BOARD OF ADJUSTMENT AGENDA

January 28, 2020, 8:30 a.m.
Committee Room, 2nd Floor, City Hall
101 City Hall Plaza, Durham, NC

1. Call To Order

2. Roll Call
   Chris Burnham
   Regina deLacy
   Fredrick Davis
   Myca Jeter, Designated Alternate
   Ian Kipp
   Jessica Major
   Chad Meadows, Vice Chair
   Michael Retchless
   Jacob Rogers, Chair
   Teisha Wymore

3. Adjustments To Agenda

4. Swearing-In Of Witnesses

5. Hearing And Determination Of Cases - Planning Staff

   A. **Case B1900027** – City: A minor special use permit to allow a school within a place of worship located in a residential zoning district. The subject site is located at 1415 Holloway Street, is zoned Residential Urban – 5(2) [RU-5(2)], and in the Urban Tier.
   B. **Case B1900048** – City: A minor special use permit to request a parking reduction greater than 20%. The subject site is located at 105 W NC 54 HWY, is zoned Commercial Center (CC-D) and Office & Institutional (OI-D); is in the Falls of the Neuse/Jordan Lake Protected Area (F/J-B) and Major Transportation Corridor I-40 (MTC I-40) Overlay Districts, and in the Suburban Tier.
   C. **Case B1900050** - County: A minor special use permit for a development with new project floor area over 5,000 square feet within the Commercial Neighborhood (CN) zoning district without a development plan. The subject site is located at 12907 N. Roxboro Road, 12807 N. Roxboro Road & 123 Bill Poole Road, is zoned Commercial Neighborhood (CN); is in the Little River Protected Area (M/LR-B) and Rougemont Rural Village, and in the Rural Tier.
   D. **Case B1900051** - County: A minor special use permit to reduce parking by more than 20%. The site is located at 12907 N. Roxboro Road, 12807 N. Roxboro Road & 123 Bill Poole Road, is zoned Commercial Neighborhood (CN); is in the Little River Protected Area (M/LR-B) and Rougemont Rural Village, and in the Rural Tier.
   E. **Case B1900052** - City: A request for a variance from the street yard requirements for the addition of a roof over an existing front deck. The subject site is located at 2202 Eastwood Drive, is zoned Residential Suburban (RS-20), and in the Suburban Tier.

   Documents:

   B1900027.PDF
   B1900048.PDF
   B1900050.PDF

B1900051.PDF
B1900052.PDF

6. Approval Of Minutes - December 10, 2019

   Documents:

   BOA MINUTES - DRAFT.PDF

7. Approval Of Orders
8. Old Business
9. New Business
10. Adjournment

Notice under the Americans with Disabilities Act *- A person with a disability may receive an auxiliary aid or service to effectively participate in city government activities by contacting the ADA Coordinator, voice 919.560.4197 or ADA@DurhamNC.gov, as soon as possible but no later than 48 hours before the event or deadline date.*

Staff Contact: Jessica Dockery, Planning Manager
919.560.4137 x28210. BOA@DurhamNC.gov

MINOR SPECIAL USE PERMIT

EMPOWERED MINDS ACADEMY
B1900027

Meeting Date: January 28, 2020

Reference Name	Empowered Minds Academy Minor Special Use Permit (B1900027)		**Jurisdiction**	City
Request	A minor special use permit to allow a school within a place of worship located in a residential zoning district.			
Site Characteristics	**Tier:**	Urban		
	Use:	Place of Worship		
	Zoning:	Residential Urban – 5 (2) [RU-5(2)]		
	Overlays:	None		
	Size:	0.86 acres		
Applicant	Valine Zeigler		**Submittal Date**	May 28, 2019
Location	1415 Holloway Street			
PID(s)	113051			
Staff Recommendation	Staff will make a recommendation following the hearing.			

A. Summary

Valine Zeigler, Executive Director of Empowered Minds Academy, proposes a minor special use permit to allow for a school to be located within an existing place of worship, First United Antioch Baptist Church, located at 1415 Holloway Street. The site is zoned Residential Urban – 5(2) [RU-5(2) and is located in the Urban Tier.

An elementary or middle school educational facility in a residential zoning district, such as RU-5(2), requires the issuance of a minor special use permit pursuant to Unified Development Ordinance (UDO) Section 5.1.2, *Use Table*, and it subject to the limited use standards of UDO Section 5.3.3K.

A site plan has been submitted in conjunction with this request (Attachment 4, D1900160). The plan is currently under review and clear of substantial comments.

B. Summary of the Issues

Staff is unaware of any issues at the time of this report.

Recommended Conditions of Approval

1. The improvements shall be substantially consistent with the information submitted to the Board as part of the application and site plan case D1900160.

2. Students of Empowered Minds Academy shall be limited to 5 to 14 years of age.

3. A maximum of 40 students are permitted to attend the Academy.

C. UDO Section 3.9.8: Criteria for Approval

1. UDO Section 3.9.8A General Findings

Applications for major or minor special use permits shall be approved only if the approving authority finds that the use as proposed, or the use as proposed with conditions, is:

1. *In harmony with the area and not substantially injurious to the value of properties in the general vicinity;*
2. *In conformance with all special requirements applicable to the use;*
3. *Will not adversely affect the health or safety of the public; and*
4. *Will adequately address the review factors identified below.*

If the Board of Adjustment fails to find conformance with the conditions listed above, or makes findings which are inconsistent with those conditions listed above, then the proposed permit must be denied.

The Board should consider the information provided in the staff analysis and conclusions for the following review factors when making determinations on the general findings.

2. UDO Section 3.9.8B Review Factors

UDO Section 3.9.8B requires consideration of the review factors shown below:

a. *Circulation*

Number and location of access points to the property and the proposed structures and uses with particular reference to automotive, bicycle, mass transit and pedestrian safety and convenience, traffic flow and control, and access in case of fire or catastrophe.

Staff Analysis. Given the narrow nature of the existing parking lot directly adjacent to the school building, the North Parking Lot, each vehicle dropping off a student will need to park their vehicle and walk the student inside. Under directive from the Transportation Management Plan (TMP) drafted by the Municipal and School Transportation Assistance (MSTA), the applicant will restripe the lot, decreasing the parking from 10 spaces to 7 spaces, allowing for a small stacking area in which one vehicle may wait. MTSA recommends that vehicles exit the site using a right-in and right-out turn. During peak hours, vehicles may have to park across Holloway Street, in the South Parking Lot, and walk over to the site using the crosswalk and accessible path to the building.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

b. ***Parking and Loading***
Location of off-street parking and loading areas.

Staff Analysis. There are 10 spaces currently located on site in the North Parking Lot and 38 spaces located across Holloway Street in the South Parking Lot. There is also on-street parking located on Alma Street and N. Guthrie Avenue. The school use requires 7 parking spaces. Given that the place of worship and the school will operate at two different times, the on-street parking and the North and South Parking Lot facilities should be able to adequately service the two uses without adverse effects on the neighboring properties.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

c. ***Service Entrances and Areas***
Locations of refuse and service areas with particular reference to ingress and egress of service vehicles.

Staff Analysis. Refuse is currently stored in existing roll-out bins located at the site. No modification is proposed regarding refuse collection.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

d. ***Lighting***
Locations of exterior lighting with reference to glare, traffic safety, economic effect, and compatibility with other properties in the area.

Staff Analysis. No changes to existing lighting at the site are required or proposed.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

e. ***Signs***
Appropriateness of signs considering location, color, height, size, and design within the context of other properties in the area.

Staff Analysis. Any future signs will require separate review and a permit and must be in compliance with the Ordinance signage requirements. No signs are currently proposed. Signs are not reviewed during site plan review nor during a minor special use permit process.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

f. ***Utilities***
Location and availability of utilities.

Staff Analysis. No modifications are proposed to utility connections as part of this request.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

g. ***Open Spaces***
Location of required yards and other open spaces, and preservation of existing trees and other natural features.

Staff Analysis. Per UDO Section 6.9.1B.2, open space, pursuant to Section 7.2.2, is not required for development sites of an acre or less.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

h. ***Environmental Protection***
Preservation of tree cover, Durham Inventory Sites, floodplain, stream buffers, wetlands, steep slopes, open space and other natural features, and protection of water quality.

Staff Analysis. No modifications are proposed or required as part of this request.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

i. ***Screening, Buffering and Landscaping***
Installation of screening, buffering, fencing, and landscaping where necessary to protect adjacent property.

Staff Analysis. No modifications are proposed or required as part of this request.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

j. ***Effect on Adjacent Property***
Effects of the proposed use on nearby properties, including, but not limited to, the effects of noise, odor, lighting, and traffic.

Staff Analysis. The table below notes the surrounding uses and zoning districts:

Surrounding Uses and Zoning Districts				
	Use	**Zoning District**	**Overlay**	**Tier**
North	Single-Family Residential	RU-5(2)	N/A	Urban
South	Place of Worship/Parking	RU-5(2)	N/A	Urban
East	Single-Family Residential Multi-family Residential Community Service	RU-5(2) RU-5(2) CN	N/A	Urban
West	Single-Family Residential Multi-family Residential	RU-5(2) RU-5(2)	N/A	Urban

Staff does not anticipate that the proposal will generate additional odor or lighting. No additional noise is expected to be generated by the school as there will not be any outdoor recreation or play areas.

The applicant has indicated that the school will only operate between 8:30 AM and 3:15 PM, Monday through Friday, with occasional after-hours use on weekdays until 4:30 PM. The place of worship primarily operates on Sunday mornings, with occasional Sunday evening services and a weekly evening service on Wednesdays. There is not an overlap between the hours of operation of the two separate uses and staff does not anticipate traffic issues from the school use.

Through site design, many of the recommendations from the MSTA Transportation Management Plan have been implemented by the applicant to ensure that there are minimum effects on the adjacent properties in relation to traffic.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

k. ***Compatibility***

The level of general compatibility with nearby properties and impacted neighborhoods, including, but not limited to, the appropriateness of the scale, design, and use in relationship to other properties.

Staff Analysis. The applicant is proposing to use 500 square feet within an existing place of worship for a school. The original building was built in 1941 and many of the neighboring residential structures were also built within this time period. Staff believes that the use is compatible with the neighboring community as there are no proposed external modifications except those to bring the parking lot into greater compliance with the Ordinance. Additionally, the varying hours of operation allow the school to operate at completely different times than the place of worship.

Refer to Attachment 3, Application – B1900027, for the applicant's response to this finding.

l. *Consistency with Policy*

Consistency with the Durham Comprehensive Plan and applicable development tier guidelines, overlay purposes, and zoning district intent statements in Article 4, Zoning Districts.

UDO Section 4.1.2A.3 Urban Tier Intent Statement

The Urban Tier – That area surrounding the historic downtown of the City within which development was concentrated prior to the 1960s. Within this area, development should maintain an urban form with small lot sizes and differing uses in proximity to one another.

UDO Section 4.2.3 Residential Urban Districts (RU-5, RU-5(2), RU-M)

The RU Districts are established to provide for orderly urban residential development and redevelopment. A limited number of nonresidential uses are allowed, subject to the restrictions necessary to preserve the character of the urban neighborhood. Such uses should have convenient access to arterial streets and nearby civic, commercial or employment uses.

Staff Analysis. The proposed development is located in the RU-5(2) zoning district within the Urban Tier. The Ordinance recognizes that certain uses, such as schools, daycares, and places of worship, are appropriate and should be allowed in residential districts, on a case-by-case basis, with the issuance of a minor special use permit. Staff finds that the proposed use of 500 square feet within the existing place of worship meets the intent and goals of the UDO and the *Comprehensive Plan*.

m. *Other Factors*

Any other review factors which the approving authority considers to be appropriate to the property in question.

Staff Analysis. There are limited use standards within UDO Section 5.3.3K that the site must comply with. The proposed use permit and subsequent site plan case D1900160 are in compliance with the limited use standards.

D. Notification

Staff certifies that newspaper advertisements, letters to property owners within 600 feet of the site, and the posting of a sign on the property have been carried out in accordance with UDO Section 3.2.5. In addition, email notice was provided per the Durham Planning Public Notification Service.

E. Staff Contact

Eliza Monroe, 919-560-4137 ext. 28245, or Eliza.Monroe@durhamnc.gov

Attachments

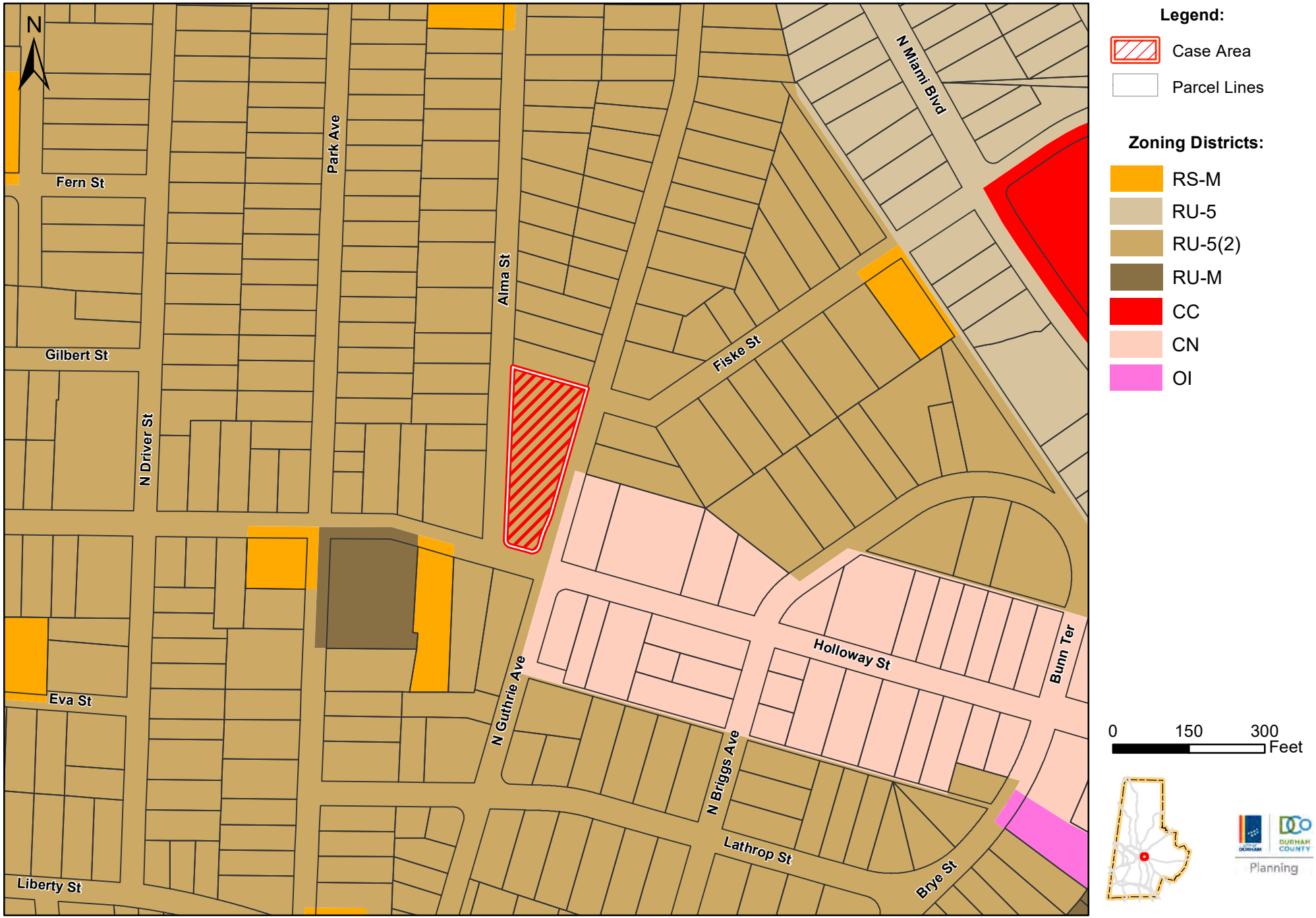
1. Context Map
2. Durham GIS Aerial Photo

3. Application – B1900027
4. Site Plan – D1900160
5. Municipal and School Transportation Assistance Report

B1900027 Empowered Minds Academy Minor Special Use Permit

Context Map

Attachment 1

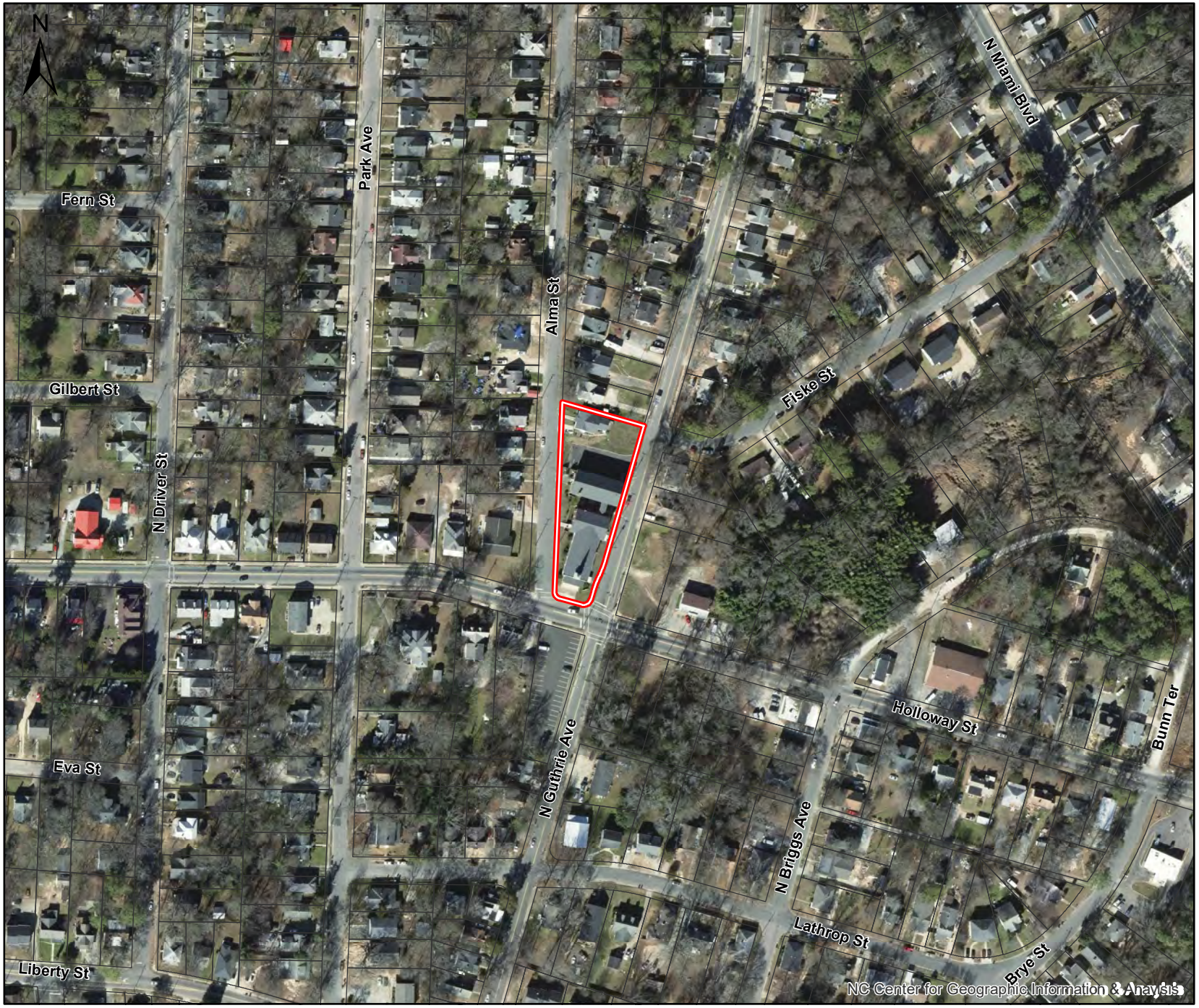


Durham City-County Planning Department, 12/13/2019

B1900027 Empowered Minds Academy Minor Special Use Permit

Attachment 2

Aerial Map



Legend:

Case Area

Parcel Lines

0 150 300 Feet

Planning

Durham City-County Planning Department, 12/13/2019

DURHAM 1869 CITY OF MEDICINE

Durham City-County Planning Department

MINOR AND MAJOR SPECIAL USE PERMIT (SUP) APPLICATION

(A Pre-submittal conference must be held prior to submission)

DURHAM COUNTY

Tracking Information (Staff Only)

Case Number: B1900027	Date/Time rec'd: 5/28/19 1:17	Rec'd by: WJW

About this Application

ONLY COMPLETE APPLICATIONS CAN BE ACCEPTED

Minor special use permits are heard by the Board of Adjustment as a quasi-judicial public hearing. ***Major special use permits*** are heard by the Governing Body (City Council if City, Board of Commissioners if County) as a quasi-judicial public hearing.

Submittal: Applications are accepted by appointment only. Deadlines are discussed at the pre-submittal meeting and are available online at http://durhamnc.gov/340/Applications-Application-Materials. Applications should be submitted in-person, and fees are due at time of submittal.

The application is a form of written testimony, and used both to show how Ordinance considerations are addressed and to provide evidence that the required findings for approval can be made. In addition to the application materials, the applicant may provide any other written, drawn or photographed material to support his/her request and as permitted by the Board of Adjustment or Governing Body, as applicable. Any such additional material submitted will become part of the application, and as such cannot be returned.

Attendance at the hearing is required. Applicants may represent themselves or may be represented by someone appropriate for quasi-judicial public hearings. The applicant has the **burden of proof** and must provide sufficient evidence in order for the required findings to be made. The public hearing will allow the applicant, proponents, opponents and anyone else the opportunity to testify in regards to the request. An application may be approved, approved with conditions, continued for more information, or denied. **Decisions can be appealed to Superior Court within 30 days.**

Contact Information: If you have any questions, please contact the City-County Planning Department at 560-4137 between 8:00 a.m. and 5:00 p.m. on weekdays.

Application Requirements	Applicant Initial	Staff Initial
Record of the pre-submittal meeting (copies provided at the meeting)		WJW
Fee		WJW
Completed application and responses: ORIGINAL signatures required		WJW
Submitted Site Plan (Digital and 11x17), if required, or Plot Plan		WJW
Responses to general findings and review factors: Section 3.9.8A and B of the UDO		WJW
Responses to Additional Findings and/or Review Factors, as applicable		WJW
Responses to Limited Use Standards, as applicable		WJW
Floorplan, as applicable		
Elevations, as applicable		N/A
Note: Additional supporting documents may also be submitted		

Case # Attachment 3

Property Information			
Site Address:	1415 Holloway St.	PID(s):	113051
Zoning District(s) :	RU - 5(2)	PIN(s):	0831-11-67-8046
Overlay District(s):	Durham County Development Area	SUP Type:	(Minor (msup)) Major (MSUP)
Current Use:	Community Service/Church	Jurisdiction:	City County Both

Property Owner			
Name(s) (Print):	First United Antioch Baptist Church	Telephone:	919-949-4022/919-688-8893
Contact Person:	Michael D. Page, D. Min.	Email:	mdelano@aol.com
Owner Signature	Michael D. Page	Date	9/18/19

Applicant			
Name(s):	Valine Zeigler		
Contact Person:	Valine Zeigler	Telephone:	919-949-0147
Address:	5223 Partridge St.	Fax:	N/A
City/State/ZIP:	Durham, NC. 27704	Email:	valine@empoweredmindsacademy.com

I certify that all of the information presented by me in this application is accurate to the best of my knowledge, information, and belief.

Valine Zeigler — Applicant Signature

9/8/19 — Date

Agent (if different than applicant)			
Name:			
Contact Person:	Grayson Baur	Telephone:	
Address:		Fax:	
City/State/ZIP:		Email:	grayson baur@yahoo.com

Complete and respond to the following with an attachment (suggested), or in the space provided:

Applicant's Name: I, Valine Zeigler, do hereby petition the City of Durham/County of Durham for a Special Use Permit to allow the following:

For a school to be housed at 1415 Holloway St., specifically the annex building adjacent to the church facility.

Section 3.9.8 of the UDO: Criteria for Approval of Major and Minor Special Use Permits

A. General Findings

Applications for minor or major special use permits shall be approved only if the Board of Adjustment or Governing Body, as applicable, finds that the use as proposed, or the use as proposed with conditions, is:

1. In harmony with the area and not substantially injurious to the value of properties in the general vicinity;
Applicant's Response:

The proposed school use will not alter any buildings on site. A limited amount of increased vehicular and pedestrian traffic is expected per the findings of the MSTA report. The site is in the Urban Tier, and as such, the proposed limited school use is consistent with what one expects to find in urban neighborhoods. The neighborhood is presently challenged by disinvestment, which the City recognizes by its inclusion in a Durham Community Development Area. The anticipated increase in economic use, and pedestrian and social activity that a small school affords, will likely serve to increase property values and community values, not diminish them.

2. In conformance with all special requirements applicable to the use;
Applicant's Response:

In compliance with fire safety rules, EMA must have learners grades K-1 and below on the ground floor. Therefore, the proposed entrance for all learners is the Alma Street entrance to the Admin building, which is the first building level. The second level will be reserved for grades above K-1.

3. Will not adversely affect the health or safety of the public; and
Applicant's Response:

EMA will contribute to the well-being of children and provide another use for a building that is currently underutilized. EMA has sought and received guidance from the MSTA on parking and circulation for the school to ensure that safe school access for learners and staff will be provided that does not adversely affect neighboring streets and properties. Please see the MSTA report for details.

4. Will adequately address the review factors identified below.
Applicant's Response:

Please see the review factors below for a response to each item.

B. Review Factors

The applicant shall demonstrate that the review factors listed below have been adequate addressed.

1. Circulation

Number and location of access points to the property and the proposed structures and uses, with particular reference to automotive, bicycle, mass transit and pedestrian safety and convenience, traffic flow and control, and access in case of fire or catastrophe.
Applicant's Response:

The existing site is served by continuous sidewalks on all three street faces leading to the building access points. Per the proposed site plar bicycle racks will be installed on both the Alma and Guthrie sides for a total of 8 bike spaces.

Emergency egress from the building is achieved from four points: the 2 primary exit doors facing Alma St and Guthrie Avenue, from the first level door on the south side of the building leading to the loggia, and from the ground floor exit door directly beneath the loggia.

2. Parking and Loading

Location of off-street parking and loading areas.
Applicant's Response:

Stacking for the school use will occur within the existing north parking lot per the terms of the MSTA report. Parking for the school use will be accommodated within this lot also. Parking for the church use will occur as it currently does and will not be affected by the school us

3. Service Entrances and Areas

Locations of refuse and service areas with particular reference to ingress and egress of service vehicles.
Applicant's Response:

The current trash and recycling receptacles are sufficient for school needs. EMA will not require deliveries or service vehicles.

4. Lighting

Locations of exterior lighting with reference to glare, traffic safety, economic effect and compatibility with other property in the area.

Applicant's Response:

EMA will not alter the current exterior lighting. The proposed school use, for 8:30 am - 5:00 pm, will occur only in daylight hours.

5. Signs

Appropriateness of signs considering location, color, height, size, and design within the context of other property in the area.

Applicant's Response:

EMA may add a small sign to the building to identify its location, but this will be determined once the school is operational.

6. Utilities

Location and availability of utilities.

Applicant's Response:

EMA may purchase additional wifi + phone service. Other than that, EMA has not intention to alter current usage. Utilities will be included in the lease.

7. Open Spaces

Location of required yards and other open spaces and preservation of existing trees and other natural features.

Applicant's Response:

EMA will not alter any open spaces or remove any existing trees, shrubs, or natural features.

8. Environmental Protection

Preservation of tree cover, Durham Inventory Sites, floodplain, stream buffers, wetlands, steep slopes, open space and other natural features, and protection of water quality.

Applicant's Response:

EMA has no intention to make alterations to current environmental protections.

9. Screening, Buffering and Landscaping

Installation of screening, buffering, fencing and landscaping where necessary to protect adjacent property.

Applicant's Response:

Antioch Baptist Church already has sufficient screening, buffering, and landscaping. EMA has no intention to alter what is currently in place.

10. Effect on Adjacent Property

Effects of the proposed use on nearby properties, including, but not limited to, the effects of noise, odor, lighting, and traffic.

Applicant's Response:

The sounds that EMA will bring include children playing and talking, which will be minimal, considering EMA's small size. EMA will not contribute any unpleasant or distracting odor. EMA will not alter the current lighting. Besides morning and afternoon drop-off and pick-ups, EMA will not impact traffic in a negative way; parents comply with the NCDOT's MSTA report recommendations for safe drop-off and pick-up

11. Compatibility

The level of general compatibility with nearby properties and impacted neighborhoods, including but not limited to the appropriateness of the scale, design, and use in relationship to other properties.

Applicant's Response:

EMA will make a contribution to a historically undeserved neighborhood and community by providing a community based school that focuses on the nurturing of lifelong learning, creativity, and independence.

12. Consistency with Policy

Consistency with the Comprehensive Plan and applicable development tier guidelines, overlay purposes, and zoning district intent statements in Article 4, Zoning Districts.

Applicant's Response:

Please see attached Page 8 for a response to Item #12.

13. Other Factors

Any other review factors which the approving authority considers to be appropriate to the property in question.

EMA will provide another use for an underutilized space. EMA will also make a positive contribution to the neighborhood and community by providing an alternative option for education.

NOTE: Please address the requirements of any applicable "Limited Use Standards" or other special requirements of the use as an attachment of the application.

Read and sign below:

In granting a Minor or Major Use Permit, conditions may be placed to assure that adequate mitigation measures are associated with the use. The conditions shall become part of the special use permit approval. Violations of any of the conditions shall be treated in the same manner as other violations of the Ordinance. Furthermore, Special Use Permits shall become null and void in any of the following cases (Section 3.9.13 of the UDO):

A. If a site plan is not approved within 12 months of the date of permit approval.

B. If an approved site plan or building permit expires.

C. If a building permit is not issued within two years of the date of approval, in cases where a site plan is not required.

D. If a substantial violation of the conditions of the permit, as determined by the Planning Director or designee occurs. The addition of language to the special use permit regarding such voiding shall not be required.

Applicant Signature **Date** 9/8/19

Minor Special Use Permit Application Attachment
Response to Item #12.

12. Consistency with Policy

Consistency with the Comprehensive Plan and applicable development tier guidelines, overlay purposes, and zoning district intent statements in Article 4, Zoning Districts.

Applicant's Response:

On the current Comprehensive Plan, the site is shown as a Medium-High Density Residential, and directly adjacent to Commercial along Holloway Street. The school use is consistent with the Medium High Residential Density designation, as it is with the current RU-5(2) zoning. Given the stated Comp Plan expectation for more density in this district, the need for more school uses in the neighborhood can be expected to increase, not decrease. The subject project in part helps anticipate that increased demand for school services. Any modest increase in traffic and density of use on this site (per the MSTA report) will be consistent with and complementary to the adjacent commercial use identified for Holloway Street also.

The site is located within a Durham Community Development Area. The stated mission of the Department of Community Development (DCD) is "to foster safe, decent and sustainable neighborhoods..." The proposed school use is consistent with this mission because it promotes neighborhood stability, safety, and sustainability.

The intent statement for Zone RU-5(2) states: "A limited number of nonresidential uses are allowed, subject to the restrictions necessary to preserve the character of the urban neighborhood. Such uses should have convenient access to arterial streets and nearby civic, commerical or employment uses." The subject project is consistent with this intent statement because it proposes no physical change to its site and does not propose a significant increase in traffic, and will actually benefit the neighborhood by providing economic benefit (leasing fees) to the existing church use, which can be used in part for property improvements. In addition, the site lies directly on a state highway arterial and is surrounded by an urban street grid, facilitating access to the nearby uses listed above.

