric@neighboringconcepts.com">eric@neighboringconcepts.com</a>

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### SUMMARY OF KEY FINDINGS

The feedback received from the focus group participants at the meeting provided the following main points about opportunities and constraints in the Airport/West Corridor...

### Key Constraints and Challenges:

1. There are several challenges to the water quality issues of the corridor:

- 1-a. Lake Wylie is on the State 303(d) list of impaired waters.
- 1-b. A lot of stressors on the coves. Great damage was done by sedimentation, most likely from the freeway construction.
- 1-c. Kim LeNeave, a Browns Cove resident, pointed out that the Berewick development did not go well for sediment control; over 73,000 cubic feet of sediment has been deposited into Browns Cove and it caused flooding issues (the Tanger development, however, designed by LandDesign, did a much better job).
- 1-d. Browns Cove wants to see detention/retention ponds for sediment control installed before development; the ponds need to be periodically cleaned out during construction.
- 1-e. While the study area has increased protection for water quality in this area, Daryl Hammock of Charlotte Storm Water Services is working with a stakeholder committee on the Post-Construction Controls Ordinance enhancement to further the protections.
- 1-f. The additional post-construction controls enhancements will address pollutants like phosphorus and nitrogen but not necessarily sedimentation.
- 1-g. The post-construction controls are not being enforced well enough. Design may have been correct, but work during construction is not being followed through correctly.
- 1-h. I-485 did not follow Mecklenburg County stormwater controls and, as a result, has no stormwater protective measures in place.
- 1-i. Both the sediment control (pre-construction) and post-construction regulations need to be improved. The problem with erosion and sedimentation controls (ESC) is that they typically aren't designed for big enough rain events. The 100 Year Storm events occur more often than implied by the design case and you can do immense damage with one such event.
- 1-j. A questions was raised whether farm ponds might be a possibility for detention locations; there are an estimated 10 to 15 ponds in the area.
2. NCWRC is concerned both with the water quality and the recreation value of the Catawba River/Lake Wylie. The Bass Master Tournament is held on Lake Wylie (a very large event). They would like to see Low Impact Development in the study area: treat stormwater, provide stream buffers, use pervious pavement for sidewalks and parking lots; the percentage of impervious cover is very important.
3. This area is the "headwater" section of Lake Wylie and is part of Duke Energy's lake services group comprehensive shoreline management program that brings restrictions to consider. Duke Energy can make these criteria, the Catawba-Wataree Comprehensive Relicensing Agreement's Shoreline Management Plan (SMP) and Shoreline Management Guidelines (SMG) available for each segment of shoreline classification (Joe Hall has forwarded a data release form to the project team for related GIS data). Their jurisdiction does not go past the water, but the criteria identify, for example, potential recreation areas and areas that should not be touched, delimiting the kinds of activities - both present and future - allowed along the shore.

4. Most of the group was opposed to an additional river crossing; some (Duke) see it as presenting economic development opportunities.
5. There are many raptor species in this area and there are some state-listed endangered species, a mussel and a fish, that extend into the coves.
6. The increased truck traffic may present more hazards for the cyclists who frequent the area.
7. Reasons this is “the last frontier” to development in the County might include:
  - 7-a. it is not in City of Charlotte;
  - 7-b. 2008 recession dampened previous growth;
  - 7-c. lack of sewer;
  - 7-d. topography;
  - 7-e. noise from the airport (for the area, the issue appears to be that the taxiing noise is not buffered well and is more bothersome than take-off and landing noise).
8. Considering the area’s resources and constraints, many attending felt the area was not suited for development to support a center for industry and logistics. (Mary Newsom: “This is a wedge, not a ‘corridor’.”) The Beam Road/Shopton Road area was suggested to be a better location for this kind of non-residential development and that’s where the airport is buying property. A Wallace Neel extension south to this area may grant truck traffic access options that make that area better suited.
9. Contrary to our working assumption, one of the attendees believes (from a recent discussion with Jack Christine) that the airport still has intentions to build a runway west of I-485.

#### Key Opportunities:

1. Suggestions and ideas brought forth included:
  - 1-a. For the City’s risk mitigation, consider bonding stormwater management (like Durham, N.C.). Rick Roti’s suggestion was to seriously consider locating parcels to be acquired to strategically plan low-cost ponds for pre-emptive sedimentation control capacity (farm ponds might be ideal and ready made to cut down costs). Perhaps developers buy back credits in the event of a failure.
  - 1-b. Increasing the required buffers and size of the design storm events for sedimentation controls should be considered; perhaps tie it to the amount of land that will be exposed at one time.
  - 1-c. Include connections to the Carolina Thread Trail and greenway system in the roadway.
  - 1-d. Provide incentives for good design for enhanced stream protection. Example: density bonuses attained by preserving a certain distance from streams outside of stream buffers. It would make infrastructure cheaper while increasing the buffer/protection.
  - 1-e. Be sure to have good tree canopy coverage with road development to attain Charlotte’s tree canopy goal is 50% canopy by 2050. (Depending on how the area is developed, the net addition to Charlotte’s canopy might improve by annexation, especially considering all the stream buffers here.)

- 1-f. The GIS constraints mapping should include an overlay study of “hot spots” by overlaying slopes, streams, special habitats and soil type.
- 1-g. N.C. Wildlife Resources Commission (NCWRC) has a “Partners for Green Growth” pilot project that has a fund that local governments can apply for (\$30,000 per year total available), which will reimburse cost-share funds of up to \$10,000 or \$20,000 and awards 40 hours of technical assistance for local planning projects. The deadline is July 31, 2015.
- 1-h. NCWRC has a “Wildlife Friendly Certification” program that is a voluntary certification process for development, which is worthwhile since it can assist designers walk through design for wildlife friendly attributes during design.
- 1-i. The NCWRC’s “Green Growth Toolbox” (available at ncwildlife.org) would be a good technical guide for study area development. By borrowing its data and resource tools, the connectivity goals of the Green Growth Toolbox can be pursued while addressing Items “1-c” through “1-f” above.
2. Lake Wylie shoreline management:
  - 2-a. The shoreline carries a classification indicating an existing use or future use based on its environmental attributes. If the City desires to change the upland land uses, Duke Energy will make resources available to share with the City to help correlate efforts.
  - 2-b. Part of the agreement [\[PDF\]](#) grants Mecklenburg County the ability to provide a boat access on Upper Lake Wylie.
3. Attendees called attention to the following efforts elsewhere that could serve as models for the project area:
  - 3-a. Melbourne, Australia could demonstrate a model policy and program for recovering stormwater; they have street that recovers all of its run-off and they harvest storm water off the streets to keep trees alive during droughts. The Australians provide many potential environmental conservation development models.
  - 3-b. The Town of Huntersville has stricter water quality guidelines for development than the rest of Mecklenburg County that are worth considering. (See *Town of Huntersville Water Quality Design Manual* [\[PDF\]](#) and Section 7.290, “Lots within the Mountain Island Lake Watershed Protection Area”, of the *Town of Huntersville Subdivision Ordinance* [\[PDF\]](#). They also have a small area plan [\[PDF\]](#) for a very similar area next to the Catawba with preserves and critical watersheds, and it addresses preservation/growth management with future thoroughfare plans.)
  - 3-c. Bluffton, S.C. (Beaufort County) has low impact development standards and developer incentives for low impact development for zero run-off. (See especially the *May River Watershed Action Plan* [\[PDF\]](#), and the nationally recognized 2012 *Beaufort County Manual for Stormwater Best Management and Design Practices* [\[PDF\]](#) which brought the LID practices into adoption. Beaufort County’s Stormwater Fee structure is based on a formula accounting for total residential impervious square footage - “equivalent single family units”; see website [here](#).)
  - 3-d. On the enforcement side, Durham, N.C. has a performance bonded stormwater management policy.

- 3-e. Kacy Cook with NCWRC can provide many examples of good developments and best practices. Also consult the Green Growth Toolbox resources and website ([ncwildlife.org](http://ncwildlife.org)); the website has links to wildlife-friendly examples and sample ordinances.
  - 3-f. MeckConnect includes a lot of specific development examples available at [ConnectOurFuture.org](http://ConnectOurFuture.org). It is a robust website that can point to illustrative strategies. They just wrapped up the first phase and they have parcel level data for a potential capacity analysis, should the project team request it. Mary Newsom nudged the project team to look at the capacity of the existing zoning.
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CIP Advance Planning - Garrison Rd and Dixie River Road

## Focus Group #6 Meeting Summary - Environmental Permitting

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Meeting Time/Date: 3:00 PM - 4:30 PM, May 7, 2015  
*Phone Interview - DMS: 2:30 PM - 3:00 PM, May 11, 2015*  
*Phone Interview - A. Weakley: 3:00 PM - 3:20 PM, May 11, 2015*  
*Phone Interview - A. Pitner: 3:00 PM - 3:20 PM, May 12, 2015*

Location: CMGC, Conference Room #601  
*Phone Interviews: Neighboring Concepts Office (1230 W. Morehead)*

Summary by: Eric Orozco (from meeting notes by Deidra Grier and Donal Simpson)

### Interviewed Participants:

Name	Representing	E-mail
Isaac Hinson	City Storm Water Services (City SWS)	ihinson@ci.charlotte.nc.us
David Caldwell	County Storm Water Services (County SWS)	David.Caldwell@mecklenburgcountync.gov
Marla Chambers	N.C. Wildlife Resources Commission (NCWRC)	marla.chambers@ncwildlife.org

### Interviewed by Phone, 2:30-3:00 PM, May 11:

Nancy Daly	NCDENR Division of Mitigation Services (DMS)	Nancy.Daly@ncdenr.gov
Jeff Horton	NCDENR Division of Mitigation Services	Jeffrey.Horton@ncdenr.gov
Hal Bryson	NCDENR Division of Mitigation Services	Hal.Bryson@ncdenr.gov

### Interviewed by Phone, 3:00-3:20 PM, May 11:

Allison Weakley	NCDENR Office of Land Stewardship (OLS)	allison.weakley@ncdenr.gov
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### Interviewed by Phone, 3:00-3:20 PM, May 12 (with Deidra Grier & Eric Orozco):

Andrew Pitner	NCDENR Division of Water Resources (DWR)	Andrew.Pitner@ncdenr.gov
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### Participants:

Tim Greene	Charlotte Eng. & Prop. Management (E&PM)	tlgreene@ci.charlotte.nc.us
Imad Fakhreddin	Charlotte Eng. & Prop. Management (E&PM)	ifakhreddin@ci.charlotte.nc.us
Ashley Landis	Charlotte Dept. of Transp. (CDOT)	alandis@ci.charlotte.nc.us
Greg Boulanger	HNTB	gboulanger@hntb.com
Eric Seckinger*	HNTB	eseckinger@hntb.com
Donal Simpson	Donal Simpson, FAIA AICP	drsfaia@gmail.com
Deidra Grier	Neighboring Concepts	deidra@neighboringconcepts.com
Eric Orozco	Neighboring Concepts	<a href="mailto:eric@neighboringconcepts.com">eric@neighboringconcepts.com</a>

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### SUMMARY OF KEY FINDINGS

\* Attended only the May 7 meeting.

The feedback received from the focus group participants at the meeting provided the following main points about opportunities and constraints in the Airport/West Corridor...

### Key Constraints and Challenges:

1. Challenges with recent development:
  - 1-a. Browns Cove is on City Council agenda to approve dredging. Sediment contributors are from the airport expansion, the construction of I-485, and construction at Berewick. They probably won't be able to remove all the sediment with the dredging, and some homeowners have permanently lost access to their piers.
  - 1-b. The City built detention/sedimentations for extra erosion control for Dixie River Road jointly with the Tanger Outlets developer; the developer paid for a monitoring station.
2. Stormwater permitting constraints and challenges: For road design, design probably will have to go beyond standard measures because of the increased environmental restrictions and topography and streams in this area. Main points of advice from the May 7 meeting attendees...
  - 2-a. More traffic equals more problems for water quality. Suggestion on where to put the new roads is to keep them away from the river/low-lying areas and more towards dense areas.
  - 2-b. 401(4) requirement regulates impacts to streams and wetlands. City/County SWS will look at minimization of streams and wetland impacts, and stream and wetland mitigation.
  - 2-c. While road projects are exempt from buffer requirements, be aware of stream buffer requirements and of excessive sedimentation. Some impacts are caused from the channel failures.
  - 2-d. Suggested first step is to identify streams and wetlands and work around them as much as possible. Delineate boundaries of streams and wetlands and avoid these as much as possible.
  - 2-e. Post construction ordinance requires Best Management Practices (BMP) for control of runoff. Design Standards in Watersheds is part of the North Carolina General Statutes (NCAC).
  - 2-f. For road runoff management, dispersed flow is preferred; this might require larger right-of-way. Treat runoff at the source, don't divert back to the cove. Suggestion is to draw zones behind the cove and keep that flow dispersed at different places (keep it from concentrating).
  - 2-g. Swales are better in this area for runoff. It is best to keep it from concentrating in ponds and filters. Use Low Impact Development techniques.
  - 2-h. David (County SWS) suggests sitting down with Jay Wilson from the City for detailed engineering measures on the erosion control permit.
  - 2-i. Using farm ponds as detention is generally discouraged by 401(4) rules; they're impounded streams and are therefore protected as US waters. Identify all streams, ponds and wetlands boundaries and stay out of them. Offline ponds are good, as long as they are not connected to a stream.

- 2-j. On the current alignment, there would be 8 culverts and 1 bridge. The Beaver Dam watershed has an ecosystem enhancement program underway as a mitigation program, making this a costlier crossing than typical.
- 3. Mecklenburg County Storm Water Services (County SWS):
  - 3-a. David (County SWS) was unaware of any County capital projects planned for this area - needs follow up. A new boat ramp was once being considered, but Park & Recreation didn't want the maintenance and the original budget was insufficient to do what they wanted.
  - 3-b. David (County SWS) was unaware of any flooding concerns. Due to the low numbers of buildings out there, his thought was that this is somewhat unlikely. He will research if any properties have flooding issues. Note that this was actually mentioned as an issue by a Browns Cove resident attending the earlier meeting for Focus Group #5, Environmental Conservation.
- 4. N.C. Wildlife Resources Commission (NCWRC):
  - 4-a. NCWRC is concerned about non-residential development close to wildlife and the Catawba River. Currently, there are large areas close to the shoreline designated "non-residential" in the adopted future land use plan (from the 2003-adopted *Dixie Berryhill Strategic Plan*).
  - 4-b. Aquatic life passage through culverts is needed to allow fish to swim upstream.
  - 4-c. Adding more roads will put residents at risk with having accidents with deer and other wildlife that may roam out there now. Streams and buffers provide habitat protection.
  - 4-d. Wildlife Action Plan treats native, state and federal protected species). Look at their referenced resources to see where such species are in the area and how to design development near them. Refer to the Wildlife Action Plan and the Green Growth Toolbox for wildlife protection (both available at [ncwildlife.org](http://ncwildlife.org)).
- 5. N.C. DENR Division of Mitigation Services (DMS):
  - 5-a. DMS's concern is especially for the Beaverdam Creek area, which is in the N.C Ecosystem Enhancements Program easements placed in perpetuity. The protection program covers 13,000 linear feet of stream restoration and 2,600 linear feet of preservation, and that is on two unnamed tributaries (not on Beaverdam Creek proper) that come in from the east - UT-1 is in Berewick Regional Park. Their enhancement projects typically have a 50 ft. buffer on each side of the creek.
  - 5-b. There are existing "mitigation credits" implemented by the existing NCEEP easements that may be impacted since the easements were placed there in the first place to cover mitigation for impacts elsewhere in the watershed. The Army Corps of Engineers requires an applicant to pay into a fee in lieu of an impact, which then goes to DMS to create the mitigation. Crossings there would have significant costs associated with them. There are multiplier effects. Extra land acquisition costs and construction costs are associated with easement sites.
  - 5-c. There are a couple of existing crossings of Beaverdam Creek. Any new crossings might be a bigger impact than widening, since they introduce new right-of-way that takes out easement area. Therefore, the crossing will have to make up

- mitigation credits for the impacted assets. It is to the project's benefit to avoid these easements as much as possible.
- 5-d. There already was a release of easements for a Duke right-of-way recently (this is included in the copy of deed documents Jeff Horton sent to Eric Orozco).
  - 5-e. They don't know if there are other mitigations planned in the area and they can't project the need. It is possible to generally anticipate that there will be needs. There are two 8-digit catalog units designated by USGS/NRCS: "Catawba 01" and "Catawba 03"; "01" is the hydrologic unit in the western portion of the study area and "03" in the eastern portion. "01" and "02" are typically troubled areas and may need stream restoration in the future. What makes them troubled? Multiple reasons that could cause a stream to not function normally - it could be sedimentation, bank erosions, run-off (most likely, the airport and NCDOT projects contributed).
  - 5-f. According to Hal (DMS), our study area is bisected by their catalog units and one of them ("03") is small. This claim needs to be verified as their 8-digit catalog map online doesn't appear to bear this out - the entire corridor falls in the 01 area, and the 01-03 boundary actually just skirts the study area (it comes close to Steel Creek Road in the south). However, if it should be true, this could pose a challenge by adding the Beaverdam Creek crossing or moving the rights-of-way with widening because it will determine where the compensation projects may need to be located or what banked credits can apply. Additionally, consideration to the potential of impacts to the watershed by the airport's future projects east of I-485 there need to be anticipated. This is especially true for all the areas they recently bought south of the third parallel runway, which includes lakes that feed Beaverdam Creek (Shoaf Lake and Legion Lake).
- 6. N.C. DENR Office of Land Stewardship (OLS):
    - 6-a. Natural Heritage Program sites are in the area. Like NCWRC, the OLS does not have permitting authority regarding these, but NCWRC coordinates closely with them and other state agencies (Marla Chambers of NCWRC is the Western N.C. NCDOT Coordinator).
    - 6-b. The goal of the Natural Heritage Program is to increase the state's biodiversity. Inventory includes Natural Areas (NHNA's), Managed Areas (MAREA's), and Element Occurrences for rare species. The Park and Rec properties are included in the managed areas and Iswa Nature Preserve has Element Occurrences that appear to have habitat extending into unprotected areas outside of the preserve.
  - 7. N.C. DENR Division of Water Resources (DWR) Mooresville Regional Office:
    - 7-a. Types of work that Andrew Pitner's group addresses: discharge permitting and well permitting (depending on the nature of the wells, they handle the high volume projects). Annexation will not impact them since they are state regulated. Andrew mentioned there are people on his staff that will need to get involved. Alan Johnson in his office is to be the main contact (can use the main office number, 704-663-1699, they are all based in Mooresville).

- 7-b. Andrew mentioned he knows of one minor permit in the area for the Berryhill School. Andrew mentioned they may have another for Gough-Econ (close to I-85). These are the only current ones he's aware of.
- 7-c. The soot from the steam station is a limiting factor with air quality. Contact Ron Slack in their air quality division for more information (same Mooresville office: 704-663-1699).
- 7-d. How the water table has been impacted is unclear. There are efforts involved with monitoring the quality of water table, but Andrew was not sure if they would have any wells in our specific area. Monitor wells near the Duke Allen Steam Station are currently in the installation process.
- 7-e. In addition to the local jurisdiction SWIM buffers, the area is subject to riparian buffer regulations that the Mooresville Regional Office (MRO) administers. These are the 401 and Buffer Permitting Unit state buffers for the Catawba River mainstem below Lake James. For information refer to the DWR website - see [401 & Buffer Permitting Unit](http://portal.ncdenr.org/web/wq/401bufferpermitting) (<http://portal.ncdenr.org/web/wq/401bufferpermitting>). Andrew recommends consulting the [Riparian Buffer Clarification Memos](#). Alan Johnson at the MRO is also the contact for the Catawba Buffers.

#### Key Opportunities:

1. City Storm Water Services (City SWS):
  - 1-a. City has a "bank" for stream and wetland mitigation, credits may be available. See Item "3-d" below.
2. N.C. Wildlife Resources Commission (NCWRC):
  - 2-a. If the non-residential future land use areas could be reconsidered in an update to the 2003-adopted *Dixie Berryhill Strategic Plan*, particularly where they extend quite close to the river, this would help address NCWRC's concerns with commercial/industrial development near the river. Originally, the future land use plan's designated "non-residential" areas were largely drawn up the way they were on the basis of keeping residential development out of the areas within the noise contours of the airport's 1996 Noise Exposure Map, which are now being revised in the current Noise Program update.
  - 2-b. The Green Growth Toolbox (available at [ncwildlife.org](http://ncwildlife.org)) shows planners how to create contiguous links of open land to serve as wildlife corridors. (Eric Orozco has gone through the training workshop.) The extensive buffer areas of the stream systems and the numerous transmission line right-of-ways in the Corridor may provide logical opportunities to do this. These links could also be preserved to serve the County's planned greenways in the north.
  - 2-c. Marla Chambers is the NCWRC Western N.C. NCDOT Coordinator.
3. N.C. DENR Division of Mitigation Services (DMS):
  - 3-a. The corners of the NCEEP easements are monumented in the ground. It is described on their website; Jeff Horton has sent the deeds/restrictions and boundary information for this site to Eric Orozco.

- 3-b. If Dixie River Road widening stops within the existing right of way, it would not be considered an impact.
- 3-c. DMS interviewees were unsure about the relative costs of culvert impacts versus bridge impacts; generally, though, the goal is to allow aquatic organisms to pass through and there are ways to do this with culverts.
- 3-d. DMS is always looking for land owners that might be interested in working with their program for conservation easements; the project team should see if adding extra restoration areas may help make up for the impact to mitigation credits in adding a new crossing. Note that City SWS has a “bank” of mitigation credits. Also note that compensations may be located in areas other than the impacts. A mitigation project isn’t necessarily tied to the area of impact, so long as they mitigate within the 8-digit catalog units. Also, restoration projects are programmatic to restore to a more functional stream so there might be options that are comparatively less costly.
- 3-e. Their website has documents to show sites they have protected which may be a helpful tool for this project. Currently, there is no other mitigation project in the study area; nearest is inside Billy Graham Parkway to the east at Irwin Creek near Whitehurst Road.
- 3-f. Restoration/mitigation could potentially be coordinated with the airport in Charlotte Douglas’s recent land acquisitions in the watershed area east of I-485.
- 4. N.C. DENR Office of Land Stewardship (OLS):
  - 4-a. Allison (OLS) helps manage the Natural Heritage Data Explorer, an interactive GIS subscription service on natural heritage and other reference layers. It allows approved subscribers to submit for all inventories in a defined project area and to receive a report on natural resources in an area and within a mile of the area. Allison (OLS) is available to assist the project team to research habitat inventories for our area (they have not surveyed the entire state and they may not have a recent survey in the study area). Eric Orozco can submit for a report of any biodiversity/wildlife areas within the Corridor and follow up with Allison for further assistance on occurrences. (Eric has done the training required to generate reports and is subscribed. This data is restricted to use for conservation purposes in the project only and not to be disseminated to the general public.)
  - 4-b. In addition, OLS updates the “NC Conservation Planning Tool” (2007), which prioritizes an interconnected network of essential ecosystem resources and functions that is important for conservation statewide. It pools the most recent “boots-on-the-ground” data sets (not just modelled) from four primary statewide assessments: biodiversity/wildlife habitat; open space and conservation lands; agricultural lands; and forestry lands. Sites can be evaluated on a scale of 1 to 10 to identify their conservation priority (10 highest). Priority areas may be eligible for NRCS/trust funding. It is a base component to NCWRC’s “Green Growth Toolbox” (See Item “2-b), which can inform the project team about how to conserve areas in infrastructure and subdivision planning, providing design guidelines for protecting habitat and keeping conservation areas un-fragmented.

CIP Advance Planning - Garrison Rd and Dixie River Road

## Focus Group #7 Meeting Summary - Transportation Planning

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Meeting Time/Date: 2:30 PM - 4:00 PM, May 18, 2015

Location: CMGC, 14<sup>th</sup> Floor Large Conference Room

Summary by: Eric Orozco (from meeting notes by Deidra Grier and Donal Simpson)

### Interviewed Participants:

Name	Representing	E-mail
Andy Grzymiski	Charlotte Dept. of Transp. (CDOT)	agrzymiski@ci.charlotte.nc.us
Candice Leonard	Charlotte Reg. Transp. Planning Org. (CRTPO)	cleonard@ci.charlotte.nc.us
Stuart Basham	N.C. Dept. of Transp., Div. 10 (NCDOT)	slbasham@ncdot.gov

### Participants:

Tim Greene	Charlotte Eng. & Prop. Management (E&PM)	tlgreene@ci.charlotte.nc.us
Imad Fakhreddin	Charlotte Eng. & Prop. Management (E&PM)	ifakhreddin@ci.charlotte.nc.us
Jonathan Wells	Charlotte-Mecklenburg Planning	jwells@ci.charlotte.nc.us
Ashley Landis	Charlotte Dept. of Transp. (CDOT)	alandis@ci.charlotte.nc.us
Greg Boulanger	HNTB	gboulanger@hntb.com
Eric Seckinger	HNTB	eseckinger@hntb.com
Donal Simpson	Donal Simpson, FAIA AICP	drsfaia@gmail.com
Deidra Grier	Neighboring Concepts	deidra@neighboringconcepts.com
Eric Orozco	Neighboring Concepts	<a href="mailto:eric@neighboringconcepts.com">eric@neighboringconcepts.com</a>

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### SUMMARY OF KEY FINDINGS

The feedback received from the focus group participants at the meeting provided the following main points about opportunities and constraints in the Airport/West Corridor...

#### Key Constraints and Challenges:

1. The major constraints for transportation development in the area are topography and water/stream crossings (including expenses added to stream restoration), meaning project costs could be comparatively high in certain segments.
2. CDOT was not sure how the original cost estimates were calculated. Both CDOT and HNTB estimated that the construction cost could be as much as 3X higher than the estimates (HNTB used a planning level cost estimate, using the MPO tool, and got \$125-127 million total project cost; \$44 million is what is in the proposed bonds). The project team should work to identify the return on investment in terms of economic benefit

- (e.g. property taxes, job growth) since the road costs are much higher than originally estimated.
3. City money cannot be spent outside the city limits. Public Private Partnerships with developers will thus be necessary both to contribute to the cost of projects and to incorporate the properties needed with voluntary annexation. The project team should work to identify developer assumptions and “strong sentiments” concerning locations of alignments.
  4. The Garden Parkway became an unfunded project (it is only alive to fight the lawsuit against it). The Mecklenburg County segment didn’t score well in the last round of the State Transportation Improvement scoring. The need to provide east-west mobility between Gaston and Mecklenburg counties, especially due to the removal of the Mt. Holy Road river crossing, however, is not going away, and will remain a consideration in the road network planning in the corridor. Two options for the connector alignment are currently being considered in Gaston County, one going through Belmont and one circumventing Belmont. The project team should also work to identify Lincoln Harris and other developers’ needs and assumptions concerning the potential for this east-west connector.
  5. The Thoroughfare Plan alignment in the study area follows Dixie River Road instead of Garrison currently. Currently, Dixie River Road is the designated major thoroughfare and Garrison Road is a minor thoroughfare. The crossing of Beaverdam Creek (toward the southern end tie-in with Dixie River Road) will be the biggest challenge to change Garrison to be the designated major thoroughfare. It was anticipated that the connection of Garrison Road to Dixie River Road would be a four way intersection with an entry at Berewick and that assumed that Garrison would remain a minor thoroughfare. Another challenge to making Garrison Road the main alignment is that CMS and Park and Recreation do not want to lose property for the road alignment changes that would occur.
  6. The 2006-adopted *CATS 2030 Transit Corridor System Plan* needs updating, but the West Corridor plans (along Wilkinson Boulevard) will probably never go past I-485 (at the time of the 2006 West/Southeast Corridor DEIS, the end of line station stayed to the east of I-485 and it was planned there mainly to put a park and ride to capture I-485 and east-west commuters; no Transit Oriented Development opportunities were considered near there).
  7. The airport’s planned fifth runway would dramatically affect NCDOT’s plan for the grade separation of the intersection of Billy Graham Parkway and West Boulevard, since this will require a tunnel underneath the runway, and the FAA has issues with this. The feasibility of the grade separation project will be questioned because of this. NCDOT is delaying the project to the 2023-25 time frame waiting for the airport to complete its long range plan. This also goes for the planned interchange of Billy Graham at Morris Field Dr.
  8. The planned Lincoln Harris development currently does not anticipate the increase of traffic around the I-485 interchange. There is a potential conflict between Norfolk Southern’s plans at West Boulevard and Lincoln Harris’s plans west of I-485 on an

extension of West Boulevard due to the conflict between truck traffic and local traffic. Traffic studies for traffic in and out of interchange near airport will need to be deliberated before new developments come in.

9. Considering the time frame of the current planning efforts and market analysis (both the CIP and the Airport's), Andy Grzynski (CDOT) questioned why a project like this would be on the November 2016 bonds, since it is currently unclear that the proposed \$31.2 million (for Garrison Road extensions) can be tied to a project (or a cost-estimated phase of it).

### Key Opportunities:

1. The alignment in the area plan came from three things:
  - 1-a. The result of public involvement during the planning process of the 2003-adopted *Dixie Berryhill Strategic Plan*;
  - 1-b. An attempt to delineate the land uses, putting more intensive, non-residential uses to the east near the airport and keeping the noise-sensitive land uses to the west of the alignment (keeping these out of the area within the 65 DNL contour of the airport's 1996 Noise Exposure Map); and,
  - 1-c. To take advantage of existing rights of way and circumventing residential communities as much as possible.
2. Because the area plan's outdated constraints driving land use goals (in "a" and "b" of item 1 above), an update to the adopted future land use policy in the corridor may need to be considered. This will allow the project to update the land use and transportation framework to better reflect the new market analysis and the airport's most recent updates to the Noise Program. Related to this effort, new alignment options can be studied both to improve the alignment (and estimated costs) and to help improve development opportunity and options for development.
3. Another Catawba River crossing might be attractive to interests on both sides of the river (even in Belmont depending on where it goes, through or around Belmont).
4. A project to widen I-85 by adding an extra lane from Sam Wilson Road to Main Street in Lowell is in the STIP and may help with east-west mobility. This project is a near-term substitute for the capacity represented by the Garden Parkway.
5. There was a widening of Dixie River Road in about 2010 in conjunction with a sewer line project where Beaver Dam Creek crosses Dixie River Road. Stream restoration effort will follow the sewer line extension project.
6. Dixie River Road has enough right-of-way in the southern portion along the new developments (between Windy Gap and Berewick) for a parkway cross section, with lanes at different elevations (this width extends past the Beaverdam Creek crossing up to the curve tying to the straight north-south section by the Dixie River Road Church).
7. The railroad at the SteelFab plant was widened with a new track recently added for intermodal traffic. In the future, the crossing just east of the SteelFab plant will need to be grade separated, providing an opportunity to reconsider the location for the crossing. Formerly, the Thoroughfare Plan avoided SteelFab when the alignment was drawn because SteelFab was not interested in relocating at that time; however, they

now appear to be finding themselves limited by the capacity of their operations on the site and are open to considering a relocation. Shifting the alignment westward, crossing through the SteelFab site, will allow a better opportunity to accommodate development between the thoroughfare alignment and I-485 (currently this area is quite narrow).

8. The railroad line is being discussed as a high speed rail corridor between Charlotte and Atlanta with a potential stop related to Charlotte Douglas.
  9. NCDOT has a project to widen NC-160 (Steele Creek Road) from Shopton Road West down to NC-49 (South Tryon Street) as a 4-lane divided boulevard. It is in the Draft STIP.
  10. There is a possibility for “bundling” plan amendments in the project process. If this project proposes a change in the Thoroughfare Plan, it would have to go back through the CRTPO Thoroughfare Plan Amendment process, which will need to include public meetings and a public hearing. It could be possible to bundle the CIP Advance Planning process with a Thoroughfare Plan Amendment, but it would have to be advertised correctly (as at Eastfield Road and others). The process for a Thoroughfare Plan Amendment would be to start the process formally with CRTPO, go through a public involvement process first to establish a proposed alignment, then make a presentation to the TCC with the final alignment, and hold a final public hearing. A possible Small Area Plan amendment could be bundled too, if it goes that far. Area Plan amendments have to go to the Planning Commission and then be approved by the City Council.
-

CIP Advance Planning - Garrison Rd and Dixie River Road

## Focus Group #8 Meeting Summary - Private Utilities

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Meeting Time/Date: 3:00 PM - 4:30 PM, May 5, 2015

Location: CMGC 12<sup>th</sup> Floor Conference Room

Summary by: Eric Orozco (from meeting notes by Deidra Grier and Donal Simpson)

### Interviewed Participants:

Name	Representing	E-mail
Aric Allen	AT&T	EA5498@att.com
Jeff Hughes	AT&T	JH5977@att.com
Jamie Riggins	AT&T	JR9080@att.com
Gregory Brown	Piedmont Natural Gas	gregory.brown@pedmontng.com
David S. Gafel	Time Warner Cable	david.gafel@twcable.com

### Participants:

Tim Greene	Charlotte Eng. & Prop. Management (E&PM)	tlgreene@ci.charlotte.nc.us
Imad Fakhreddin	Charlotte Eng. & Prop. Management (E&PM)	ifakhreddin@ci.charlotte.nc.us
Jonathan Wells	Charlotte Mecklenburg Planning (CMP)	jwells@ci.charlotte.nc.us
Greg Boulanger	HNTB	gboulanger@hntb.com
Eric Seckinger	HNTB	eseckinger@hntb.com
Donal Simpson	Donal Simpson, FAIA AICP	drsfaia@gmail.com
Deidra Grier	Neighboring Concepts	deidra@neighboringconcepts.com
Eric Orozco	Neighboring Concepts	<a href="mailto:eric@neighboringconcepts.com">eric@neighboringconcepts.com</a>

*Note: Duke Energy did not send a representative. Steven Farrah is the contact for planning.*

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### SUMMARY OF KEY FINDINGS

The feedback received from the focus group participants at the meeting provided the following main points about opportunities and constraints in the Airport/West Corridor...

#### Key Constraints and Challenges:

1. Telecom - now operated by Level 3 Communications - is also in the area. Most of the commercial backbone will probably be traveling along Old Dowd and Wallace Neel.
2. No one was sure of any private water or sewer utilities (or others) existing in the area.
3. Relocation capacity of the three utilities:
  - 3-a. With what's existing, any new alignment for Dixie River Road would mean new alignments for utilities. For fiber, in particular, relocation may mean rebuilding

the entire line to maintain a route because splicing a line to move a section may degrade that line. Coaxial cable is easier to move but subject to the same effects. Generally, said David Gafel (Time Warner), "the more splices, the more headaches... both now and down the road".

- 3-b. For Piedmont Natural Gas, there's an encroachment permit process. They prefer for relocations to avoid work during the winter, since that is their highest demand period. For transmission lines, they need a long design lead since they need to own those ROWs outright and it is a lengthy process to gear up the right contractors to do that work (distribution lines just follow the City ROW).
- 4. All three private utilities have capacity to integrate utility work during the roadway construction process. However, the following are issues:
  - 4-a. Since they are revenue driven, their ability to extend facilities within the design of the roadway underground depends on the time frame they can recover revenue. They won't lay down lines without development to serve (they will instead dig/install later when the development arrives).
  - 4-b. Since AT&T and Time Warner's facility and vault capacities are calibrated to user distinctions (residential vs. commercial, etc) and loads, they need to know what kind of development will be coming in and how much of it.
  - 4-c. To avoid conflicts in development projects, Time-Warner and AT&T like to get plans early for utility coordination, but they both tend to follow Duke Energy's lead. Developer usually approaches the Duke Energy first with the plans, Duke draws up their own plans, Duke hands their plans over to them, and then they finally coordinate their design based on Duke Energy's plans.
  - 4-d. They also prefer to follow Duke Energy in determination of installing aerial or underground lines, since they keep joint use agreements with them, and this depends on what the developer wants. Buried lines usually go in the same trench as Duke's lines (with some separation between).
  - 4-e. Delays are typically contingent on getting the designs from the power company early enough so that AT&T and Time Warner can begin their design.
  - 4-f. Also to avoid conflicts, it is best to phase the road construction beginning at the point from which their distribution lines will be extended. If they are built from opposite directions, their lines tend to get damaged by construction and have to be repaired multiple times.

#### Key Opportunities:

- 1. If developers stage development along with the thoroughfare construction for extensions and widening work (especially if they are constructing it), coordination with the private utilities will be eased due to the constraints explained above.
- 2. AT&T:
  - 2-a. AT&T has little along Dixie River Road - majority of current service drops off at about Walkers Ferry Road now (just south of Old Dowd Road). Conduit goes under I-485 by SteelFab. It is thought that their backbone distribution line going down NC-160 may have potential to serve "three-quarters" of the development

- anticipated in the study area, at least in the southern portion up to Old Dowd Road where the NC-160 “wire center” can probably extend up to. Another “wire center” can extend service where need be.
- 2-b. Poles in the area are about ½ AT&T and ½ Duke.
  - 2-c. Most new lines for AT&T (and Time Warner) are going underground. They will put lines under- or above-ground as requested by the developer or by the City (if they are in a City right-of-way).
  - 2-d. AT&T’s planning horizon is typically “tomorrow” (customer driven). They can get a job out of their engineering department in about 90 days. Their long-range planning is done within a capacity management team on the distribution side. They look further ahead solely to get fiber “feed” out to the end, and they may consult the municipal long-range plans.
3. Piedmont Natural Gas:
- 3-a. Piedmont has mains throughout Mecklenburg County. They can add distribution lines as needed, when needed. If the roadway is there, they can serve an area. Their installation schedules are customer driven; they have the capacity to provide service anywhere in the County. The developer provides the right-of-way for distribution lines in his development.
  - 3-b. Piedmont has a distribution main on Old Dowd Road and Amos Smith Road, called the “loop” because it loops from Old Dowd, travelling down Dixie River Road and eastward toward Beam Road. A map of their facilities can be requested (email Gregory Brown: [gregory.brown@piedmontng.com](mailto:gregory.brown@piedmontng.com))
  - 3-c. Their transmission lines are in their own right-of-way (typically 50 ft. wide); lines are 12 inch or 16 inch. Piedmont has an encroachment process. Consult their construction department on planning and design of roadway integration.
4. Time Warner Cable:
- 4-a. Time Warner has cell towers in the area. Fiber lines feed the cell towers and some of the neighborhoods of Garrison Road and Walkers Ferry Road. Recent relocation and undergrounding of a distribution line due to the runway project; it runs along Old Dowd Road and all homes in the area are fed with this. Map of pole lines available via request.
  - 4-b. Time Warner is also customer/developer driven. They have a main hub at I-485 and 160 on the east side of I-485 with the “trunk” traveling NC-160 just like AT&T. Unlike AT&T, they are certain they would have to add a new hub to add service for the future development in the study area.
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# Market Analysis

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Airport/West Corridor -  
Extension of Garrison Rd &  
Widening of Dixie River Rd

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## **Introduction**

Michael Gallis & Associates was tasked with completing a key component of the study by creating a baseline understanding of the current commercial and residential real estate Market conditions in the Airport/West Corridor. While the study roadway alignment was limited to the Airport/West Corridor, the Market study expanded beyond the Airport/West Corridor to create a baseline for the entire upcoming Charlotte-Douglas International Airport (CLT) Strategic Development study Area (CLT Area). Therefore, this report incorporates areas beyond the Airport/West Corridor.

Prior to this study, in March of 2013, Michael Gallis and Associates completed a Demand Impact Analysis using a Market-Based approach for the City of Charlotte for only the Airport/West Corridor. The report concluded that the planned Garrison Road and Dixie River Road projects (estimated at \$43M) would translate into a \$942M in direct and synergetic economic development for Charlotte resulting in 6,910 jobs.

The purpose of this Market Report: Phase I, was to expand on the 2013 Demand Impact Analysis. This expansion of the 2013 report included enlarging the study area geographically to include the entire CLT Area. In addition, this study was to determine the competitive relationship of the land surrounding CLT to other East Coast Airports, assess stakeholder interest in the Area, analyze the development potential of the Area, and create a baseline understanding of current market conditions in the CLT Area based on the current commercial and residential real estate market within the CLT Area. By evaluating each of these components a framework for optimizing the potentials and opportunities for the CLT Area could be created.

The process involved the completion of four individual and interrelated study components.

1. Analyze and evaluate the CLT Area within a local, regional, and East Coast context.
2. Interview key developers and stakeholders to better understand the current perceptions and characteristics of the CLT Area.
3. Complete an Area Analysis to better understand the land & environmental characteristics, regulatory, and existing and planned development patterns.
4. Conduct a Market Analysis based on the current conditions and characteristics of the commercial and residential development activity in the CLT Area.

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**Content 5. Market Analysis (Task 2.03)**



# **Market Report**

## **Phase I**

**August 2015**

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## EXECUTIVE SUMMARY

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In December of 2014, the City of Charlotte contracted with a team led by HNTB that included Michael Gallis & Associates and Neighboring Concepts to begin to study the Airport/West corridor, one of the areas included in the previously passed Bond Referendum for the City of Charlotte. Michael Gallis & Associates was tasked with completing a key component of the study by creating a baseline understanding of the current commercial and residential real estate Market conditions in the Airport/West Corridor. While the HNTB Study Area was limited to the Airport/West Corridor, the Market study expanded beyond the Airport/West Corridor to create a baseline for the entire CLT Strategic Development Area (CLT Area). Therefore, this report incorporates areas beyond the Airport/West Corridor.

### Background

Prior to this study, in March of 2013, Michael Gallis and Associates completed a Demand Impact Analysis using a Market-Based approach for the City of Charlotte for only the Airport/West Corridor of the CLT Area which is referred to in this report as Zone 1. The Analysis concluded that “the Airport/West Corridor is poised to capture the value being created as Charlotte’s role in the global economy is re-defined by the development of the Airport Multimodal Facility, which will make Charlotte a prominent hub for East Coast and international trading activity. The significant new commercial development will produce thousands of new jobs readily available to nearby residents on the Westside. The residential market will be strengthened by the presence of new commercial development. The proposed road projects, in combination with the new CMUD investments in water and sewer, could fundamentally change the entire character and market appeal of this submarket.” The report concluded that the planned Garrison Road and Dixie River Road projects would translate into a \$942M in direct and synergetic economic development for Charlotte resulting in 6,910 jobs.

### Purpose

The purpose of this Market Report: Phase I, was to expand on the 2013 Demand Impact Analysis. This expansion of the 2013 report included enlarging the study area geographically to include the remainder of the CLT Area, referred to in this report as the Zones 2, 3, 4, and 5, as well as to provide greater depth in the analysis of the potentials of the entire CLT area for development and its current market conditions. In addition, this study was to determine the competitive relationship of the land surrounding CLT to other East Coast Airports, assess stakeholder interest in the Area, analyze the development potential of the Area, and create a baseline understanding of current market conditions in the CLT Area based on the current commercial and residential real estate market within the CLT Area. By evaluating each of these components a framework for optimizing the potentials and opportunities for the CLT Area could be created.

### Process

The process involved the completion of four individual and interrelated study components.

1. The first component (included in Task 2.03 Market Research & Development Opportunities) was to analyze and evaluate the CLT Area within a local, regional, and East Coast context. The Competitive Airport Analysis analyzed 12 Eastern US airports to determine the relative scale of opportunity that exists in Charlotte as compared to these other major air hubs.
2. A second component (Task 2.02 Developer Interviews) of this study was to interview key developers and stakeholders to better understand the current perceptions and characteristics of the CLT Area.
3. A third component (Task 2.01 Area Analysis) of the study was to complete an Area Analysis to better understand the land & environmental characteristics, regulatory, and existing and planned development patterns.

- The fourth component (Task 2.03 Market Research & Development Opportunities) was the Market Analysis based on the current conditions and characteristics of the commercial and residential development activity in the CLT Area.

The Market Analysis completed in Phase I will be used as the foundation for Phase II which will focus on determining: What will happen in the area if current trends continue without major capital investments (Plan/Trend); and what would happen under the impact of new major capital investments and a unifying plan development concept to guide future development of commercial and residential real estate in the CLT Area (Value Optimization Scenarios).

### **PRINCIPLE FINDINGS: Opportunities & Recommendations**

Creating a global vision for the CLT Area can more effectively integrate and leverage Charlotte's transportation and communications assets to help the region move forward in developing an unprecedented global competitive advantage and will reinforce the larger regional vision of becoming a "Global City of the Future". In the modern, connected economy, the strength of a region's global transportation and communication facilities that provide the linkages to the global marketplace that is the foundation for future economic growth. Charlotte has already begun investing in strengthening these linkages with the aim of becoming a "Global Hub of Commerce". Charlotte is becoming a prime inland port city leveraging its unique assets to gain a competitive advantage that will boost the region's global presence.

#### **The CLT Area has the greatest opportunity to emerge as the fourth major trade hub on the US East Coast.**

- CLT, the 6th busiest airport in the nation for operations (ACI), the 8th busiest US airport for passenger enplanements (FAA), is widely acknowledged as one of the most important economic development assets to the Charlotte region, supporting the existing economy and attracts future investments to the area.
- CLT Area has the opportunity to create a global economic city unlike anything that any other East Coast airport has ever undertaken as it has the largest amount of underdeveloped land remaining in the area surrounding the Core Airport property (Zone 5, see Figure 23 above). The CLT Area should be developed in an integrated and coordinated pattern to produce synergistic economic effects. This will require coordinating transportation, commercial and residential development activities in the CLT Area to coordinate with and leverage the airport's assets.
- Table 2: Compared to CLT, 11 Eastern US airports have limited opportunities for development

**Table 2: Competitive Airport Analysis Surrounding Land Use within 4 -5 Mile Radius**

Airport	Airport property	Area Undeveloped	Undevelopable*	Industrial	Commercial	Residential	Hotel/Resort	Office	Area Analyzed
<b>CLT</b>	10%	49%	10%	4%	4%	21%	1%	1%	100%
<b>DFW</b>	18%	28%	14%	6%	3%	29%	1%	1%	100%
<b>PHL</b>	7%	21%	24%	9%	1%	37%	0%	1%	100%
<b>ORD</b>	12%	4%	17%	18%	5%	42%	1%	1%	100%
<b>MIA</b>	6%	1%	3%	6%	16%	66%	1%	1%	100%
<b>MCO</b>	14%	28%	27%	5%	5%	19%	1%	1%	100%
<b>ATL</b>	8%	20%	10%	10%	4%	46%	1%	1%	100%
<b>IAD</b>	10%	31%	8%	6%	9%	35%	0%	1%	100%
<b>RDU</b>	5%	34%	32%	4%	10%	13%	1%	1%	100%
<b>JFK</b>	10%	3%	31%	1%	7%	46%	0%	2%	100%
<b>BWI</b>	8%	24%	13%	9%	12%	32%	1%	1%	100%
<b>EWR</b>	6%	2%	21%	6%	8%	55%	1%	1%	100%

Source: MG&A

\*% Includes dedicated Open Space, Wetlands, & Environmentally Sensitive Areas

**Current incremental development pattern is not maximizing value for CLT Area, or for the City of Charlotte.**

- The CLT Area is lacking a clear, visionary identity with no integrated development framework, resulting in piecemeal development. The area is also lacking necessary infrastructure for quality development.
- Given the CLT Area’s unique geographic, transportation, and environmental assets, development should consider how each of the area’s attributes contributes to value optimization of the entire area.
- Analysis provided an inventory of current development and should be used to further develop a broad mix of uses in all Zones. CLT Area is positioned within the largest industrial submarket and second largest office submarket in Mecklenburg County, with significant room for growth and delivery of new product to the market in coming quarters.
- The characteristics, market conditions, and development potential in each of the CLT Area Market Analysis Zones is very different and without a framework for guiding their future, there is a high potential for conflicting developments and traffic generation that will become a barrier to optimizing the value of the entire CLT Area.

