



**REQUEST FOR PROPOSALS  
FOR  
THE CITY OF CHARLOTTE**

**SHOPPING CENTER DRIVE ALIGNMENT  
RFQ 2009-10**

**April 21, 2009**

The City of Charlotte (City) intends to contract with one (1) or more professional firms or teams in order to enhance east-west connectivity between the University Research Park, Belgate/IKEA developments, and the CATS Blue Line Extension on North Tryon Street. Enhancements will include, but are not necessarily limited to: designing a new bridge across I-85 which will extend from IKEA Boulevard to IBM Drive and tie into a portion of Shopping Center Drive; constructing a grade separation across I-85; and replacing the existing CMS driveway into Martin Middle School.

Consideration should be given to the following:

- The proposed street alignment will cross a regulated floodway;
- A Duke Energy substation with two transmission-line rights-of-way are located nearby;
- Crescent Resources will be constructing an adjacent portion of this road as part of their Belgate development. This portion most likely will be constructed earlier than the City's portion.
- In 2007, I-85 in this area had an ADT of approximately 110,000 to 120,000 vehicles per day.

The City is seeking firms whose combination of experience and personnel will provide timely, cost-effective and quality professional services.

**DETAILS**

Responsibilities of the successful consultant(s) may include, but are not necessarily limited to:

- Review of the associated feasibility study, dated May 15, 2008, in which Alignment #10 was selected as the preferred alternative;
  - ❖ *The tie-in east of I-85 is a fixed point, and the CMS driveway over Doby Creek is located at a narrow spot of the floodplain/floodway, so the alignment is relatively constrained to a narrow corridor. CMS has requested changes to Alignment #10 that better accommodate the Martin Middle School site. The selected consultant will be required to make these changes.*
- Additional analysis as required to verify the assumption that this street may qualify as a three-lane avenue;
- Designing modifications or retrofits to the existing CMS driveway bridge over the creek;
- Including a communications infrastructure/traffic signal system cable design;
- Utilizing the Urban Street Design Guidelines;
- Measuring the level of service for pedestrians and bicycles at major intersections;
- Incorporating mast arms at signalized intersections;
- Accommodating utilities;

- Working closely with NCDOT, FHWA, CMS, waterway/environmental regulatory agencies and public stakeholders
- Giving consideration to alternative forms of transportation;
- Considering the ramifications of longer project schedules due to funding issues; and
- Developing an effective communication plan for the public.

**QUALIFICATION PACKAGE EVALUATION CRITERIA**

Qualifications Packages will be evaluated on the firms’ ability to meet the requirements of this Request for Qualifications (RFQ). Your firm will be evaluated on the following:

- The firm’s past experience and quality of performance in providing similar services for similar projects;
- Ability to meet project schedule (construction should be completed prior to the opening of the Blue Line Extension in 2015);
- Qualifications and abilities of key staff identified in the Qualifications Package (see Tab 2, Item 2 below);
- Utilization of Small Business Enterprises;
- References;
- An office in the Charlotte metro area; and
- Responses to questions included in this solicitation.

**SUBMITTAL PACKAGE CONTENT**

Each qualifications package should contain a cover letter and two tabbed sections, described below. Number all pages and limit your package length to **25 pages**. The City reserves the right to remove from consideration all packages that exceed the 25-page limit. Sub-tabs or dividers will not count toward the page limit. Please provide packages comprised of materials that are easily recyclable or reusable.

**Cover Letter**

The cover letter should provide a brief summation of the firm’s qualifications and identify a contact person who can respond to questions that arise during the RFQ process. Contact information **must** include: telephone number, fax, **email** and postal address.

**Tab One: Information about the Team**

Provide the requested information in the following order under Tab One:

1. Identify the entity that would enter into a contract with the City of Charlotte by listing the following information:
  - complete legal name of firm;
  - location/address of company headquarters;
  - local office address (if different from above);
  - type of business (i.e., sole proprietorship, partnership, corporation);
  - state of incorporation or organization; and
  - name and title of the person legally authorized to enter into an contract with the City of Charlotte.
2. Provide an organizational chart identifying key members of the team. The chart should clearly delineate roles and responsibilities of the various team members and show Small Business classifications as appropriate.
3. Provide a chart detailing the availability of each team member.
4. Provide a projected project schedule. Schedule should detail the amount of time required for each critical task.

5. State any conflicts of interest your firm or any key individual may have with this project or with the City of Charlotte.
6. List all projects similar in size or type to this project completed in the past five (5) years by your firm. Include a brief description of each project, including a dollar amount and total time period involved, and provide the name, address and phone number of a reference for each project.

**Tab Two: Information Regarding the Services**

Provide the requested information in the following order under Tab Two:

1. Discuss information and support needed from City staff and departments.
2. Demonstrate the professional experience of both the prime consultant and subconsultant key staff in the following areas:
  - Previous street connectivity projects;
  - Public Involvement;
  - Provide specific examples of past project coordination with various local and state agencies (include references and contact information). This shall include, but is not limited to: CMS, local and state environmental agencies, etc;
  - Provide specific examples of past project coordination with Duke Energy regarding transmission lines and substations. Include references and contact information;
  - Provide references from state environmental and waterway regulatory agencies, FEMA, and the US Army Corps of Engineers regarding past projects involving the design of roadways around and across a regulated floodway. If such work occurred in Mecklenburg County, references from Mecklenburg County Stormwater Services may be provided in lieu of references from FEMA.
  - Provide a description of past projects involving the design of roadways around and across an urban freeway(s). Include a description of location, project scope and ADTs for the freeway(s). Provide references from the appropriate state department of transportation and FHWA.
  - Provide a description of past projects involving the design of roadways around and across an interstate highway(s) in North Carolina. Provide references from NCDOT (PDEA, structures group, traffic control/Congestion Management, etc.) and FHWA.
3. If a significant portion of work is expected to be performed in any office outside the Charlotte area, list each task and the associated office from which work will be performed;
4. Respond to the following questions:
  - Does your firm foresee any special challenges of this project? If so, please describe.
  - What unique skills does your firm possess that will enable you to address these challenges?

**PACKAGE SUBMISSION REQUIREMENTS**

Firms interested in performing the required services for the City should provide the following:

- One original and four (4) bound copies of the qualifications package, including the cover letter; and
- One (1) CD containing one copy of your submittal, including the cover letter, consolidated into one (1) PDF formatted document.

In a separate envelope, please provide the following:

- One (1) executed original of the Commercial Non-Discrimination Certification form (included in Exhibit 1).
- One (1) set of executed forms for the SBO Program (included in Exhibit 2).

These forms will not count toward your page limitation.

Proposals should be addressed and mailed to:  
Ms. LaNelle McDowall, Contracts Administrator  
Engineering & Property Management, 14<sup>th</sup> Floor  
City of Charlotte  
600 East Fourth Street  
Charlotte, North Carolina 28202

Packages may also be delivered, addressed as above, directly to the Customer Service Representative at the reception desk on the 14<sup>th</sup> floor of the Charlotte Mecklenburg Government Center.

Each firm is solely responsible for the timely delivery of its Qualification Package. All submittals must be received by **12:00 noon on May 19, 2009**. **No Proposals will be accepted after this deadline. Firms accept all risks of late delivery of Proposals regardless of fault.**

#### **ADDITIONAL INFORMATION ABOUT THIS RFQ**

1. **Small Business Enterprise Program**

The Charlotte City Council has declared that a race and gender neutral program employing goals and good faith efforts to promote the utilization of small businesses in City contracts will benefit the City by promoting competition in City contracting and by promoting economic growth and development in the Charlotte MSA.

In August 2002, the North Carolina State Legislature ratified Session Law 2002-91 authorizing the City to establish a Small Business Enterprise program to enhance opportunities for small businesses to participate in City contracts. The City's Small Business Opportunity Program (SBO Program) applies to all aspects of the City's contracting and procurement programs. A complete copy of the SBO Program is available for review at the City's website at <http://smallbiz.charmeck.org>. Under the SBO Program, all firms doing business with the City are required to consider providing opportunities for Small Business Enterprises (SBEs) on City contracts. SBE participation is an evaluation criterion for this RFQ.

In order to comply with the SBO Program, please identify SBEs on your project team. We encourage you to consider any and all possibilities for SBE participation. A complete list of certified SBEs is available on the City's website at <http://smallbiz.charmeck.org>. **A goal for SBE utilization will be set during contract negotiations and carefully reviewed by the SBO Program Office to ensure an appropriate level of SBE participation on each contract.**

You must negotiate in good faith with all interested SBE firms. Part C Section 2.2 of the SBO Program defines what negotiating in "good faith" means. Each firm must negotiate in good faith with each SBE that responds to the firm's solicitations and each SBE that contacts the firm on its own accord (as defined more specifically in Part C Section 4.4). Failure to comply with the requirements set forth in Part C Section 4 shall be considered as a factor in the evaluation process and may result in a qualification package being excluded from further consideration.

To demonstrate Good Faith Negotiation compliance the City may request on a case-by-case basis documentation sufficient in the City's judgment to prove that the firm's reasons for rejecting an interested SBE's proposal are valid. Firms must provide such forms and information within three (3) Business Days after the City requests it. It is important that you carefully review Part C Section 5 of the SBO Program as soon as possible so as to put yourself in a position to provide the documentation quickly and accurately if requested.

2. **Vendor Registration**

In order to measure the effectiveness of the City's SBO Program and to receive payment for work provided under any City contract, all prime consultants and first-tier subconsultants and suppliers must be registered in the City's Vendor Registration System.

3. **Selection Committee**

A Selection Committee will evaluate the information submitted. **Please do not contact any City staff member other than the designated contact person regarding the project contemplated under this RFQ. Any attempt to contact anyone other than the contract person will result in disqualification of the firm's Proposal for consideration.** The designated contact person for this solicitation is LaNelle McDowall, Contracts Administrator. Please direct all questions and requests for information to her attention **no later than May 7, 2009** via email at [lmcdowall@ci.charlotte.nc.us](mailto:lmcdowall@ci.charlotte.nc.us). Interviews are not anticipated, but may be held at the discretion of the selection committee.

4. **Public Records**

Upon receipt by the City, your Proposal becomes the property of the City and is considered a public record except for material that qualifies as "Trade Secret" information under North Carolina General Statute 66-152 et seq. Your Qualifications Package will be reviewed by the City's Selection Committee, as well as other City staff and members of the general public who submit public record requests. To properly designate material as a trade secret under these circumstances, each firm must take the following precautions: (a) any trade secrets submitted by a firm should be submitted in a separate, sealed envelope marked "Trade Secret – Confidential and Proprietary Information – Do Not Disclose Except for the Purpose of Evaluating this Proposal," and (b) the same trade secret/confidentiality designation should be stamped on each page of the trade secret materials contained in the envelope.

In submitting a Proposal, each firm agrees that the City may reveal any trade secret materials contained in such response to all City staff and City officials involved in the selection process and to any outside consultant or other third parties who serve on the Selection Committee or who are hired by the City to assist in the selection process. Furthermore, each firm agrees to indemnify and hold harmless the City and each of its officers, employees and agents from all costs, damages, and expenses incurred in connection with refusing to disclose any material that the firm has designated as a trade secret. Any firm that designates its entire Qualifications Package as a trade secret may be disqualified from the selection process.

5. **Clarification of Submittal**

The City reserves the right to obtain clarification of any point in a firm's submittal or to obtain additional information.

6. **Conditions and Reservations**

The City anticipates the selection of two (2) firms as a result of this solicitation, and reserves the right to request substitutions of subconsultants. The City reserves the right to accept or reject any or all responses to this solicitation and/ or to re-advertise for additional responses should responses be deemed inadequate. The City reserves the right to waive technicalities and informalities.