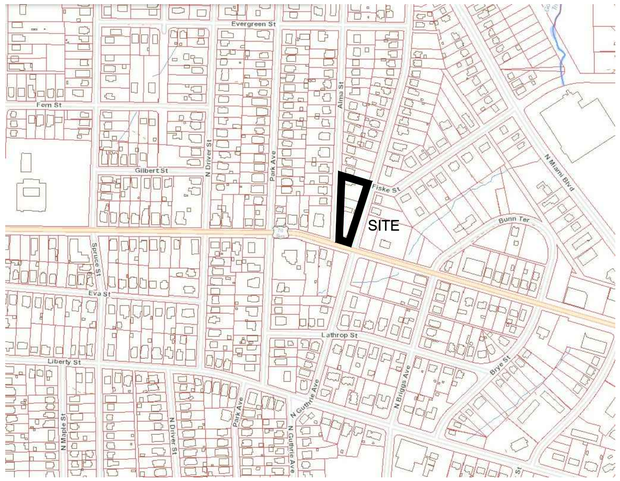
Applicant Signature	9/8/19 **Date**

EMPOWERED MINDS ACADEMY

1415 HOLLOWAY STREET, DURHAM, NC

LEVEL 1 SITE PLAN

CITY/COUNTY OF DURHAM #: D1900160



VICINITY MAP

SCALE: NTS

SHEET INDEX	
L1.0	COVER SHEET
L2.0	EXISTING CONDITIONS / PROPOSED CONDITIONS
L3.0	DETAILS

SITE DATA TABLE	
PROJECT NAME	EMPOWERED MINDS ACADEMY
EXISTING STREET ADDRESS	FIRST UNITED ANTIOCH BAPTIST CHURCH 1415 HOLLOWAY ST., DURHAM NC 27701
PARCEL NUMBER	113051
PIN	0831-11-67-8046
LOCATION/JURISDICTION	CITY OF DURHAM
EXISTING/PROPOSED TOTAL LOT AREA	0.861 AC
TOTAL LOT AREA (PROJECT)	0.861 AC
PROPOSED DISTURBED AREA	0.0 SF / 0.0 AC
EXISTING IMPERVIOUS AREA	0.484 AC
PROPOSED IMPERVIOUS AREA	0.484 AC (NO CHANGE)
NET GAIN OF IMPERVIOUS AREA	0.0 SF (0.0 AC)
AREA OF PUBLIC RIGHT-OF-WAY DEDICATION	N/A
CURRENT ZONING	RU-5(2)
OVERLAY DISTRICT(S)	None
DEVELOPMENT TIER	URBAN
EXISTING GROSS BUILDING AREA	25,900 SF (TOTAL OF THREE BUILDINGS)
EXISTING LAND USE	CHURCH / COMMUNITY SERVICE
PROPOSED GROSS BUILDING AREA	25,900 SF (NO CHANGE)
PROPOSED LAND USE	SCHOOL
WATERSHED	FALLS LAKE
RIVER BASIN	NEUSE
HISTORIC INVENTORY SITE	NONE
NUMBER OF LOTS	1
NON-RESIDENTIAL DEVELOPMENT	YES
REQUIRED VEHICLE PARKING	SEE TABLE ON L2.0
EXISTING VEHICLE PARKING	SEE TABLE ON L2.0
FEMA MAPPED FLOODPLAINS, PER FIRM PANEL 3020083100J	NONE

PROJECT DESCRIPTION

LEVEL 1 SITE PLAN AS PART OF A MINOR SPECIAL USE PERMIT APPLICATION TO USE AN EXISTING CHURCH AS A SITE FOR A SCHOOL TO SERVE KINDERGARTEN THROUGH 9TH GRADE. NO LAND DISTURBANCE OR DEVELOPMENT IS PROPOSED.

GENERAL CONDITIONS OF APPROVAL:

1. THIS SITE IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON FIRM PANEL #3020083100J.
2. THERE ARE NO STREAM BUFFERS ON THIS SITE.
3. THERE ARE NO STEEP SLOPES ON THIS SITE.
4. ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE. CONTACT DURHAM CITY COUNTY PLANNING DEPARTMENT SITE INSPECTION STAFF FOR INSPECTION.
5. EACH LANDSCAPING COMPLIANCE INSPECTION AFTER THE INITIAL INSPECTION WILL INCUR A RE-INSPECTION FEE, STARTING AT $100 + 4% TECHNOLOGY SURCHARGE. EACH SUBSEQUENT RE-INSEPCTION WILL INCREASE BY $100 + 4%. PAYMENT MUST BE RECEIVED BY THE DURHAM CITY COUNTY PLANNING DEPARTMENT PRIOR TO RE-INSPECTION.
6. LANDSCAPE MULCH: PINE STRAW SHALL NOT BE USED AS MULCH OR GROUNDCOVER WITHIN TEN FEET OF ANY STRUCTURES CONSISTING OF EXTERIOR COMBUSTIBLE CONSTRUCTION AS SPECIFIED BY DURHAM CITY CODE SECTION 46-87.

   STREET TREES MEETING THE REQUIREMENTS OF SECTION 9.6.4 OF THE UDO ARE NOT REQUIRED FOR THIS PROJECT.
7. TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE OR ISSUANCE OF A GRADING PERMIT AND SHALL INCLUDE WARNING SIGNS POSTED IN BOTH ENGLISH AND SPANISH, AS FOLLOWS, 'NO TRESPASSING/ TREE PROTECTION AREA/ PROHIBIDO ENTRAR/ SONA PROTECTORA PARA LOS ARBOLES.'

   IF TREE PROTECTION IS REQUIRED BY THE CITY/ COUNTY PLANNING DEPARTMENT, TREE PROTECTION CERTIFICATION MUST BE SUBMITTED TO DURHAM COUNTY EROSION CONTROL DIVISION, AND TREE PROTECTION INSPECTION COMPLETED PRIOR TO THE ISSUANCE OF A LAND-DISTURBANCE PERMIT.
8. ROOT PROTECTION ZONE EQUALS ONE FOOT OF RADIUS FOR EVERY INCH OF DIAMETER OF EXISTING TREES, OR SIX FOOT RADIUS, WHICHEVER IS GREATER. NO DISTURBANCE ALLOWED WITHIN THIS AREA. AREA MUST BE PROTECTED WITH BOTH TREE PROTECTION FENCING AND WARNING SIGNS.
9. PROTECTION OF EXISTING VEGETATION (UDO SEC. 8.3.20): AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA PRIOR TO OR AT THE SAME TIME AS SILT FENCE AND OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHAll BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA.
10. MEASURES SHALL BE PROVIDED TO PREVENT LIGHT SPILLOVER ONTO ADJACENT PROPERTIES AND GLARE TOWARD MOTOR VEHICLE OPERATORS AND SHAU BE INDICATED ON THE SITE PLAN. EXTERIOR LIGHTS SHAU BE SHIELDED SO THAT THEY DO NOT CAST DIRECT LIGHT BEYOND THE PROPERTY LINE. IN ACCORDANCE WITH THESE STANDARDS:
    a. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO RESIDENTIAL ZONING IS 0.5 FOOT CANDLES.
    b. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO NONRESIDENTIAL ZONING IS 5.0 FOOT CANDLES.
    c. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO A STREET IS 5.0 FOOT CANDLES.
    d. THE LEVEL OF ILLUMINATION AS MEASURED IN FOOT CANDLES AT ANY ONE POINT SHALL MEET THE STANDARDS IN THE TABLE IN UDO SECTION 7.4.3A WITH THE MINIMUM AND MAXIMUM LEVELS MEASURED ON THE PAVEMENT WITHIN THE LIGHTED AREA.
    e. THE MAXIMUM HEIGHT FOR DIRECTIONAL OR FULL CUT-OFF LIGHTING FIXTURES (FIXTURES DESIGNED TO INSURE THAT NO LIGHT IS EMITTED ABOVE A HORIZONTAL LINE PARAIIEL TO THE GROUND) SHAU BE 30 FEET ABOVE GRADE (MEASURED TO THE TOP OF THE FIXTURE).
    f. THE MAXIMUM HEIGHT FOR NON-DIRECTIONAL LIGHTING FIXTURES, WHICH ARE DEFINED AS FIXTURES DESIGNED TO ALLOW LIGHT TO BE EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND, SHALL BE 15 FEET ABOVE GRADE (MEASURED TO THE TOP OF THE FIXTURE).
    g. THESE STANDARDS MUST BE VERIFIED BY FIELD SURVEY (BY USE OF PHOTOMETRIC SURVEY) PRIOR TO THE CERTIFICATE OF COMPLIANCE BEING ISSUED. ALL OF THIS INFORMATION, INCLUDING DETAILS, WILL BE REQUIRED ON BUILDING PLANS PRIOR TO ISSUANCE OF BUILDING PERMIT.
13. EXISTING LIGHTING WILL BE UTILIZED TO MEET CURRENT STANDARDS, IN ACCORDANCE WITH UDO SECTION 7.4.3A.
14. LAND DISTURBANCE PERMIT NOT REQUIRED. PROJECT IS LESS THAN 12,000 SF DISTURBED AREA PROPOSED.
15. IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.
16. THE WORK DETAILED IN THIS SITE PLAN WILL BE FULLY COMPLIANT WITH THE NORTH CAROLINA ACCESSIBILITY CODES (ANSI 117.I -2009 ANO CHAPTER 11 OF THE NCBC) UNLESS ANO EXCEPT IN AREAS WHERE AN APPROVED STATEMENT FROM A SITE ENGINEER, SURVEYOR OR ARCHITECT VERIFIES THAT SITE CONDITIONS EXIST WHERE THE TOPOGRAPHY OF THE SITE IS EXTREME AND ONLY ALTERNATE METHODS OF COMPLIANCE ARE POSSIBLE.
17. AN AS-BUILT SURVEY OF THE SITE, PERFORMED BY THE DESIGN PROFESSIONAL OR DESIGNEE, MUST BE SUBMITTED TO THE BUILDING INSPECTIONS DEPARTMENT CERTIFYING THAT ALL SITE ACCESSIBILITY CODE REQUIREMENTS SUCH AS CURB CUTS, RAMP SLOPES, SIDEWALK SLOPES AND WIDTHS, AND CROSS-SLOPES MEET THE REQUIREMENTS OF THE NC ACCESSIBILITY CODE PRIOR TO CO ISSUANCE.

PUBLIC WORKS CONDITIONS OF APPROVAL:

SPECIAL CONDITIONS OF APPROVAL :

1. OWNER/ DEVELOPER SHALL NOTIFY THE DURHAM CITY COUNTY PLANNING DEPARTMENT SITE COMPLIANCE STAFF AT THE COMPLETION OF CONSTRUCTION TO REQUEST AN INSPECTION PRIOR TO USE OF THE FACILITY.
2. THE TRAFFIC MANAGEMENT PLAN (TMP) DATED AUGUST 6, 2019 THAT WAS DEVELOPED BY THE NCDOT'S MUNICPAL SCHOOL TRANSPORTATION ASSISTANCE GROUP MUST BE IMPLEMENTED AND SHALL REMAIN IN EFFECT UNTIL SUCH TIME THAT THE PLAN IS REVISED AND APPROVED BY NCDOT AND THE CITY TRANSPORTATION DEPARTMENT.
3. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY, INSTALL REQUIRED SCHOOL AREA SIGNS ALONG HOLLOWAY STREET (US70 BUSINESS / NC98) AS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS.

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1382 GRAYSON E. BAUR

APPROVAL BOX

LEVEL 1 SITE PLAN #D1900160 :

DURHAM CITY-COUNTY SITE PLAN

DRAWN	GB

Grayson Baur Landscape Architect
116 W. LYNDS ST.
DURHAM, NC 27701
919 451-9563

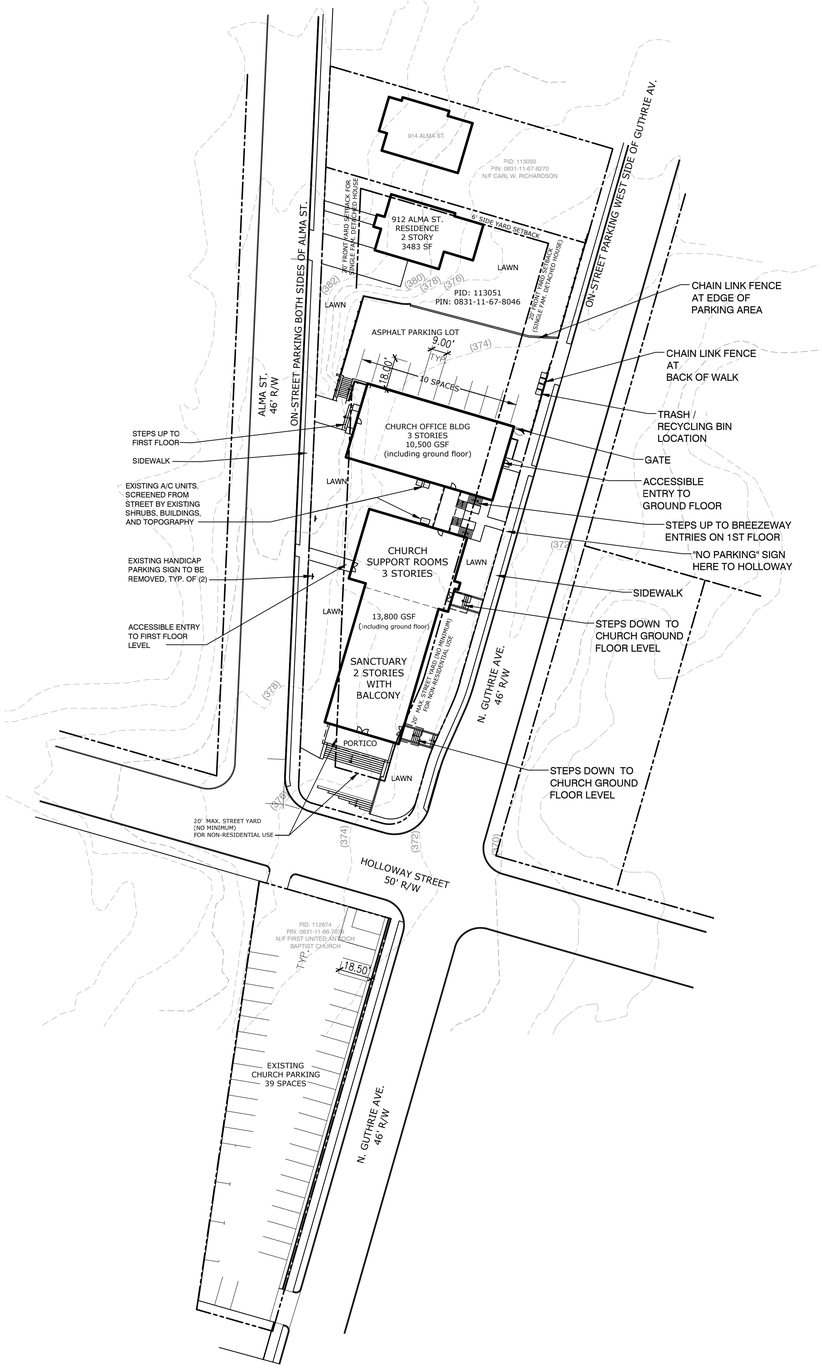
DATE	11/05/19
SCALE	See Plans

Empowered Minds Academy

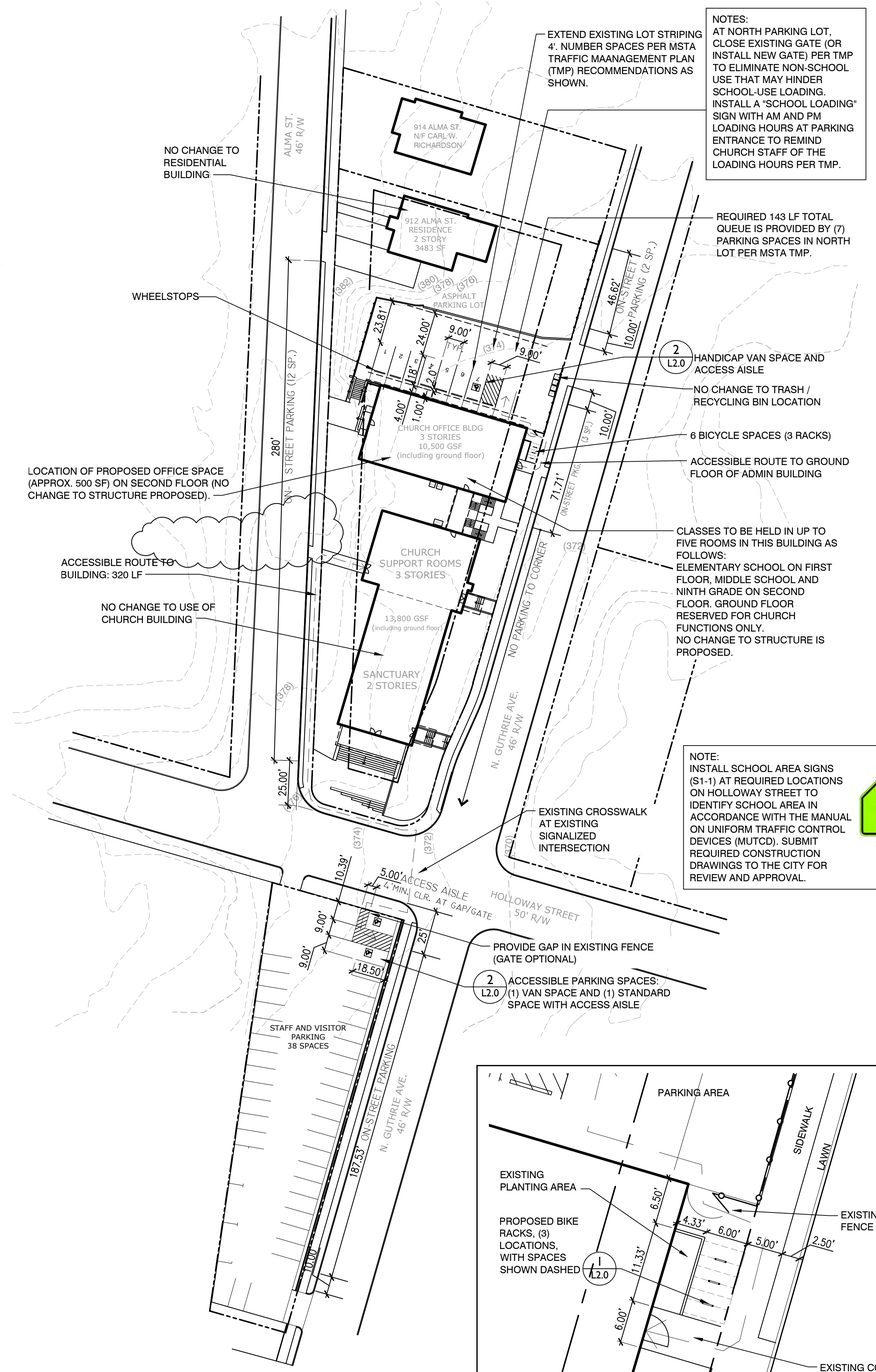
Durham, NC

COVER

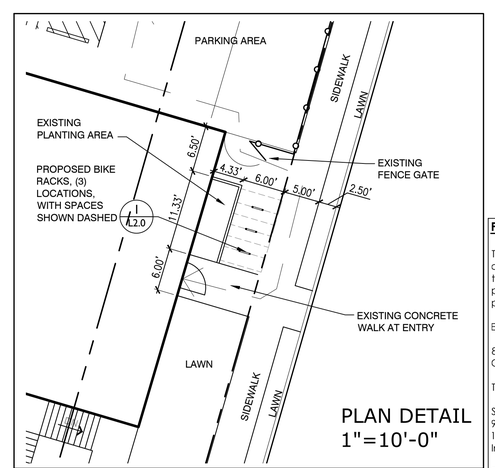
L 1.0



EXISTING CONDITIONS PLAN



PROPOSED CONDITIONS PLAN



N

0' 20' 40' 80'

SCALE: 1" =40'
U.N.O.

PARKING TABLE

PER UDO 10.3.1, USES INCLUDE "ELEMENTARY AND MIDDLE SCHOOL" USE AND "PLACE OF WORSHIP" USE*

ITEM	QUANTITY	Number of Spaces
SCHOOL USE		One per classroom plus one per 300 SF floor area of administrative office space proposed.
NUMBER OF CLASSROOMS PROPOSED	5	5 SPACES
ADMINISTRATIVE OFFICE SPACE PROPOSED:	500 SF	2 SPACES
TOTAL per PARKING RATE TABLE		7 SPACES
TOTAL Parking required for peak school use per MSTA recommendations:		7 SPACES
Parking provided for school use, North Lot:		7 SPACES
PLACE OF WORSHIP USE		One per 28 SF available for seating in the assembly area(s).
Seating Assembly Areas:		
Sanctuary first floor (pews only, not incl. aisles or prefunction space)	1,175 SF	
Balcony (pew areas only)	402 SF	
Choir pews	196 SF	
Pews east of choir area	78 SF	
Band seating	28 SF	
TOTAL ASSEMBLY SEATING (sum of above values)	1879 SF	67 SPACES
TOTAL, BOTH USES, per PARKING RATE TABLE		(67 +7) = 74 SPACES
MINIMUM SPACES REQUIRED FOR URBAN TIER		67 SPACES
PARKING PROVIDED		
North Lot (On-Site)		7 SPACES (incl. 1 van HC space)
TOTAL ON-SITE SPACES		7 SPACES (incl. 1 van HC space)
ALTERNATIVE COMPLIANCE SPACES (for Church Use only)		
South Lot (off-street, same ownership as subject property)		38 SPACES
Guthrie Av. on-street parking on west side along church frontage (23 LF per space)	118 LF	5 SPACES
Guthrie Av. on-street, west side along parking lot frontage (23 LF per space)	187 LF	8 SPACES
Alma St. on-street, on east side along church frontage (23 LF per space)	280 LF	12 SPACES
TOTAL ALTERNATE COMPLIANCE		63 SPACES
TOTAL MOTORIZED VEHICLE PARKING PROVIDED (ON- AND OFF-SITE)		(7) + (63) = 70 SPACES
HANDICAP PARKING Per table 10.3.2		
Total off-street parking spaces, North Lot		7
Handicap spaces required, North Lot		1 (van space)
Handicap spaces provided, North lot		1 (van space)
Total off-Street parking spaces , South Lot		38
Handicap spaces required, South Lot		2 (1 van space + 1 standard)
Total off-street parking spaces provided, South Lot		2 (1 van space + 1 standard)
BICYCLE PARKING		
SCHOOL USE: Elementary and Middle School: 1 per classroom	5 classrms	5 SPACES
BICYCLE PARKING REQUIRED, SCHOOL USE		5 SPACES
BICYCLE PARKING PROVIDED, SCHOOL USE		6 SPACES
PLACE OF WORSHIP USE: 5% of provided motor vehicle parking (for 69 spaces provided total)	(0.05) x 69	4 SPACES
BICYCLE PARKING PROVIDED, PLACE OF WORSHIP USE		6 SPACES , see note

Note: A minimum of four bicycle parking spaces for Place of Worship use are provided using the same facility as the bicycle parking provided for the School use. This sharing of facilities is proposed because the times of use for the two uses do not significantly overlap - see Narrative.

*NOTE: Refer to MSTA Recommendations for further information regarding State requirements for a school use on this site.

PROJECT NARRATIVE :

The Applicant, Empowered Minds Academy (EMA), proposes to lease space in an existing building on the property of Antioch Baptist Church for the purpose of conducting a small private school. EMA proposes to hold classes in up to (5) rooms in the existing Church Administration Building, and to use up to 500 SF of space for administrative/office purposes. No change to the building is currently proposed; only the "School" use designation of the property is proposed to be added.

EMA proposes the following school hours:

8:30 am to 3:15 pm Monday - Friday.
Occasional after-hours use on weekdays until 4:30 pm.

The Antioch Baptist Church's schedule is as follows:

Sunday Services:
9:00 A.M. Sunday School Hour
10:00 A.M. Worship Hour
In addition, another church group sometimes rents the sanctuary on Sunday evenings.

Special Sunday Services:
8:00 A.M. Service (Every Fifth Sunday Only)
8:00 A.M. Early Morning Prayer Service (Every Fourth Sunday)

Wednesdays:
6:30 P.M. Bible Study

Church office hours are Tuesdays and Thursdays, 9:00 am - 12 noon, or by appointment. Church staff consists of Pastor Michael Page, office number: 919-530-5402. Thus, the only overlap between church and school functions occurs on Tuesdays and Thursdays when the Pastor and one other administrative staff are in the office building.

DURHAM CITY-COUNTY SITE PLAN

DRAWN	GB

Grayson Baur Landscape Architect
116 W. LINDY ST.
DURHAM, NC 27701
919 451-9663

DATE	11/05/19
SCALE	See Plans

Empowered Minds Academy
Durham, NC

EXISISTING AND PROPOSED CONDITIONS

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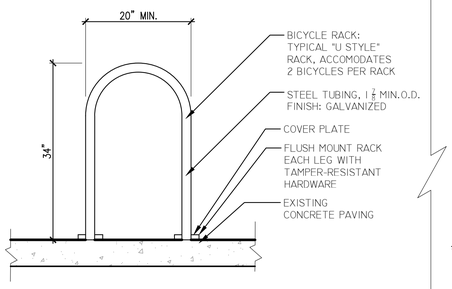
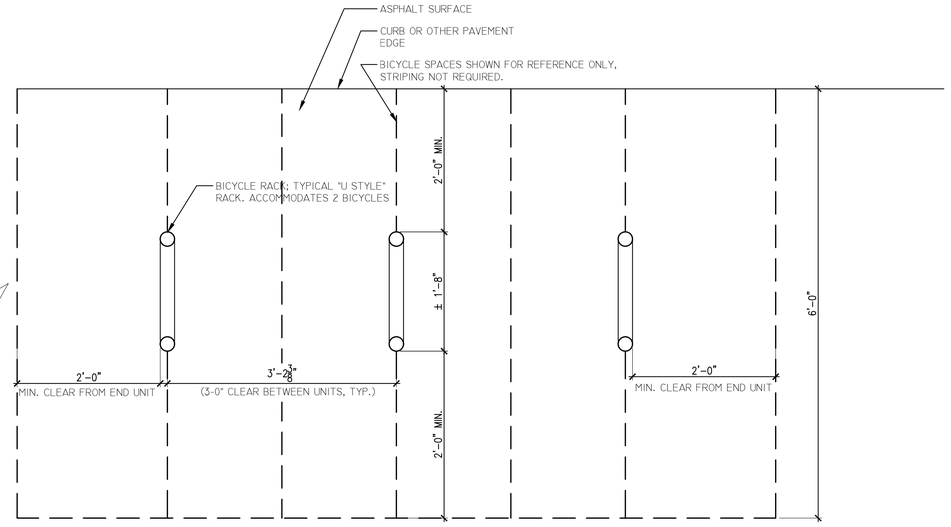


ELEVATION



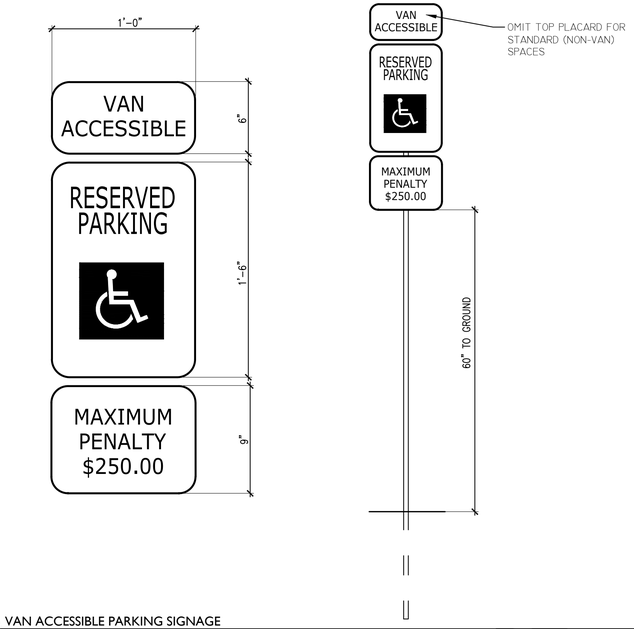
PLAN

NOTE: PLAN SHOWS THREE RACKS. ONE-RACK INSTALLATION IS SIMILAR; OBSERVE SIDE CLEARANCES SHOWN HERE FOR END UNITS.

1 BIKE RACK

*NOTE:
INSTALL RACK ACCORDING TO MANUFACTURER'S RECOMMENDATION.

0 1' 2'



2 VAN ACCESSIBLE PARKING SIGNAGE

0 1' 2'

DURHAM CITY-COUNTY SITE PLAN

DRAWN	GB

Grayson Baur Landscape Architect
116 W. LINDY ST.
DURHAM, NC 27701
919 451-9663

DATE	11/05/19
SCALE	See Plans

Empowered Minds Academy

Durham, NC

L 3.0 DETAILS

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

August 6, 2019

MEMORANDUM

TO: Jason Watson – Assistant District Engineer
John H. Grant, PE – Regional Traffic Engineer
Doumit Ishak - Congestion Management Regional Engineer
Ed Johnson, RLA, ASLA - Division of Bicycle and Pedestrian Transportation
Kimberly Hinton - Municipal & School Transportation Assistance Project Engineer

FROM: Rodney Stephenson - Municipal & School Transportation Assistance Project Intern RBS

SUBJECT: Empowered Minds Academy MSTA Cursory Review, Durham, Durham County

Municipal and School Transportation Assistance (MSTA) has performed a cursory review of Empowered Minds Academy's temporary relocation and collaborated with the Division of Bicycle and Pedestrian Transportation. The school will be relocated at 1415 Holloway Street within the Antioch Baptist Church. This review consists of the school campus and school driveways. This review is based on a maximum student population of 40 students in a private school with a self-paced focus ranging from ages 5 through 14. If the school is projected to accommodate a higher number of students than shown, then further review will be required. It is the responsibility of the local school officials to contain all school generated traffic on their campus and to maintain safe and efficient parent loading operations.

School Operational Times			
Age Group	**School Hours**	**Drop-Off Hours**	**Pick-Up Times**
Ages 5 - 14	8:30 AM – 3:15 PM	8:00 AM – 8:30 AM	3:15 PM – 4:30 PM

Received by This Office	06/13/2019	Durham Development Review	6/07/2019
		Special Permit Comments	6/07/2019
Received by This Office	07/03/2019	Site Plan Draft	5/23/2019
Received by This Office	07/17/2019	Site Plan Draft	5/23/2019
Received by This Office	07/24/2019	Site Plan Draft	5/23/2019
Received by This Office	08/05/2019	Site Plan Draft	7/02/2019

✓	The campus can properly address school traffic operations needed for high traffic demand days with on-campus parking spaces.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TRANSPORTATION MOBILITY & SAFETY DIVISION
1561 MAIL SERVICE CENTER
RALEIGH, NC 27699-1561

Telephone: (919) 814-5000
Fax: (919) 771-2745
Customer Service: 1-877-368-4968

Location:
750 N. GREENFIELD PARKWAY
GARNER, NC 27529

Website: www.ncdot.gov

CONCERNS AND RECOMMENDATIONS

MSTA has the following concerns and recommendations described below and shown on ***Figure 1:***

- **Queue Analysis:** Based on the MSTA School Traffic calculator, the school would need approximately 110 feet of queue on an average day (five vehicles) and approximately 143 feet (7 vehicles) on a high demand day to accommodate the queue. The school is not able to allow stacking of vehicles on the campus due to parking lot physical constraints.

  The school should provide seven (7) parking spaces in the North Parking Lot to allow parents to park and walk their student to the building entrance. It should be noted in the Student handbook that the loading and unloading operations should occur within the destinated areas.