**Maximizing the potential value of the CLT Area will require creating a new development framework.**

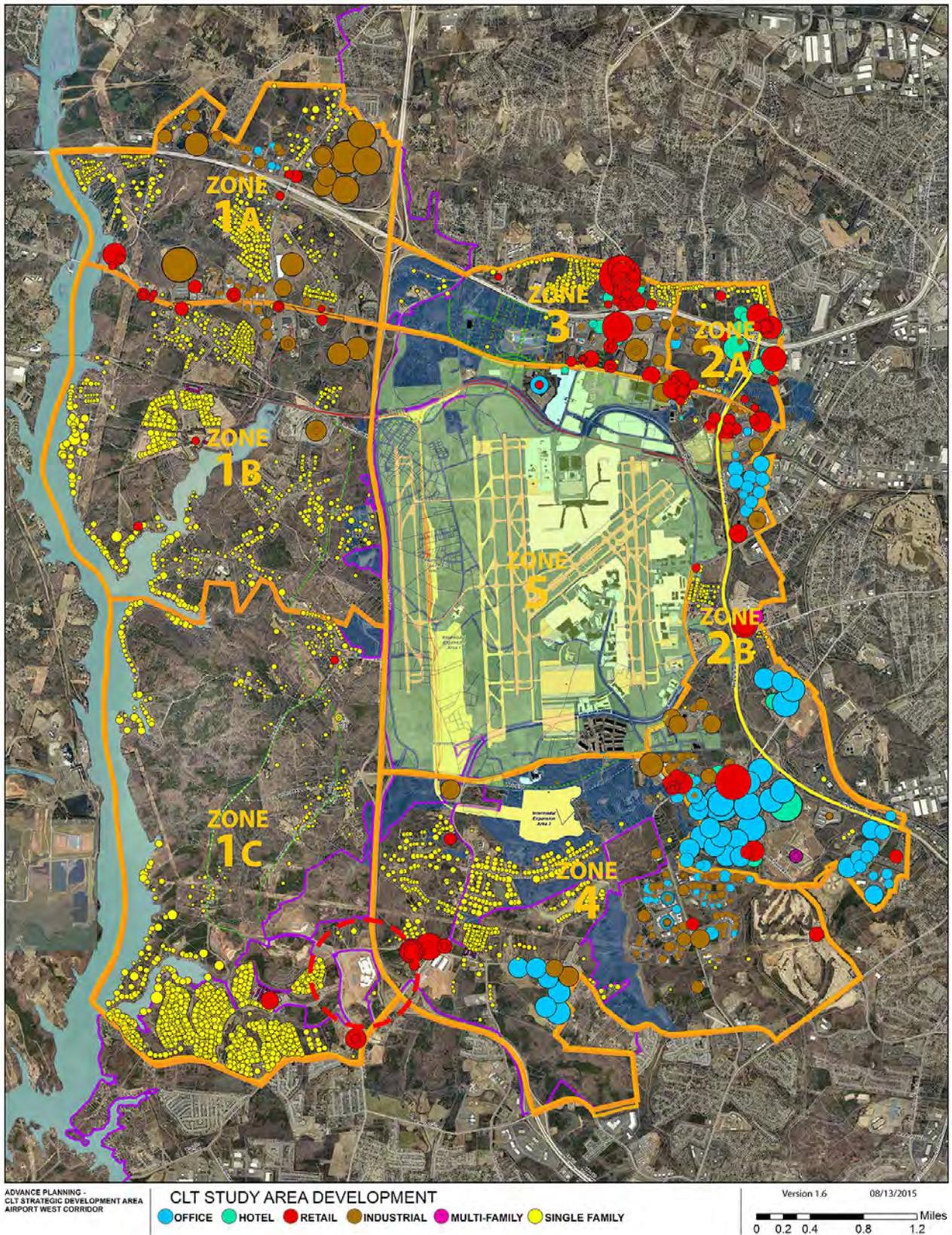
- At present, there is no coordinated plan to coordinate development that can integrate the existing developments, the underdeveloped properties and the undeveloped land surrounding the entire CLT Area into a synergistic plan that can optimize the area’s economic potential.
- Over 44% of the CLT Area could be developed or redeveloped to maximize value for the City of Charlotte.
- Coordination should take into account relationships between land use types when conducting a land utilization matrix that will identify and rank land areas by type and amount of supportable development to maximize value and capture the opportunities for all parties.
- A development framework will guide future development activities necessary to produce an airport area development pattern unique among other major Eastern US airport and establish the CLT Area as the leading destination for major development investments.
- The Airport West Corridor is located in close proximity to major employment and activity centers. Proximity to the transit corridor along Wilkinson Blvd could also be used to draw residents and employers to the area. Unlike other sprawling areas of Charlotte like Ballantyne and Matthews, the study area is well connected to the Center City, with connections to I-85 and I-485 that provide easy access to the greater Charlotte area.
- Well-designed communities created with a unique identity and sense of place would give the area a permanent draw and attractiveness. Residential construction in the CLT Area: potential to create high end, luxury single family adjacent to or with easy access to the Catawba River as well as create affordable, first-time-buyer friendly housing in the corridor. Millennials will continue to drive real estate demand, typically looking for well connected, community and transit oriented developments.

**Table 4: Development/Redevelopment Potential Acres (%) within CLT Area Total Acreage**

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5*	CLT Area
<b>Development/Redevelopment Acres</b>	4,234	771.5	570	2,167	120	7,862
<b>Total Acres</b>	7,900	1,943	748	3,250	3,892	17,732
<b>% of Zone Developable/Re-developable</b>	53.6%	39.7%	76.2%	66.7%	3.1%	44.3%

*Source: Spatial Decision Systems, MG&A*

*\*Note: only 3.1% of Zone 5 was considered developable/redevelopable as it is primarily Core Airport property*



**Figure 21: CLT Area Development - All**

*Note: A red dashed symbol has been added for Charlotte Premium Outlets, which was not included in the available Mecklenburg County Tax Parcel Data at time of analysis. The symbol is shown on this map for locational purposes only and is not to scale, though at over 400,000 sq. ft., the Charlotte Premium Outlets are the largest retail development in CLT Area.*

**Table 5: CLT Area Development/Redevelopment Potential: Low, Medium, High (acres)**

Zone	1 acres	%	2 acres	%	3 acres	%	4 acres	%	5 acres	%	CLT acres	%
Low	232.4	5	81.1	11	31.9	6	201.3	9	8.2	7	554.9	7
Medium	2,235.7	53	526.2	68	305.7	54	1,051.3	49	69.6	58	4,188.6	53
High	1,765.6	42	164.1	21	232.0	41	914.6	42	42.5	35	3,118.8	40
<b>Total</b>	<b>4,233.7</b>	<b>100</b>	<b>771.5</b>	<b>100</b>	<b>569.6</b>	<b>100</b>	<b>2,167.2</b>	<b>100</b>	<b>120.2</b>	<b>100</b>	<b>7,862.3</b>	<b>100</b>

Source: Spatial Decision Systems, MG&A

- Establish team to develop and implement the Airport Master Plan. Developers and stakeholders interviewed acknowledged the need for a coordinated plan for the 17,700+ acre area that integrates the five development zones into one “Airport City” will create a national model of innovative, integrated development. Such plan must be created capitalizing on public-private partnerships to maximize this opportunity for Charlotte. Such conversations establish a method that will ultimately facilitate the creation of the needed “master deal” by which the existing businesses, residents, and the City reconfigure to maximize the value of their property.
- Maintaining dialogue with key developers and stakeholders will ensure that future public investments are better able to maximize the value potential of the study area within the City of Charlotte and the Charlotte metropolitan area.

**Lack of coordinated freight and passenger roadway infrastructure planning will be an impediment to value creation.**

- Without adequate infrastructure, the value potential for the entire CLT Area will be diminished. Capacity limitations on the transportation system can impose temporary/artificial limitations on economic activity. Capacity limitations on the transportation system can impose temporary/artificial limitations on the economic activity. As Charlotte is poised to continue growth since the recession, the City has the opportunity to accelerate and support continued economic growth by investing in strategically planned infrastructure and development activity.
- For commercial real estate activity, new transportation investments translate into new opportunity. Land owners, investors and developers consider access and relationships to roads a key factor when evaluating project potential.
  - Land owners, investors and developers consider access and relationships to infrastructure a key factor in evaluating project potential.
  - On a broader scale, global linkages determine the future of a region. Charlotte has begun the process of identifying how it can position itself as a leading global city using regional competitive assets, including CLT.
- Passenger flow and travel demand continues to grow as residential developments in Zone 1, as well as south of the study area in the Whitehall/Ayrley CNIP area, and in Steele Creek and Lake Wylie communities increase in size and capacity. Highway 160/Steele Creek Road is at capacity, seen as a major priority for the state to invest in infrastructure upgrades as Southwest Charlotte continues to grow.
- West Blvd. is currently one of the top major arterials providing access to the study area from the City Center. Future planning must take into consideration the pending pressures that will continue to impact the current roadway system. The pressures will not only strain the local and regional infrastructure network, but will also have a direct impact on the maximization of value creation in the study area. The West Blvd./I-485 interchange is increasingly at risk of future congestion as both the passenger and freight transportation network continues to increase movement to and from the study area.

**Plan Trend and a Value Optimization Scenario(s) should be completed to compare the potential economic, environmental, and social benefits under differing public investment strategies.**

- Plan Trend is used to project what “build out” would look like and what social, economic, and environmental values would be created over the next 5, 10, or 20 years if the current pattern of development were allowed to continue without a significant public policy, regulatory, or investment intervention in the area.
- Value Optimization Scenario(s) are used to determine the impacts of new policies, regulations and investments that could result in realigning and developing new roadways, additional infrastructure, parks and other public institutions and facilities that would better support higher quality commercial and residential development. Scenario projections are then compared to Plan Trend projections to determine the level of value relative to the costs associated with new and additional investments. Through this process, the highest and best utilization of the land can be determined.

**At minimum, Phase I Market Research supports the findings of the 2013 fiscal impact.**

- Economic benefits calculated in the 2013 Proposed CIP Demand Impact Analysis projected that new and upgraded road infrastructure, estimated in the CIP as a \$43,000,000 investment, in the Airport/West Corridor could generate \$942,740,206 in total value (direct and synergistic value). Refined Fiscal Impact Analysis planned for Phase II would provide a better understanding of the economic benefits for future development and investment given the deeper knowledge of the market conditions and the development potential of varying land use types. Based on Phase I findings which provided a greater understanding of the market potential for the CLT Area with a focus on the Airport/West Corridor, economic impacts including total value and total jobs created estimated in the 2013 report would likely be higher than previously estimated.

## Introduction: Airport Markets in Metropolitan Areas

Airports are a distinctive and specialized submarket within metropolitan areas in a global economy. Airports provide long-range connectivity, unlike the local and regional roads or transit lines. The strength of national and global linkages is vital when evaluating the future of a city or metropolitan region. Passengers and freight destined for national or international markets must use air for rapid travel over the longer distances.

As such, airport market areas attract both office users, based on passenger flows, and industrial users, based on freight flows, which need access to national and international markets. Air freight, unlike rail or truck freight, is typically high value low weight, and often highly perishable; representing a specialized sub-set within the freight movement system. Combining air freight potential with rail and truck utilizing interstates and connections to seaports provides a metropolitan area with a multi-dimensional logistics cluster that can provide it with a competitive advantage over other metropolitan areas in the search to generate greater economic activity.

Charlotte Douglas International Airport (CLT) is the Charlotte region's linkage to the national and international marketplace. Maximizing existing and planned facilities and upgrades to CLT, the City of Charlotte can leverage long range regional & national connectivity with local transportation infrastructure and planned development in order to set the new standard in global connectivity.

## Connectivity in the Global Economy

The world changed after 1991 with the collapse of Communism. From a world divided, globalization has resulted in a single integrated world marketplace. Every metropolitan area now competes on a global scale for economic activity, and its transportation infrastructure must be capable of providing access to a broader reach. Strengthening connections in the new global economy is vital to securing and growing a prominent position and maintaining a competitive advantage. In addition, the advance of technology has resulted in more complex products requiring more parts and pieces from more places spread across the world increasing the patterns of freight and passenger movements. These changes are multidimensional and have important effects on the future of transportation planning and development activities associated with transportation and logistics facilities.

At the global scale a new geography has emerged: trading blocs and large nations equal to or exceeding the size of trading blocs are now the basic submarkets of the world economy. Within these trading blocs, more interactive "mega-regions" are emerging as multiple, closely spaced metropolitan areas strengthen the connections between them to form larger units of global competition. In addition to these new trends, metropolitan areas remain the basic competitive units of the global economy and hubs in the global communications and transportation network.

The world has become an integrated network and the U.S. is no longer the center of global trade. Eurasia has gained a competitive advantage as it is a continuous land mass containing 85% of the world's population and 70% of the world's economic activity, making it the primary trade corridor in the center of the world economy. With the rise of Asia, the Pacific Basin has transformed into a highly active and growing economic region, while the Atlantic, the oldest and most established trading basin, remains the most complex as trade between more of the world's trading blocs pass across it than in the Pacific, which tends to be Asia dominant. An important feature of the US relationship to the global economy is the number of gateways along each of the three major coastlines, the Atlantic, Gulf and Pacific. On the West Coast, trade is concentrated to only a few global trade hubs; whereas East Coast trade hubs are widely spread, creating more economically independent sub-areas along the Atlantic. The changing geography has stimulated a truly global marketplace, continuous interactions where information and ideas are uploaded and shared instantaneously.

**Transformational Investment Trends**

Rapid global growth is driving the need to invest in greater connectivity through innovative transportation infrastructure and targeted urban strategic development in order to compete in the global marketplace. Public and private entities that have remained adaptive and innovative continue to strengthen local and regional connectivity and attractiveness by making transformational investments. As the global population and economy continue to grow, the regions that develop infrastructure will emerge as the most successful global economic centers; as they have built the foundation for strengthened global access. Across the world, new investments are being made to strengthen transportation infrastructure that form main lines of global trade and connect the urban areas that form primary hubs in the global economic network. The widening of the Panama Canal and improvements to the Suez Canal are pieces of projects that will expand the capacity of the primary global trade routes across the world, increasing the pressure and demands of the world’s freight system.

<b>Incremental</b>	<b>Transformational</b>
The World is Changing	Changing the World
Maintain Existing Conditions	Create New Conditions
Tweak as Required	Transform to Align with Changing World, Future Vision
Minor Course Corrections	Sets a New Course

Metropolitan areas and nations are pursuing both incremental and transformational investments. Incremental investments are smaller, less costly, more fragmented, and one-dimensional, thereby lacking the power to develop sufficient connectivity and synergies on a greater scale. Incremental investments react to the changing world, while transformational approaches seek to change the world. Incremental approaches maintain existing conditions and tweak as required, resulting in minor course corrections.

Conversely, transformational approaches create new conditions and transform to align with the changing world, paving a new course of action. Transformational investments are larger, wider-reaching solutions that address many issues at once and tend to be more successful as they look to plan for the present and optimize for the future. Transformational approaches are proactive in nature, seeking to produce large-scale results that significantly alter or entirely change the existing conditions. Transformational approaches assess existing conditions within regions, and seek to define the opportunities and challenges, creating new visions and strategies for changing the existing condition in order to achieve long-term results.

## Competitive Eastern US Airport Analysis

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Metro areas with international ports as hubs in the global pattern rely on major inland, air, and sea ports to exchange and transfer goods, products, and people. Some metropolitan areas occupy natural geographic positions that helped cities achieve status as leading world business centers and have pursued similar strategies based on a common recognition that global linkage is one of the foundations to becoming a leading global economic force.; New York City, Miami, and Philadelphia were located on natural harbors that grew to prominence in the height of the trans-Atlantic trade. Other cities, like Chicago, Atlanta, and Dallas grew as global hubs as a result of conscious and deliberate strategic planning and investments in transportation facilities that strengthened global connectivity.

Research on the 12 Eastern US airports was organized around two categories:

- *Position & Context in the Regional Network*
- *Land Use & Build Out surrounding Major Eastern Air Hubs*

## Key Findings

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MG&A conducted research and analysis on 11 major Eastern US airports to compare CLT opportunities with those and other airports; findings revealed that most airports are built out with limited large scale opportunities remaining in the airport areas.

Analysis of 12 leading Eastern US air hubs found that CLT was the only airport studied with a large portion of adjacent land undeveloped and relatively unconstrained. In every other East Coast metro area with a major air hub, land surrounding the airport has been built out to a much greater degree. Analysis revealed a shortage of developable land with limited large scale opportunities in a 4 to 5 mile radius of major airports, including the top three East Coast trade hubs of New York, Miami, and Atlanta. None of the airports studied had a comparable amount of undeveloped property that could be utilized to reinforce and leverage the assets of their respective airport. As commercial real estate in existing airport submarkets tightens, business may look to new markets for expansion as the industrial activity continues its growth since the recession.

Charlotte has a large underdeveloped/undeveloped land envelope that if developed properly could create an opportunity to design and develop it right, as an area integrated with the airport and offering to a global market place an unprecedented opportunity to be close to access by air, rail, road, by passengers and freight more effectively than anywhere else in North America. In addition to accessibility via all available modes, the CLT Area has approximately twenty miles of river front that provides the largest single amenity to any available tract adjacent to any of the East Coast airports studied.

Given Charlotte's position in both the regional and national transportation network and the opportunity surrounding the Eastern air hub, commercial builders searching for reliable and cost effective access to major Eastern markets could locate in direct proximity to CLT for regional, national and global access. According to the Charlotte Chamber of Commerce Logistics overview, Charlotte's position along the East Coast provides access to over 53% (164 million consumers) of the US population in a 650 mile radius, ahead of the top two East Coast trade hubs of Atlanta, 45%, and New York, 37%.

The major undeveloped land area in Charlotte represents a unique opportunity, especially given the area's connection to major interstates and proximity to the Catawba River, a valuable environmental & recreational amenity. CLT has a distinct opportunity to capitalize on the study area's untapped potential to maximize value creation for the City of Charlotte and the greater Charlotte region, creating a unique "Airport City" by combining transportation assets with an integrated development plan that will distinguish CLT among global and US airports.

## Position & Context

The 12 airports studied in the Competitive Airport Analysis are positioned primarily along the Eastern Coast of the US, with Dallas Fort Worth and Chicago O'Hare as major competitive air hubs in the Southwest and Midwest. Important hubs with strong global connectivity have evolved both north and south of the Carolinas: to the north lie New York City, Philadelphia and Washington D.C., and to the south Atlanta and Miami, with access into the Gulf region including New Orleans, the major Midwest/Southwest trade hubs, including Kansas City, Dallas and Houston, and connections to the West Coast including Los Angeles, Inland Empire, and Oakland. Charlotte's central location provides the optimal position for global connectivity along the East Coast, prime for reaching major metropolitan areas east of the Mississippi.

Airports along the Northeastern coast are generally clustered together more closely. The Southeastern pattern of development has traditionally been less dense, with greater distance between metropolitan areas. Atlanta, Charlotte, and Raleigh continue to strengthen as the major cities of the Southeast. Atlanta has continued to opportunistically grow into a major global hub by leveraging investments in global connectivity.

CLT, the 6th busiest airport in the nation for operations (ACI), the 8th busiest airport for passenger enplanements (FAA) in the US, is widely acknowledged as one of the most important economic development assets to the Charlotte region that supports the existing economy and attracts future investments in the region. CLT ranked 8th in 2013 for Passengers (total passengers enplaned and deplaned, where passengers in transit were counted once), up from 11<sup>th</sup> in 2012. CLT's total passenger count grew 5.4% from 2012, counting 43,457,471 passengers in 2013. Passenger figures for 2014 grew 1.8% to just over 44 million passengers. However, for 2013 all cargo (counting cargo carried in dedicated cargo planes) data, CLT was ranked last (64<sup>th</sup>) of the 12 airports studied in the competitive airport analysis. With the exception of CLT, airports studied with direct freight rail connections, such as ATL, ORD, MIA, and JFK, ranked in the top 20 for landed air cargo weight in 2013. Given recent investments in the airport intermodal center, CLT cargo operations could be considered underutilized for an airport of this size and position in the network.

**Table 1: Passenger Enplanements & All-Cargo Landed for Eastern US Airports, 2013**

Airport	Rank	2013 Enplanements	% Change 2012-13	Rank	2013 Landed Weight (lbs.)	% Change 2012-13
Atlanta Hartsfield – Jackson (ATL)	1	45,308,685	-1.07%	14	2,187,228,002	7.9%
Chicago O'Hare (ORD)	3	32,278,906	0.33%	4	6,864,249,348	50.7%
Dallas/Fort Worth (DFW)	4	29,018,883	3.55%	10	3,062,528,160	-0.8%
New York John F Kennedy (JFK)	6	25,036,855	2.10%	9	3,372,770,377	-3.5%
Charlotte Douglas (CLT)	8	21,347,428	6.56%	64	353,447,052	1.0%
Miami Int. (MIA)	11	19,422,275	2.29%	5	6,847,177,300	-4.21%
Newark Liberty (EWR)	13	17,514,139	2.69%	12	2,533,226,761	-11.2%
Orlando Int. (MCO)	14	16,885,160	-1.60%	32	698,556,765	-3.71%
Philadelphia Int. (PHL)	19	14,705,014	0.79%	16	1,884,230,897	0.03%
Baltimore/Washington Int. (BWI)	22	11,134,130	-0.47%	40	493,739,798	0.98%
Washington Dulles Int. (IAD)	23	10,575,366	-2.23%	44	477,671,020	2.57%
Raleigh-Durham Int. (RDU)	39	4,482,973	-0.16%	51	409,473,228	7.21%

Source: FAA, Michael Gallis & Associates (MG&A)



**Figure 1: East Coast Competitive Airports.** Each of the major East Coast Airports studied occupies a strategic location within the interstate highway transportation system. Local and regional accessibility provides reliable connectivity throughout the greater metro regions, linking greater units of the new basic submarkets of economic competition.



**Figure 2: East Coast Rail Corridors** The 12 airports studied had varying regional and national freight rail connectivity. Norfolk Southern made a transformational investment in both the Heartland Corridor and the Crescent Corridor, pictured left. Charlotte is located along the NS Crescent Corridor, giving Charlotte access to markets including New York, Boston, Chicago, and Dallas, with transfer connectivity to Western markets.

## Land Use

Analysis of the land area surrounding each competitive Eastern US airport revealed a shortage of developable land with limited large scale opportunities in a 4 to 5 mile radius of major airports, including the top three East Coast trade hubs of New York, Miami, and Atlanta. As commercial real estate in existing airport submarkets tightens, business may look to new markets for expansion as the industrial activity continues its growth since the recession.

Given Charlotte's position in both the regional and national transportation network and the opportunity surrounding the Eastern air hub, commercial builders searching for reliable and cost effective access to major Eastern markets could locate in direct proximity to CLT for regional, national and global access; the interstate network providing regional access via I-85, I-77; and the NS intermodal yard providing regional and national access to markets including Atlanta, Florida, Harrisburg (PA), Chicago, Memphis, and Los Angeles.

Table 2 (below) shows the current existing land use of the area studied surrounding each airport. Percentages were calculated using aerial spatial analysis to estimate land uses surrounding major airports. CLT had the largest percentage of undeveloped land surrounding a major air hub that remains relatively unconstrained. Though RDU and IAD were found to have moderate amounts of undeveloped land surrounding the major air hub, both RDU and IAD do not have a direct freight rail connection. CLT's NS mainline and intermodal yard accessibility as well as position along the East Coast provide CLT with a greater opportunity for leveraging the CLT Area's geographic and transportation assets.

**Table 2: Competitive Airport Analysis Surrounding Land Use within 4 -5 Mile Radius**

Airport	Airport property	Area Undeveloped	Undevelopable*	Industrial	Commercial	Residential	Hotel/Resort	Office	Area Analyzed
<b>CLT</b>	10%	49%	10%	4%	4%	21%	1%	1%	100%
<b>DFW</b>	18%	28%	14%	6%	3%	29%	1%	1%	100%
<b>PHL</b>	7%	21%	24%	9%	1%	37%	0%	1%	100%
<b>ORD</b>	12%	4%	17%	18%	5%	42%	1%	1%	100%
<b>MIA</b>	6%	1%	3%	6%	16%	66%	1%	1%	100%
<b>MCO</b>	14%	28%	27%	5%	5%	19%	1%	1%	100%
<b>ATL</b>	8%	20%	10%	10%	4%	46%	1%	1%	100%
<b>IAD</b>	10%	31%	8%	6%	9%	35%	0%	1%	100%
<b>RDU</b>	5%	34%	32%	4%	10%	13%	1%	1%	100%
<b>JFK</b>	10%	3%	31%	1%	7%	46%	0%	2%	100%
<b>BWI</b>	8%	24%	13%	9%	12%	32%	1%	1%	100%
<b>EWR</b>	6%	2%	21%	6%	8%	55%	1%	1%	100%

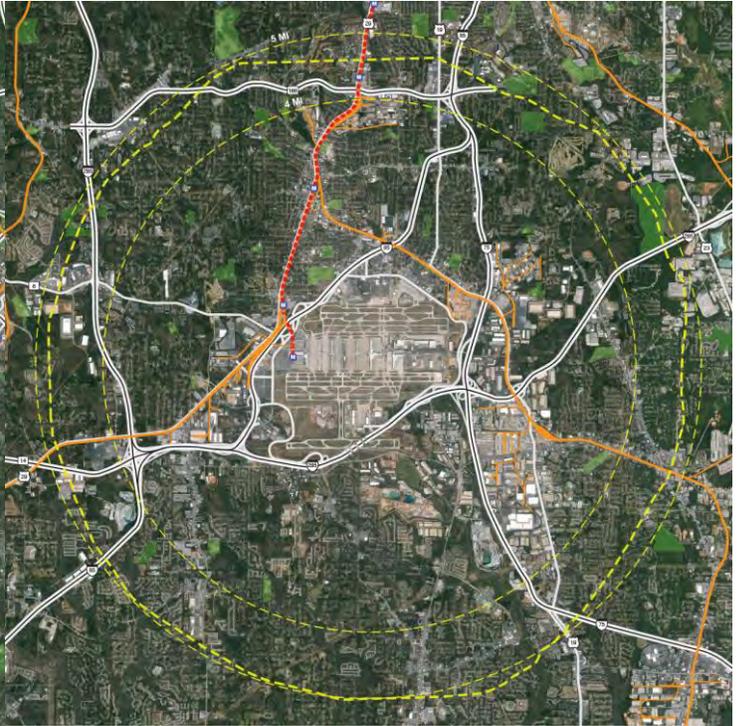
Source: MG&A

\*% Includes dedicated Open Space, Wetlands, & Environmentally Sensitive Areas

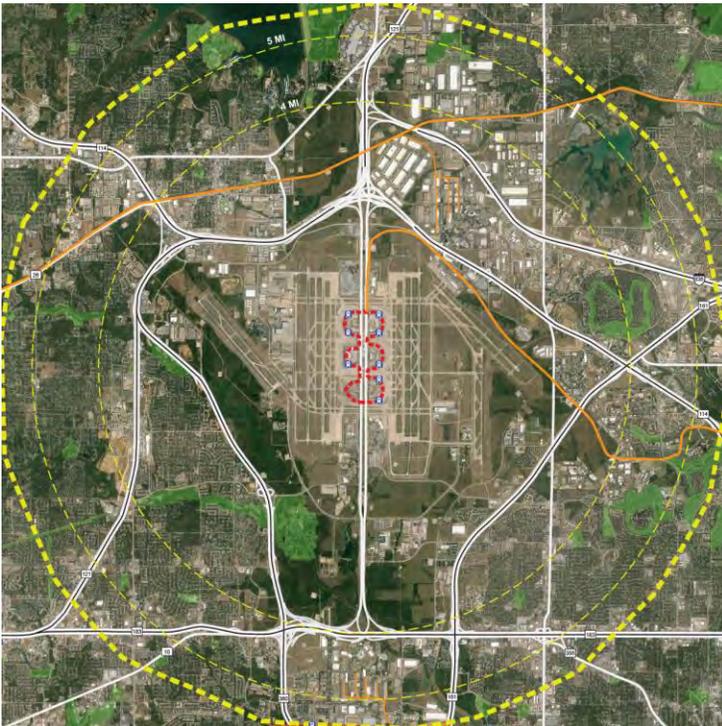
The following aerial maps of each competitive Eastern US airport studied (Figures 3-14) provide a visual comparison of the current development pattern within a 4 – 5 mile radius. Dedicated open space or constrained environmental lands with a green overlay (Note: while Orlando does not have large park areas, the area does have significant wetland areas that limit development of remaining open space); freight rail connections indicated in orange; and transit connections indicated by a red dashed line.



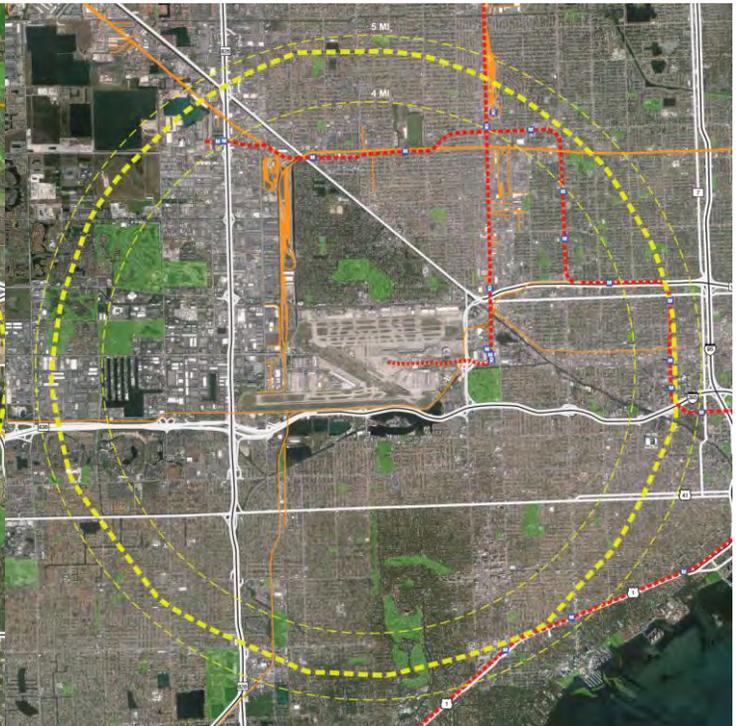
**Figure 3: Charlotte Douglas International Airport**



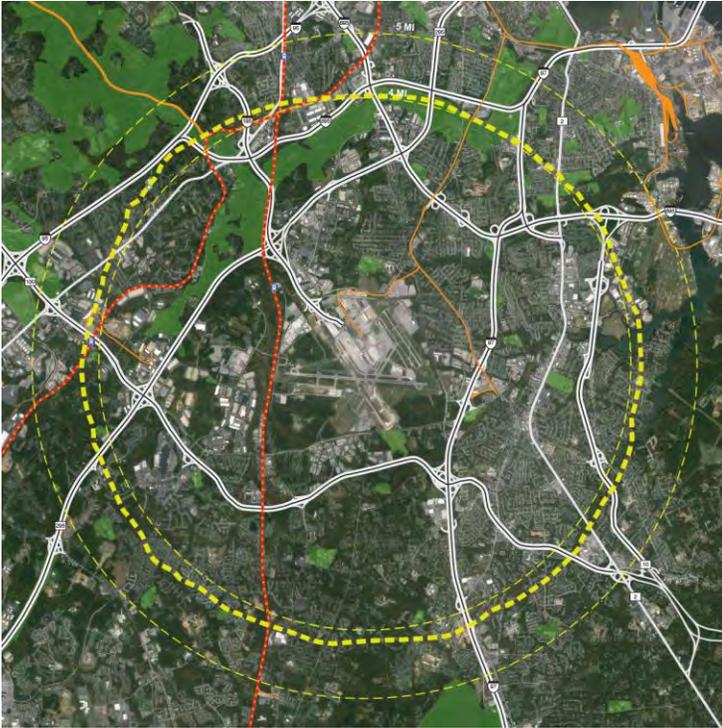
**Figure 4: Atlanta Hartsfield International Airport**



**Figure 5: Dallas Fort Worth International Airport**  
Michael Gallis & Associates



**Figure 6: Miami International Airport**  
8/12/2015



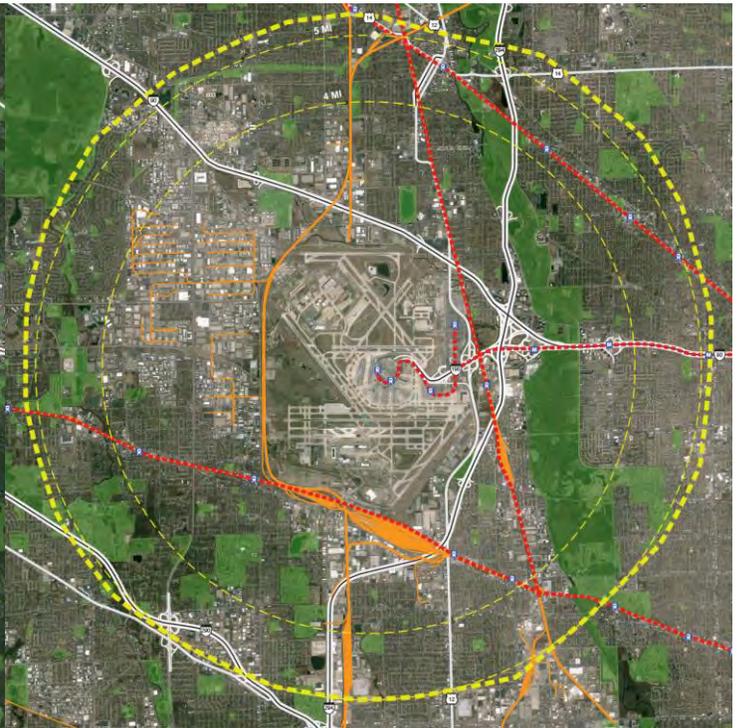
**Figure 7: Baltimore Washington International Airport**



**Figure 8: Newark Liberty International Airport**



**Figure 9: Washington Dulles International Airport**  
Michael Gallis & Associates



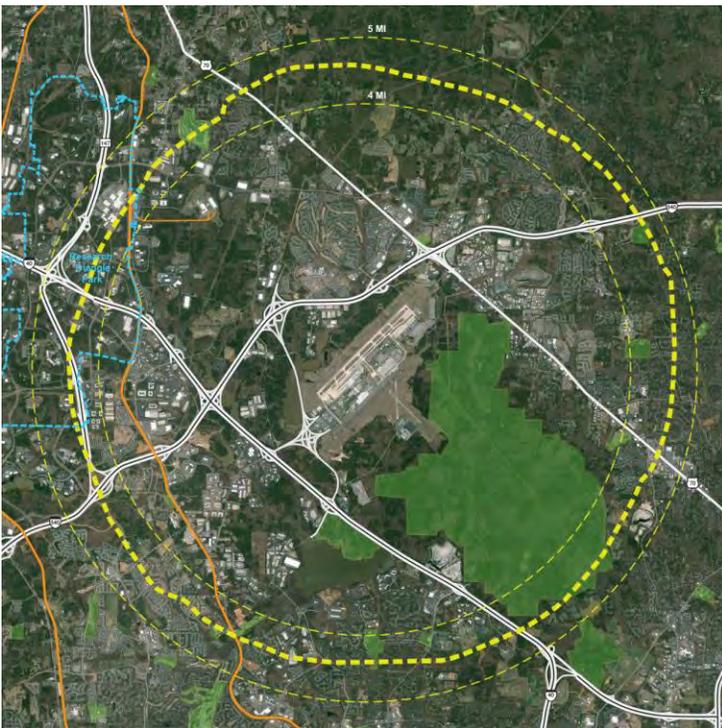
**Figure 10: Chicago O'Hare International Airport**  
8/12/2015



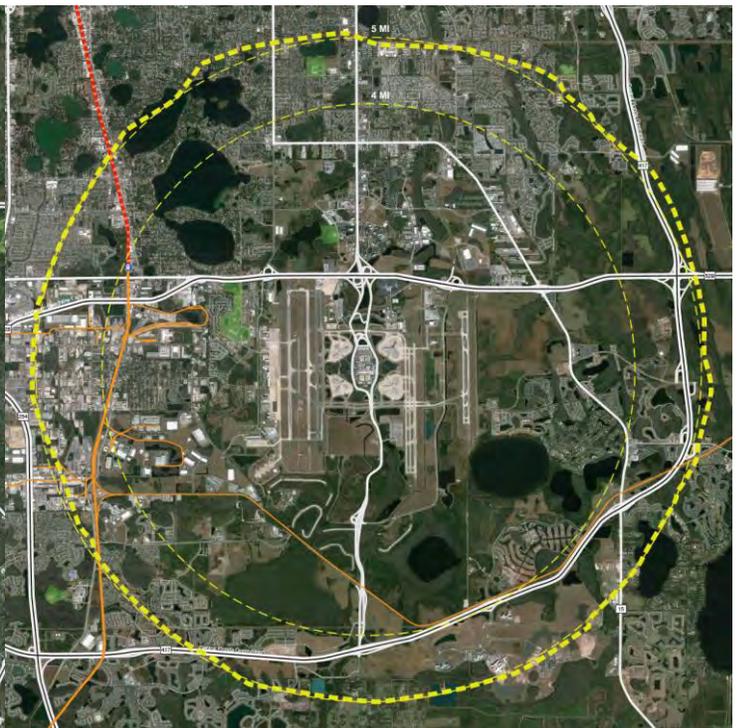
**Figure 11: New York John F. Kennedy International Airport**



**Figure 12: Philadelphia International Airport**



**Figure 13: Raleigh Durham International Airport**  
Michael Gallis & Associates



**Figure 14: Orlando International Airport**  
8/12/2015

## Developer Interviews

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MG&A identified four categories of interested parties to be interviewed for the Airport/West Corridor Project:

1. Transportation Providers including NS, trucking & air cargo industry experts
2. Local and National Developers
3. City, County, and State interested parties
4. Current Residents & Land Owner

Unlike traditional planning where inputs remain static, this process allows for dynamic flows of information and innovation from all interested parties that feed into the decision making process: City departments and developers simultaneously educate and are educated by each other. As information and ideas are gathered from stakeholders, these inputs inform the planning process including future zoning of the study area. Open lines of communication aid a more effective, streamlined planning and development process as developers will not have to react to planning designations; rather, developers remain involved and provide useful feedback for the City to better understand the market forces, both positive and negative, in the area.

All participants were presented with in-depth information to better understand the project goals from the City's perspective. Each interview has resulted in straightforward conversation about the current conditions and the future potential of the area. These conversations left participants eager to stay involved as the planning process moves forward. The project team gained a better understanding of development criteria (like traffic pattern generation). Together, the City and the developers came to realize there could be better value creation in the project area if the planned road alignment is able to facilitate contemporary development.

This process offers the City a unique ability to capitalize on public-private partnerships to maximize this opportunity for Charlotte. Such conversations establish a method that will ultimately facilitate the creation of the needed "master deal" by which the existing businesses, residents, and infrastructure providers can all reconfigure to maximize the value of their property.

## Key Findings - General Considerations

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A wide range of both complementary and competing points of view were expressed by the participants from the interviewees who ranged from transportation providers to real estate developers, land owners to environmental groups.

Currently each developer remains primarily focused on a specific subarea within the greater CLT Area, rather than on the overall development pattern. However, developments in any one area will have an effect on the other areas. The coordination is not the responsibility of any single developer and there is some concern that a unifying entity will need to coordinate activity to avoid potential conflicts in the surface transportation system and projected development activity. For example, current isolated, piecemeal developments with competing land uses pose challenges for realizing the greater long-term vision for the entire CLT Area.

It is recommended that the City remain open and flexible to interface with the development community in order to make this reconfiguration possible. Dialogue with key parties, including local and national developers, logistics and distribution companies, must remain open in order to plan and construct an optimal infrastructure pattern in the Airport/West Corridor within the greater vision for the CLT Area.

### ***Perception & Character of the Airport/West Corridor***

- The last frontier often overlooked unintentionally; the last undeveloped area in Mecklenburg County, the Westside seen as the “hidden gem.”
- The Airport real estate market is considered “nascent,” the next “big move” or “big play” for the City.
- The Westside, specifically the Airport/West corridor, is challenged by the perception and reality of lacking quality infrastructure and development.
  - Over half of those interviewed named the perception and the reality of the area’s public schools as the main deterrent and limitation on residential development. The area’s demographics were cited as a challenge for commercial and residential development.
  - Proximity to airport often viewed as a negative or an undesirable location.
- Environmental features seen as both a challenge and opportunity.
  - Every interviewee expressed appreciation for the area’s recreational value. Interest in preserving unique environmental character and using this to appeal to residents and employees. Glenn noted that the area has naturally evolved as an environmentally sensitive area, with sensitive recreation such as kayaking over more active recreation such as boating.
  - Concern over costs associated with meeting erosion control measures, open space preservation and topographic hurdles.

### ***Connectivity & Alignment Considerations***

- Potential conflict between truck traffic and passenger traffic as development continues, as freight traffic will increase when the Intermodal Yard expands from 200,000 containers to 600,000 containers over the next decade and as residential development continues. Planning must take into consideration the pending pressures on the freight and passenger movements that will impact and potentially conflict with the current roadway system.
- As development continues, passenger and freight movements to and from the study area will increase and the potential for conflict between these two traffic types will unquestionably increase. Development pressures on the transportation system will not only strain the local and regional infrastructure network, but will also have a direct impact on the maximization of value creation in the study area.
- Infrastructure serving its economic purpose: General consensus that the necessary infrastructure, including sewer and water, must be built to catalyze development activity.
- Most see the road acting as a buffer between residential and office, retail, or commercial mixed use, as shown in the adopted land use plan. Part of this view has to do with the challenges associated with building “tighter developments” closer to the Catawba River. Several developers noted that the infrastructure and development pattern should “loosen” west of the buffer road.
- Frontage road increases development value, doubling the area for development.
- The north-south connection is seen as vital to activating the residential market.
  - Suggestion to begin road construction at the south, in proximity to Berewick, as development adjacent to Berewick may continue as an extension of the current market. Once the area is “activated” then Crescent can move forward with residential development that fits their greater vision for the area.
- Varying views on East-West connection over the river; almost all agree that East-West connection, especially West Blvd./I-485 interchange needs improvement for projected traffic increases, ease of movement to and from study area.
- Targeted users of the road:

- Planning for high truck use thought to be an unwise public investment due to low potential for industrial development in the Airport/West Corridor. Additionally, the trucking industry in place is already well connected to interstate network. The road may generate light truck traffic, with freight moving only locally to destination from source.
  - Interest in frontage road to minimize truck traffic on Dixie River Road, provided anecdotal evidence of trucking activity having negative effects on road landscaping.
- Limited access points to ensure continuous flow of traffic. Several developers expressed that they would not want these projects to turn into another Billy Graham Parkway, troubled with heavy stop-and-go traffic and congestion.
- Road character will matter for both connectivity, creation of place and attractiveness.
  - Concern over the current road character as winding farm roads, unsafe at high speeds
  - Road must contribute to the identity of the area; facilitate local connection for all moving through the corridor. Several developers emphasized continuous pedestrian/bicycle connectivity to meet current demand for “livable, walkable” neighborhoods.
  - Connectivity to Wilkinson Blvd. Transit Corridor
  - Connectivity to Highway 160-Steele Creek Road into Whitehall/Ayrsley and Westinghouse

#### ***Future Planning & Long-Term Vision Considerations***

- Developers expressed concern that some land use types are more compatible with others, for example high quality office and retail developments will better activate the residential market. Whereas, industrial land use and resulting freight traffic increases may compete with the activation of residential or mixed use market demand.
- Need for an identity and visionary planning to create something bigger than piecemeal development. Almost everyone agreed that development of 3000+ acres cannot be piecemeal for it to be successful. Most do not want to see “more of the same,” or even an extension of Berewick. Most express that Ballantyne has been successful, but do not want to repeat much of the Ballantyne model (car centric, not walkable, often heavy congestion).
- Residential, retail and office were generally seen as the highest and best use for the Airport/West Corridor.
  - Developers also noted that the residential market is experiencing significant market shifts as millennials drive the market for conveniently located, walkable and livable urban experiences. Baby boomers also contribute to the trend, looking for walkable or transit-oriented areas to spend their later years.
  - The commercial office market and “some services” in the eastern half of the study area are deemed necessary to create, or “activate” the residential market slated for the western half of the study area.
  - The residential demographic is seen as vital to activate the retail market, which has shifted considerable as a result of the economic downturn and the shift to online shopping.
    - Some concern over dynamics, including noise pollution and topography, which will make achieving adequate residential density needed for quality retail investments.
    - Crescent envisions providing diverse products at various price points to encourage socioeconomic diversity

- Industrial development will be limited in the Airport/West study area due to environmental, namely topographic and hydrologic, conditions. Developers tended to agree that industrial development will likely be better suited directly south of the airport, in Zone 4 of the CLT Strategic Development Area. The current and future industrial developments are in need of their own visionary planning to best leverage the new intermodal yard and the continued growth of Charlotte's world class airport.

## Key Findings - Developer Specific Considerations

### **March 4, 2015, 2:00 pm: Shannon Binns - Sustain Charlotte**

**Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)**

- Not anti-development, pro "smart development." Make investment decisions that shift the city away from historic development patterns that contribute to continued suburban sprawl; make choices that lead to a more vibrant, increasingly livable community for years to come.
- Support transit oriented development in the study area's identified Growth Corridor that will strengthen connectivity to the Center City and other Charlotte Activity Centers.
- Support connectivity and accessibility of the Airport West corridor to all nearby transit options. New road construction provides the City with unique opportunity to create adequate connections, including bicycle and pedestrian infrastructure, throughout the Airport/West corridor in such a way that residents and employees can take advantage of safe, continuous access to nearby employment, retail, and leisure assets.
- Encourage dense, mixed use development; place-making; walkable development.
- Address major concerns over the impact of development, specifically the increase of impermeable surfaces & resulting runoff on the area's fragile hydrology, including the heavily polluted and endangered Catawba River.