A response to this RFQ should not be construed as a contract, nor indicate a commitment of any kind. The City will not be held responsible for payment of costs incurred in the submission of a response to this RFQ or for any cost incurred prior to the execution of a final contract. No recommendations or conclusions that arise as a result of this solicitation process concerning your firm shall constitute a right (property or otherwise) under the Constitution of the United States or

under the Constitution, case law or statutory law of North Carolina. No binding contract, obligation to negotiate, nor any other obligation shall be created on the part of the City unless the City and your firm execute a contract.

Please direct all questions and requests for information to the attention of the undersigned **no later than May 7, 2009** via email at [lmcdowall@ci.charlotte.nc.us](mailto:lmcdowall@ci.charlotte.nc.us). The City of Charlotte appreciates your interest in providing roadway design services and looks forward to receiving your qualifications package.

Sincerely,

LaNelle McDowall  
Contracts Administrator

Attachments: Exhibits 1 - 2

**EXHIBIT 1  
NON-DISCRIMINATION CERTIFICATION**

Project: Shopping Center Drive  
Project Number: 512-09-068  
Proposer: \_\_\_\_\_

The undersigned Proposer hereby certifies and agrees that the following information is correct:

1. In preparing its Proposal, the Proposer has considered all Proposals submitted from qualified, potential sub-consultants and suppliers and has not engaged in discrimination as defined in Section 2 below.
2. For purposes of this section, *discrimination* means discrimination in the solicitation, selection, or treatment of any sub consultant, vendor, supplier or commercial customer on the basis of race, ethnicity, gender, age, religion, national origin, disability or other unlawful form of discrimination. Without limiting the foregoing, *discrimination* also includes retaliating against any person or other entity for reporting any incident of discrimination.
3. Without limiting any other remedies that the City may have for a false certification, it is understood and agreed that, if this certification is false, such false certification will constitute grounds for the City to reject the Proposal submitted with this certification and terminate any contract awarded based on such Proposal. It shall also constitute a violation of the City's Commercial Non-Discrimination Ordinance and shall subject the Proposer to any remedies allowed thereunder, including possible disqualification from participating in City contracts for up to two years.
4. As a condition of contracting with the City, the Proposer agrees to promptly provide to the City all information and documentation that may be requested by the City from time to time regarding the solicitation and selection of sub consultants and suppliers. Failure to maintain or failure to provide such information shall constitute grounds for the City to reject the Proposal and to terminate any contract awarded on such Proposal. It shall also constitute a violation of the City's Commercial Non-Discrimination Ordinance and shall subject the Proposer to any remedies that are allowed thereunder.
5. As part of its Proposal, the Proposer shall provide to the City a list of all instances within the past ten years where a complaint was filed or pending against the Proposer in a legal or administrative proceeding alleging that the Proposer discriminated against its sub consultants, vendors, suppliers, or commercial customers, and a description of the status or resolution of that complaint, including any remedial action taken.
6. As a condition of submitting a Proposal to the City, the Proposer agrees to comply with the City's Commercial Non-Discrimination Policy as described in Section 2, Article V of the Charlotte City Code, and consents to be bound by the award of any arbitration conducted thereunder.

By: \_\_\_\_\_  
SIGNATURE OF AUTHORIZED OFFICIAL

Title: \_\_\_\_\_



**EXHIBIT 2**

**Small Business Opportunity Program**

Subconsultant / Supplier Utilization Commitment

*This form **MUST** be submitted with your Proposal*

**SBOP Form 3**

(Page 1 of 2)

Proposer Name: \_\_\_\_\_

Project Name: Shopping Center Drive

Project Number: N/A

1. Below is a list of all **SBEs** that you intend to use on this contract

SBE Name	Description of work / materials	NIGP code	VMS #	\$ Amount
				X

I acknowledge that I have inquired with each SBE listed above as to their Certification Status (i.e. - their SBE expiration date)

2. Below is a list of all **non-SBEs** that you intend to use on this contract

Firm Name	Description of work / materials	NIGP code	VMS #

**Total Subconsultant / Supplier Utilization** (including SBEs and Non-SBEs) \_\_\_\_\_ **TBD**

**Total SBE Utilization** \_\_\_\_\_ **TBD**

**Total Proposal Amount** \_\_\_\_\_ **TBD**

**Percent SBE Utilization** (Total SBE Utilization *divided by* Total Proposal Amount) \_\_\_\_\_ **TBD**

\_\_\_\_\_  
Signature of Authorized Official

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Submittal Date





## Small Business Opportunity Program

### Subconsultant / Supplier Utilization Commitment

SBOP Form 3  
(Page 2 of 2)

**All Sub consultants and Suppliers must be registered with the City of Charlotte.** Pursuant to Appendix A, Section 8 of the SBO Policy, each sub consultant or supplier (non-SBE and SBE sub consultant) that you use on this contract must be registered in the City's vendor registration database. You will need to provide the vendor registration number for each sub consultant and supplier used on this contract as a condition for receiving final payment on this Contract.

#### **What happens if you add sub consultants or suppliers after submitting this form?**

Nothing in this certification shall be deemed to preclude you from entering into sub consulting arrangements after submission of this form. However, pursuant to Part D of the SBO Program, you must comply with the following:

- You must maintain the level of SBE participation proposed on this form throughout the duration of the Contract, except as specifically allowed in Part D, Section 2.2.
- If you need to add or replace an SBE, you must comply with Part D, Section 3.
- If the scope of work on the Contract increases, or if you elect to subconsult any portion of work not identified on this form as being subconsulted, then you must comply with Part D, Section 6.

#### **Subconsultant/Supplier Utilization Commitment**

Pursuant to Part C, Section 3.6, City Solicitation Documents for each Contract will include a form labeled "Subconsultant/Supplier Utilization Commitment" ("Form 3"), which captures information regarding the SBEs and other sub consultants and suppliers that the Company intends to use on the Contract. Failure to properly complete and submit Form 3 with the proposal/qualification package constitutes grounds for rejection of the proposal/qualification package.

Pursuant to Part C, Section 3.7, within (3) Business Days after receiving a request from the City (or within such longer time as may be communicated by the City in writing), Company must submit a separate Letter of Intent for each SBE listed on Form 3. Company may use the Letter of Intent that the City provides with the City Solicitation Documents or may use an alternative form if it contains the same information as Form 4. Regardless of the form, each Letter of Intent must be executed by both the SBE and the Company. The City shall not count proposed SBE utilization for which it has not received a Letter of Intent within such time period, unless the SBE certifies to the City that it originally agreed to participate in the Contract at the level reported by the Company, but subsequently declined to do so.

#### **Signature**

Your signature on the preceding page indicates that the undersigned Company certifies and agrees that it has complied with all provisions of the SBO Program.

**EXHIBIT 3**  
**SHOPPING CENTER DRIVE EXTENSION**  
**TO IBM DRIVE**  
**FEASIBILITY STUDY\*\***

*\*\*NOTE: Only Option 10, as the preferred option, has been included. Other options are available upon request.*

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**Memorandum**

**To:** Matt Magnasco, P.E.  
City of Charlotte

**From:** Benjamin Taylor, P.E.

**Date:** May 15th, 2008

**Subject:** Shopping Center Drive Extension to IBM Drive  
Feasibility Study (City contract 08-00470, VMS V9802)  
Charlotte, North Carolina

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Kimley-Horn and Associates was retained to determine the feasibility of extending Shopping Center Drive from Shopping Center Drive where the Wal\*Mart project terminates through proposed IKEA Boulevard to existing IBM Drive by crossing I- 85 with a grade separation located in Charlotte, North Carolina. Multiple alignments were generated, from which the two alignments were to be developed based off the following criteria set forth by the City of Charlotte:

1. Maximizes the developable land for Crescent Resources in the Belgate development.
2. Minimizes the total project cost.
3. Minimizes the right-of-way to be acquired / dedicated.
4. Minimizes disruption or impact to Charlotte-Mecklenburg Schools' facility west of I-85.
5. Crosses I-85 as close to 90 degrees as possible (to minimize Bridge costs).
6. Provides a logical, direct connection between IBM Drive and North Tryon Street.

**Existing Conditions**

The project study area includes an average of 3250 linear feet of new roadway alignment extending shopping center drive from existing shopping center drive to the northwest tying into IBM drive, crossing Interstate 85 with grade separation. Currently commercial development surrounds a majority of the existing site east of Interstate 85, which was previously undeveloped land covered with dense vegetation and mature trees. The range of the topography is from elevation 770 ft to 660 ft across the 30 acre Ikea site. The Ikea site has recently been mass graded under the Belk Tract Mass Grading Plans-(permit GRS 2007191, 6-28-07). West of Interstate-85, dense vegetation abuts both Vance High School and Interstate-85. There is also a service road located in front of Vance High School which serves as its primary entrance and exit.



General vicinity of proposed alignment - east of I-85



General vicinity of proposed alignment – east of I-85



Service Road due west of I-85 facing west towards Vance High School

## Results

The first several alignment options considered had conflicts with severe topography, floodplain, and conflicts with Duke Power transmission lines. To construct these options there would be conflicts to floodplains, dedicated tree save areas, and Duke Power transmission lines. Some of the options would have impacts to erosion control ponds. Using the maximum grade of 8% for a roadway, large amounts of fill will be required on the west side of I-85 increasing the impact on the wetlands. After meeting with key stakeholders at the City, three more options were considered using the existing Vance High School Service road. These options eliminate the need to cross Duke Power transmission towers; avoid environmental impacts due to an existing bridge that can be utilized. Amidst the design for alignment 9, it was determined that the option was not viable due to the fill constraints set forth by Duke Power on the west side of I-85. A detailed breakdown of cost for the two options (8 & 10) can be found in the Calculation tab of this memorandum. CMS has not been contacted for the dedication of R/W (turning over a portion of the service road to the City).

## Closure

Based on the results of this analysis, the initial roadway alternatives (Alignments 1 – 7) would generally be in the range of \$15-17 million in today's dollars. The Portion through the "Belgate" development is generally in the range of \$3-4 million. It is our opinion that options that tie into the Vance H.S. service road (8 & 10) will generally have lower construction costs and reduce the need to move Duke Transmission towers. A detailed breakdown of the two options that utilize Vance H.S. service road opinion of probable construction costs is included in this report. The Vance H.S Service options are generally near \$8 million (This amount doesn't include the portion within the "Belgate" Development). The major difference between options 8 & 10 is the curve

radii at the tie in to the Service road. Option 8 utilizes the 160' radius that would not meet current standards. Option 10 utilizes a 250' radius but impacts more of the H.S. Site.

Included in this report are:

- Design Criteria
- Typical Sections
- X Options showing Plan and Profile
- A Matrix comparing all the options
- Exhibit that will be included in the "Belgate" re-zoning detailing the R/W needs for a potential flyover.
- A comparison of a Mechanically Stabilized Earth (MSE) wall versus R/W for Shopping Center drive on the East side of I-85 within the "Belgate Development"
- Site Photos

We appreciate the opportunity to perform these services for you. Please feel free to contact Benjamin Taylor (704-319-5694) or Frank Masterson (704-319-7691) if you have any questions regarding this analysis.

Kimley-Horn was retained to perform a limited feasibility study, and we performed only those tasks specifically stated in our scope of services. This report may be relied upon only by Kimley-Horn's Client. It is not intended for use by any other party.