School Name: Empowered Minds Academy, Durham, NC
Type: Private / Non-urban Charter
Version: 102816

MSTA School Queue Input					Calculations					
Grade Level	Student Population	Number of Buses	Staff Members	Student Drivers	PM Total Vehicles	PM Peak Vehicles	Average Queue Length	Total AM Trips	Total PM Trips	High Demand Length
										30%
Pre-K & K	5		1		2	1	22	7	5	29
1-10	35		2		10	4	88	32	22	114
11th										
12th										
Sum >>	40		3		12	5	110	39	27	143

- **Transportation Management Plan (TMP)**
  The school campus has two parking lots located on two city blocks on North Guthrie Avenue. The buildings are mostly built out to the extent of the property. School traffic operations potentially occur on three streets that are two-lane and two-way roadways: Holloway Street (US 70 Business/NC 98) signed at 35 miles per hour (mph), North Guthrie Avenue, and Alma Street, both signed at 25 mph.

  It will be necessary to implement the Transportation Management Plan (TMP) to inform staff and parents of school traffic operations on average and high demand days. This will aide in how to implement school traffic operations efficiently and should be put in the Student Handbook. A Transportation Management Plan is attached.

- **American with Disabilities Act (ADA) Accessibility**
  - There are two existing handicap parking spaces on Alma Street without ramp accessibility.

    Install Pedestrian amenities per ADA standards. Provide one handicap parking space per twenty-five parking spaces

- **Holloway Street (US 70 Business/NC 98)**
  Identify school area in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) to warn road users

  Install School Area Sign's (S1-1) to identify an approaching school area that includes the school building, a school crossing, and school related activity adjacent to the highway.

- **North Parking Lot**
  - The school driveway into the North Parking Lot is 12 feet wide. The school driveway can only accommodate one vehicle at a time.

    If needed, a staff member (utilizing traffic safety gear, such as a Class II Safety Vest) could help direct the school traffic to keep exiting vehicles from blocking any entering vehicles' access to the parking lot. The staff member would direct exiting vehicles to stop in the temporary holding area to allow entering vehicles to clear the driveway before exiting. There is adequate sight distance in both directions from the parking lot to allow vehicles to yield to each other without a staff member. This guidance should be shared with the parents and provided in the Student Handbook.

    Another option would be to widen the driveway 24 feet (one 12-foot ingress lane and one 12-foot egress lane) to allow two vehicles to pass each other at one time.

  - Not enough parking spaces for the maximum student population during high demand days, such as adverse weather or special school events.

    Parents should use the North Parking Lot (10 parking spaces) and South Parking Lot (39 parking spaces) during such events

  - Non-school parking, potentially from the neighborhood, may interfere with loading.

    Close existing gate or install a gate (metal or plastic chain-link) to eliminate non-school use which could hinder loading. It is our understanding that church activities will be minimal during school operational hours and no activities during the school loading hours. Church staff may access the North Parking Lot as necessary during non-loading periods.

    Install a "School Loading" sign with the AM and PM loading hours at the North Parking Lot entrance to remind church staff of the loading hours. This information should be shared with church administration.

  - Parents and students should be directed to use the pedestrian walkway from the parking spaces to the school entrance. The site plan delineates a four-foot-wide walkway offset one foot from the building.

    Install curb stops two feet from the walkway in each parking space to prevent vehicle overhang impeding the walking space. Another option is to install a chain barrier for the length of the walkway to divide the walkway and the parking.

We appreciate the opportunity to serve "Empowered Minds Academy" and hope you find our services helpful as together we continue to provide "Safe Roads to Safe Schools."

Empowered Minds Academy Transportation Management Plan

The Transportation Management Plan (TMP) informs staff, parents and visitors how to implement school traffic operations efficiently. It provides a traffic flow design for average and high demand days. School traffic operations, such loading should occur only in the designated areas.
See *Figure 1*.

Pedestrian Operations

Pedestrians shall use sidewalks and crosswalks where provided.

Staff Traffic Operations

Staff are suggested to park in the South Parking Lot or any available on-street parking.
(Note 6).

Average Day Traffic Operations

Parent Traffic Operations

1. Parents are encouraged to enter the North Parking Lot by making a right-turn from North Guthrie Avenue and if present, follow directions of the traffic director.
   (Note 1).

2. When parking, parents are encouraged to park in spaces 1-7 in sequential order. These spaces are numbered in sequential order starting from the western end (furthest end) of the North Parking Lot to reduce encounters at the school driveway.
   (Note 3).

3. Once parked, parents should escort their student to the school entrance utilizing the pedestrian walkway along the school's northern building exterior.
   (Note 4).

4. Exiting traffic should yield to incoming traffic by waiting in the temporary holding area. This will deter queuing on North Guthrie Avenue. Parents are encouraged to exit the North Parking Lot by making a right-turn onto North Guthrie Avenue.
   (Notes 1, 2).

5. If a student needs extended time to load or the student is to be picked up early, then the parents are encouraged to use the visitor parking spaces in the South Parking Lot. Parents must accompany the student to the school entrance and utilize sidewalks and the crosswalk at the signalized Holloway Street (US 70 Business/NC 98) and North Guthrie Avenue intersection to access the school.
   (Note 5).

High Demand Day Traffic Operations

Parent Traffic Operations

1. In the event of a high demand day, parents should park in the South Parking Lot.

2. Parents must accompany the student to the school entrance and utilize sidewalks and the crosswalk at the signalized Holloway Street (US 70 Business/NC 98) and North Guthrie Avenue intersection to access the school.

Empowered Minds Academy

40 Student Population
110 Feet Average Queue
33 Feet 30% High Demand
143 Feet Total Desired Queue

This Design Provides

143 Feet Total Queue

MEETS using 7 parking spaces

CONCEPT PLAN
NOT FOR CONSTRUCTION

100 0

Municipal & School Transportation Assistance

Figure 1
Empowered Minds Academy
Proposed Traffic Pattern

Division 5 | Durham County | Durham

SCALE: NONE	N. C. DEPARTMENT OF TRANSPORTATION TRANSPORTATION MOBILITY AND SAFETY DIVISION	REVIEWED BY: KDH	
DATE: 8/05/2019		REVISIONS:	
PREPARED BY: RBS			

NOTES

1. Encourage parents to make right turns into and out of the school, to enter and exit.
2. Exiting traffic should yield to incoming traffic by waiting in the temporary holding area (27 feet wide by 27 feet long). This will deter queuing on North Guthrie Avenue.
3. Park & Go: Parents should begin parking towards the back of the North Parking Lot in order from parking spaces 1-7 to reduce encounters at the school driveway entrance.
4. Delineate a 4-foot wide walkway offset 1-foot from the building from the steps at parking space-1 to the fence opening at the North Guthrie Avenue sidewalk. Parents should escort the student to the school entrance. Install curb-stops between parking and walkway in order to provide a safer walkway.
5. Identify Short Term parking spaces in the South Parking Lot. 5 parking spaces should be identified by installing "Visitor Parking" signs and/or pavement markings at the spaces to be assigned. These spaces are for parents requiring extended periods of time to load. If a parent stops in the loading zone, to wait to load their student, a loading assistant should direct that parent to the Visitor Parking. Parents should accompany the student utilizing the crosswalk to gain access to the school.
6. Staff parking is suggested to use the South Parking lot.
7. Keep gate closed school days to eliminate neighborhood parking which could hinder PM loading.
8. Place a School Loading sign with loading hours by the North Parking Lot.

MINOR SPECIAL USE PERMIT

HOMESTEAD MARKET PARKING REDUCTION B1900048

Meeting Date: January 28, 2019

Reference Name	Homestead Market Parking Reduction Minor Special Use Permit (Case B1900048)		**Jurisdiction**	City of Durham
Request	A minor special use permit to request a parking reduction greater than 20%.			
Site Characteristics	**Tier:**	Suburban		
	Use:	Commercial – Retail, Office, & Restaurant		
	Zoning:	Commercial Center (CC -D) Office & Institutional (OI-D)		
	Overlays:	Falls of the Neuse/Jordan Lake Protected Area (F/J-B) Major Transportation Corridor I-40 (MTC I-40)		
	Size:	21.691 acres		
Applicant	Tim Summerville; Stewart		**Submittal Date**	October 28, 2019
Location	105 W NC 54 HWY			
PID(s)	149676			
Staff Recommendation	Staff will make a recommendation after the public hearing.			

A. Summary

Tim Summerville, applicant for the property owner, requests a minor special use permit to reduce the amount of required parking more than 20%. The site is located at 105 W NC 54 Highway and is zoned Commercial Center (CC-D) and Office & Institutional (OI-D). It is located within the Suburban development tier and within the Falls of the Neuse/Jordan Lake Protected Area (F/J-B) Watershed Protection Overlay District as well as the Major Transportation Corridor I-40 (MTC I-40) Overlay District.

The site is currently a commercial center that contains retail, office, restaurant, and grocery which are all permitted uses per the Development Plan. When built in 1988, the site plan was permitted with 619 motor vehicle parking spaces. This is less than the minimum requirement per the planning regulations at that time. In researching how the discrepancy in parking came to pass, staff was not able to locate a record of the interpretation leading to the decision to permit. The site is completely built out and additional parking spaces cannot be added. The applicant is proposing several changes of uses, and foresees more in the future, and would like to request a parking reduction from the required parking to allow what they are currently providing, 619 parking spaces, to be the maximum spaces needed on site.

Per Unified Development Ordinance (UDO) Section 10.3.1B.10, except for within Compact Neighborhood Tiers, reductions of more than 20% of the required motor vehicle parking shall require the approval of a Minor Special Use Permit.

B. Summary of the Issues

Staff has not identified any issues at the time of this report.

Recommended Conditions of Approval

1. The improvements shall be substantially consistent with the information submitted to the Board as part of the application and site plan case D1900378.

C. Section 3.9.8: Criteria for Approval

1. Section 3.9.8A General Findings

Applications for major or minor special use permits shall be approved only if the approving authority finds that the use as proposed, or the use as proposed with conditions, is:

1. *In harmony with the area and not substantially injurious to the value of properties in the general vicinity;*
2. *In conformance with all special requirements applicable to the use;*
3. *Will not adversely affect the health or safety of the public; and*
4. *Will adequately address the review factors identified below.*

If the Board of Adjustment fails to find conformance with the conditions listed above, or makes findings which are inconsistent with those conditions listed above, then the proposed permit must be denied.

The Board should consider the information provided in the staff analysis and conclusions for the following review factors when making determinations on the general findings.

2. Section 3.9.8B Review Factors

Section 3.9.8B requires consideration of the review factors shown below:

a. *Circulation*

Number and location of access points to the property and the proposed structures and uses with particular reference to automotive, bicycle, mass transit and pedestrian safety and convenience, traffic flow and control, and access in case of fire or catastrophe.

Staff Analysis. A reduction in parking does not impact circulation. The site has frontage along North Carolina Highway 54 West and Highgate Drive. The existing parking lot is accessed via ingress and egress points along these two frontages. The proposed reduction does not require any modifications to these access points and none are proposed. Pedestrian access to the site is provided via sidewalks and the American

Tobacco Trail, which connects to Highgate Drive. A public transit bus stop is located along both Highgate Drive and Highway 54. Both stops are serviced by GoDurham routes.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

b. ***Parking and Loading***
Location of off-street parking and loading areas.

Staff Analysis. Based upon the current parking standards of UDO Section 10.3.1B, the applicant is required to provide 839 motor vehicle parking spaces. There are currently 619 spaces located on site. The site has been built out to its maximum potential and, short of removing a BMP or a building, there is no feasible way to meet the 220 parking space deficit. Staff notes that to increase parking, the applicant could convert up to 20% of the spaces to compact parking spaces per UDO Section 10.4.1B.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

c. ***Service Entrances and Areas***
Locations of refuse and service areas with particular reference to ingress and egress of service vehicles.

Staff Analysis. A parking reduction does not impact the location of refuse and service areas associated with the proposed project.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

d. ***Lighting***
Locations of exterior lighting with reference to glare, traffic safety, economic effect, and compatibility with other properties in the area.

Staff Analysis. A parking reduction does not impact required lighting. All current lighting has been reviewed during site plan review for compliance with the Ordinance.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

e. ***Signs***
Appropriateness of signs considering location, color, height, size, and design within the context of other properties in the area.

Staff Analysis. A parking reduction does not impact required signage. Signs are not reviewed during site plan review nor during the minor special use permit process.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

f. ***Utilities***
Location and availability of utilities.

Staff Analysis. A parking reduction does not impact the location and availability of utilities. The site is currently serviced by public water and sanitary sewer.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

g. ***Open Spaces***
Location of required yards and other open spaces, and preservation of existing trees and other natural features.

Staff Analysis. A parking reduction does not trigger any additional tree coverage or open space requirements.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

h. ***Environmental Protection***
Preservation of tree cover, Durham Inventory Sites, floodplain, stream buffers, wetlands, steep slopes, open space and other natural features, and protection of water quality.

Staff Analysis. No Inventory Sites, floodplains, stream buffers, wetlands, or steep slopes exist on site. Therefore, a parking reduction would not impact protected environmental features.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

i. ***Screening, Buffering and Landscaping***
Installation of screening, buffering, fencing, and landscaping where necessary to protect adjacent property.

Staff Analysis. . As the site was developed prior to the establishment of the Ordinance in 2006, the existing screening, buffering, and landscaping provided are legal non-conformities. The proposed parking reduction does not require the applicant to provide additional screening, buffering, or landscaping.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

j. *Effect on Adjacent Property*

Effects of the proposed use on nearby properties, including, but not limited to, the effects of noise, odor, lighting, and traffic.

Staff Analysis. The table below notes the surrounding uses and zoning districts:

Surrounding Uses and Zoning Districts				
	Use	**Zoning District**	**Overlay**	**Tier**
North	Vacant and commercial-fast food	OI(D) & CC(D)	F/J-B MTC I-40	Suburban
South	Highway	CC and OI	N/A	N/A
East	Convenience Store w/ Gas	CC(D)	F/J-B MTC I-40	Suburban
West	Multifamily Apartments and Commercial Office	OI	F/J-B MTC I-40	Suburban

Staff does not expect that a reduction in required parking would have a negative impact in regards to noise, odor, or lighting with this request. The applicant is proposing to continue utilizing the existing parking lot which has serviced the site and the uses for over 30 years.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

k. *Compatibility*

The level of general compatibility with nearby properties and impacted neighborhoods, including, but not limited to, the appropriateness of the scale, design, and use in relationship to other properties.

Staff Analysis. The parking reduction request is for the applicant to continue to utilize the existing parking lot to service the commercial center. The site is located within a densely commercial area with several other commercial centers located in close proximity. The requested reduction does not result in any modifications or changes to the site and thus will have no physical impacts.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

l. *Consistency with Policy*

Consistency with the Durham Comprehensive Plan and applicable development tier guidelines, overlay purposes, and zoning district intent statements in Article 4, Zoning Districts.

UDO Section 4.1.2A.2 Suburban Tier Intent Statement
The Suburban Tier – That area not included within the Downtown, Compact, Urban, or Rural Tiers in which urban services are expected to be provided with development at traditional suburban densities and patterns. This area is anticipated to absorb the majority of Durham's population growth and its attendant demands for housing, employment, and goods and services, including opportunities for affordable housing and recreation.

UDO Section 4.3.3 Office and Institutional (OI)
The OI District is established for employment and community service activities. Some support facilities and residential uses are also allowed when compatible with surrounding uses. The OI district is designed for use on sites that have convenient access to arterials, since development of moderate to high intensity is allowed.

UDO Section 4.4.3 Commercial Center (CC)
The CC District is established to provide for orderly development of commercial services in a unified setting on large parcels of land (generally over ten acres in size to serve residential neighborhoods within a three to five mile radius of the site). It is the intent of this district to encourage a concentration of commercial activities surrounding a node such as the intersection of two arterials with an overall design scheme, rather than strip commercial areas. The district is intended to provide a wide range of retail and service activities that serve many neighborhoods. Residential uses generally are not appropriate in the CC District. Development in the CC district should provide safe pedestrian access to adjacent residential areas.

The CC District is designed for use on sites at major intersections that are capable of handling the proposed traffic. The CC District should not be located where primary access is from any connector-level street.

Staff Analysis. This development was approved with a development plan in 1988, allowing the uses and the site layout in combination with the Ordinance. There are no new uses or site design details included in the requested parking reduction. The Ordinance recognizes that certain situations will require a parking reduction greater than those that can be obtained by-right and reductions of more than 20% of motor vehicle parking shall be allowed on a case by case basis with the issuance of a minor special use permit. The proposal is in harmony with the intent and goals of the Durham Comprehensive Plan.

Refer to Attachment 3, Application – B1900048, for the applicant's response to this finding.

m. ***Other Factors***
Any other review factors which the approving authority considers to be appropriate to the property in question.

Staff Analysis. No additional review factors were identified at the time of this report.

D. Notification

Staff certifies that newspaper advertisements, letters to property owners within 600 feet of the site and the posting of a sign on the property has been carried out in accordance with UDO Section 3.2.5. In addition, email notice was provided per the Durham Planning Public Notification Service.

E. Staff Contact

Eliza Monroe, 919-560-4137 ext. 28245 or Eliza.Monroe@durhamnc.gov

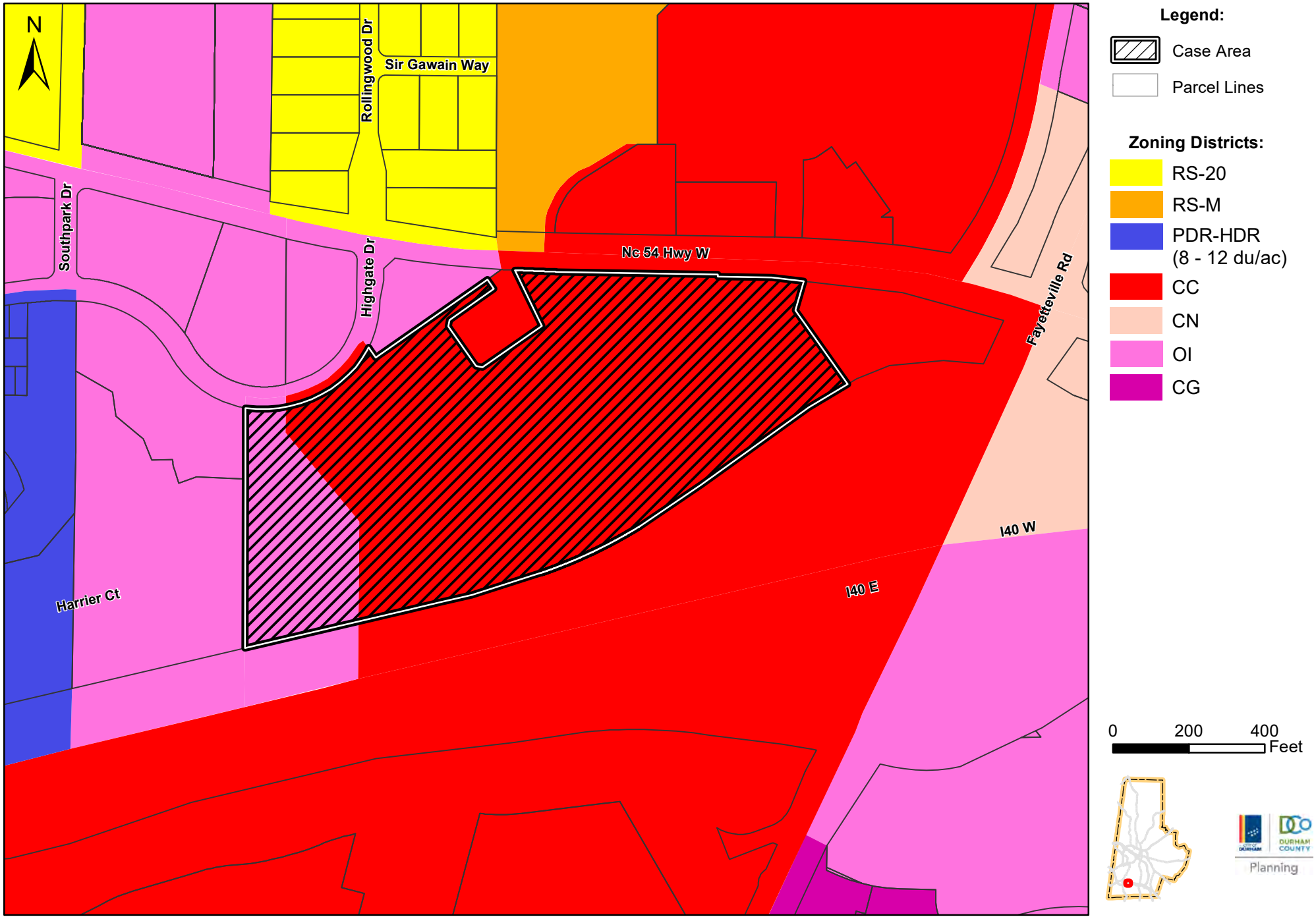
Attachments

1. Context Map
2. Aerial Map
3. B1900048 – Application
4. Site Plan – D1900378
5. Transportation Memo
6. Development Plan (P87-7) & (P97-64)

B1900048 Homestead Market Parking Reduction Minor Special Use Permit

Attachment 1

Context Map



Durham City-County Planning Department, 12/13/2019

B1900048 Homestead Market Parking Reduction Minor Special Use Permit

Attachment 2

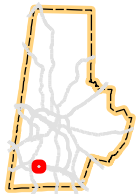
Aerial Map

Legend:

Case Area

Parcel Lines

0 200 400 Feet



Durham City-County Planning Department, 12/13/2019

Rev. 01/2015

DURHAM 1869 CITY OF MEDICINE

Durham City-County Planning Department

MINOR AND MAJOR SPECIAL USE PERMIT (SUP) APPLICATION

(A Pre-submittal conference must be held prior to submission)

DURHAM COUNTY

Tracking Information (Staff Only)

Case Number: B1900048	Date/Time rec'd: 10/28/19 @ 3:00PM	Rec'd by: Eliza Monroe

About this Application

ONLY COMPLETE APPLICATIONS CAN BE ACCEPTED

Minor special use permits are heard by the Board of Adjustment as a quasi-judicial public hearing. *Major special use permits* are heard by the Governing Body (City Council if City, Board of Commissioners if County) as a quasi-judicial public hearing.

Submittal: **Applications are accepted by appointment only**. Deadlines are discussed at the pre-submittal meeting and are available online at http://durhamnc.gov/ich/cb/ccpd/Pages/Applications.aspx. Applications should be submitted in-person, and fees are due at time of submittal.

The application is a form of written testimony, and used both to show how Ordinance considerations are addressed and to provide evidence that the required findings for approval can be made. In addition to the application materials, the applicant may provide any other written, drawn or photographed material to support his/her request and as permitted by the Board of Adjustment or Governing Body, as applicable. Any such additional material submitted will become part of the application, and as such cannot be returned.

Attendance at the hearing is required. Applicants may represent themselves or may be represented by someone appropriate for quasi-judicial public hearings. The applicant has the **burden of proof** and must provide sufficient evidence in order for the required findings to be made. The public hearing will allow the applicant, proponents, opponents and anyone else the opportunity to testify in regards to the request. An application may be approved, approved with conditions, continued for more information, or denied. **Decisions can be appealed to Superior Court within 30 days.**

Contact Information: If you have any questions, please contact the City-County Planning Department at 560-4137 between 8:00 a.m. and 5:00 p.m. on weekdays.

Application Requirements	Applicant Initial	Staff Initial
Record of the pre-submittal meeting (copies provided at the meeting)	TS	EM
Fee	TS	EM
Completed application and responses: ORIGINAL signatures required	TS	EM
SUBMITTED SITE PLAN AND APPLICATION (full size and 11X17) or PLOT PLAN, as determined at pre-submittal meeting	TS	EM
Responses to general findings and review factors: Section 3.9.8A and B of the UDO	TS	EM
Responses to Additional Findings and/or Review Factors, as applicable	TS	EM
Responses to Limited Use Standards, as applicable	TS	EM
Floorplan, as applicable	N/A	
Elevations, as applicable	N/A	

Case #_____

Property Information	
Site Address: 105 W NC 54 HWY	PID(s): 0718-02-76-9042
Zoning District(s) : CC	PIN(s): 149676
Overlay District(s): F/J-B, MTC	SUP Type: X Minor (msup) Major (MSUP)
Current Use:	Jurisdiction: X City County Both

Property Owner	
Name(s) (Print): RRPIV Homestead Durham LP	Telephone: 919-617-6868
Contact Person: Joe DeStasio	Email: jdestasio@ramrealestate.com
RRPIV Homestead Durham LP, By: RRPIV Homestead Durham GP LLC, its General Partner By: Ram Realty Associates IV LLC, its Manager Owner Signature	Date

Applicant	
Name(s): Stewart	
Contact Person: Tim Summerville	Telephone: 919. 866. 4794
Address: 101 West Main St.	Fax:
City/State/ZIP: Durham, NC 27701	Email: tsummerville@stewartinc.com
I certify that all of the information presented by me in this application is accurate to the best of my knowledge, information, and belief. Applicant Signature	Date 10/28/19

Agent (if different than applicant)	
Name: Stewart	
Contact Person: Tim Summerville	Telephone: 919-866-4794
Address: 101 West Main Street	Fax:
City/State/ZIP: Durham, NC 27701	Email: tsummerville@stewartinc.com

Case #_____

Complete and respond to the following with an attachment (suggested), or in the space provided:

Applicant's Name: I, _____Tim Summerville_____, do hereby petition the City of Durham/County of Durham for a Special Use Permit to allow the following:

Required parking reduction of greater than 20% for the existing shopping center.

Section 3.9.8 of the UDO: Criteria for Approval of Major and Minor Special Use Permits

A. General Findings

Applications for minor or major special use permits shall be approved only if the Board of Adjustment or Governing Body, as applicable, finds that the use as proposed, or the use as proposed with conditions, is:

1. In harmony with the area and not substantially injurious to the value of properties in the general vicinity;

Applicant's Response:

The request for a reduction in the required parking will not be substantially injurious to the value of properties in the area. The shopping center is currently operating with enough parking for the needs of their current and future tenants. Additional spaces will become unused spaces.

2. In conformance with all special requirements applicable to the use;

Applicant's Response:

The shopping center contains a mix of retail and restaurant uses. The included parking study shows that the current number of parking spaces are appropriate for the existing and proposed uses.

3. Will not adversely affect the health or safety of the public; and

Applicant's Response:

The parking reduction will not have any impact on the health or safety of the public. The reduction will reduce the amount of required parking that is not necessary for the functionality of the shopping center. Additional unused parking spaces would create more impervious surface which increases stormwater runoff, pollutants, and additional heat island effect.

4. Will adequately address the review factors identified below.

Applicant's Response:

All review factors have been addressed below.

Case #_____

B. Review Factors
The applicant shall demonstrate that the review factors listed below have been adequate addressed.

1. Circulation
Number and location of access points to the property and the proposed structures and uses, with particular reference to automotive, bicycle, mass transit and pedestrian safety and convenience, traffic flow and control, and access in case of fire or catastrophe.
Applicant's Response:

The existing access to the shopping center will not change with the parking reduction for automotive and bicycle traffic. Emergency access and circulation will not be affected.

2. Parking and Loading
Location of off-street parking and loading areas.
Applicant's Response:

The location of off-street parking and loading areas will not change with this application. A parking study was done to determine how much parking was used during different times throughout the shopping center. A copy of this study is included and concludes that the number of off-street parking spaces provided is more than adequate to support this application.

3. Service Entrances and Areas
Locations of refuse and service areas with particular reference to ingress and egress of service vehicles.
Applicant's Response:

The location of refuse and service areas will remain unchanged by this application.

4. Lighting
Locations of exterior lighting with reference to glare, traffic safety, economic effect and compatibility with other property in the area.
Applicant's Response:

The locations and light levels will not be changed.

5. Signs
Appropriateness of signs considering location, color, height, size, and design within the context of other property in the area.
Applicant's Response:

There will be no changes to sign locations or layouts with this request.

Case #_____

6. Utilities
Location and availability of utilities.
Applicant's Response:

Existing utilities serving the shopping center will not be affected.

7. Open Spaces
Location of required yards and other open spaces and preservation of existing trees and other natural features.
Applicant's Response:

Open spaces, yards, and existing trees will be preserved with this request. Adding additional unused parking to the site would require unnecessary disturbance to these areas.

8. Environmental Protection
Preservation of tree cover, Durham Inventory Sites, floodplain, stream buffers, wetlands, steep slopes, open space and other natural features, and protection of water quality.
Applicant's Response:

As shown in the parking study, the current number of parking spaces are adequate for the use of the shopping center. The addition of unnecessary parking spaces will increase impervious surface. This would create additional stormwater runoff that will impact water quality, streams, floodplains and other natural features. Existing trees and vegetation would also need to be removed to create the unused parking spaces.

9. Screening, Buffering and Landscaping
Installation of screening, buffering, fencing and landscaping where necessary to protect adjacent property.
Applicant's Response:

Existing screening and buffering will not be impacted with this application.

10. Effect on Adjacent Property
Effects of the proposed use on nearby properties, including, but not limited to, the effects of noise, odor, lighting, and traffic.
Applicant's Response:

The effect on adjacent properties will not be changed with this application.

11. Compatibility
The level of general compatibility with nearby properties and impacted neighborhoods, including but not limited to the appropriateness of the scale, design, and use in relationship to other properties.
Applicant's Response:

Case #_____

The existing shopping center is located in a commercial zoning district. It is surrounded by other retail and commercial developments. Located within the shopping center are restaurants and retail to serve the nearby residential zoning.

12. Consistency with Policy
Consistency with the Comprehensive Plan and applicable development tier guidelines, overlay purposes, and zoning district intent statements in Article 4, Zoning Districts.
Applicant's Response:

The parking reduction is consistent with the Comprehensive Plan and all other requirements.

13. Other Factors
Any other review factors which the approving authority considers to be appropriate to the property in question.

NOTE: Please address the requirements of any applicable "Limited Use Standards" or other special requirements of the use as an attachment of the application.

Read and sign below:

In granting a Minor or Major Use Permit, conditions may be placed to assure that adequate mitigation measures are associated with the use. The conditions shall become part of the special use permit approval. Violations of any of the conditions shall be treated in the same manner as other violations of the Ordinance. Furthermore, Special Use Permits shall become null and void in any of the following cases (Section 3.9.13 of the UDO):

A. If a site plan is not approved within 12 months of the date of permit approval.

B. If an approved site plan or building permit expires.

C. If a building permit is not issued within two years of the date of approval, in cases where a site plan is not required.

D. If a substantial violation of the conditions of the permit, as determined by the Planning Director or designee occurs. The addition of language to the special use permit regarding such voiding shall not be required.