### **March 6, 2015, 3:00 pm: Louis Stephens - Jones Lang LaSalle**

**Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashley Landis (CDOT), Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)**

- Maximizing major opportunity to leverage Charlotte's airport and the new intermodal yard; consolidate and restructure the industrial market south of the airport (Zone 4)
- Challenge to overcome perception of the area, unattractiveness of proximity to airport and to improve demographics needed for increased real estate investments
- Area is lacking the recognition, identity and leadership that would, in the long-run, help all interested parties including Johnny Harris' and Crescent Communities
- The Westside needs an identity and a feeling of place; want to create a place where residents to say "I live on the Westside" with pride
- Infrastructure investment from public sector absolutely necessary for the area to grow and succeed
- Topography will pose the greatest challenge, utilize topography as advantage wherever possible
- Construction should begin in the south; alignment should be pushed west closer to the water to create "more useable" parcels between Dixie River Road and I-485
- Must improve road character, local and regional connectivity through the corridor and to greater Charlotte

- Residential and office best suited for Airport/West Corridor, with some retail nodes along the proposed alignment; Industrial better suited for Zone 4.
- Value capture of area's amenities: greenways, parks, recreation
- Believes development here to be a 50-year play that will take time to cultivate the area's identity and sense of place, but that the area is in need of a comprehensive, collaborative vision in order for this to happen

**March 9, 2015, 3:00 pm: Marc Silverman & Lorin Stiefel - M. David Properties**

**Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashley Landis (CDOT), Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)**

- The study area seen as the next big move in Charlotte, Areas north and south especially seen as prime for industrial development, the area needs planning with a clear vision of the targeted or desired development and land use types in order to capitalize on this opportunity.
- Understand the needs of each land use, what will facilitate development, what will limit development. Natural growth of the industrial market leasing activity will depend on the connectivity and access. Retail, office, residential best suited for the areas east and west of the airport, while industrial uses best suited for north and south of the airport.
- Collaborative, efficient transportation will be needed to maximize development potential. With I-485 already in place to provide north-south connection, the east-west connection should be strengthened to provide a more efficient flow of traffic.
- Purpose of transportation is to move vehicles effectively; create roads conducive to encourage continuous free flowing access and movement.
- Advised against emulating the road conditions of Billy Graham Parkway, which does not prove successful for freight flows due to congestion and stop-and-go traffic
- Understand the changing customer and market demands of industrial uses, remaining adaptable to these changes as the City of Charlotte continues to grow
- Facilitating collaboration between public and private sector to ensure stronger and sustained economic growth

**March 11, 2015, 10:00 am: Keith Glenn - Crescent Communities**

**Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashley Landis (CDOT), Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)**

- Create a destination to “live, work, play” in the thousands of acres that would meet the market and not drive away the existing residents and occupiers, valuing the diversity and the appeal of the existing history of the area
- Environmental amenity leveraged as an asset to be preserved, utilized for recreation.
- Infrastructure must come before the development, will catalyze major development plays
- Residential, retail and office seen as the “highest and best use of the area”
- Development likely to evolve east to west; need the commercial market and development to hatch in order to create residential demand. Unlike this area is fully activated, would create pieces closest to Berewick as an extension of Pappas’ development.
- Certain employment and residential types have a symbiotic relationship, especially for Commercial Mixed Use developments (“one type of certain employment serves residential better, and residential serves it better especially CMU). Need to understand relationships between types employment offered/job creation and residential demand.
- Solve perception problems to sell to the next generation that will move to the area.
- In favor of annexation

**March 11, 2015, 2:00 pm: Wayne Cooper - Land Owner; Jubal Early - Lincoln Harris**

**Attendees: Imad Fakhreddin (City of Charlotte), Ashley Landis (CDOT), Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)**

- Proximity to airport, major interstates, proximity to Center City make the Westside attractive to businesses
- Area needs to cultivate global demand and support major airport activity, envisions Crystal City-type mixed use development plan
- Considers the projects focused on economic development around a transit corridor, with consideration for movement of new employment housing residents
- The current Dixie River Road alignment tight to the interstate where the road connects with Old Dowd Rd. The roadway begs for careful consideration of the connection to Berewick and new residential, retail, services development to avoid congestion.
- Sees the area as a vital part of the City’s future, Lincoln Harris has created a visionary development plan for the area including town centers, road alignments and other infrastructure construction
  - Plan has identified 150 acre area for initial development that would be the catalyst of high economic and employment generation.
  - Plan would incorporate access to Crescent Communities’ 930 vacant acres for employment housing in support of the initial commercial development.
- Suggested interview with Tracy Dodson of Lincoln Harris, Keith Glenn of Crescent Communities and Dale Stewart of LandDesign to better understand the specifics of the Lincoln Harris development plan

**March 13, 2015, 1:30 pm: Brian Schlenker - SteelFab**

**Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashley Landis (CDOT), Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)**

- Road construction and improvements conducive to SteelFab's current transportation needs; preference for alignment to stay west of current SteelFab property as long as the city provides equal or more developed land directly to the east of our property. Our first preference would be to not disturb any of our property.
- Impacts on company future growth: Road west of property allow for SteelFab to continue growth, operations between road construction and I-485 as long as the city provides equal developed land directly to the east.
- Potential residential draw for current employees of a well-established business currently living outside the area.
- Would entertain idea to trade land, with additional benefits to SteelFab for relocation, for a greenfield site with strong connectivity to interstate and served by rail spur, as well as enough room for current operations and room to grow as long as city would provide funding for relocation on office, plant and equipment. Location would also have to be accommodating to current employee base; could not move to a location that adds 20+ minutes to current commute.
- Currently not considering annexation

**March 19, 2015, 2:00 pm: Landon Wyatt & Chris Thomas - Childress Klein**

**Attendees: Imad Fakhreddin (City of Charlotte); Ashley Landis (CDOT); Alberto Gonzalez (City Planning); Greg Boulanger (HNTB); Michael Gallis & Amy Rowland (MG&A)**

- Create market is what is now seen as "nascent" corridor lacking an identity.
- Both Thomas and Wyatt agreed that development in the 3000+ acres seen as the "last frontier" cannot be done piecemeal; needs an identity.
- Multiple conditions that can make developing the area cost prohibitive, including grading, erosion control, open space and tree cover requirements, and urban street guidelines
- Residential market is driven by school assignments and the perception and reality of schools in the area poses a marketing issue.
- Residential, office and retail considered the highest and best use of the Airport/West Corridor. Industrial will remain concentrated south of the airport or south of the study area in the Whitehall-Ayrsley area (primarily for existing connectivity and topography)
- Demand Shifts:
  - Millennial demand for "walkable and experiential" communities will be harder to replicate in the study area. Millennial generation likely not interested in living in this area.
  - Walkability is a large demand now when businesses look for office space; workforce appreciates walking to lunch, etc. even if they have to drive to work.
- Develop park property (owned by the County north of Dixie River Road, adjacent to I-485) and put the park elsewhere (along the waterfront). Thomas sees the park as "in the line of progress." Build Dixie River Road closer to I-485, through what is now being planned as a park. Thomas explained that this alignment would allow for better development, high connectivity to Berewick and new major retail center (Charlotte Premium Outlets) and provide relief on some of the existing and projected congestion in the Berewick area.
  - Cited Satellite Blvd. in northeast Atlanta as a model for commercial development with two active road fronts

**March 26, 2015, 9:00 am: Joe Cartafalsa – CLT Air Freight Carriers**

**Attendees: Imad Fakhreddin and Tim Greene (City of Charlotte); Ashley Landis (CDOT); Greg Boulanger (HNTB); Michael Gallis & Amy Rowland (MG&A)**

- Has seen increased in business with the completion and opening of the Norfolk Southern Intermodal Yard. As the intermodal yard expands, how will freight and logistics companies be affected?
- How will freight movements through the entire CLT Area impact passenger movements?
- Will the planned Dixie River Road/Garrison Road serve primarily commercial or residential developments?
- In favor of increasing accessibility and connectivity to I-85

**April 15, 2015, 2:00 pm: Norfolk Southern**

**Grant Cothran, Manager - Intermodal Development; Cary Booth, Assistant Vice President - Intermodal Service Development; Steve Portnell, Director - Real Estate; Alan Shaw, Vice President- Intermodal Operations**

**Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashely Landis (CDOT); Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)**

- Consideration to where Charlotte fits within the NS network, specifically the Crescent Corridor, and how to maximize this position and grow as intermodal continues to grow nationally.
- Increasing sales volumes to make sure customers can locate closer to the facility now that the intermodal facility is in place.
- Smarter industrial land use, i.e. Zone 4 positioned best for future development, leveraging the airport (a major economic driver for Charlotte) and the NS intermodal yard as the “highest and best uses” will support the existing and continued investments.
  - Challenges with the topography of the CLT Area could limit industrial development to certain areas, leading to concern that the best industrial land is seeing office parks rather than industrial and will not meet industrial customer base
- Recognize and minimize potential conflicts in traffic patterns between freight and passenger traffic

**May 11, 2015, 10:00 am: Tracy Dodson - Lincoln Harris, Keith Glenn - Crescent Communities, Dale Stewart - LandDesign.**

**Attendees: Deborah Campbell, Ed McKinney, Tim Greene & Imad Fakhreddin (City of Charlotte); Greg Boulanger (HNTB); Michael Gallis & Amy Rowland (MG&A)**

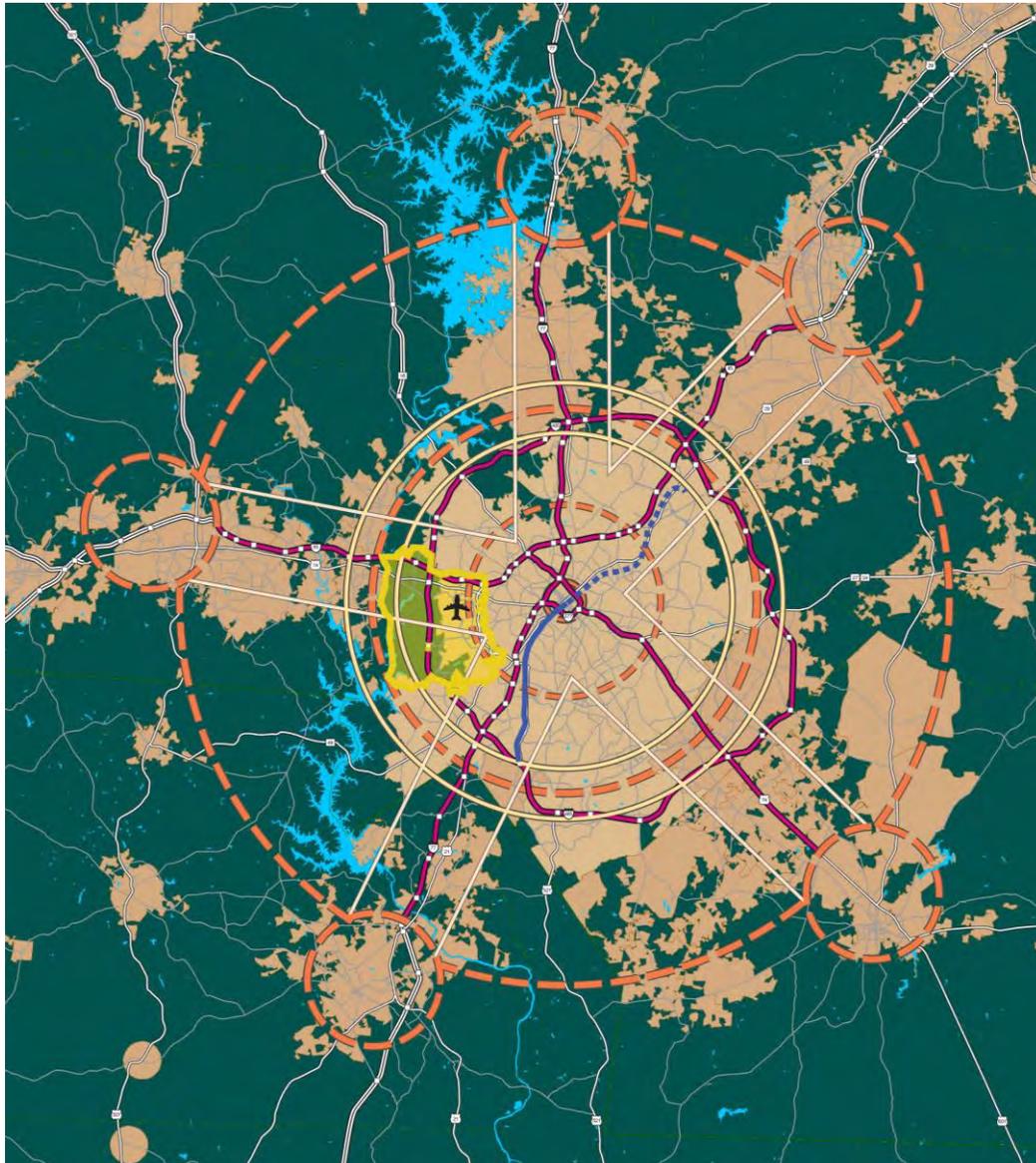
- Parallel processes to be merged, broader development plans to come together in common vision. Marry independent processes with our data research as the foundation. Create and maintain an economic engine for the City in the area.
- Lincoln Harris, LandDesign master plan utilizes existing Dixie River Road, Garrison Road as planned in the Dixie Berryhill Plan, as well as the proposed Garden Parkway linking the area to Gaston County.

## Area Analysis

Each zone has varying potential for future development and economic growth for the area. The Area Analysis was completed using the same five analysis zones created in the Market Analysis (See Task 2.03) so that the data for each zone could be coordinate; the data from each zone was then combined to show the overall totals for the entire CLT Area. In this way, each zone could be compared to the total and better understood as a subcomponent of the CLT Area.

The following sections describe:

- Geographic, transportation, and development characteristics of each zone
- Land utilization for each Market Analysis zone



**Figure 15: CLT Area in Centers & Corridors Growth Framework**  
Metropolitan Charlotte continues to grow along a concentric and radial Central City pattern, now understood as the Centers, Corridors, and Wedges framework. Construction of the interstate system laid the foundation for Charlotte's metropolitan structure. Charlotte's metropolitan pattern began in the early 1980s when the emergence of a metro area could be seen in changing commuting patterns, the increased social and economic interaction of regional cities and the ever changing relationships between the residential, employment and activity centers of metropolitan Charlotte. Each corridor is served by an interstate or state highway, parallel arterials, and an existing rail line.

## Key Findings, Opportunities, & Constraints

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The CLT Area is bounded on the West by the Catawba River, one of the region's most important environmental assets and is crisscrossed by several interstate freeways and a railroad main line that have very different and potentially conflicting effects on development activity in the area.

Transportation sensitive land uses are drawn to airport markets, as rail, air, and interstate transportation are all located in close proximity. CLT is emerging as a transportation facility that attracts users in each land use category considered transportation sensitive: hotel, office, industrial, and retail. Locating in proximity to major transportation infrastructure increases reliability and can lower cost as businesses are able to move more effectively through the region. Businesses driven by transportation accessibility and connectivity locate in proximity to major air hubs, major highways and rail centerlines. The area already offers local and regional connectivity via I-85, I-77, and I-485, Wilkinson Blvd. and Billy Graham Parkway.

Of the greatest significance to the area, location in proximity to both CLT and the new NS intermodal yard guarantees rapid regional, national and global access. New development in the area should be complementary to future growth and expansion of the airport. The new intermodal facility, as well as planned public upgrades to the area, will serve as catalysts for growth that has the potential to strengthen Charlotte's position in the global market place. Most notably, the Airport Intermodal Yard will continue to shape the growth and character of the region. The area remains largely undeveloped with almost 45% of the CLT Area vacant or with minor improvements such as parking or storage areas. Given the environmental and transportation assets, once new transportation and utility infrastructure is completed the area is likely to experience rapid growth.

Development has evolved in a piecemeal and incremental pattern. While some development is high quality, other development is dilapidated and out of date. As a result, the area does not have a clear identity nor does it provide the perception of a clear direction, although some isolated components are well recognized and well maintained. Each of the five zones has a different combination of existing commercial and residential development, transportation and infrastructure, environmental conditions and regulatory overlays, market identity and development potential.

- Zone 1, located west of the airport between I-485 and the Catawba River, has the largest amount of undeveloped land. The high degree of topographic variations along the waterfront (Zone 1) represents a significant development challenge, local watershed overlays and regulations that add additional challenges given previous issues on the study area's unique environmental qualities. In addition, proximity to the airport could restrict certain land use types, specifically residential developments. Noise impacts and Runway Protection Zones (RPZ) add regulatory hurdles for development and expansion within the study area.
- Zones 2, 3, and 4 are all in transition as new development activity and new infrastructure occur in the CLT Area.
- Zone 5, the airport operational area, has airport and freight related industrial and office development on the property.

The characteristics, market conditions, and development potential in each of the Market Analysis Zones is very different and without a framework for guiding their future, there is a high potential for conflicting developments and traffic generation that will become a barrier to optimizing the value of the entire CLT Area. All development will require advance planning and sequencing to ensure value optimization for the City in the long term. Site opportunities and constraints will inform the identification of specific development.

## CLT Area Existing Land Use and Physical Characteristics

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### Geography

The CLT Area includes 17,711 acres bound west by the Catawba River, east generally by the Billy Graham Parkway Corridor, north by Tuckaseegee Rd. and south by Berewick, I-485, and Tyvola Rd. The CLT Area is located in a wedge as defined by the Charlotte Mecklenburg Planning Department's Centers, Corridors and Wedges development framework.

### Transportation

Charlotte's airport is 12 minutes from the center city, which remains Charlotte's largest office and hotel concentration. Airport access is provided from the CBD by Wilkinson Blvd, a four-lane major arterial with on-grade intersections, or by I-85 and Little Rock Rd. An extensive transportation network links the CLT Strategic Development Study Area to both local and regional economic and employment centers. Transportation elements linking the study area include:

- East-West connections include the state's first "super highway" Wilkinson Blvd and I-85, as well as the Norfolk Southern line.
- The newly completed I-485 Outerbelt provides access to local economic centers including Pineville, Ballantyne, Blakeney, and Matthews.
- I-485 provides access to I-77, linking the region to north to Huntersville, Davison, and Statesville, and south to Columbia.
- Billy Graham Parkway provides North-South access from I-85 to the SouthPark market.
- West Blvd. provides access to the southern half of the study area from the Center City and Central/Midtown markets.
- Highway 160/Steele Creek Road and Arrowood Rd provide access to southern economically important areas including Westinghouse and Fort Mill, South Carolina.
- Highway 160/Steele Creek Road connects with Highway 49/S. Tryon Street/York Road, the only arterial crossing the Catawba River south of Wilkinson Blvd.

### Development Pattern

While developments along Wilkinson Blvd. began in the 1920s and increased during the 1950s as the road became the region's first "super highway" attracting highway oriented development, the area has languished for years as it was considered primarily rural and hidden behind the airport with little direct access except by two lane rural roads whose pattern dates to the farming era of Charlotte's past. The Norfolk Southern mainline is a primary rail corridor. However, few rail oriented industrial developments are found in the area, as most rail oriented development was surrounding downtown Charlotte.

As the interstate system was constructed, I-85 provided new access to the airport area but did not significantly increase development in the airport area. However, as interstate construction continued with the construction of I-77, industrial activity increased south of the airport in the Westinghouse Blvd. corridor. Arrowood Rd. became an office corridor easily accessible by I-77.

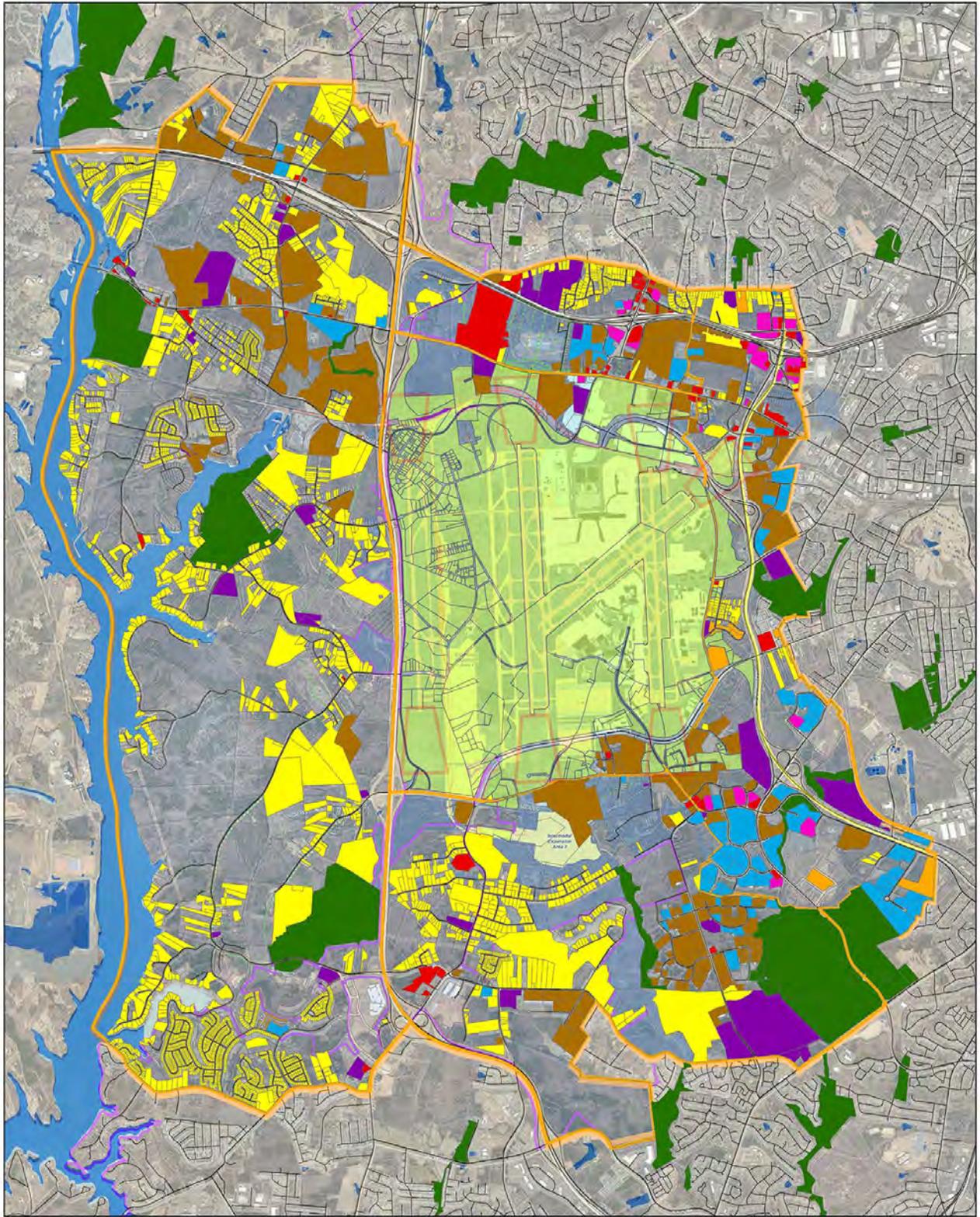
Later, the construction of Billy Graham Pkwy initiated a period of office and multi-family construction along the corridor but lacked significant retail and other amenities that limited the market dynamic in the area. The construction of the I-485 beltway laid the foundation for new development in the area. The recent opening of the Charlotte Premium Outlets at Steele Creek and I-485 interchange along with the Berewick and Vineyard Pointe residential developments have driven by the access provided by the new beltways.

<b>Land Use Cat.</b>	<b>Acres</b>	<b>% of Total Acres</b>
<b>Commercial</b>	<b>2,138</b>	<b>12.1%</b>
Hotel	98	0.6%
Industrial	1,396	7.9%
Office	456	2.6%
Parking Garage	--	0.0%
Retail	188	1.1%
Institutional	667	3.8%
<b>Residential</b>	<b>2,465</b>	<b>13.9%</b>
Single Family	2,365	13.3%
Multi-Family	100	0.6%
<b>Underdeveloped</b>	<b>7,925</b>	<b>44.7%</b>
<b>Parks/Preserves</b>	<b>761</b>	<b>4.3%</b>
<b>Airport Core</b>	<b>3,776</b>	<b>21.3%</b>
Industrial	619	3.5%
Institutional	591	3.3%
Office	23	0.1%
Parking Garage	81	0.5%
Retail	2	0.0%
Military	--	0.0%
No Building	2,461	13.9%
<b>CLT Area Total</b>	<b>17,732</b>	<b>100%</b>

*Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A*

Table 3 highlights data from Mecklenburg County Tax Parcel data. Land Use category “Airport Core” includes land considered currently undevelopable, airport owned property reserved for airport functions, as well as the land, either public or private, which is within the Runway Protected Zones.

Underdeveloped land refers to land that is primarily vacant (undeveloped) or underutilized within the greater CLT Area. Underdeveloped land includes vacant land as well as land with no buildings, but other improvements such as surface parking. Almost 45% of land in the CLT Area is considered underdeveloped.



ADVANCE PLANNING -  
CLT STRATEGIC DEVELOPMENT AREA  
AIRPORT WEST CORRIDOR

**CLT STUDY AREA - CURRENT LAND USE**

- |            |            |        |                 |
|------------|------------|--------|-----------------|
| INDUSTRIAL | COMMERCIAL | HOTEL  | INSTITUTIONAL   |
| SINGLE FAM | MULTI-FAM  | OFFICE | PARKS/PRESERVES |

Version 1.5 05/18/2015  
 Miles

**Figure 16: CLT Area Land Use**

## Zone 1 – Airport/West Corridor

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### **Geography**

Zone 1, the Airport/West Corridor, is the largest of the 5 zones by acreage, a total land area of 7,900 acres. Zone 1 is located west of CLT. Zone 1 is bound on the east by the I-485 outer loop, providing continuous access to the greater Charlotte metro area, on the west by the Catawba River, an amenity of significant ecological and scenic value that also poses environmental challenges for future development. Zone 1 is bound north by a combination of I-85 and the Norfolk Southern mainline forming the primary East Coast corridor connecting Atlanta to the Northeast. The southern area is not defined by any major transportation or environmental amenity, but rather by new residential development. The riverfront is considered a lesser amenity than the lakes as the river is narrow and offers fewer opportunities for water-oriented recreation and a far lesser scenic view.

### **Transportation**

Zone 1 has local access to North Charlotte, as well as regional access from the Southwest through Gastonia, Spartanburg, Greenville and the heavily urbanized Atlanta metro area, and Northeast to the Piedmont Triad, Triangle, and Virginia where I-85 connects to I-40, the major east coast connecting highway, and I-95 for greater national accessibility. Zone 1 has indirect access to I-77 via I-485 and I-85. Both Zone 1B and 1C have direct access to roads leading into the Airport and Airport Intermodal Yard.

The Airport/West project area consists of the existing section of Garrison Road, a narrow unmarked pavement that serves farm land in western Mecklenburg County. Garrison Road extends from West Blvd/1-485 Interchange and dead ends at a private farm approximately one mile south west of the interchange. The project supports economic development by leveraging the Airport Intermodal Facility for development that provides quality jobs for the City.

### **Publically Owned Land**

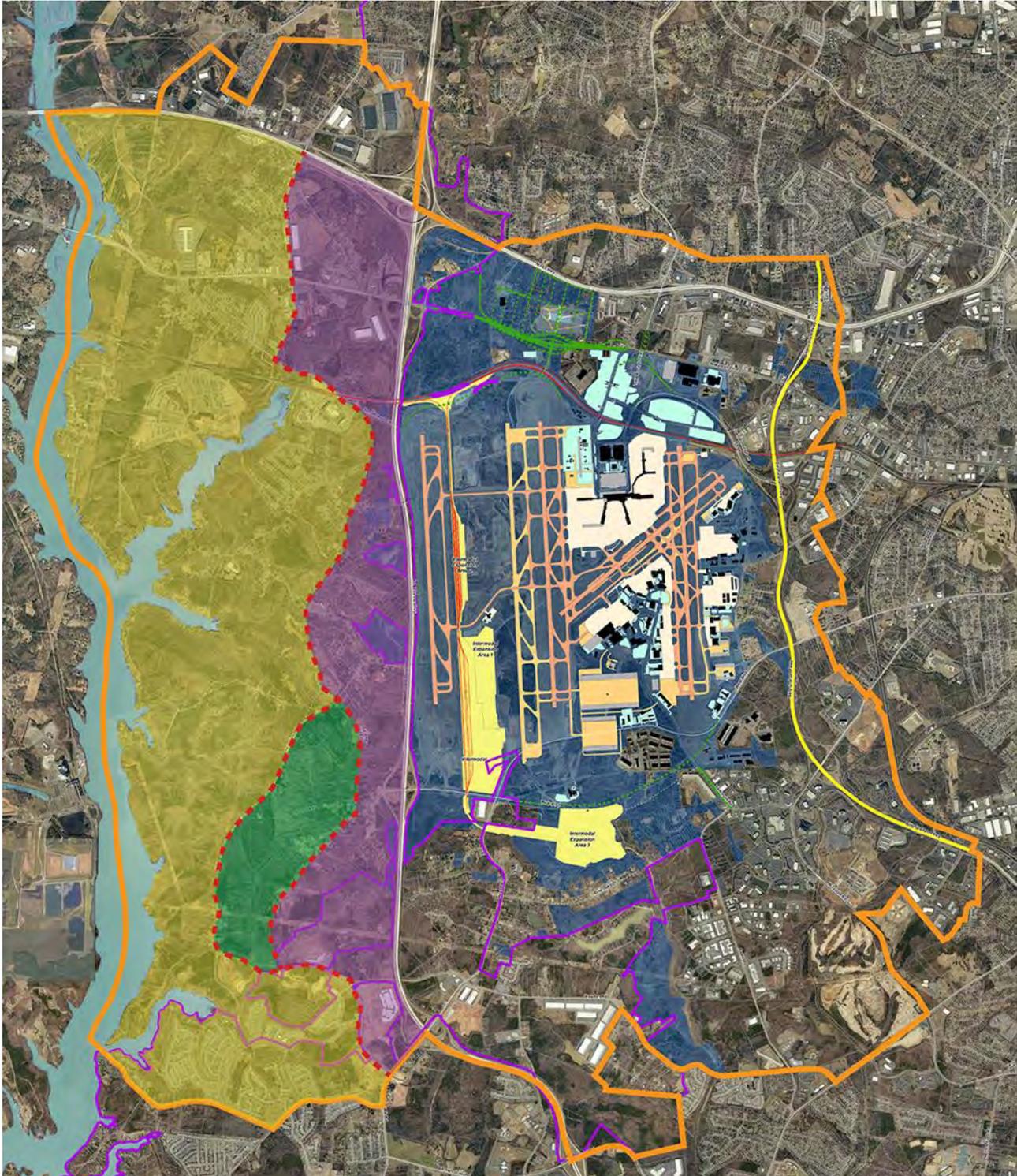
Of the 7,900 acres in Zone 1, 829 acres are publically owned, primarily in Zone 1B and Zone 1C, with 420 acres and 409 acres respectively. The City of Charlotte owns 259 acres of land classified as No Building. Mecklenburg County owns 525 acres, primarily Parks/Preserves.

### **Development Pattern**

Zone 1 has developed generationally, with the primary development pattern occurring along the riverfront where single family residential lots were built for access to the CLT Area's largest environmental asset. Zone 1 has the highest acreage of land considered underdeveloped, 4,708 acres classified as underdeveloped, or 60% of the entire zone.

**Future Investment**

Garrison Road & Dixie River Road will redefine the perception and character of the CLT Area, acting as a dividing line between a River Oriented Development area (yellow) and a Transportation Oriented Development area (Purple), creating an Intermediate Zone (green) that will have its own character as the proposed roads create a new development pattern.



**Figure 17: Airport/West Corridor Future Investment**

## Zone 2 – Billy Graham Corridor

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### **Geography**

Zone 2 includes 1924.4 acres of land located east of CLT; as such the airport is the primary western boundary of the entire zone. The Billy Graham Corridor is bound north by Tuckaseegee Road, west by Stafford Drive, CLT, and Yorkmont Road & Tyvola Road. Zone 2 follows Mulberry Church Road/Billy Graham from Tuckaseegee road south, ending just before the Billy Graham/I-77 interchange.

### **Publicly Owned Land**

Approximately 45% (197 acres) of Zone 2 is owned by the City of Charlotte. Mecklenburg County owns 23% of the acres in Zone 2.

### **Transportation**

The transportation infrastructure pattern before Billy Graham was completed included radials extending to downtown. Upon completion, Billy Graham Parkway provided a loop between the freeway system that connected both north and south, with reliable access to the SouthPark market.

Zone 2 is a segment along the Billy Graham Corridor that connects to both I-85 and I-77. Billy Graham Parkway connects to other local access roads, such as Woodlawn and Tyvola, which provide greater connectivity to the Charlotte metro.

Billy Graham Parkway is a local connector that has been described as slow moving, with limited regional access. Interchanges with Wilkinson Blvd, West Blvd, and Tyvola Rd provide local access from the City Center. Billy Graham to Woodlawn provides access to the SouthPark market, a submarket that has been successful in maximizing development in office, retail, and residential land uses.

### **Development Pattern**

Zone 2 is the most developed zone in the CLT Area, with only 36% of land (707 acres) considered underdeveloped. The majority of Zone 2 development is commercial development, representing 35% of total acreage in the Zone. Zone 2 includes 140 acres considered to be Airport Core.

## Zone 3 – CLT North

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### **Geography**

Zone 3 includes 782 acres located directly north of CLT, bound by I-485 to the west and Stafford Drive to the east (Zone 2A boundary), and north by Tuckaseegee Road. The City of Charlotte owns the majority of land contained in the western half of Zone 3.

### **Publicly Owned Land**

Approximately 50% of land is publically owned: 375 acres of the study area's 748 are owned by the City of Charlotte. Of the City's 375 acres, 369 were classified as No Building. Mecklenburg County Tax Parcel Data indicated the Department of Transportation owns land in Zone 3 less than one acre.

### **Transportation**

Major local and regional connections located in Zone 3 include I-85 and I-485 (I-85/I-485 interchange is the northwestern boundary), Wilkinson Blvd run through the zone, as well as I-85 service road and the Norfolk Southern main line.

The zone has direct access to CLT via Little Rock Road, Entrance Road, and Scott Futrell Drive. North-South connections: 590 Airport Connector Northlake and 591-Airport Connector Archdale.

### **Development Pattern**

Almost 60% of Zone 3 (acreage) is underdeveloped, primarily owned by the City of Charlotte. The eastern half of Zone 3 has developed as the main passenger entrance to the airport with 25% commercial development.

## Zone 4 – West Blvd. Intermodal Access

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### **Geography**

Zone 4, or the West Blvd. Intermodal Access area, includes 3,252 acres of land located south of Charlotte Douglass International Airport. Zone 4 is bound west by I-485, the Southern boundary consists of the intersection of I-485/Arrowood Rd; Shopton Road; and Tryon Street (Tryon is the southeastern Zone 4 boundary). Eastern boundary includes Tyvola Road and the Zone 2B boundaries of Yorkmont Road and Tyvola Road. Zone 4 contains the proposed future intermodal expansion area.

### **Publically Owned Land**

The western half of Zone 4 is currently located outside the Charlotte City Limits. The City of Charlotte is the largest public owner of land in Zone 4: holding 1,271 acres, or 39% of total Zone 4 acres, of which 880 acres were classified as No Building, 204 acres Institutional, and 157 acres Parks/Preserves.

### **Transportation**

Zone 4 major arterials include I-485, West Blvd, and Arrowood Road along the western boundary of the area. West Blvd provides East-West connection to Center City and direct access to I-485. However, the West Blvd./I-485 Interchange is increasingly at risk of over congestion as the residential communities along the Catawba River (Berewick, etc.) continue to grow and as trucking companies increase daily trips to and from the Norfolk Southern Intermodal Yard. Sections of Arrowood Road, Shopton Road, and S Tryon Street comprise the southern boundaries. Yorkmont Road provides direct access into CLT's air cargo operating area.

### **Development Pattern**

Zone 4 has over 1,942 acres underdeveloped, almost 60% of total acreage in the zone. The area has historically attracted scattered residential development, which accounts for 14% of total acreage. Commercial development is limited to 11% of total area acreage, or 346 acres, the majority of which has been industrial development given proximity to major transportation assets including CLT and the NS intermodal yard, as well as proximity to major industrial markets in the Westinghouse/Arrowood market.

## Zone 5- Charlotte Douglas International Airport Operational Area

### **Geography**

Zone 5, the Charlotte Douglas International Airport (CLT) Operational Area, covers over 3,892 acres, including Charlotte Douglas International Airport. Zone 5 is bound north by Wilkinson Blvd, west by I-485, south by West Blvd, and east by the eastern CLT operational area by portions of access arterials including Airport Drive, Minutemen Way, and R C Josh Birmingham Parkway.

CLT is a Federal Aviation Administration (FAA) designated large air hub, located 7 miles west of Charlotte's Center City. To date, CLT operates four runways following the completion of the third parallel runway in 2010. Zone 5 includes the airport's 1.8 million sq. ft. terminal, home to 95 gates spread throughout the terminal's five concourses. Zone 5 includes the Airport's short and long term parking facilities, offering over 26,000 parking spots to passengers, as well as the rental car operations facilities located on the property. Additionally Zone 5 houses Wilson Air Center, the 50 acre fixed based operating facility on the eastern boundary line, and the air cargo operating facilities located in the southern half of the zone, accessed from the south.

### **Publicly Owned Land**

Zone 5 is located almost entirely within the Charlotte City Limits, with the exception of I-485 exit ramp right of way. Zone 5 totals 3,966 acres; of Zone 5 total acreage, 3862 acres or 97% is publically owned property. The City of Charlotte is the primary land owner of Zone 5, holding over 6.27 million sq. ft. on 3,862 acres. The NC Air National Guard owns 192,577 sq. ft. area in Zone 5.

### **Transportation**

CLT can be directly accessed from the region's two major interstates, I-85 via either the I-85/Wilkinson Blvd. or the I-85/Billy Graham Parkway interchange, and I-485 via the I-485/West Blvd or I-485/Wilkinson Blvd interchange. Billy Graham Parkway offers access to Zone 5 including connection with Wilkinson Blvd, RC Josh Birmingham Parkway, Morris Field Drive, and West Blvd. Billy Graham provides indirect access to the Zone via the I-77/Billy Graham Parkway interchange southeast of the CLT Area boundary.

Eastern access into Zone 5 via Billy Graham Pkwy, Morris Field Road, Airport Drive, and Minutemen Way. Wallace Neel Road, which runs parallel along the western Zone 5 boundary, can be accessed via West Blvd from the south, Dixie River Road and Walker Ferry Road to the west, Old Dowd Road from the northwest.

Passenger and traveler access to the airport and adjacent parking facilities, rental car facilities and terminals is funneled into Zone 5 from northern access points including Scott Futrell Road, Entrance Road, and Little Rock Road.

Southern access to the cargo center operations and the Norfolk Southern Intermodal Yard via West Blvd, Yorkmont Road, and ARRF Road. Zone 5 is directly rail served from the Norfolk Southern main line north of the CLT airport operational area, trunk line parallel to the new runway serving the Airport Intermodal Yard.

### **Development Pattern**

Zone 5 represents 3,892 acres of land, including CLT. CLT property, considered constrained for Land Utilization, is referred to and designated in the market study as Core Airport. Core Airport represents 93% of total acres in Zone 5. Zone 5 has 121 acres, or 3% of total acreage, considered underdeveloped. The remaining land uses in Zone 5 are Commercial Office space (1%), Commercial Industrial space (2%), and Institutional (1%).

### **History of the Catawba River**

The Catawba River, the western boundary of the CLT Area, begins in North Carolina's Blue Ridge Mountains, flowing southeast through the Piedmont to Mecklenburg County. From the Charlotte metropolitan area, the Catawba River flows south through eight South Carolina counties where it links with Lake Wateree and is called the Wateree River. The Catawba River has helped shape the development pattern seen today; Duke Energy, once a major land holder along the Catawba River, dammed the river for energy generation. Historically, the Catawba River has been utilized primarily for industrial purposes including energy generation and textile chemical manufacturing. Today, the majority of the Catawba River has been dammed, creating both Lake Norman, the largest manmade lake in the state, Mountain Island Lake, and Lake Wylie. The portion of the Catawba River adjacent to the CLT Area is considered to be part of Lake Wylie.

### **Hydrology**

A complex network of streams, tributaries and groundwater systems throughout Mecklenburg County feeds the Catawba River. Though the entire CLT Area is not defined within the City of Charlotte's Watershed Overlay, the area is located within the Catawba-Wateree River Basin, which extends over 75% of Mecklenburg County. A river basin is defined as the greater land area that is dissected and drained by streams and creeks, flowing into one another, eventually ending in the Catawba-Wateree hydrologic system. The river basin describes an area in which all things, biotic and abiotic are connected, interdependent, and influential to the local and regional hydrologic cycle. By definition a river basin and watershed are both land areas draining into the same body of water; however, watershed is generally used to describe a smaller area of land draining into a more narrowly defined water body. Much of the CLT Area is located within the Catawba River Watershed, defined as the "The entire land area contributing surface drainage into a stream, creek, lake or other body of water" (City of Charlotte Zoning Ordinance Chapter 10). The City of Charlotte Zoning Ordinance identifies three separate watersheds within the greater Catawba-Wateree River system: Mountain Island Lake Watershed, Catawba River/Upper Lake Wylie Watershed, and the Lower Lake Wylie watershed. Regulations and constraints related to development activity in watershed overlay zones are identified in Task 1.06.

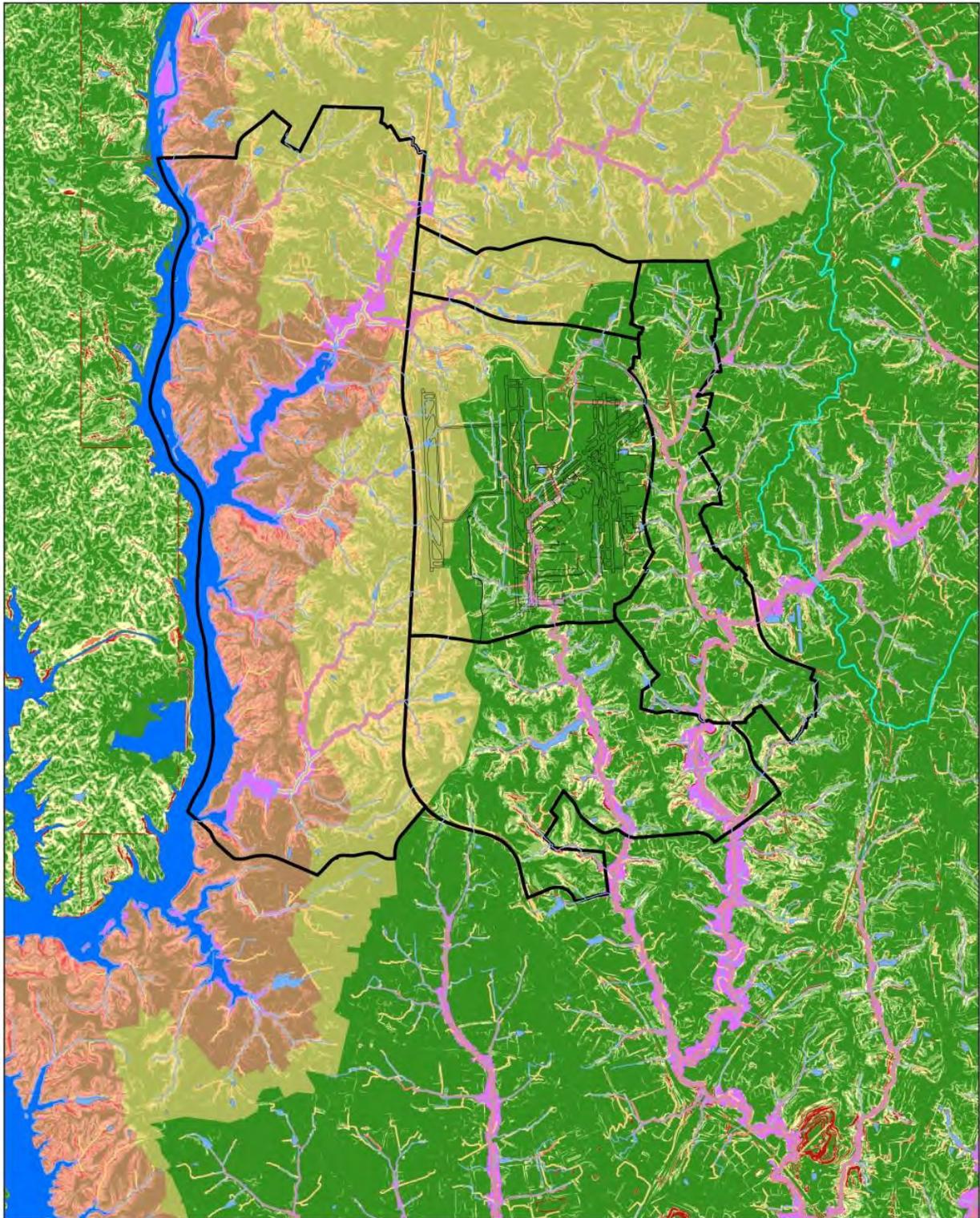
Zone 1 is located within the Catawba River/Lake Wylie watershed overlay. The Zone includes River front property, as well as property along offshoots of the river such as Little Paw Creek (Zone 1B) and Beaverdam Creek (Zone 1C).

- Zone 1A - located in the Upper and Lower Lake Wylie Watershed, with Protected and Critical Areas in both watersheds.
- Zone 1B - Lower Lake Wylie Protected and Critical Areas, includes Little Paw Creek
- Zone 1C - located in the Lower Lake Wylie Protected and Critical Areas, includes Beaverdam Creek.

Zone 2 includes both Sugar Creek and Irwin Creek. Additionally, the Irwin Creek Wastewater Treatment facility is located east of the Billy Graham Corridor off Westmont Drive, a secondary arterial off Wood Ridge Center Drive.

### **Topography**

The natural environmental surface conditions & topography in Zone 1 present a challenge for development of the area. See Figure 19 for full slope analysis, in which slope percentages are grouped into (5 categories).