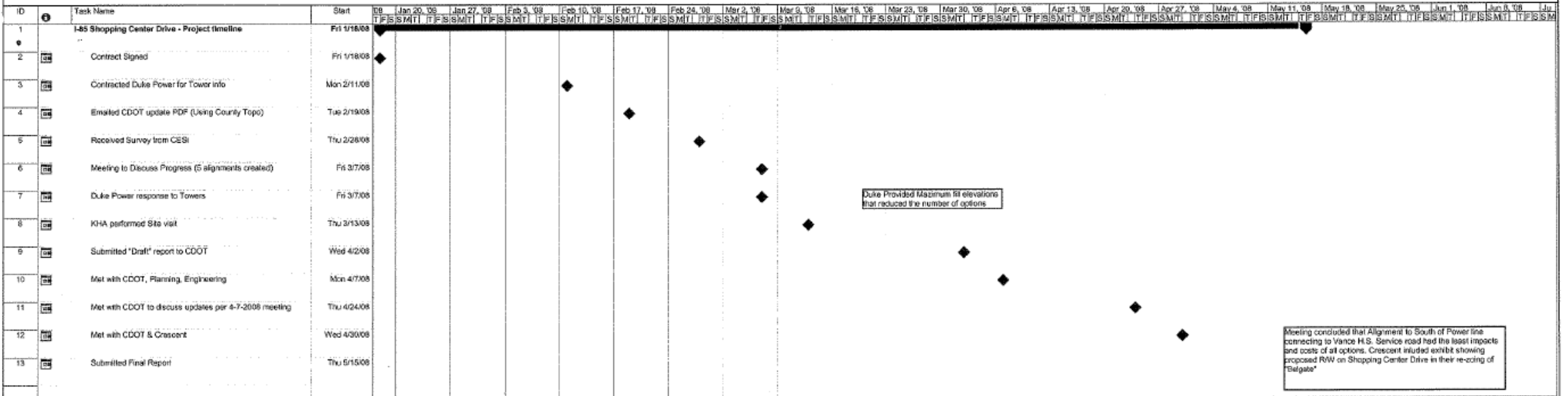
The Client may use this report as part of its due diligence, but this report should not be used as the sole basis for the Client's decision making. We endeavored to research development issues and constraints to the extent practical given the scope, budget, and schedule agreed to with the Client. Our assessment is based in large part on information provided to us by others (city staff, CDOT staff, Utility Company Representatives, Surveyors, etc.) and therefore is only as accurate and complete as the information provided to us. This report is based on our knowledge as of May 15<sup>th</sup>, 2008 and is based on the desires



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Shopping Center Drive Extension to IBM Drive, Pg. 5  
of the Client that have been specifically disclosed to us. New issues may arise during development because of changes in governmental rules and policy, changed circumstances, or unforeseen conditions.

The opinion of probable construction costs and was based on GIS survey information provided by the client. All the existing ground information provided in the included profiles are based on county topography. Detailed filed survey was collected by CESi surveying along I-85 and IBM drive to check GIS information at critical points.



Last updated Thu 5/15/08  
 City PM - Matt Magnasco  
 KHA PM - Benjamin Taylor

Task  Milestone  Rofed Up Task  Rofed Up Progress  External Tasks  Group By Summary 

Progress  Summary  Rofed Up Milestone  Split  Project Summary  Deadline 



**DESIGN CRITERIA (as of May 15<sup>th</sup>, 2008)**

Shopping Center Drive will be designed in compliance with the following applicable references:

**Applicable Reference Standards:**

- Urban Street Design Guidelines
- Charlotte Land Development Standards Manual
- CLDSM Water Design Manual
- City of Charlotte Tree Ordinance Guidelines
- AASHTO A Low Speed Urban Design, with normal crown (-2%) superelevation
- AASHTO A Policy on Geometric Design of Highways and Streets – 2004
- AASHTO Roadside Design Guide
- Manual of Uniform Traffic Control Devices - MUTCD
- NCDOT Roadway Design Manual
- NCDOT Standards Specifications for Roads and Structures
- NCDENR Erosion and Sediment Control Planning and Design Manual
- SWIM - Surface Water Improvement and Management Guidelines
- City of Charlotte Landscape Construction Standards
- WATCH – Work Area Traffic Control Manual

Roadway	Functional Classification	Design Speed	Posted Speed
Shopping Center Drive	Commercial Street	30 mph.	30 mph.

**Design Vehicle:**

WB-50 (with consideration for WB67)

**Horizontal Design Requirements:**

	V	e <sub>max</sub>	Min. Radius	Bay Taper	Thru Taper
Shopping Center Drive	30 mph.	NC-2%	250 ft.	12:1(10:1 Min)	15:1 (ws <sup>2</sup> /60)

**Vertical Design Requirements:**

	<b>Min. Length</b>	<b>K (C/S)</b>	<b>Max. Grade</b>	<b>Min. Grade</b>	<b>Min. Tangent</b>
Shopping Center Drive	50 ft.	30/35	8%	0.5%	100 ft.

**Intersection Grade Break:**

5% Maximum within 100' (with mandatory stop)

**Typical Section:**

4-lane section

Travel Lane:	2-11 ft. (2 ft. 6 in. C&G)
Turn Lanes:	2-10 ft.
Bike Lane:	5 ft. (Both Sides)
Planting Strip:	8 ft. (Both Sides)
Sidewalk:	6 ft. (Both Sides)
Sidewalk berm :	2 ft. (Both Sides)

3-lane section

Travel Lane:	2-10 ft. (2 ft. 6 in. C&G)
Turn Lane:	11 ft.
Bike Lane:	6 ft. (Both Sides)
Parking:	7 ft. (Both Sides – no parking on bridge or approach to bridge)
Planting Strip:	8 ft. (Both Sides)
Sidewalk:	6 ft. (Both Sides)
Buffer	2 ft. (Both Sides)

Right-of-way + SUE (Assume SUE is 2' behind back of Sidewalk) for Normal section. Included exhibit shows the R/W needs at the bridge approach.

	<u>Typical-1</u>	<u>Typical-2</u>
Shopping Center Drive	89 ft.	80 ft.

**Cross Slopes:**

Travel Lanes, Turn Lane, & Bike Lane	2.0%	(Normal Crown)
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**Side Slopes:**

Grassed Planting Strip, Sidewalk	2.0%	Minimum
Grass median	3.0%	
Cut	2:1	Maximum
Fill	2:1	Maximum

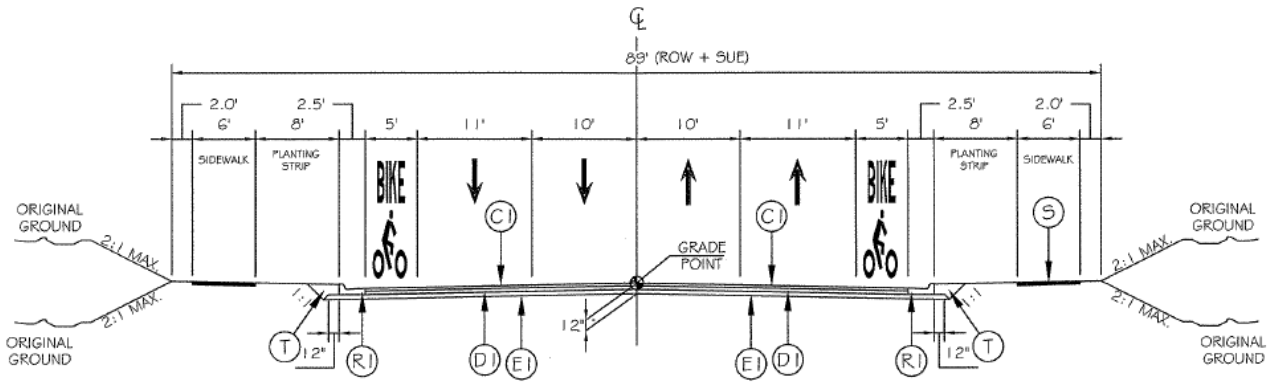
**Intersections**

CDOT Clear Sight Triangle	35' x 35'		
Intersection Sight Distance	555'	Min.	Object Height: 3.5' Eye Height: 3.5'
Stopping Sight Distance	200'	Min.	Object Height: 2.0' Eye Height: 3.5'
Angle of intersection	90'		(15' max. skew, 10' max. desirable skew)
Curb Radius	30'	Min.	
Offset to Adjacent Intersection	200'	Min.	

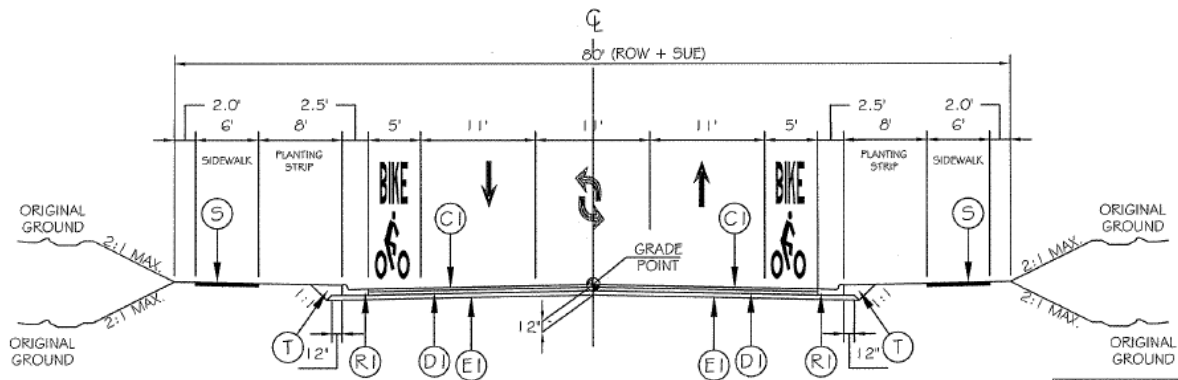
**Parking:**

No parking on Bridge approach or bridge section

THIS CITY OF CHARLOTTE SHOPPING CENTER NEW I-85 VADO CONCEPT V01.001619P-03B-TYP-S&S C-04 TYP  
 DATE: May 05, 2008 11:44am by: Frank Masterson



**INITIAL CONCEPT ALIGNMENT - TYPICAL SECTIONS**



**ULTIMATE CONCEPT ALIGNMENT - TYPICAL SECTIONS  
(USED FOR ALIGNMENT 8-10 TO MINIMIZE IMPACTS)**

PAVEMENT SCHEDULE	
C1	PROP. 3" ASPHALT CONCRETE SURFACE COURSE - TYPE 59.5C TWO LIFTS
D1	PROP. 4" ASPHALT CONCRETE INTERMEDIATE COURSE - TYPE 11 B.0C
E1	PROP. 5" BITUMINOUS CONCRETE BASE COURSE - TYPE B25.0C
R1	2'-4" CONCRETE CURB AND GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL



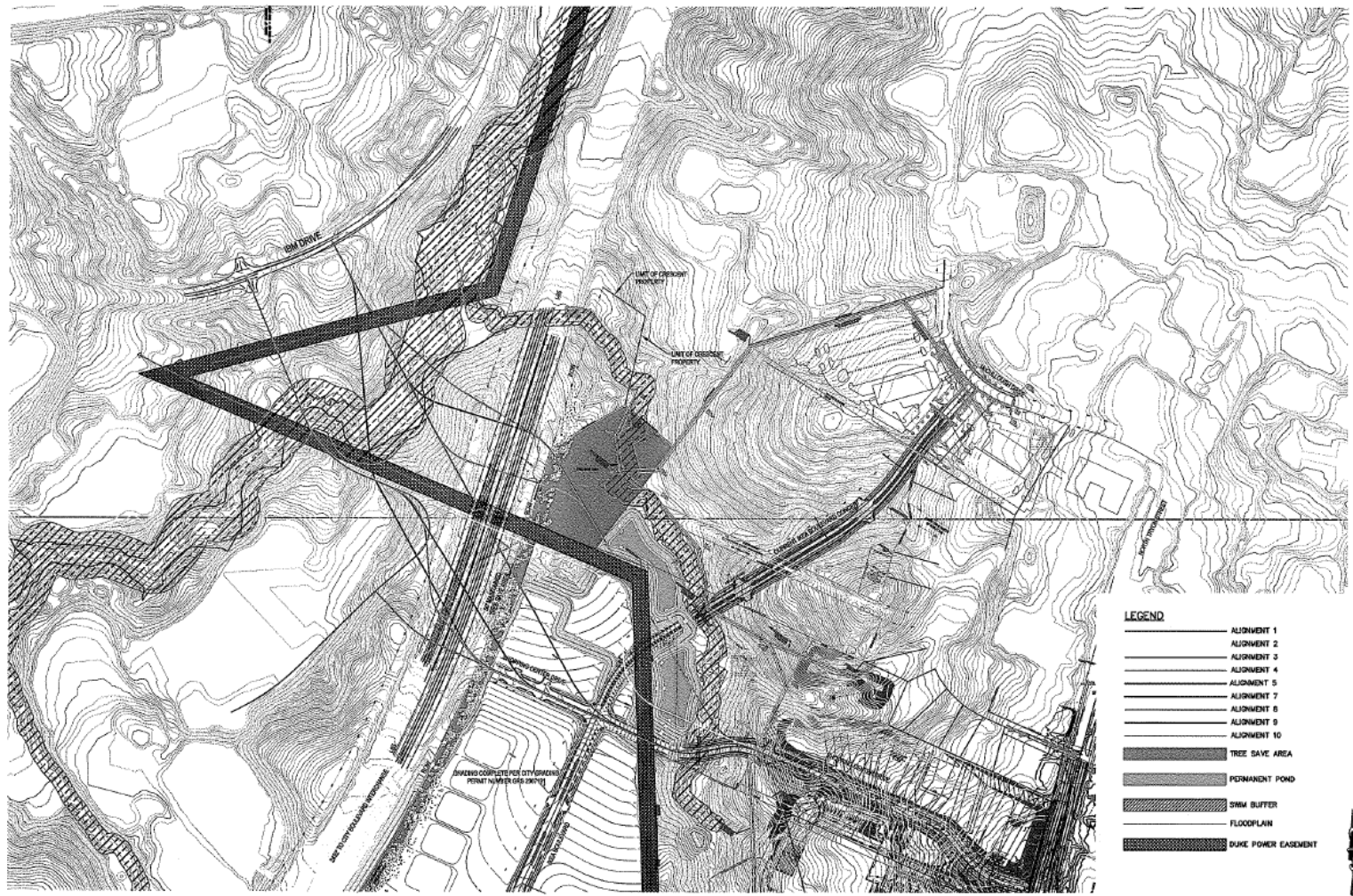
Plan Prepared by:  
**KIMLEY-HORN**  
 and Associates, Inc.  
 4651 Charlotte Park Drive, Suite 300  
 Charlotte, NC 28217

**FEASIBILITY STUDY FOR SHOPPING CENTER DRIVE  
EXTENSION TO IBM DRIVE**

**TYPICAL  
SECTION**

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

Drawing Name: P:\115204 - City of Charlotte\07 - Shopping Center\07 - Shopping Center.dwg  
 Date: May 15, 2008 8:47am  
 By: Frank Masterson  
 Project: 115204 - City of Charlotte\07 - Shopping Center\07 - Shopping Center.dwg



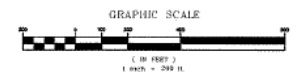
**LEGEND**

	ALIGNMENT 1
	ALIGNMENT 2
	ALIGNMENT 3
	ALIGNMENT 4
	ALIGNMENT 5
	ALIGNMENT 7
	ALIGNMENT 8
	ALIGNMENT 9
	ALIGNMENT 10
	TREE SAVE AREA
	PERMANENT POND
	SWM BUFFER
	FLOODPLAIN
	DUKE POWER EASEMENT



Plans Prepared By:  
  
**Kimley-Horn and Associates, Inc.**  
 4651 Charlotte Park Drive, Suite 300  
 Charlotte, NC 28217

**CONCEPT ALIGNMENTS**  
**FEASIBILITY STUDY FOR SHOPPING CENTER DRIVE**  
**EXTENSION TO IBM DRIVE**



**KEY**  
**SHEET**

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ENGINEERING DEPARTMENT  
 CONTRACTS DIVISION  
 OPINION OF PROBABLE CONSTRUCTION COSTS

CITY OF CHARLOTTE  
 600 EAST FOURTH STREET  
 CHARLOTTE, NORTH CAROLINA  
 28202-2844

PROJECT: SHOPPING CENTER DRIVE EXTENSION  
 NUMBER: CRESCENT PORTION

LIMITS: **PROPOSED SHOPPING CENTER DRIVE FROM END OF THE 100' TREE SAVE AREA TO EXISTING SHOPPING CENTER DRIVE**

ESTIMATE: \$3,534,000

EST. BY: F.Masterson  
 CHECK BY:  
 REVISED BY:

DATE: MARCH 28, 2008  
 DATE:  
 DATE:

Item No.	Sect. No.	Item Description	Quantity and Unit	Unit Price	Amount
<b>ROADWAY ITEMS</b>					
1	800	Mobilization (20%)	1 LS	\$ 220,737.43	\$ 220,737.43
2	SP-1	Grading	74100 CY	\$ 15.00	\$ 1,111,500.00
3	SP-2	Bridge	0 SQ-FT	\$ 135.00	\$ -
4	SP-3	Concrete Approach Slab	0 EA	\$ 12,500.00	\$ -
5	250	Removal of Existing Pavement	0 SY	\$ 7.50	\$ -
6	300	Foundation Conditioning Material, Minor Structures	0 TN	\$ 32.00	\$ -
7	310	18" R.C. Pipe Culverts, Class III	1510 LF	\$ 30.00	\$ 45,300.00
8	310	24" R.C. Pipe Culverts, Class III	723 LF	\$ 35.00	\$ 25,305.00
9	310	36" R.C. Pipe Culverts, Class III	723 LF	\$ 55.00	\$ 39,765.00
10	310	42" R.C. Pipe Culverts, Class III	723 LF	\$ 60.00	\$ 43,380.00
11	545	Incidental Stone Base	948.09 TN	\$ 30.00	\$ 28,442.74
12	607	Milling Asphalt Pavement, 2" Depth	0.00 SY	\$ 6.00	\$ -
13	610	Asphalt Concrete Base Course, Type B25.OB	5881.05 TN	\$ 75.00	\$ 441,078.40
14	610	Asphalt Concrete Intermediate Course, I19.OB	2057.07 TN	\$ 75.00	\$ 154,280.00
15	610	Asphalt Concrete Surface Course, S9.5C	1542.80 TN	\$ 75.00	\$ 115,710.00
16	620	Asphalt Binder for Plant Mix, Grade PG70-22	0 TN	\$ 450.00	\$ -
17	815	Subsurface Drainage: 4" Subdrain	0 LF	\$ 11.00	\$ -
18	815	Subdrain Excavation	0 CY	\$ 25.00	\$ -
19	815	Subdrain Aggregate	0 TN	\$ 70.00	\$ -
20	840	Masonry Drainage Structures; NCDOT STD. 840.02	12 EA	\$ 1,300.00	\$ 15,600.00
21	840	Frame with grate and Hood; NCDOT STD. 840.03	12 EA	\$ 400.00	\$ 4,800.00
22	840	Masonry Drainage Structures; NCDOT STD. 840.31	0 EA	\$ 1,300.00	\$ -
23	840	Traffic Bearing Junction Box; NCDOT STD. 840.34	0 EA	\$ 1,800.00	\$ -
24	840	Frame with grate and Hood; NCDOT STD. 840.54	0 EA	\$ 400.00	\$ -
25	846	1'-6" Concrete Curb and Gutter	0 LF	\$ 13.00	\$ -
26	846	2'-0" Concrete Curb and Gutter	0 LF	\$ 15.00	\$ -
27	846	2'-6" Concrete Curb and Gutter	2900 LF	\$ 15.00	\$ 43,500.00
28	846	6" Vertical Curb (CMLDS 10.18)	0 LF	\$ 15.00	\$ -
29	848	4" Concrete Sidewalk	2900 SY	\$ 35.00	\$ 101,500.00
30	848	6" Concrete Driveway	0 SY	\$ 50.00	\$ -
31	848	Concrete Wheelchair Ramps NCDOT STD. 848.DO5	4 SY	\$ 75.00	\$ 300.00
32	852	Monolithic Concrete Islands	70 SY	\$ 60.00	\$ 4,200.00
33	858	Adjustment of Manholes	0 EA	\$ 400.00	\$ -

34	1205	Thermoplastic Pavement Marking Lines, 4" Yellow Center Lines	2900	LF	\$ 1.00	\$ 2,900.00
35	1205	Thermoplastic Pavement Marking Lines, 4" Solid White Lines	5800	LF	\$ 1.00	\$ 5,800.00
36	1205	Thermoplastic Pavement Marking Lines, 4" Mini-Skip White		LF	\$ 1.00	\$ -
37	1205	Thermoplastic Pavement Marking Lines, 24" Solid White	12	LF	\$ 8.00	\$ 96.00
38	1205	Thermoplastic Pavement Marking Lines, 4" White Skip Lines	5800	LF	\$ 1.00	\$ 5,800.00
39	1205	Thermoplastic Pavement Marking Lines, 8" Cross-Walk lines	200	LF	\$ 3.00	\$ 600.00
40	1205	Thermoplastic Pavement Marking Symbols	4	EA	\$ 115.00	\$ 460.00
41	1205	Temporary Marking Lines - Paint	0	LF	\$ 1.00	\$ -
42	SP-4	Modular Unit Concrete Retaining Wall	0	SF	\$ 25.00	\$ -
43	SP-5	Traffic Control (20%)	1	LS	\$ 220,737.43	\$ 220,737.43
44	SP-6	Topsoil	0	CY	\$ 30.00	\$ -
45	SP-7	Planting Mix	0	CY	\$ 40.00	\$ -
46	SP-8	Traffic Signal	0	EA	\$ 150,000.00	\$ -
47	SP-9	Pedestrian Lighting (23 )	0	LS	\$ 85,000.00	\$ -
48	SP-10	Utility Pole Relocation	0	EA	\$ 9,000.00	\$ -
49	SP-11	Concrete Crosswalks	0	SY	\$ 110.00	\$ -
50	SP-12	Three Bar Hand Rail	0	LF	\$ 50.00	\$ -
51	SP-13	Offset Catch Basin; CLD STD. 20.34	0	EA	\$ 51.00	\$ -
52	862	Guard Rail	800	EA	\$ 26.25	\$ 21,000.00
53	1046	Guard Rail	2	EA	\$ 1,935.00	\$ 3,870.00

Subtotal	\$ 2,656,661.99
3 % Escalation Factor	\$79,700
30 % Contingency	\$796,999
Engineer's Estimate	\$ 3,533,360.45
SAY	\$3,534,000

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**NOTES:**

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- Does not include costs for signage.
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ENGINEERING DEPARTMENT  
 CONTRACTS DIVISION  
 OPINION OF PROBABLE CONSTRUCTION COSTS

CITY OF CHARLOTTE  
 600 EAST FOURTH STREET  
 CHARLOTTE, NORTH CAROLINA  
 28202-2844

PROJECT: SHOPPING CENTER DRIVE EXTENSION  
 NUMBER: ALIGNMENT 10

**LIMITS: SHOPPING CENTER DRIVE EXTENSION WITH GRADE SEPERATION AND FLYOVER FROM IBM DRIVE TO END OF 100' TREE SAVE AREA**