Applicant Signature 10/28/19 **Date**

HOMESTEAD MARKET PARKING REDUCTION

CONSULTANT:

STEWART

101 West Main Street
Durham, NC 27701
T 919.380.8750
CONTACT: TIM SUMMERVILLE
tsummerville@stewartinc.com

FIRM LICENSE #: C-1051
www.stewartinc.com

APPLICANT:

RAM REAL ESTATE
CONTACT: JOE DESTASIO
1480 ENVIRON WAY
CHAPEL HILL, NC 27517

PARCEL INFORMATION:

0718-02-76-9042
149676
RRPVE HOMESTEAD DURHAM LP
4801 PGA BLVD
PALM BEACH GARDENS, FL 33418

SITE DATA TABLE:

1.	PINS:	0718-02-76-9042
2.	PIDS:	149676
3.	ZONING:	CC (D), OI(D)
4.	WATERSHED BASIN:	JORDAN LAKE
5.	OVERLAY DISTRICT:	MTC I-40
6.	RIVER BASIN:	CAPE FEAR
7.	CURRENT USE:	COMMERCIAL - RETAIL /RESTAURANT
8.	PROPOSED USES:	COMMERCIAL - RETAIL /RESTAURANT (2,100 SF CONVERTED)
9.	EXISTING IMPERVIOUS:	567,397 SF / 13.06 ACRES
10.	PROPOSED IMPERVIOUS:	0 SF / 0.00 ACRES
11.	PARKING DATA:	
	EXISTING PARKING	619 SPACES
	TOTAL PARKING REQUIRED	839 SPACES (SEE CHART BELOW)
	ACCESSIBLE PARKING DATA:	
	PARKING REQUIRED	13 SPACES (3 VAN ACCESSIBLE)
	PARKING PROVIDED	18 SPACES (9 VAN ACCESSIBLE)
	COMPACT SPACES PROVIDED	24 SPACES (3.8% OF TOTAL PARKING SPACES)
	BIKE PARKING DATA:	
	PARKING REQUIRED	33 SPACES
	PARKING PROVIDED	33 (31 EXISTING SPACES* + 2 PROPOSED)
12.	TREE COVERAGE:	2,132 SF / 0.05 ACRES (10.3% OF DISTURBED AREA)
13.	BUILDING SQ FOOTAGE:	163,260 SF
14.	AREA OF DISTURBANCE	0 SF
15.	SITE AREA	944,640 SF / 21.686 AC

* EXISTING BIKE PARKING COUNT IS AN ESTIMATE. EXISTING BIKE PARKING DOES NOT MEET CITY STANDARDS

USE	SQUARE FEET	PARKING RATE	PARKING REQUIRED
Retail	50,000	1/200	250
Retail	72,461	1/250	290
Restaurant	27,309	1/100	273
Office	5,531	1/250	22
Storage	4,175	1/1000	4
		TOTAL	839

IMPERVIOUS AREA:

DESCRIPTION	AREA (SQFT)	AREA (AC)	% OF TOTAL AREA
TOTAL SITE AREA	944,640	21.69	-
TOTAL EXISTING IMPERVIOUS AREA	569,397	13.07	60.28
TOTAL PROPOSED IMPERVIOUS AREA	569,397	13.07	60.26
LIMITS OF DISTURBANCE	0	0.00	-

SITE PLAN SUBMITTAL

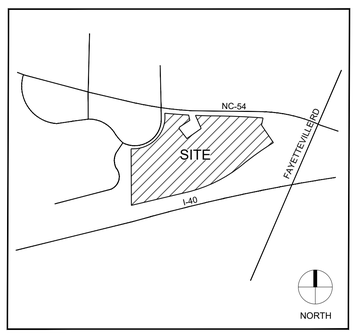
OCTOBER 25, 2019

CASE #D1900378

105 W. NC 54
Durham, North Carolina

REVISIONS

DECEMBER 5, 2019



VICINITY MAP

SCALE: N.T.S

INDEX OF DRAWINGS	
SHEET NO.	SHEET NAME
C0.00	COVER
C1.00	EXISTING CONDITIONS

GENERAL CONDITIONS OF APPROVAL:

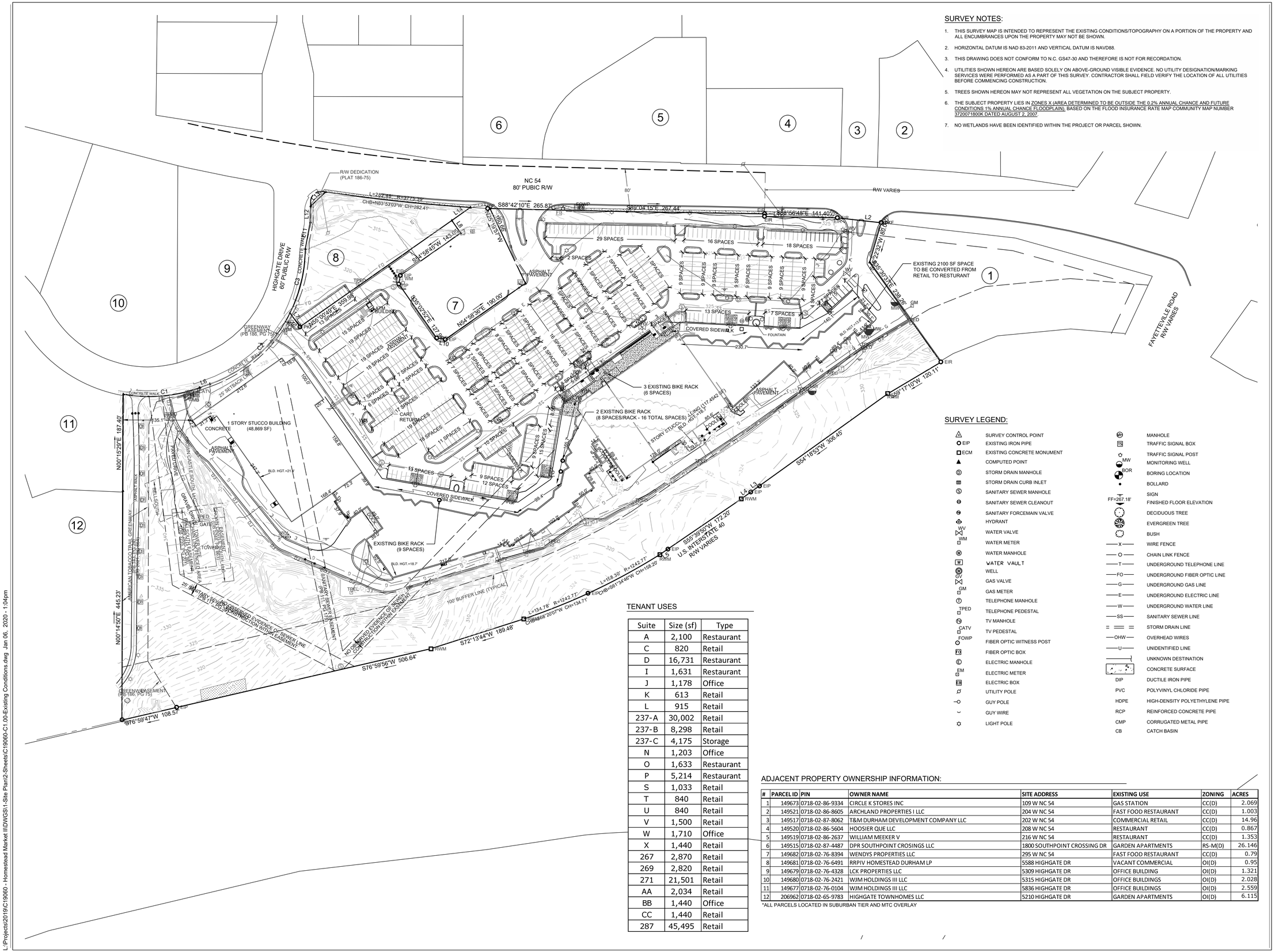
1. FOR SITES WITHOUT FLOODPLAIN: THIS SITE IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON FIRM PANEL 3720071800K DATED AUGUST 2, 2007.
2. LANDSCAPE MULCH: PINE STRAW SHALL NOT BE USED AS MULCH OR GROUNDCOVER WITHIN TEN FEET OF ANY STRUCTURES CONSISTING OF EXTERIOR COMBUSTIBLE CONSTRUCTION AS SPECIFIED BY DURHAM CITY CODE SECTION 46-87.
3. LANDSCAPING/C.O. STANDARDS NOTE: ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE. CONTACT DURHAM CITY COUNTY PLANNING DEPARTMENT SITE COMPLIANCE STAFF FOR INSPECTION.
4. LANDSCAPE RE-INSPECTION FEE: EACH LANDSCAPING COMPLIANCE INSPECTION AFTER THE INITIAL INSPECTION WILL INCUR A RE-INSPECTION FEE. PAYMENT MUST BE RECEIVED BY THE DURHAM CITY COUNTY PLANNING DEPARTMENT PRIOR TO RE-INSPECTION.
5. UNDISTURBED LANDSCAPE BUFFERS: 100 FOOT WIDE UNDISTURBED LANDSCAPE BUFFER. NO CLEARING OR GRADING OTHER THAN SELECTIVE THINNING AND ORDINARY MAINTENANCE OF EXISTING VEGETATION PERMITTED.
6. TREE PROTECTION NOTE (UDO SEC. 8.3): TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE, OR ISSUANCE OF A GRADING PERMIT AND SHALL INCLUDE WARNING SIGNS POSTED IN BOTH ENGLISH AND SPANISH, AS FOLLOWS: "NO TRESPASSING/TREE PROTECTION AREA/PROHIBIDO ENTRAR / ZONA PROTECTORA PARA LOS ÁRBOLES."
7. ROOT PROTECTION ZONE (UDO SEC. 8.3): EQUALS ONE FOOT OF RADIUS FOR EVERY INCH OF DIAMETER OF EXISTING TREES, OR SIX FOOT RADIUS, WHICHEVER IS GREATER. NO DISTURBANCE ALLOWED WITHIN THIS AREA. AREA MUST BE PROTECTED WITH BOTH TREE PROTECTION FENCING AND WARNING SIGNS.
8. PROTECTION OF EXISTING VEGETATION (UDO SEC. 8.3): AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA PRIOR TO OR AT THE SAME TIME AS SILT FENCE AND OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA.
9. UDO SITE LIGHTING NOTE (UDO SEC. 7.4): MEASURES SHALL BE PROVIDED TO PREVENT LIGHT SPILLOVER ONTO ADJACENT PROPERTIES AND GLARE TOWARD MOTOR VEHICLE OPERATORS AND SHALL BE INDICATED ON THE SITE PLAN. EXTERIOR LIGHTS SHALL BE SHIELDED SO THAT THEY DO NOT CAST DIRECT LIGHT BEYOND THE PROPERTY LINE. IN ACCORDANCE WITH THESE STANDARDS:
   a. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPPERTY LINE ADJACENT TO RESIDENTIAL ZONING IS 0.5 FOOT CANDLES.
   b. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO NONRESIDENTIAL ZONING IS 5.0 FOOT CANDLES.
   c. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO A STREET IS 5.0 FOOT CANDLES.
   d. THE LEVEL OF ILLUMINATION AS MEASURED IN FOOT CANDLES AT ANY ONE POINT SHALL MEET THE STANDARDS IN THE TABLE IN UDO SECTION 7.4 WITH MINIMUM AND MAXIMUM LEVELS MEASURED ON THE PAVEMENT WITHIN THE LIGHTED AREA.
   e. THE MAXIMUM HEIGHT FOR DIRECTIONAL OR FULL CUT-OFF LIGHTING FIXTURES (FIXTURES DESIGNED TO INSURE THAT NO LIGHT IS EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND) SHALL BE 30 FEET ABOVE GRADE, MEASURED TO THE TOP OF THE FIXTURE.
   f. THE MAXIMUM HEIGHT FOR NON-DIRECTIONAL LIGHTING FIXTURES, WHICH ARE DEFINED AS FIXTURES DESIGNED TO ALLOW LIGHT TO BE EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND, SHALL BE 15 FEET ABOVE GRADE, MEASURED TO THE TOP OF THE FIXTURE.
   g. THESE STANDARDS MUST BE VERIFIED BY FIELD SURVEY (BY USE OF PHOTOMETRIC SURVEY) PRIOR TO THE CERTIFICATE OF COMPLIANCE BEING ISSUED. ALL OF THIS INFORMATION, INCLUDING DETAILS, WILL BE REQUIRED ON BUILDING PLANS PRIOR TO ISSUANCE OF BUILDING PERMIT.
11. THE SITE WILL BE FULLY COMPLIANT WITH THE NORTH CAROLINA ACCESSIBILITY CODES (ANSI 117.1 -2009 AND CHAPTER 11 OF THE NCBC) UNLESS AND EXCEPT IN AREAS WHERE AN APPROVED STATEMENT FROM A SITE ENGINEER, SURVEYOR OR ARCHITECT VERIFIES THAT SITE CONDITIONS EXIST WHERE THE TOPOGRAPHY OF THE SITE IS EXTREME AND ONLY ALTERNATE METHODS OF COMPLIANCE ARE POSSIBLE.
12. AN AS-BUILT SURVEY OF THE SITE, PERFORMED BY THE DESIGN PROFESSIONAL OR DESIGNEE, MUST BE SUBMITTED TO THE BUILDING INSPECTIONS DEPARTMENT CERTIFYING THAT ALL SITE ACCESSIBILITY CODE REQUIREMENTS SUCH AS CURB CUTS, RAMP SLOPES, SIDEWALK SLOPES AND WIDTHS, AND CROSS SLOPES MEET THE REQUIREMENTS OF THE NC ACCESSIBILITY CODE PRIOR TO CO ISSUANCE.
13. THE ESTABLISHMENT OF FIRE LANES, IN ACCORDANCE WITH SECTION 503.3 OF THE NC FIRE CODE, MAY BE REQUIRED WHERE IT BECOMES APPARENT AFTER OCCUPANCY OF THE DEVELOPMENT THAT PARKING WITHIN ROADWAYS CREATES DIFFICULTIES FOR THE PASSAGE OF FIRE EQUIPMENT.
14. FIRE LANES ARE TO BE MARKED IN ACCORDANCE WITH CITY GUIDELINES (PAVEMENT MARKINGS AND SIGNAGE). FIRE LANE SIGNAGE READING NO PARKING - FIRE LANE, WITH RED LETTERS ON WHITE REFLECTIVE BACKGROUND, AND OF STANDARD NO PARKING SIGN CHARACTERISTICS, NEEDS TO BE USED.
15. A BACKFLOW PREVENTER PERMIT SHALL BE OBTAINED PRIOR TO BEGINNING INSTALLATION. CONTACT THE CROSS-CONNECTION CONTROL OFFICE AT 560-4194 AND REFER TO HTTP://DURHAMNC.GOV/952/BACKFLOW-PREVENTION.

SPECIAL CONDITIONS OF APPROVAL:

PUBLIC WORKS CONDITIONS OF APPROVAL:

D1900378 HOMESTEAD MARKET

Attachment 4



SURVEY NOTES:

1. THIS SURVEY MAP IS INTENDED TO REPRESENT THE EXISTING CONDITIONS/TOPOGRAPHY ON A PORTION OF THE PROPERTY AND ALL ENCUMBRANCES UPON THE PROPERTY MAY NOT BE SHOWN.
2. HORIZONTAL DATUM IS NAD 83-2011 AND VERTICAL DATUM IS NAVD88.
3. THIS DRAWING DOES NOT CONFORM TO N.C. GS47-30 AND THEREFORE IS NOT FOR RECORDATION.
4. UTILITIES SHOWN HEREON ARE BASED SOLELY ON ABOVE-GROUND VISIBLE EVIDENCE. NO UTILITY DESIGNATION/MARKING SERVICES WERE PERFORMED AS A PART OF THIS SURVEY. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES BEFORE COMMENCING CONSTRUCTION.
5. TREES SHOWN HEREON MAY NOT REPRESENT ALL VEGETATION ON THE SUBJECT PROPERTY.
6. THE SUBJECT PROPERTY LIES IN ZONES X (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE AND FUTURE CONDITIONS 1% ANNUAL CHANCE FLOODPLAIN), BASED ON THE FLOOD INSURANCE RATE MAP COMMUNITY MAP NUMBER 3720071800K DATED AUGUST 2, 2007.
7. NO WETLANDS HAVE BEEN IDENTIFIED WITHIN THE PROJECT OR PARCEL SHOWN.

SURVEY LEGEND:

△	SURVEY CONTROL POINT		MANHOLE
EIP	EXISTING IRON PIPE		TRAFFIC SIGNAL BOX
ECM	EXISTING CONCRETE MONUMENT		TRAFFIC SIGNAL POST
▲	COMPUTED POINT	MW	MONITORING WELL
	STORM DRAIN MANHOLE	BOR	BORING LOCATION
	STORM DRAIN CURB INLET		BOLLARD
	SANITARY SEWER MANHOLE		SIGN
	SANITARY SEWER CLEANOUT	FF=267.18'	FINISHED FLOOR ELEVATION
	SANITARY FORCEMAIN VALVE		DECIDUOUS TREE
	HYDRANT		EVERGREEN TREE
WV	WATER VALVE		BUSH
WM	WATER METER	—X—	WIRE FENCE
	WATER MANHOLE	—O—	CHAIN LINK FENCE
W	WATER VAULT	—T—	UNDERGROUND TELEPHONE LINE
W GM	WELL	—FO—	UNDERGROUND FIBER OPTIC LINE
	GAS VALVE	—G—	UNDERGROUND GAS LINE
GM	GAS METER	—E—	UNDERGROUND ELECTRIC LINE
T	TELEPHONE MANHOLE	—W—	UNDERGROUND WATER LINE
TPED	TELEPHONE PEDESTAL	—SS—	SANITARY SEWER LINE
TV	TV MANHOLE	= = =	STORM DRAIN LINE
CATV	TV PEDESTAL	—OHW—	OVERHEAD WIRES
FOWP	FIBER OPTIC WITNESS POST	—U—	UNIDENTIFIED LINE
FO	FIBER OPTIC BOX		UNKNOWN DESTINATION
E	ELECTRIC MANHOLE		CONCRETE SURFACE
EM	ELECTRIC METER	DIP	DUCTILE IRON PIPE
EB	ELECTRIC BOX	PVC	POLYVINYL CHLORIDE PIPE
	UTILITY POLE	HDPE	HIGH-DENSITY POLYETHYLENE PIPE
	GUY POLE	RCP	REINFORCED CONCRETE PIPE
	GUY WIRE	CMP	CORRUGATED METAL PIPE
	LIGHT POLE	CB	CATCH BASIN

TENANT USES

Suite	Size (sf)	Type
A	2,100	Restaurant
C	820	Retail
D	16,731	Restaurant
I	1,631	Restaurant
J	1,178	Office
K	613	Retail
L	915	Retail
237-A	30,002	Retail
237-B	8,298	Retail
237-C	4,175	Storage
N	1,203	Office
O	1,633	Restaurant
P	5,214	Restaurant
S	1,033	Retail
T	840	Retail
U	840	Retail
V	1,500	Retail
W	1,710	Office
X	1,440	Retail
267	2,870	Retail
269	2,820	Retail
271	21,501	Retail
AA	2,034	Retail
BB	1,440	Office
CC	1,440	Retail
287	45,495	Retail

ADJACENT PROPERTY OWNERSHIP INFORMATION:

#	PARCEL ID	PIN	OWNER NAME	SITE ADDRESS	EXISTING USE	ZONING	ACRES
1	149673	0718-02-86-9334	CIRCLE K STORES INC	109 W NC 54	GAS STATION	CC(D)	2.069
2	149521	0718-02-86-8605	ARCHLAND PROPERTIES I LLC	204 W NC 54	FAST FOOD RESTAURANT	CC(D)	1.003
3	149517	0718-02-87-8062	T&M DURHAM DEVELOPMENT COMPANY LLC	202 W NC 54	COMMERCIAL RETAIL	CC(D)	14.96
4	149520	0718-02-86-5604	HOOSIER QUE LLC	208 W NC 54	RESTAURANT	CC(D)	0.867
5	149519	0718-02-86-2637	WILLIAM MEEKER V	216 W NC 54	RESTAURANT	CC(D)	1.353
6	149515	0718-02-87-4487	DPR SOUTHPOINT CROSINGS LLC	1800 SOUTHPOINT CROSSING DR	GARDEN APARTMENTS	RS-M(D)	26.146
7	149682	0718-02-76-8394	WENDYS PROPERTIES LLC	295 W NC 54	FAST FOOD RESTAURANT	CC(D)	0.79
8	149681	0718-02-76-6491	RRPIV HOMESTEAD DURHAM LP	5588 HIGHGATE DR	VACANT COMMERCIAL	OI(D)	0.95
9	149679	0718-02-76-4328	LCK PROPERTIES LLC	5309 HIGHGATE DR	OFFICE BUILDING	OI(D)	1.321
10	149680	0718-02-76-2421	WJM HOLDINGS III LLC	5315 HIGHGATE DR	OFFICE BUILDINGS	OI(D)	2.028
11	149677	0718-02-76-0104	WJM HOLDINGS III LLC	5836 HIGHGATE DR	OFFICE BUILDINGS	OI(D)	2.559
12	206962	0718-02-65-9783	HIGHGATE TOWNHOMES LLC	5210 HIGHGATE DR	GARDEN APARTMENTS	OI(D)	6.115

*ALL PARCELS LOCATED IN SUBURBAN TIER AND MTC OVERLAY

STEWART
101 WEST MAIN STREET
DURHAM, NC 27701
T 919.380.8750
FIRM LICENSE #: C-1051
www.stewartinc.com
PROJECT #: C19060

Client:

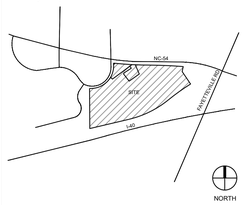
RAM REAL ESTATE
1930 CAMDEN ROAD
CHARLOTTE, NC 28203
CONTACT: JOE DESTASIO

Project:

HOMESTEAD MARKET

105 W. NC 54
DURHAM, NC 27713

Vicinity map:



Seal:

PRELIMINARY - DO NOT USE FOR CONSTRUCTION

Issued for:

SITE PLAN

No.	Date	Description
1	12.05.2019	PER CITY OF DURHAM

0 40 80 160 NORTH

SCALE: 1"=80'

Title:

EXISTING CONDITIONS

Project number: C19060 Sheet:
Date: 09.23.2019
Drawn by: LAP
Approved by: JWP

C1.00

L:\Projects\2019\C19060 - Homestead Market III\DWGS\1-Site Plan\2-Sheets\C19060-C1.00-Existing Conditions.dwg Jan 06, 2020 - 1:04pm

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone - 919-872-5115 Fax - 919-878-5416
www.rameykemp.com

October 24, 2019

Joe DeStasio
Ram Realty Advisors
1480 Environ Way
Chapel Hill, NC 27517
P: (919) 617-6868
E: jdestasio@ramrealestate.com

Subject: Homestead Market Parking Study
Durham, NC

Dear Mr. DeStasio:

This letter presents the findings of a parking study prepared for the Homestead Market located at 105 West NC 54 in Durham. The parking study evaluated the parking capacity under existing conditions and the amount of unoccupied and occupied square footage that could be utilized as restaurant space without exceeding the existing parking capacity to estimate future development potential.

Under existing conditions, there are 619 parking spaces available at the Homestead Market that consists of a mixture of retail and restaurant space. It is understood that 121,144 square feet of retail space and 19,995 square feet of restaurant space is currently occupied. The remaining 18,643 square feet [of the 159,782 square feet] of commercial space is unoccupied. To identify the peak parking demand at Homestead Market with the occupied land uses, parking counts were conducted for an 8-hour time period on three (3) different days. Based on the results of the parking counts (tables attached), the following is a brief summary of the parking demand for each day:

- On Wednesday (September 25, 2019) from 10:00 AM to 6:00 PM, it was determined that the peak parking demand occurred at 6:00 PM with 328 spaces occupied.
- On Friday (September 27, 2019) from 11:30 AM to 7:30 PM, it was determined that the peak parking demand occurred at 5:30 PM with 307 spaces occupied.
- On Saturday (September 28, 2019) from 10:30 AM to 6:30 PM, it was determined that the peak parking demand occurred at 11:30 AM with 326 spaces occupied.

Under peak parking demand conditions on Wednesday at 6:00 PM, 328 of the available 619 parking spaces were occupied with a surplus of 291 spaces. The 18,643 square feet of unoccupied space was evaluated under two (2) scenarios to determine if the parking requirements under retail (Scenario 1) and restaurant (Scenario 2) land uses could be accommodated by the unoccupied parking spaces under peak parking demand conditions. The parking requirement for retail would be 75 spaces based on a parking rate of 1 space/250 square feet (due to the aggregate square footage of existing retail space exceeding 50,000). The requirement for restaurant would be 187 parking spaces based on a parking rate of 1 space/100 square feet. When compared to the existing parking calculations, the 291 available parking spaces would accommodate the increased parking demand associated with both uses. Refer to Table 1 for a breakdown of the parking requirements.

Table 1

Land Use	Square Footage	Parking Rate	Required Parking
Existing Conditions			
Retail	50,000	1/200	250
Retail	71,144	1/250	285
Restaurant	19,995	1/100	200
Unoccupied	18,643	N/A	0
Total	159,782	N/A	735
Scenario 1 (18,643 square feet of additional retail space)			
Retail	50,000	1/200	250
Retail	89,787	1/250	360
Restaurant	19,995	1/100	200
Total	159,782	N/A	810
Parking Increase			75
Scenario 1 (18,643 square feet of additional restaurant space)			
Retail	50,000	1/200	250
Retail	71,144	1/250	285
Restaurant	38,638	1/100	387
Total	159,782	N/A	922
Parking Increase			187

Per your request, an alternative was evaluated to determine the amount of additional restaurant space that could be provided without exceeding the remaining parking capacity. When compared to the existing parking calculations, the 291 available parking spaces would accommodate the increased parking demand required with an additional 36,005 square feet of restaurant space. The 36,005 square feet would consist of the 18,643 square feet of unoccupied space and the conversion of 17,362 square feet of retail space. Refer to Table 2 for a breakdown of the parking requirements.

Table 2

Land Use	Square Footage	Parking Rate	Required Parking
Retail	50,000	1/200	250
Retail	53,782	1/250	216
Restaurant	56,000	1/100	560
Total	159,782	N/A	1,026
Required Parking from Table 1			735
Parking Increase			291

In conclusion, the Homestead Market has excess parking capacity based on the peak parking demand under existing conditions. When compared to existing parking requirements, there is enough capacity to accommodate the additional parking needs under the more conservative scenario with the current vacancies occupied by restaurants. Furthermore, it was determined that the 291 available parking spaces could accommodate a redevelopment plan that included up to 56,000 square feet of restaurant space that includes both unoccupied and converted [retail] square footage.

If you should have any questions or comments relative to this parking study, please feel free to contact me at 336-725-5470.

Sincerely,
Ramey Kemp and Associates, Inc. (License #C-0910)

NORTH CAROLINA PROFESSIONAL SEAL 28379 ENGINEER JAYSON B. CLAPP, JR.

10·24·19

Jayson B. Clapp, Jr., P.E., PTOE

Attachment: Parking Count Data Tables

Attachment 5

Wednesday			
Time Period	Total Spaces	Spaces Occupied	Available Spaces
10:00 AM	619	213	406
10:30 AM		272	347
11:00 AM		267	352
11:30 AM		278	341
12:00 PM		296	323
12:30 PM		309	310
1:00 PM		290	329
1:30 PM		252	367
2:00 PM		253	366
2:30 PM		259	360
3:00 PM		244	375
3:30 PM		227	392
4:00 PM		247	372
4:30 PM		254	365
5:00 PM		280	339
5:30 PM		297	322
6:00 PM		328	291
Peak Period		**328**	**291**

Friday			
Time Period	Total Spaces	Spaces Occupied	Available Spaces
11:30 AM	619	284	335
12:00 PM		268	351
12:30 PM		292	327
1:00 PM		287	332
1:30 PM		301	318
2:00 PM		262	357
2:30 PM		278	341
3:00 PM		281	338
3:30 PM		286	333
4:00 PM		288	331
4:30 PM		301	318
5:00 PM		293	326
5:30 PM		307	312
6:00 PM		292	327
6:30 PM		271	348
7:00 PM		266	353
7:30 PM		189	430
Peak Period		**307**	**312**

Saturday			
Time Period	Total Spaces	Spaces Occupied	Available Spaces
10:30 AM	619	280	339
11:00 AM		313	306
11:30 AM		326	293
12:00 PM		322	297
12:30 PM		315	304
1:00 PM		282	337
1:30 PM		291	328
2:00 PM		280	339
2:30 PM		279	340
3:00 PM		262	357
3:30 PM		276	343
4:00 PM		232	387
4:30 PM		213	406
5:00 PM		202	417
5:30 PM		216	403
6:00 PM		229	390
6:30 PM		259	360
Peak Period		**326**	**293**

ROLLINGWOOD DR.
NC 54
N
PARCEL #3
HIGHGATE DR.
BANK #2
BANK #1
RESTAURANT #2
PARCEL #1
RESTAURANT #1
SHOPS
DRUG
GROCERY
PARCEL #2
DEPARTMENT STORE
JUNIOR DEPARTMENT STORE
FAYETTEVILLE ROAD
INTERSTATE 40
PROPOSED DEVELOPMENT PLAN
SITE PLAN
1"=50'
Note: The 1st 1" of stormwater runoff will be infiltrated for the portion of the site within the LIA
PROJECT DATA
BUILDING AREA
DEPARTMENT STORE 54,000
JUNIOR DEPARTMENT STORE 20,000
GROCERY 39,239
DRUG 9,600
SHOPS 38,320
RESTAURANT #1 4,000
RESTAURANT #2 2,400
BANK #1 3,200
BANK #2 2,500
173,179
PARKING
SPACES REQUIRED @ 5/1000 SF 866
SPACES CREDITED FOR LANDSCAPE TREE PLANTING AREAS (10%) 87
SPACES SHOWN 779
DEVELOPER: ASHTON PROPERTIES, INC.
4300 GLENWOOD AVE.
RALEIGH, NC 27609
LAND PARCELS
PARCEL #1
EXISTING ZONING C1-A
PROPOSED ZONING C1-A(D)
AREA 14.53 ACRES
IMPERVIOUS AREA 59.90 %
PARCEL #2
EXISTING ZONING O-I
PROPOSED ZONING C1-A(D)
AREA 10.16 ACRES
IMPERVIOUS AREA 68.57 %
PARCEL #3
EXISTING ZONING O-I
PROPOSED ZONING O-I(D)
AREA 6.34 ACRES
IMPERVIOUS AREA 18.94 %
NOTE: IMPERVIOUS AREA OF PARCEL NOS. 2 & 3 IS 49.5 %
TOTAL AREA PARCEL Nos 1,2,&3: 28.03 ACRES
Case P87-7
C-1-A(D) and O-I(D)
DEVELOPMENT PLAN AND ZONING
DESIGNATION APPROVED BY CITY COUNCIL
ON May 18, 1987 ORDINANCE NO.
City Clerk
C-1-A(D) and O-I(D)
DESIGNATION APPROVED BY PLANNING & ZONING
COMMISSION ON April 1, 1987
Chairman
MAY 1987
Homestead Market
Durham, NC
1 MAY 1987
19 MAY 1987
D1

Attachment 6

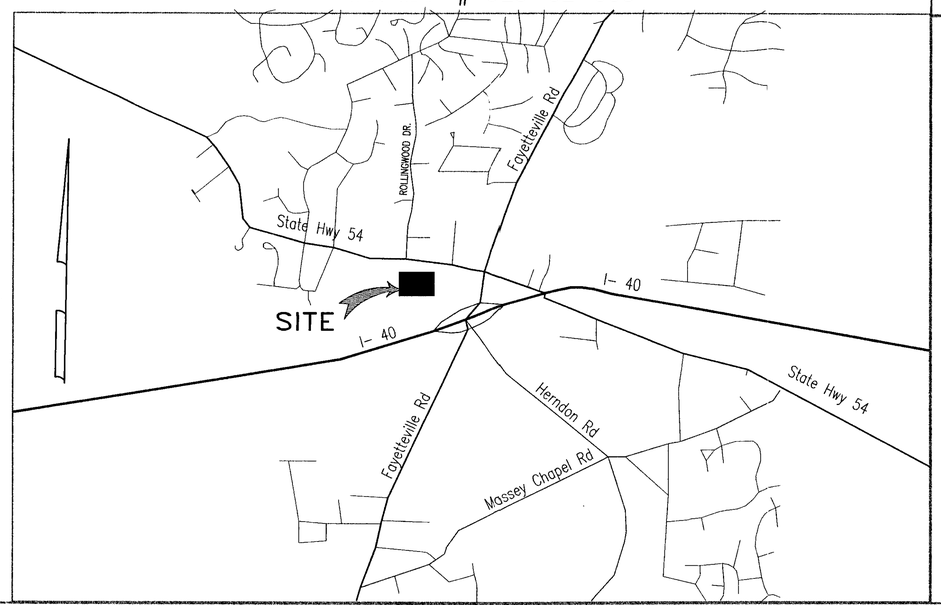
BELLSOUTH
Carolinas PCS, L.P.