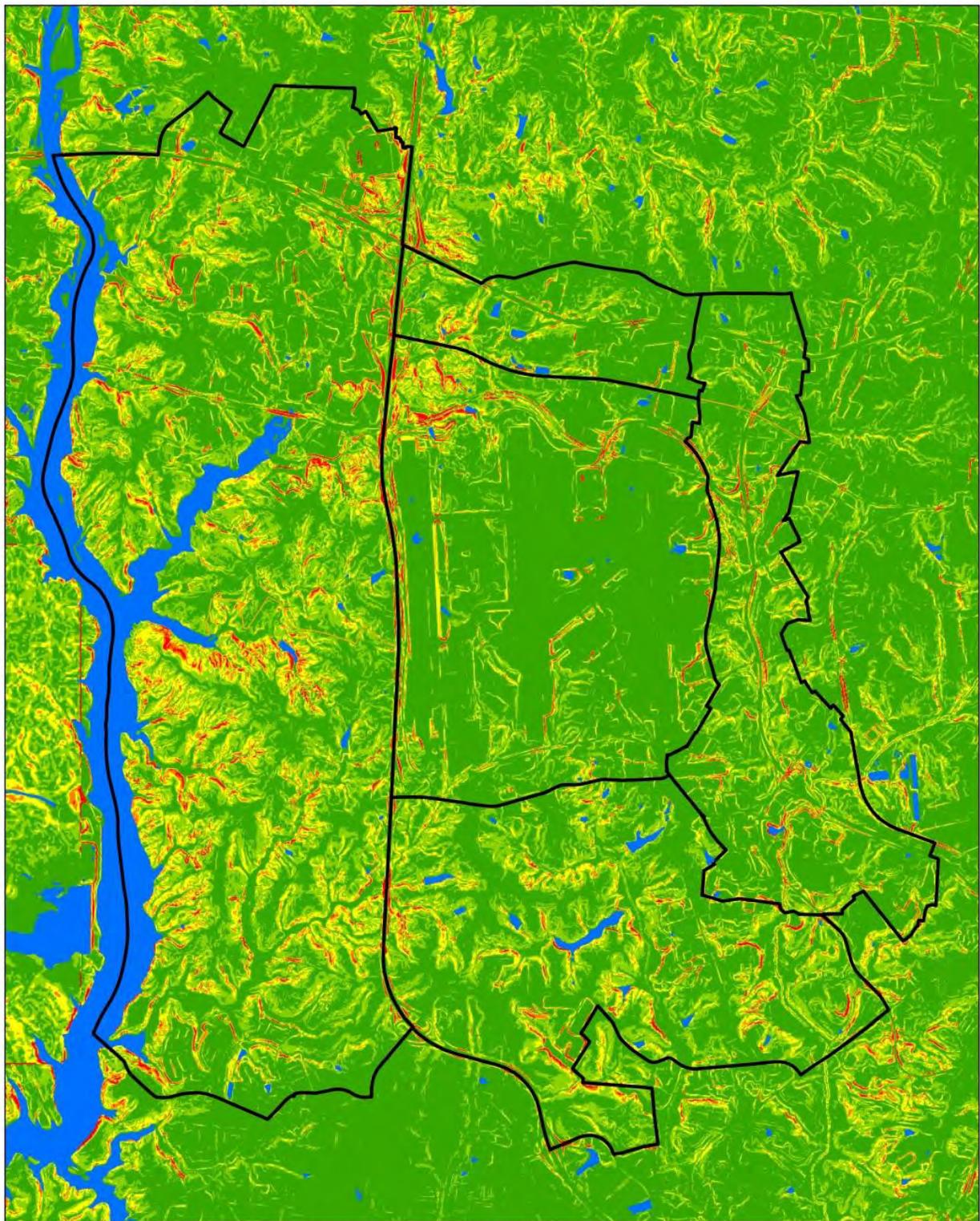
ADVANCE PLANNING -  
CLT STRATEGIC DEV. AREA  
AIRPORT/WEST CORRIDOR

**CLT STUDY AREA ENVIRONMENT - WATER REGULATORY**

- CRITICAL WATERSHED OVERLAY
- PROTECTED WATERSHED OVERLAY
- FRESHWATER POND
- LAKE/RIVER
- SWIM BUFFERS
- 2011 POST CONSTRUCTION BUFFERS
- 100YR FLOODPLAIN CHANGES 2011

Version 1.3    05/18/2015  
 0 0.150.3 0.6 0.9 1.2  
 Miles

**Figure 18: CLT Area Environment - Water Regulatory**



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AIRPORT/WEST CORRIDOR

CLT STUDY AREA ENVIRONMENT - TOPOGRAPHY

0 - 5% 5% - 10% 10% - 15% 15% - 20% 20% and above

Version 1.1 05/18/2015  
0 0.2 0.4 0.8 1.2 Miles

Figure 19: CLT Area Environment - Topography

## **Noise Exposure & Runway Protected Zones (RPZ)**

Noise contours and Runway Protected Zones will impact development in the CLT Area. Noise Exposure Maps quantify aircraft noise and identify land use incompatibilities that exist today and in the future, educate the public about the Airport and activity that occurs at the Airport, and enable land use planners to make decisions about future development to ensure noise compatibility. RPZs, reflected in the Airport Core, are areas directly off the end of a runway where no development can occur.

## **Land Utilization: Development/Redevelopment Potential**

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The Spatial Decision Systems Land Utilization model output (see Figure 20) shows the potential of land parcels available for development or re-development within the CLT Area.

The Development/Redevelopment Potential model interfaces a variety of data inputs in order to represent the land supply for future development. Constraints were predetermined for Task 1.06: Base Mapping Opportunities and Constraints Analysis. The Development/Redevelopment Potential model utilized characteristics and constraints defined in Task 1.06 in order to maintain consistency for the Area Analysis.

Characteristics that impact development potential inputs included:

- Current and future land uses including the Adopted Land Use Plan
- Transportation characteristics
- Land conversion parameters
- Physical & environmental characteristics to account for their impacts on development.

Constraints that would limit or eliminate development potential were categorized as follows:

- Infrastructure including railroad property and right-of-way, utility property and right-of-way, and North Carolina Department of Transportation property
- Core Airport Property & Runway Protected Zones
- Stable Development including existing institutional land uses and well-established residential subdivisions
- Hydrological Constraints including wetlands, ponds, FEMA Floodway, SWIM Buffers, and Post-Construction Buffers
- Slope Constraints designated at slopes that are generally considered cost prohibitive for development
- Ecologically Sensitive/Significant Areas including habitat for local species of concern, North Carolina Ecosystem Enhancement Program Easements, and North Carolina Natural Heritage Element or Program Occurrences
- Designated Open Space including designated greenways, nature preserves, and regional parks
- Historic Properties

Data inputs are modeled to account for the interrelated, interactive relationships of the study area characteristics and constraints in order to project land areas with the highest potential for development and redevelopment. Using a combination of study area specific inputs, the model output accurately represents the land supply for future development or redevelopment.

Interfacing the various multi-system data inputs produced a Development/Redevelopment Potential value scored from 0 to 9. A ranking of “0” indicated that the land has no redevelopment potential due to a major constraint or combination of constraints resulting from the model, including areas such as the Airport, the Berewick Development, Regional Park and Preserves. Redevelopment Potentials are represented by a graded scale of red-brown tones from lightest representing those with the least potential, “1”, arranged in a nine tone gradient scale indicating increasing levels of potential to “9”, the greatest potential. Land parcels shown on the Development/Redevelopment Potential map, Figure 20, are aggregated into Low, Medium and High values: Low ranked 1-3; Medium 4-6; and High 7-9.

Table 4 (below) indicates the amount and percentage of developable land within each of the five Market Analysis Zones. Zone 1 has the largest number of acres considered developable/redevelopable, near double the next highest total found in Zone 4. The highest percentage of land that is developable is found in Zone 3.

**Table 4: Development/Redevelopment Potential Acres (%) within CLT Area Total Acreage**

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5*	CLT Area
<b>Development/Redevelopment Acres</b>	4,234	771.5	570	2,167	120	7,862
<b>Total Acres</b>	7,900	1,943	748	3,250	3,892	17,732
<b>% of Zone Developable/Re-developable</b>	53.6%	39.7%	76.2%	66.7%	3.1%	44.3%

Source: Spatial Decision Systems, MG&A

*\*Note: only 3.1% of Zone 5 was considered developable/redevelopable as it is primarily Airport Core property*

Table 5 (below): Only the land that was considered Development/Redevelopment as shown in Table 4 (above) was evaluated for its potential.

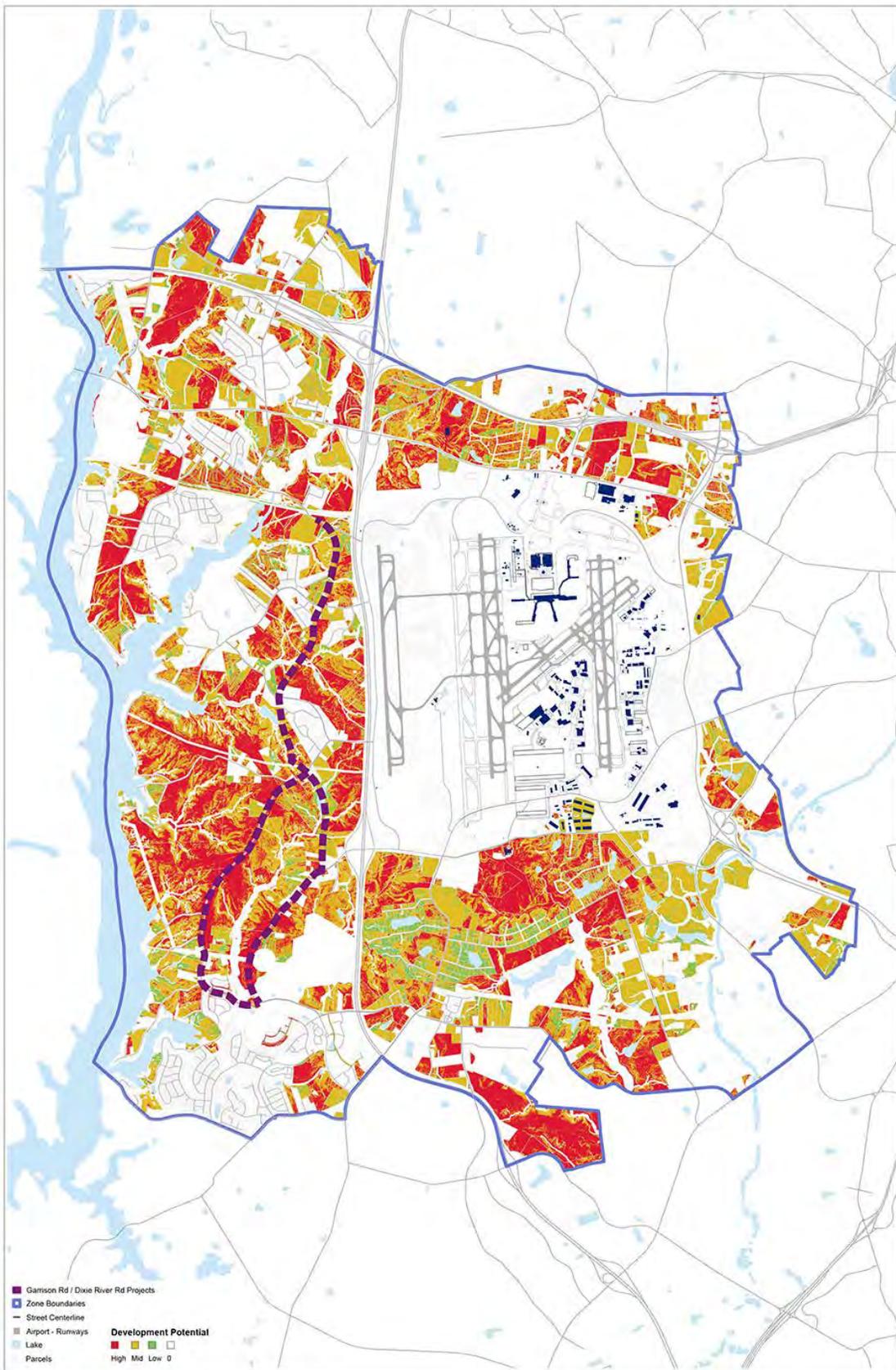
Scores across all 9 categories were aggregated into Low, Medium, or High categories:

- Low = Development/Redevelopment Potential (ranked 1, 2, or 3)
- Medium = Development/Redevelopment Potential (ranked 4,5, or 6)
- High = Development/Redevelopment Potential (ranked 7, 8, or 9)

**Table 5: CLT Area Development/Redevelopment Potential: Low, Medium, High (acres)**

Zone	1 acres	%	2 acres	%	3 acres	%	4 acres	%	5 acres	%	CLT acres	%
<b>Low</b>	232.4	5	81.1	11	31.9	6	201.3	9	8.2	7	554.9	7
<b>Medium</b>	2,235.7	53	526.2	68	305.7	54	1,051.3	49	69.6	58	4,188.6	53
<b>High</b>	1,765.6	42	164.1	21	232.0	41	914.6	42	42.5	35	3,118.8	40
<b>Total</b>	<b>4,233.7</b>	<b>100</b>	<b>771.5</b>	<b>100</b>	<b>569.6</b>	<b>100</b>	<b>2,167.2</b>	<b>100</b>	<b>120.2</b>	<b>100</b>	<b>7,862.3</b>	<b>100</b>

Source: Spatial Decision Systems, MG&A



**Airport/West Corridor  
Land Utilization:  
Redevelopment Potential Analysis**

V2-0  
08.10.15  
SPATIAL DECISION SYSTEMS **SDS**

**Figure 20: CLT Area Land Utilization: Development/Redevelopment Potential**

## Market Analysis

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For the purposes of the Market Study the CLT Area, as defined by the City of Charlotte, was divided into five analysis zones. Two of these zones were further subdivided into smaller distinct commercial and residential real estate development subzones. Each of the five zones varies in size, current real estate development activity, environmental suitability, transportation connectivity, and availability of infrastructure.

For the purposes of this study, the CLT Area was considered to be a distinct subarea within the Charlotte metropolitan real estate submarkets. Analyzing the Area within the existing pattern of submarkets was made more difficult as the CLT area does not exactly fit into current commercial and residential submarkets.

This report utilized multiple commercial and residential data sources:

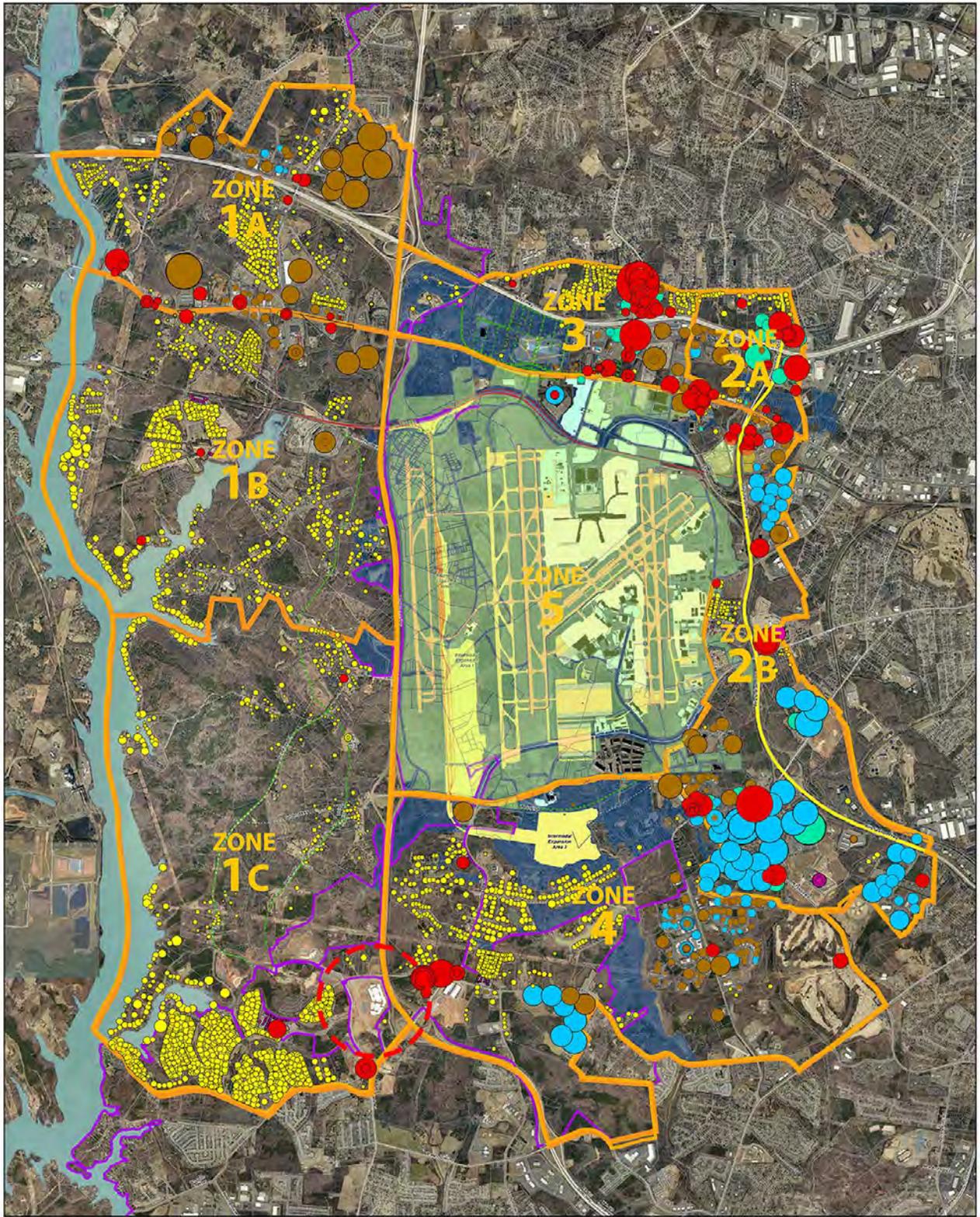
- Karnes Research data was used for office, industrial and retail, with CB Richard Ellis (CBRE) data on submarket size used for comparison only. Karnes and CBRE used differing parameters for assembling data, and therefore their statistics in industrial exhibit differing degrees of variation. Data from the Charlotte Regional Visitors Authority (CRVA) was the only provider of current and historic hotel data.
- Residential, Market Opportunity Research Enterprises (MORE) and Real Data were used. MORE provided current and historic for-sale residential data. Real Data provided current and historic apartment data.
- Data for the CLT Area was obtained using Mecklenburg County Tax Parcel data, access April 29, 2015. For parcels where there was more than one building use, the value for the land was included in the predominant use category. Single family and Multi-family data for the CLT Area was derived from the Mecklenburg County Tax Parcel data by Neighboring Concepts, as well as from the Charlotte-Mecklenburg Planning Department. To provide a surrogate to indicate the age of developments in each of the zones surrounding the airport, a single “year built” is used for commercial and residential categories.

## Key Findings: Market Baseline Conditions

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Development in the CLT Area has been historically commercial, with high concentrations of hotel, office, and industrial uses and, more recently, a growing retail segment. The CLT Area is only now beginning to experience significant residential development activity, primarily located in the southern half of the CLT Area. While individual development concentrations within the CLT Area are well known and have an established and recognized identity, the overall CLT Area suffers from a lack of identity and coordinated development. This lack of identity can be a disadvantage in the metropolitan, national, and global markets. The CLT Area development pattern & current market identity has resulted from the growth of the airport and the region, developing in isolated segments with little consideration to framework of optimal development for the area. Coordination in development would allow the area to offer a greater variety of existing inventory, supporting services and amenities, better competing with the well established markets throughout Charlotte, as well as on the East Coast.

While the CLT Area is a distinct market area within the Charlotte metropolitan real estate market, it is not currently considered a submarket in itself. Rather, the Airport is considered to be located within a pattern of existing residential and commercial submarkets that often allocate parts of the CLT Area into different submarkets. Recognizing the Area as a distinct submarket could lead to the Area becoming more well-known with a unified, visionary identity.



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AIRPORT WEST CORRIDOR

**CLT STUDY AREA DEVELOPMENT**

- OFFICE
- HOTEL
- RETAIL
- INDUSTRIAL
- MULTI-FAMILY
- SINGLE FAMILY

Version 1.6      08/13/2015

0   0.2   0.4   0.8   1.2 Miles

**Figure 21: CLT Study Area Development - All**

*Note: A red dashed symbol has been added for Charlotte Premium Outlets, which was not included in the available Mecklenburg County Tax Parcel Data at time of analysis. The symbol is shown on this map for locational purposes only and is not to scale, though at over 400,000 sq. ft., the Charlotte Premium Outlets are the largest retail development in CLT Area.*

Within the metropolitan market, some of the already established subareas already offer a greater variety of existing inventory, supporting services and amenities. The CLT Area has not been studied to recognize and plan how it fits into Charlotte's metropolitan pattern. The Westside has been largely overlooked historically, and, without an overriding concept to maximize value, the study area is at a greater risk of continuing to develop in a piecemeal pattern. Such piecemeal development does not leverage one of Charlotte's greatest economic driver and employment center, and could result in a significant loss of value to the City

- The CLT Area is a transportation anchored market that attracts a wide range of users that seek reliable access to regional, national and global markets. The CLT Area is anchored by the airport which represents one of the strongest gravity points within the real estate market along with the Center City, SouthPark, University and Ballantyne. The Center City is a high visibility and high status, primarily an office market anchored by large corporate headquarters, major governmental and nearby institutional, educational and medical, with cultural and sports facilities. The University is anchored by the region's major educational institution that contains the largest concentration of PhDs and highly educated workforce. SouthPark and Ballantyne are primarily suburban lifestyle markets that are anchored by either a large regional mall, SouthPark, or a large concentration of high end housing, Ballantyne.
- The majority of development activity in the CLT Area primarily takes place after 1945, although some structures go back to the early part of the century and the 1930s.
- The CLT Area's commercial real estate market is highly diversified, fragmented, and dispersed with localized areas of concentrated development with little connection and synergy with each other. The CLT Area overlaps two of the largest Karnes industrial submarkets, overlaps the second largest Karnes office submarket, one of the smallest Karnes retail submarkets, and the largest CRVA hotel submarket in Mecklenburg County.
  - The CLT Area is one of the five primary office markets along with Center City, SouthPark, Ballantyne, and University.
  - It is a major industrial market north of the dominant Westinghouse/Arrowood market.
  - It is the dominant hotel market with almost double the number of rooms found in Center City and more than double the rooms found in South Charlotte.
  - It is not a major retail market, as the area is primarily convenience retail serving the airport, office and hotel as there is not the residential development sufficient to support larger or more diverse retail investment.
- The residential markets are only beginning to be established, with limited and historic or generational single family residential outside of the new residential developments in Zone 1C and limited multi-family development despite growing apartment demand due to shifting economic, lifestyle preferences.

## Zone 1 – Airport/West Corridor

Zone 1, the Airport/West Corridor, is one of the highly desirable areas for development due to its location between I-485 which provides access to the region and the Catawba River which provides a high amenity value, however difficult topography, a lack of infrastructure, and a generally negative image limits development.

Zone 1 is the largest of the 5 zones by acreage, a total land area of 7,900 acres. Zone 1 is bound on the east by the I-485 outer loop; west by the Catawba River; north by a zig-zag line north of and coincident with I-85, and south by a line that is generally considered the point that separates Whitehall/Ayrsley from the CLT Area. The southern boundary of this Zone is not defined by any single major transportation or environmental amenity, but rather by the recently constructed Berewick residential development.

**Table 6: Zone 1 Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>4,609,056</b>	<b>43.4%</b>	<b>\$257,879,400</b>	<b>28.6%</b>	<b>1982</b>
Industrial	4,037,757	38.0%	\$148,209,600	16.4%	1986
Office	110,194	1.0%	\$7,792,800	0.9%	1979
Retail	461,105	4.3%	\$101,877,000	11.3%	1968
<b>Institutional</b>	<b>305,360</b>	<b>2.9%</b>	<b>\$30,444,100</b>	<b>3.4%</b>	<b>1979</b>
<b>Residential</b>	<b>5,706,112</b>	<b>53.7%</b>	<b>\$496,667,969</b>	<b>55.0%</b>	<b>1993</b>
Single Fam	5,521,854	52.0%	\$480,603,069	53.3%	1992
Multi-Fam	184,258	1.7%	\$16,064,900	1.8%	2009
<b>Parks/Preserves</b>	<b>0</b>	<b>0.0%</b>	<b>\$7,434,900</b>	<b>0.8%</b>	
<b>No Building</b>	<b>0</b>	<b>0.0%</b>	<b>\$109,837,123</b>	<b>12.2%</b>	
<b>Grand Total</b>	<b>10,620,528</b>	<b>100.0%</b>	<b>\$902,263,492</b>	<b>100.0%</b>	<b>1992</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

Zone 1 cannot be considered a single market area but rather three separate and distinct submarket areas or subzones, 1A to the north, 1B in the center, and 1C to the south including Berewick, each of which has a somewhat different identity. These three sub-zones were determined by recognizing the influence of the area's defining geographic and transportation characteristics.

Zone 1A is primarily a commercial area served traditionally by Wilkinson Blvd. and, later, I-85 and I-485. The commercial developments are generally older industrial, and service and convenience retail. Zone 1A is the smallest of the three subzones with 1536 acres.

**Table 7: Zone 1A Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>3,318,415</b>	<b>84.7%</b>	<b>\$121,838,900</b>	<b>63.9%</b>	<b>1983</b>
Industrial	3,237,785	82.6%	\$115,711,100	60.7%	1987
Office	50,407	1.3%	\$4,212,700	2.2%	1977
Retail	30,223	0.8%	\$1,915,100	1.0%	1967
<b>Institutional</b>	<b>66,258</b>	<b>1.7%</b>	<b>\$7,285,500</b>	<b>3.8%</b>	<b>1973</b>
<b>Residential</b>	<b>532,942</b>	<b>13.6%</b>	<b>\$44,409,100</b>	<b>23.3%</b>	<b>1970</b>
Single Family	532,942	13.6%	\$44,409,100	23.3%	1970
<b>Underdeveloped</b>	<b>0</b>	<b>0.0%</b>	<b>\$17,041,300</b>	<b>8.9%</b>	
<b>Grand Total</b>	<b>3,917,615</b>	<b>100.0%</b>	<b>\$190,574,800</b>	<b>100.0%</b>	<b>1973</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

Zone 1B is primarily single family residential with some industrial with access provided by the arterials extending south from I-85 and Wilkinson Blvd, as well as the NS RR main line. The area has extensive river front access that has attracted residential development. While Vineyard Pointe is a recently planned development, most of the areas residential consist of generational water front cabins. Zone 1B is the second largest subzone with 2,486.4 acres bound north by Wilkinson Blvd, west by Catawba River, and east by I-485.south by the Little Paw Creek area including portions of Windy Grove Road (western) and M. Olive Church Road (to the east). The Catawba River offshoot at Little Paw Creek divides Zone 1B, creating a peninsula-like land area.

**Table 8: Zone 1B Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>865,440</b>	<b>34.0%</b>	<b>\$38,503,000</b>	<b>16.2%</b>	<b>1980</b>
Industrial	788,736	31.0%	\$32,237,400	13.6%	1984
Office	59,787	2.3%	\$3,580,100	1.5%	1982
Retail	16,917	0.7%	\$2,685,500	1.1%	1969
<b>Institutional</b>	<b>112,863</b>	<b>4.4%</b>	<b>\$12,751,800</b>	<b>5.4%</b>	<b>1986</b>
<b>Residential</b>	<b>1,568,097</b>	<b>61.6%</b>	<b>\$142,108,800</b>	<b>59.7%</b>	<b>1991</b>
Multi-Family	93,004	3.7%	\$7,712,900	3.2%	2009
Single Family	1,475,093	57.9%	\$134,395,900	56.5%	1990
<b>Underdeveloped</b>	<b>0</b>	<b>0.0%</b>	<b>\$39,116,017</b>	<b>16.4%</b>	
<b>Parks/Preserves</b>	<b>0</b>	<b>0.0%</b>	<b>\$5,404,200</b>	<b>2.3%</b>	
<b>Grand Total</b>	<b>2,546,400</b>	<b>100.0%</b>	<b>\$237,883,817</b>	<b>100.0%</b>	<b>1991</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

Zone 1C is largely undeveloped with very difficult topography and environmental regulatory overlays, limited accessibility, and little infrastructure served by Rock Island Road, Shopton Road, and Steele Creek Road. Berewick residential community and the Charlotte Premium Outlets are recent developments that are a continuation of the southern Lake Wylie market and Whitehall/Ayrsley market. Zone 1C is the largest subzones with 3,742 acres located in what is historically known as the “Dixie-Berryhill” area.

**Table 9: Zone 1C Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>425,201</b>	<b>10.2%</b>	<b>\$97,537,500</b>	<b>20.6%</b>	<b>1977</b>
Industrial	11,236	0.3%	\$261,100	0.1%	1982
Retail	413,965	10.0%	\$97,276,400	20.5%	1971
<b>Institutional</b>	<b>126,239</b>	<b>3.0%</b>	<b>\$10,406,800</b>	<b>2.2%</b>	<b>1978</b>
<b>Residential</b>	<b>3,605,073</b>	<b>86.7%</b>	<b>\$310,150,069</b>	<b>65.5%</b>	<b>1999</b>
Multi-Family	91,254	2.2%	\$8,352,000	1.8%	2010
Single Family	3,513,819	84.5%	\$301,798,069	63.7%	1999
<b>Underdeveloped</b>	<b>0</b>	<b>0.0%</b>	<b>\$53,679,806</b>	<b>11.3%</b>	
<b>Parks/Preserves</b>	<b>0</b>	<b>0.0%</b>	<b>\$2,030,700</b>	<b>0.4%</b>	
<b>Grand Total</b>	<b>4,156,513</b>	<b>100.0%</b>	<b>\$473,804,875</b>	<b>100.0%</b>	<b>1999</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

## Zone 2 – Billy Graham Corridor

Zone 2 developed as Billy Graham Parkway was completed, linking I-77 with I-85 providing access to the airport and to established South Charlotte markets and Gaston County. Zone 2 has been the primary focus of commercial development in the CLT Area and is now being challenged by the market potentials along I-485. However, Zone 2 remains the dominant office development zone with 90% of office sq. ft. in the CLT Area, and contains the largest segment of the hotel market with 76% of the total CLT Area. Other than the Airport occupying Zone 5, this zone has the least amount of acres classified as Underdeveloped (36%).

Zone 2 includes 1,942 acres of land located east of CLT, bound north by Tuckaseegee Road, west by Stafford Drive, CLT and Yorkmont Road & Tyvola Road. Zone 2 follows Mulberry Church Road/Billy Graham from Tuckaseegee Road south, ending just before the Billy Graham/I-77 interchange.

**Table 10: Zone 2 Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Hotel Rooms	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>2,249</b>	<b>8,245,035</b>	<b>80.0%</b>	<b>\$707,278,600</b>	<b>74.8%</b>	<b>1985</b>
Hotel	2,249	1,349,336	13.1%	\$120,714,700	12.8%	1985
Industrial		2,055,690	19.9%	\$97,943,900	10.4%	1983
Office		4,413,408	42.8%	\$452,034,900	47.8%	1991
Parking Garage		242,780	2.4%	\$0	0.0%	2006
Retail		183,821	1.8%	\$36,585,100	3.9%	1983
<b>Institutional</b>		<b>545,435</b>	<b>5.3%</b>	<b>\$86,247,200</b>	<b>9.1%</b>	<b>1982</b>
<b>Residential</b>		<b>1,150,058</b>	<b>11.2%</b>	<b>\$66,260,800</b>	<b>7.0%</b>	<b>1962</b>
Multi-Family		1,000,859	9.7%	\$54,379,900	5.7%	1967
Single Family		149,199	1.4%	\$11,880,900	1.3%	1956
<b>No Building</b>		<b>0</b>	<b>0.0%</b>	<b>\$66,319,100</b>	<b>7.0%</b>	
<b>Parks/Preserves</b>		<b>0</b>	<b>0.0%</b>	<b>\$2,530,000</b>	<b>0.3%</b>	
<b>Airport Core</b>		<b>369,153</b>	<b>3.6%</b>	<b>\$17,243,600</b>	<b>1.8%</b>	<b>1995</b>
Industrial		369,153	3.6%	\$11,960,500	1.3%	1995
Airport Core Land		0	0.0%	\$5,283,100	0.6%	
<b>Grand Total</b>	<b>2,249</b>	<b>10,309,681</b>	<b>100.0%</b>	<b>\$945,879,300</b>	<b>100.0%</b>	<b>1976</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

The Billy Graham Corridor is subdivided into two sub-zones along the area's defining features:

Zone 2A is a mixed commercial area, primarily retail and hotel serving the airport market with some smaller industrial developments located along the I-85 frontage road and Stafford Dr. At the northern fringe of this market is some residential although continued development of the airport would indicate that the area will remain commercial. Zone 2A single family residential development occurred historically as the area has not attracted recent residential development.

Zone 2A is the smallest subzone with 293 acres bound north by Tuckaseegee Road; south by Wilkinson Blvd, west by Stafford Drive. Zone 2A has both local and regional access via I-85; the I-85 service road provides local access; Wilkinson Blvd. intersection provides local access to Center City and CLT.

**Table 11: Zone 2A Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Hotel Rooms	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>1426</b>	<b>1,275,848</b>	<b>87.4%</b>	<b>\$95,504,900</b>	<b>81.2%</b>	<b>1978</b>
Hotel	1426	672,835	46.1%	\$57,645,100	49.0%	1981
Industrial		507,141	34.7%	\$20,902,300	17.8%	1976
Office		31,900	2.2%	\$2,786,400	2.4%	1960
Retail		63,972	4.4%	\$14,171,100	12.1%	1978
<b>Institutional</b>		<b>29,890</b>	<b>2.0%</b>	<b>\$3,156,700</b>	<b>2.7%</b>	<b>1988</b>
<b>Residential</b>		<b>154,496</b>	<b>10.6%</b>	<b>\$6,543,000</b>	<b>5.6%</b>	<b>1963</b>
Multi-Family		94,263	6.5%	\$441,400	0.4%	2012
Single Family		60,233	4.1%	\$6,101,600	5.2%	1954
<b>Underdeveloped</b>		<b>0</b>	<b>0.0%</b>	<b>\$12,384,200</b>	<b>10.5%</b>	
<b>Grand Total</b>	<b>1426</b>	<b>1,460,234</b>	<b>100.0%</b>	<b>\$117,588,800</b>	<b>100.0%</b>	<b>1972</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

Zone 2B is primarily a commercial market created by convenient and immediate access to CLT. Airport office markets are typically dominated by regional headquarters that have a high degree of need to manage sales and service representatives to access a regional market via air. The majority of office development in Zone 2 is found in Zone 2B. Two unequal concentrations of industrial developments, the smallest in the northeast and a larger concentration in the southwest adjacent to CLT along West Blvd and Yorkmont Rd. The area contains a small amount of convenience retail to support the office and hotel markets. The area has marginal residential development primarily developed in the 1950s-60s. The only new residential developments were at the West Blvd/Billy Graham intersection including the CHA development at Renaissance.

Zone 2B is the largest subzone with 1,650 acres along Billy Graham Parkway from the Wilkinson Blvd. interchange south before Westmont Drive, providing connections to the major economic centers in South Charlotte, including SouthPark. The area has connectivity to major local arterials Tryon Street, West Blvd, and Yorkmont.

**Table 12: Zone 2B Market Baseline Inventory & Tax Value Data, 2014**

Land Use. Cat.	Hotel Rooms	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>823</b>	<b>6,969,187</b>	<b>78.8%</b>	<b>\$611,773,700</b>	<b>73.9%</b>	<b>1990</b>
Hotel	823	676,501	7.6%	\$63,069,600	7.6%	1991
Industrial		1,548,549	17.5%	\$77,041,600	9.3%	1987
Office		4,381,508	49.5%	\$449,248,500	54.2%	1993
Parking Garage		242,780	2.7%	\$0	0.0%	2006
Retail		119,849	1.4%	\$22,414,000	2.7%	1986
<b>Institutional</b>		<b>515,545</b>	<b>5.8%</b>	<b>\$83,090,500</b>	<b>10.0%</b>	<b>1981</b>
<b>Residential</b>		<b>995,562</b>	<b>11.2%</b>	<b>\$59,717,800</b>	<b>7.2%</b>	<b>1961</b>
Multi-Family		906,596	10.2%	\$53,938,500	6.5%	1964
Single Family		88,966	1.0%	\$5,779,300	0.7%	1958
<b>Underdeveloped</b>		<b>0</b>	<b>0.0%</b>	<b>\$53,934,900</b>	<b>6.5%</b>	
<b>Parks/Preserves</b>		<b>0</b>	<b>0.0%</b>	<b>\$2,530,000</b>	<b>0.3%</b>	
<b>Airport Core</b>		<b>369,153</b>	<b>4.2%</b>	<b>\$17,243,600</b>	<b>2.1%</b>	<b>1995</b>
Industrial		369,153	4.2%	\$11,960,500	1.4%	1995
Airport Core Land		0	0.0%	\$5,283,100	0.6%	
<b>Grand Total</b>	<b>823</b>	<b>8,849,447</b>	<b>100.0%</b>	<b>\$828,290,500</b>	<b>100.0%</b>	<b>1978</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

## Zone 3 – CLT North

Currently Zone 3 is in the process of becoming the main entrance to the airport as the new access roads from I-85 and Wilkinson Blvd. are completed. Once the major terminal expansion and service roads are completed this zone will develop a much higher level of visibility and strength as a commercial market. However, this zone currently lacks a clear identity as it is an uncoordinated mix of new and antiquated development, some that extend back into the 1940s and 1950s when Wilkinson Blvd. was first expanded to become a “super-highway”. The main airport entrance was from West Blvd. prior to 1982 when the main terminal was relocated to the north side and the entrance was relocated to Wilkinson Blvd. and I-85. This set off a new construction cycle in this zone as now hotels and retail were constructed to serve the new terminal location.

Currently commercial activity is grouped into several areas of concentration. There is a high concentration of convenience retail and hotel along Little Rock Rd just north of I-85. There is a scattering of small industrial behind Little Rock Rd, north and south of I-85. There are two small residential concentrations both north of I-85, on either side of Little Rock Rd. However, Zone 3 remains primarily classified as Underdeveloped as 60% of the total acres primarily in the western half of the zone remain underutilized.

Zone 3 has a total of 782 acres. The zone is located directly north of CLT, bound by I-485 to the west and Stafford Drive to the east (Zone 2A boundary), and north by Tuckaseegee Road. The City of Charlotte, CLT owns the majority of land contained in the western half of Zone 3. Zone 3, will soon become the new entrance into the airport from I-85 and Wilkinson Blvd as the new surface infrastructure, now under construction, is completed. This should change the market potential of the area.

**Table 13: Zone 3 Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Hotel Rooms	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>808</b>	<b>1,162,927</b>	<b>74.1%</b>	<b>\$73,044,100</b>	<b>58.9%</b>	<b>1979</b>
Hotel	808	393,615	25.1%	\$26,640,900	21.5%	1980
Industrial		589,383	37.5%	\$28,649,800	23.1%	1979
Office		26,547	1.7%	\$3,079,200	2.5%	1974
Retail		153,382	9.8%	\$14,674,200	11.8%	1976
<b>Institutional</b>		<b>151,424</b>	<b>9.6%</b>	<b>\$17,384,600</b>	<b>14.0%</b>	<b>2001</b>
<b>Residential</b>		<b>255,471</b>	<b>16.3%</b>	<b>\$17,528,500</b>	<b>14.1%</b>	<b>1974</b>
Single Family		255,471	16.3%	\$17,528,500	14.1%	1974
<b>Underdeveloped</b>		<b>0</b>	<b>0.0%</b>	<b>\$16,085,162</b>	<b>13.0%</b>	<b>1966</b>
<b>Grand Total</b>		<b>1,569,822</b>	<b>100.0%</b>	<b>\$124,042,362</b>	<b>100.0%</b>	<b>1975</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

## Zone 4 – West Blvd. Intermodal Access

Zone 4 is currently the most diverse commercial area with a mixed pattern of commercial industrial, office, retail and residential uses. This area has been primarily developed in an incremental and opportunistic pattern resulting from the growth of the airport, new infrastructure and access to both CLT and the Westinghouse/Arrowood area. The residential market was established over 50 years ago in the late 1950s when the area remained largely rural with amenities such as Eagle Lake that attracted homes to the area. As the airport expanded, it grew closer to established residential and as a result, the newer commercial developments attracted to the airport filled in around existing residential areas.

Currently, the airport intermodal yard is slated to expand into residential areas to provide greater opportunities for rail oriented industrial to be developed. There are three primary commercial concentrations in Zone 4. Two of the concentrations are mixed office and industrial, the first along Beam Rd and the second along Shopton Rd. A third retail component is growing at the intersection of Steele Creek/Highway 160 and Shopton Rd as part of a larger concentration that is anchored by Charlotte Premium Outlets, with access to I-485 and Highway 160. This area currently has a conflicted identity due to the varying uses created over a long period time in a mixed pattern.

Zone 4, or the West Blvd. Intermodal Access area, includes 3,252 acres of land located south of Charlotte Douglass International Airport. Zone 4 is bound west by I-485, the Southern boundary consists of the intersection of I-485/Arrowood Rd; Shopton Road; and Tryon Street (Tryon is the southeastern Zone 4 boundary). Eastern boundary includes Tyvola Road and the Zone 2B boundaries of Yorkmont Road and Tyvola Road. Zone 4 contains the southern portion of the new Intermodal Facility (Intermodal Expansion Area).

**Table 14: Zone 4 Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>3,203,789</b>	<b>73.7%</b>	<b>\$177,932,200</b>	<b>48.2%</b>	<b>1993</b>
Industrial	2,854,179	65.7%	\$137,282,800	37.2%	1995
Office	281,373	6.5%	\$26,384,600	7.1%	1986
Retail	68,237	1.6%	\$14,264,800	3.9%	1991
<b>Institutional</b>	<b>356,709</b>	<b>8.2%</b>	<b>\$56,448,900</b>	<b>15.3%</b>	<b>1972</b>
<b>Residential</b>	<b>785,379</b>	<b>18.1%</b>	<b>\$62,155,800</b>	<b>16.8%</b>	<b>1977</b>
Multi-Family	64,588	1.5%	\$4,652,400	1.3%	2002
Single Family	720,791	16.6%	\$57,503,400	15.6%	1974
<b>Underdeveloped</b>	<b>0</b>	<b>0.0%</b>	<b>\$69,948,808</b>	<b>18.9%</b>	
<b>Parks/Preserves</b>	<b>0</b>	<b>0.0%</b>	<b>\$3,050,100</b>	<b>0.8%</b>	
<b>Grand Total</b>	<b>4,345,877</b>	<b>100%</b>	<b>\$369,535,808</b>	<b>100%</b>	<b>1981</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

## Zone 5- Charlotte Douglas International Airport Operational Area

Zone 5, the CLT airport, has the highest level of established local, regional, and national identity. Land defined as the Airport Core represents 93% of total acreage in Zone 5, including CLT terminals, parking facilities, and office space, as well as other private operators including FedEx that operate in the area. While it is not considered part of the private market as it does not compete for the same type of development occurring in the surrounding zones, it does continue to evolve with transportation oriented users but primarily limited to those that require direct airfield or air terminal access.

Zone 5, the CLT Operational Area, covers over 3966 acres at the heart of the CLT Area. Zone 5 is bound north by Wilkinson Blvd, west by I-485, south by West Blvd, and east by the eastern CLT operational area by portions of access arterials including Airport Drive, Minutemen Way, and R C Josh Birmingham Parkway.

**Table 15: Zone 5 Market Baseline Inventory & Total Tax Value, 2014**

Land Use Cat.	Hotel Rooms	Heated Area (Sq. Ft.)	% of Total SF	Sum of Total Value (\$)	% of Total Value	Avg. Year Built
<b>Commercial</b>	<b>124</b>	<b>820,966</b>	<b>11.2%</b>	<b>\$38,944,300</b>	<b>5.30%</b>	<b>1990</b>
Industrial		692,132	9.5%	\$30,844,900	3.9%	1991
Office		85,496	1.2%	\$8,099,400	1.0%	1988
Retail		13,354	0.2%	\$778,800	0.1%	1980
Hotel	124	29,984	0.4%	\$2,049,900	0.3%	1990
<b>Institutional</b>		<b>16,951</b>	<b>0.2%</b>	<b>\$7,537,600</b>	<b>1.0%</b>	<b>1968</b>
<b>Underdeveloped</b>		<b>0</b>	<b>0.0%</b>	<b>\$9,878,700</b>	<b>1.3%</b>	
<b>Airport Core</b>		<b>6,475,039</b>	<b>88.5%</b>	<b>\$730,125,092</b>	<b>92.5%</b>	<b>1976</b>
Industrial		3,178,988	43.5%	\$192,491,800	24.4%	1986
Institutional		2,497,619	34.2%	\$276,777,292	35.1%	1989
Office		381,940	5.2%	\$25,090,600	3.2%	1981
Parking Garage		110,999	1.5%	\$12,959,300	1.6%	1990
Retail		87,068	1.2%	\$5,265,100	0.7%	1974
Military		192,577	2.6%	\$5,384,400	0.7%	1962
Airport Core Land		25,848	0.4%	\$212,156,600	26.9%	1900
<b>Zone 5 Total</b>	<b>124</b>	<b>7,312,956</b>	<b>100.0%</b>	<b>\$789,314,392</b>	<b>100.0%</b>	<b>1978</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

## Commercial Real Estate Pattern

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Commercial space is utilized for the various types of economic activity, each category requiring different types of spaces and buildings. For example, growth in the manufacturing and warehousing sectors requires industrial space, while growth in business services and software development requires office space. Thus, there is different demand for different types of space and buildings dependent on the type of job growth. Hotel space is dependent on the growth of office space, while retail is more generally dependent on the growth in jobs, wages and disposable income. Each metropolitan area has a different mix, proportion and spatial distribution of commercial types of real estate. Airport markets have historically been a magnet for commercial uses.

The airport continues to transform into a global transportation facility, it will strengthen its market and attract more users to each commercial real estate category. Transportation is dependent on both cost and reliability; two factors that have helped strengthen the draw of the airport market in Charlotte. The combination of air, rail, and interstate transportation connectivity increase the attractiveness to both industrial and office users. In turn, office and industrial market growth around CLT has created demand for hotel space.

Commercial real estate is broken into five categories:

1. **Office** - further broken into Class A, B, and C. Class A represents the “newest and highest quality” office space available on the market located in the most desirable areas. The Charlotte region is home to 8 Fortune 500 headquarters, tied for 20 of the Top Metropolitan Areas by Fortune 500 Headquarters in 2014. Over 50% of Fortune 500 companies have a presence in the Charlotte metro area.
2. **Industrial** - Charlotte’s industrial market is primarily located in two of seven submarkets in northwestern and southwestern Mecklenburg County. The Charlotte metro area has been ranked in the Top 20 for Transportation & Warehousing according to the Charlotte Chamber of Commerce. The Airport area has attracted supporting businesses for CLT’s Air Cargo operations.
3. **Retail** - regional malls, power centers, community, neighborhood and specialty.
4. **Hotel/lodging** – including convention, full-service and limited-service designations. The Charlotte Regional Visitors Authority maintains hotel for the entire county and select submarkets, tracking supply and demand, current properties and rooms, occupancy rates, and average daily rate.

## Office

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### Key Findings - Office

- The CLT Area (located in the I-77/Southwest submarket) is one of the 5 major office concentrations in the Charlotte market along with Downtown, University (located in the Northeast submarket), SouthPark (SouthPark submarket), and Ballantyne/South (Ballantyne/South submarket).
- The CLT Area office market, 4.9 million sq. ft., is located in the I-77/Southwest submarket, 7.8 million sq. ft. The other large office concentration in the I-77/Southwest submarket is Arrowood.
  - CLT Area office developments are concentrated along Billy Graham (Zone 2)
- As the second largest office submarket by inventory, I-77/Southwest has not generated the same demand in recent years as have Downtown, Ballantyne/South, or SouthPark.
  - The I-77/Southwest office submarket has been lagging with few completions since 2009.
  - This submarket relies primarily on companies that operate within the Southeast region or regional headquarters of national firms that have prioritized transportation reliability and efficiency over other locational criteria.
- Since the recession, few office buildings have been completed in the I-77/Southwest market. Shifting corporate business travel practices driven by cost cutting measures has resulted in lower levels of executive travel. The rise of video conferencing as an alternative to travel has impacted airport markets across the country. In addition, airport office markets have also been impacted by the shifting preferences for “walkable” environments. This type of environment is typically found in downtowns or well-designed suburban areas where a variety of amenities are in close proximity to office locations.
- Rising rents in Downtown, SouthPark, and Ballantyne/South could be a benefit to the Airport market. Located just 10 minutes from Downtown and easily accessible to SouthPark and Ballantyne, these market conditions could drive businesses who seek to more affordable office space to the Airport area.
- The completion of the I-485 beltway should have important effects on the CLT Area office market.

### Charlotte Office Market Overview

The office study used only Karnes Research. Charlotte’s office market, defined by Karnes as office inventory for lease larger than 15,000 sq. ft., is divided into 11 submarkets. At the end of 2014, the Charlotte office market had 49.89 million sq. ft., while CBRE lists the total office market size at 39.74 million sq. ft. for Q1 2015. The I-77/Southwest submarket is the second largest office submarket in the County.

Despite a drop in net absorption in 2009 and 2011, the County’s office market has maintained relatively consistent demand. Of County net absorption, the Southwest submarket averaged 13% from 2005-2014. County deliveries declined significantly after 2010, dropping from 2.3 million sq. ft. in 2010 to only 290,969 sq. ft. in 2011. The County has added only 1.56 million sq. ft. from 2011-2014, only 150,100 sq. ft. of the 2011-2014 County total was delivered to the I-77/Southwest market. At the end of 2014, 295,000 sq. ft. were under construction in the I-77/Southwest market, which indicates construction of the new Charlotte Veteran’s Administration Health Care Center.