**ESTIMATE: \$8,270,000**

EST. BY: F.Masterson  
 CHECK BY:  
 REVISED BY:

DATE: APRIL 23, 2008  
 DATE:  
 DATE:

Item No.	Sect. No.	Item Description	Quantity and Unit	Unit Price	Amount
<b>ROADWAY ITEMS</b>					
1	800	Mobilization (20%)	1 LS	\$ 291,755.92	\$ 291,755.92
2	SP-1	Grading	30625 CY	\$ 15.00	\$ 459,375.00
3	SP-2	Bridge	18500 SQ-FT	\$ 185.00	\$ 3,422,500.00
4	SP-3	Concrete Approach Slab	2 EA	\$ 12,500.00	\$ 25,000.00
5	250	Removal of Existing Pavement	0 SY	\$ 7.50	\$ -
6	300	Foundation Conditioning Material, Minor Structures	0 TN	\$ 32.00	\$ -
7	310	18" R.C. Pipe Culverts, Class III	2010 LF	\$ 30.00	\$ 60,300.00
8	310	24" R.C. Pipe Culverts, Class III	1170 LF	\$ 35.00	\$ 40,950.00
9	310	36" R.C. Pipe Culverts, Class III	1170 LF	\$ 55.00	\$ 64,350.00
10	310	42" R.C. Pipe Culverts, Class III	0 LF	\$ 60.00	\$ -
11	545	Incidental Stone Base	964.43 TN	\$ 30.00	\$ 28,932.87
12	607	Milling Asphalt Pavement, 2" Depth	0.00 SY	\$ 6.00	\$ -
13	610	Asphalt Concrete Base Course, Type B25.OB	4431.07 TN	\$ 75.00	\$ 332,330.28
14	610	Asphalt Concrete Intermediate Course, 119.OB	2978.98 TN	\$ 75.00	\$ 223,423.69
15	610	Asphalt Concrete Surface Course, S9.5C	2234.24 TN	\$ 75.00	\$ 167,567.77
16	620	Asphalt Binder for Plant Mix, Grade PG70-22	0 TN	\$ 450.00	\$ -
17	815	Subsurface Drainage: 4" Subdrain	0 LF	\$ 11.00	\$ -
18	815	Subdrain Excavation	0 CY	\$ 25.00	\$ -
19	815	Subdrain Aggregate	0 TN	\$ 70.00	\$ -
20	840	Masonry Drainage Structures; NCDOT STD. 840.02	26 EA	\$ 1,300.00	\$ 33,800.00
21	840	Frame with grate and Hood; NCDOT STD. 840.03	26 EA	\$ 400.00	\$ 10,400.00
22	840	Masonry Drainage Structures; NCDOT STD. 840.31	0 EA	\$ 1,300.00	\$ -
23	840	Traffic Bearing Junction Box; NCDOT STD. 840.34	0 EA	\$ 1,800.00	\$ -
24	840	Frame with grate and Hood; NCDOT STD. 840.54	0 EA	\$ 400.00	\$ -
25	846	1'-6" Concrete Curb and Gutter	0 LF	\$ 13.00	\$ -
26	846	2'-0" Concrete Curb and Gutter	0 LF	\$ 15.00	\$ -
27	846	2'-6" Concrete Curb and Gutter	6210 LF	\$ 15.00	\$ 93,150.00
28	846	6" Vertical Curb (CMLDS 10.18)	0 LF	\$ 15.00	\$ -
29	848	4" Concrete Sidewalk	6210 SY	\$ 35.00	\$ 217,350.00
30	848	6" Concrete Driveway	0 SY	\$ 50.00	\$ -
31	848	Concrete Wheelchair Ramps NCDOT STD. 848.DO5	4 SY	\$ 75.00	\$ 300.00
32	852	Monolithic Concrete Islands	0 SY	\$ 60.00	\$ -
33	858	Adjustment of Manholes	0 EA	\$ 400.00	\$ -



34	1205	Thermoplastic Pavement Marking Lines, 4" Yellow Center Lines	0	LF	\$ 1.00	\$ -
35	1205	Thermoplastic Pavement Marking Lines, 4" Solid White Lines	12420	LF	\$ 1.00	\$ 12,420.00
36	1205	Thermoplastic Pavement Marking Lines, 4" Mini-Skip White	6210	LF	\$ 1.00	\$ 6,210.00
37	1205	Thermoplastic Pavement Marking Lines, 24" Solid White	90	LF	\$ 8.00	\$ 720.00
38	1205	Thermoplastic Pavement Marking Lines, 4" White Skip Lines	6210	LF	\$ 1.00	\$ 6,210.00
39	1205	Thermoplastic Pavement Marking Lines, 8" Cross-Walk lines	240	LF	\$ 3.00	\$ 720.00
40	1205	Thermoplastic Pavement Marking Symbols	9	EA	\$ 115.00	\$ 1,035.00
41	1205	Temporary Marking Lines - Paint	0	LF	\$ 1.00	\$ -
42	SP-4	Modular Unit Concrete Retaining Wall	0	SF	\$ 25.00	\$ -
43	SP-5	Traffic Control (20%)	1	LS	\$ 291,755.92	\$ 291,755.92
44	SP-6	Topsoil	0	CY	\$ 30.00	\$ -
45	SP-7	Planting Mix	0	CY	\$ 40.00	\$ -
46	SP-8	Traffic Signal	2	EA	\$ 150,000.00	\$ 300,000.00
47	SP-9	Pedestrian Lighting (23 )	0	LS	\$ 85,000.00	\$ -
48	SP-10	Utility Pole Relocation	0	EA	\$ 9,000.00	\$ -
49	SP-11	Concrete Crosswalks	0	SY	\$ 110.00	\$ -
50	SP-12	Three Bar Hand Rail	1600	LF	\$ 50.00	\$ 80,000.00
51	SP-13	Offset Catch Basin; CLD STD. 20.34	0	EA	\$ 51.00	\$ -
52	862	Guard Rail	1600	EA	\$ 26.25	\$ 42,000.00
53	1046	Guard Rail	6	EA	\$ 1,935.00	\$ 11,610.00

Subtotal	\$ 6,224,166.45
3 % Escalation Factor	\$177,725
30 % Contingency	\$1,867,250
Engineer's Estimate	\$ 8,269,141.38
SAY	\$8,270,000

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ENGINEERING DEPARTMENT  
 CONTRACTS DIVISION  
 OPINION OF PROBABLE CONSTRUCTION COSTS

CITY OF CHARLOTTE  
 600 EAST FOURTH STREET  
 CHARLOTTE, NORTH CAROLINA  
 28202-2844

PROJECT: SHOPPING CENTER DRIVE EXTENSION  
 NUMBER: ALIGNMENT 8A-8B

LIMITS: **SHOPPING CENTER DRIVE EXTENSION WITH GRADE SEPERATION AND FLYOVER FROM IBM DRIVE TO END OF 100' TREE SAVE AREA**

ESTIMATE: \$8,131,000

EST. BY: F.Masterson  
 CHECK BY:  
 REVISED BY:

DATE: MAY 11, 2008  
 DATE:  
 DATE:

Item No.	Sect. No.	Item Description	Quantity and Unit	Unit Price	Amount
<b>ROADWAY ITEMS</b>					
1	800	Mobilization (20%)	1 LS	\$ 303,293.51	\$ 303,293.51
2	SP-1	Grading	125186 CY	\$ 15.00	\$ 1,877,790.00
3	SP-2	Bridge	15910 SQ-FT	\$ 135.00	\$ 2,147,850.00
4	SP-3	Concrete Approach Slab	2 EA	\$ 12,500.00	\$ 25,000.00
5	250	Removal of Existing Pavement	0 SY	\$ 7.50	\$ -
6	300	Foundation Conditioning Material, Minor Structures	0 TN	\$ 32.00	\$ -
7	310	18" R.C. Pipe Culverts, Class III	1692 LF	\$ 30.00	\$ 50,760.00
8	310	24" R.C. Pipe Culverts, Class III	972 LF	\$ 35.00	\$ 34,020.00
9	310	36" R.C. Pipe Culverts, Class III	972 LF	\$ 55.00	\$ 53,460.00
10	310	42" R.C. Pipe Culverts, Class III	0 LF	\$ 60.00	\$ -
11	545	Incidental Stone Base	1030.62 TN	\$ 30.00	\$ 30,918.56
12	607	Milling Asphalt Pavement, 2" Depth	0.00 SY	\$ 6.00	\$ -
13	610	Asphalt Concrete Base Course, Type B25.OB	4735.18 TN	\$ 75.00	\$ 355,138.43
14	610	Asphalt Concrete Intermediate Course, I19.OB	3183.43 TN	\$ 75.00	\$ 238,757.48
15	610	Asphalt Concrete Surface Course, S9.5C	2387.57 TN	\$ 75.00	\$ 179,068.11
16	620	Asphalt Binder for Plant Mix, Grade PG70-22	0 TN	\$ 450.00	\$ -
17	815	Subsurface Drainage, 4" Subdrain	0 LF	\$ 11.00	\$ -
18	815	Subdrain Excavation	0 CY	\$ 25.00	\$ -
19	815	Subdrain Aggregate	0 TN	\$ 70.00	\$ -
20	840	Masonry Drainage Structures; NCDOT STD. 840.02	24 EA	\$ 1,300.00	\$ 31,200.00
21	840	Frame with grate and Hood; NCDOT STD. 840.03	24 EA	\$ 400.00	\$ 9,600.00
22	840	Masonry Drainage Structures; NCDOT STD. 840.31	0 EA	\$ 1,300.00	\$ -
23	840	Traffic Bearing Junction Box; NCDOT STD. 840.34	0 EA	\$ 1,800.00	\$ -
24	840	Frame with grate and Hood; NCDOT STD. 840.54	0 EA	\$ 400.00	\$ -
25	846	1'-6" Concrete Curb and Gutter	0 LF	\$ 13.00	\$ -
26	846	2'-0" Concrete Curb and Gutter	0 LF	\$ 15.00	\$ -
27	846	2'-6" Concrete Curb and Gutter	6500 LF	\$ 15.00	\$ 97,500.00
28	846	6" Vertical Curb (CMLDS 10.18)	0 LF	\$ 15.00	\$ -
29	848	4" Concrete Sidewalk	6500 SY	\$ 35.00	\$ 227,500.00
30	848	6" Concrete Driveway	0 SY	\$ 50.00	\$ -
31	848	Concrete Wheelchair Ramps NCDOT STD. 848.DO5	4 SY	\$ 75.00	\$ 300.00
32	852	Monolithic Concrete Islands	0 SY	\$ 60.00	\$ -
33	858	Adjustment of Manholes	0 EA	\$ 400.00	\$ -