1130 SITUS COURT, SUITE 100
RALEIGH, NORTH CAROLINA 27606

DEVLOPMENT PLAN
BASE TRANSCEIVER STATION SITE
09-368-161-RB
CITY OF DURHAM
NORTH CAROLINA

POH JOB NO. 02 RNC 368.0161 0R1B

VICINITY MAP
HWY. 54 AND FAYETTEVILLE ROAD, DURHAM, NC
TAX MAP # 525-02-008



P97-64

APPROVAL STAMP	SPECIAL CONDITIONS OF APPROVAL
	Approved 9-9-97

INDEX OF DRAWINGS

SHEET	DESCRIPTION
1	COVER SHEET
2	ZONING BOUNDARIES
2	DEVELOPMENT PLAN
3	TOWER AND LANDSCAPE PLAN

PREPARED BY:

PiedmontOlsenHensley
ENGINEERS/ARCHITECTS/PLANNERS
2301 Rexwoods Drive
Post Office Box 31388, Raleigh, NC 27622-1388
Tel: 919/782-5511 Fax: 919/782-5905

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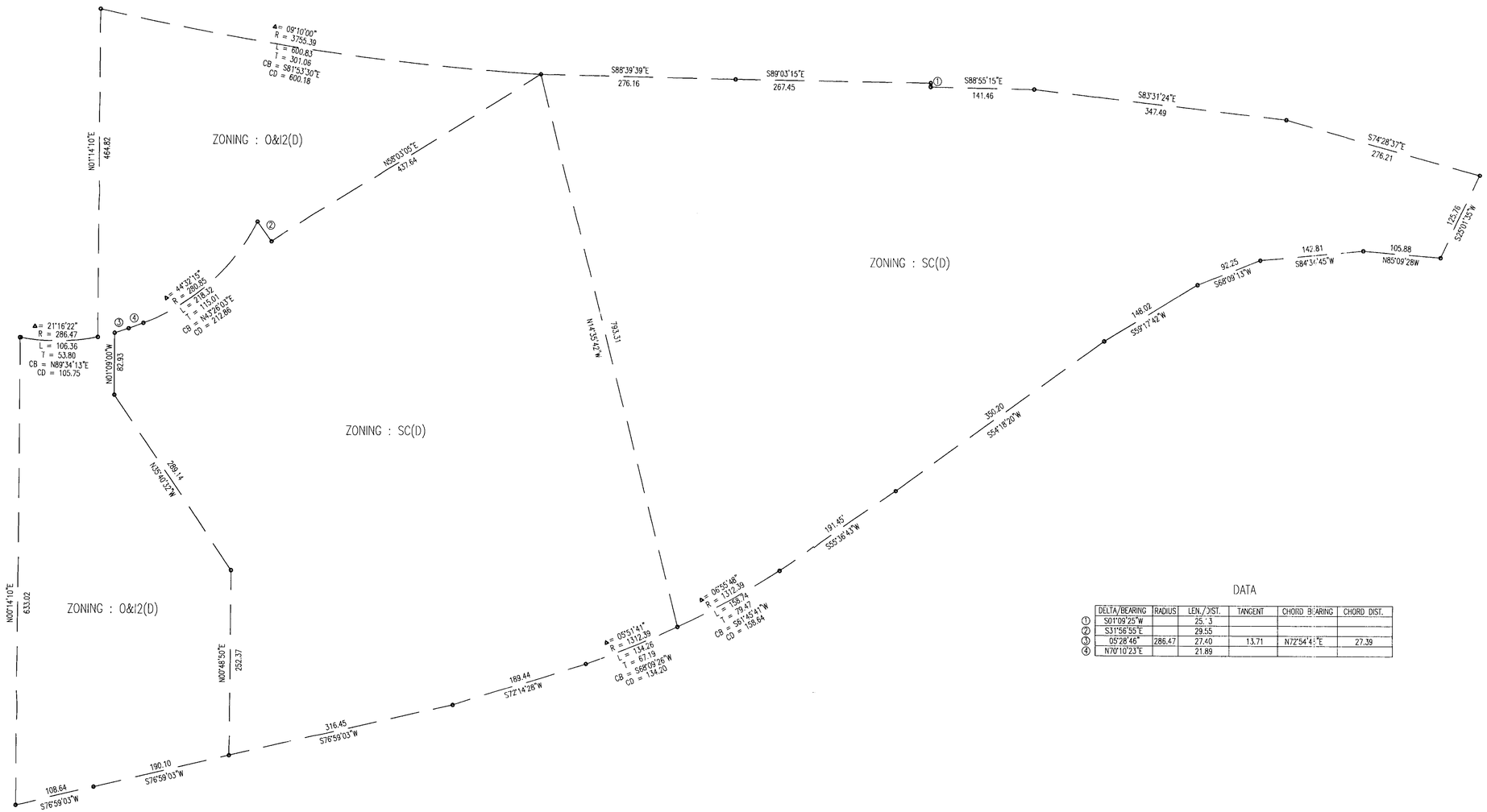

DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT	CHORD BEARING	CHORD DIST.
①	S01°09'25"W		25.03			
②	S31°56'55"E		29.55			
③	05°28'46"	286.47	27.40	13.71	N72°54'41"E	27.39
④	N70°10'23"E		21.89			

0 80' 160' 240'
1" = 80'

PRELIMINARY PLAT
NOT FOR RECORDATION,
SALES, OR CONVEYANCES.

NO.	DATE	REVISION DESCRIPTION	BY / CKD
A	8/15/97	ISSUED FOR AGENCY REVIEW	RK / JA

BELLSOUTH
Carolinas PCS, L.P.

09-368-161R-B

ZONING BOUNDARIES

copyright © 19 97

PiedmontOlsenHensley
ENGINEERS/ARCHITECTS/PLANNERS
2301 Rexwoods Drive
Post Office Box 31388, Raleigh, NC 27622-1388
Tel: 919/782-5511 Fax: 919/782-5905

SEALS NOT VALID UNLESS SIGNED AND DATED

PROJECT MANAGER J. GARCEAU	DEPARTMENT MANAGER J. LATHAN
LEAD DESIGN PROF. J. ALLEN	CHECKED J. BECKMAN
DRAWN R. KOONCE	DATE AUGUST 13, 1997
PROJECT NUMBER 22597-02	DRAWING NUMBER 2

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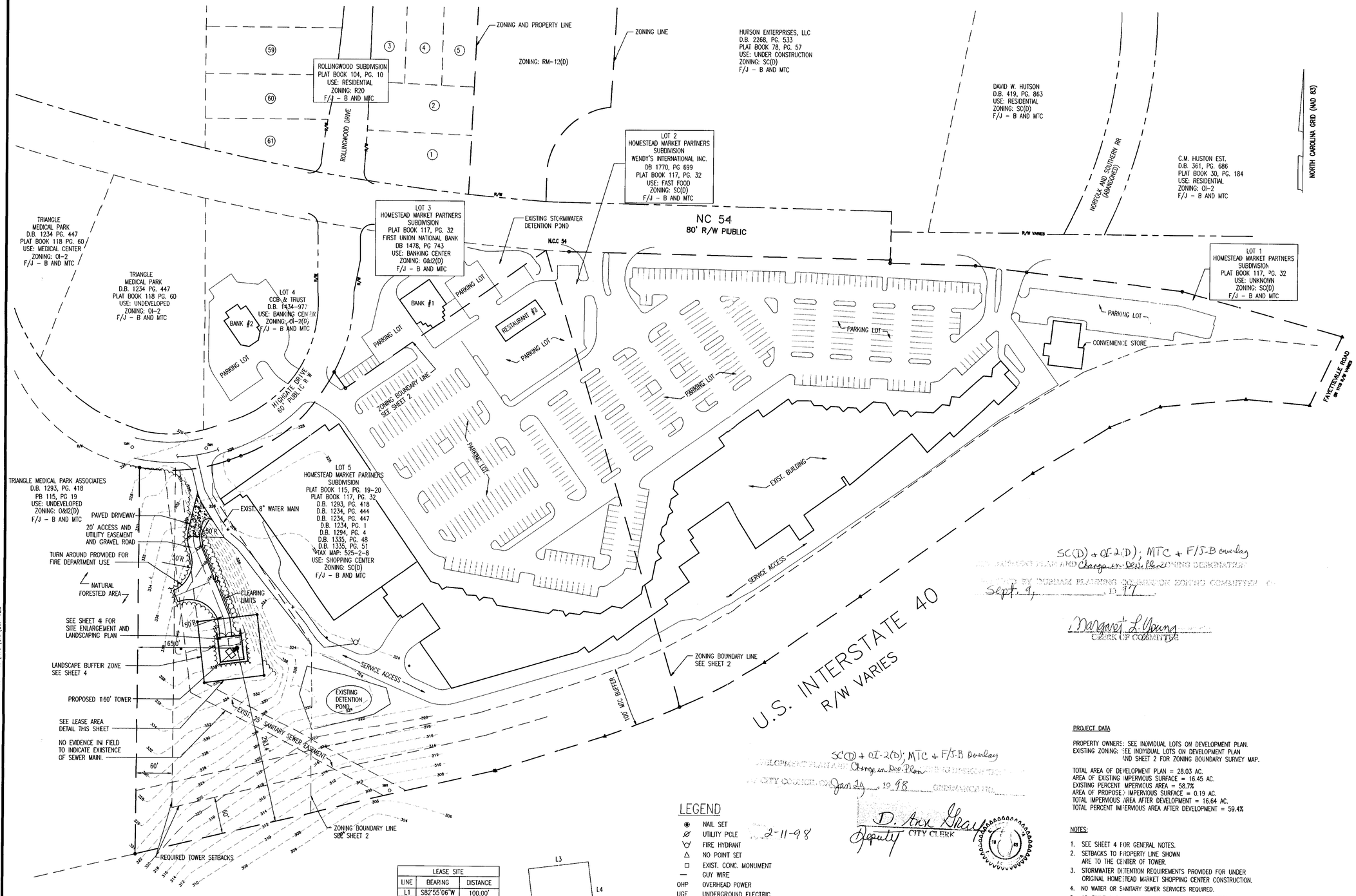
CX2436

Attachment 6



SC(D) + OI-2(D); MTC + F/J-B overlay
DEVELOPMENT PLAN AND Change in Dev. Plan ZONING DESIGNATION
REVIEWED BY DURHAM PLANNING DEVELOPMENT ZONING COMMITTEE ON
Sept. 9, 19 97
Margaret L. Young
CLERK OF COMMITTEE

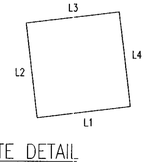
SC(D) + OI-2(D); MTC + F/J-B Overlay
DEVELOPMENT PLAN AND Change in Dev. Plan ZONING DESIGNATION
CITY COUNCIL ON Jan 26, 19 98 ORDINANCE NO.
2-11-98
D. Ann Gray
Deputy CITY CLERK

LEGEND

- NAIL SET
- UTILITY POLE
- FIRE HYDRANT
- NO POINT SET
- EXIST. CONC. MONUMENT
- GUY WIRE
- OHP OVERHEAD POWER
- UGE UNDERGROUND ELECTRIC

LEASE SITE		
LINE	BEARING	DISTANCE
L1	S82°55'06"W	100.00'
L2	N07°04'54"W	100.00'
L3	N82°55'06"E	100.00'
L4	S07°04'54"E	100.00'

LEASE AREA : 10000 S.F.



LEASE SITE DETAIL

NO SCALE

SITE PLAN

0 80' 160' 240'
1" = 80'

PROJECT DATA

PROPERTY OWNERS: SEE INDIVIDUAL LOTS ON DEVELOPMENT PLAN.
EXISTING ZONING: SEE INDIVIDUAL LOTS ON DEVELOPMENT PLAN AND SHEET 2 FOR ZONING BOUNDARY SURVEY MAP.

TOTAL AREA OF DEVELOPMENT PLAN = 28.03 AC.
AREA OF EXISTING IMPERVIOUS SURFACE = 16.45 AC.
EXISTING PERCENT IMPERVIOUS AREA = 58.7%
AREA OF PROPOSED IMPERVIOUS SURFACE = 0.19 AC.
TOTAL IMPERVIOUS AREA AFTER DEVELOPMENT = 16.64 AC.
TOTAL PERCENT IMPERVIOUS AREA AFTER DEVELOPMENT = 59.4%

NOTES:

1. SEE SHEET 4 FOR GENERAL NOTES.
2. SETBACKS TO PROPERTY LINE SHOWN ARE TO THE CENTER OF TOWER.
3. STORMWATER DETENTION REQUIREMENTS PROVIDED FOR UNDER ORIGINAL HOMESTEAD MARKET SHOPPING CENTER CONSTRUCTION.
4. NO WATER OR SANITARY SEWER SERVICES REQUIRED.
5. AS-BUILT SURVEY OF SHOPPING CENTER CONSTRUCTION PROVIDED BY OWNER.
6. SEE SHEET 2 FOR ZONING BOUNDARY AND DEVELOPMENT AREA BOUNDARY.

PRELIMINARY PLAT
NOT FOR RECORDATION,
SALES, OR CONVEYANCES.

NO.	DATE	REVISION DESCRIPTION	BY / CKD
C	8/27/97	REVISED PER DURHAM PLANNING DEPT. COMMENTS	PI / JB
B	8/15/97	REVISED PER DURHAM PLANNING DEPT. COMMENTS	PI / JB
A	7/7/97	ISSUED FOR AGENCY REVIEW	DB / JB

BELLSOUTH
Carolinas PCS, L.P.

09-368-161R-B

DEVELOPMENT PLAN

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PiedmontOlsenHensley
ENGINEERS/ARCHITECTS/PLANNERS
2301 Rexwoods Drive
Post Office Box 31388, Raleigh, NC 27622-1388
Tel: 919/782-5511 Fax: 919/782-5905

SEALS NOT VALID UNLESS SIGNED AND DATED

PROJECT MANAGER J. GARCEAU	DEPARTMENT MANAGER J. LATHAN
LEAD DESIGN PROF. J. ALLEN	CHECKED J. BECKMAN
DRAWN P. IVEY	DATE MAY 22, 1997
PROJECT NUMBER 22597-02	DRAWING NUMBER 3

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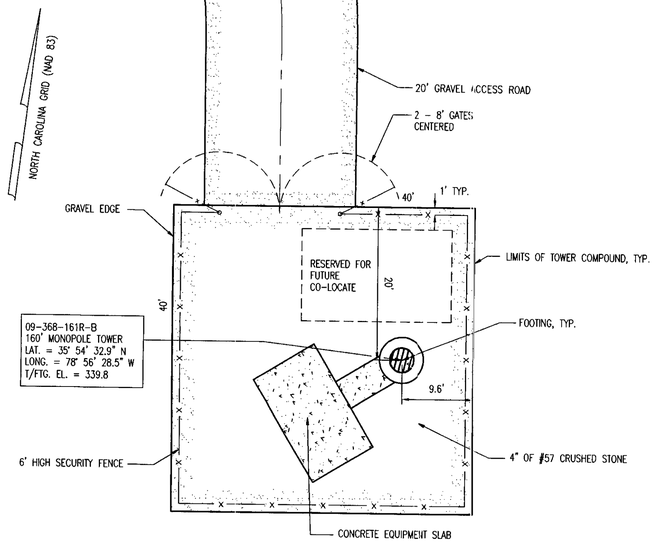


SITE LAYOUT PLAN

0 10' 20' 30'
1" = 10'

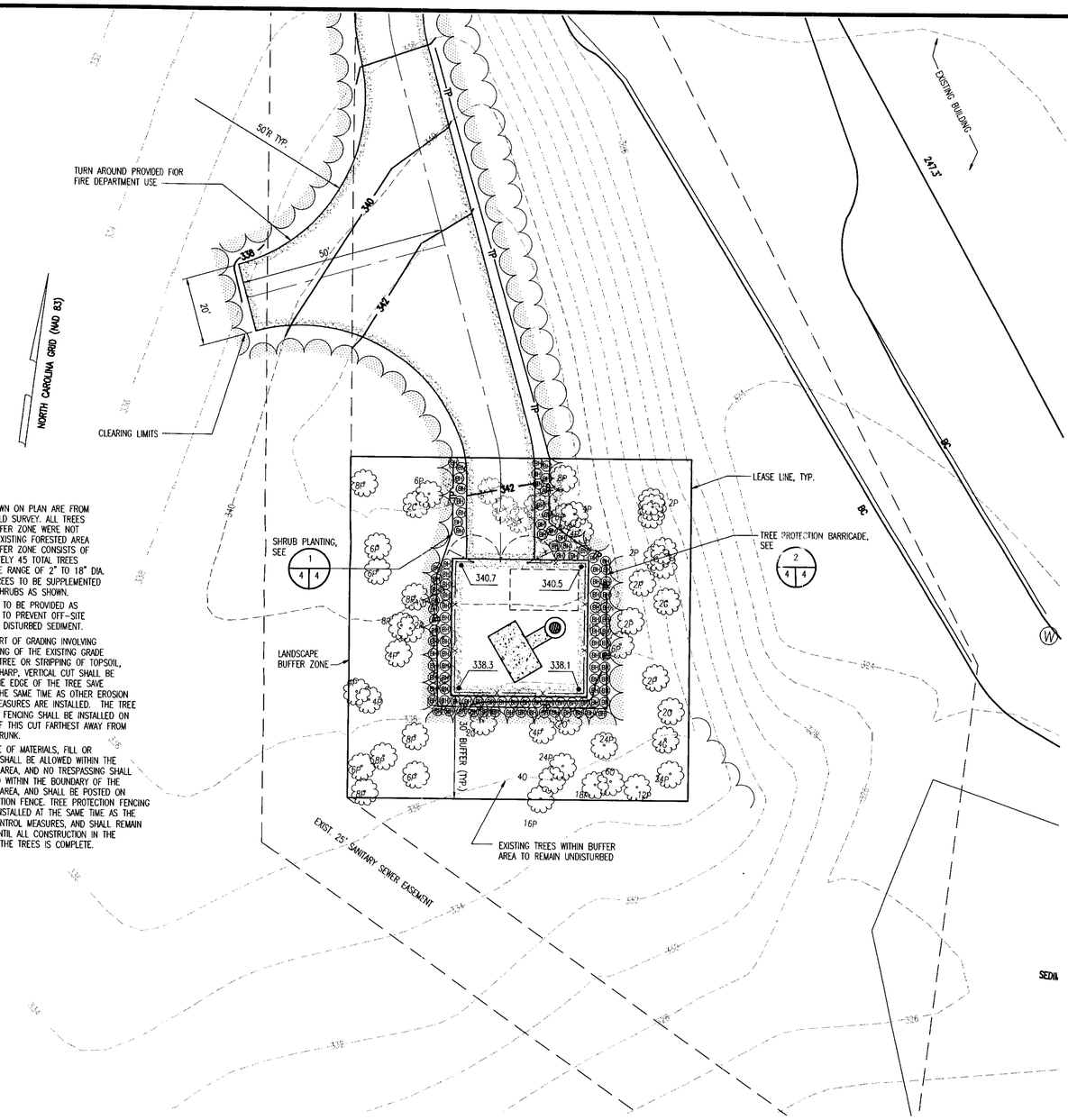
LEGEND

○	EXIST. TREE
⊕	INDICATES TREE WITHIN BUFFER ZONE NOT USED IN CALCULATION OF REQUIRED LANDSCAPING
SG	SWEET GUM
P	PINE
O	OAK
24"	TRUNK DIAMETER, TYP.
(BH)	BURFORD HOLLY
⊗	TREE TO BE REMOVED
—— TP ——	TREE PROTECTION BARRICADE
——310——	PROPOSED CONTOUR
- - -310- - -	EXISTING CONTOUR

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THAT ALL EXISTING TOPOGRAPHY AND HORIZONTAL GEOMETRY IS AS INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL ESTABLISH THE EXISTENCE AND LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES OR INTERFERENCES WHICH AFFECT THE WORK OF THIS CONTRACT.
2. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES, CODES, AND REGULATIONS.
3. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR CONTAINMENT OF SEDIMENT AND CONTROL OF EROSION ON SITE. ANY DAMAGE TO ADJACENT OR DOWNSTREAM PROPERTIES WILL BE CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
4. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR WORK ON THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY COST ASSOCIATED WITH REPAIRS FOR SUCH DAMAGE WILL BE AT THE CONTRACTOR'S EXPENSE.
5. ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE OR AS DIRECTED BY THE CONSTRUCTION MANAGER AND IN ACCORDANCE WITH JURISDICTIONAL AUTHORITIES.
6. COORDINATES AND BEARINGS SHOWN ARE BASED ON NORTH CAROLINA GRID (NAD 83). ELEVATIONS SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
7. SURVEY INFORMATION SHOWN COMPLIES WITH FAA ORDER 8260.19C ACCURACY TOLERANCES.
8. CONTRACTOR SHALL MAINTAIN 20' HORIZONTAL CLEARANCE FROM CENTERLINE OF EXISTING POWER LINES AS REQUESTED BY THE POWER COMPANY.
9. SEED AND MULCH ALL DISTURBED AREAS NOT COVERED BY OTHER MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS.
10. ANY PROPERTY DAMAGE CAUSED BY THE CONTRACTOR OR HIS OPERATIONS SHALL BE CORRECTED AND/OR RESTORED TO THE SATISFACTION OF THE PROPERTY OWNER(S) AND THE CONSTRUCTION MANAGER AT NO ADDITIONAL COST TO THE OWNER.
11. ITEMS REFERENCED AS BEING ON "HOLD" SHALL BE INCLUDED IN THE BID AND WORK, BUT FABRICATION OR CONSTRUCTION IS NOT TO PROCEED UNTIL THE "HOLD" REFERENCE IS REMOVED.
12. THIS SITE IS NOT LOCATED IN A FLOOD HAZARD AREA AS MAPPED BY FEMA AND SHOWN ON FIRM 37063C 0162G DATED 02/02/96.

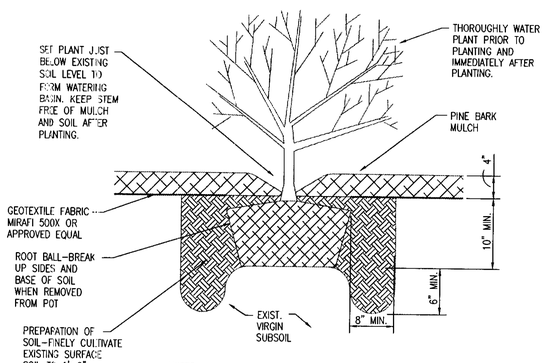
NOTE: SPECIAL USE PERMITS FOR ALL TOWERS SHALL EXPIRE UNLESS DOCUMENTATION, INCLUDING BUT NOT LIMITED TO AN FCC LICENSE, IS SUBMITTED EACH JANUARY TO THE DEVELOPMENT REVIEW BOARD (DRB) DEMONSTRATING THAT THE TOWER IS UTILIZED.



NOTES:
1. TREES SHOWN ON PLAN ARE FROM ACTUAL FIELD SURVEY. ALL TREES WITHIN BUFFER ZONE WERE NOT LOCATED. EXISTING FORESTED AREA WITHIN BUFFER ZONE CONSISTS OF APPROXIMATELY 45 TOTAL TREES WITH A SIZE RANGE OF 2" TO 18" DIA. EXISTING TREES TO BE SUPPLEMENTED WITH 24" SHRUBS AS SHOWN.
2. SILT FENCE TO BE PROVIDED AS NECESSARY TO PREVENT OFF-SITE RUNOFF OF DISTURBED SEDIMENT.
3. AT THE START OF GRADING INVOLVING THE LOWERING OF THE EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THIS CUT FARTHEST AWAY FROM THE TREE TRUNK.
4. NO STORAGE OF MATERIALS, FILL OR EQUIPMENT SHALL BE ALLOWED WITHIN THE PROTECTED AREA, AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA, AND SHALL BE POSTED ON THE PROTECTION FENCE. TREE PROTECTION FENCING SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES, AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.

LANDSCAPING AND GRADING PLAN

0 20' 40' 60'
1" = 20'



NOTES:
1. FOURTEEN DAYS PRIOR TO PLANTING, ALL AREAS DESIGNATED FOR PLANTING ARE TO BE CLEARED OF WEEDS, ETC.
2. GARDEN SOIL TO BE ORGANIC GARDEN SOIL.
3. PLANTS NOT TO BE STAKED UNLESS SPECIFIED.

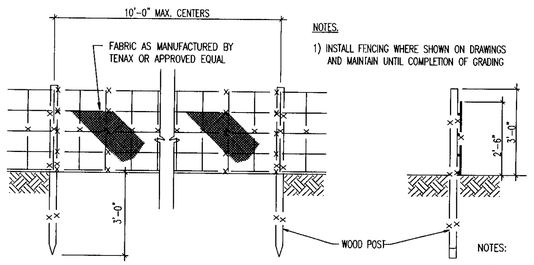
1 / 4 4 TYPICAL SHRUB PLANTING DETAIL
SCALE: NONE

LANDSCAPE BUFFER AREA		TREES		SHRUBS	
		REQUIRED	EXISTING	REQUIRED	PROVIDED
TOTAL AREA IN BUFFER ZONE:	10,000 SF				
TOTAL CLEARED AREA:	2,200 SF				
TOTAL VEGETATED AREA:	7,800 SF	26	45	104	104
TOTAL VEGETATED AREA REQUIRED:	7,800 SF				

NOTE: PLANT SIZES INDICATED SPECIFY MINIMUM ALLOWABLE SIZES AT PLANTING. WHERE CONTAINER SIZES AND HEIGHTS ARE INDICATED FOR A SINGLE SPECIES, BOTH SIZE REQUIREMENTS MUST BE MET.

PLANT MATERIAL LIST

BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	QUANTITY
Ilex Cornuta 'Burfordii'	Burford Holly	18" at planting	Plant 5' O.C.	104



NOTES:
1) INSTALL FENCING WHERE SHOWN ON DRAWINGS AND MAINTAIN UNTIL COMPLETION OF GRADING

2 / 4 4 TREE PROTECTION BARRICADE
SCALE: NONE

NOTES:
1. TREE PROTECTION BARRICADES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE PROTECTION MEASURES SHALL BE PROPERLY MAINTAINED DURING SITE DEVELOPMENT AND SHALL NOT BE REMOVED PRIOR TO FINAL LANDSCAPING.
2. REMOVE ALL BARRIERS UPON COMPLETION OF PROJECT AND FILL THE HOLES.

PRELIMINARY PLAT
NOT FOR RECORDATION, SALES, OR CONVEYANCES.

NO.	DATE	REVISION DESCRIPTION	BY / CKD
B	10/23/97	ADDED LANDSCAPING INFO	JB /
B	8/15/97	ADDRESSED DURHAM PLANNING DEPT. COMMENTS	DB / JB
A	7/7/97	ISSUED FOR PERMITTING, BIDS AND OWNER REVIEW	DB / JB

BELLSOUTH
Carolinas PCS, L.P.

09-368-161R-B
DEVELOPMENT PLAN

TOWER AND
LANDSCAPE PLAN

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PiedmontOlsenHensley
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2301 Rexwoods Drive
Post Office Box 31388, Raleigh, NC 27622-1388
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SEAL NOT VALID UNLESS SIGNED AND DATED

PROJECT MANAGER J. GARCEAU	DEPARTMENT MANAGER J. LATHAN
LEAD DESIGN PROF. J. ALLEN	CHECKED J. BECKMAN
DRAWN D. BUTTS	DATE MAY 22, 1997
PROJECT NUMBER 22597-02	DRAWING NUMBER 4

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MINOR SPECIAL USE PERMIT

12907 NORTH ROXBORO ROAD MINOR SPECIAL USE PERMIT B1900050

Meeting Date: January 28, 2020

Reference Name	12907 North Roxboro Road Minor Special Use Permit (Case B1900050)	**Jurisdiction**	County
Request	A minor special use permit for a development with new project floor area over 5,000 square feet within the Commercial Neighborhood (CN) zoning district without a development plan.		
Site Characteristics	**Tier:**	Rural	
	Use:	Commercial Retail	
	Zoning:	Commercial Neighborhood [CN(D)]	
	Overlays:	Lake Michie/ Little River Protected Area (M/LR-B) and Rougemont Rural Village	
	Size:	2.39 acres	
Applicant	George Venters	**Submittal Date**	October 2, 2019
Location	12907 N. Roxboro Road, 12807 N. Roxboro Road & 123 Bill Poole Road		
PID(s)	189743, 189742 & 189744		
Staff Recommendation	Staff will make a recommendation following the hearing.		

A. Summary

George Venters, the applicant requests a minor special use permit to build a 9,100 square foot building within a Commercial Neighborhood (CN) zoning district. The site is located in the Rural Development Tier, in the Rural Village of Rougemont, and is currently vacant. The applicant is proposing a retail development.

Per Unified Development Ordinance (UDO) Section 6.10.1B.1.d, a development within the CN district with new project floor area over 5,000 square feet, no development plan, and residential zoning districts adjacent (including directly across a public right-of-way) to two or more property lines requires a Minor Special Use Permit. Per UDO Section 5.1.2, a retail use is permitted within the CN zoning district by-right. The minor special use permit is required because the applicant has proposed a building that is 9,100 square feet, per the site plan. The applicant held a neighborhood meeting on September 12, 2019, pursuant to UDO Section 3.2.3, *Neighborhood Meeting. (See Attachment 5, Neighborhood Meeting, for the meeting notes and presentation).*

B. Summary of the Issues

No issues were found at the time of this report.

Recommended Conditions of Approval

1. The improvements shall be substantially consistent with the information submitted to the Board as part of the application and site plan case number D1900178.

C. UDO Section 3.9.8: Criteria for Approval

1. UDO Section 3.9.8A General Findings

Applications for major or minor special use permits shall be approved only if the approving authority finds that the use as proposed, or the use as proposed with conditions, is:

1. *In harmony with the area and not substantially injurious to the value of properties in the general vicinity;*
2. *In conformance with all special requirements applicable to the use;*
3. *Will not adversely affect the health or safety of the public; and*
4. *Will adequately address the review factors identified below.*

If the Board of Adjustment fails to find conformance with the conditions listed above, or makes findings which are inconsistent with those conditions listed above, then the proposed permit must be denied.

The Board should consider the information provided in the staff analysis and conclusions for the following review factors when making determinations on the general findings.

2. UDO Section 3.9.8B Review Factors

UDO Section 3.9.8B requires consideration of the review factors shown below:

a. *Circulation*

Number and location of access points to the property and the proposed structures and uses with particular reference to automotive, bicycle, mass transit and pedestrian safety and convenience, traffic flow and control, and access in case of fire or catastrophe.

Staff Analysis. The applicant is proposing two access driveways, one off North Roxboro Road and one off Bill Poole Road, to access the site. The width of these driveways and the drive aisle shown on Attachment 4, Site Plan –D1900178, show that there is adequate access area for all vehicles, including emergency vehicles.

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

b. *Parking and Loading*

Location of off-street parking and loading areas.

Staff Analysis. Per sections 10.3.1A.4 and 10.3.1B.1 of the UDO, a minimum of 46 parking spaces are required for the site. The applicant is providing 36 parking spaces.

This includes 7 compact spaces. A parking reduction application, B1900051, has been submitted to allow for this reduction. (See Attachment 4, Site Plan – D1900178, Cover Sheet)

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

c. ***Service Entrances and Areas***
Locations of refuse and service areas with particular reference to ingress and egress of service vehicles.

Staff Analysis. The owner has chosen to use dumpsters for refuse. Waste will be stored in a dumpster off Bill Poole Road, which meets all screening requirements per UDO Section 9.7.2 (See Attachment 4, Site Plan – D1900178, Sheet C-2)

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

d. ***Lighting***
Locations of exterior lighting with reference to glare, traffic safety, economic effect, and compatibility with other properties in the area.

Staff Analysis. All proposed lighting has been reviewed during site plan review for compliance with UDO Section 7.4.

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

e. ***Signs***
Appropriateness of signs considering location, color, height, size, and design within the context of other properties in the area.