While most submarkets experienced fluctuating vacancy rates from 2010 to 2011, the Southwest submarket vacancy has experienced continuous decline since 2011, when vacancy was as high as 27.2%. Analysis of 2010-2014 vacancy rates indicated that the Southwest market has improved 3.6%, below the major office centers in the Northeast and Ballantyne/South.

Analysis of the change in rent rate for five years indicates the Southwest submarket has increased at an average rate of 6.7% per year. Though annual rent rates remain lower than the average, the Southwest submarket change in rent from 2010-2014 was on par with top performing submarkets, increasing at a higher rate than both Downtown and Ballantyne/South.

**Table 16: Mecklenburg County Office Submarket Overview, YE 2014**

Submarket	Office Inventory	% of County	Vacancy (%)	Avg. Rent (\$/Sq. Ft.)
6 - Cotswold	220,647	0.44%	10.30	21.93
4 - Park Road	727,403	1.46%	23.30	17.10
8 - East	1,042,172	2.09%	25.90	14.25
11 - CrownPoint/Mathews	1,105,898	2.22%	19.70	16.59
10 - North	2,334,399	4.68%	14.20	20.68
2 - Midtown	3,549,684	7.11%	7.50	23.49
5 - SouthPark	4,336,088	8.69%	13.50	25.25
9 - Northeast	5,142,792	10.31%	14.60	18.85
7 - Ballantyne/South	6,648,124	13.32%	15.90	23.59
<b>3 - I-77/ Southwest</b>	<b>7,814,940</b>	<b>15.66%</b>	<b>19.80</b>	<b>17.73</b>
1 - Downtown	16,974,362	34.02%	11.20	\$27.46
Mecklenburg County	49,896,510	100%	14.30	\$23.11

Source: Karnes Research, Kimley-Horn, MG&A

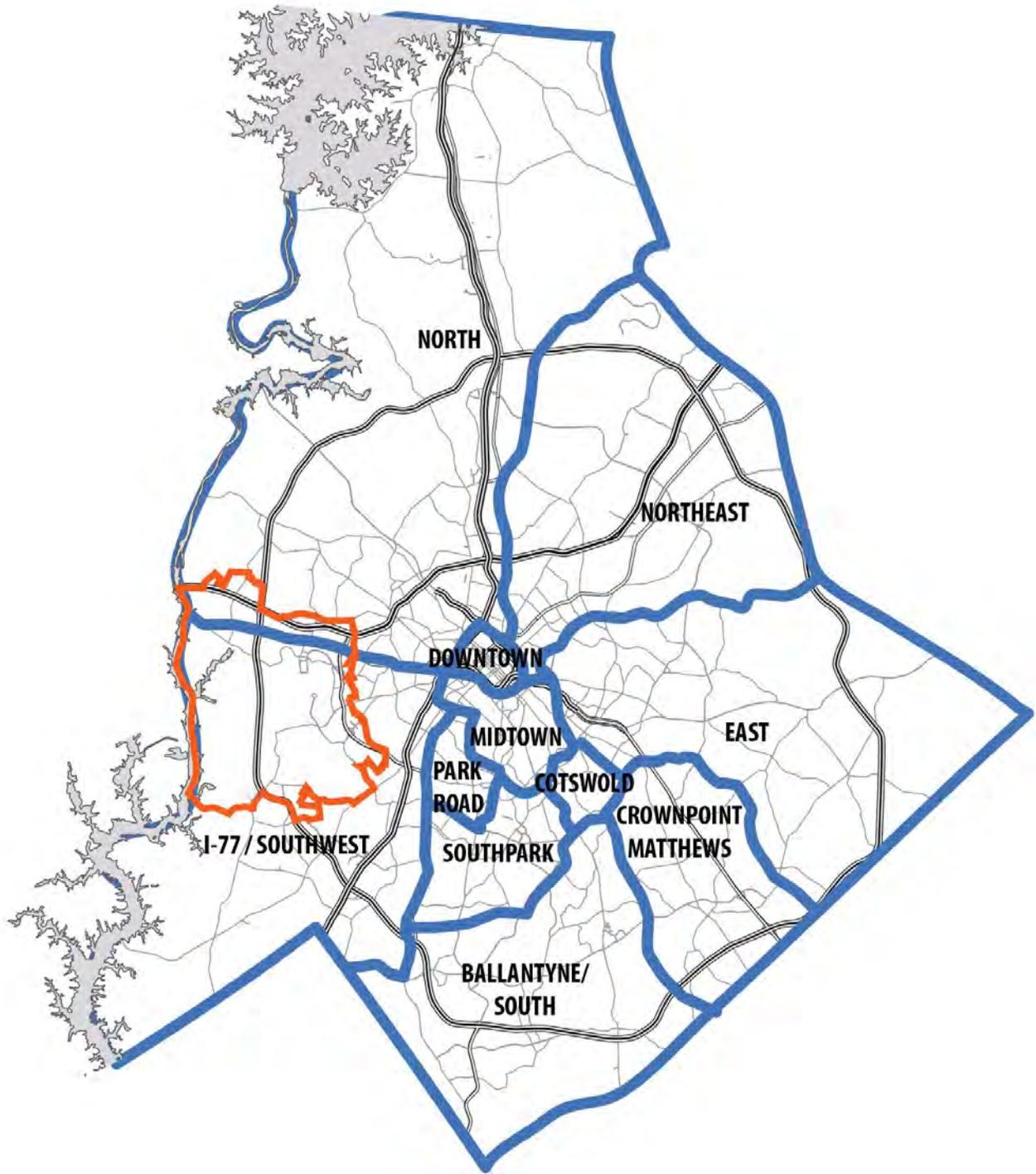


Figure 22: Mecklenburg County Office Submarkets (Karnes Research)

### CLT Area Office Overview

Comparing Karnes and Mecklenburg County Tax Parcel data, the CLT Area's 4.9 million sq. ft. of office inventory represents approximately 63% of the I-77/Southwest office submarket inventory. In 2015, the Charlotte office market is expected to see strong growth, including 1+ million sq. ft. of new office space that has been proposed south of the study area in the Whitehall/Ayrsley market.

Airport office areas have traditionally been driven by regional headquarters whose business function required a high frequency of travel to a wide range of destinations by executives, sales, and service personnel across a broad enough geographic area that it required close proximity to the airport in order to reduce the time and expense of traveling from office to airport and reducing the risk of delays due to traffic or weather. Office demand has experienced major changes in the past decades with rapidly advancing communication and information technologies, and was stunted by the economic downturn of 2009.

Office markets located in West Charlotte have been concentrated within the I-77 corridor. As South Charlotte continued to grow, smaller and larger office clusters are seen along the I-485 loop the smaller being in Pineville and Matthews and the larger in Ballantyne. These markets compete and have drawn some market share from the Airport subarea.

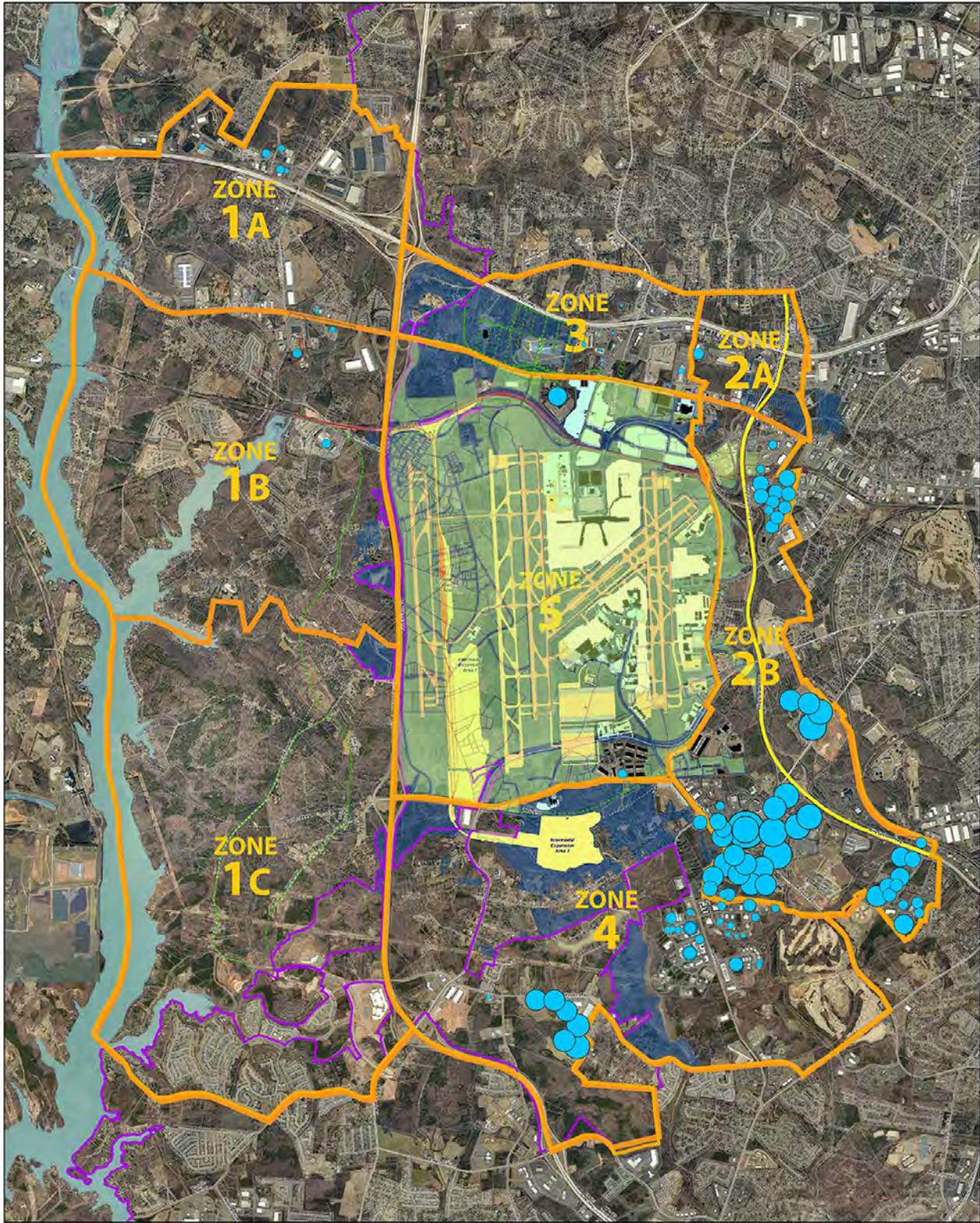
The initial office concentrations in the airport area grew along Billy Graham Parkway, as the area offered easy access regionally via I-85, access to I-77, and CLT as well as locally to executive housing, retail & services in South Charlotte. In 1982, Billy Graham Parkway was a new road that opened up land that had been considered remote and inaccessible with direct access to the airport and the South Park housing stock along Tyvola Road and Fairview Rd.

The completion of the I-485 beltway should have important effects on the CLT Area office market. While the initial office market grew along Billy Graham, which provided access between I-77 South and I-85 South, the beltway provides more complete access to the growing suburban areas surrounding the City of Charlotte.

**Table 17: CLT Area Office Overview**

Area	Heated Area (Sq. Ft.)	% of CLT Area Office	Total Value (\$)	% of CLT Area Office	Avg. Year Built
<b>Zone 1</b>	<b>110,194</b>	<b>2.2%</b>	<b>\$7,792,800</b>	<b>1.6%</b>	<b>1979</b>
Zone 1A	50,407	1.0%	\$4,212,700	0.8%	1977
Zone 1B	59,787	1.2%	\$3,580,100	0.7%	1982
Zone 1C	0	0.0%	0	0.0%	0
<b>Zone 2</b>	<b>4,413,408</b>	<b>89.8%</b>	<b>\$452,034,900</b>	<b>90.9%</b>	<b>1991</b>
Zone 2A	31,900	0.6%	\$2,786,400	0.6%	1960
Zone 2B	4,381,508	89.1%	\$449,248,500	90.3%	1993
<b>Zone 3</b>	<b>26,547</b>	<b>0.5%</b>	<b>\$3,079,200</b>	<b>0.6%</b>	<b>1974</b>
<b>Zone 4</b>	<b>281,373</b>	<b>5.7%</b>	<b>\$26,384,600</b>	<b>5.3%</b>	<b>1986</b>
<b>Zone 5</b>	<b>85,496</b>		<b>\$8,099,400</b>		<b>1988</b>
<b>CLT Area Total - Office</b>	<b>4,917,018</b>	<b>100.0%</b>	<b>\$497,390,900</b>	<b>100.0%</b>	<b>1987</b>
Airport Core - Office	381,940		\$25,090,600		1981

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A  
 Note: Airport Core NOT included in CLT Area Office Total



ADVANCE PLANNING -  
CLT STRATEGIC DEVELOPMENT AREA  
AIRPORT WEST CORRIDOR

CLT STUDY AREA DEVELOPMENT - OFFICE (SQ. FT.)

1,000 5,000 10,000 100,000

Version 1.3 05/13/2015

0 0.2 0.4 0.8 1.2 Miles

Figure 23: CLT Area Development - Office

## Industrial – Warehouse/Flex

### Key Findings – Industrial (Warehouse/Flex)

- CLT Area is located in largest & top performing County industrial submarket, with proximity to, established industrial areas, major transportation assets with local, regional, and global draw.
  - County data shows CLT Area land uses primarily industrial, with over 10 million sq. ft. of industrial inventory, or 30% of CLT Area total sq. ft.
- Market drivers for continued growth in the Charlotte industrial market include growing population, increasing relocation of manufacturing to the Southeast, and the NS intermodal yard forming a unique growth node in the Southeast logistics network.
- Industrial building types continue to evolve in both height and size as technology, market conditions, and demand impact their design: i.e. parking lot size, height of building and overall building size are among the industrial product attributes that have changed in under a decade.
- Warehouse/distribution still in high demand, but manufacturing has yet to fully rebound as the majority of vacant manufacturing space is functionally obsolete and stays on the market. Development continues to gain momentum, over 2 million square feet of speculative projects underway.

### Charlotte Industrial Market Overview

Karnes tracks and covers all multi-tenant industrial and flex buildings over 15,000 square feet in Mecklenburg County. Karnes recorded a total industrial inventory of 43 million square feet at the end of 2014. CBRE MarketView data covers all industrial and flex buildings over 10,000 square feet in Mecklenburg, York, Cabarrus, and Iredell counties and reported a total inventory of 156.5 million square feet.

Karnes Research divides Mecklenburg County Industrial market into 8 submarkets: Central, East, North, Northeast, Northwest, Southeast, Southwest, and CrownPoint/Matthews. The CLT Area is positioned primarily within the Southwest submarket, with some overlap in the Northwest.

Charlotte's industrial activity is located primarily in the western half of the Charlotte-Mecklenburg area. The greatest concentration of industrial activity is located either in or bordering the CLT Area. Warehouse space represented the majority of Charlotte's industrial inventory, 79.9%, according to Karnes end of year 2014 data.

**Table 18: Mecklenburg County Industrial Market Overview, YE 2014**

Submarkets	Total Industrial Market (Sq. Ft.)	% of Total	Vacancy (%)	Avg. Rent (\$/Sq. Ft.)	Under Construction, YE 2014
1 - Central	4,129,537	9.6%	7.3	7.48	0
8 - CrownPoint/Matthews	1,238,960	2.9%	8.75	7.23	0
2 - East*	299,534	0.7%	19	11.64	0
6 - North	7,995,257	18.5%	5.7	7.33	415,541
7 - Northeast	1,218,557	2.8%	20.65	6.56	0
5 - Northwest	5,627,277	13.0%	13.45	5.51	205,081
3 - Southeast*	168,119	0.4%	8.9	12.58	0
4 - Southwest	22,488,991	52.1%	6.4	6.31	320,960
County Total	43,166,232	100%	10.35	6.60	425,541

Source: Karnes Research, Kimley-Horn, MG&A

\*East and Southeast Flex space only, leading to higher rent/sq. ft. rate as County Flex averages \$8.84, Warehouse \$4.35.

The Southwest submarket represented 47% of total warehouse inventory and 72% of total flex inventory at the end of 2014. The Northwest submarket comprised 16% of total warehouse inventory and 13% of total flex inventory at the end of 2014. Together, the Southwest and Northwest represent 65% of flex and warehouse inventory in the County.

From 2005 to 2008, County warehouse space completions averaged 792,627 sq. ft. per year, the majority of which were located in either the Southwest or Northwest submarket. After 2008, the pace of construction dropped abruptly: warehouse completions fell significantly, adding only 766,015 sq. ft. between 2009 and 2014 while flex space has added only 129,718 sq. ft. of new product to the market since 2009. As Charlotte is no longer in recovery from the recession, the warehouse market is predicted to experience strong growth moving into 2015. At the end of 2014, 931,582 sq. ft. of industrial space was under construction, 33% in the Southwest and 22% in the Northwest.

Warehouse vacancy has continued to fall for five consecutive years ending at 5.9%, this could be a result of fewer completions since 2009 but also indicates that the warehouse market has recovered steadily, even surpassing pre-recession occupancy. The County average for flex vacancy dropped 3.6 percentage points from 2013 to 2014, falling from 18.4% to 14.8%, the lowest average vacancy rate in 10 year. Flex space in the Southwest market posted vacancy well below the County at the end of 2014, ending with 6.4% vacancy, while the Northwest ended 2014 above the average, 21.5%. Average rent for County warehouse reached pre-recession rates by the end of 2014.

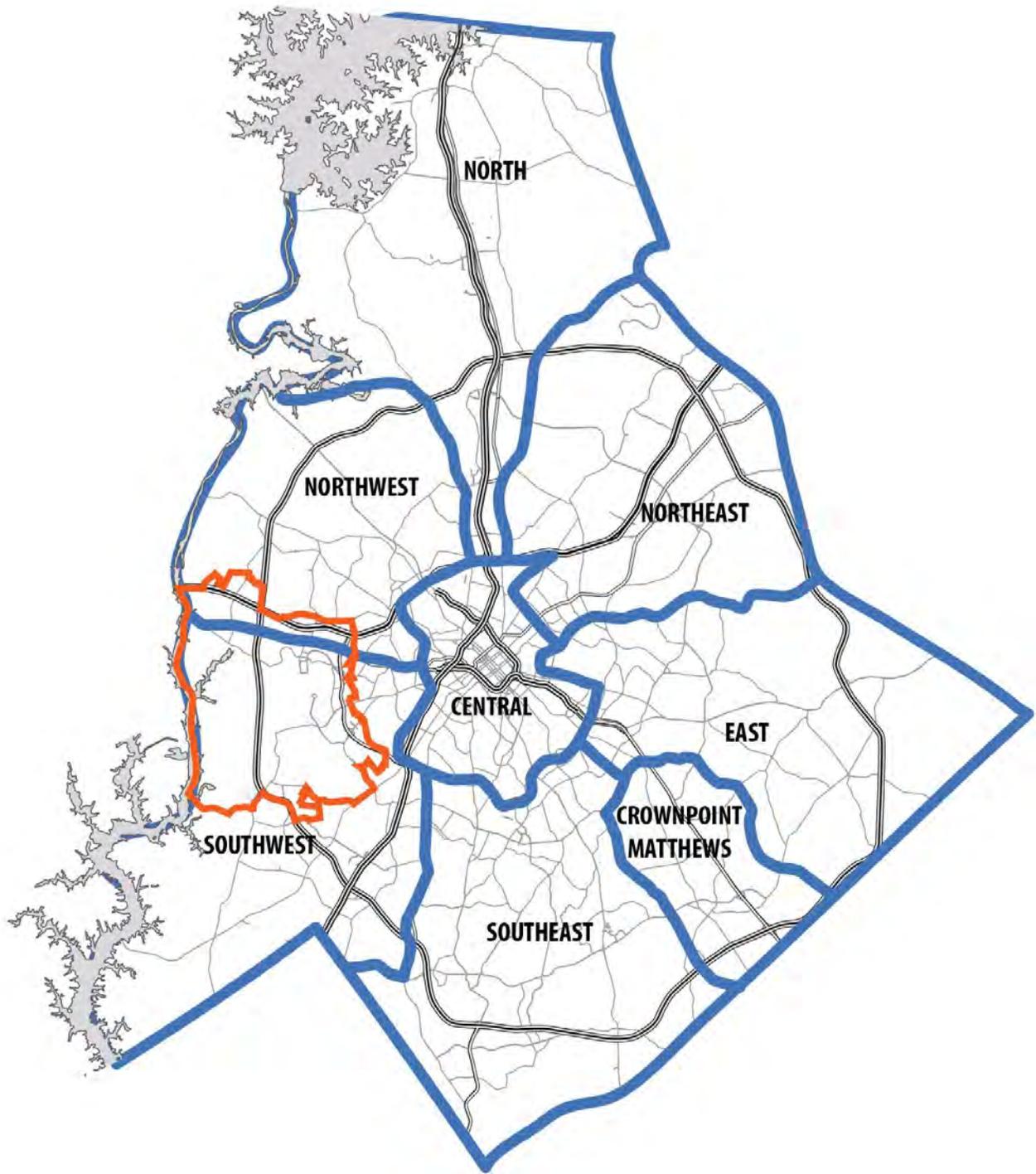


Figure 24: Mecklenburg County Industrial Submarkets (Karnes Research)

## CLT Area Industrial Overview

The CLT Area represents 10.2 million sq. ft. of the 28.1 million sq. ft. of industrial space, as tracked by Karnes, contained in their Southwest and Northwest submarkets, or the 34.5 million sq. ft. contained in the CBRE Northwest submarket. Comparing Karnes and Mecklenburg County data sources, the CLT Area represents approximately 36% of the Northwest and Southwest industrial markets.

Completion of the I-485 Outerbelt and the NS Intermodal Yard should increase industrial activity in the CLT Area although the difficult topography and regulatory hurdles in the area west of CLT will be barriers to future development due to increasing costs above current market levels.

Industrial activity is concentrated in Zone 1, primarily in Zone 1A, which represents 32% of CLT Area industrial with some spillover in to Zone 1B. Zone 4 contains the second largest industrial concentration, located south of the airport on Beam Rd. Industrial directly adjacent to CLT is located in Zones 2, 4, and 5.

Charlotte's initial industrial concentration emerged along South Blvd and Graham St, and the parallel rail line. With the construction of the interstates and greater reliance on trucking, the industrial concentrations began to migrate out along I-77 South and I-85 during the late-1960's and into the 1980's with a large concentration south of the airport at Arrowood and Westinghouse Blvd. These markets had the advantage of an interstate access and an active Norfolk Southern spur in close proximity to their main line connecting Atlanta to the Northeast on the North edge of the airport.

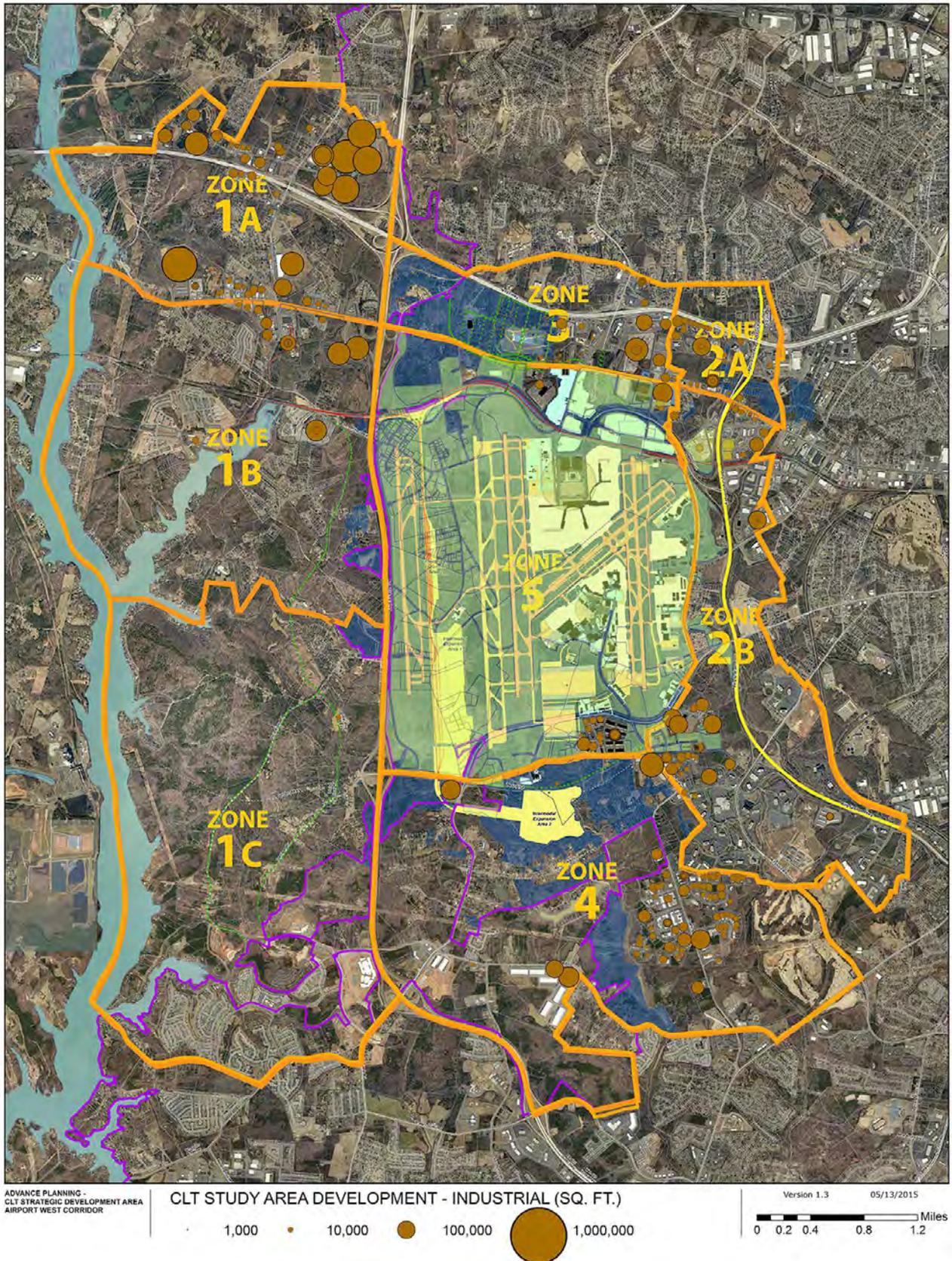
Many industrial facilities have located to be in close proximity to CLT, primarily northwest (Zone 1A), south and southeast (Zone 4, and 2B) of the airport. Within the Southwest submarket, the greatest concentrations of industrial are located in Westinghouse/Arrowood and along I-77 South.

**Table 19: CLT Area Industrial Overview**

Zone	Heated Area (Sq. Ft.)	% of CLT Area	Total Value (\$)	% of CLT Area	Avg. Year Built
<b>Zone 1</b>	<b>4,037,757</b>	<b>39.5%</b>	<b>\$148,209,600</b>	<b>33.5%</b>	<b>1986</b>
Zone 1A	3,237,785	31.7%	\$115,711,100	26.1%	1987
Zone 1B	788,736	7.7%	\$32,237,400	7.3%	1984
Zone 1C	11,236	0.1%	\$261,100	0.1%	1982
<b>Zone 2</b>	<b>2,055,690</b>	<b>20.1%</b>	<b>\$97,943,900</b>	<b>22.1%</b>	<b>1983</b>
Zone 2A	507,141	5.0%	\$20,902,300	4.7%	1976
Zone 2B	1,548,549	15.1%	\$77,041,600	17.4%	1987
<b>Zone 3</b>	<b>589,383</b>	<b>5.8%</b>	<b>\$28,649,800</b>	<b>6.5%</b>	<b>1979</b>
<b>Zone 4</b>	<b>2,854,179</b>	<b>27.9%</b>	<b>\$137,282,800</b>	<b>31.0%</b>	<b>1995</b>
<b>Zone 5</b>	<b>692,132</b>	<b>6.8%</b>	<b>\$30,844,900</b>	<b>7.0%</b>	<b>1991</b>
<b>CLT Area Total</b>	<b>10,229,141</b>	<b>100%</b>	<b>\$442,931,000</b>	<b>100%</b>	<b>1987</b>
<b>Core Airport</b>	<b>3,548,141</b>	--	<b>\$204,452,300</b>	--	<b>1989</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

Note: Airport Core NOT included in CLT Area Industrial Total



**Figure 25: CLT Area Development - Industrial**  
Michael Gallis & Associates

## Retail

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### Key Findings - Retail

- Airports are typically not retail markets other than the terminal as they do not attract a high demographic residential market due to the negative influences of the airport itself, including noise and air pollution, and the industrial markets that cluster in the area. The only retail is typically convenience retail that serves the office and industrial markets.
- CLT Area located in the Southwest retail market outperformed the top three largest submarkets (Outer Southeast, East, and Inner Southeast) over the five year period from 2010 to 2014. The Southwest submarket vacancy rate decreased from 8.8% to 5.9% while the average rent rate grew by 8.4% from \$22.42 to \$24.31. The Southwest submarket has seen the highest and most consistent growth in rent rate of all submarkets since 2010.
- The strength of the Southwest submarket as reflected in vacancy rate reduction and rent rate growth indicates that this market is gaining strength in the recovery period.
- Retail in the CLT Area is lacking despite recent investments in the 395,000+ sq. ft. Charlotte Premium Outlets. The Outlet location in the study area is a result of the location's 12-county draw, in close proximity to I-485 with access to I-85 and I-77. The current retail market serves the Berewick residential development, as well as the southern markets located in the Whitehall/Ayrsley neighborhood and the Westinghouse Market.
  - Growing residential development and improving demographics in the CLT Area will act to strengthen the retail market
  - Limited retail especially in Airport/West Corridor (Zone 1)
  - Concentrated near hotel clusters in Zone 2A and Zone 3
  - Scattered along arterials, for example, retail in CLT Area follows historic arterials rather than meeting current demand, i.e. cluster along Wilkinson Blvd. despite the lack of new development activity in the corridor.

### Charlotte Retail Market Overview

At the end of 2014, Karnes recorded 34 million sq. ft. of retail inventory in Mecklenburg County. Karnes Research divides Charlotte into eight distinctive retail submarkets: Downtown, East, Inner Southeast, Outer Southeast, North, Northeast, Northwest, and Southwest. The CLT Area overlays the Southwest and Northwest Karnes retail submarkets.

The largest retail developments in Charlotte are found primarily in southeastern Mecklenburg County due to its high demographic profile and established high end suburban developments. Within the southeast, retail is concentrated in the Inner, including SouthPark, and Outer Southeast, including Ballantyne and Pineville. The other large retail submarket is the East submarket that centers on Matthews. Together, the East, Inner and Outer Southeastern submarkets account for over half, or 57%, of all retail inventory in the Charlotte market.

The Outer Southeast, the largest retail market by sq. ft. of inventory, had the county's lowest vacancy rate and second highest average rent. The Southwest submarket is directly adjacent to the Outer Southeast, connected with local and regional access by I-485. The Inner Southeast has connectivity to the Southwest market via West Blvd, Tryon Street, Woodlawn Rd, and Fairview Rd. Despite being the second largest retail submarket, the East has experienced negative growth in average rent rate and increases in vacancy since 2010. Karnes Research does not include Cabarrus County and therefore the Kings Grant/Mills outlet mall is not included in their statistics. However, this area represents one of the largest retail concentrations in the Charlotte metro area.

Before 2009, Charlotte's retail market added over a million in sq. ft. per year delivering 6.77 million sq. ft. from 2005-2008. From 2005-2008, the Southwest and Northwest submarkets accounted for 43.5% of county retail deliveries, adding 2.95 million sq. ft. of new retail to the market. In 2005 alone, the Southwest and Northwest submarkets combined accounted for 65% of

the county retail inventory delivered. Retail growth slowed significantly during the recession, the Southwest and Northwest market added no new inventory from 2011-2013. From 2009 to the end of 2014 the county delivered only 1.94 million new retail square feet. In 2014, Charlotte added 661,611 new sq. ft., of retail space; 81.5% of 2014 deliveries were located in the Southwest market, including the completion of the Charlotte Premium Outlets.

**Table 20: Mecklenburg County Retail Overview, YE 2014**

Submarket	Inventory - End of 2014		U/C - End of 2014		Vacancy (%)	Avg. Rent (\$/Sq. Ft.)
	Sq. Ft.	% of Total	Sq. Ft.	% of Total		
1 - Downtown	913,463	2.7%	-	0.0%	11.1	31.65
5 - Southwest	2,274,456	6.6%	-	0.0%	5.9	24.31
7 - North	2,533,315	7.4%	58,423	9.8%	5.4	22.04
6 - Northwest	3,784,960	11.0%	392,996	65.6%	10.4	16.95
8 - Northeast	4,989,637	14.5%	6,000	1.0%	15.4	17.93
3 - Inner Southeast	6,041,596	17.6%	71,050	11.9%	6.8	23.82
2 - East	6,242,351	18.2%	70,600	11.8%	14.1	16.65
4 - Outer Southeast	7,551,585	22.0%	-	0.0%	5.2	26.07
Mecklenburg County	34,331,363	100.0%	599,069	100.0%	9.4	21.51

Source: Karnes Research, Kimley-Horn, MG&A

The Southwest retail submarket is the second smallest submarket by inventory with 2.27 million sq. ft. of retail product, including the new Charlotte Premium Outlets. The Northwest market ranks fifth of the eight submarkets for existing inventory. At the end of 2014, the Northwest market had the largest supply of retail sq. ft. under construction. Analysis of retail inventory in the Northwest market indicated higher concentrations of retail space outside the study area along I-85, I-485/Brookshire Blvd., and I-77, including Northlake Mall.

The Southwest market has the third highest rent rate, posting an average rate of \$24.31 per sq. ft. 2014, above the county average by +\$2.80, growing over 2.5% from 2013. The Southwest market outperformed the second and third largest submarkets, East and Inner Southeast respectively, in average rent at the end of 2014. From 2005 to 2008, the Southwest market was the only submarket to increase average rent for five consecutive years.

The Southwest market vacancy rate has improved at a faster rate than the three largest retail submarkets in the county, indicating a shift in demand for retail space in submarkets outside the southeastern areas of the county. The Southwest market experienced the greatest improvement in vacancy from 2013 to 2014, dropping 2.1 percentage points.

Despite significant completions prior to 2009, the Northwest retail market has lagged behind the Southwest market in performance measures with a higher historical vacancy rate and a lower average rent rate. During the recession the Northwest market has remained afloat, still experiencing positive change for annual vacancy and rent rate. The Northwest market had 392,000 square feet under construction at the end of 2014, which could provide a boost in rent rate to the submarket in coming quarters. Though the Southwest had no retail under construction at the end of 2014, the area is expected to grow with the addition of retail in Berewick Town Center. As the retail market continues to adapt to post-recession trends, the Southwest submarket is emerging as a fast growing area likely to see increased investments.

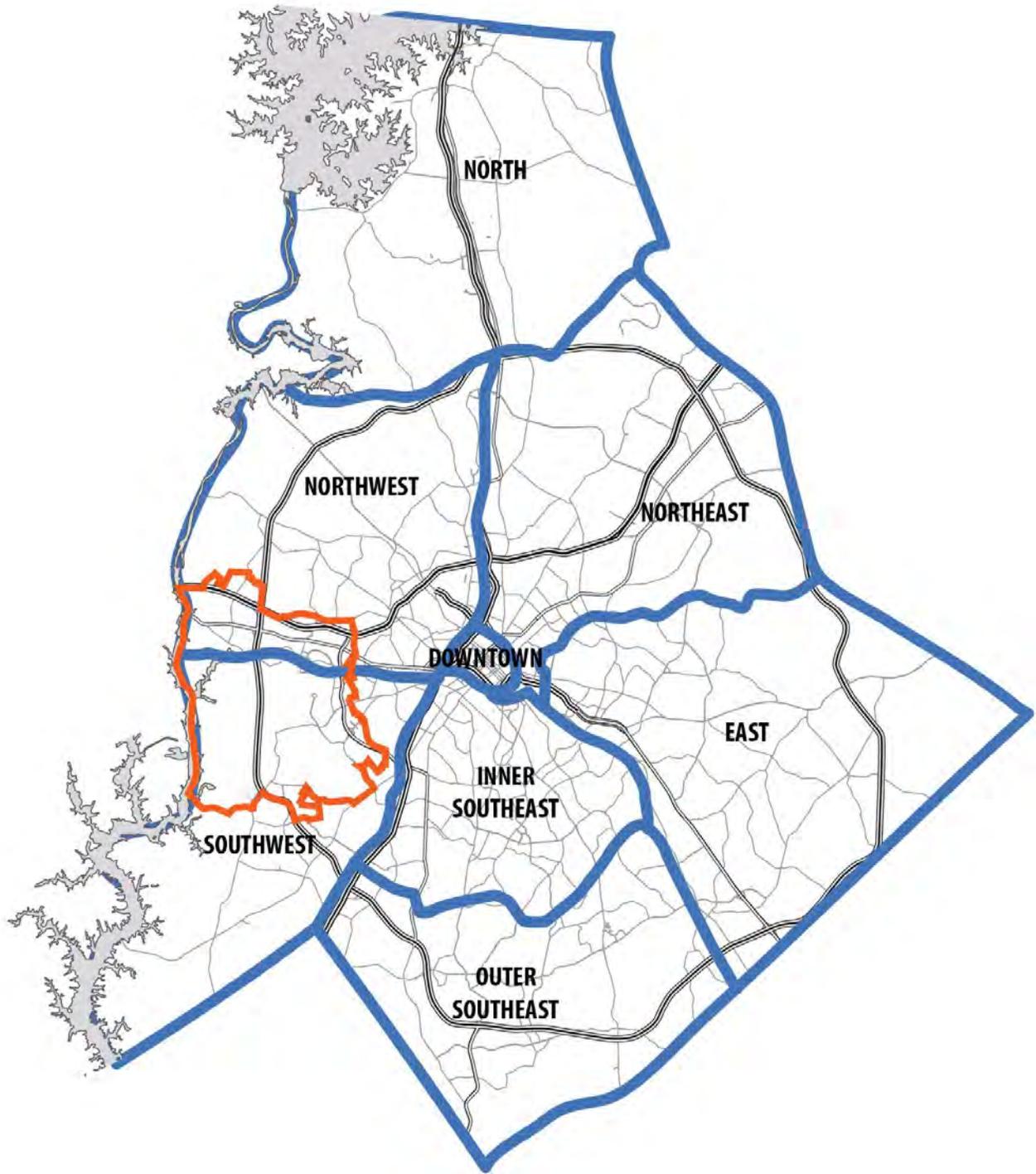


Figure 26: Mecklenburg County Retail Submarkets (Karnes Research)

### CLT Area Retail Overview

The CLT Area's retail market represents less than 900,000 sq. ft. of County retail space. Comparison of Mecklenburg County Tax Parcel data to Karnes Research indicates that retail in the CLT Area represents only 15% of retail in both the Southwest and Northwest Submarkets.

Convenience retail makes up the majority of retail in the CLT Area, primarily located along major arterials, serving I-85 as well as the airport entrance. The Charlotte Premium Outlets, located in Zone 1C added over 350,000 sq. ft. of consumer retail to the CLT Area upon completion in 2014. Despite Zone 2 having the largest concentration of commercial office market space, the zone represents 21% of total retail. As a result, the Billy Graham Corridor has been overlooked as businesses now value access to amenities and services for employees when searching for office space in the Charlotte region.

The completion of the I-485 Outerbelt, the continued growth of employments at CLT, the amount of undeveloped land surrounding the airport and the potential for fixed guideway transit should have positive effects on the growth of residential and improved demographic profile for the CLT Area. This should in turn strengthen the retail market.

Retail in the airport area, until most recently, has been primarily convenience retail to serve the daytime population of employees working in the primarily and later office developments in the area. Only recently has a major new shopping center, the Charlotte Premium Outlets within the strategic development area and retail along Westinghouse Blvd. outside the study area, moved into the area along the southern portion of the I-485 beltway.

The retail market within CLT has remained strong, though retail within the airport is not considered or measured the same as retail located within metropolitan submarkets. As the major air hub for the area, CLT's growing airport retail attracts the 40+ million passengers that fly through the hub per year.

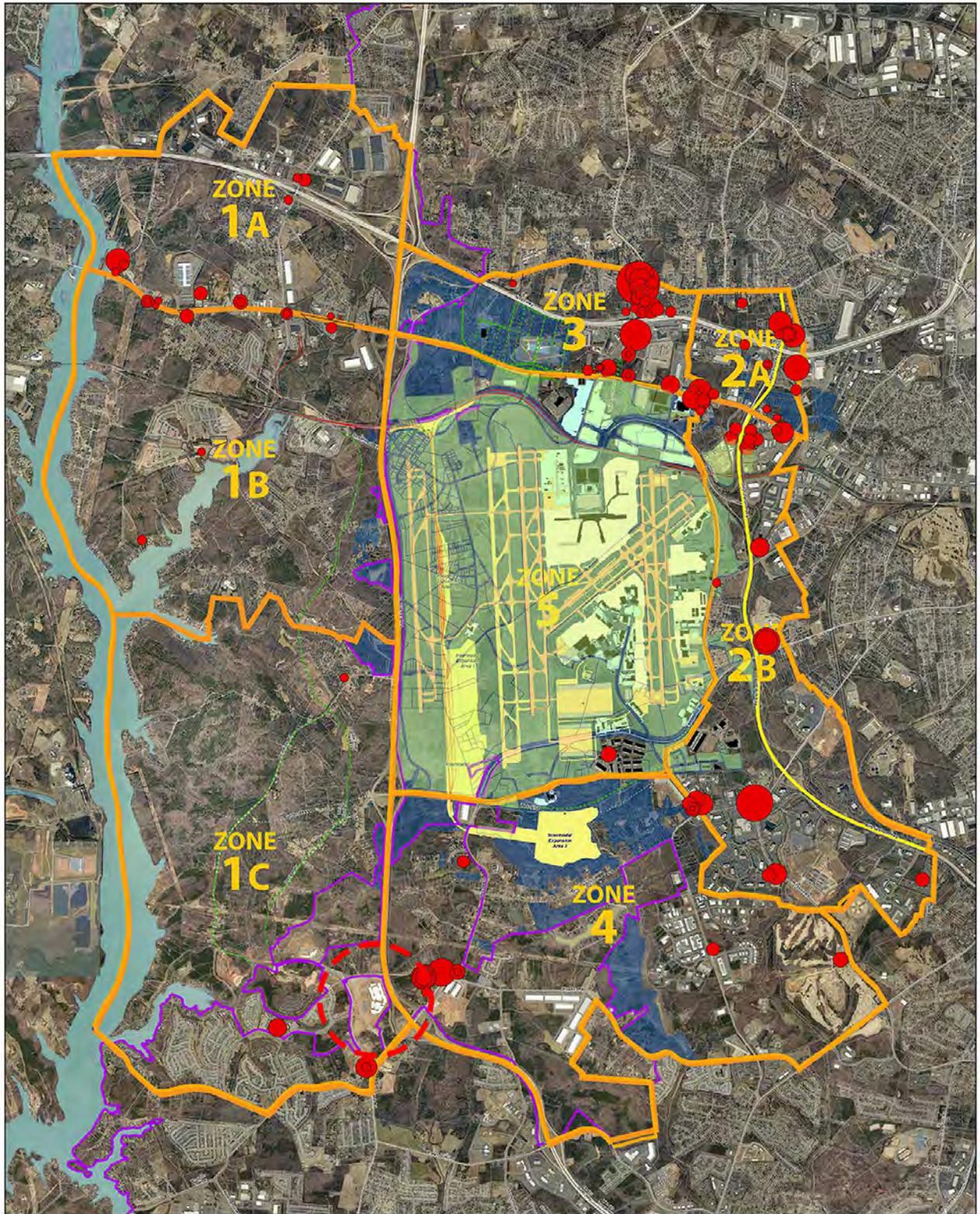
**Table 21: CLT Area Retail Overview**

Zone	Heated Area (Sq. Ft.)	% of CLT Area	Total Value (\$)	% of CLT Area	Avg. Year Built
<b>Zone 1</b>	<b>461,105</b>	<b>52.4%</b>	<b>\$101,877,000</b>	<b>60.6%</b>	<b>1968</b>
Zone 1A	30,223	3.4%	\$1,915,100	1.1%	1967
Zone 1B	16,917	1.9%	\$2,685,500	1.6%	1969
Zone 1C	413,965*	47.0%	\$97,276,400*	57.8%	1971
<b>Zone 2</b>	<b>183,821</b>	<b>20.9%</b>	<b>\$36,585,100</b>	<b>21.8%</b>	<b>1983</b>
Zone 2A	63,972	7.3%	\$14,171,100	8.4%	1978
Zone 2B	119,849	13.6%	\$22,414,000	13.3%	1986
<b>Zone 3</b>	<b>153,382</b>	<b>17.4%</b>	<b>\$14,674,200</b>	<b>8.7%</b>	<b>1976</b>
<b>Zone 4</b>	<b>68,237</b>	<b>7.8%</b>	<b>\$14,264,800</b>	<b>8.5%</b>	<b>1991</b>
<b>Zone 5</b>	<b>13,354</b>	<b>1.5%</b>	<b>\$778,800</b>	<b>0.5%</b>	<b>1980</b>
<b>CLT Area Total</b>	<b>879,899</b>	<b>100%</b>	<b>\$168,179,900</b>	<b>100%</b>	<b>1978</b>
<b>Core Airport</b>	<b>87,068</b>		<b>\$5,265,100</b>		<b>1974</b>

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A

Note: Airport Core NOT included in CLT Area Retail Total

\*Zone 1C totals include manual add-in for sq. ft. and total tax value for the new Charlotte Premium Outlets, and is therefore not reflected in the Avg. Year Built.



ADVANCE PLANNING -  
CLT STRATEGIC DEVELOPMENT AREA  
AIRPORT WEST CORRIDOR

CLT STUDY AREA DEVELOPMENT - RETAIL (SQ. FT.)

• 100 • 1,000



100,000

Version 1.4 08/13/2015

0 0.2 0.4 0.8 1.2 Miles

**Figure 27: CLT Area Development – Retail**

*Note: A red dashed symbol has been added for Charlotte Premium Outlets, which was not included in the available Mecklenburg County Tax Parcel Data at time of analysis. The symbol is shown on this map for locational purposes only and is not to scale, though at over 400,000 sq. ft., the Charlotte Premium Outlets are the largest retail development in CLT Area.*

## Hotel/Lodging

### Key Findings - Hotel

- According to Mecklenburg County Tax Parcel data there are 3,181 hotel rooms in CLT study area; when compared to CRVA data, the CLT Area represents 40% of CRVA Airport hotel market.
- The CRVA Airport submarket was hit hardest during recession with a 15% drop in occupancy from 2010-2011 and a 46% drop in Average Daily Rate (ADR) in the same time frame. Since 2012, the Airport submarket has experienced strong growth in demand, second only to the North Mecklenburg submarket.
- Study Area hotel concentrated along the intersection of major regional, local arterials & in proximity to CLT passenger access points.