34	1205	Thermoplastic Pavement Marking Lines, 4" Yellow Center Lines	0	LF	\$	1.00	\$	-
35	1205	Thermoplastic Pavement Marking Lines, 4" Solid White Lines	13000	LF	\$	1.00	\$	13,000.00
36	1205	Thermoplastic Pavement Marking Lines, 4" Mini-Skip White	200	LF	\$	1.00	\$	200.00
37	1205	Thermoplastic Pavement Marking Lines, 24" Solid White	130	LF	\$	8.00	\$	1,040.00
38	1205	Thermoplastic Pavement Marking Lines, 4" White Skip Lines	6500	LF	\$	1.00	\$	6,500.00
39	1205	Thermoplastic Pavement Marking Lines, 8" Cross-Walk lines	180	LF	\$	3.00	\$	540.00
40	1205	Thermoplastic Pavement Marking Symbols	15	EA	\$	115.00	\$	1,725.00
41	1205	Temporary Marking Lines - Paint	0	LF	\$	1.00	\$	-
42	SP-4	Modular Unit Concrete Retaining Wall	0	SF	\$	25.00	\$	-
43	SP-5	Traffic Control (8%)	1	LS	\$	121,317.41	\$	121,317.41
44	SP-6	Topsoil	0	CY	\$	30.00	\$	-
45	SP-7	Planting Mix	0	CY	\$	40.00	\$	-
46	SP-8	Traffic Signal	1	EA	\$	150,000.00	\$	150,000.00
47	SP-9	Pedestrian Lighting (23 )	0	LS	\$	85,000.00	\$	-
48	SP-10	Utility Pole Relocation	0	EA	\$	9,000.00	\$	-
49	SP-11	Concrete Crosswalks	0	SY	\$	110.00	\$	-
50	SP-12	Three Bar Hand Rail	2000	LF	\$	50.00	\$	100,000.00
51	SP-13	Offset Catch Basin; CLD STD. 20.34	0	EA	\$	51.00	\$	-
52	862	Guard Rail	2000	EA	\$	26.25	\$	52,500.00
53	1046	Guard Rail	4	EA	\$	1,935.00	\$	7,740.00

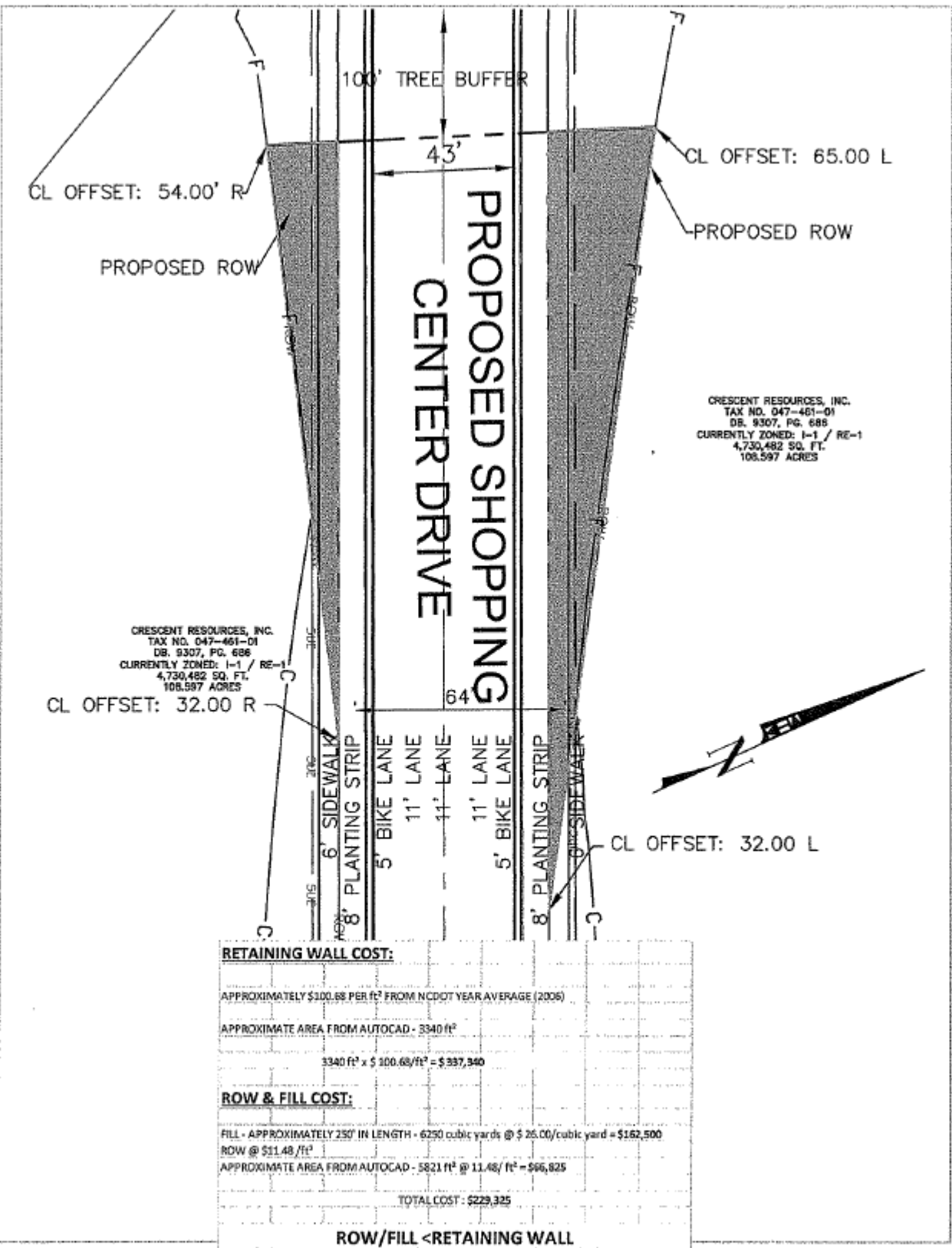
Subtotal	\$	6,116,718.49
3 % Escalation Factor		\$179,002
30 % Contingency		\$1,835,016
Engineer's Estimate	\$	8,130,735.60
SAY		\$8,131,000

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Drawing name: P:\015016 City of Charlotte\087 Shopping Center over I-85\CADD\CONCEPT\REV CONCEPT\015016087-PLAN-PROFILE-10.dwg ROW-PL-RET WALL COST May 14, 2008 0:18pm by: Frank-Montenegro  
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CRESCENT RESOURCES, INC.  
 TAX NO. 047-461-01  
 DB. 9307, PG. 686  
 CURRENTLY ZONED: I-1 / RE-1  
 4,730,482 SQ. FT.  
 108.597 ACRES

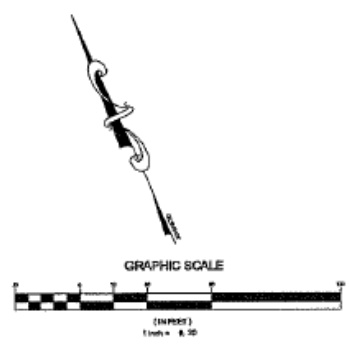
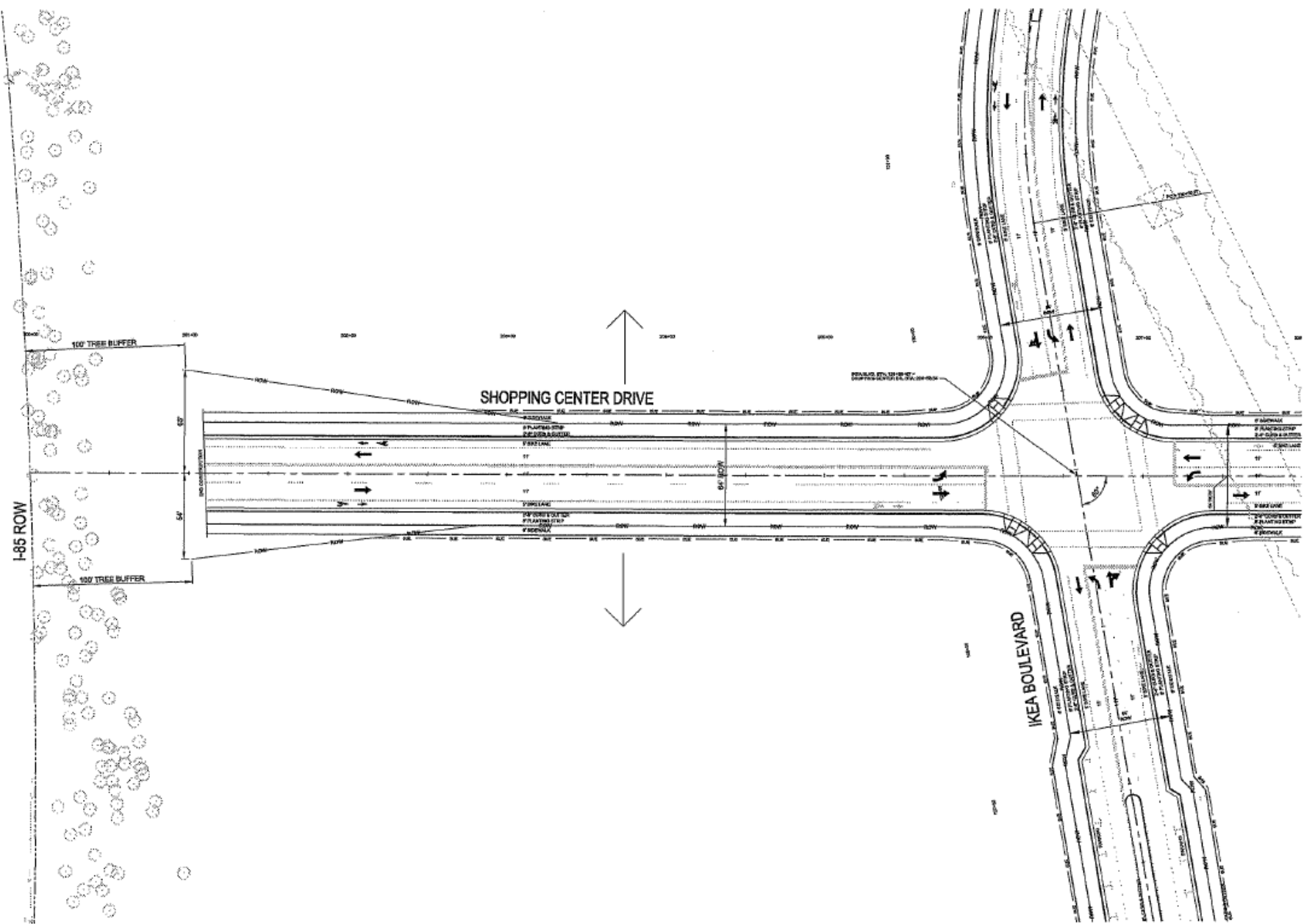
CRESCENT RESOURCES, INC.  
 TAX NO. 047-461-01  
 DB. 9307, PG. 686  
 CURRENTLY ZONED: I-1 / RE-1  
 4,730,482 SQ. FT.  
 108.597 ACRES

RETAINING WALL COST:	
APPROXIMATELY \$100.68 PER FT <sup>2</sup> FROM NCDOT YEAR AVERAGE (2006)	
APPROXIMATE AREA FROM AUTOCAD - 3340 ft <sup>2</sup>	
3340 ft <sup>2</sup> x \$ 100.68/ft <sup>2</sup> = \$337,340	
ROW & FILL COST:	
FILL - APPROXIMATELY 250' IN LENGTH - 6250 cubic yards @ \$ 26.00/cubic yard = \$162,500	
ROW @ \$11.48/ft <sup>2</sup>	
APPROXIMATE AREA FROM AUTOCAD - 5821 ft <sup>2</sup> @ 11.48/ ft <sup>2</sup> = \$66,825	
TOTAL COST - \$229,325	
ROW/FILL <RETAINING WALL	



SCALE: NTS DESIGNED BY: FDM DRAWN BY: FDM CHECKED BY: [Signature]	Kimley-Horn and Associates, Inc. © 2008 KIMLEY-HORN AND ASSOCIATES, INC. 4051 Charlotte Park Drive, Charlotte, NC 28217 PHONE (704) 333-9131 FAX (704) 333-0045 WWW.KIMLEY-HORN.COM	DATE: 04/30/08 PROJECT NO.: 015016087	ROW/FILL - RETAINING WALL COST ANALYSIS	DESIGN ENGINEER:	SHEET NUMBER:
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252 C:\cassett\0118 - IKEA - R110 - PHASE 1\CAD\ROADWAY\DWG\Exhibit\0118R219 - ROW - EXHIBIT.dwg May 15, 2008 7:10:39 AM by jcw.dj@hmc.com