Staff Analysis. Any proposed signs will require a separate review and permit. The signs will be reviewed for compliance with the Ordinance signage requirements. Signs are not reviewed during site plan review nor during the minor special use permit process.

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

f. ***Utilities***
Location and availability of utilities.

Staff Analysis. The proposed building will be serviced by county water and sewer will operate on a septic system, (See Attachment 4, Site Plan – D19000178, Sheet C-6)

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

g. ***Open Spaces***
Location of required yards and other open spaces, and preservation of existing trees and other natural features.

Staff Analysis. There are no tree coverage requirements for development in the Rural Tier per UDO Section 8.3.1B.1. However, the site plan shows by a tree line that some trees will remain on the property (See Attachment 4, Site Plan – D19000178, Sheet C-6).

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

h. ***Environmental Protection***
Preservation of tree cover, Durham Inventory Sites, floodplain, stream buffers, wetlands, steep slopes, open space and other natural features, and protection of water quality.

Staff Analysis. There are no Durham Inventory Sites, floodplain, stream buffers, wetlands, or steep slopes located on the site. Per UDO Section 6.10.1 A.1, there is no requirement for open space to be located on the site. The site is in the Lake Michie/ Little River Protected Area (M/LR-B) Watershed Protection Overlay District and has a impervious surface limit of 24% utilizing the high density option for Rural Villages, per UDO Section 8.7.2B.1. The proposed impervious surface is .57 acres, or 23.99 %.

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

i. ***Screening, Buffering and Landscaping***
Installation of screening, buffering, fencing, and landscaping where necessary to protect adjacent property.

Staff Analysis. The northwest side of the development is adjacent to a RS-10 zoning district and a CN zoning district. Development in a CN district is not required to provide a project boundary buffer when developed to an adjacent CN. From the RS-10 zoning district to the CN zoning district, a 30-foot buffer with 60% opacity is required, per UDO Section 9.4. The northeast side of the development faces a right-of-way that has a width greater than 60 feet and has no required project boundary buffer, per UDO Section 9.4.2A.2. The southwest side is adjacent to a CN zoning district, where no project boundary buffer is required, as well as a RR zoning district, where a 30-foot buffer with 60% opacity is required, per UDO Section 9.4. The southeast side faces a RS-10 zoning district and requires a 30-foot buffer with 60%

opacity, per UDO Section 9.4. The applicant is providing all required buffers. (See Attachment 4, Site Plan, Sheet C-3).

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

j. ***Effect on Nearby Property***
Effects of the proposed use on nearby properties, including, but not limited to, the effects of noise, odor, lighting, and traffic.

Staff Analysis. The table below notes the surrounding uses and zoning districts:

Surrounding Uses and Zoning Districts				
	Use	**Zoning District**	**Overlay**	**Tier**
Northwest	Convenience Center	RS-10 & CN	Lake Michie/Little River Protected Area; Rural Village of Rougemont	Rural
Southeast	Single-Family Residential & Vacant	RS-20 & RR	Lake Michie/Little River Protected Area; Rural Village of Rougemont	Rural
Northeast	Residential	RS-20	Lake Michie/Little River Protected Area; Rural Village of Rougemont	Rural
Southwest	Place of Worship	RS-10 & RR	Lake Michie/Little River Protected Area; Rural Village of Rougemont	Rural

There will be no adverse effects on the nearby properties in regards to lighting, odor, noise, or traffic. The proposed lighting improvements shown on site plan D1900178 have been reviewed to ensure compliance with UDO Section 7.4, Outdoor Lighting.

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

k. ***Compatibility***

The level of general compatibility with nearby properties and impacted neighborhoods, including, but not limited to, the appropriateness of the scale, design, and use in relationship to other properties.

Staff Analysis. The subject site is bordered by commercial retail, residential, and vacant residential uses. The proposed used is commercial retail and will have no compatibility issues with the existing uses. There are sufficient project boundary buffers or distances between uses, limiting impact to adjacent residential uses.

Refer to Attachment 3, Application – B1900050, for the applicant's response to this finding.

l. ***Consistency with Policy***

Consistency with the Durham Comprehensive Plan and applicable development tier guidelines, overlay purposes, and zoning district intent statements in Article 4, Zoning Districts.

UDO Section 4.1.2A.1 Rural Tier Intent Statement

The Rural Tier – That area of Durham that lies outside the Suburban Tier and largely within watershed critical areas within which development should maintain a rural focus to encourage preservation of agriculture and protect important water resources. Development within this area should feature large lots to minimize demands on infrastructure, with limited commercial areas.

UDO Section 4.3.2 Commercial Neighborhood Intent Statement

The CN District is established to provide for modest-scale commercial centers (as defined in Article 6) in close proximity to residential areas that offer limited commercial uses to satisfy the needs of the surrounding neighborhood. Compatibility is facilitated through design standards and buffering that provide for walkable, pedestrian-oriented development that complements nearby residential neighborhoods. The district is not intended for use by major or large-scale commercial sales, service or automotive-oriented activities. The CN District is only appropriate in locations that have direct access to residential neighborhoods.

UDO Section 17.3 Rural Village

An area delineated on the Future Land Use Map, within the Rural Tier, that can include residential, commercial, office, institutional, and open space/recreation land uses.

Staff Analysis. The proposed development is located in a CN zoning district within the Rural Tier and Rural Village of Rougemont. Retail sales and service uses are permitted

by right within CN zoning districts and Rural Villages as the use meets the intent of being within close proximity to the residential neighborhoods that it serves. However, the construction of a new project over 5,000 square feet within the zoning district, with no development plan and adjacent to residentially-zoned properties, requires a mSUP.

m. *Other Factors*

Any other review factors which the approving authority considers to be appropriate to the property in question.

Staff Analysis. There are no other review factors applicable to this report at this time.

D. Notification

Staff certifies that newspaper advertisements, letters to property owners within 600 feet of the site and the posting of a sign on the property has been carried out in accordance with UDO Section 3.2.5 of the UDO. In addition, email notice was provided per the Durham Planning Public Notification Service.

E. Staff Contact

Cole Renigar, CZO, 919-560-4137 ext. 28234, or Cole.Renigar@durhamnc.gov

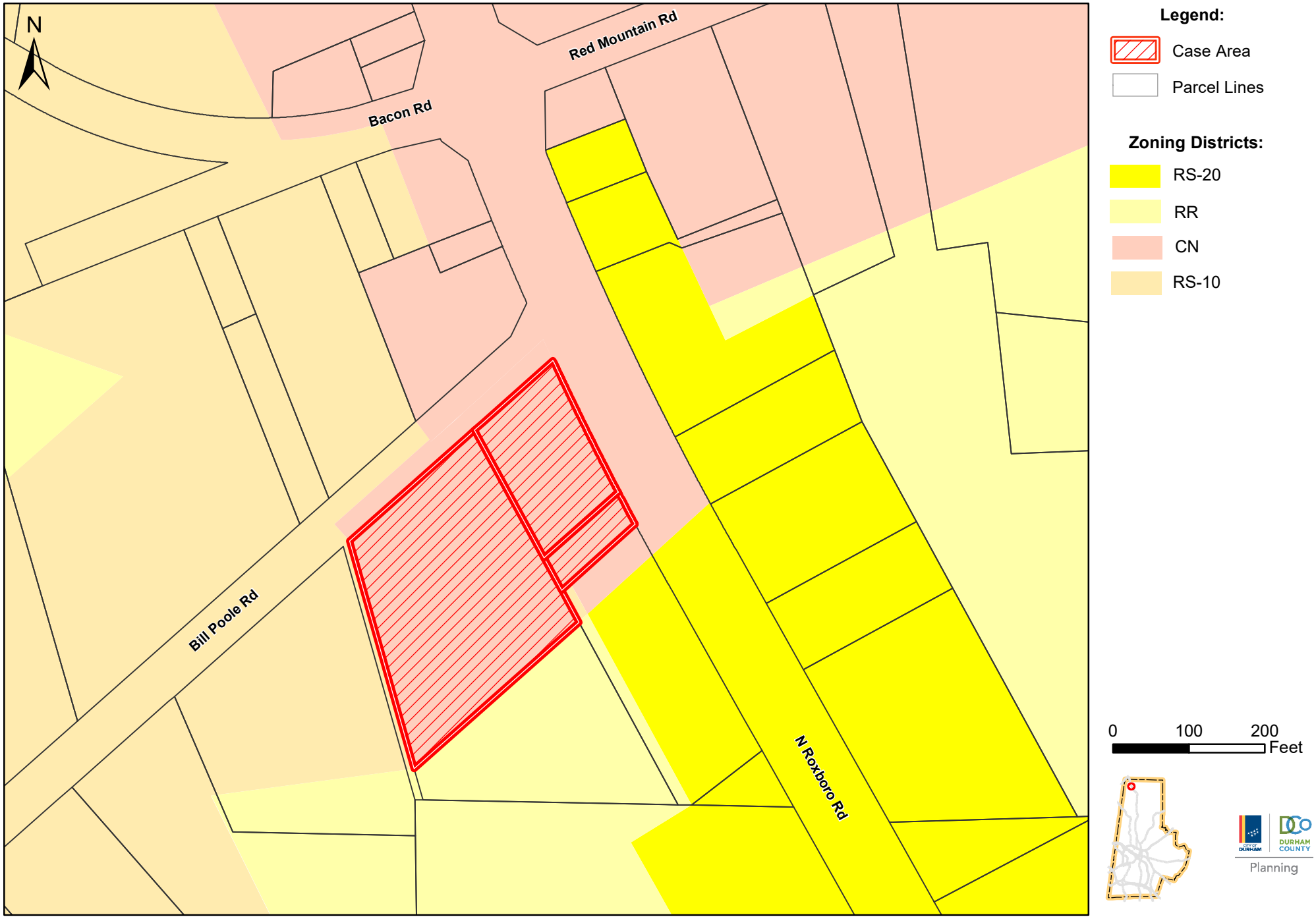
Attachments

1. Context Map
2. Durham GIS Aerial Photo
3. Application – B1900050
4. Site Plan – D19000178
5. Neighborhood Meeting Notes & Presentation

Attachment 1

B1900050 12907 North Roxboro Minor Special Use Permit

Context Map



Durham City-County Planning Department, 6/19/19

B1900050 12907 North Roxboro Minor Special Use Permit

Aerial Map

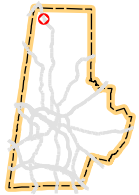
Attachment 2

Legend:

Case Area

Parcel Lines

0 50 100 Feet



DURHAM COUNTY Planning

Durham City-County Planning Department, 12/5/2019

DURHAM
1869
CITY OF MEDICINE

Durham City-County Planning Department

MINOR AND MAJOR SPECIAL USE PERMIT (SUP) APPLICATION

(A Pre-submittal conference must be held prior to submission)

DURHAM COUNTY

Tracking Information (Staff Only)		
Case Number: B1900056	Date/Time rec'd: 10/2 @9:00 AM	Rec'd by: Eliza Monroe

About this Application

ONLY COMPLETE APPLICATIONS CAN BE ACCEPTED

Minor special use permits are heard by the Board of Adjustment as a quasi-judicial public hearing. ***Major special use permits*** are heard by the Governing Body (City Council if City, Board of Commissioners if County) as a quasi-judicial public hearing.

Submittal: Applications are accepted by appointment only. Deadlines are discussed at the pre-submittal meeting and are available online at http://durhamnc.gov/340/Applications-Application-Materials. Applications should be submitted in-person, and fees are due at time of submittal.

The application is a form of written testimony, and used both to show how Ordinance considerations are addressed and to provide evidence that the required findings for approval can be made. In addition to the application materials, the applicant may provide any other written, drawn or photographed material to support his/her request and as permitted by the Board of Adjustment or Governing Body, as applicable. Any such additional material submitted will become part of the application, and as such cannot be returned.

Attendance at the hearing is required. Applicants may represent themselves or may be represented by someone appropriate for quasi-judicial public hearings. The applicant has the **burden of proof** and must provide sufficient evidence in order for the required findings to be made. The public hearing will allow the applicant, proponents, opponents and anyone else the opportunity to testify in regards to the request. An application may be approved, approved with conditions, continued for more information, or denied. **Decisions can be appealed to Superior Court within 30 days.**

Contact Information: If you have any questions, please contact the City-County Planning Department at 560-4137 between 8:00 a.m. and 5:00 p.m. on weekdays.

Application Requirements	Applicant Initial	Staff Initial
Record of the pre-submittal meeting (copies provided at the meeting)	GV	EM
Fee	GV	EM
Completed application and responses: ORIGINAL signatures required	GV	EM
Submitted Site Plan (Digital and 11x17), if required, or Plot Plan	GV	EM
Responses to general findings and review factors: Section 3.9.8A and B of the UDO	GV	EM
Responses to Additional Findings and/or Review Factors, as applicable	GV	
Responses to Limited Use Standards, as applicable	GV	
Floorplan, as applicable	GV	
Elevations, as applicable	GV	
Note: Additional supporting documents may also be submitted		

Case # B1900050

Property Information	
Site Address: ROXBORO ROAD (US Hwy 501)	PID(s): 0829-01-17 189742, 189743, 189744
Zoning District(s): CN(D)	PIN(s): 0829-01-17-7629 0829-01-17-9708 0829-01-17-8867
Overlay District(s):	SUP Type: Minor (msup) Major (MSUP)
Current Use: VACANT	Jurisdiction: City (County) Both

Property Owner	
Name(s) (Print): DAVID CLAYTON	Telephone:
Contact Person:	Email: David.clayton@frontier.com
Owner Signature	Date 9-30-2019

Applicant	
Name(s): GLANDON FOREST EQUITY, LLC	
Contact Person: GEORGE VENTERS	Telephone: 919-459-2602
Address: 3825 BARRETT DR SUITE 100	Fax:
City/State/ZIP: RALEIGH NC 27609	Email: gventers@vanguardpg.com
I certify that all of the information presented by me in this application is accurate to the best of my knowledge, information, and belief.	
Applicant Signature	Date 9/30/19

Agent (if different than applicant)	
Name:	
Contact Person:	Telephone:
Address:	Fax:
City/State/ZIP:	Email:

Case # B1900050

Complete and respond to the following with an attachment (suggested), or in the space provided:

Applicant's Name: I, GEORGE VENTERS, do hereby petition the City of Durham/County of Durham for a Special Use Permit to allow the following:
TO ALLOW AN INCREASE IN BUILDING SIZE FROM 5000SF TO 9100SF.

Section 3.9.8 of the UDO: Criteria for Approval of Major and Minor Special Use Permits

A. General Findings

Applications for minor or major special use permits shall be approved only if the Board of Adjustment or Governing Body, as applicable, finds that the use as proposed, or the use as proposed with conditions, is:

1. In harmony with the area and not substantially injurious to the value of properties in the general vicinity;
   Applicant's Response:

2. In conformance with all special requirements applicable to the use;
   Applicant's Response:

3. Will not adversely affect the health or safety of the public; and
   Applicant's Response:

The project is to be developed on a corner lot with access driveways on North Roxsboro Road and Bill Poole Road. This offers customers, vendors as well as emergency response units maximum flexibility and convenience to the site. The size of the building does not necessitate a change to the circulation.

2. **Parking and Loading**
   Location of off-street and parking and loading areas.
   Applicant's Response:

   The majority of the parking is located along the North Roxsboro Rd frontage, with a few parking spaces and loading area on the Bill Poole Rd side. The size of the building does not change the location or orientation of the parking lot or loading areas.

3. **Service Entrances and Areas**
   Locations of refuse and service areas with particular reference to ingress and egress of service vehicles.
   Applicant's Response:

   The size of the building does not change the location for refuse or service areas. Currently the refuse dumpsters are located in the loading area on the Bill Poole Road side of the building. There is a driveway immediately next to the loading area off of Bill Poole Road.

4. **Lighting**
   Locations of exterior lighting with reference to glare, traffic safety, economic effect and compatibility with other properties in the area.
   Applicant's Response:

   The size of the building does not increase the number of parking lot site lights or other building lights. All building lights will have full cut off fixtures and all parking lot lights will shine straight down in the parking areas to minimize light pollution onto adjacent properties. The surrounding commercial business have similar site lights to illuminate the parking areas.

5. **Signs**
   Appropriateness of signs considering location, color, height, size and design within the context of other property in the area.
   Applicant's Response:
   The increased building size is mainly to accommodate storage area for a retail building. The building and pylon signage for the building will not be increased due to a larger building. All signs will be designed and permitted within current Durham County sign ordinances.

6. **Utilities**
   Location and availability of utilities.
   Applicant's Response:

would create less noise, odors and traffic that the existing convenience store/gas stations in the immediate area.

11. **Compatibility**
The level of general compatibility with nearby properties and impacted neighborhoods, including but not limited to the appropriateness of scale, design, and use in relationship to other properties.
Applicant's Response:

The larger building would not negatively impact nearby properties or neighborhoods. There are very few residential homes within surrounding the property with the exception of a few single-family homes across North Roxboro Rd. The building fronts North Roxboro Rd, which carries approximately 13,000-14,000 vpd. The highest and best use for this property is for commercial use.

12. **Consistency with Policy**
Consistency with Comprehensive Plan and applicable development tier guidelines, overlay purposes and zoning district intent statements in Article 4, Zoning Districts.
Applicant's Response:
This site, as well as all adjacent properties, are located within the Rougemont Commercial District on the Future Land Use Map. The intended use is compatible with uses allowed in the Commercial Neighborhood District and will provide grocery and general merchandise in a convenient location to the community.

13. **Other Factors**
Any other review factors which the approving authority considers to be appropriate to the property in question.

Rougemont currently does not have any full-service retail businesses to serve the community. This project will allow the residents a more convenient location for every day consumer staples, reducing travel time and expenses for the shoppers. A larger building is needed to provide these services. There are no occupied residential dwellings adjacent to the property and it is located in the commercial downtown area of Rougemont and a larger building will not negatively affect the community.

GENERAL CONDITIONS OF APPROVAL

1. THE PROJECT AREA IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS AS SHOWN ON FIRM PANEL 3720082800K, DATED OCT. 19, 2018.

2. OWNER/DEVELOPER SHALL NOTIFY THE DURHAM CITY-COUNTY PLANNING DEPARTMENT SITE COMPLIANCE STAFF AT THE COMPLETION OF CONSTRUCTION AND LANDSCAPING TO REQUEST AN INSPECTION PRIOR TO USE OF THE FACILITY.

3. PINE STRAW NOT BE USED AS MULCH OR GROUND COVER WITHIN TEN FEET OF ANY STRUCTURE CONSISTING OF EXTERIOR COMBUSTIBLE CONSTRUCTION AS SPECIFIED BY DURHAM CITY CODE SECTION 46-87.

4. ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE. CONTACT DURHAM CITY-COUNTY PLANNING DEPARTMENT SITE COMPLIANCE STAFF FOR INSPECTION.

5. EACH LANDSCAPING COMPLIANCE INSPECTION AFTER THE INITIAL INSPECTION WILL INCUR A RE-INSPECTION FEE. PAYMENT MUST BE RECEIVED BY THE DURHAM CITY-COUNTY PLANNING DEPARTMENT PRIOR TO RE-INSPECTION.

6. CONSTRUCTION IN PRESERVED TREE COVERAGE AREAS:

A. PRESERVED TREE COVERAGE AREAS SHALL NOT BE USED FOR ACTIVE RECREATIONAL PURPOSES, EXCEPT FOR WALKING PATHS AND FOOT TRAILS CONSTRUCTED WITH MINIMAL DISTURBANCE OF TREE ROOTS AND EXISTING VEGETATION PROVIDE A REGISTERED ARBORIST HAS CERTIFIED THAT THE CONSTRUCTION OF THE TRAIL HAS BEEN DESIGNED TO MINIMIZE IMPACT TO THE EXISTING TREES. NO TREE OVER 10 INCHES SHALL BE REMOVED FOR THE CONSTRUCTION OF THE TRAILS IN PRESERVED TREE COVERAGE AREAS.

B. ALL BUILDINGS SHALL BE SET BACK AT LEAST 10 FEET FROM THE EDGE OF ANY PRESERVED TREE COVERAGE AREA.

C. UTILITY LINES AND DRAINAGE CHANNELS SHALL BE MINIMIZED WITHIN THE ROOT PROTECTION ZONES OF THE TREES TO BE SAVED. PREFERABLY, SUCH FACILITIES SHOULD BE LOCATED ADJACENT TO DRIVEWAYS AND IN GROUPINGS ALLOWED BY SOUND ENGINEERING PRACTICES.

7. TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE, OR ISSUANCE OF A GRADING PERMIT AND SHALL INCLUDE WARNING SIGNS POSTED IN BOTH ENGLISH AND SPANISH, AS FOLLOWS: "NO TRESPASSING/TREE PROTECTION AREA/PROHIBIDO ENTRAR/ZONA PROTECTORA PARA LOS ARBOLES."

8. ROOT PROTECTION ZONE EQUALS ONE FOOT OF RADIUS FOR EVERY INCH OF DIAMETER OF EXISTING TREES, OR SIX FOOT RADIUS, WHICHEVER IS GREATER. NO DISTURBANCE ALLOWED WITHIN THIS AREA. AREA MUST BE PROTECTED WITH BOTH TREE PROTECTION FENCING AND WARNING SIGNS.

9. AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA PRIOR TO OR AT THE SAME TIME AS SILT FENCE AND OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FURTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREE IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED THE BOUNDARY OF THE PROTECTED AREA.

10. MEASURES SHALL BE PROVIDED TO PREVENT LIGHT SPILLOVER ONTO ADJACENT PROPERTIES AND GLARE TOWARD MOTOR VEHICLE OPERATORS AND SHALL BE INDICATED ON THE SITE PLAN. EXTERIOR LIGHTS SHALL BE SHIELDED SO THAT THEY DO NOT CAST DIRECT LIGHT BEYOND PROPERTY LINE. IN ACCORDANCE WITH THESE STANDARDS:

A. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO RESIDENTIAL ZONING IS 0.5 FOOT CANDLES.

B. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO NONRESIDENTIAL ZONING IS 5.0 FOOT CANDLES.

C. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO A STREET IS 5.0 FOOT CANDLES.

D. THE LEVEL OF ILLUMINATION AS MEASURED IN FOOT CANDLES AT ANY ONE POINT SHALL MEET THE STANDARDS IN THE TABLE IN UDO SECTION 7.4 WITH MINIMUM AND MAXIMUM LEVELS MEASURED ON THE PAVEMENT WITHIN THE LIGHTED AREA.

E. THE MAXIMUM HEIGHT FOR DIRECTION OR FULL-CUTOFF LIGHTING FIXTURES (FIXTURES DESIGNED TO INSURE THAT NO LIGHT IS EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND) SHALL BE 30 FEET ABOVE GRADE, MEASURED TO THE TOP OF THE FIXTURE.

F. THE MAXIMUM HEIGHT FOR NON-DIRECTIONAL LIGHTING FIXTURES, WHICH ARE DESIGNED TO ALLOW LIGHT TO BE EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND, SHALL BE 15 FEET ABOVE GRADE, MEASURED TO THE TOP OF THE FIXTURE.

G. THESE STANDARDS MUST BE VERIFIED BY FIELD SURVEY (BY USE OF PHOTOMETRIC SURVEY) PRIOR TO THE CERTIFICATE OF COMPLIANCE BEING ISSUED. ALL OF THIS INFORMATION, INCLUDING DETAILS, WILL BE REQUIRED ON BUILDING PLANS PRIOR TO ISSUANCE OF BUILDING PERMIT.

11. COUNTY AND SOIL EROSION CONTROL:

A. IF AN OFFSITE SOIL SPOIL OR BURROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BURROW SITE MUST BE INCLUDED IN THE LAND DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BURROW SITE HAS A LAND-DISTURBANCE PERMIT.

B. A TREE PROTECTION INSPECTION IS REQUIRED PRIOR TO ISSUANCE OF EROSION CONTROL PERMIT.

C. IF MORE THAN 5 ACRES IS DISTURBED, A SURETY WILL BE REQUIRED.

12. BY REFERENCING ROADWAY IMPROVEMENTS ON THE PLAN, THE APPLICANT AGREES TO CONSTRUCT SAID IMPROVEMENT PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY IN A MANNER THAT WILL ALLOW THEM TO FUNCTION AS NOTED ON THE PLAN AND IN ACCORDANCE WITH NCDOT AND CITY OF DURHAM STANDARDS AND POLICIES. THIS INCLUDES (WHERE APPROPRIATE) BUT IS NOT LIMITED TO : ADEQUATE TRANSITION TAPERS, ALIGNMENT OF LANES THROUGH INTERSECTIONS, ASSOCIATED SIGNAL MODIFICATIONS, PAVEMENT MARKINGS, ASSOCIATED SIGNAGE, CURB AND GUTTER, COORDINATION WITH OTHER PROPOSED ROADWAY IMPROVEMENTS AND BIKE LANES. THE APPLICANT ALSO ACCEPTS THE FINANCIAL RESPONSIBILITY FOR ACQUISITION OF ANY ADDITIONAL RIGHT-IF-WAY NECESSARY TO ACCOMMODATE THESE IMPROVEMENTS AND ANY REQUIRED SIDEWALK CONSTRUCTION.

13. THE LOCATION OF THE SIDEWALK SHOWN ON THIS PLAN IS SCHEMATIC. A CITY OF DURHAM AND/OR NCDOT ENCROACHMENT PERMIT IS REQUIRED PRIOR TO ANY CONSTRUCTION. AFTER OBTAINING THE REQUIRED PERMITS, PLEASE CONTACT THE CITY OF DURHAM ENGINEERING CONSTRUCTION INSPECTION OFFICE AT 919-560-4326 FIR A PRE-CONSTRUCTION CONFERENCE AND FIELD VISIT PRIOR TO ANY WORK ON THE PROPOSED SIDEWALK.

14. SOLID WASTE:

A. SOLID WASTE CONTAINMENT CAPACITY AND COLLECTION FREQUENCY WILL PREVENT THE ILLEGAL PLACEMENT OF GARBAGE AND RECYCLABLES.

PUBLIC WORKS CONDITIONS OF APPROVAL

1. THE DESIGNING PROFESSIONAL (A NCPE, NCPLS OR NCRLA - AS REQUIRED) SHALL SUBMIT THREE (3) SETS OF CONSTRUCTION DRAWINGS TO THE PUBLIC WORKS DEPARTMENT - DEVELOPMENT REVIEW FOR REVIEW AND APPROVAL. CONSTRUCTION DRAWING APPROVAL IS REQUIRED PRIOR TO COMMENCING CONSTRUCTION (SEE CONSTRUCTION PLAN APPROVAL PROCESS). THE APPROVAL OF CONSTRUCTION DRAWINGS IS SEPARATE FROM SITE PLAN APPROVAL. CITY OFFICIALS SHALL REVIEW ALL SIZES, MATERIALS, SLOPES, LOCATIONS, EXTENSIONS AND DEPTHS FOR ALL PROPOSED UTILITIES (WATERLINES, SANITARY SEWER LINES AND STORM DRAINAGE CONVEYANCE SYSTEMS) FOR COMPLIANCE WITH ALL APPLICABLE REGULATORY STANDARDS, SPECIFICATIONS, AND BEST MANAGEMENT PRACTICES.

2. THE DESIGNING PROFESSIONAL (A NCPE, NCPLS OR NCRLA - AS REQUIRED) SHALL SUBMIT ONE (1) SET OF AS-BUILT DRAWINGS TO THE PUBLIC WORKS DEPARTMENT - DEVELOPMENT REVIEW FOR REVIEW AND APPROVAL. AS-BUILT DRAWING APPROVAL IS REQUIRED PRIOR TO WATER METER INSTALLATION AND/OR SANITARY SEWER SERVICE CONNECTION AND PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.

3. FIRE FLOW ANALYSIS REQUIRED FOR REVIEW AND APPROVAL AS PART OF THE CONSTRUCTION DRAWING APPROVAL AS PART OF THE CONSTRUCTION DRAWING PROCESS. TO SCHEDULE A FLOW TEST COMPLETE THE ONLINE APPLICATION (http://durhamnc.gov/1538/Fire-Flow-Test-Request).

4. WATER PERMIT REQUIRED AFTER CONSTRUCTION DRAWING APPROVAL AND PRIOR TO COMMENCING WATER MAIN INSTALLATION.

5. SEWER PERMIT REQUIRED FROM DURHAM COUNTY AFTER CONSTRUCTION DRAWING APPROVAL AND PRIOR TO COMMENCING SANITARY SEWER MAIN INSTALLATION.

6. PIPES AND/OR STRUCTURES SHOWN IN THE EROSION CONTROL PLAN OF THE SITE PLAN THAT ARE PROPOSED TO BE PERMANENT WILL BE REVIEWED AND APPROVED AS PART OF THE GRADING PLAN DURING CONSTRUCTION DRAWING REVIEW. THESE PIPES AND/OR STRUCTURES MAY NOT BE INSTALLED PRIOR TO CONSTRUCTION DRAWING APPROVAL AND PAYMENT OF INSPECTION FEES.

7. PROWAG STANDARDS ARE TO BE USED. SEE CITY OF DURHAM CURB CUTS DETAILS (http://durhamnc.gov/DocumentCenter/Home/View/2114).

8. AN NCDOT OR CITY OF DURHAM DRIVEWAY PERMIT IS REQUIRED.

9. BACKFLOW PREVENTORS ARE REQUIRED ON THIS PROJECT. BACKFLOW PREVENTOR INSTALLER MUST OBTAIN A BACKFLOW PREVENTOR PERMIT (ONLINE) PRIOR TO BEGINNING BACKFLOW PREVENTOR INSTALLATIONS. CONTACT THE CROSS CONNECTION CONTROL OFFICE AT 919-560-4194 TO OBTAIN ADDITIONAL INFORMATION AND INSTALLATION REQUIREMENTS.

10. THE SITE PLAN CANNOT BE APPROVED UNTIL NUTRIENT MITIGATION OFFSET PAYMENT RECEIPT HAS BEEN RECEIVED BY THE CITY OF DURHAM CONFIRMING THE PAYMENT FOR ______ LB/YR OF TOTAL NITROGEN REMOVAL.

11. NOTE THAT AT THE TIME OF CONSTRUCTION DRAWINGS (CD'S) IT SHALL BE SHOWN THAT THE PROPOSED BMP(S) CAN BE SUSTAINED ON SITE, THIS INCLUDES BUT NOT LIMITED TO THE DETERMINATION OF SEASONALLY HIGH WATER TABLE (SHWT) ON THE BMP FOOTPRINT DURING THE APPROPRIATE TIME OF THE YEAR, AS REQUIRED FOR THE PROPOSED BMP(S). HOWEVER, PLEASE NOTE THAT THE SUITABILITY OF PROPOSED BMP SHOULD BE A CRITICAL DESIGN FACTOR IN BMP CHOICE AT THE SITE PLANNING STAGE.

12. IF IT IS DETERMINED AT THE CD STAGE THAT THE PROPOSED BMP(S) IS UNSUSTAINABLE ON SITE OR OTHERWISE FOUND UNSUITABLE FOR THE SITE, ALTERNATE BMP'S SHALL BE REQUIRED ON SITE TO MEET THE SITE REQUIREMENTS. IF ALTERNATE BMP'S ARE REQUIRED, AS DETERMINED IN CD STAGE, A REVISED OR AMENDED SITE PLAN MAY BE REQUIRED TO MEET THE STORMWATER PERFORMANCE STANDARDS EXISTING AT THAT TIME.

13. NOTE THAT THE APPROVAL OF BMP'S DOES NOT OCCUR UNTIL THE CONSTRUCTION DRAWING STAGE.

14. AN AS-BUILT CERTIFICATION SHALL BE PROVIDED BY THE DESIGN ENGINEER FOR THE CONSTRUCTION OF THE STORMWATER BMP(S) REQUIRED FOR THIS SITE AND SHALL BE APPROVED BY THE CITY OF DURHAM PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

15. FOR EACH STORMWATER BMP FACILITY, A COMPLETED CITY OF DURHAM DESIGN SUMMARY SHALL BE PROVIDED BO LATER THAN AT THE FIRST CONSTRUCTION DRAWING SUBMITTAL.