### Charlotte Hotel Market Overview

Data compiled by the Charlotte Regional Visitors Authority (CVRA) indicate that, in 2014, the hospitality industry remained strong, setting new hotel performance records that beat the City's best performance statistics in 2007. CVRA divides Mecklenburg County into 5 submarkets, categorizing the areas where CRVA conducts the majority of business: Uptown, Airport, North Mecklenburg, South Charlotte, and the University Area. The 5 submarkets make up the majority of the county's hotel inventory, or 83% of the County's room supply. According to CRVA, the remaining percentage of hotel supply would primarily be located in the south east corridor of Mecklenburg County.

Mecklenburg County has 24,881 hotel rooms, the majority of which are represented in the five CRVA submarkets. From 2012 to 2014, the County has seen an average growth in demand of 5.7% per year. However the change in hotel supply has only grown 1.2% per year in the amount of time. Demand in the Airport submarket has grown an average of 6.2% from 2012-2014, with no change in supply in the same time period.

Despite a drop in occupancy for two consecutive years, 2009 and 2010, County occupancy has improved steadily from 2011 to 2014, ending 2014 with a historically high occupancy rate of 70.6%. Occupancy in the Airport market remained on par with the County average from 2011 to 2014, ending 2014 higher than the County at 71.3% occupancy.

Average daily rates (ADR) for the County have experienced steady growth since 2011, growing an average of 4.6% per year. The Airport market has historically posted the lowest ADR of all hotel markets in the County. Uptown and South Charlotte demand the highest daily rates as they are located in high-demand, or highly sought after locations, in proximity to Center City, the largest office market, and major conventions, sporting events, concerts, and festivals as well as office and shopping destinations in SouthPark.

**Table 22: Mecklenburg County Hotel Overview, YE 2014**

Submarket, 2014	Occupancy (%)	Avg. Daily Rate (\$)	Current Properties	% of County	Current Rooms	% of County
South Charlotte	73	126.77	25	11.16%	3,166	12.72%
North Meck	61.9	87.14	19	8.48%	1,600	6.43%
Airport	71.3	77.31	65	29.02%	7,974	32.05%
University	69.4	80.11	27	12.05%	3,256	13.09%
Uptown	71	157.97	18	8.04%	4,571	18.37%
Submarkets Total	69.32	105.86	154	68.75%	20,567	82.66%
Mecklenburg County Total	70.6	98.06	224	100.00%	24,881	100.00%

Source: Charlotte Regional Visitors Authority, MG&A

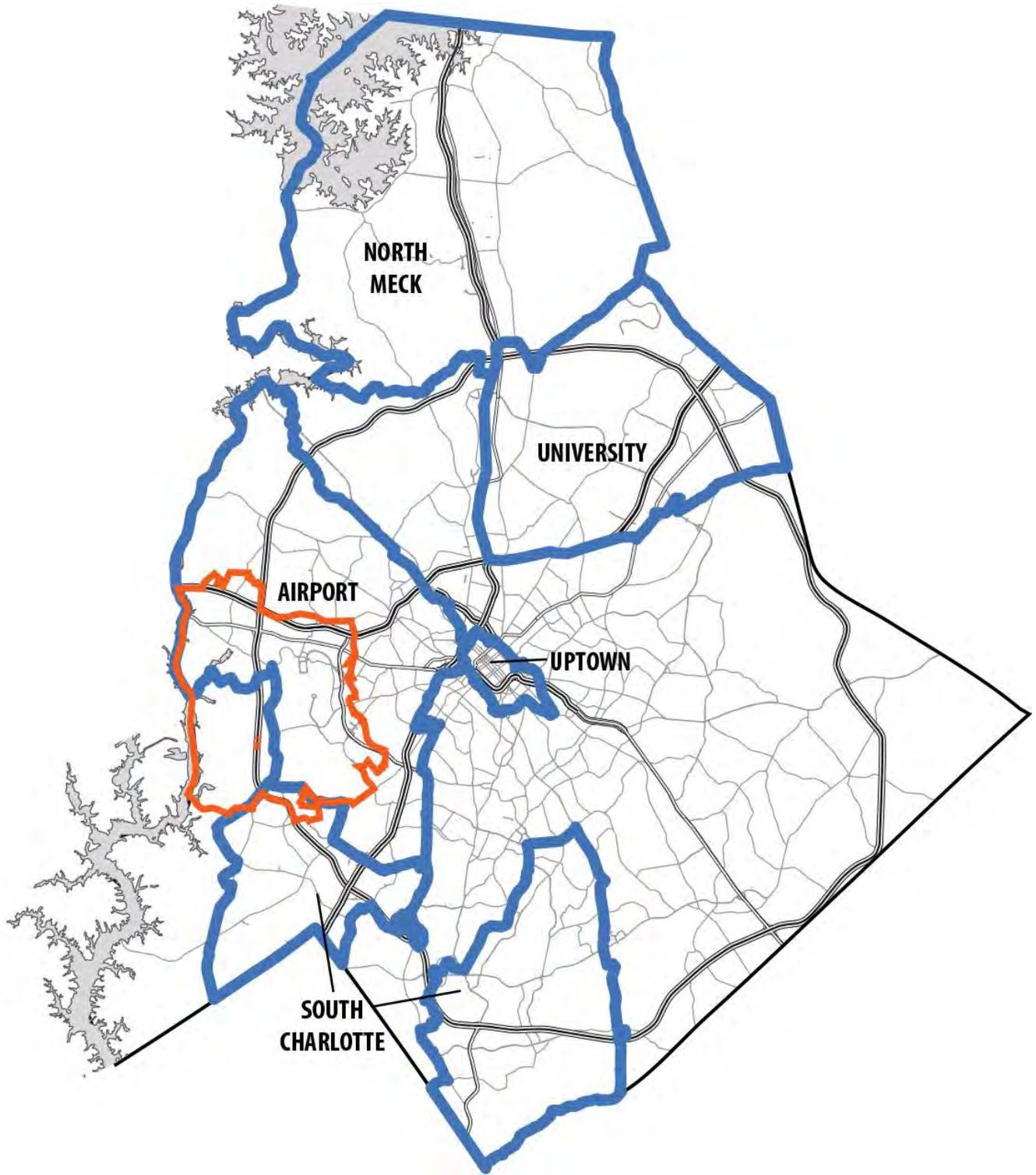


Figure 28: Mecklenburg County Hotel Submarkets (CRVA)

### CLT Area Hotel Overview

Comparing the Mecklenburg Tax Parcel Data to CRVA data, the CLT Area hotel market was found to represent 3,181 rooms, almost half of the rooms, 7,974 rooms, as tracked by CRVA in the Airport submarket.

As the office market in the CLT Area has stalled, it has affected the growth of the hotel market. The growth in the office market has taken place in Ballantyne and recent announcements indicate that SouthPark and Downtown will gain additional office space thereby attracting additional hotel to those areas.

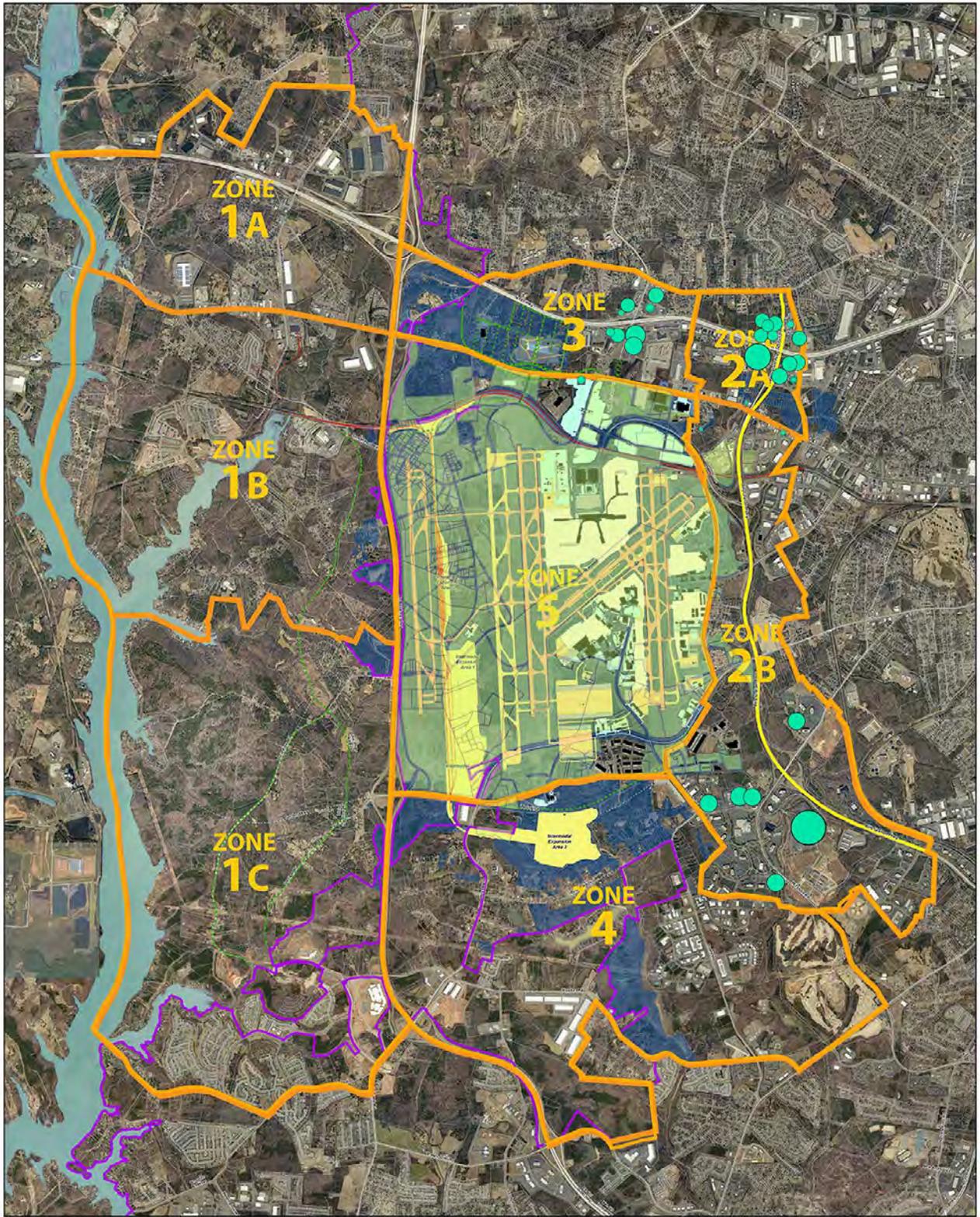
The hotel market has largely been a function of visitors wanting to stay near the airport for convenience to the associated office market or late and early arrivals that want to remain in close proximity of the airport for convenience of entrance and exit from the city. The convenience of the airport market is somewhat diminished by its close proximity to the other large hotel concentrations: the downtown market, the South Park market, and the growing Ballantyne market via the I-485 outer belt, although traffic issues will continue to affect reliable access from the Airport market.

The majority, or 70.7%, of CLT Area hotel rooms are located in Zone 2, of which the 44.8% are located in Zone 2A and 25.9% in Zone 2B. Zone 3, located in direct proximity to the airport entrance, represents 25.4% of CLT Area hotel rooms. The remaining 4% of hotel rooms are located in Zone 5. There are no hotel properties in Zone 1 and 4.

**Table 23: CLT Area Hotel Overview**

Zone	Hotel Rooms	% of CLT Area Rooms	Heated Area (Sq. Ft.)	% of CLT Area Sq. Ft.	Total Value (\$)	% of CLT Area	Avg. Year Built
<b>Zone 1</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>
Zone 1A	0	0.0%	0	0.0%	0	0.0%	0
Zone 1B	0	0.0%	0	0.0%	0	0.0%	0
Zone 1C	0	0.0%	0	0.0%	0	0.0%	0
<b>Zone 2</b>	<b>2,249</b>	<b>70.7%</b>	<b>1,349,336</b>	<b>76.1%</b>	<b>\$120,714,700</b>	<b>80.8%</b>	<b>1985</b>
Zone 2A	1,426	44.8%	672,835	38.0%	\$57,645,100	38.6%	1981
Zone 2B	823	25.9%	676,501	38.2%	\$63,069,600	42.2%	1991
<b>Zone 3</b>	<b>808</b>	<b>25.4%</b>	<b>393,615</b>	<b>22.2%</b>	<b>\$26,640,900</b>	<b>17.8%</b>	<b>1980</b>
<b>Zone 4</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>
<b>Zone 5</b>	<b>124</b>	<b>3.9%</b>	<b>29,984</b>	<b>1.7%</b>	<b>\$2,049,900</b>	<b>1.4%</b>	<b>1990</b>
<b>CLT Area Total</b>	<b>3,181</b>	<b>100%</b>	<b>1,772,935</b>	<b>100%</b>	<b>\$149,405,500</b>	<b>100%</b>	<b>1984</b>
Core Airport	0		0		0		0

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A  
 Note: Airport Core NOT included in CLT Area Hotel Total



ADVANCE PLANNING -  
CLT STRATEGIC DEVELOPMENT AREA  
AIRPORT WEST CORRIDOR

CLT STUDY AREA DEVELOPMENT - HOTEL (SQ. FT.)

• 1,000    • 10,000    • 100,000

Version 1.3    05/13/2015

0 0.2 0.4 0.8 1.2 Miles

Figure 29: CLT Area Development - Hotel

## Residential Real Estate Pattern

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Every metropolitan area has a different mix, proportion, and spatial distribution of residential types. The range and location of dwellings is based on a number of different categories from age, marital status, income, education, ethnicity, gender, and lifestyle preferences. The growth of this market is based on the growth of population and further disaggregated into categories that incorporate a variety of the variables identified above.

Developer and real estate interviews have indicated that schools are the primary driver of quality housing. In addition, accessible shopping areas, parks, and other amenities do play a role. However, schools remain by far the dominant characteristic influencing the pattern of the residential real estate market.

Residential data is classified into:

1. **Single Family Residential:** Data available classified as For-Sale Residential and subcategorized into Detached, Townhouse, and Condo to understand Total Closings & Average Closing Price for New & Resale homes by subcategories. Mecklenburg County data tracks single family residential in five land use categories: Duplex/Triplex, Manufactured Home Single Wide, Manufactured Home Double Wide and Residential.
2. **Multi-Family Residential:** Data available classified as Apartment to understand vacancy rate, average rental rate per square foot, absorption, completions & new construction.

### **Residential Data: Mecklenburg County and City of Charlotte**

There are two private sector data suppliers and one public source used in this report. Real Data is used for Apartment only and MORE data is used for for-sale residential for Mecklenburg County, while the Charlotte-Mecklenburg County Planning Department's (Char-Meck Planning) databases were used as they record the total number of single and multi-family units within the City but not the entire County. As a result, the numbers of units located within the other 6 cities in Mecklenburg County are not recorded by the Char-Meck Planning.

In the multi-family category the Char-Meck Planning does not distinguish between multi-family for-sale and multi-family for rent. However, the Char-Meck Planning does record the total number of single and multi-family units for the City of Charlotte; MORE data records the total closings and closing price for-sale single and multi-family residential, but not total units in Mecklenburg County. Real Data does record the total number of "Apartment" units, multi-family for rent units.

The data from Char-Meck Planning is included as it provides more complete information on single and multi-family residential in the Southwest area. Both data sources are used to describe the status of the residential real estate market in the CLT Area.

### **Mecklenburg County & City of Charlotte Submarkets**

The Char-Meck Planning divides the Charlotte Sphere of Influence into 7 distinct submarkets (See Table 24 and Figure 30) The CLT Area is located primarily within the Southwest Submarket, with minimal overlay in the Northwest submarket. The Northwest overlap is a small fraction of the CLT Area and is therefore not used for comparison.

Real Data, for the purposes of describing the Apartment market, divides the County into 14 submarkets (See Table 27 and Figure 33), while MORE, describing the single and multi-family for sale market, divides the County into 7 submarkets (See Table 25 and Figure 31). Real Data divides the CLT Area almost equally between their Northwest (NW) and Southwest-1 (SW-1) submarkets, while MORE and the Char-Meck Planning primarily place the CLT Area within the Southwest submarket though in slightly different proportions. Correlating data between these markets is required to provide a description of the residential market and its characteristics.

## City of Charlotte

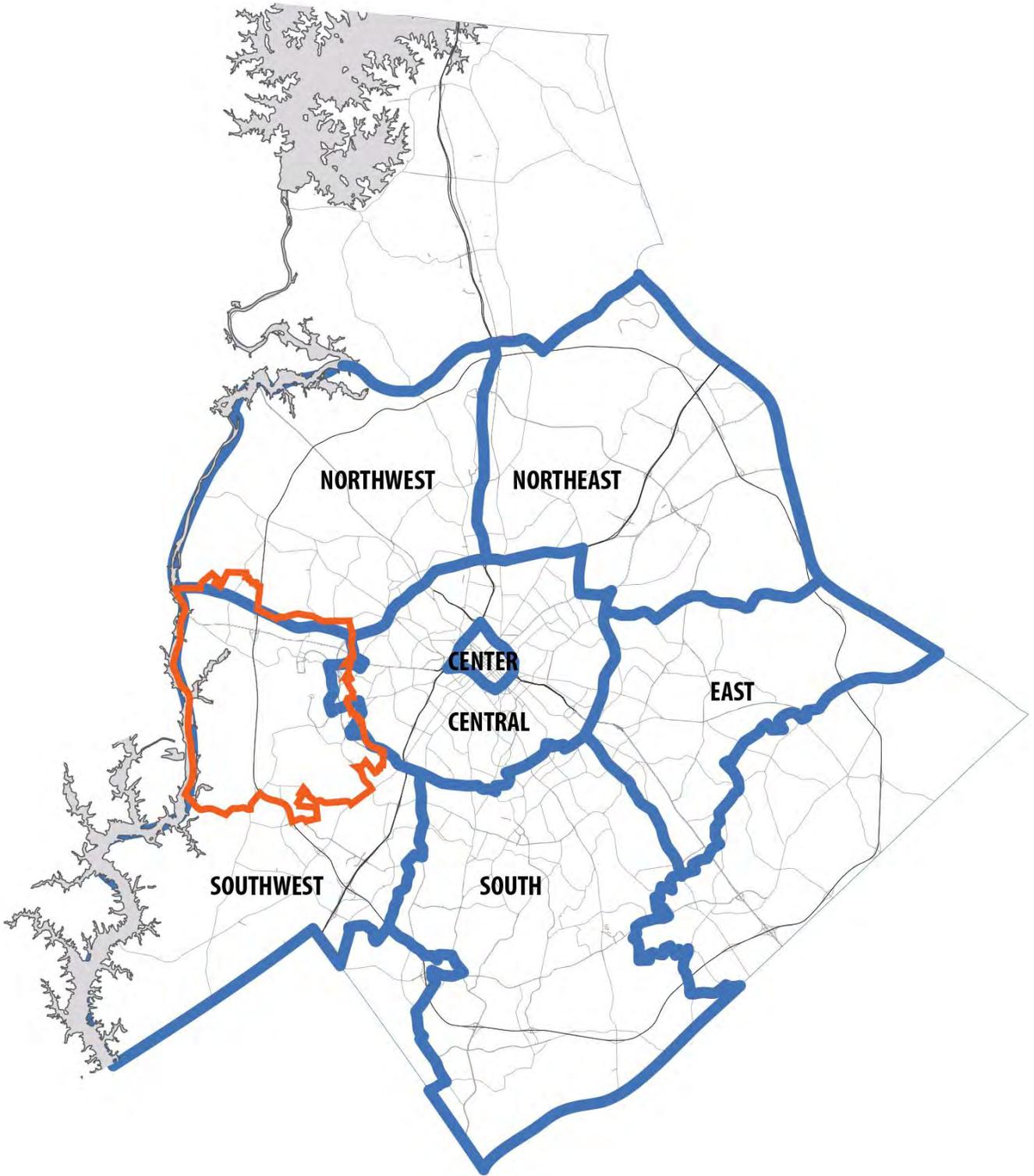
**Table 24: City of Charlotte Existing Residential Units, Dec. 2014**

Submarket	Single Family - SF		Multi-Family - MF		Total SF & MF Units
	Total Units	% SF of Submarket	Total Units	% MF of Submarket	
Northwest	27,607	79.0%	7,318	21.0%	34,925
Southwest	19,442	58.4%	13,821	41.6%	33,263
East	29,561	55.6%	23,578	44.4%	53,139
Northeast	37,292	58.8%	26,129	41.2%	63,421
Central	29,048	49.3%	29,911	50.7%	58,959
Center	198	2.6%	7,326	97.4%	7,524
South	54,755	58.0%	39,708	42.0%	94,463
City of Charlotte	197,903	57.2%	147,791	42.8%	345,694

*Source: Mecklenburg County Tax Parcel Data, City of Charlotte, MG&A*

Each City of Charlotte submarket, as recorded by Char-Meck Planning in Table 19, has a varying mix of single and multi-family units. Generally the majority of submarkets in the City of Charlotte are relatively balanced between single and multi-family, typically with a slightly largest percent of single to multi-family. Only two submarkets show a distinct bias in their mix: the Center submarket being dominated by multi-family with the largest percentage, 97.4%, relative to the percentage of single family, 2.6%, while the Northwest is dominated by single family, with 79% and multi-family is 21%.

The 5 remaining submarkets are relatively balanced, with single family slightly larger than multi-family except Central where the mix is almost equal. The Southwest submarket is balanced with 58.4% single family, and 41.6% multi-family.



**Figure 30: City of Charlotte Existing Residential Submarkets (Char-Meck Planning)**

## Single Family Residential & For-Sale Residential

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### Key Findings – For-Sale/Single Family

- The river provided a draw for developments along the waterfront and larger, remote residential parcels that have often been held by a single family for generations.
- Lack of supply and available land near employment centers, as well as shifting consumer preferences holding back Charlotte’s growth in for-sale residential.
- Mecklenburg County lagging behind South Carolina Counties (York, Lancaster) in for sale residential closings.
  - Jobs and schools, as well as shifting demand for amenities, “walkable” and “livable” environments driving the current for-sale market. Study area is located in Westside, not as attractive of a market for homebuyers. Perception and reality of the schools in the area is holding back residential activity, if there were new or improved schools the area could perform better
- Southwest submarket (Char-Meck Planning) made up 9.8% of total single family in the City of Charlotte.
- Southwest submarket (MORE) registered only 9% of total closings for 2014 in the County, the second lowest among the 7 MORE submarkets behind only the Northwest submarket. The Southwest submarket remains a small residential market, though residential demand is growing, primarily from Zone 1C (Berewick) which utilizes proximity to existing Whitehall/Ayrsley and Westinghouse markets.
- Total closings for Southwest (MORE) grew 8% from 2013 to 2014. Total closings for the Southwest grew 3% from 2013 to 2014 and average closing price which grew 4% from 2013 to 2014.
- Average closing price in Southwest submarket grew 6%, higher than the County average.
- Southwest (MORE) submarket average for-sale residential resale value average is \$233,000, whereas Gaston County in the \$120-200,000s range, indicating that the study area is at risk of seeing residential development shift outside Mecklenburg County as home buyers are willing to locate farther out for price.

### Charlotte For-Sale Residential Market Overview

Single family units account for 57.2% of total residential units in the City of Charlotte, as tracked by Char-Meck Planning (See Table 24). The Southwest submarket represents 9.8% of total single family units in the City of Charlotte. The South submarket has the largest percentage of single family units, with 54,755 units or 27.7% of total single family. The remaining bulk of single family units are relatively evenly split between the Northeast, East, Central and Northwest submarkets. The Northeast submarket has 37,292 single family units, 18.8% of total single family. The East submarket has 29,561 units, 14.9% of the total. Central has 29,048 units, 14.7% of the total. The Northwest has 27,607, 13.9% of the total. The Center (City Center) has only 198 single family units.

MORE divides Mecklenburg County into 7 for-sale residential submarkets. The CLT Area is located primarily within the Southwest submarket, with minimal overlay into the Northwest market. For-sale residential data is collected for single-family detached, townhouse and condominium residential units. Single-Family Detached is defined as free-standing residential structure on an individual lot or parcel. Townhouse is defined as a two- to three-story residential unit with a common wall bordering the adjacent unit; townhouse units are individually platted where the owner of the unit also owns the property it is constructed on. Condominium is defined as a residential dwelling constructed as part of a multi-unit complex; while each condominium unit is owned separately, the property and common spaces are shared by all the units in the complex.

In the County, developers are bringing new townhome units to market at a much greater

rate than condos. Larger developments have been overlooked as small infill projects have proven to be more successful in the recent years.

**Table 25: Mecklenburg County For-Sale Residential Overview, YE 2014**

Submarket	Total Closings (new & resale)	Avg. Closing Price (\$)
Northwest	1,378	155,446
Southwest	1,587	223,570
Southeast	1,817	166,736
Northeast	2,423	168,264
Central	2,588	351,987
North	2,756	320,612
South	5,307	329,641
Mecklenburg County	17,882	258,824

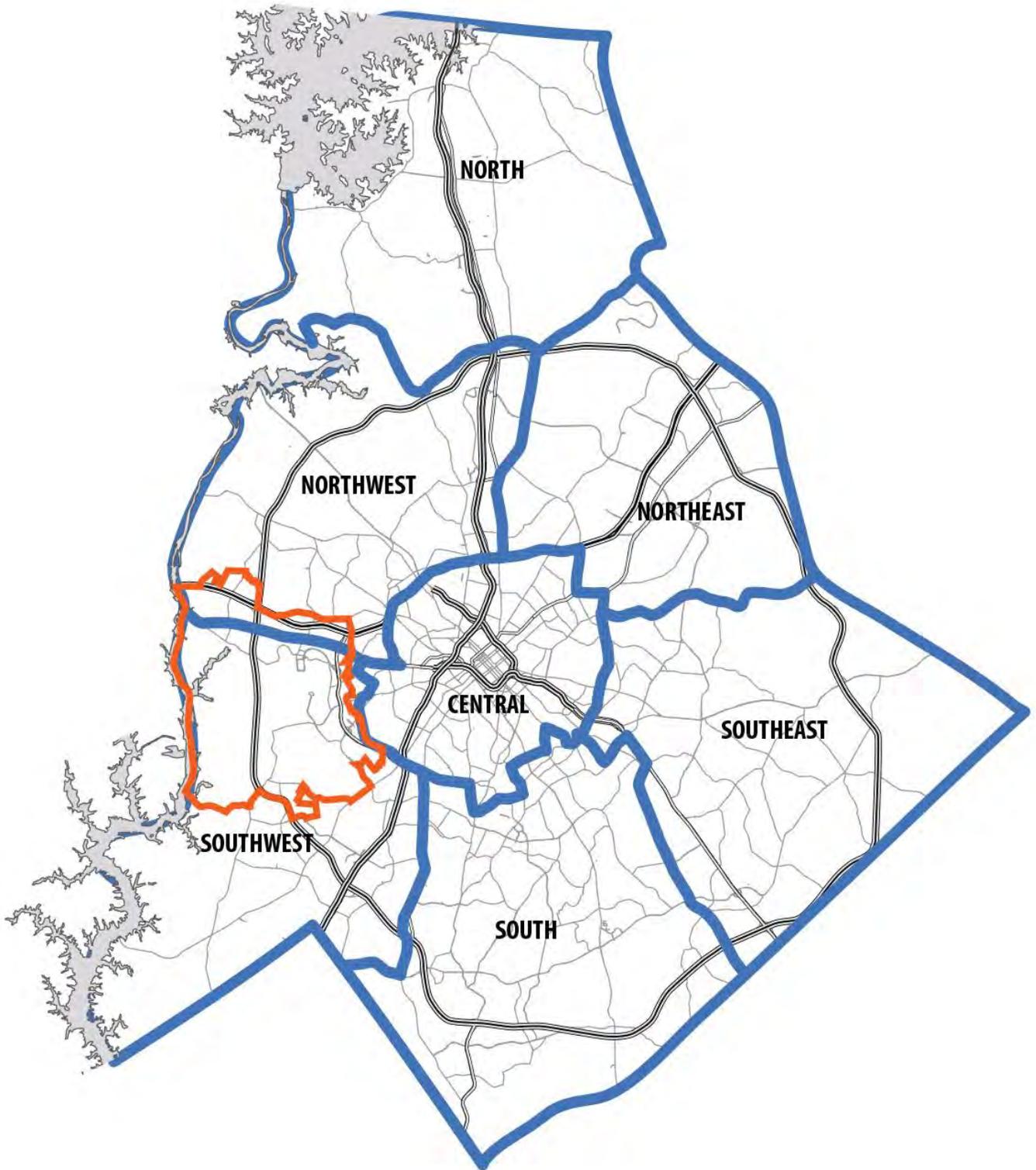
*Source: MORE; Kimley-Horn, MG&A*

The CLT Area is located primarily in the Southwest MORE submarket. The Southwest submarket includes many negatives for housing including the proximity to industrial markets of Arrowood and Westinghouse

Southwest submarket had 4,913 total closings from 2011-2014, primarily resale (3,077 resale closings, 1,836 new closings). However, Southwest submarket did have higher % of total closings come from new closings: 33% of total closings in Southwest were new whereas 18% in the County, indicating growth in new residential construction in the submarket. Southwest market had 2nd lowest number of total closings in 2014, with a higher than average closing price. Only 1 new condo closed in 2011, only 114 resale condos. Condos made up 2.27% of total closings in 2014 in submarket compared to 9.39% in the County.

Historically, detached homes represent the majority of both new and resale closing for the Southwest market. For 2014, Southwest market had greater percentage of new closings (32.96%) compared to the County which saw average of only 18% new closings. Historically, despite only making up 7-8% of total closings, the Southwest closings represent 15-18% of total new detached closings and 13-25% new townhouse closings. In 2014, Southwest market had 25% of the County's total new townhouse closings; 15% of the County's total new detached home closings. Spike in residential market seen in 2014- total closings in Southwest represented 8.87% of the County's total closings (for all three for-sale types).

The Southwest market average closing price for 2014, \$223,570 fell just under the County average of \$258,824. In 2014, the Northwest market had the lowest average closing price in the County.



**Figure 31: Mecklenburg County For-Sale Residential Submarkets (MORE)**

### CLT Area Single Family Overview

Of the 3,999 residential units in the CLT Area, 3,090 units are single family, 77.3% of the total recorded in the Mecklenburg County Tax Parcel Data. The CLT Area has not been an active residential market, although Vineyard Pointe on the north and Berewick to the south are recent subdivisions that are beginning to change the residential market dynamics in the CLT Area. The recent Berewick development has added a new large-scale residential development in the southwestern study area. It was quickly followed by an adjacent new retail center, Charlotte Premium Outlets. Traditionally, the CLT Area has been an area with large tracts of primarily rural land with farms and ranches, a scattering of lake shore houses were built to take advantage of the Catawba River's amenity value, and small groups of manufactured homes were built in clusters, primarily near Wilkinson Blvd. and to the south. The CLT Area has been developed in an incremental pattern that has resulted in an odd mixture of residential developments that have had a negative impact on its image as a residential market. The presence of a coal fired power plant along the Belmont peninsula directly opposite the CLT Area has been an additional a negative factor in development of residential in the area.

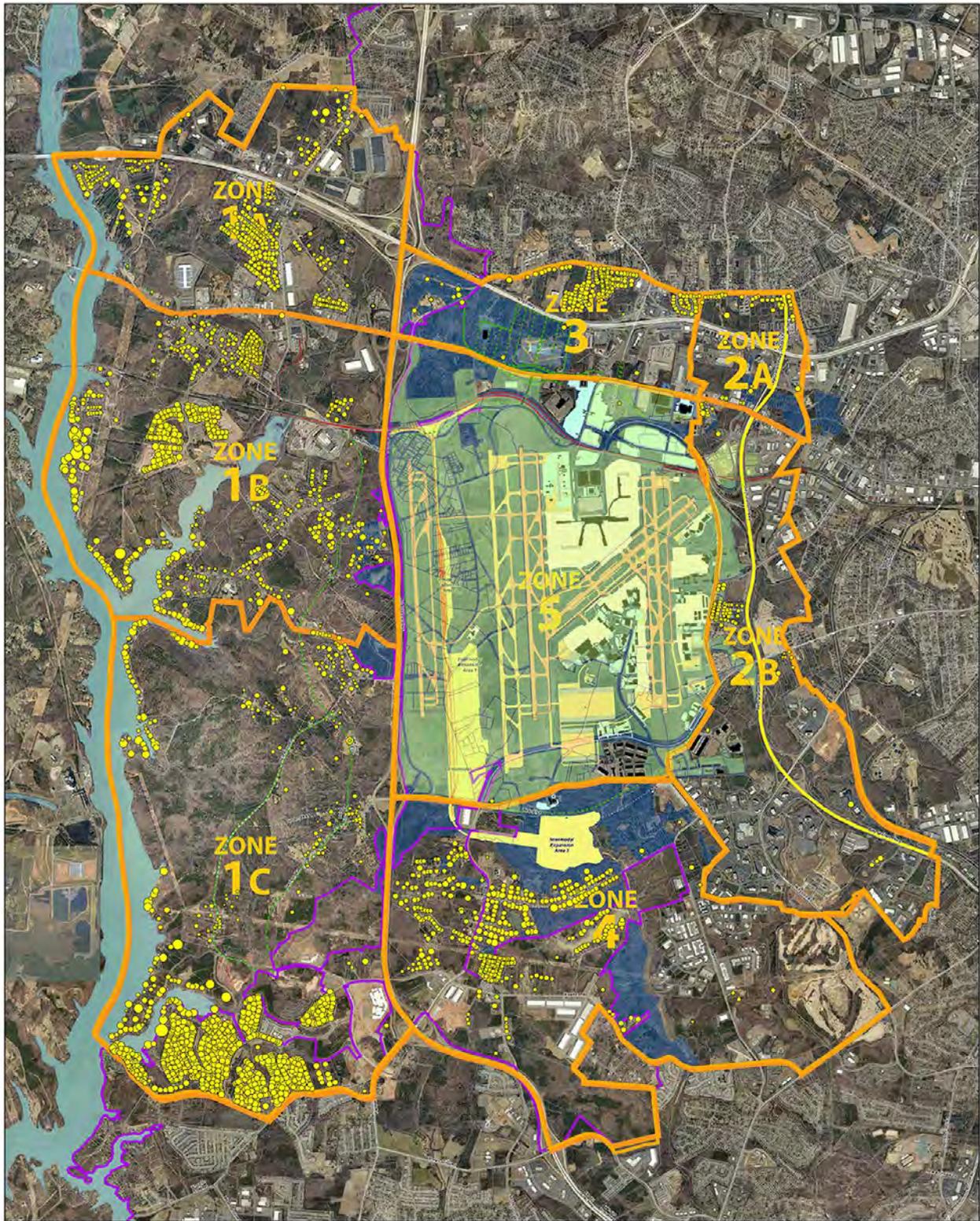
There is concern over suitability of residential development near airport, but other airports in US have supported residential nearby airport. Residential near airport may require developers to add in extra insulation etc. Additionally the topography poses challenges even for residential developers. The area is considered price sensitive, for example the Berewick market is said to be doing well since they are selling townhomes for less than they would sell for in other areas. Market crash and foreclosures are said to have inhibited some growth in the area. Vineyard Point (Zone 1B) is said to not be performing well due to lack of services, somewhat undesirable area off Wilkinson through industrial land uses. Proximity to CLT, I-485, and major industrial concentrations could be viewed as having negative impacts on residential development in the CLT Area.

The Westside market has bled into Gaston County, into the Belmont area where markets are also beginning to grow. According to real estate experts, Gaston County is now being viewed as a more desirable location than in the past, with lake access and better schools.

**Table 26: CLT Area Single Family Overview**

Zone	Units	Heated Area (Sq. Ft.)	% of CLT Area Total	Total Value	% of CLT Area Total	Avg. Year Built
<b>Zone 1</b>	<b>2,413</b>	<b>5,521,854</b>	<b>83.1%</b>	<b>\$480,603,069</b>	<b>84.7%</b>	<b>1992</b>
Zone 1A	338	532,942	8.0%	\$44,409,100	7.8%	1970
Zone 1B	739	1,475,093	22.2%	\$134,395,900	23.7%	1990
Zone 1C	1,336	3,513,819	52.9%	\$301,798,069	53.2%	1999
<b>Zone 2</b>	<b>120</b>	<b>149,199</b>	<b>2.2%</b>	<b>\$11,880,900</b>	<b>2.1%</b>	<b>1956</b>
Zone 2A	42	60,233	0.9%	\$6,101,600	1.1%	1954
Zone 2B	78	88,966	1.3%	\$5,779,300	1.0%	1958
<b>Zone 3</b>	<b>172</b>	<b>255,471</b>	<b>3.8%</b>	<b>\$17,528,500</b>	<b>3.1%</b>	<b>1974</b>
<b>Zone 4</b>	<b>385</b>	<b>720,791</b>	<b>10.8%</b>	<b>\$57,503,400</b>	<b>10.1%</b>	<b>1974.033679</b>
<b>Zone 5</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>
<b>CLT Area Total</b>	<b>3,090</b>	<b>6,647,315</b>	<b>100.0%</b>	<b>\$567,515,869</b>	<b>100.0%</b>	<b>1988</b>
Core Airport	0	0		0		0

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A  
 Note: Airport Core NOT included in CLT Area Single Family Total



**Figure 32: CLT Area Development - Single Family Residential**

## Multi-Family Residential & Apartment

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### Key Findings – Apartment/Multi-Family Residential

- There is a shift in demand, resulting from millennials and Baby Boomers gravitating toward dense urban centers where Apartment living is growing in popularity.
  - Dense urban areas are walking environments where amenities such as grocery stores, entertainment, and other amenities can be easily accessed without use of car.
  - Millennials more likely to continue renting for a longer period of time before buying their first home.
  - More stringent requirements in financing purchase of homes has been a barrier for millennials buying homes.
- Despite strong growth in the Charlotte apartment market, the Southwest-1 and Northwest markets have seen marginal increase in demand.
- Resistance to financing for-sale multi-family by financial institutions combined with a lack of supply and available land near employment centers and shifting consumer preferences is seen to be holding back growth in for-sale residential.

### Charlotte Apartment Market Overview

Multi-family units account for 42.8% of total units in the City of Charlotte, as tracked by Char-Meck Planning (See Table 24). The Southwest submarket represents 9.4% of total multi-family units in the City of Charlotte. The South submarket has the largest percentage of multi-family units, with 39,708 units or 26.9% of total multi-family, followed by the Central submarket, with 29,911 units or 20.2% of City multi-family units. The East and Northeast submarkets make up 16% and 17.7%, respectively, of total City multi-family units.

Real Data divides Mecklenburg County into 14 apartment submarkets, see Table 27. As of February there were 86,675 units total in the County. No one submarket had a clear majority of apartment units, as percent of the total ranged from 2.4%-9.7%. The largest apartment submarkets were located in the East.

The study area is located in the Northwest and Southwest-1 submarket, which make up 4% and 7.8% of the market respectively.

From 2005-2014, the County has added 20,967 apartment units. In the same time period, the Southwest-1 market added 3,802 units and the Northwest market added only 760 units. Before the recession, Apartment growth in the County peaked in 2009, when 4,403 new units came to the market. Apartment deliveries in 2010 and 2011 declined, as the housing market was impacted by the recession. Since 2012, apartment construction has boomed, adding 2,000-4,000 new units to the county per year. By the end of 2014 Charlotte's apartment market had surpassed pre-recession figures with 4,438 new units delivered.

Together both submarkets, Northwest and Southwest-1, added 4,562 units from 2005-2014, representing 22% of new units added to the County. The majority of units added were located within the Southwest-1.

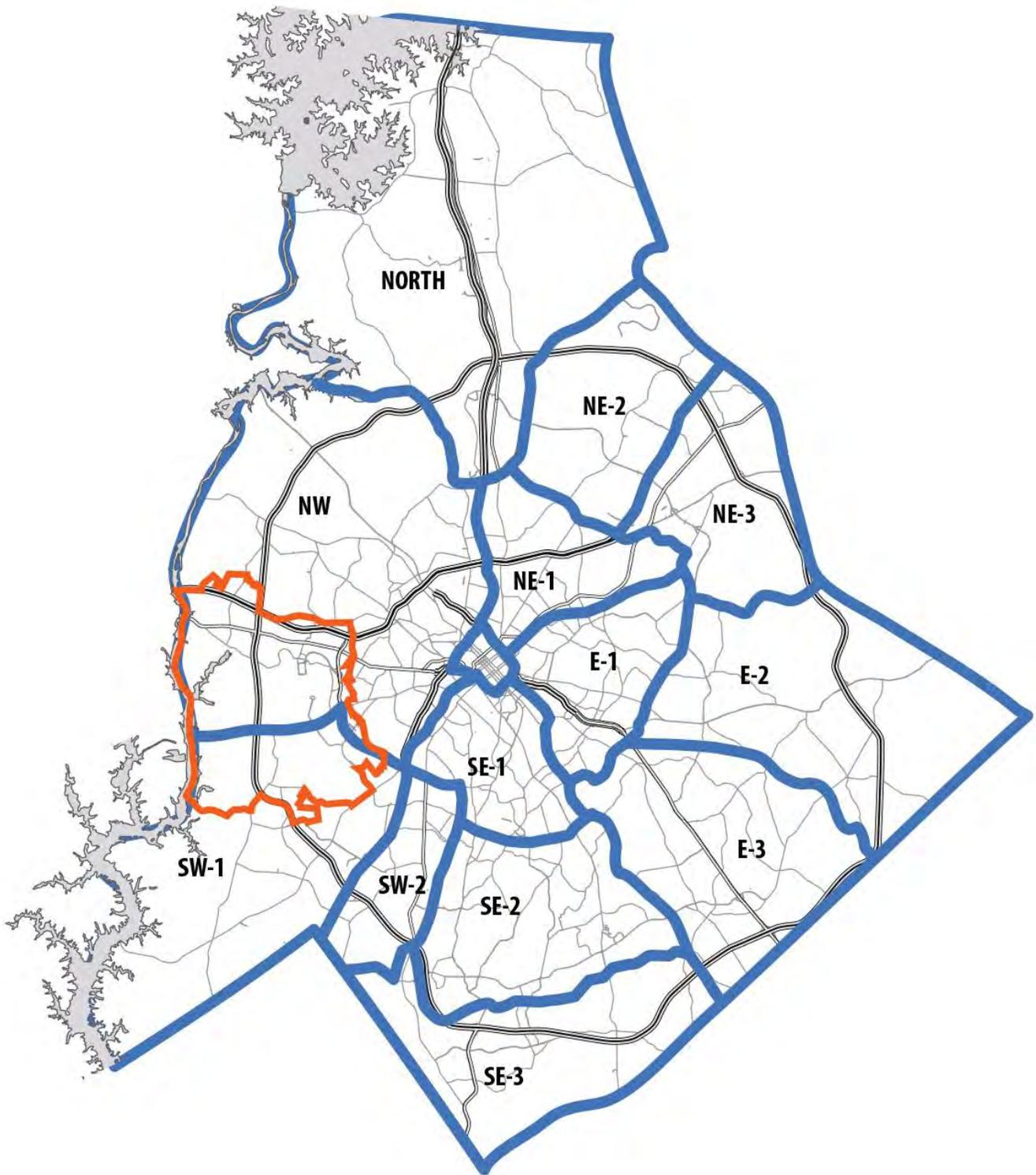
Southwest-1 market has experienced steady absorption; though the submarket has not always grown year-over-year, but has not posted negative net absorption since 2005. Southwest-1 appears to be experiencing somewhat steady demand for apartment units, likely due to proximity to major employment centers like Westinghouse, access to Ballantyne, SouthPark, and South Carolina markets.

**Table 27: Mecklenburg County Apartment Overview, YE 2014**

Submarkets	Inventory, Feb. 2015		Units Under Construction, Feb. 2015		Vacancy (Feb. 2015)	Rent/Sq. Ft. (Feb 2015)
	Units	% of Total	Units	% of Total	(%)	(\$/Sq. Ft.)
Downtown	2,115	2.4%	1,060	11.9%	14.1	1.76
Northwest	3,489	4.0%	214	2.4%	6.7	0.88
Northeast-1	3,592	4.1%	0	0.0%	2.9	0.78
Southeast-3	5,362	6.2%	649	7.3%	8.4	1.05
North	5,727	6.6%	1,387	15.6%	8.3	0.99
Southwest-2	6,234	7.2%	0	0.0%	4.7	0.82
East-2	6,308	7.3%	0	0.0%	6.6	0.82
Northeast-2	6,308	7.3%	467	5.2%	3.7	0.95
Southwest-1	6,780	7.8%	0	0.0%	5.9	0.98
Northeast-3	7,644	8.8%	0	0.0%	4.5	1.07
Southeast-2	8,116	9.4%	0	0.0%	6.5	0.95
Southeast-1	8,264	9.5%	3,327	37.3%	9.0	1.29
East-3	8,345	9.6%	518	5.8%	4.9	0.87
East-1	8,391	9.7%	1,292	14.5%	8.0	0.94
Mecklenburg County	86,675	100.0%	8,914	100.0%	6.6	1.01

Source: Real Data, Kimley-Horn, MG&A

The Southwest-1 submarket ended 2014 with a lower vacancy rate than the County, at 5.9% and 6.6% respectively, and has maintained a vacancy rate lower than the County average since 2011. Northwest vacancy stayed above the County since 2011, where it ended 2014 at 6.7%, only 0.1 percentage points above the county. Northwest submarket average rent/sq. ft. has historically remained below the County average, whereas the Southwest-1 submarket average rent/sq. ft. has remained on par with County average. The Southwest-1 submarket average rent/sq. ft. was recorded above the County average for 8 of 10 years between 2005 and 2014.



**Figure 33: Mecklenburg County Apartment Submarkets (Real Data)**

### CLT Area Multi-family Overview

Of the 3,999 residential units in the CLT Area, 909 units, 22.7% of the Area total, were recorded as multi-family in the Mecklenburg County Tax Parcel Data. The CLT Area represents a small fraction of multi-family or apartment units within the two Real Data submarkets that it overlays, as well as the Char-Meck Planning Southwest submarket.

Multi-family units in the CLT Area, with a total of 909 units, represent 6.6% of the total 13,821 multi-family units located in the Char-Meck Planning Southwest submarket (Table 24).

Real Data tracks multi-family apartments in the Southeast. Comparing Real Data to the Mecklenburg County Tax Parcel data (Table 28), the CLT Area's 909 multi-family units represent only 9% of the total units in the Northwest and Southwest-1 Apartment submarkets. The Southwest-1 and Northwest market combined represented only 11.8% of the County apartment market at the end of February 2015. According to Real Data, Charlotte's apartment Market Rank is 93 indicating favorable growth in occupancy, employment, development, demand and rent growth.

Real Data names Charlotte as one of the "most active development pipelines in the county". However, apartment growth is concentrated in the Downtown, Southeast-1 and East-1 markets. The Northwest and Southwest-1 markets have seen little growth and experience lower demand to more desirable markets in proximity to areas such as Downtown, South End, and NoDa. Despite the recent growth in both supply and demand of apartments, the CLT Area has remained traditionally single family residential.