Plans Prepared By:  
 Kinley-Horn and Associates, Inc.  
 4651 Charlotte Park Drive, Suite 300  
 Charlotte, NC 28217

## SHOPPING CENTER DRIVE RIGHT OF WAY EXHIBIT

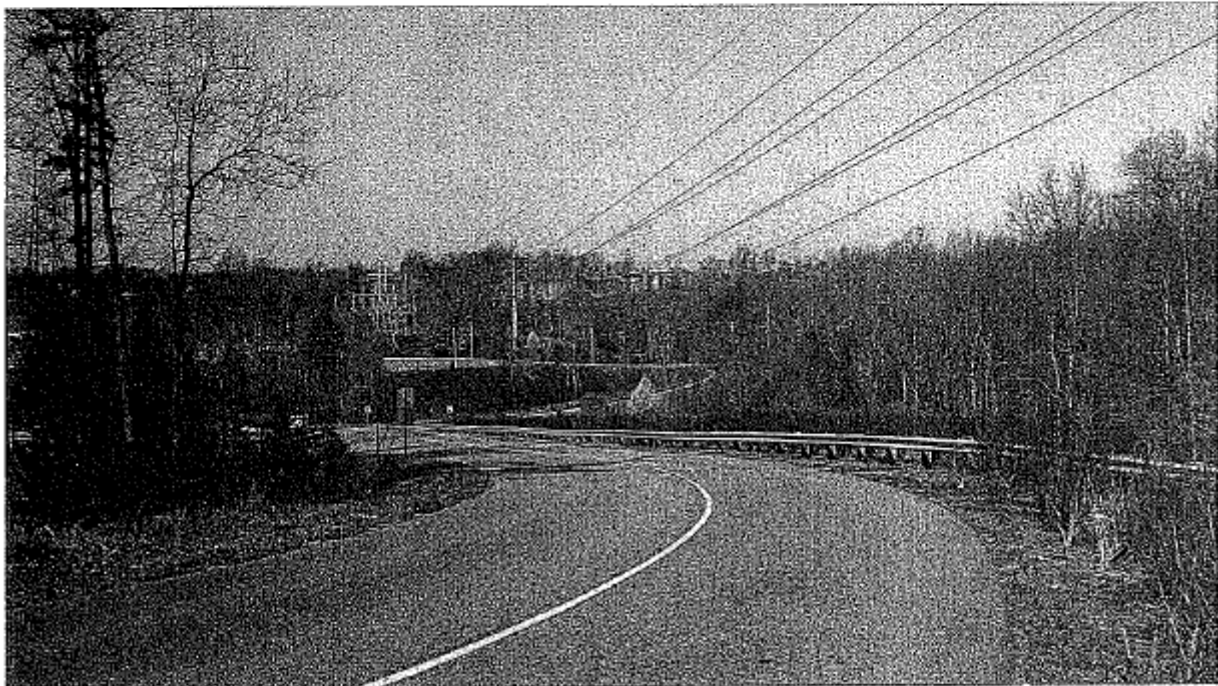
DATE: 05-06-08

SHEET  
 R2-X

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Looking to the West. Taken near the I-85 ROW. Bridge on School driveway shown.



Looking to the West. Closer to I-85

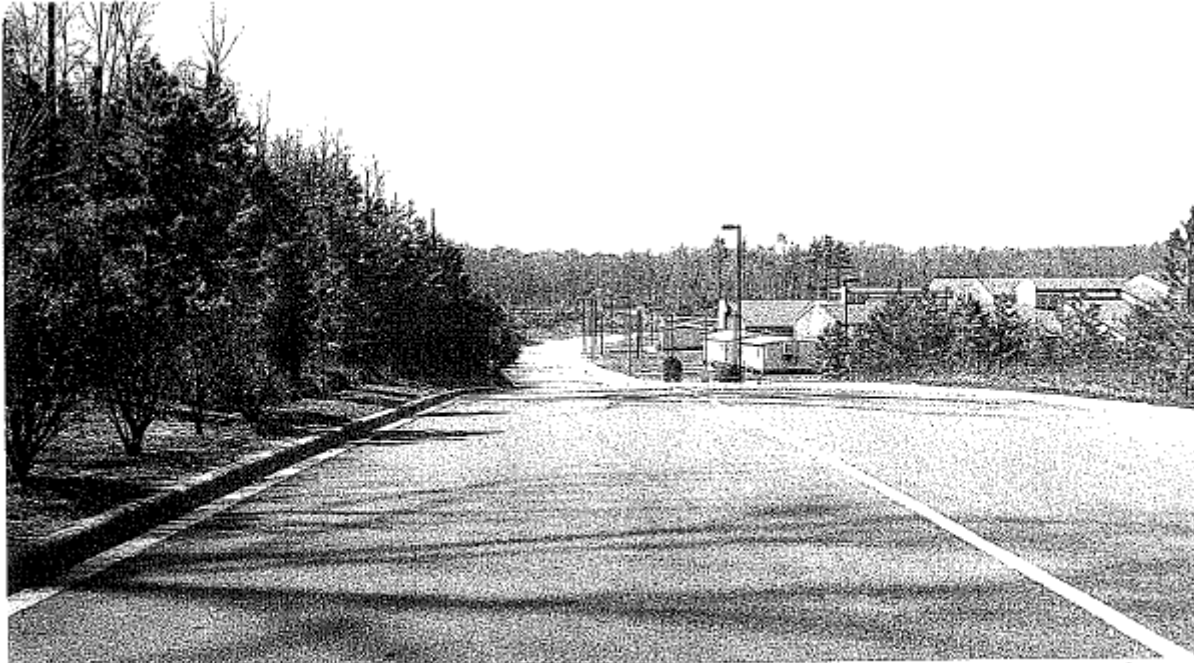




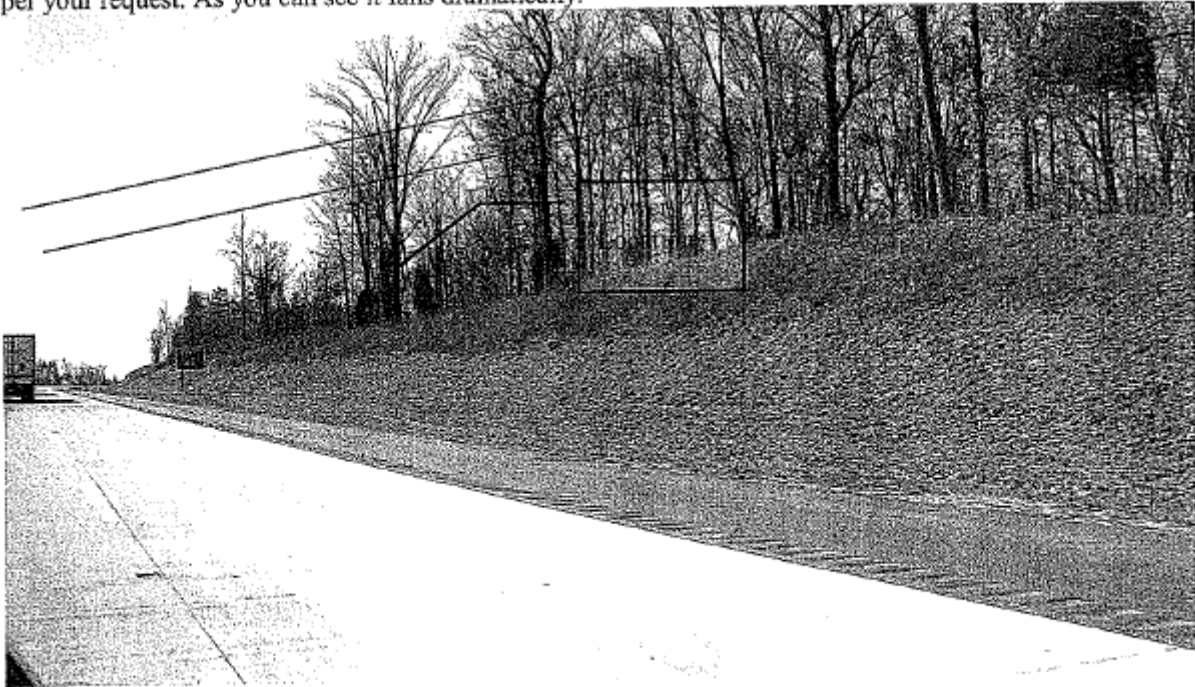
Taken from Bridge on School driveway looking East towards I-85



Taken from Bridge looking South. The school is on the Left. IBM drive on Right.



Near top of school drive (near I-85 ROW) looking south. Matt- this is close to where we tried to Tee the road in per your request. As you can see it falls dramatically.



I-85 Southbound at Crossing



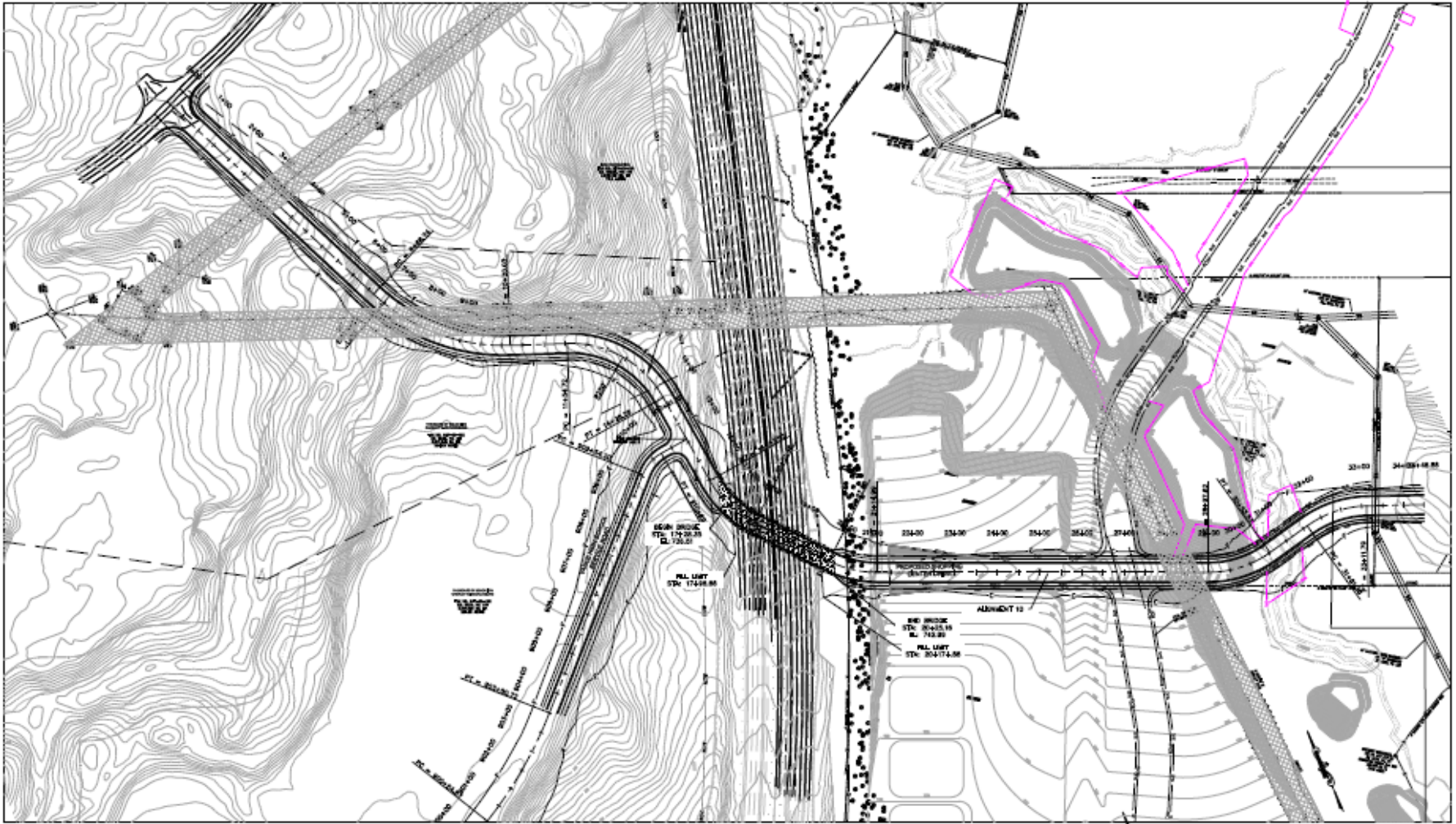


**Shopping Center Drive Extension to IBM Drive Feasibility Study  
(City contract 08-00470, VMS V9802)  
Charlotte, North Carolina**