16. AN EXECUTED STORMWATER FACILITY OPERATION AND MAINTENANCE PERMIT AGREEMENT (PREPARED BY STORMWATER SERVICES, CITY OF DURHAM), PAYMENT OF STORMWATER FACILITY PERMIT FEE ($3,500 PER DETENTION/ WATER QUALITY DEVICE) AND PERPETUAL SURETY FOR THE CONTINUED MAINTENANCE OF THE FACILITY.

17. TO RECEIVE SITE PLAN/PRELIMINARY PLAT APPROVAL FOR DEVELOPMENTS OTHER THAN SINGLE FAMILY DETACHED RESIDENTIAL DEVELOPMENTS THAT ARE MAKING USE OF NUTRIENT BANKS, THE APPROVAL OF THE SITE PLAN/PRELIMINARY PLAT IS CONTINGENT UPON THE PURCHASE OF NUTRIENT CREDITS FROM AN APPROVED NUTRIENT BANK. IF A REVISED SITE PLAN/PRELIMINARY PLAT IS SUBMITTED FOR THIS DEVELOPMENT, THE REVISED SITE PLAN/PRELIMINARY PLAT WILL BE SUBJECT TO ANY ORDINANCES IN PLACE AT THE TIME OF THE REVISED SITE/PRELIMINARY PLAT SUBMISSION. PRIOR TO THE APPROVAL OF THE SITE PLAN/PRELIMINARY PLAT, A LETTER SHOWING THE PURCHASE OF THE NUTRIENT CREDITS FOR THE DEVELOPMENT AND A COPY OF THE NUTRIENT BANK LEDGER, SHOWING THE TOTAL NUTRIENT CREDITS AVAILABLE MINUS ANY AND ALL DEDUCTIONS, IS TO BE PROVIDED TO THE CITY OF DURHAM STORMWATER SERVICE SECTION.

DURHAM COUNTY EROSION CONTROL GENERAL NOTES:

1. IF MORE THAN 20,000 SQ.FT IS DISTURBED, A SEDIMENTATION AND EROSION CONTROL PLAN MUST BE SUBMITTED AND APPROVED PRIOR TO THE ISSUANCE OF A LAND-DISTURBANCE PERMIT.

2. IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA OF THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.

SPECIAL CONDITIONS OF APPROVAL

1. AT A MINIMUM, THE STORMWATER DESIGN DETAILS FOR THIS PROJECT SHALL BE GOVERNED BY THE MINIMUM STANDARDS OF THE MOST RECENT EDITION OF THE DURHAM COUNTY ORDINANCE FOR DEVELOPMENT (RGD) AND ANY LETTERS TO INDUSTRY (POSTED ON THE COUNTY'S WEBSITE) OR SUPPLEMENTAL NOTIFICATIONS OF RGD UPDATES (ALSO POSTED ON CITY'S WEBSITE) THAT ARE IN EFFECT THE DATE CONSTRUCTION DRAWINGS ARE FIRST RECEIVED FOR REVIEW BY THE COUNTY. NON-COMPLIANCE WITH ANY OF THESE MINIMUM STANDARDS SHALL RENDER THE APPROVAL OF SUCH ITEMS NULL AND VOID. IT WILL BE THE RESPONSIBILITY OF THE OWNER TO CORRECT ANY DEFICIENCIES NOTES DURING THE LIFE OF THIS PROJECT TO THE SATISFACTION OF THE COUNTY.

2. FINAL DESIGN CALCULATIONS FOR THE STORMWATER BEST MANAGEMENT PRACTICES(S) (BMP[S]) WILL REQUIRE THE USE OF STORAGE INDICATION ROUTING METHODOLOGY SUCH AS TR-20 OR HEC-1 MODELS. FOR EACH BMP, AS APPLICABLE, PROVIDE STAGE-STORAGE RELATIONSHIP AND INFLOW AND OUTFLOW HYDROGRAPHS. PROVIDE ALL TABULATED DATA INCLUDING CALCULATIONS SHOWING OUTLET UNDER ORIFICE CONTROL, BARREL CONTROL AND WEIR CONTROL, AS APPROPRIATE, TO SHOW HOW THE ROUTING WAS DEVELOPED.

3. STORMWATER BEST MANAGEMENT PRACTICE(S) (BMP[S]) PERMIT FEE(S), THE EXECUTED STORMWATER FACILITY AGREEMENT AND COVENANTS (PREPARED BY THE CITY OF DURHAM STORMWATER SERVICES SECTION) AND EITHER A PAYMENT INTO THE STORMWATER REPLACEMENT FUND OR THE PROVISION OF AN ALTERNATE SECURITY ARE REQUIRED FOR ALL BMP(S) ASSOCIATED WITH THIS DEVELOPMENT. CONSTRUCTION OF THE DEVELOPMENT IS NOT ALLOWED TO COMMENCE UNTIL THESE ITEMS ARE PROVIDED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OUTLINED IN THE STORMWATER FACILITY AGREEMENT AND COVENANTS. THE DESIGNER SHALL SUBMIT A CERTIFIED CONSTRUCTION COST ESTIMATE FOR EVERY STORMWATER BMP PROPOSED IN THE DEVELOPMENT AT THE FIRST SUBMITTAL OF THE CONSTRUCTION DRAWINGS.

4. AN AS-BUILT CERTIFICATION FOR THE STORMWATER BEST MANAGEMENT PRACTICE(S) (BMP[S]), PROVIDED BY THE DESIGN ENGINEER, IS REQUIRED. THE AS-BUILT SHALL BE SUBMITTED IN ACCORDANCE WITH THE CITY OF DURHAM BMP CERTIFYING ENGINEER (BCE) PROGRAM, REFER TO SECTION 8.6, BMP CERTIFYING ENGINEER PROGRAM FOR STORMWATER BMPS IN THE CITY OF DURHAM, OF THE REFERENCE GUIDE FOR DEVELOPMENT, APPROVED BY THE STORMWATER SERVICES SECTION (S3), AND THE BMP(S) SHALL BE INSPECTED AND APPROVED BY S3 PRIOR TO ISSUANCE OF ANY CERTIFICATES OF OCCUPANCY OR CERTIFICATES OF COMPLIANCE FOR THE PROJECT.

5. A COMPLETED CITY OF DURHAM DESIGN SUMMARY IS REQUIRED FOR EACH STORMWATER BEST MANAGEMENT PRACTICE(S) NO LATER THAN AT THE FIRST CONSTRUCTION DRAWING SUBMITTAL.

6. STORMWATER NEST MANAGEMENT PRACTICE(S) (BMP[S]) DESIGN CALCULATIONS WILL NOT BE REVIEWED OR APPROVED WITH THE SITE PLAN/PRELIMINARY PLAT SUBMITTAL. ALL BMP DESIGNS WILL BE REVIEWED AND APPROVED DURING THE CONSTRUCTION DRAWING SUBMITTAL PROCESS. IF, AT THE TIME OF THE CD SUBMITTAL, IT IS FOUND THAT THE PROPOSED BMP(S) IS UNDERSIZED OR OTHERWISE INSUFFICIENT OR UNSUITABLE FOR THE SITE , IT IS THE RESPONSIBILITY OF THE APPLICANT TO INSURE THAT THE PLAT MAY BE REQUIRED IF THE ORIGINALLY PROPOSED BMP(S) ARE FOUND INSUFFICIENT OR UNSUITABLE AND ALTERNATIVE BMP(S) ARE REQUIRED.

7. TO RECEIVE SITE PLAN/PRELIMINARY PLAT APPROVAL FOR DEVELOPMENTS OTHER THAN SINGLE FAMILY DETACHED RESIDENTIAL DEVELOPMENTS THAT ARE MAKING USE OF NUTRIENT BANKS, THE APPROVAL OF THE SITE PLAN/PRELIMINARY PLAT IS CONTINGENT UPON PURCHASE OF NUTRIENT CREDITS FROM AN APPROVED NUTRIENT BANK. IF A REVISED SITE PLAN/PRELIMINARY PLAT IS SUBMITTED FOR THIS DEVELOPMENT, THE REVISED SITE PLAN/PRELIMIMARY PLAT WILL BE SUBJECT TO AN ORDINANCE IN PLACE AT THE TIME OF THE REVISED SITE PLAN/PRELIMINARY PLAT SUBMISSION. PRIOR TO THE APPROVAL OF THE SITE PLAN/PRELIMINARY PLAT, A LETTER SHOWING THE PURCHASE OF THE NUTRIENT CREDITS FOR THIS DEVELOPMENT AND A COPY OF THE NUTRIENT BANK LEDGER, SHOWING THE TOTAL NUTRIENT CREDITS AVAILABLE MINUS ANY AND ALL DEDUCTIONS, IS TO BE PROVIDED TO THE CITY OF DURHAM STORMWATER SERVICES SECTIONS.

8. CONSTRUCTION DRAWING APPROVAL FOR THIS PROJECT IS CONTINGENT UPON THE FUTURE PURCHASE OF NUTRIENT CREDITS FROM AN APPROVED NUTRIENT BANK. IF REVISED SITE PLAN/PRELIMINARY PLAT IS SUBMITTED FOR THE SITE, THE REVISED SITE PLAN/PRELIIMINARY PLAT WILL BE SUBJECT TO ANY ORDINANCES IN PLACE AT THE TIME OF THE REVISED SITE PLAN/PRELIMINARY PLAT SUBMISSION. PRIOR TO THE APPROVAL OF ANY CONSTRUCTION DRAWINGS OR PRIOR TO THE RELEASE OF ANY BUILDING PERMITS PERTAINING TO THIS DEVELOPMENT, WHICH EVER COMES FIRST, A LETTER SHOWING THE PURCHASE OF THE NUTRIENT CREDITS FOR THIS DEVELOPMENT AND A COPY OF THE NUTRIENT BANK LEDGER, SHOWING THE TOTAL NUTRIENT CREDITS AVAILABLE MINUS ANY AND ALL DEDUCTIONS, IS TO BE PROVIDED TO STORMWATER SERVICES.

9. NO BUILDING PERMIT SHALL BE ISSUED BEFORE A PLAT TO REMOVE THE PROPERTY LINES IS RECORDED

10. CONSTRUCTION DRAWINGS WILL NOT BE APPROVED UNTIL APPROPRIATE NUTRIENT OFFSET PAYMENTS HAVE BEEN MADE.

GENERAL NOTES:

1. THE CONTRACTOR SHALL EMPLOY ALL NECESSARY BARRICADES, SIGNS, FENCES, FLASHING LIGHTS, FLAGMEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED BY CITY OF DURHAM, DURHAM COUNTY AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, FOR DETAILS OF TRAFFIC CONTROL STANDARDS AND DEVICES.

2. THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION.

3. APPROVAL OF THESE PLANS IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.

4. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.

5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION "STANDARD DETAILS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND APPLICABLE CITY OF DURHAM AND DURHAM COUNTY CODES AND ORDINANCES. THE CONTRACTOR SHALL MAINTAIN A CURRENT EDITION OF THE STATE AND LOCAL CODES, ORDINANCES, STANDARD SPECIFICATION AND STANDARD DETAILS ON THE PROJECT SITE FOR REFERENCE DURING CONSTRUCTION OF THE PROJECT.

6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND SHALL REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS THE OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY. CONTRACTOR SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING WITH WORK.

7. THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.

8. THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.

9. THE CONTRACTOR SHALL REPAIR, RESURFACE, RECONSTRUCT OR REFURBISH ANY AREAS DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, HIS SUBCONTRACTORS OR SUPPLIERS AT NO ADDITIONAL COST TO THE OWNER.

10. ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

11. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF TRUCK DOCKS, EXIT DOORS, SIDEWALKS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.

12. ALL PAINT STRIPING, PAVEMENT MARKINGS, AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR AS OTHERWISE SPECIFIED. ALL REFERENCED SIGN STANDARDS ARE TAKEN FROM THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". ALL NEW SIGNS SHALL BE MOUNTED ON GALVANIZED POSTS AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.

13. CONTRACTOR SHALL INSTALL ACCESSIBLE RAMPS PER LOCAL MUNICIPALITY AND ADA STANDARDS AT ALL DRIVE AND BUILDING LOCATIONS AS REQUIRED.

14. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY THE CITY OF DURHAM AND DURHAM COUNTY PUBLIC UTILITIES DEPARTMENTS FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.

15. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY OWNER OF ANY UNACCEPTABLE AREAS.

16. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES AND STORM DRAINAGE) TO OWNER PRIOR TO COMPLETION OF CONSTRUCTION

17. LANDSCAPE MULCH: PINE STRAW SHALL NOT BE USED AS MULCH OR GROUNDCOVER WITHIN TEN FEET OF ANY STRUCTURES CONSISTING OF EXTERIOR COMBUSTIBLE CONSTRUCTION AS SPECIFIED BY DURHAM CITY COD SECTON46-87.

18. FOR COUNTY SOIL AND EROSION CONTROL:
    A: A SEDIMENTATION AND EROSION CONTROL PLAN MUST BE SUBMITTED AND APPROVED PRIOR TO THE ISSUANCE OF A LAND-DISTURBANCE PERMIT.
    B: IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BARROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BARROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.

19. PROVIDE FIRE PLANS EXAMINER ONE COPY OF UTILITY CONSTRUCTION DRAWINGS, SHOWING UNDERGROUND PIPING LAYOUT AND ALL FIRE APPURTENANCES. PERMIT FOR INSTALLATION OF PRIVATE FIRE HYDRANT(S) MUST BE ISSUED BY FIRE PLANS EXAMINER PRIOR TO INSTALLATION OF SAID HYDRANTS.

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

DURHAM COUNTY EROSION CONTROL GENERAL NOTES:

1. IF MORE THAN 20,000 SQ.FT IS DISTURBED, A SEDIMENTATION AND EROSION CONTROL PLAN MUST BE SUBMITTED AND APPROVED PRIOR TO THE ISSUANCE OF A LAND-DISTURBANCE PERMIT.

2. IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA OF THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.

SOLID WASTE NOTE:

GARBAGE AND RECYCLING (INCLUDING CARDBOARD) SHALL BE COLLECTED AS OFTEN AS NECESSARY TO PREVENT THE ILLEGAL PLACEMENT OF GARBAGE AND RECYCLABLES. THE PROPOSED TENANT WILL UTILIZE AN EXISTING CARDBOARD RECYCLING PROGRAM WHERE CARDBOARD IS RETURNED ON REGULARLY SCHEDULED DELIVERY TRUCKS TO AN APPROVED RECYCLING FACILITY.

DURHAM COUNTY STORMWATER NOTE:

PER NC STORMWATER MANUAL, CHAPTER C-5, MDC 2, A SOIL INVESTIGATION SHALL BE PERFORMED IF PERMEABLE PAVEMENT IS PROPOSED FOR STORMWATER CREDIT. THIS WILL BE REQUIRED PRIOR TO APPROVAL OF CONSTRUCTION DRAWINGS.

ALL SCMs MUST BE DESIGNED IN ACCORDANCE WITH THE NC STORMWATER MANUAL MINIMUM DESIGN CRITERIA.

ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE CITY OF DURHAM AND NCDOT STANDARDS, SPECIFICATION AND DETAILS.

DEPARTMENT OF TRANSPORTATION NOTE:

SIGN AND/OR PAVEMENT MARKINGS TO BE INSTALLED BY THE DEVELOPER (NEW SUBDIVISIONS OR OFF-SITE ROADWAY IMPROVEMENTS THAT NEED NEW MARKINGS FOR EXAMPLE):

THE DEVELOPER IS RESPONSIBLE FOR FABRICATION AND INSTALLATION OF ALL REQUIRED SIGNS AND PLACEMENT MARKINGS WITHIN THE PUBLIC RIGHT-OF-WAY. THE DEVELOPER SHALL SUBMIT A SIGNING AND MARKINGS PLAN TO THE CITY AT CONSTRUCTION PLAN STAGE FOR REVIEW AND APPROVAL. ALL SIGNS AND PAVEMENT MARKINGS, SHOWN ON THE CONSTRUCTION PLANS, MUST BE IN PLACE PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY AND/OR STREET ACCEPTANCE, AS DETERMINED BY THE CITY. VARIATIONS TO THESE STANDARD NOTES MAY BE APPLIED WITH THE EXPRESS CONSENT OF THE TRANSPORTATION DIVISION.

SIGNAGE AND MARKING PLAN CONSTRUCTION DRAWING NOTES:
1. ALL SIGNS, STREET MARKERS, AND PAVEMENT MARKINGS (EVERYTHING CALLED OUT ON THE SIGNING AND MARKING SHEET) MUST BE INSTALLED ON EACH STREET PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND/OR STREET ACCEPTANCE, AS DETERMINED BY THE CITY.
2. STOP BARS SHALL BE 2-FEET WIDE WHITE THERMOPLASTIC PER NCDOT SPECIFICATIONS.
3. ALL SIGNS MUST CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SITE DATA

OWNER/APPLICANT		GLANDON FOREST EQUITY, LLC 3825 BARRETT DRIVE, SUITE 100 RALEIGH, NC 27609 919-459-2602
PARCEL		PIN: 0829-01-17-7629 PARCEL ID: 189744 PIN: 0829-01-17-8867 PARCEL ID: 189743 PIN: 0829-01-17-9708 PARCEL ID: 189742
ZONING		CN(D) (COMMERCIAL NEIGHBORHOOD) ZONING CASE#Z1800037
TIER		RURAL TIER (ROUGEMONT RURAL VILLAGE AREA)
EXISTING USE		VACANT
PROPOSED USE		COMMERCIAL RETAIL
RIVER BASIN		NEUSE (UPPER FALLS LAKE)
EXISTING PARCEL AREA		GROSS: 2.39 AC (104,131 SF)
PROPOSED PARCEL AREA		NET: 2.39 AC (104,131 SF)
BUILDING HEIGHT	MAXIMUM	25'
	PROPOSED	20'
BUILDING COVERAGE	MAXIMUM	60%
	PROPOSED	9,100 SF (8.7%)
BUILDING AREA	PROPOSED	9,100 SF
SETBACK/YARD REQUIREMENTS	REQUIRED	STREET YARD: BILL POOLE ROAD: 25' U.S. HIGHWAY 501: 25FT
PARKING	REQUIRED	RETAIL: 1 SP/200 SF x 7,500 SF = 38 SP TOTAL: 38 SPACES MAX (CN)
	PROPOSED	35 SPACES (6 COMPACT SPACES - 17.1%)
HC PARKING	REQUIRED	2 SPACES
	PROPOSED	2 SPACES
HC VAN PARKING	REQUIRED	1 SPACES
	PROPOSED	1 SPACES
BICYCLE PARKING	REQUIRED	RETAIL: 1 SP/5,000 SF X 9,100 SF = 2 SP (MINIMUM 4 SPACES)
	PROPOSED	4 SPACES
WATERSHED PROTECTION OVERLAY DISTRICT		M/LR-B LAKE MITCHIE - LITTLE RIVER WATERSHED NEUSE - UPPER FALLS LAKE
IMPERVIOUS SURFACE	MAXIMUM	24% OF GROSS SITE AREA 0.57 AC PER SCM DESIGN CALCULATIONS
	EXISTING	3,160 SF, 0.07 AC (EXISTING DRIVE AISLE AND STRUCTURE)
	PROPOSED	0.57 AC (23.99%)
TREE COVERAGE	REQUIRED	NO TREE COVERAGE IS REQUIRED IN THE RURAL TIER

DOLLAR GENERAL®

Site Plan
Proposed
Dollar General
Case# D1900178
Roxboro Road (US Hwy 501)
Durham, NC
Durham County Jurisdiction

Civil Engineer

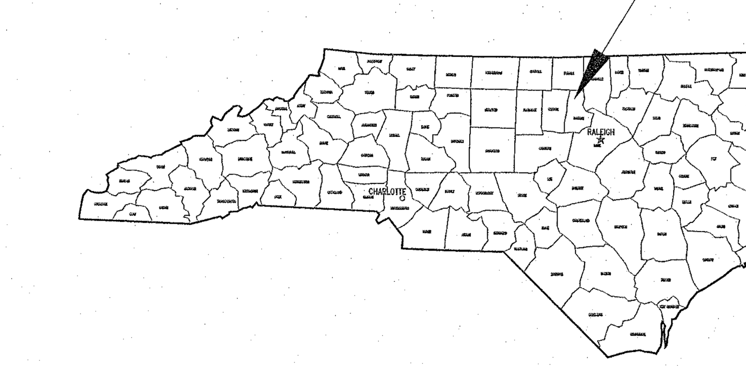
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE#P-0619

TRIANGLE
SITE DESIGN

Developer
Glandon Forest Equity, LLC
3825 Barrett Drive, Suite 100
Raleigh, NC 27609
(919) 459-2602
gventers@vanguardpg.com

Property Owner:
David Clayton
1 Wayside Place
Durham, NC 27705

SITE



INDEX TO SHEETS

SHEET #	DESCRIPTION
C-1	COVER SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	SITE PLAN
C-4	GRADING AND DRAINAGE PLAN
C-5	EROSION CONTROL PLAN
C-6	UTILITY PLAN
C-7	CONSTRUCTION DETAILS
C-8	CONSTRUCTION DETAILS
C-9A	NC CONSTRUCTION GENERAL PERMIT (NCG01) NOTES
C-9B	EROSION CONTROL DETAILS
C-10A	STORMWATER MANAGEMENT DETAILS
C-11	LANDSCAPE PLAN
C-11B	LANDSCAPE EXHIBIT EXISTING EAST PROPERTY LINE

REVISIONS

NO.	DATE	DESCRIPTION
9		
8		
7		
6		
5		
4	12/10/19	REVISED PER CITY/COUNTY REVIEW
3	11/22/19	REVISED PER CITY/COUNTY & NCDOT REVIEW
2	10/22/19	REVISED PER CITY/COUNTY & NCDOT REVIEW
1	8/7/19	REVISED PER CITY/COUNTY REVIEW

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SEAL:
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24434 MATTHEW E. LOWDER 12/20/19

SHEET: C-1

DATE: May 28, 2019

JOB NUMBER: 004154

APPROVAL STAMP - CASE # D1900178

Dollar General-Rougemont, Durham County, North Carolina

SURVEY NOTES

1.) ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES.

2.) SITE AREA = 2.39 ACRES (COMPUTED BY USING COORDINATE METHOD).

3.) THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FLOOD MAP PANEL 3720082800K, DATED OCT. 19, 2018.

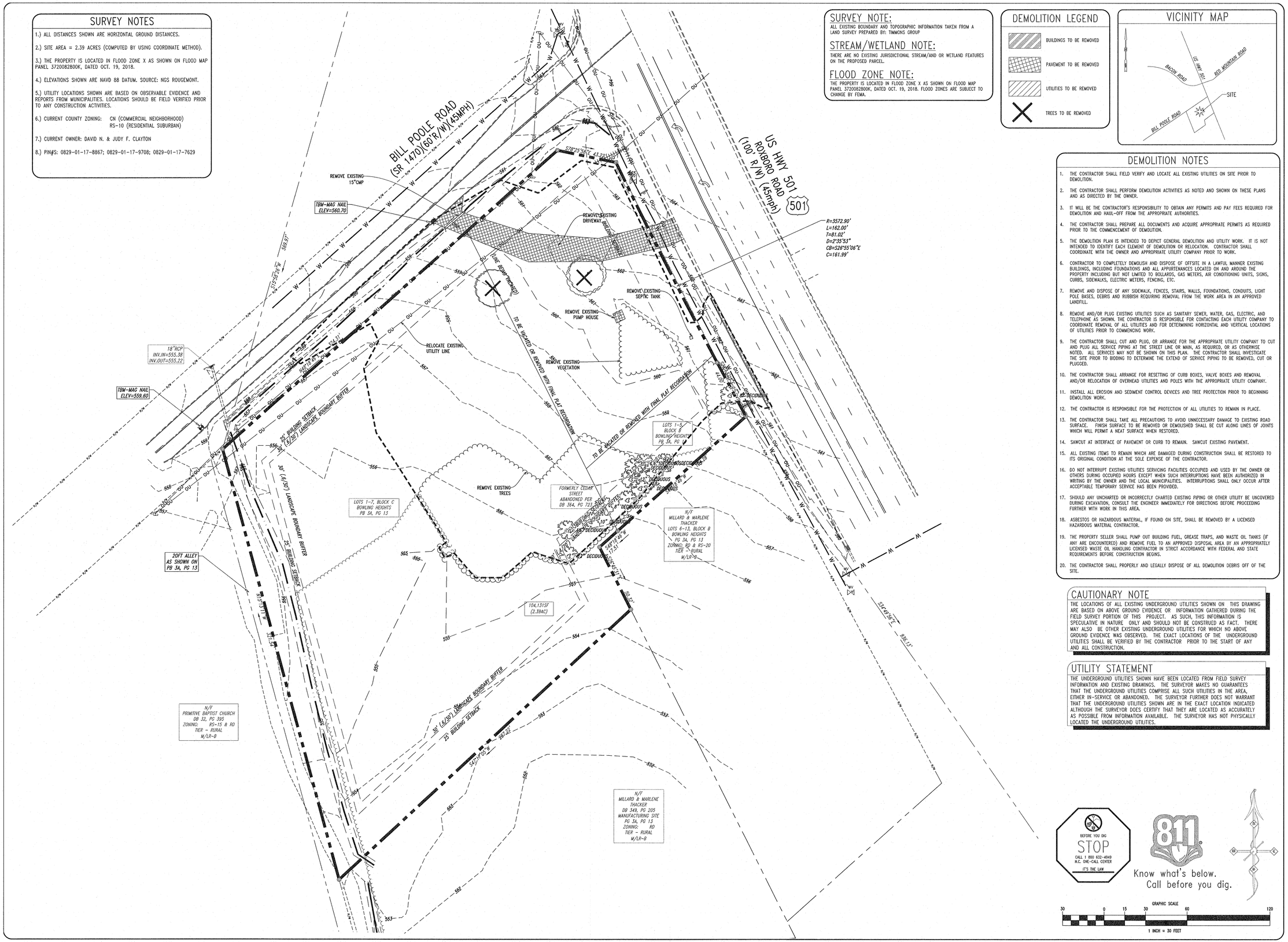
4.) ELEVATIONS SHOWN ARE NAVD 88 DATUM. SOURCE: NGS ROUGEMONT.

5.) UTILITY LOCATIONS SHOWN ARE BASED ON OBSERVABLE EVIDENCE AND REPORTS FROM MUNICIPALITIES. LOCATIONS SHOULD BE FIELD VERIFIED PRIOR TO ANY CONSTRUCTION ACTIVITIES.

6.) CURRENT COUNTY ZONING: CN (COMMERCIAL NEIGHBORHOOD)
RS-10 (RESIDENTIAL SUBURBAN)

7.) CURRENT OWNER: DAVID N. & JUDY F. CLAYTON

8.) PIN#S: 0829-01-17-8867; 0829-01-17-9708; 0829-01-17-7629



SURVEY NOTE:

ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY: TIMMONS GROUP

STREAM/WETLAND NOTE:

THERE ARE NO EXISTING JURISDICTIONAL STREAM/AND OR WETLAND FEATURES ON THE PROPOSED PARCEL.

FLOOD ZONE NOTE:

THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FLOOD MAP PANEL 3720082800K, DATED OCT. 19, 2018. FLOOD ZONES ARE SUBJECT TO CHANGE BY FEMA.

DEMOLITION LEGEND

- BUILDINGS TO BE REMOVED
- PAVEMENT TO BE REMOVED
- UTILITIES TO BE REMOVED
- TREES TO BE REMOVED

VICINITY MAP

DEMOLITION NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO DEMOLITION.
2. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY THE OWNER.
3. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS AND PAY FEES REQUIRED FOR DEMOLITION AND HAUL-OFF FROM THE APPROPRIATE AUTHORITIES.
4. THE CONTRACTOR SHALL PREPARE ALL DOCUMENTS AND ACQUIRE APPROPRIATE PERMITS AS REQUIRED PRIOR TO THE COMMENCEMENT OF DEMOLITION.
5. THE DEMOLITION PLAN IS INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK. IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY PRIOR TO WORK.
6. CONTRACTOR TO COMPLETELY DEMOLISH AND DISPOSE OF OFFSITE IN A LAWFUL MANNER EXISTING BUILDINGS, INCLUDING FOUNDATIONS AND ALL APPURTENANCES LOCATED ON AND AROUND THE PROPERTY INCLUDING BUT NOT LIMITED TO BOLLARDS, GAS METERS, AIR CONDITIONING UNITS, SIGNS, CURBS, SIDEWALKS, ELECTRIC METERS, FENCING, ETC.
7. REMOVE AND DISPOSE OF ANY SIDEWALK, FENCES, STAIRS, WALLS, FOUNDATIONS, CONDUITS, LIGHT POLE BASES, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED LANDFILL.
8. REMOVE AND/OR PLUG EXISTING UTILITIES SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO COORDINATE REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
9. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED, OR AS OTHERWISE NOTED. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTEND OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED.
10. THE CONTRACTOR SHALL ARRANGE FOR RESETTING OF CURB BOXES, VALVE BOXES AND REMOVAL AND/OR RELOCATION OF OVERHEAD UTILITIES AND POLES WITH THE APPROPRIATE UTILITY COMPANY.
11. INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
13. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACE. FINISH SURFACE TO BE REMOVED OR DEMOLISHED SHALL BE CUT ALONG LINES OF JOINTS WHICH WILL PERMIT A NEAT SURFACE WHEN RESTORED.
14. SAWCUT AT INTERFACE OF PAVEMENT OR CURB TO REMAIN. SAWCUT EXISTING PAVEMENT.
15. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.
16. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
17. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
18. ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.
19. THE PROPERTY SELLER SHALL PUMP OUT BUILDING FUEL, GREASE TRAPS, AND WASTE OIL TANKS (IF ANY ARE ENCOUNTERED) AND REMOVE FUEL TO AN APPROVED DISPOSAL AREA BY AN APPROPRIATELY LICENSED WASTE OIL HANDLING CONTRACTOR IN STRICT ACCORDANCE WITH FEDERAL AND STATE REQUIREMENTS BEFORE CONSTRUCTION BEGINS.
20. THE CONTRACTOR SHALL PROPERLY AND LEGALLY DISPOSE OF ALL DEMOLITION DEBRIS OFF OF THE SITE.

CAUTIONARY NOTE

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE BASED ON ABOVE GROUND EVIDENCE OR INFORMATION GATHERED DURING THE FIELD SURVEY PORTION OF THIS PROJECT. AS SUCH, THIS INFORMATION IS SPECULATIVE IN NATURE ONLY AND SHOULD NOT BE CONSTRUED AS FACT. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF THE UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF ANY AND ALL CONSTRUCTION.

UTILITY STATEMENT

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

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IT'S THE LAW

811
Know what's below.
Call before you dig.

GRAPHIC SCALE
30 0 15 30 60 120
1 INCH = 30 FEET

TRIANGLE SITE DESIGN

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mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24404 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
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3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: EXISTING CONDITIONS PLAN

SHEET NUMBER: C-2

DG#20605-Rougemont, NC

TRAFFIC CONTROL NOTES

THE DISTRICT OFFICE OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO CONSTRUCTION.

TRAFFIC MUST BE MAINTAINED AT ALL TIMES AND TRAFFIC CONTROL MUST COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND WITH THE CURRENT EDITION OF THE NCDOT STANDARDS AND SPECIFICATIONS.

ALL LANES OF TRAFFIC ARE TO BE OPEN DURING THE HOURS OF 6:00 AM TO 9:00 AM AND FROM 4:00 PM TO 6:00 PM. A MINIMUM OF ONE 12-FOOT LANE SHALL BE MAINTAINED AT ALL TIMES.

ALL ROADWAY SIGNS WHICH ARE TO BE REMOVED DURING CONSTRUCTION ARE TO BE REINSTALLED AS SOON AS POSSIBLE.