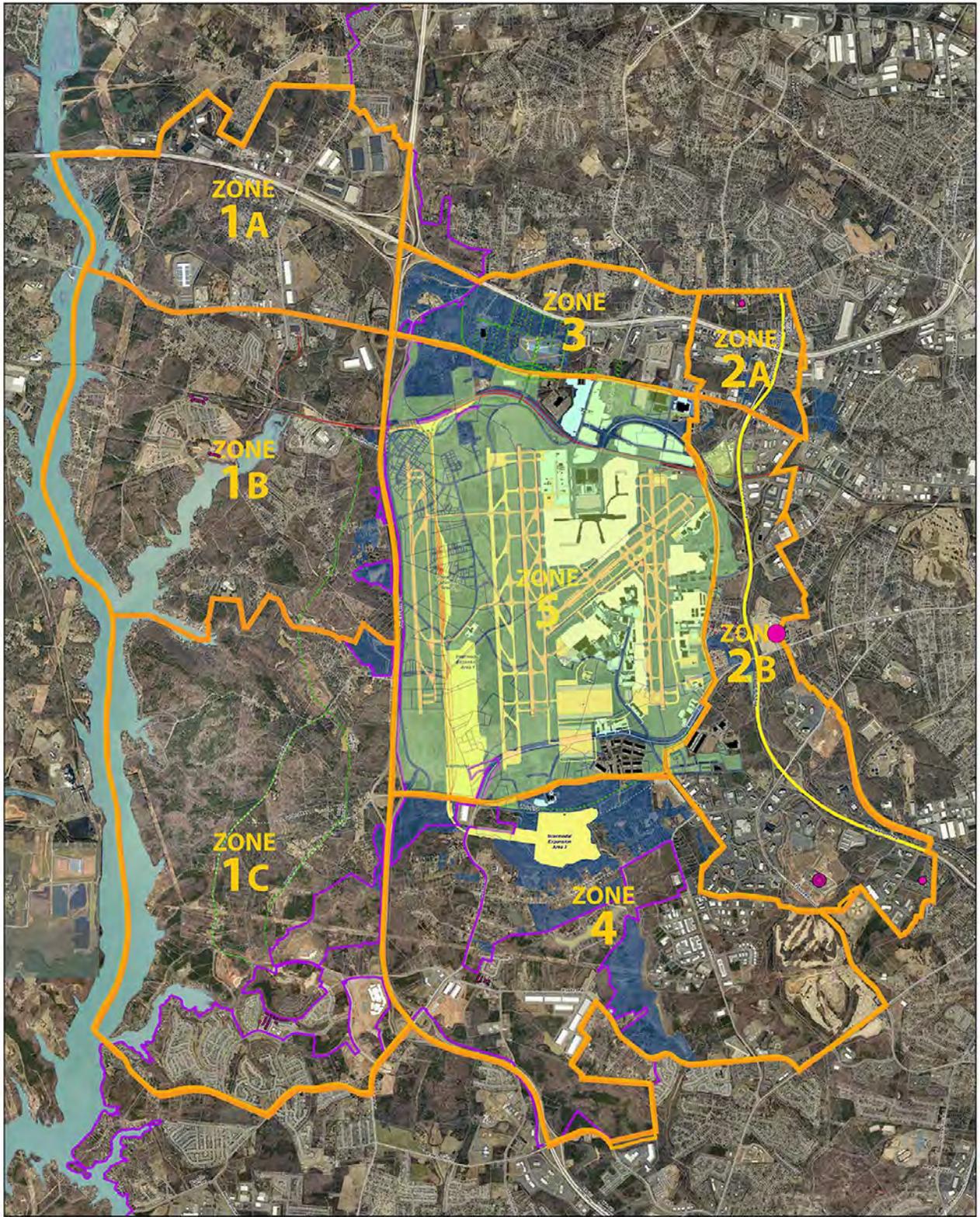
The majority of the CLT Area multi-family units are located in Zone 2, with 770 of the 909 multi-family units in the study area. Multifamily projects are located along the Billy Graham corridor, which includes the CHA investment in the revitalization of Renaissance community at the intersection of Billy Graham and West Blvd. Zone 1B and 1C have 36 and 52 multi-family units, respectively.

Despite having the largest concentration of multi-family units in Zone 2, units in Zone 1 have a higher taxable value on average than the Billy Graham Corridor, likely due to the new developments at Vineyard Pointe as well as Berewick, which have direct access to new retail and services, including the Charlotte Premium Outlets.

**Table 28: CLT Area Multi-Family Overview**

Zone	Sum of Units	Heated Area (Sq. Ft.)	% of CLT Area Total	Total Value	% of CLT Area Total	Avg. Year Built
<b>Zone 1</b>	<b>88</b>	<b>184,258</b>	<b>14.7%</b>	<b>\$16,064,900</b>	<b>21.4%</b>	<b>2009</b>
Zone 1A	0	0	0.0%	0	0.0%	0
Zone 1B	36	93,004	7.4%	\$7,712,900	10.3%	2009
Zone 1C	52	91,254	7.3%	\$8,352,000	11.1%	2010
<b>Zone 2</b>	<b>770</b>	<b>1,000,859</b>	<b>80.1%</b>	<b>\$54,379,900</b>	<b>72.4%</b>	<b>1967</b>
Zone 2A	85	94,263	7.5%	\$441,400	0.6%	2012
Zone 2B	685	906,596	72.5%	\$53,938,500	71.8%	1964
<b>Zone 3</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>
<b>Zone 4</b>	<b>51</b>	<b>64,588</b>	<b>5.2%</b>	<b>\$4,652,400</b>	<b>6.2%</b>	<b>2001</b>
<b>Zone 5</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>
<b>CLT Area Total</b>	<b>909</b>	<b>1,249,705</b>	<b>100%</b>	<b>\$75,097,200</b>	<b>100%</b>	<b>1990</b>
Core Airport	0	0		0		0

Source: Mecklenburg County Tax Parcel Data, Neighboring Concepts, MG&A  
 Note: Airport Core NOT included in CLT Area Multi-Family Total



ADVANCE PLANNING -  
CLT STRATEGIC DEVELOPMENT AREA  
AIRPORT WEST CORRIDOR

CLT STUDY AREA DEVELOPMENT - MULTI-FAMILY RES. (SQ. FT.)

• 10,000    ● 50,000    ● 100,000

Version 1.3    05/13/2015

0 0.2 0.4 0.8 1.2 Miles

Figure 34: CLT Area Development - Multi-Family Residential

## Appendix A: Competitive Airport Analysis

Airport	Distance downtown (miles)	Freeways and arterials	Freight railways	Transit Connections
DFW	22	<ul style="list-style-type: none"> <li>Texas routes 183, 121,114,161,360, 97 and Interstate 635 Service Rd.</li> </ul>	<ul style="list-style-type: none"> <li>not serviced by freight railways, but it has rail north and south serving individual buildings, but not a rail yard</li> <li>the operators with intermodal rail yards in this city are BNSF, UP, KCS and NS</li> </ul>	<ul style="list-style-type: none"> <li>DART Rail Orange line</li> <li>bus link to Commuter Rail TRE</li> <li>Bus Route 408</li> </ul>
ORD	18	<ul style="list-style-type: none"> <li>Illinois route 19,72</li> <li>Interstate route 90 and Interstate 190 and 294 service rd.</li> <li>Interstate 190 service rd is the main access to the airport, connected to US route 12 and 45 on the east border.</li> </ul>	<ul style="list-style-type: none"> <li>South side of the airport, 1 mile from the cargo terminal, the operators with intermodal rail yards in this city are BNSF, NS, CSX, UP and CN</li> </ul>	<ul style="list-style-type: none"> <li>CTA Blue Line Rapid Transit train</li> <li>Pace bus routes 250 and 330</li> <li>METRA North Central Service Suburban train.</li> </ul>
MIA	9	<ul style="list-style-type: none"> <li>Florida routes 948,953,112,836</li> <li>US Route 27</li> </ul>	<ul style="list-style-type: none"> <li>West side of the airport, besides cargo terminal, the operators with intermodal rail yards in this city are CSX and NS</li> </ul>	<ul style="list-style-type: none"> <li>Metrarail Orange Line</li> <li>Miami Beach Airport Flyer</li> <li>Metrobus routes 37,42,57,238 (east-west),133(TriRail shuttle)</li> </ul>
MCO	12.5	<ul style="list-style-type: none"> <li>Jeff Fuqua Blvd.</li> <li>Florida Routes 527,528,436,482</li> </ul>	<ul style="list-style-type: none"> <li>not serviced by freight railways, but it has rail on the west serving individual buildings but not a rail yard</li> <li>although there is no intermodal rail yards in this city the operators in this city are CSX and NS</li> </ul>	<ul style="list-style-type: none"> <li>Lynx routes 11,51,42,111</li> <li>Bus link to SunRail Station</li> </ul>
ATL	8.5	<ul style="list-style-type: none"> <li>Interstates 75, 85</li> <li>Georgia Routes 14,139</li> <li>US route 29</li> </ul>	<ul style="list-style-type: none"> <li>not serviced by freight railways, but it has rail adjacent with spurs that serves individual buildings but not a rail yard</li> <li>the operators with intermodal rail yards in this city are CSX, BNSF and NS</li> </ul>	<ul style="list-style-type: none"> <li>MARTA Metro lines Gold and Red</li> </ul>
IAD	27	<ul style="list-style-type: none"> <li>Virginia routes 267</li> <li>Interstate 66</li> </ul>	<ul style="list-style-type: none"> <li>not serviced by freight railways, and has not rail adjacent to it</li> </ul>	<ul style="list-style-type: none"> <li>Bus routes 5A,983,981, Silver Line Express</li> </ul>
RDU	14	<ul style="list-style-type: none"> <li>Interstate 40</li> <li>John Brantley Blvd</li> </ul>	<ul style="list-style-type: none"> <li>not serviced by freight railways, but it has rail on the northwest that serves individual buildings but not a rail yard</li> <li>the operator in this city is NS</li> </ul>	<ul style="list-style-type: none"> <li>Triangle Transit route 100</li> </ul>
JFK	18.5	<ul style="list-style-type: none"> <li>New York routes 27</li> <li>Interstate 678 service rd</li> <li>Van wyck Expressway</li> <li>JFK expressway</li> </ul>	<ul style="list-style-type: none"> <li>not serviced by freight railways, but it has rail adjacent serving individual buildings but not a rail yard</li> <li>the operator with intermodal rail yard in this city is NS</li> </ul>	<ul style="list-style-type: none"> <li>AirTrain JFK</li> <li>MTA Bus routes Q10,Q3,B15</li> <li>NYC Airporter express bus</li> <li>Trans Bridge Bus</li> </ul>
BWI	11	<ul style="list-style-type: none"> <li>Maryland routes 295,648,170</li> <li>Interstate 95</li> <li>Interstate 195 Service rd</li> </ul>	<ul style="list-style-type: none"> <li>not serviced by freight railways, but it has rail on the west and northwest serving individual buildings but not a rail yard</li> <li>the operators with intermodal rail yards in this city are CSX and NS</li> </ul>	<ul style="list-style-type: none"> <li>MTA LRT</li> <li>RTA Bus route 501</li> <li>ICC Bus route 201</li> <li>MTA bus routes 17,99</li> <li>WMATA bus route BWI express/B30</li> <li>Bus shuttles to Amtrak</li> <li>Bus shuttles to MARC train</li> </ul>
EWR	15	<ul style="list-style-type: none"> <li>US routes 1,9</li> <li>Interstate 95,78</li> </ul>	<ul style="list-style-type: none"> <li>North side of the airport, less than a mile from the cargo terminal, the operator with intermodal rail yards in this city is NS</li> </ul>	<ul style="list-style-type: none"> <li>AirTrain Newark</li> <li>NJ Transit Bus lines go28, 37,62,67,107</li> <li>Newark Express bus</li> <li>Trans Bridge bus</li> </ul>
PHL	9	<ul style="list-style-type: none"> <li>Pennsylvania route 291</li> <li>Interstate 95</li> </ul>	<ul style="list-style-type: none"> <li>not serviced by freight railways, but it has rail adjacent with spurs that serves individual buildings but not a rail yard</li> <li>the operators with intermodal rail yards in this city are CSX and NS</li> </ul>	<ul style="list-style-type: none"> <li>SEPTA Airport Regional Rail Line</li> <li>SEPTA Bus routes 37,108 and 115</li> <li>SEPTA Airport line to Amtrak and Greyhound Terminals</li> </ul>

## Appendix B: Developer Interviews

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Shannon Binns

Founder & Executive Director- Sustain Charlotte

Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)

3/4/2015, 2:00 pm

### Background

Sustain Charlotte, a local non-profit, was chosen to be interviewed as a developer because the organization is actively accelerating the regional sustainability movement. In planning and realizing the City's global strategy, it is vital to bring all stakeholders into the conversation. Sustain Charlotte aims to educate, advocate, and engage citizens, businesses, non-profits, the public sector and academic institutions for healthier, more vibrant communities for generations to come, across the Charlotte Metro. *Sustainability in an urban context recognizes that long-term economic vitality, environmental health, and social cohesion are interdependent: the health of one determines the health of all. An enduring economy depends on the sustainable use of natural resources. (Sustain Charlotte)*

Sustain Charlotte was founded in 2010, after Binns observed the Charlotte area rapidly developing in an unsustainable manner. Binns emphasized that while most people have the perception that "sustainability goals" focus entirely on environmental protection, sustainability (as defined above) also has economic and social dimensions. Sustain Charlotte identified 10 target areas (Air, Buildings and Homes, Economy, Energy, Food, Parks and Green Space, Waste, Social Equity, Transportation and Water) in their first publication, "*Charlotte 2030: A Sustainable Vision for Our Region*," though the organization has primarily focused its efforts around sustainable land use and transportation. Sustain Charlotte has also launched the Transportation Choices Alliance to promote greater accessibility and opportunities to walk, bike, ride transit for the entire region.

### Perception & Character of the Airport/West Corridor

In his work as executive director of Sustain Charlotte, Binns focuses some of his time on advocating for transit-oriented development in the City's transit corridors. With little prior knowledge of the history or the development pattern of the Westside, Binns perceived that any extensive development (development to mean any land use that would add impervious cover) in the Airport/West Corridor would further contribute to Charlotte's suburban sprawl, and represent "more business as usual" development. Charlotte has grown and developed at the edges of the city, annexing adjacent land and developing greenfield areas. Sustain Charlotte advocates for investment and redevelopment in the 300 square miles that Charlotte has already incorporated; building along existing transportation corridors or in those identified as targeted growth corridors in the City's growth framework.

Binns noted that though the northern portion of the study area has been identified as a growth corridor in the City of Charlotte's Centers, Corridors, and Wedges framework. However, the remainder of the study area is located in a wedge. The economic dimension of sustainability, as well as the city's own plan, would encourage investments in growth corridors rather than in wedges. However, Binns also noted that unlike sprawling development areas such as Ballantyne, the study

area is closer to the Center City which could effectively link Westside residents to the Central Business District with adequate transit connections.

### **Connectivity: Transportation and Alignment Options**

Noting again that the Airport/West Corridor is closer to the Center City than sprawling areas like Ballantyne, this area has higher potential for strong connectivity to existing high growth areas. Binns had no preference on particular alignments of the proposed Dixie River Road and Garrison Road extensions/upgrades; his focus remained on how these new roads would be constructed to facilitate multi-modal connections for residents and employees to and from the Wilkinson Blvd. transit corridor, as identified in the 2030 Transit Plan.

#### *Primary connectivity questions & considerations:*

- How will pedestrians and cyclists move through the entire study area without the use of an automobile? What infrastructure would encourage increased pedestrian and bike use?
- Will development in the study area be transit oriented?
- How might people in the area be able to access transit in the Wilkinson Blvd. corridor?
- How will people get to the Center City for work or leisure?
- How could planned infrastructure projects facilitate and enhance accessibility and connectivity to the entire Charlotte region?

Binns emphasized that the road construction should have a fully connected pedestrian network and protected bike lanes that would allow people to travel the entire length of the corridor and gain access to transit along Wilkinson Blvd. Binns noted that he was recently driving near the new Simon Premium Outlets in the study area and noticed a painted bike lane along Steele Creek or Shopton Road that came to a sudden end, forcing cyclists to merge with fast-moving traffic, a very unsafe condition. He emphasized that Charlotte has added bike lanes to existing roads, but the current bike network remains fragmented.

Binns indicated that new construction/development is an opportunity for pedestrian and bike accessibility and connectivity to be a high priority at the outset of the project, rather than an addition later on. New York City was cited as an example of a city effectively adding protected bike lanes on existing streets without widening. Protected bike lanes are designed to have a clear buffer between the car and bike lanes, rather than widen existing roads to include a four or five foot bike lane next to auto traffic. Binns said that research has shown that people are more likely to use bike lanes if the bike lane has a protective buffer from the adjacent auto traffic.

### **Future Planning & Long-Term Vision**

Binns cited few examples of existing urban areas that Charlotte could use as examples of development done right. Binns cited Plaza Midwood as a good example in the Charlotte area that provides a sense of community and place, with walkable and bike friendly infrastructure. The neighborhood is highly social and has made an effort to integrate other forms of transportation besides the automobile.

*Primary planning considerations:*

- Shifting to meet demand for “livable,” “walkable,” and transit oriented cities; areas where people interact and create community rather than remain compartmentalized or stuck in isolated suburban areas.
  - Millennials do not want to live in sprawling subdivisions, are driving demand for compact, walkable urban areas.
  - Boomers want to retire, maybe don’t want to drive and feel stuck without transit or walkable areas. AARP is working to assist seniors in maintaining mobility after losing the ability to drive; AARP worked with the Charlotte DOT to identify areas where seniors had poor accessibility (walking, transit) in 2014.
- Encourage place-making: where public spaces and open spaces/greenways are walkable, interactive areas. Currently Charlotte has too many residential subdivisions with no destinations within them or within walking/biking distance, which makes it hard for residents to not rely on the car for all their trips. Rather than a collection of isolated subdivisions, create connected places. The business district in Plaza Midwood is one local example where street activity is higher. In Plaza Midwood people have more social interactions and are more likely to explore businesses along the street corridors.
- Encourage dense, mixed use development rather than vast areas of single family homes. Providing a large mix of uses so that people can live in the area and meet most needs without needing to drive 5-10 miles round-trip.
- Create and sustain jobs - encourage greater concentration of employment centers in this area to match high density development.
- Provide sufficient housing for those working in the area, including low-income housing.

*Primary Concerns:*

- Additional impervious surfaces will generate more runoff into the creeks and the river, if runoff is not properly treated on site this will increase pollution of these waterways and if the velocity is not slowed it will erode them via scouring as well. More than 80% of Mecklenburg County’s streams are currently deemed impaired and unsafe for recreation, their intended purpose. Therefore, need to identify what will be done to prevent damage given the hydrology of the Airport/West area (Low Impact Development, on site mitigation, etc.)

When asked for suggestions on individuals, developers, or organizations that should be contacted and involved in the process, Binns first suggested the Catawba Riverkeeper Foundation. American Rivers, a non-profit, designated the Catawba River one of the most endangered rivers in the country in 2008 due to continuous development in the river basin. The Catawba Riverkeeper Foundation is an education and advocacy nonprofit that works to protect the Catawba-Wateree River watershed. Increasing development in the Charlotte region, especially in the study area,

would increase runoff that would ultimately strain the hydrologic network even further. Binns stated that the Catawba Riverkeeper considers sprawl to be the number one threat to the health and integrity of the Catawba River.

Binns also suggested talking to developers in the area such as Vision Ventures, “or those who want to do something different, in addition to the developers that contribute to the type of sprawling development that we don’t need more of.” Sustain Charlotte would not want to see the area turn into another unsustainable model like Ballantyne where people are not riding transit, not walking, not biking, and not making social connections because of the land use and transportation pattern of their neighborhood that keeps them isolated in their homes and cars. Lastly, Binns suggested weighing in with noted urban design and planning experts Tom Low, David Walters, and Craig Lewis.

Binns emphasized that Sustain Charlotte is not anti-development; rather they are pro “smart development,” which is a growing city means more compact, mixed-used and transit-oriented development. The organization advocates that Charlotte grow smarter than it has in the past: growth that would align with the goals laid out in Sustain Charlotte’s 2030 vision for the city to grow sustainably and fosters greater social equity, economic growth and environmental protection.

#### *Key Considerations-*

- Make investment decisions that shift the city away from historic development patterns that contribute to continued suburban sprawl; make choices that lead to a more vibrant, increasingly livable community for years to come.
- Support transit oriented development in the study area’s identified Growth Corridor that will strengthen connectivity to the Center City and other Charlotte Activity Centers.
- Support connectivity and accessibility of the Airport West corridor to all nearby transit options. New road construction provides the City with unique opportunity to create adequate connections, including bicycle and pedestrian infrastructure, throughout the Airport/West corridor in such a way that residents and employees can take advantage of safe, continuous access to nearby employment, retail, and leisure assets.
- Encourage dense, mixed use development; place-making; walkable development.
- Address major concerns over the impact of development, specifically the increase of impermeable surfaces & resulting runoff on the area’s fragile hydrology, including the heavily polluted and endangered Catawba River.

Louis Stephens

Managing Director, Jones Lang LaSalle

Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashley Landis (CDOT); Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)

3/6/2015, 3:00 pm

## **Background**

Jones Lang LaSalle (JLL) is the largest real estate services firm in the nation. JLL Charlotte is a commercial real estate services firm specializing locally in industrial and retail assets, banking and finance, and hotels and hospitality. JLL provides professional real estate planning and management services that include finding, securing and optimizing industrial real estate assets in and around Charlotte. JLL maintains relationships with national leaders in residential and commercial development and real estate management. Mr. Louis Stephens has an extensive background in acquisition, development, and consulting on various regional projects. Stephens has an in-depth understanding of Charlotte's commercial market conditions and market outlook, offering his insight into the economic development potential of industrial, office and retail markets. Stephens' extensive real estate background includes work in Charlotte's Westside and Charlotte's airport market.

## **Perception & Character of the Airport/West Corridor**

- Stephens described West Charlotte as historically, though not intentionally, overlooked. He noted that the area is seen as generational but lacks a unified vision or identity. However, the current development potential is an opportunity for something greater in Charlotte's Westside.
- Charlotte's airport is the number one driver in the City, and "if we don't take advantage of [the airport's global position], it will be the biggest mistake the City has ever made." Going on to explain that, "the potential here is huge;" including the potential to bring more of the jobs that Charlotte needs. The continued expansion at the airport, coupled with I-77, I-85, I-485, and the possibility of completing a West Blvd. extension, contribute to a growing, strengthening Southwest market.
- Upon completion in 1982, Billy Graham Parkway connected I-77 to I-85 back when "everyone used air or auto travel for business travel." Charlotte's airport market, specifically the office market along Billy Graham Pkwy., was successful for a short period of time, but has suffered from a lack of retail and services. Billy Graham/I-77 market is also challenged by the existing traffic pattern and congestion.
- Various factors changed Charlotte's airport market dynamic: with the rise of the internet automobile and air, business travel has continued to decline; 9/11 contributed to a decline in travel due to increased fear; oil and gas costs rose; and Ballantyne became the largest suburban office market in the metropolitan area/County. Starting in 1997, eight or nine out of ten commercial real estate deals went to the Ballantyne area.
- In past experiences working in the Westside, Stephens has seen deals slip through the cracks due to a lack of strong decision makers in the area. JLL had been working on a development in close proximity to the U.S. National Whitewater Center (north of the CLT

Area), but the County was not able to follow through on “all the necessary systems” in time, which left the company unable to follow through on their plan. CenterPoint, a leading national industrial developer based out of Chicago, previously visited sites in Zones 1A and 1B (of the CLT Strategic Development Plan Area), but was unable to coordinate “all the powers” to secure commitment for the rail and transit needed. The environmental issues also posed a significant challenge for industrial development. Instead, JLL helped CenterPoint introduce an intermodal yard to Spartanburg, South Carolina. Stephens has remained in contact with CenterPoint as the company is again eying an investment in the Charlotte airport market, a play that would boost Charlotte’s industrial presence in the regional and global marketplace. Seeing the company as a key player that would help spur economic development in the area, Stephens believes that CenterPoint’s established relationships and access to capital will guide other users to Charlotte.

### **Connectivity: Transportation and Alignment Options**

Stephens expressed that specific alignments or road infrastructure options are “above his pay grade,” though he did indicate that the proposed alignment might better serve the area if it were moved west, closer to the river.

Stephens does not think that connectivity over the Catawba River is likely to happen in the near future since the area is already well connected by the current interstate network (I-77, I-85 and I-485). He expressed that he thought the new residential and services developments along the planned Dixie River Road and Garrison Road upgrades would support those who are employed in the area.

#### *Primary connectivity questions & considerations:*

- Utilize topography, when possible, to developer’s advantage in construction roads and new buildings.
- Construction, or phasing, of Dixie River Road/Garrison Road would ideally begin in the south, connecting to Berewick, to further catalyze development.
- Must improve local and regional connectivity, as well as road character, throughout the Airport/West Corridor. There is no access in the area now, esp. zone 1, that is the major deterrent, until West Blvd. realignment all the roads in the area are farm roads, not an attractive place to development, the only place in the county where those roads still exist. Driving these roads are challenging.
- Wrecks there could be high because it is unsafe. Make a 4-lane Blvd. connected to Berewick, South Blvd., bring sewer and water as the start, but will take time unless you identify and make it a place and create a theme for it, making it special
- Ensure infrastructure will serve its economic purpose for both commercial and residential uses.
- Maximizing the area for intermodal:
  - Interior service frontage road along I-485 they use to get on and off the interstate
  - What is the influence of the trucking and freight on the road, Freightways in the area as well, but where? Road would be limited, would have to create a

truck way? Louis agreed. Where is the slope the flattest, etc.? Maximize the southern area near the intermodal yard.

- Connecting all industrial properties as a back road designed for trucks, moving existing alignment west to accommodate for a service road. Distances key in moving roads to create developable parcels on either side of the road.
- Would have a service road, a frontage road dedicated for trucking to get on and off the interstate. If the land can be balanced (public private moving land).

### **Future Planning & Long-Term Vision**

Stephens emphasized that development will not happen without roads, water and sewer; it will only happen with the City's help. Given the generational aspect, development must aid the Westside in creating its place and identity based on its history and its future.

#### *Primary planning considerations:*

- Must have connectivity; bring the connectivity throughout the entire area. Step one is to build the road in order to develop the area.
- Infrastructure serving its economic purpose
- Zone one primarily office, residential, retail/services.
- Environmental parks along the river, utilize water amenity
- Developing in the area will be industrial at best in zone 4 and 2a, zone 3. The intermodal is inside Zone 4 east of 485. Big box does not do well with watershed.
- Shifting market demands: For a 10 year span, out of ten deals, eight or nine of them went to Ballantyne, but for the first time boomerang effect back to the Center City: for example the law center on Wilkinson moved back to urban core.
- Leverage Norfolk Southern investment utilizing public-private initiatives: Industrial in Zone 4 with businesses that complement the intermodal.
  - Intermodal will increase the tax base.
- Needs an identity, needs to have a sense of community, given the relatively undeveloped area this is an opportunity to make something special, to make it a "place."
  - Residential, must appeal to the millennials
  - Value capture of area's amenities
  - Keep the sense of community created by the generational ownership; Have to make it unique, want people to say "I live on the Westside" with pride. Ballantyne need a car to do everything. This needs to have an area, get with NC conservancy and NC thread trail, tax credits with development. That will be a huge draw for people to move, to have connectivity and access through the area that draws people out of the car
- Explore any public private partnerships for infrastructure, amenity incentives (greenways).

*Primary Concerns:*

- The biggest challenge in the study area is the topography, especially for industrial sites.
  - Historically, construction costs in the study area have been high given the topography and resulting costs to move dirt, fill in land, etc.
  - Given the topographic challenges, potential for industrial development in zone 3, potentially on property along the NS rail line in the north.
- Demand shifting back to the urban core, the study area is not considered “urban.”
- Preconceived notion that living by an airport is not ideal
- Finding Mecklenburg County’s next mega-site to attract major investment.

*Recommended Additional Contacts:*

- Area residents
- Residential developers (specifically Ryan Homes or Standard Pacific), specifically the local residential developers that know the market and know where the market could go. Stephens emphasized that the shifting market would not be suitable for all single family residential, must meet market demands.
- Local architects and engineers

*Key Considerations-*

- Maximizing major opportunity to leverage Charlotte’s airport and the new intermodal yard; consolidate and restructure the industrial market south of the airport (Zone 4)
- The Westside needs an identity and a feeling of place; want to create a place where residents to say “I live on the Westside” with pride
- Believes that the area is lacking the recognition, identity and leadership that would, in the long-run, help all interested parties including Johnny Harris’ and Crescent Communities
- Challenge to overcome perception of the area, unattractiveness of proximity to airport and to improve demographics needed for increased real estate investments
- Infrastructure investment from public sector absolutely necessary for the area to grow and succeed
- Construction should begin in the south; alignment should be pushed west closer to the water to create “more useable” parcels between Dixie River Road and I-485
- Must improve road character, local and regional connectivity through the corridor and to greater Charlotte
- Residential and office best suited for Airport/West Corridor, with some retail nodes along the alignment; Industrial better suited for Zone 4.
- Value capture of area’s amenities: greenways, parks, recreation
- Topography will pose the greatest challenge, utilize topography as advantage wherever possible
- Believes this to be a 50-year play that will take time to cultivate the area’s identity and sense of place, but that the area is in need of a comprehensive, collaborative vision in order for this to happen

## M. David Properties

Marc Silverman, Founder & Lorin Stiefel, Owner & Manager

Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashely Landis (CDOT); Greg

Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)

3/9/2015, 3:00 pm

### **Background**

Through his company, M. David Properties, Mr. Marc Silverman and daughter Lorin Stiefel provide industrial and commercial real estate services throughout the Carolinas, and have insights into current and shifting industrial product demand. M. David Properties remains active in pursuing future industrial developments servicing the northwestern and southwestern, including the Airport study area, industrial submarkets.

- M. David Properties owns and manages two industrial parks in the Airport West Area: SilverLake, a 565,000 sq. ft. park located approximately ten miles south of CDIA near the I-77/I-485 interchange, and SilverLanding, a 43 acre park located on Steele Creek Road and West Blvd, directly across from the Airport Intermodal Facility.
- Silverman and Stiefel were chosen to provide insight on leveraging existing and future investments in the area in order to strengthen the airport market's industrial assets.
- Additional company land holdings include parcels that would fall within the planned CDIA fourth runway protected area, some of which are in negotiation with the airport for potential land trades.
- The company also own property south of the study area on Westinghouse Blvd, as well as along I-85 just east of the CLT Strategic Plan Development Area boundary.

### **Perception & Character of the Airport/West Corridor**

- M. David Properties has not yet had any customers come to them specifically as a result of the new intermodal yard, but remains optimistic they will see an increase in business from the intermodal yard.
- The immediate proximity to the intermodal yard is not as much of a premium for the businesses located in the airport submarket; Silverman explained that for businesses transporting freight by truck moving one thousand feet up to a mile and a half is not cost prohibitive. Stiefel pointed out time (length of travel) continues to be the bigger factor in Charlotte's industrial market.
  - Proximity to interstate, specifically for the trucking market, is the main driver of their business.
  - The immediate proximity to the airport and the intermodal yard has not generated as much of a premium as other cities like Chicago or Dallas. Stiefel believes this to be a function of traffic congestion; Charlotte as the city continues to grow, congestion could generate higher demand for immediate proximity to the Airport Intermodal Yard.
  - Silverman believes it will take Charlotte more time to generate more traffic and develop or streamline the area's logistics network. The demand is not yet realized, and the distribution system has not been developed around the intermodal yard.

- As these businesses do adapt shippers, logistics businesses, and manufactures to leverage the intermodal yard investment, industrial demand will rise. Regardless of the time it takes to generate higher demand, Silverman noted that locating south rather than north of the airport is undoubtedly the most advantageous location for business to remain competitive. However, lease rates in north and south hover around similar price points because “customers are not likely to pay more than ten cents more to locate in a slightly more favorable location.”
- Growth of the airport industrial market will be “evolutionary rather than revolutionary.” Silverman noted he is looking forward to the pending intermodal expansion, confident that further expansion will draw business like a FedEx or UPS Ground facility into the intermodal yard. Both Silverman and Stiefel see the Westside as the next big area for industrial development.

### **Connectivity: Transportation and Alignment Options**

Does not see the road as a heavy trucking corridor, suggesting that trucks will continue to use I-485. Local trucking that would serve new office or distribution markets would use the road, since the truck will not have to go very far from their origin, but the majority would still utilized nearby interstates. Silverman expressed that any road’s primary function is to move vehicles (of any size and weight). The easiest way to achieve this goal using the least amount of land is to have vehicles move quicker, limiting stop and go traffic however possible. Silverman suggests not creating an isolated corridor, but to create more access points, not driveways to the road to facilitate continuous flow.

Silverman also noted that surface roads in proximity to interstates will change the character of traffic flow to and from the interstate; local examples of this can be found in the relationships of Wilkinson Blvd. and I-485 as well as South Blvd. and I-77. Emphasized that the needs of industrial development rely on somewhat different access, and connectivity than other uses, specifically referring to residential development.

#### ***Primary connectivity questions & considerations:***

- Who will be, or who does the City want to be, the main user of the roads?
  - Construction of the roads must be planned and completed in such a way that is mindful of the variety of uses that the roads will serve
- How will construction of Dixie River Road/Garrison Road change current traffic patterns?
- Create a limited access road conducive to encourage continuous free flowing access and movement, i.e. minimal traffic lights.
  - Silverman advised against emulating the road conditions of Billy Graham Parkway, which does not prove successful for freight flows due to congestion and stop-and-go traffic.
- Connectivity and accessibility to the greater Charlotte region
  - East-West connection would provide useful connection to the Charlotte metro
  - Upgrades to existing interstates are the most critical transportation needs in the state.

- City and County infrastructure planning, specifically citing traffic calming solutions, specifically referencing roundabouts, and traffic flows that can negatively impact freight movement
- Road serve as a buffer to separate residential and the commercial to the east. Silverman is aware of the Lincoln Harris development plan that would create a “good” office market with convenient access to the airport. Silverman also suggested additional landscaping alongside of the roads, saying that “a pretty connector surface road will change the character of the road.”
- Support a frontage road (or roads) because such roads facilitate access and ease of movement for freight carriers. Frontage roads could also serve as a buffer in the area with close proximity to the interstate for better accessibility.
- Wherever the road alignment, development will begin around the access points.

### **Future Study Area Planning & Long-Term Vision**

From Silverman’s perspective, residential development would make the most sense along the river front, saying that the area would make a “beautiful” recreational and residential area due to the topography and the water as a valuable amenity. Silverman suggested office space could be localized in the southeastern portion of the Airport West corridor.

Encouraged that the road be a buffer between office and other commercial uses on the east and residential on the west, along the water. Both also discouraged industrial development north of, or “at the top of the hill from,” residential development. Industrial developments would be concentrated in south of the airport (Zone 4), north of Wilkinson Blvd., (Zone 1A), or due north of the airport (Zone 3). Silverman pointed out that Charlotte has, essentially, come to the end of the line for new mega-site developments; the Airport study area, specifically within the noise contours, could end up being the only place in the City of Charlotte or Mecklenburg County left to create

#### ***Primary planning considerations:***

- “What kind of product and identity does the City, the airport, and the private sector wants to develop in the area?” Knowing what kind of long-term development is vital to creating the infrastructure that will draw “desirable” development into the corridor.
- A good portion of the natural growth of the industrial market leasing activity will depend on the connectivity and access.
- Site selection
  - Connectivity to interstates; established Westinghouse market
  - Location primarily south of the airport
  - Infrastructure including water, sewer, stormwater treatment facilities. The size of the water and sewer will determine development, as industrial developments have larger capacity requirement than residential
  - Environmental features including watershed, topography
- Shifting customer & market demands
  - For industrial development, the customer base drives business more than the infrastructure. As the intermodal yard develops and ramps up demand, the industrial development will move in.

- Understanding the customer base needs and wants are the most important consideration. Industrial development will mostly respond to the demand in the study area, relying on building to suit the customer demands. (Silverman used the recent significant changes in parking demand and demand for taller buildings as examples, both of which require larger land area for development) Silverman highlighted that the industrial developments do not precede demand because there is far too great a likelihood that developers like M. David Properties will end up “too far out” with an excess of empty space. Industrial developers try not to overbuild as the needs and wants of customers is ever changing.
- Changing manufacturing, distribution and warehousing patterns
  - Retail landscape adapting to the internet. Companies will reduce the number of stores but construct new warehouses to distribute faster.
  - Increased demand in shortening delivery times leads resulting from the combination of fuel prices going up, reduction of distribution centers to the bare minimum depending on product demand.
  - Now the drivers are limited to hours, federal law, and it is easier to have them drive locally.
- Future City and airport planning. Speaking from experience, Silverman explained that local developers are not able to construct all of the things that they need (unlike a larger industrial developer like CenterPoint). Local developers must work more within the City’s limitations, taking advantage of public sector plans because they do not have the same monetary ability to build out to their liking. For example, Silverman and Stiefel partnered with the airport for a water and sewer line into a property located south of the airport.

***Primary Concerns:***

- What will be required of the developer (tree buffers, side roads, open space requirements)? Silverman also noted that land west of Steel Creek Road is located in the Catawba River Basin (designated by the City as the Lower Lake Wylie Watershed), which impacts having more open space, less impervious cover.

***Recommended Additional Contacts:***

- Prologis
- Local industrial developers such as Childress Klein, specifically Fred Smart, and Beacon
- Other local developers of single family residential and multifamily residential, office, retail, including Lincoln Harris

Silverman notes that the “out of town” developers are more likely to view the Charlotte market primarily as a monetary investment, whereas the local developers have a deeper understanding and vision for the character of the city and the identity of the Airport West area.

### *Key Considerations:*

- The study area seen as the next big move in Charlotte, Areas north and south especially seen as prime for industrial development, the area needs planning with a clear vision of the targeted or desired development and land use types in order to capitalize on this opportunity.
- Understand the needs of each land use, what will facilitate development, what will limit development. Natural growth of the industrial market leasing activity will depend on the connectivity and access. Retail, office, residential best suited for the areas east and west of the airport, while industrial uses best suited for north and south of the airport.
- Collaborative, efficient transportation will be needed to maximize development potential. With I-485 already in place to provide north-south connection, the east-west connection should be strengthened to provide a more efficient flow of traffic.
- Purpose of transportation is to move vehicles effectively; create roads conducive to encourage continuous free flowing access and movement.
- Advised against emulating the road conditions of Billy Graham Parkway, which does not prove successful for freight flows due to congestion and stop-and-go traffic
- Understand the changing customer and market demands of industrial uses, remaining adaptable to these changes as the City of Charlotte continues to grow
- Facilitating collaboration between public and private sector to ensure stronger and sustained economic growth

Keith Glenn

Senior Vice President, Crescent Communities

Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashely Landis (CDOT); Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)

3/11/2015, 10:00 am

## **Background**

Crescent Communities is a real estate and community development company based in Charlotte, North Carolina. Crescent Resources was founded in the 1960s by Duke Energy Corporation, the entity responsible for damming the Catawba River. From 1969 to the late 1980s Crescent remained a timber and land management company for the 3,000 acres along the Catawba River inherited by Duke Energy. In the later decades of the 20<sup>th</sup> century, Crescent made significant land exchanges that established the company as a player in the real estate market. Today, though no longer affiliated with Duke Energy, Crescent remains a leader in residential, commercial, and mixed use developments throughout the South. Crescent's restructuring allowed the company to assess their current land portfolio and allow for greater diversity in their product type that would better serve today's market. Crescent Communities focuses on creating public spaces, community building and place-making, with an emphasis on green design.

Mr. Keith Glenn was referred by Crescent Communities CEO Todd Mansfield for his residential real estate development expertise as well as his longstanding knowledge of the Airport West Area. Glenn has been with Crescent for over 16 years, beginning in the company's financial department. Glenn's shift to real estate development took place over 10 years ago. His portfolio primarily includes greenfield development and suburban community master planning. Glenn remains actively involved in the future planning of Crescent's land holdings in the study area, interacting often with Charlotte's real estate community.

## **Perception & Character of the Airport/West Corridor**

- Crescent Communities has held onto land in the Westside for decades; until now, the remaining 928.7 acres of land has been considered a low priority for development in the greater Charlotte region. With Crescent, Glenn is now actively exploring the future development opportunities for their property as the Westside's amenity value continues to grow, influenced by logistics investments ("logistics in terms of air and ground transit are way above average"),
- Crescent previously sold various land holdings for Vineyard Point and portions of the Berewick development, though neither of these communities is seen as "fitting into a continuous development solution" for the entire Airport/West Corridor. Glenn expressed that both developments are "more of the same" in terms of traditional building/lot development. Developments in the Airport/West area, more broadly in Charlotte's Westside, have not been master planned; they are instead isolated piecemeal developments or redevelopments that have resulted in perpetuating the perception that the Westside has been unintentionally left behind as Charlotte grew to the largest metropolitan region in the state.

- Other factors have contributed to the underdeveloped character of the area: proximity to a major airport that is often viewed as negative or undesirable, perception of the area as only supporting blue collar employment centers, and the perception and reality of less desirable schools. Glenn cited school districts as the number one driver of single family residential home sales in the Charlotte metro market.
- Current homes along the Catawba River lack consistency; there is a history of smaller, generational cabins (most of which were small lots sold off by Duke Energy) for temporary residential use, i.e. weekend cabins, which do not foster development of the area's identity as a full time residential area. Glenn noted the difference in the value of property that faces the water would vary, especially since some waterfront lots face out to Duke Energy's Allen Steam Plant.
- Waterfront property along the Catawba River could increase value anywhere from 5-6 times for being along the water versus second row. The second row with water view will, with certain buyers and the depth of those buyers, carry a slight premium depending on how Crescent either muted or accelerated the amenity value of the area. In the past, Crescent has provided shared or centralized boat docks in one location for lake or riverfront access.
- The area has naturally evolved for programming that is more about environmental stewardship and sensitivity, creating a connection to the water, including high kayak usage. At present, the area is not a motorized recreational amenity.
- Loose attachment to the U.S. National Whitewater Center. Glenn views the land as having a beautiful landscape, providing a physically appealing amenity that would ideally be developed and marketed to highlight unique environmental features. The topography poses a challenge for development, though some developments in the Carolinas, particularly Fort Mill's Riverwalk, are finding solutions to meet demand while capturing the amenity value of the Catawba River.

### **Connectivity: Transportation and Alignment Options**

Glenn thought that the current alignment appears to have been chosen on both the potential for the area's vacant land and on the topography. He envisions the road alignment as supporting the concept or visionary framework for the entire area; it is unclear if the current alignment would facilitate this type of framework. Glenn foresees "interest in buying the tracts of land where the road may come through" in anticipation of future development activity, emphasizing the road alignment's impact on future development.

#### *Primary connectivity questions & considerations:*

- How will infrastructure contribute to creation and realization of a vision for the entire area?
- The north-south connection has much higher influence on activating the region for new residential and commercial developments
- East-West connections (i.e. Garden Parkway, West Blvd) "more important for the bigger, regional long term vision of connectivity to the region."

- Development likely to happen “east to west,” requiring an efficient transition to the looser land uses moving westward to the Catawba River; how will infrastructure facilitate this transition?
- Road character
- Impact of shifting alignment through Crescent land:
  - Could create road character via high value land along the road
  - Potential for better connection to town center
  - Topography could be a challenge
- Creating optimal connectivity:
  - Connectivity to the Westside, not just from the Westside (make the Westside a better destination)
  - Greater connectivity to downtown would be “ideal,” since “connectivity is a benefit.” Developers can sell some on the promise of planned public transit (“it’s an investment pitch”) as creating efficient, reliable, modern connectivity.
  - Must create connectivity to water and views
- Efficient arterial alignment will either add or detract value
- How to handle current and projected constraints from I-485, Berewick area (including Highway 160-Steele Creek Road)

### **Future Study Area Planning & Long-Term Vision**

Glenn sees nothing but opportunity for the area. There is nowhere else in the city that is a “clean canvas” of undeveloped acreage. Glenn said, “It’s a hidden gem of a corridor, with consistent connectivity to the City Center.” Without a comprehensive master plan for the entire area, the Airport/West area may never find its own identity. Glenn stressed how important it will be to create a collaborative vision and identity for the entire study area. For Glenn, utilizing the study area’s amenities will differentiate future development as a master planned community rather than pockets of development. Glenn believes Crescent’s residential strategy provides the necessary framework that will catalyze development in the Westside and create long term success.

Glenn does think that the CLT Area has manufacturing and warehousing opportunity, but Glenn would prefer to see more of an economic engine, with more office and less industrial development. Industrial, office, and flex space would be best suited between the new Dixie River Road alignment and I-485. Class A office nearby I-485 would also help attract corporate clients. Moving south, Crescent would create a town center, tightly joined to the commercial development, with a “looser configuration” into single family residential and some multifamily residential.

With Crescent, Glenn wants to provide quality products for single family residential along the western land area: “There is an opportunity for the rebirth of the Westside utilizing good architecture and good product, possibly smaller, but at a good price point.”

#### *Primary planning considerations:*

- What collaborative vision will create an identity and sense of place for the entire 7,000+ acres in the Airport/West area? What will it take to bring all players together?

- Activation of the entire study area, including the 900+ acres currently held by Crescent,
  - Ensure commercial development that is complementary to the “bigger picture,” the larger vision for the area
  - Development pattern likely to occur from east to west, “Crescent needs development along I-485, something that will make the southern town center work.”
  - Relationship between employment types and residential developments: With “serious office,” the markets will respond with the creation of substantial retail and restaurants which will in turn support a greater vision. Without the office development, Glenn believes that the residential market will face a lot of challenges.
- Marketing a unique, genuine environmental story for the area; a story and vision that are not greenwashing
  - Programming environmental stewardship and sensitivity into the existing character of the area
  - Efficient use of real estate: doubtful that the vision or topography would allow for a golf course. Instead, promote and create greenways, trails, and environmental linkages; potential for environmental center and/or a school on the property at Little Paw Creek.
- Capturing the generational, lifestyle shifts in demand that have sway on residential positioning and product development:
  - Need for multifamily rental property in today’s market since multifamily living “is not entirely an economic choice, it is a lifestyle choice.” Younger generations are choosing to rent and not being tethered to a house especially in the downturn.
- Create a greater quality and diversity in product type that will provide price points that encourage socioeconomic diversity. For Glenn, the “highest and best use of residential will be to allow everyone the opportunity to live in the area.”
- City planning: Glenn was under the impression that the City is thinking the study area’s opportunity is to be purely industrial, such commercial uses would impact the type of residential developments
- In favor of annexation

*Primary Concerns:*

- Changing perception, creating identity
  - How will airport continue to grow and how will flight patterns, noise contours impact real estate development?
  - Perceived lack of employment centers
  - Perception and reality of the local school districts. The land could appeal to a large swath of buyers if schools are improved. Glenn noted that Berewick’s new school is performing relatively well, highlighting the community initiative to “break the cycle.”