4/3/2008

	UTILITY CONFLICT	GRADE	WETLAND	TREE SAVE	PERMANENT POND	COMPATIBILITY (BIA BLVD.)	FLOOD PLAIN	BRIDGE COST (\$/LINE)	HIGH SCHOOL DISTURBANCE
ALIGNMENT 1	Crosses transmission lines at a skew and in the middle of the towers.	Proposed grade is maximum of 185 to tie into existing 34%.	Wetland impact east and west of 85 increased due to height of 85 necessary.	Minimal impacts to the 100 tree save area.	No impacts to the permanent ponds.	Utilizes proposed Shopping Center Drive east of 185.	Crosses flood plain at max distance. Increase area of disturbance due to height of 85.	Cost is increased due to the skew angle of the bridge.	Minimal disturbance to Vance High School service road.
ALIGNMENT 2	Crosses transmission towers direct at a skew. Relocation of 2 towers necessary due to proximity.	Existing grade other than 85 to a 15% over with grade separation east of 145 - like prop. grade 8%.	Wetland impact east and west of 145 increased due to height of 85 necessary.	Minimal impacts to the 100 tree save area.	Impacts to pond 1.	Crosses BIA Blvd at a skew. Utilizes existing service roads.	Impacts are minimal due to the use of existing service road.	Bridge at 30°.	Moderate disturbance to Vance High School service road.
ALIGNMENT 3	Crosses transmission towers at a skew. Crosses under transmission close to towers.	Increased amount of fill needed due to existing terrain. Max. prop. grade 26%.	Wetland impact east and west of 85 increased due to height of 85 necessary and also crossing at a skew.	Increased impacts to the 100 tree save area due to crossing at a skew.	No impacts to the permanent ponds.	Utilizes proposed Shopping Center Drive. Existing parcel east of proposed Shopping Center Drive.	Crosses flood plain at max distance. Increase area of disturbance due to height of 85.	Cost is increased due to the skew angle of the bridge.	Minimal disturbance to Vance High School service road.
ALIGNMENT 4	Relocation of tower needed due to proximity. Crosses under lines in the middle.	Increased amount of fill needed due to existing terrain. east and west. Max. prop. grade 23%.	Wetland impact east and west of 85 increased due to height of 85 necessary and also crossing at a skew.	Increased impacts to the tree save area. Crossing at a skew in the larger tree save area.	Impacts to both pond 1 and 2.	Crosses BIA Blvd. at 90°, however at max longitudinal grade.	Crosses flood plain at max distance. Increase area of disturbance due to height of 85.	Bridge at 50°.	Minimal disturbance to Vance High School service road.
ALIGNMENT 5	Relocation of tower needed due to proximity. Crosses under lines in the middle.	Increased amount of fill needed due to existing terrain. east and west. Max. prop. grade 34%.	Wetland impact east and west of 85 increased due to height of 85 necessary and also crossing at a skew.	Increased impacts to the tree save area. Crossing at a skew in the larger tree save area.	Impacts to both pond 1 and 2.	Crosses BIA Blvd. at 90°, however at max longitudinal grade.	Crosses flood plain at max distance. Increase area of disturbance due to height of 85.	Bridge at 30°.	Minimal disturbance to Vance High School service road.
ALIGNMENT 7	Relocation of tower needed due to proximity. Crosses under lines in the middle.	Proposed grade is maximum of 135 to tie into existing 25%.	Wetland impact east and west of 85 increased due to height of 85 necessary and also crossing at a skew.	Increased impacts to the tree save area. Crossing at a skew in the larger tree save area.	Impacts to both pond 1 and 2.	Crosses BIA Blvd at 30°, however at max longitudinal grade.	Crosses flood plain at max distance. Increase area of disturbance due to height of 85.	Cost is increased due to the skew angle of the bridge.	Minimal disturbance to Vance High School service road.
ALIGNMENT 8	Minimal conflicts due to the ability to tie back into existing roadway.	Proposed grade north and south on Vance High School service road is from 86 to the tie into existing 145 to tie into existing.	Wetland impact minimal due to the ability to tie into existing.	Minimal impacts to the 100 tree save area. crosses 80°.	No impacts to the permanent ponds.	Utilizes proposed Shopping Center Drive west of 145 as well as existing Vance High School service road.	Crosses flood plain at existing crossing. Minimal area of disturbance.	Bridge at 90°.	Minimal disturbance to Vance High School service road due to the large amount of fill needed to tie-in road to meet Shopping Center Road.
ALIGNMENT 9	Crosses transmission lines at a skew and in the middle of the towers. Alignment NOT feasible due to height of 85 set forth by Duke Power.	Proposed grade north and south on Vance High School service road is from 86 to tie into existing 145 to tie into existing.	Wetland impact east and west of 85 increased due to height of 85 necessary.	Minimal impacts to the 100 tree save area.	No impacts to the permanent ponds.	Utilizes proposed Shopping Center Drive east of 145.	Crosses flood plain at existing crossing. Maximum area of disturbance is the large amount of fill.	Cost is increased due to the skew angle of the bridge.	Minimal disturbance to Vance High School service road.
ALIGNMENT 10	Minimal conflicts due to the ability to tie back into existing roadway.	Proposed grade is maximum 86 west of 85 to tie into existing.	Wetland impact minimal due to the ability to tie into existing.	Minimal impacts to the 100 tree save area.	No impacts to the permanent ponds.	Utilizes proposed Shopping Center Drive east of 145 as well as existing Vance High School service road.	Crosses flood plain at existing crossing. Minimal area of disturbance.	Cost is maximum due to the skew angle of the bridge and curve in bridge.	Medium disturbance to Vance High School service road due to maximum 250' curve on Vance High School service road.

DATE: 11/13/2024 11:58:43 AM PROJECT: SHOPPING CENTER DRIVE EXTENSION TO IBM DRIVE SHEET: CONCEPT ALIGNMENT 10 PLAN SHEET



Plans Prepared By:  
**CHARRITTY**  
4601 Charlotte Park Drive, Suite 200  
Charlottesville, VA 22902

**CONCEPT ONLY  
NOT FOR CONSTRUCTION**

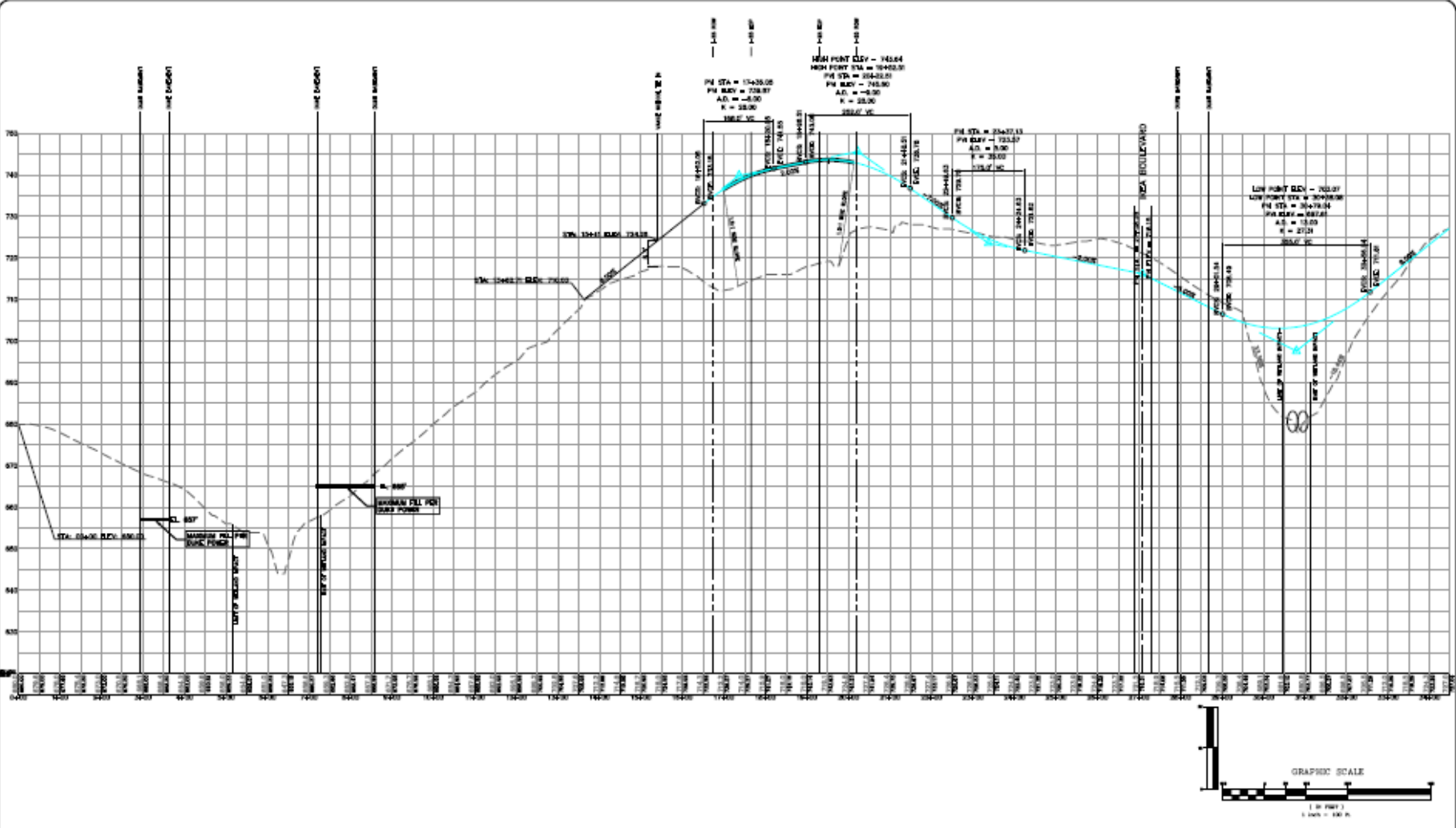
**CONCEPT ALIGNMENT 10 PLAN SHEET**  
FEASIBILITY STUDY FOR SHOPPING CENTER DRIVE  
EXTENSION TO IBM DRIVE



PLAN  
ALIGN 10

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Prepared By:  
[Signature]  
4611 Charlotte Park Drive, Suite 300  
Charlotte, NC 28217

### FEASIBILITY STUDY FOR SHOPPING CENTER DRIVE EXTENSION TO IBM DRIVE

PROFILE  
ALIGN 10

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