- Rather than a continuation of the same, want to shift to a greater vision for the area. Continuation of Berewick does not activate the market to its fullest potential. Similarly, not want to recreate what is already happening, things that are do-able already in areas like Uptown.
- Meeting Charlotte residential demand despite market shifts including rising construction costs are rising, rising replacement costs, rise in rentals vs. ownership, and difficulty for first-time buyers in securing mortgages
- Topography, Crescent’s current holdings have substantial topography
- Environmental sensitivity, backlash for impacts of erosion, silt on Catawba River

*Recommended Additional Contacts:*

- Multi-modal, intermodal stakeholders with an interest in airport development
- Speak with major landowners, such as Wayne Cooper, Elam and Brown.
- Pappas Properties, Childress Klein

*Key Considerations:*

- Infrastructure must come first, will catalyze major development
- Major public-private collaboration needed to create the long-term vision for the entire area and see it realized
- Residential, retail, and office seen as the “highest and best use of the area”
- Development likely to evolve east to west; need the commercial market and development, likely a continuation of Berewick at first, to “hatch” in order to create residential demand.
- Certain employment and residential types have a symbiotic relationship, especially for Commercial Mixed Use developments (“one type of certain employment serves residential better, and residential serves it better especially CMU). Need to understand relationships between types employment offered/job creation and residential demand.
- Create a destination to “live, work, play” in the thousands of acres (including Crescent’s land) that would meet the market and not drive away the existing residents and occupiers, valuing the diversity and the appeal of the existing history of the area
- Environmental amenity leveraged as an asset to be preserved, utilized for recreation.
- Solve the real problems and the negative perception to sell to the next generation that will move to the area.
- In favor of annexation

Wayne Cooper, Land Owner

Jubal Early- Broker, Lincoln Harris

Attendees: Imad Fakhreddin (City of Charlotte), Ashely Landis (CDOT); Greg Boulanger (HNTB),

Michael Gallis & Amy Rowland (MG&A)

3/11/2015, 2:00 pm

## **Background**

Mr. Wayne Cooper is a major landholder along in the Dixie Berryhill area along the Catawba River. Cooper is active as Chairman of the NC District Export Council and Charlotte Foreign Trade Zone, appointed by the U.S. Secretary of Commerce, where he focuses on strategies to grow the economy in Charlotte region. He serves on the Board of Directors for the Charlotte Regional Partnership, the NC World Trade Association, and remains an active affiliate with many other regional organizations and institutions. Cooper was selected for his valuable insight on the study area and how the City could leverage investments in the area to increase immediate and long term continuous economic activity. Cooper suggested Mr. Jubal Early, Senior Vice President of Brokerage Services with Lincoln Harris, be in attendance for his involvement in fulfilling the company's land use and development plan in the Airport/West Corridor. Early has been in talks with numerous landowners in the area.

## **Perception & Character of the Airport/West Corridor**

When Cooper was looking at buying property in the Charlotte area, he recalled numerous people advising him against buying out in the Westside. Despite the somewhat negative perception of buying in the Westside (the "wrong side of town"), Cooper liked how close he was to "everything" via Wilkinson Blvd. and I-485 while still having the solitude of the countryside. When he first bought, Cooper acquired 20+ acres and a 3 acre lake then picked up more land adjoining to the property over time. Cooper enjoys the proximity to the airport and the city, he can get downtown in 15-20 easy minutes via Wilkinson and West Blvd, I-485; Can get on 85- Brookshire freeway; can access hospitals in Pineville and South Tryon; "just about everything".

Cooper stays active in land use plans, airport plans that affect the Airport/West Corridor. According to Cooper, he cannot hear air traffic from his property, however he can still hear the hum of 485 saying that, it is "amazing to be that close" to the runway yet not be impacted by the noise.

## **Connectivity: Transportation and Alignment Options**

According to Early, Lincoln Harris has studied the area with LandDesign, and has laid out road alignments and development plans that will maximize value, though neither Early nor Cooper knew of any specific roadway alignments. Early noted that the plan will create a grid of right of way similar to the way Harris did it in Ballantyne, putting roads through the development. Though Early noted that the roadways are limited to the site area, not extending north or south of the planned area. Lincoln Harris has come up with a plan after talking with many public and private entities. Early noted that Tracy Dodson has been in discussion with the City regarding the site plan.

### *Primary connectivity questions & considerations:*

- Alignment in the north roadway should be farther west so that the parcels are large enough to develop on.
- Careful consideration of the connection to Berewick and the new retail development to avoid congestion.
- Will be important to connect to Gaston County: the Lincoln Harris design incorporated a bridge, which could be publically or privately developed.

## **Future Study Area Planning & Long-Term Vision**

Lincoln Harris has a first phase identified: the area of about 150 acres right up against the I-485/West Blvd. interchange that would be the catalyst of the high economic and employment generation. Early noted that the Lincoln Harris/LandDesign team has been in talks with the City of Charlotte. Early also noted that the plan will maximize the land's environmental assets, including a large 40-acre lake, a central amenity that would serve as the primary detention area. Cooper appreciates the solitude and the remoteness of the area, "the peace among the greater Charlotte metro region" and is in favor of preserving some of the environmental character. As the area develops, Cooper envisions growth in commercial development.

Currently, the team does not have plans for distribution development, and envisions distribution will be located east of I-485. Cooper noted that as soon as the Panama Canal widening opens, it will greatly increase the need to invest in efficient and reliable industrial development, namely distribution. Cooper explained that South Carolina has been successful in moving freight throughout the state, helping to attract new manufacturing to the state in recent years. For example, the foreign trade zone in Greer, South Carolina has been the key to the success of South Carolina's trade. CLT's former Aviation Director wanted the foreign trade zone, but was never able to realize this goal. Cooper believes a distribution hub in proximity to the intermodal yard would boost Charlotte's position in the global freight network.

### *Primary planning considerations:*

- The entire area is vital to the future of the City, must be planned correctly to maximize value for the City and the region
- Area and development need to have global attraction
- Must have connectivity; bring the connectivity throughout the entire area; road upgrades will stimulate development
- Sewer and water necessary for development & growth
- Views development of the area more about economic development around a transit corridor
- Plans will adapt to changing conditions

### *Recommended Additional Contacts:*

- Tracy Dodson (Lincoln Harris) and Dale Stewart (LandDesign)
- Public/community stakeholders, including residents

*Key Considerations:*

- Proximity to airport, major interstates, proximity to Center City make the Westside attractive to businesses
- Area needs to cultivate global demand and support major airport activity, envisions Crystal City-type mixed use development plan
- Considers the projects focused on economic development around a transit corridor, with consideration for movement of new employment housing residents
- The current Dixie River Road alignment tight to the interstate where the road connects with Old Dowd Rd. The roadway begs for careful consideration of the connection to Berewick and new residential, retail, and services development to avoid congestion.
- Sees the area as a vital part of the City's future, Lincoln Harris has created a visionary development plan for the area including town centers, road alignments and other infrastructure construction
- Plan has identified 150 acre area for initial development that would be the catalyst of high economic and employment generation.
- Plan would incorporate access to Crescent Communities' 930 vacant acres for employment housing in support of the initial commercial development.
- Suggested interview with Tracy Dodson of Lincoln Harris, Keith Glenn of Crescent Communities and Dale Stewart of LandDesign to better understand the specifics of the Lincoln Harris development plan

Brian Schlenker

Assistant Plant Manager, SteelFab

Attendees: Imad Fakhreddin & Tim Greene (City of Charlotte); Ashley Landis (CDOT); Greg Boulanger (HNTB); Michael Gallis & Amy Rowland (MG&A)

3/13/2015, 1:30 pm

## **Background**

- SteelFab, Inc. is a national leader in fabrication of structural steel that owns and operates 72.5 acres on Charlotte's Westside.
- SteelFab is located west of Charlotte Douglas International Airport, southwest of the intersection of Wilkinson Blvd. and I-485, off Old Dowd Road. SteelFab has occupied their current Charlotte property since 1975, expanding as needed over the last 40 years.
- SteelFab's Charlotte plant services areas along the East Coast and Midwest including New York, New Jersey, Connecticut, Washington DC, as well as Texas, and Wisconsin. SteelFab has had prior conversations with HNTB concerning alternatives to the crossing over the Norfolk Southern rail line. SteelFab also maintains a strong presence in Alabama and Georgia, as well as Texas though the Texas plant is smaller, unable to handle larger work, which is then sent to Charlotte plant for completion and final destination shipping.
- SteelFab employees over 300 people at Charlotte plant. Employees are spread across the Charlotte metropolitan area: about 33% residing in Gaston County, 40-60% in Mecklenburg County, and a small percentage in Rock Hill; Schlenker knew of only one employee living in the study area.

## **Perception & Character of the Airport/West Corridor**

- The plant in the "last relatively undeveloped area in Mecklenburg County"; remote area surrounded loosely by neighborhoods, either located north of the plant on Wilkinson Blvd. or south of the plant off Walkers Ferry Road. Schlenker described their property's area as having a significant amount of light and noise pollution. Plant has no direct neighbors, with enough of a natural buffer between the industrial plant and the existing residential areas to avoid noise complaints. Schlenker noted that the plant would prefer developments in such a way that the plant continues having no direct neighbors.
- Western property line backs up to a ravine at the edge of the Catawba River. Natural features not seen as an amenity for business operations, though Schlenker mentioned that he and his employees have utilized the resources in the study area for personal recreation.
- As business continued to grow, SteelFab's Charlotte plant underwent several expansions, including a recently completed 240,000 sq. foot expansion; looking at a site map, Schlenker said that one can see the growth of the plant in the current configuration of buildings. Schlenker described the current layout of the plant as somewhat inconvenient: "the plant would have a different layout if they were to start over today but the company has had to adapt and adjust according to business and the existing property."
- Area lacks retail and services: Most of the plant workers eat lunch on site since there is "nowhere to each lunch".

### **Connectivity: Transportation and Alignment Options**

- Transportation needs, which can change at a moment's notice, dictate all logistical decisions for shipping and receiving.
- SteelFab's current location includes a rail spur off the Norfolk Southern rail line operating through the study area. SteelFab only receives shipments by rail, the company has never shipped product from the Charlotte facility via rail.
  - Schlenker noted that the recent intermodal expansion has not had any effect on SteelFab's business operations.
- Trucking has made logistic sense for SteelFab's custom work, provides flexibility for the company to change direction if unseen conditions, weather, special events, etc., shift direction or timelines of fabrication and shipment. The company's trucking needs vary with business, at time utilizing extendible trailers, permitted escort loads, and very wide loads that require police escorts.
  - SteelFab receives shipments into the plant at the Eastern entrance off Old Dowd Road. Trucking shipments generally leave the plant turning onto Old Dowd Road from Walkers Cove Trail.
  - If trucking shipments are unable to make the turn, which immediately crosses the rail line after exit, then trucks exit from the receiving entrance into SteelFab's adjacent storage and turn around. After exiting to Old Dowd Road, the trucking route takes trucks to Sam Wilson for access to either I-85 or I-485.
- Trucks are unable to access the West Blvd. /I-485 interchange as the vehicles are unable to make the right hand turn by coming down Wallace Neel Road, to the intermodal expansion. This right turn has proven to be a limiting factor for SteelFab truck shipments.
- Preference for alignment to stay West between SteelFab's current property and the river if the road will primarily serve residential development, devoid of heavy traffic and wide loads.
  - Mindful of all uses, including SteelFab if they choose to utilize road for deliveries. For example, tree lined or heavily landscaped road side design be mindful of the potential for wide loads on the roadway.
- If Dixie River Road and Garrison Road are primarily for residential/passenger movement, it would be ideal for SteelFab to have a frontage road for access to I-485 and I-85. If there was a frontage road on the Westside of I-485, they could access the frontage road with land between SteelFab current property and I-485.
- Improved safety and accessibility at Old Dowd Road- Norfolk Southern rail crossing
- Impact on current transportation: shipping entrance and exit, mobility through area to interstates
- Bike lane and pedestrian access could be appealing for employees to consider relocation closer to the plant.
- If SteelFab stays in their current location, the company would prefer the road west of the property, with possibility for land trading. This would leave the remaining land between the current plant and I-485 open for future expansion. A frontage road would be highly useful for the company in this configuration if the proposed road projects are targeted to

serve residential development. Schlenker expressed a high level of interest in starting over on a greenfield site, giving the company the ability to build a new plant with a more efficient site plan. Schlenker also noted that the company has acquired a 100 acre rail-served site in South Carolina that could be utilized if necessary. Schlenker said that if moving to a site in Charlotte was not possible, the company may consider moving to South Carolina location.

### **Future Study Area Planning & Long Term Vision**

Current SteelFab site plan is a product of 40+ years of growth and expansion. SteelFab is willing to have open conversations with the City regarding the future planning in the area, specifically relating to the possibility of acquiring the right-of-way for the road and what it would mean for the company's operations. Schlenker explained that the owners are content with their current land use and growth, including the recent expansion.

Though currently not part of the City of Charlotte, the property is currently on city sewer and water, located in proximity and served by the West Mecklenburg fire department and City police. The plant does have utility lines running through the property: with an underground electric line that feed into two underground transformers, an above ground line feeding an above ground transformer near the recent plant expansion, a natural gas line, and level three fiber optic lines. SteelFab "does not go near" the level 3 fiber optic lines.

#### ***Primary planning considerations:***

- Interstate and rail access with enough room for current operations and opportunity for future growth. At the time SteelFab does not envision expanding in the near future; rather the company is pushing growth in other markets before investing again in current Charlotte property. The company does have some storage space concerns for both raw and finished product storage; SteelFab is currently leasing storage lots in Gastonia. Despite the offer to expand into the property east of the plant, the cost of the grading was greater than the cost of leasing storage in Gastonia.
- Cost
- Impact on current employees:
  - Potential to draw employees closer to the area, from Gaston County and South Carolina. Schlenker said that traffic to and from Rock Hill can often add hours to employees commute depending on the time of day. Schlenker shared a story of some employees moving closer (within 5-10 minutes) to the plant.
  - In the event of SteelFab relocation, the company could not move too far from where they are since they have an established employee base now and cannot afford to lose employees on account of longer commute times.
- Ability to start over, streamline site plan. If the company did move, possibility to disassemble some of the existing facilities but other facilities like the main shop would likely be scrapped due to age of facility.

#### ***Primary Concerns:***

- The topography of the land does pose some challenges for future expansion and site development. At present, the company must be careful to take erosion control measures. Topography and the related costs of grading & site development to transform land into useable form, especially with uncertainty over whether or not business will keep up demand for continued business.
  - Recent unsolicited offer made by property owner, Katherine F. Donahue, for the land adjacent to SteelFab's eastern parcel boundary. The land area was recently felled for timber. After analyzing the site, SteelFab concluded that the site's topography limited the utility of the land for the company; the site would require costly grading in order to create a level, usable site at a price the company did not think was worth the investment at this time. Schlenker is unsure about the current property owners plan for the parcel.
- Would plant lose land for road upgrades? If so, where will the company get land back?
- Content with space and location, prefer to remain isolated/have no neighbors. SteelFab bought the property across Old Dowd Road to turn into storage after several incidents involving stolen property from the residential community formerly located in the property.

***Recommended Additional Contacts:***

- Property owners in the area, including Katherine F. Donahue

***Key Considerations-***

- Road construction and improvements conducive to SteelFab's current transportation needs; preference for alignment to stay west of current SteelFab property as long as the city provides equal or more developed land directly to the east of our property. Our first preference would be to not disturb any of our property.
- Impacts on company future growth: Road west of property allow for SteelFab to continue growth, operations between road construction and I-485 as long as the city provides equal developed land directly to the east.
- Potential residential draw for current employees of a well-established business currently living outside the area.
- Would entertain idea to trade land, with additional benefits to SteelFab for relocation, for a greenfield site with strong connectivity to interstate and served by rail spur, as well as enough room for current operations and room to grow as long as city would provide funding for relocation on office, plant and equipment. Location would also have to be accommodating to current employee base; could not move to a location that adds 20+ minutes to current commute.
- Currently not considering annexation

Childress Klein

Chris Thomas, Partner and Landon Wyatt, Partner

Attendees: Ashley Landis (CDOT); Imad Fakhreddin (City of Charlotte); Alberto Gonzalez (City Planning); Greg Boulanger (HNTB); Michael Gallis & Amy Rowland (MG&A)

3/19/2015, 2:00 pm

## **Background**

Childress Klein is one of the top industrial, office and retail developers in the region. Childress Klein offers valuable input on the market characteristics of the airport area, with an emphasis how the Airport West Area fits into the greater Charlotte metropolitan area. Childress Klein can offer insight on how transportation investments impact development patterns, attracting and retaining commercial economic activity. Childress Klein owns and maintains property along Billy Graham, within the CLT Strategic Plan Development Area. Wyatt can also provide in depth understanding of what the City could offer in order to maximize developments in along the investment corridor. Chris Thomas is the Partner responsible for the development, marketing and leasing of retail real estate projects in the Carolinas. Landon Wyatt is the Partner with the primary responsibility for the company's industrial business in the Carolinas. Wyatt emphasized that "there is no one who knows this land better than Thomas," who has been active in the area for over 25 years, including work with CDOT and NCDOT 10 years ago on the Dixie River Road alignment.

## **Perception & Character of the Airport/West Corridor**

- Both Thomas and Wyatt agreed that the Airport West corridor has not yet developed a market; describing the area, in Wyatt's words, as "nascent, with complete potential for creating an identity in an area that is not located within a set market at this time." They agree that the Airport/West corridor is Mecklenburg County and the City of Charlotte's "last frontier" for new, large scale greenfield development.
- Development in the 7000+ acres cannot be done piecemeal. They emphasized that the area needs an identity. Billy Graham Parkway is seen as a corridor that "has not developed as it was meant to," with very little left in the corridor to create something different. The Billy Graham Parkway corridor could be an opportunity as the area develops and changes the current character and perception.
- Major implications of the area's topography and location in the Catawba River Watershed. Thomas cited this as a prominent issue in the development of the Charlotte Premium Outlets, costing a great deal of money and time that "almost wrecked" the project. Thomas explained that grading activity, site development and post construction erosion control, etc. cost twice as much on a per acre basis than expected. Wyatt also emphasized that "all eyes will be on the area" as development kicks off, with the community watching how development alters the sensitive environment. Wyatt explained that residential developers are able to work with the topography most of the time, whereas commercial development, especially industrial and retail land use, requires a greater percentage of flat land. Thomas noted that the noise cones and other dynamics have made the area difficult for the residential density necessary for quality retail. According to Thomas, the Charlotte Premium

Outlets exist and are successful because of the location's regional draw and connection; saying that "the Outlets are located in a 12 county trade area."

- The perception and reality of schools in the area poses a large marketing hurdle as Charlotte's residential market is driven by school assignments. Thomas explained that this lingering negative perception is "irrelevant" to those coming from out of town to see the area or evaluate potential.
- The Highway 49/Highway 160 interchange (near Rivergate) is the "epicenter" south of the Airport/West study area. Crossing north over the I-485/Highway 160-Steele Creek Road interchange, Thomas sees the character of the area change dramatically due to the continued growth of the Airport. The Berewick town center was also described as a nice neighborhood with reasonable success thus far.

### **Connectivity: Transportation and Alignment Options**

Thomas' extensive background in Charlotte and the Westside, including developments at the Charlotte Premium Outlets and Rivergate, he understands the current and projected transportation pressures in both the Airport/West and Whitehall/Ayrsley study area. Upgrades were provided at the Highway 160-Steele Creek Road/I-485 interchange for the increased traffic brought by completion of the Charlotte Premium Outlets. The new outlets and continued development in Berewick will result in a continued increase in movement along Highway 160-Steele Creek Road. Thomas explained that Highway 160 serves the geography of the south, including Westinghouse the second largest employment center in the region. Since most Westinghouse employees live outside of the employment hub, the area is at risk of becoming overly congested as new development projects are finished. Thomas expressed major concern about placing any additional burden on the Highway 160-Steele Creek Road/I-485 and the Arrowood Road/I-485 interchanges.

From this perspective, the best way to create continuity, accessibility, and maximize the efficiency of the area would be to move the current Dixie River Road alignment east (specifically referring to the portion of the road from the intersection with West Blvd./the proposed Garden Parkway alignment down to the meeting of Dixie River Road and Garrison Road). This alignment would shift the southern access of the current proposed alignment to begin where Dixie River Road and Shopton Road meet. Additionally, both Thomas and Wyatt agreed that Dixie River Road would better serve the entire area if the road was extended past the current T-intersection, formed with Highway 160-Steele Creek Road, to create a T-intersection with Arrowood Road. This through road would relieve some of the pressure from the current Highway 160-Steele Creek Road/I-485 interchange.

Thomas expressed that he does not understand the thinking behind creating the current proposed alignment. The road proposed by Thomas and Wyatt would run through what is currently planned as the Berewick Regional Park.

#### *Primary connectivity questions & considerations:*

- Who are targeted users of the new/upgraded roads?
  - Not a wise public investment to plan around trucking due to low potential for large scale industrial development in the Airport/West Corridor

- Will need East-West connection:
  - Crossing the Catawba River into Gaston County; Thomas noted that the Highway 49 Bridge crossing the Catawba River is “almost at capacity.” He also said he knows of at least 20 new developments planned for the South Carolina side of Lake Wylie that can be accessed via Highway 49, calling it an “exodus” of development to South Carolina.
  - Approval of the Garden Parkway would have taken 30-40 minutes off trip time from Hickory to Charlotte; would bring trucks around the south side of Gastonia and directly into the airport area
- How could Dixie River Road’s southern alignment be modified to alleviate current and future congestion, especially south of the Airport/West Area?
  - Expressed that Highway 160, from the Highway 49 intersection travelling north to the I-485 interchange should be one of the highest priorities for CDOT/NCDOT.
- Maximize road for development:
  - Modifications to Dixie River that could create Charlotte’s own Satellite Blvd. (Atlanta, GA) to spawn tremendous commercial development, creating a commercial site with two fronts.
  - However, “larger thoroughfare will bring development but it will be a bigger barrier to walkable environments” if it becomes a bigger, wider movement of traffic
- Interstate access and visibility
- Connectivity to convenience sites

### **Future Study Area Planning & Long-Term Vision**

Wyatt, saying that his analysis might be broad given the large study area, explained that industrial will likely be “very difficult” west of I-485 given the watershed and topographic issues. Due to regulations of development and land use in the watershed, the economic utility of the land is cut in half for industrial. On top of that, there is a challenge with the topography, as most industrial and retail sites need a “tabletop.” In evaluating potential project sites, there was agreement that land with slopes above 10% were likely to be cost prohibitive. Industrial development requires the creation of large, relatively flat areas for building pads and supporting parking. Both the watershed and topography issues tend to “knock development” from the start. For reference, 300,000 sq. ft. is the average median size of new construction in Charlotte’s industrial market, resulting in demand for a site of 600,000 sq. ft. for or 12-13 flat acres for industrial development. Thomas said that residential, and office to an extent, can work more with an area’s given topography.

Both Thomas and Wyatt viewed office, retail and residential as the possible highest and best land uses in the Airport/West Area. However, the area will need greater connectivity to Highway 160-Steele Creek Road, Arrowood Road and Whitehall/Ayrsley for access to existing commercial and services.

Thomas advocated for realigning the road east, swapping the county-owned land slated for Berewick Regional Park for the City owned land along the Catawba River. This would allow for better development for both land uses: Park with direct access to the area’s most valuable natural amenity and allow for commercial development.

*Primary planning considerations:*

- “Major activity” coming between the Arrowood Road and Steele Creek Road interchanges with I-485: there are 280 acres in the Whitehall area being planned primarily for industrial and another 280 acres between Arrowood/Brown-Grier, Steele Creek and 485 that could eventually have some office as part of a master planned multiuse development. Wyatt pointed out that even these 280 acres slated for industrial developed have “really challenging topography” despite being outside of the watershed boundary.
- Connections to the rest of Mecklenburg County, Gaston County will influence planning of the Airport/West area
- Demand shifts: walkability is a large demand now; workforce appreciates walking to lunch etc. even if they have to drive to work; The Airport/West area must draw businesses in for more than just “9-5 activity.”
  - Fort Mill (IPL, Lash) both pedestrian driven users, they are building a town center so employees have the opportunity to walk, creating a better urban experience (the opposite of Ballantyne).
  - Thomas used the recent site search and selection for Sealed Air headquarters to underscore what businesses are looking for in new office sites. Sealed Air specifically would not choose a site unless the location was such that its employees were able to walk to lunch. The area is lacking major services, currently there are no sites west of the airport for lunch.
- Office and industrial in the Whitehall area- already amenities in place in the interchange, already across from outlets and Berewick. They do not have to invent own restaurants and services.
- Adapting to major shifts in the retail industry
  - Today the retail market has shifted such that retailers will no longer make deals on projections. Retailers evaluate sites on what is in place now (built, not approved). The demographics will influence the movement of retail into the area.
  - Interstate visibility
- Potential land trades: Could the planned Berewick Region Park (currently County owned property) be traded for land located directly on the water? Park should have access to water front as an amenity to take advantage of the area’s natural resource.

*Primary Concerns:*

- Multiple cost prohibitive issues & regulations that knock development from the start. Each of these, listed below, increases costs for development, “making [the developer’s job] much more difficult” and leaving developers wondering if development is feasible.
  - Critical and Protected Watershed Overlay regulations
  - Topography (grading requirements): slopes are evaluated on a per site basis
  - Post-Construction Stormwater Ordinance (PCCO)
  - City of Charlotte’s Tree Ordinance whereby commercial sites must have a 15% tree save
  - Urban Street Design Guidelines.
- Reaction from public as development moves forward
- Concern over past experiences where Childress Klein was not able to realize their site plans: In the past Childress Klein was forced to adapt to the City’s zoning ordinances, unable to fulfill their original plan.
- Current lack of services for residential and workforce populations, inability for businesses to be more than a 9-5 operation if the customer base is limited
- Millennial demand for walkable communities is harder to replicate in an area like the study area as it is not considered an “urban lifestyle.” Millennial generation may not be interested in living in this area, that the millennial are more experiential.

*Recommended Additional Contacts:*

- Pappas Properties

***Key Considerations-***

- Current market is what is now seen as “nascent” corridor, the “last frontier.” Generational area with a somewhat negative perception, lacking an identity.
- Development in 7000+ acres cannot be done piecemeal; needs an identity
- Residential, office and retail considered the highest and best use of the Airport/West Corridor. Industrial concentrated south of the airport or south of the study area in Whitehall-Ayrsley (primarily for existing connectivity and topography)
- Multiple conditions that can make development in the area cost prohibitive
- Residential market is driven by school assignments, the perception and reality of schools in the area poses a marketing issue.
- Demand Shifts:
  - Millennial demand will be harder to replicate in the Airport/West area
  - Walkability is a large demand now when businesses look for office space
  - Retailers will not move into an area without necessary demographics
- Develop park property (owned by the County north of Dixie River Road, adjacent to I-485) and put the park elsewhere (along the waterfront), allowing for better development, high connectivity to Berewick and new major retail center (Charlotte Premium Outlets) and provide relief on some of the existing and projected congestion in the Berewick area.
  - Cited Satellite Blvd. in northeast Atlanta as a model for commercial development with two active road fronts

Joe Cartafalsa

Owner, CLT Air Freight Carriers

Attendees: Imad Fakhreddin and Tim Greene (City of Charlotte); Ashley Landis (CDOT); Greg Boulanger (HNTB); Michael Gallis & Amy Rowland (MG&A)

3/26/2015, 9:00 am

## **Background**

CLT Air Freight Carriers, owned and operated by Mr. Joe Cartafalsa and his son, is trucking and warehousing company located 5 miles south of CLT and has been serving the Carolinas for over 19 years. CLT Air Freight Carrier's wide customer base includes international and domestic freight forwarders, US Customs Brokers, airlines, road-feeder services, shippers and consignees. CLT Air Freight Carriers boasts experienced dispatch operations, over 105,000 square feet of warehouse storage space and import operations in both Charlotte and Raleigh. The company plans to open a 75,000 sq. ft. space in Charleston in 2015. CLT Freight Brokers provides services from start to finish including expedited shipments, exclusive use vehicles, two man delivery, port and rail containers, and oversize shipments.

## **Perception & Character of the Airport/West Corridor**

- Trucking and warehouse company travelling between Shopton and Yorkmont, requiring access to I-85, CLT and the Norfolk Southern Intermodal yard. Managing 250 deliveries and pickups in a day (imported and exported material), with sizes ranging from WB 53-WB 60 (the distance between the wheels) trailers to serve over 500 local customers. The company chose their current site 19 years ago because it was a "good deal", and all the freight forwarders ("85% of freight forwarders are in this area [Zone 4] ") and trucking activity was taking place on Beam Road and Yorkmont Road.
- The business is impacted by proximity to customer base, and they are currently satisfied with their location in Charlotte, as well as location in Raleigh. Agreed that the company's attraction to the current location (in Zone 4) is related to the current ease of access, and the need to make sure freight flow is maintained.
- Business is connected to the intermodal yard, picking up containers is now more convenient and they have seen a "substantial increase in container service." Additionally, it is much easier for drivers to make trips to the airport intermodal yard rather than the North Tryon location. The operation has expanded now as the intermodal yard got bigger and more convenient, enabling faster turnaround for the company.
- Has not heard complaints from drivers on congestion in the study area at this time, but has heard complaints from drivers on ease of pick-up in the intermodal yard.
- Has been impressed by the airport and the accessibility improvements.
- A high percentage of the company's employees live in the Fort Mill area.

## **Connectivity: Transportation and Alignment Options**

Though unsure of exact routing used by his drivers, Cartafalsa West Blvd / Highway 160 has been their primary road for access to major local and regional thoroughfares; therefore the design of the West Blvd I-485 interchange will impact access to the Airport/West Area.

### *Primary connectivity questions & considerations:*

- Would the road primarily serve commercial or residential traffic?
- How to design connections for trucking, freight forwarding south of the airport (Zone 4)?
- How will West Blvd. extension be completed to accommodate current and future traffic flows?

## **Future Study Area Planning & Long-Term Vision**

### *Primary planning considerations:*

- Considering future expansion
  - Need flat land for future site
  - Potential to locate adjacent to existing location
- How will development in the Airport/West Corridor impact congestion, specifically freight traffic, in Zone 4 as residents or employees access the area from the East?
- How will the Norfolk Southern Intermodal Yard expansion impact traffic patterns?

### *Primary Concerns:*

- Potential increased traffic and congestion as the Airport/West area and the CLT Area develop.

### *Recommended Additional Contacts:*

- Bill Waters, Waters Construction, Inc. & land owner in the area

### ***Key Considerations:***

- Has seen increased in business with the completion and opening of the Norfolk Southern Intermodal Yard. As the intermodal yard expands, how will freight and logistics companies be affected?
- How will freight movements through the entire CLT Area impact passenger movements?
- Will the planned Dixie River Road/Garrison Road serve primarily commercial or residential developments?
- Adapting to changes in freight industry
- Is in favor of anything that would increase access to I-85

Norfolk Southern

Grant Cothran, Manager – Intermodal Development; Cary Booth, Assistant Vice President – Intermodal Service Development; Steve Portnell, Director - Real Estate; Alan Shaw, Vice President- Intermodal Operations

Attendees: Tim Greene & Imad Fakhreddin (City of Charlotte), Ashely Landis (CDOT); Greg Boulanger (HNTB), Michael Gallis & Amy Rowland (MG&A)

4/15/2015, 2:00 pm

Norfolk Southern was interviewed to bring the company up to speed on the advanced planning process for the Airport/West Corridor CIP, and hear feedback from NS about the status of the airport intermodal yard, the future growth of the CLT Area including planned Dixie River Road, Garrison Road project.

Alan Shaw is VP of Intermodal Operations, facility development and folding the marketing with market development into facility development to ensure they have the assets to support growth. Cary Booth works in intermodal operations under Vice President Alan Shaw developing new intermodal transportation services including train scheduling and facility development. Booth has worked closely with the Charlotte airport in developing the new intermodal yard. Steve Portnell is the director of Real Estate based in Atlanta, working as a service provider for corporate use, non-operating properties in sales, property management (for all departments including intermodal). Grant Cothran works in Intermodal Marketing, making sure that customers are able to and are locating as close as possible to the terminal, making good use of NS infrastructure. Cothran noted that NS is a wholesaler, where the final customer would be the recognizable companies on the shelves, called Beneficial Cargo Owners (BCOs). BCOs do not pay NS directly, the intermediaries or channel partners bundle services for the final mile(s). Cothran interfaces with the final customers in site selection process to understand what market location they are looking for.

## **Background**

- Norfolk Southern made a significant investment in Charlotte in their construction of the new intermodal yard to integrate major transportation modes in one area. For NS, this is the 2<sup>nd</sup> biggest investment behind Atlanta that the company has made. NS is actively marketing new airport intermodal yard. NS works with developers on master planning, spec buildings. The supply chain here is bigger than just one terminal, there are built in advantages to being near the terminal.
- Growth rate of intermodal vs. trucking, 7.8% (2<sup>nd</sup> best year in the last 20 years), driver shortage influenced growth, but there was a fleet of rules impacting drivers (shorter drive times, documentation).
- Airport intermodal yard opened in December 2013 and was up 18% in 2014 (over 2013). The Airport intermodal yard is in the neighborhood for 195-200,000 containers lifted in 2015.
- Big opportunities are in the East, the largest freight flows in the nation with 70% of customers located in the East. Role of Charlotte in the Crescent Corridor: Charlotte is well positioned, with strong service connections to take advantage of movement to various parts of nation. Charlotte can reach the northeast, Dallas, LA, Memphis, Mexico, Florida, Chicago, Harrisburg/Eastern PA, and Atlanta. Effectively improving capacity from New Orleans and

Memphis up through Charlotte and Atlanta into Eastern PA so NS can encourage rail business to compete with truck, encouraging economic development along the line.

- Extends beyond NS: end of NS they connect to other railroads including UP, KCS and BNSF
- Charlotte doing well economically, timing was right when the facility was built and opened. See potential in the East Coast, market share and volume. Competing in 6-800 hauls, transcontinental is now mostly rail served, rail intermodal. Across the nation rail intermodal beats highway costs. NS can offer better services over time to Chicago; origination in Charlotte goes to Chicago through Lynchburg and Coal Fields. Highway was hard to price before due to security to highway, now the economics have changed and made NS able to compete against trucking. RR economics are getting better such that NS can compete in shorter hauls.

### **Connectivity: Transportation and Alignment Options**

*Primary connectivity questions & considerations:*

- Who are targeted users of the new/upgraded roads?
- North-South access- bridges over, don't want to cross dray there. Would not want truck traffic under the overpasses (airport overpasses). Bridges over the tracks, part of the development.
- Trucks already having issues even without large scale development.
- NS is in favor of more and better infrastructure and connections in general. An additional crossing in to Gaston County would open some business for NS, though NS has no official position on Garden Parkway.
- Crossing at NS mainline

### **Future Study Area Planning & Long-Term Vision**

- Given significant investment, NS hopes for strong, continued growth in early years of operation
- Expansion plans, See more growth in intermodal from new development in the study area
- Airport huge driver of growth in Charlotte, leveraging economic driver; development to be framed as economic development opportunities
- NS customers demanding proximity to facility for customers being able to convert profit. NS services per mile are significantly cheaper but must get to points of entry
- Maximize investment in transportation linkages: Looking down the road, want to see a mature area. Highest and best use for surrounding property would support the existing and continued investments.
  - Density in the area would drive proximity to the intermodal yard, make it a premium.
  - Strong vision for intermodal facility to be located near industrial, distribution areas. The intention was to hope that for the City and for NS facility there were more distribution and manufacturing centers located close to the yard. In planning the intermodal yard, understanding that the area would primarily be utilized for industrial development. Zone 4, for example, prime for the NS opportunity to see

intermodal development and airport related development. Additionally, Zone 1 has industrial potential. Unsure that residential is the best use for the area, could be missing value creation for the area and the City.

- Develop Industrial, logistics parks, and/or manufacturing plants in proximity to the new intermodal yard. Talking to customers, such as J B Hunt, to locate in proximity to intermodal yard. Logistics is a focus for site selection, goes hand in hand with rise in intermodal. Provide facilities for customers to grow rapidly in shorter hauls.
- Identify areas close to airport, must look at development potential. Given the NS investment, seems logical to build ecosystem for industrial development.
- Making economics work for NS customers: Growth affected by truck driver shortages, competing for business going over 600 miles. Over 86% of freight moves over 600+ miles, called long haul. Within the long hauls segment (nationwide), intermodal is about 3%, trucking is 97%. Intermodal has potential for growth

*Primary Concerns:*

- Topographic limitations on development potential in the area. Utilizing industrial land where possible given topography, so as not to develop the “best” land for industrial with other uses that would not meet NS customer base.
- Potential conflict between land uses and landowners; trucks already experiencing some issues in reliable movement, access even without large scale development

*Key Considerations:*

- Consideration to where Charlotte fits within the NS network, specifically the Crescent Corridor, and how to maximize this position and grow as intermodal continues to grow nationally.
- Increasing sales volumes to make sure customers can locate closer to the facility now that the intermodal facility is in place.
- Economic development strategies to align with railroad foundation for economic development in the region.
- Smarter industrial land use, i.e. Zone 4 positioned best for future development, leveraging the airport (a major economic driver for Charlotte) and the NS intermodal yard as the “highest and best uses” will support the existing and continued investments.
  - Challenges with the topography of the CLT Area could limit industrial development to certain areas, leading to concern that the best industrial land is seeing office parks rather than industrial and will not meet industrial customer base
- Recognize and minimize potential conflicts in traffic patterns between freight and passenger traffic

Tracy Dodson - Lincoln Harris; Dale Stewart - LandDesign; Keith Glenn – Crescent Communities  
Attendees: Deborah Campbell, Ed McKinney, Tim Greene & Imad Fakhreddin (City of Charlotte);  
Greg Boulanger (HNTB); Michael Gallis & Amy Rowland (MG&A)  
5/11/2015, 11:30 am

- Parallel processes to be merged, broader development plans to come together in common vision that addresses what the CLT Area wants to become and how to make the area an even greater economic engine for the City of Charlotte. Marry independent processes with our data research as the foundation. Create and maintain an economic engine for the City in the area.
- Lincoln Harris, LandDesign master plan utilizes existing Dixie River Road, Garrison Road as planned in the Dixie Berryhill Plan, as well as the proposed Garden Parkway linking the area to Gaston County.
- LH haven't heard anything related to MGA work that should conflict LH plan, continue conversation for things that may not have been discussed or considered yet
- Schedule a monthly touch base meeting, especially after selecting airport area group to maintain open dialogue, know where everyone is.

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# Probable Cost Estimate For Planned Alignment

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Airport/West Corridor -  
Extension of Garrison Rd &  
Widening of Dixie River Rd

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## **Introduction**

As part of Phase I of the Advanced Planning Stage of the Airport/West Corridor, HNTB used the alignments provided by the City to use as a baseline for the market study and opportunities and constraints analysis. At this phase, no changes have been made to the shown alignments that are currently included in the adopted CRTPO Thoroughfare Plan.

In addition to the studies outlined above, HNTB developed a baseline cost for the current alignments to use as a comparison with future alternative alignments that will be developed as part of Phase 2 of the Advanced Planning Stage. For the sake of consistency with other Charlotte projects, the cost estimate was developed using the same methods that the CRTPO uses to estimate project costs for planning purposes.

The probable cost estimate was developed under the assumption that the project would include up to 10 miles of new location, 4-lane roadway mainline and side roads, including bike lanes and sidewalks on both sides of the roadway. In addition, the construction cost included 10 miles of water line construction, new reinforced concrete box culverts and culvert extensions. No bridges are anticipated on this project. A 30% construction contingency and 9% preliminary engineering contingency were included in the overall construction cost estimate.

HNTB also utilized the same method used by CRTPO to estimate the costs for right of way, utility relocations and environmental mitigation. The total estimate of the probable cost to construct this project totaled approximately \$130M in 2015 dollars, as outlined in the Detailed Estimated Cost sheet.

In addition to the overall cost estimate, HNTB took the further step of breaking the project up into six specific segments based on logical termini that would allow each segment to be constructed independently from each other to have separate utility. The cost estimate for each of the 6 segments was strictly based on the length of the segment. These segments are outlined and further described in the Probable Cost by Segment sheet. In Phase 2 of this project, these segments, and other segments from future alternatives will be prioritized and ranked as to which segments should be constructed first to maximize the City's return on investment.

# **Table of Contents**

**Content 1. Probable Cost Estimate by Segment**

**Content 2. Detailed Estimated Cost**

# Airport/West Corridor: Probable Cost by Segment

## Extension of Garrison Road & Widening of Dixie River Road

### Segment Descriptions/Probable Cost

**Segment 1:** Garrison Road from existing Dixie River Road to West Boulevard (1.5 miles mixed new location and widening/reconstruction), \$25.0 M

**Segment 2:** Garrison Road Extension from West Boulevard to existing Dixie River Road (1.0 mile new location), \$16.6 M

**Segment 3:** Dixie River Road extension from existing Dixie River Road to Mt. Olive Church Road (0.95 mile new location), \$15.8 M

**Segment 4:** Dixie River Road extension from Mt. Olive Church Road to Walkers Ferry Road (0.75 mile new location), \$12.5 M

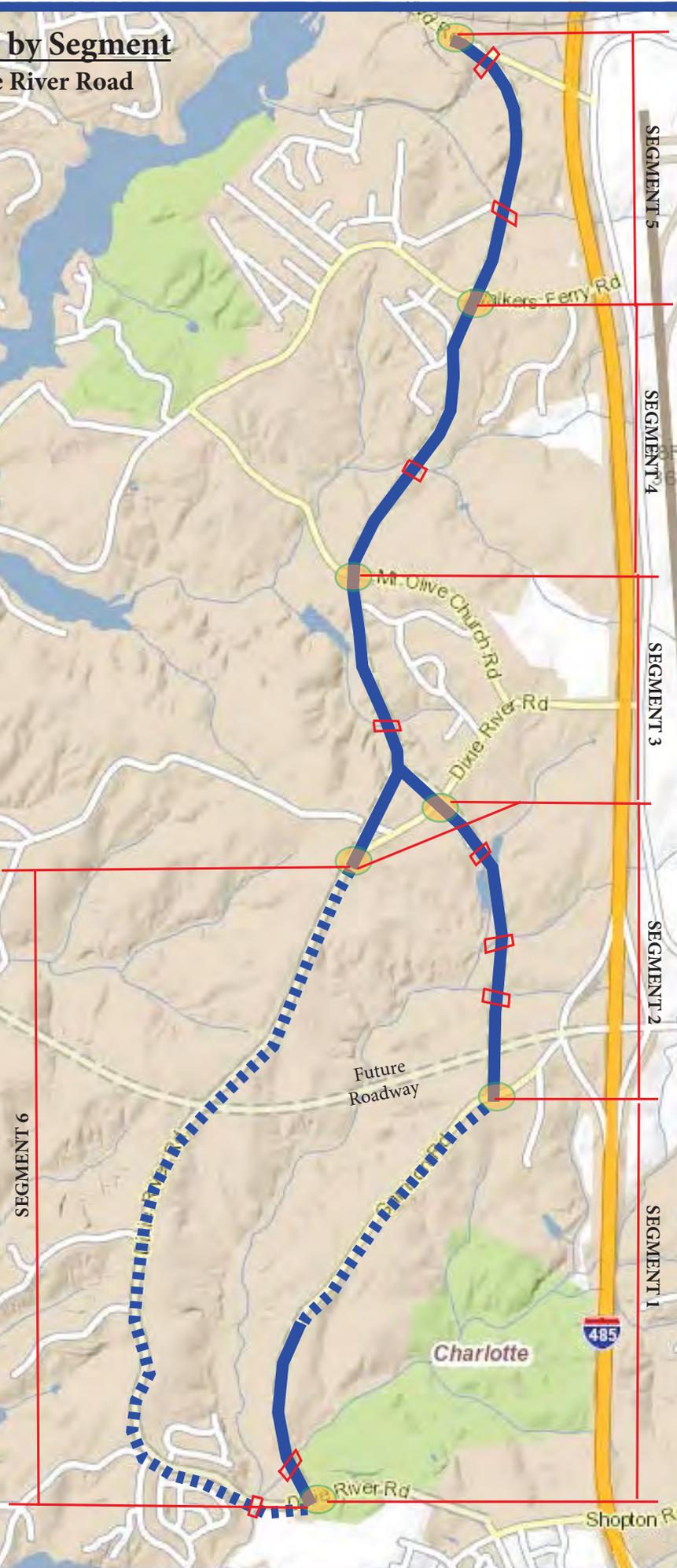
**Segment 5:** Dixie River Road extension from Walkers Ferry Road to Old Dowd Road (0.75 mile new location), \$12.5 M

**Segment 6:** Dixie River Road widening from Garrison Road Extension to Dixie River Road Extension (2.8 miles widening/reconstruction), \$46.6 M

Segments 1-6: 7.75 Miles

**Total Probable Cost: \$129 M**

- Legend:**
-  Segment Termini
  -  New location roadway
  -  Roadway widening/reconstruction
  -  Proposed culvert



# Estimated Project Cost

(Advanced Planning Level) – Based on Current Alignment

<b>Airport/West Corridor</b> Extension of Garrison Road and Widening of Dixie River Road Planning / Order of Magnitude Estimate of Probable Costs of Construction				
<b>ESTIMATED PROJECT COST = \$128,936,000</b>				Revision Date: <b>5/7/15</b>
Item Description	Quantity	Unit	Unit Cost	Subtotal Cost
<b>CONSTRUCTION</b>				
<b>New Roadway:</b>				
4-lane curb & gutter w/ raised median plus bike lanes	10.00	Mile	\$ 5,970,000	\$ 59,700,000
<b>Sidewalks:</b>				
5 ft., 2-sides	10.00	Mile	\$ 239,000	\$ 2,390,000
<b>Structures:</b>				
new culvert	960	LF	\$ 350	\$ 336,000
lengthen culvert	60	SF	\$ 350	\$ 21,000
<b>Utility Construction</b>				
Water Line	52800.00	LF	\$ 85	\$ 4,488,000
SUBTOTAL				\$ 66,935,000
Planning Level Contingency (30%)				\$ 20,080,500
SUBTOTAL				\$ 87,015,500
Preliminary Engineering Contingency (9%)				\$ 7,831,395
<b>SUBTOTAL CONSTRUCTION COST</b>				<b>\$ 94,847,000</b>
<b>RIGHT OF WAY</b>				
<b>ROW Land and Displacements</b>				
Select Region for Acreage Costs:				<b>West</b>
Commercial	20.00	Acres	\$ 405,000	\$ 8,100,000
Industrial	50.00	Acres	\$ 95,000	\$ 4,750,000
Office	5.00	Acres	\$ 160,000	\$ 800,000
Residential	60.00	Acres	\$ 48,000	\$ 2,880,000
Other (Average)		Acres	\$ 177,000	\$ -
SUBTOTAL				\$ 16,530,000
ROW Aquisition Contingency (50%)				\$ 8,265,000
<b>SUBTOTAL RIGHT OF WAY COST</b>				<b>\$ 24,795,000</b>
<b>UTILITIES</b>				
<b>Utility Relocations</b>				
Length of Project (Widening)	6.00	Miles	\$ 1,000,000	\$ 6,000,000
Length of Project (New Location)	4.00	Miles	\$ 500,000	\$ 2,000,000
SUBTOTAL				\$ 8,000,000
Utilities Contingency (10%)				\$ 800,000
<b>SUBTOTAL UTILITIES COST</b>				<b>\$ 8,800,000</b>
<b>ENVIRONMENTAL MITIGATION</b>				
Streams impacted	1020.00	LF	\$ 323	\$ 329,460
Wetlands impacted	2.00	Acres	\$ 59,600	\$ 119,200
SUBTOTAL				\$ 448,660
Environmental Mitigation Contingency (10%)				\$ 44,866
<b>SUBTOTAL ENVIRONMENTAL MITIGATION COST</b>				<b>\$ 494,000</b>
<b>PROJECT COST SUMMARY</b>				
Subtotal Construction Cost				\$ 94,847,000
Subtotal Right of Way Cost				\$ 24,795,000
Subtotal Utilities Cost				\$ 8,800,000
Subtotal Environmental Mitigation Cost				\$ 494,000
<b>TOTAL PROJECT COST (2015 \$)</b>				<b>\$ 128,936,000</b>
Project Notes / Project Assumptions				Say \$130M
Assume 10 miles of total construction.				
4 lane divided with bike lanes and sidewalks				
Right of Way based on 150' wide corridor				