DURING NON-WORKING HOURS, EQUIPMENT IS TO BE PARKED AS CLOSE TO THE RIGHT OF WAY LINE AS POSSIBLE AND BE PROPERLY BARRICADED IN ORDER TO PREVENT ANY EQUIPMENT OBSTRUCTION WITHIN THE TRAVEL LANE.

ALL CONTRACTORS DOING WORK WITHIN STATE RIGHT OF WAY ARE TO HAVE A COPY OF THESE PLANS ON THE JOB SITE.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WITHIN 5' OF AN OPEN TRAVEL LANE, THE CONTRACTOR SHALL CLOSE THE OPEN TRAVEL LANE ADJACENT TO THE WORK AREA USING APPROPRIATE TRAFFIC CONTROL MEANS AND METHODS UNLESS WORK IN THAT AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

THE CONTRACTOR SHALL NOT WORK SIMULTANEOUSLY ON BOTH SIDES OF AN OPEN TRAVEL WAY WITHIN THE SAME LOCATION ON A TWO-LANE, TWO-WAY ROAD.

THE MAXIMUM LENGTH OF A LANE CLOSURE ON THE PROJECT SHALL BE ONE MILE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

THE CONTRACTOR SHALL BACKFILL AT 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF OF MORE THAN 3".

WHEN BACKFILL IS REQUIRED, IT SHALL BE AT NO EXPENSE TO THE OWNER.

THE MAXIMUM DIFFERENCE IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC SHALL BE 2".

WHEN LANE CLOSURES ARE NOT IN EFFECT, CHANNELIZING DEVICES IN WORK AREAS SHALL BE SPACED NO GREATER THAN TWICE THE POSTED SPEED LIMIT, EXCEPT 10' ON-CENTER IN RADII, AND SHALL BE SET 3' OFF THE EDGE OF AN OPEN TRAVELWAY.

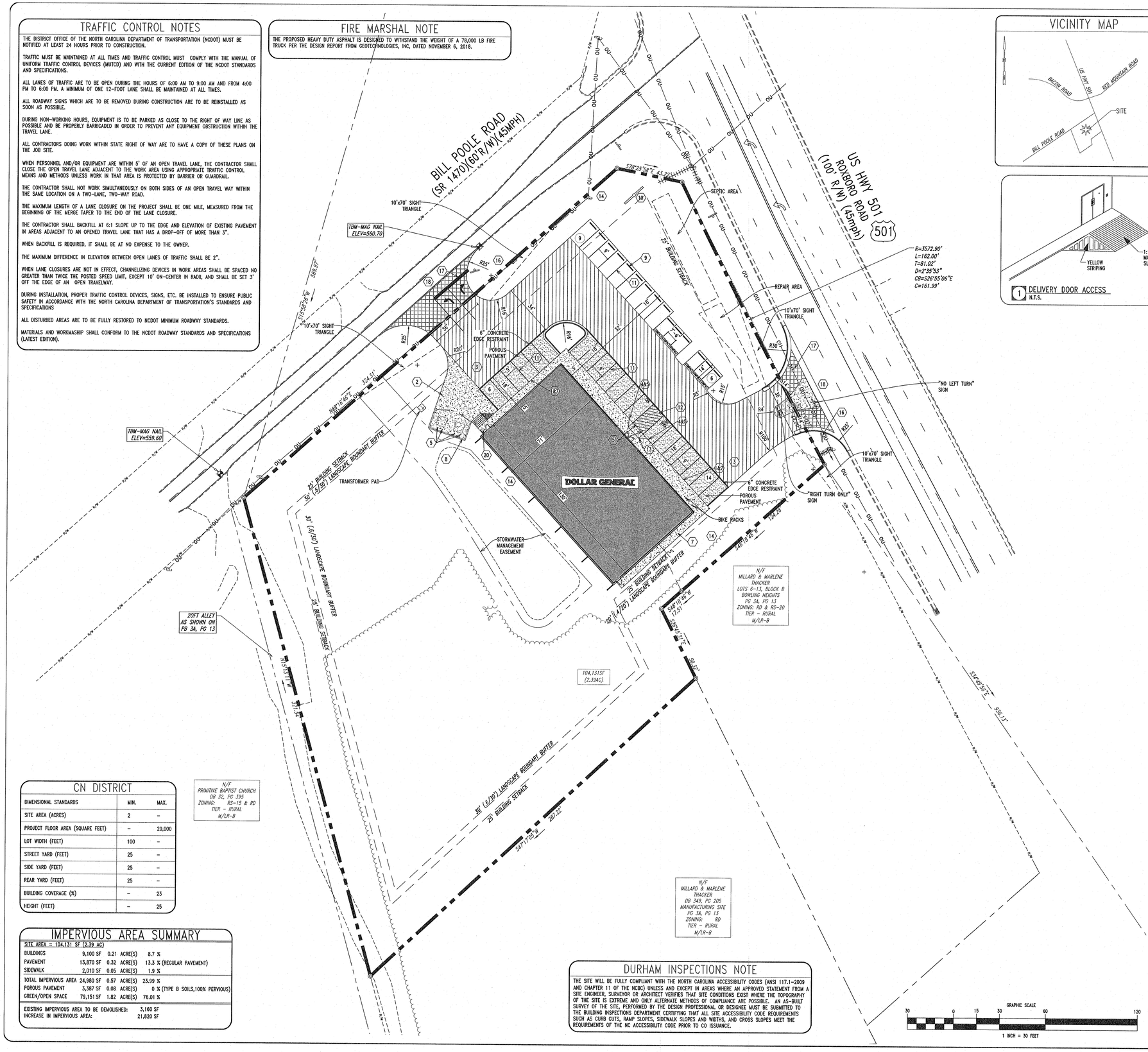
DURING INSTALLATION, PROPER TRAFFIC CONTROL DEVICES, SIGNS, ETC. BE INSTALLED TO ENSURE PUBLIC SAFETY IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS

ALL DISTURBED AREAS ARE TO BE FULLY RESTORED TO NCDOT MINIMUM ROADWAY STANDARDS.

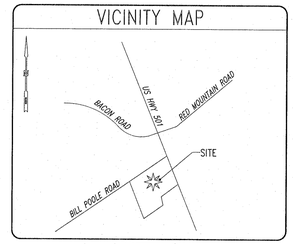
MATERIALS AND WORKMASHIP SHALL CONFORM TO THE NCDOT ROADWAY STANDARDS AND SPECIFICATIONS (LATEST EDITION).

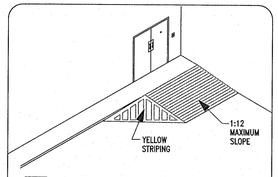
FIRE MARSHAL NOTE

THE PROPOSED HEAVY DUTY ASPHALT IS DESIGNED TO WITHSTAND THE WEIGHT OF A 78,000 LB FIRE TRUCK PER THE DESIGN REPORT FROM GEOTECHNOLOGIES, INC, DATED NOVEMBER 6, 2018.



VICINITY MAP





1 DELIVERY DOOR ACCESS
N.T.S.

GENERAL NOTES

1. THE CONTRACTOR SHALL EMPLOY ALL NECESSARY BARRICADES, SIGNS, FENCES, FLASHING LIGHTS, FLAGMEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED BY DURHAM COUNTY AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, FOR DETAILS OF TRAFFIC CONTROL STANDARDS AND DEVICES.
2. THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION.
3. APPROVAL OF THESE PLANS IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
4. COORDINATE ALL CURB AND STREET GRADES IN INTERSECTIONS WITH INSPECTOR.
5. NON-STANDARD ITEMS (I.E. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION BEFORE INSTALLATION.
6. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
7. EXISTING SITE CONDITIONS, GRADES, CONTOURS, UTILITIES AND OTHER EXISTING FEATURES FROM A SURVEY PREPARED BY TIMMONS GROUP.
8. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION "STANDARD DETAILS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND APPLICABLE DURHAM COUNTY CODES AND ORDINANCES. THE CONTRACTOR SHALL MAINTAIN A CURRENT EDITION OF THE STATE AND LOCAL CODES, ORDINANCES, STANDARD SPECIFICATION AND STANDARD DETAILS ON THE PROJECT SITE FOR REFERENCE DURING CONSTRUCTION OF THE PROJECT.
9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND SHALL REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS THE OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY. CONTRACTOR SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING WITH WORK.
10. THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
11. THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
12. THE CONTRACTOR SHALL REPAIR, RESURFACE, RECONSTRUCT OR REFURBISH ANY AREAS DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, HIS SUBCONTRACTORS OR SUPPLIERS AT NO ADDITIONAL COST TO THE OWNER.
13. ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
14. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF TRUCK DOCKS, EXIT DOORS, SIDEWALKS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
15. ALL PAINT STRIPING, PAVEMENT MARKINGS, AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR AS OTHERWISE SPECIFIED. ALL REFERENCED SIGN STANDARDS ARE TAKEN FROM THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". ALL NEW SIGNS SHALL BE MOUNTED ON GALVANIZED POSTS AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
16. CONTRACTOR SHALL INSTALL ACCESSIBLE RAMPS PER LOCAL MUNICIPALITY AND ADA STANDARDS AT ALL DRIVE AND BUILDING LOCATIONS AS REQUIRED.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY THE DURHAM COUNTY PUBLIC UTILITIES DEPARTMENTS FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.
18. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY OWNER/DOLLAR GENERAL OF ANY UNACCEPTABLE AREAS.
19. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES AND STORM DRAINAGE) TO OWNER/DOLLAR GENERAL PRIOR TO COMPLETION OF CONSTRUCTION

KEYNOTES

1. CONCRETE MONOLITHIC CURB/SIDEWALK - SEE DETAIL SHEET C-7
2. CONCRETE PAVEMENT DESIGN AS PER GEOTECHNICAL REPORT SPECIFICATIONS - SEE DETAIL SHEET C-7
   EXPANSION AND CONTROL JOINTS - SEE DETAILS SHEET C-7
3. ASPHALT PAVEMENT DESIGN AS PER GEOTECHNICAL REPORT SPECIFICATIONS - SEE DETAIL SHEET C-7
   - STANDARD DUTY PAVEMENT
   - HEAVY DUTY PAVEMENT
   - NCDOT PAVEMENT SECTION
4. HANDICAP PARKING SIGN - SEE DETAIL SHEET C-7
5. BOLLARD - SEE DETAIL SHEET C-8
6. CONCRETE LIGHT POLE BASE - NOT USED
7. CONCRETE SIDEWALK - SEE DETAIL SHEET C-7 FOR SIDEWALKS AROUND BUILDING.
8. DUMPSTER LAYOUT - 6' HIGH MASONRY ENCLOSURE W/GATES - SEE DETAIL SHEET C-8
9. 6'-0" LONG CONCRETE WHEEL STOP, PINNED TO PAVEMENT - SEE DETAIL SHEET C-7. LOCATE 2'-6" FROM FACE OF CURB OR SIDEWALK.
10. PYLON SIGN (UNDER SEPARATE PERMIT)
11. 4" WIDE PARKING STRIPE PAINTED YELLOW (TYP)
12. 4" WIDE PARKING DIAGONAL STRIPES
13. CONCRETE HANDICAP RAMP - MAXIMUM SLOPE 1:12 (8.33%) (PER A.D.A. REQUIREMENTS) ANY RAMPS LESS THAN 1:20 SHALL HAVE DETECTABLE WARNINGS AND CONTRASTING COLOR. SEE DETAIL SHEET C-7.
14. NEW GRASS/LANDSCAPE AREA
15. CONCRETE CURB AND GUTTER - SEE DETAIL SHEET C-8 (NOT USED)
16. STOP SIGN - SEE DETAIL SHEET C-8
17. PAVEMENT MARKINGS - SEE DETAIL SHEET C-8
18. NEW CURB CUT, MATCH EXISTING EOP & APPROACH PER LOCAL CODES & SPECS.
19. (NOT USED)
20. DELIVERY DOOR ACCESS - REFER TO DETAIL THIS SHEET
21. CONCRETE FLUME - REFER TO DETAIL ON SHEET C-8 (NOT USED)
22. 6' WOOD SCREEN FENCE - REFER TO DETAIL ON SHEET C-8 (NOT USED)
23. PROPOSED PARKING COUNT

CN DISTRICT

DIMENSIONAL STANDARDS	MIN.	MAX.
SITE AREA (ACRES)	2	-
PROJECT FLOOR AREA (SQUARE FEET)	-	20,000
LOT WIDTH (FEET)	100	-
STREET YARD (FEET)	25	-
SIDE YARD (FEET)	25	-
REAR YARD (FEET)	25	-
BUILDING COVERAGE (%)	-	23
HEIGHT (FEET)	-	25

IMPERVIOUS AREA SUMMARY

SITE AREA = 104,131 SF (2.39 AC)

BUILDINGS	9,100 SF	0.21	ACRE(S)	8.7 %
PAVEMENT	13,870 SF	0.32	ACRE(S)	13.3 % (REGULAR PAVEMENT)
SIDEWALK	2,010 SF	0.05	ACRE(S)	1.9 %
TOTAL IMPERVIOUS AREA	24,980 SF	0.57	ACRE(S)	23.99 %
POROUS PAVEMENT	3,387 SF	0.08	ACRE(S)	0 % (TYPE B SOILS,100% PERVIOUS)
GREEN/OPEN SPACE	79,151 SF	1.82	ACRE(S)	76.01 %

EXISTING IMPERVIOUS AREA TO BE DEMOLISHED: 3,160 SF
INCREASE IN IMPERVIOUS AREA: 21,820 SF

DURHAM INSPECTIONS NOTE

THE SITE WILL BE FULLY COMPLIANT WITH THE NORTH CAROLINA ACCESSIBILITY CODES (ANSI 117.1-2009 AND CHAPTER 11 OF THE NCBC) UNLESS AND EXCEPT IN AREAS WHERE AN APPROVED STATEMENT FROM A SITE ENGINEER, SURVEYOR OR ARCHITECT VERIFIES THAT SITE CONDITIONS EXIST WHERE THE TOPOGRAPHY OF THE SITE IS EXTREME AND ONLY ALTERNATE METHODS OF COMPLIANCE ARE POSSIBLE. AN AS-BUILT SURVEY OF THE SITE, PERFORMED BY THE DESIGN PROFESSIONAL OR DESIGNEE MUST BE SUBMITTED TO THE BUILDING INSPECTIONS DEPARTMENT CERTIFYING THAT ALL SITE ACCESSIBILITY CODE REQUIREMENTS SUCH AS CURB CUTS, RAMP SLOPES, SIDEWALK SLOPES AND WIDTHS, AND CROSS SLOPES MEET THE REQUIREMENTS OF THE NC ACCESSIBILITY CODE PRIOR TO CO ISSUANCE.

STRIPING LEGEND

YELLOW CURBING AND BOLLARDS - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY AND METAL SURFACES FREE OF HEAVY RUST 2 COATS SHERWIN WILLIAMS - KEM 4000 ACRYLIC ALKYD ENAMEL SAFETY YELLOW B55Y300
STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT YELLOW
HANDICAP STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT "H.C." BLUE

TRIANGLE SITE DESIGN

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(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24434 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
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REVISIONS:

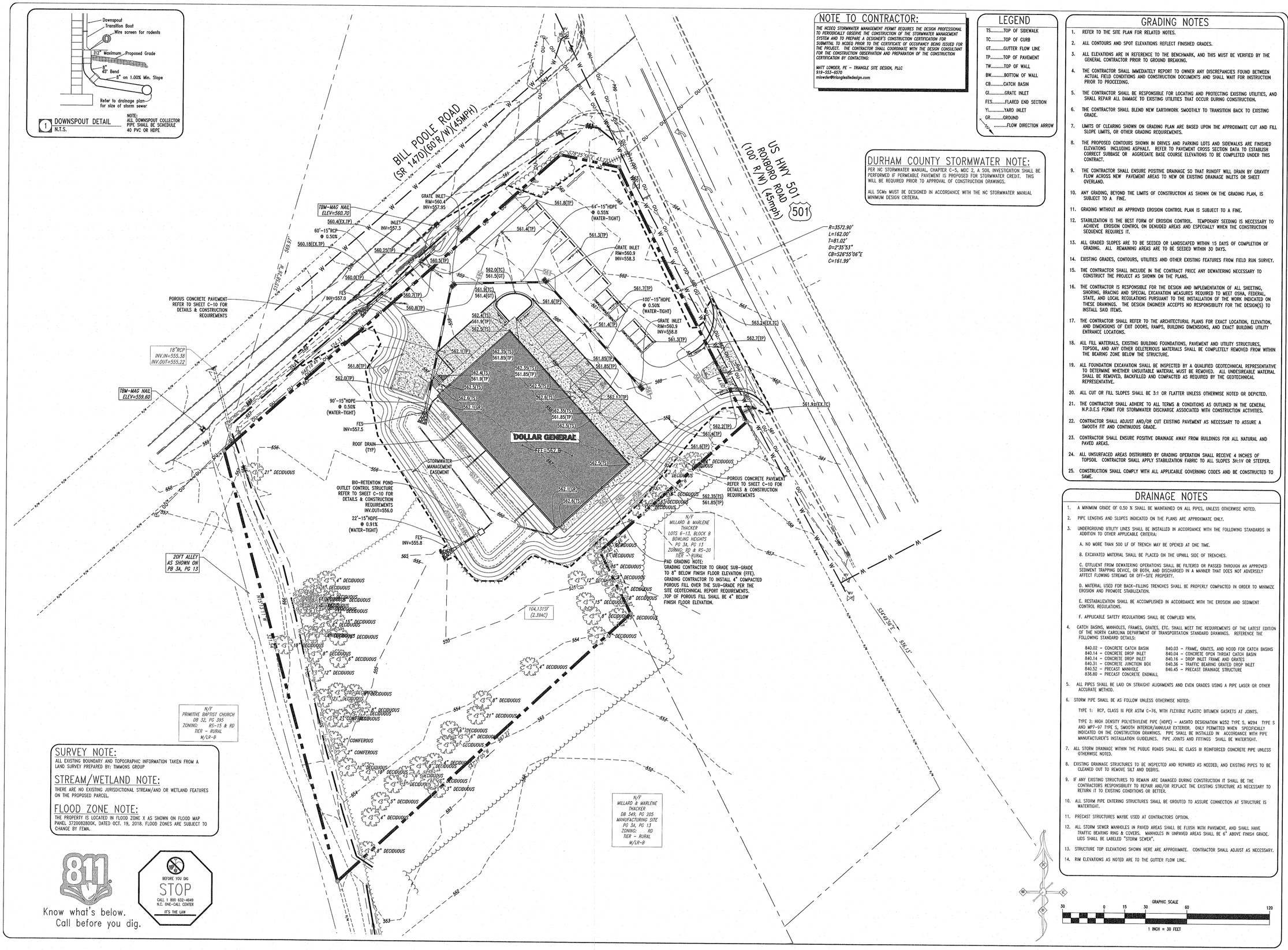
8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: SITE PLAN

SHEET NUMBER: C-3

DG#20605-Rougemont, NC



1 DOWNSPOUT DETAIL
N.T.S.

NOTE:
ALL DOWNSPOUT COLLECTOR PIPE SHALL BE SCHEDULE 40 PVC OR HDPE

NOTE TO CONTRACTOR:

THE NCDEQ STORMWATER MANAGEMENT PERMIT REQUIRES THE DESIGN PROFESSIONAL TO PERIODICALLY OBSERVE THE CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM AND TO PREPARE A DESIGNER'S CONSTRUCTION CERTIFICATION FOR SUBMITTAL TO NCDEQ PRIOR TO THE CERTIFICATE OF OCCUPANCY BEING ISSUED FOR THE PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE DESIGN CONSULTANT FOR THE CONSTRUCTION OBSERVATION AND PREPARATION OF THE CONSTRUCTION CERTIFICATION BY CONTACTING:

MATT LOWDER, PE – TRIANGLE SITE DESIGN, PLLC
919-553-6570
mlowder@trianglesitedesign.com

LEGEND

TS	TOP OF SIDEWALK
TC	TOP OF CURB
GT	GUTTER FLOW LINE
TP	TOP OF PAVEMENT
TW	TOP OF WALL
BW	BOTTOM OF WALL
CB	CATCH BASIN
GI	GRATE INLET
FES	FLARED END SECTION
YI	YARD INLET
GR	GROUND
	FLOW DIRECTION ARROW

DURHAM COUNTY STORMWATER NOTE:

PER NC STORMWATER MANUAL, CHAPTER C-5, MDC 2, A SOIL INVESTIGATION SHALL BE PERFORMED IF PERMEABLE PAVEMENT IS PROPOSED FOR STORMWATER CREDIT. THIS WILL BE REQUIRED PRIOR TO APPROVAL OF CONSTRUCTION DRAWINGS.

ALL SCMs MUST BE DESIGNED IN ACCORDANCE WITH THE NC STORMWATER MANUAL MINIMUM DESIGN CRITERIA.

GRADING NOTES

1. REFER TO THE SITE PLAN FOR RELATED NOTES.
2. ALL CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
3. ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAKING.
4. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
7. LIMITS OF CLEARING SHOWN ON GRADING PLAN ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS, OR OTHER GRADING REQUIREMENTS.
8. THE PROPOSED CONTOURS SHOWN IN DRIVES AND PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
9. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET OVERLAND.
10. ANY GRADING, BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN, IS SUBJECT TO A FINE.
11. GRADING WITHOUT AN APPROVED EROSION CONTROL PLAN IS SUBJECT TO A FINE.
12. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON DENUDED AREAS AND ESPECIALLY WHEN THE CONSTRUCTION SEQUENCE REQUIRES IT.
13. ALL GRADED SLOPES ARE TO BE SEEDED OR LANDSCAPED WITHIN 15 DAYS OF COMPLETION OF GRADING. ALL REMAINING AREAS ARE TO BE SEEDED WITHIN 30 DAYS.
14. EXISTING GRADES, CONTOURS, UTILITIES AND OTHER EXISTING FEATURES FROM FIELD RUN SURVEY.
15. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DEWATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS.
16. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS. THE DESIGN ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE DESIGN(S) TO INSTALL SAID ITEMS.
17. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATION, ELEVATION, AND DIMENSIONS OF EXIT DOORS, RAMPS, BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
18. ALL FILL MATERIALS, EXISTING BUILDING FOUNDATIONS, PAVEMENT AND UTILITY STRUCTURES, TOPSOIL, AND ANY OTHER DELETERIOUS MATERIALS SHALL BE COMPLETELY REMOVED FROM WITHIN THE BEARING ZONE BELOW THE STRUCTURE.
19. ALL FOUNDATION EXCAVATION SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE TO DETERMINE WHETHER UNSUITABLE MATERIAL MUST BE REMOVED. ALL UNDESIREABLE MATERIAL SHALL BE REMOVED, BACKFILLED AND COMPACTED AS REQUIRED BY THE GEOTECHNICAL REPRESENTATIVE.
20. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED OR DEPICTED.
21. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
22. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
23. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
24. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER.
25. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.

DRAINAGE NOTES

1. A MINIMUM GRADE OF 0.50 % SHALL BE MAINTAINED ON ALL PIPES, UNLESS OTHERWISE NOTED.
2. PIPE LENGTHS AND SLOPES INDICATED ON THE PLANS ARE APPROXIMATE ONLY.
3. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

   A. NO MORE THAN 500 LF OF TRENCH MAY BE OPENED AT ONE TIME.

   B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.

   C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.

   D. MATERIAL USED FOR BACK-FILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.

   E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL REGULATIONS.

   F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
4. CATCH BASINS, MANHOLES, FRAMES, GRATES, ETC. SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS. REFERENCE THE FOLLOWING STANDARD DETAILS:

840.02 – CONCRETE CATCH BASIN	840.03 – FRAME, GRATES, AND HOOD FOR CATCH BASINS
840.14 – CONCRETE DROP INLET	840.04 – CONCRETE OPEN THROAT CATCH BASIN
840.14 – CONCRETE DROP INLET	840.16 – DROP INLET FRAME AND GRATES
840.31 – CONCRETE JUNCTION BOX	840.36 – TRAFFIC BEARING GRATED DROP INLET
840.52 – PRECAST MANHOLE	840.45 – PRECAST DRAINAGE STRUCTURE
838.80 – PRECAST CONCRETE ENDWALL	

5. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
6. STORM PIPE SHALL BE AS FOLLOW UNLESS OTHERWISE NOTED:

   TYPE 1: RCP, CLASS III PER ASTM C-76, WITH FLEXIBLE PLASTIC BITUMEN GASKETS AT JOINTS.

   TYPE 2: HIGH DENSITY POLYETHYLENE PIPE (HDPE) – AASHTO DESIGNATION M252 TYPE S, M294 TYPE S AND MP7-97 TYPE S, SMOOTH INTERIOR/ANNULAR EXTERIOR. ONLY PERMITTED WHEN SPECIFICALLY INDICATED ON THE CONSTRUCTION DRAWINGS. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER'S INSTALLATION GUIDELINES. PIPE JOINTS AND FITTINGS SHALL BE WATERTIGHT.
7. ALL STORM DRAINAGE WITHIN THE PUBLIC ROADS SHALL BE CLASS III REINFORCED CONCRETE PIPE UNLESS OTHERWISE NOTED.
8. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE SILT AND DEBRIS.
9. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
10. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
11. PRECAST STRUCTURES MAYBE USED AT CONTRACTORS OPTION.
12. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
13. STRUCTURE TOP ELEVATIONS SHOWN HERE ARE APPROXIMATE. CONTRACTOR SHALL ADJUST AS NECESSARY.
14. RIM ELEVATIONS AS NOTED ARE TO THE GUTTER FLOW LINE.

SURVEY NOTE:

ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY: TIMMONS GROUP

STREAM/WETLAND NOTE:

THERE ARE NO EXISTING JURISDICTIONAL STREAM/AND OR WETLAND FEATURES ON THE PROPOSED PARCEL.

FLOOD ZONE NOTE:

THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FLOOD MAP PANEL 3720082800K, DATED OCT. 19, 2018. FLOOD ZONES ARE SUBJECT TO CHANGE BY FEMA.

811
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TRIANGLE SITE DESIGN

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NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24434 ENGINEER MATTHEW E. LOWDER
10/10/19

DOLLAR GENERAL

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US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
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REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

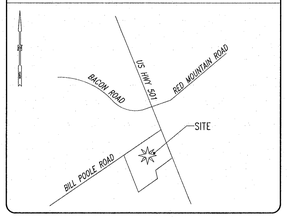
LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE:
GRADING AND DRAINAGE PLAN

SHEET NUMBER:
C-4

DG#20605-Rougemont, NC

VICINITY MAP



GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC. THAT MAY BE REQUIRED.
2. THE CONTRACTOR SHALL NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EVERY OFFSET, TRANSITION, FITTING, ETC. THAT MAY BE REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
3. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
4. CONTRACTOR SHALL MAINTAIN AN "AS BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE ENGINEER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE OWNER.
5. IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE WRITTEN PERMISSION OF THE OWNER.
6. THE CONTRACTOR MUST, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY HIM, HIS EMPLOYEES OR HIS WORK. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.

EROSION CONTROL NOTES

REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.

REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER THE FOR THE DEVELOPMENT.

STORMWATER NUTRIENT NOTE

IN COMPLIANCE WITH DURHAM CITY CODE CHAPTER 70, ARTICLE X. STORMWATER PERFORMANCE STANDARDS FOR DEVELOPMENT, SECTION 70-737 (c) NITROGEN AND PHOSPHORUS CONTROL REQUIREMENT, THE DEVELOPMENT OF THIS SITE IS MAKING USE OF A NUTRIENT BANK. THE APPROVAL OF THIS SITE PLAN IS CONTINGENT UPON THE PURCHASE OF NUTRIENT CREDITS FROM AN APPROVED NUTRIENT BANK. IF A REVISED SITE PLAN IS SUBMITTED FOR THIS SITE, THE REVISED SITE PLAN WILL BE SUBJECT TO ANY ORDINANCES IN PLACE AT THE TIME OF SUBMISSION. PRIOR TO THE APPROVAL OF THIS SITE PLAN PERTAINING TO THIS SITE, A LETTER SHOWING THE PURCHASE OF THE NUTRIENT CREDITS FOR THIS SITE AND A COPY OF THE NUTRIENT BANK LEDGER IS TO BE PROVIDED SHOWING THE TOTAL NUTRIENT CREDITS AVAILABLE MINUS ANY AND ALL REDUCTIONS IS TO BE PROVIDED TO THE CITY OF DURHAM STORMWATER SERVICES.

DURHAM COUNTY NOTE

IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.

EROSION CONTROL LEGEND

REFER TO DETAIL SHEET FOR CONSTRUCTION REQUIREMENTS

- CE — CONSTRUCTION ENTRANCE
- BIP RAP APRON
- TEMPORARY INLET PROTECTION
- HORSESHOE INLET PROTECTION
- TEMPORARY SILT FENCE OUTLET
- TEMPORARY CHECK DAM
- SF — TEMPORARY SILT FENCE
- >TD — >TD — TEMP. DIVERSION DITCH

MODEL ENFORECMENT AND CONSTRUCTION SEQUENCE FOR S&E

ENFORCEMENT NOTE 1. FAILURE TO FOLLOW THIS CONSTRUCTION SEQUENCE MAY RESULT IN LOCAL ENFORCEMENT ACTIONS, INCLUDING BUT NOT LIMITED TO CIVIL PENALTIES TO $5000 PER VIOLATION PER DAY, INJUNCTIVE RELIEF, CRIMINAL PENALTIES, AND PERMIT REVOCATION. ADDITIONALLY, OFF-SITE SEDIMENTATION MAY RESULT IN RESTORATION REQUIREMENTS.

ENFORCEMENT NOTE 2. IF THE DURHAM COUNTY S&E STAFF DETERMINES THAT EXCESSIVE SEDIMENT IS LEAVING THE SITE, A REVISED SEDIMENTATION AND EROSION CONTROL PLAN MAY BE REQUIRED, WITH ASSOCIATED REQUIREMENTS FOR ADDITIONAL S&E MEASURES.

CONSTRUCTION SEQUENCE

1. INSTALL TREE PROTECTION FENCING IN ACCORDANCE WITH THE APPROVED SITE PLAN.
2. INSPECT TREE FENCE AND SUBMIT A "TREE PROTECTION FENCING CERTIFICATION" FORM TO DURHAM COUNTY S & E OFFICE, FAX: (919)560-0740.
3. CALL DURHAM COUNTY S&E OFFICE FOR INSPECTION OF TREE FENCE INSTALLATION, (919)560-0735.
4. SCHEDULE AND HOLD PRE-CONSTRUCTION CONFERENCE PRIOR TO BEGINNING ANY LAND-DISTURBING ACTIVITIES. THIS CONFERENCE SHOULD BE ATTENDED BY A REPRESENTATIVE OF THE FINANCIALLY RESPONSIBLE PARTY AND/OR THE GENERAL CONTRACTOR, GRADING SUB-CONTRACTOR, EROSION CONTROL SUB-CONTRACTOR AND THE DURHAM COUNTY S&E OFFICE.
5. OBTAIN LAND DISTURBING PERMIT AND PLACARD, AND POST THE PLACARD ON SITE.
6. OBTAIN AN APPROVED (STAMPED) S&E CONTROL PLAN AND KEEP IT ON SITE, EITHER IN THE INSPECTION BOX, CONSTRUCTION OFFICE OR WITH THE CONTRACTOR.
7. INSTALL CONSTRUCTION EGRESS/EXIT, SILT FENCING, SEDIMENT TRAPS/BASINS, DIVERSION DITCHES, CHECK DAMS, AND OTHER INITIAL EROSION CONTROL MEASURES AS SPECIFIED IN THE PLAN. REMOVE ONLY TREES AND GROUND COVER NECESSARY TO INSTALL THESE DEVICES.
8. IF A STOCKPILE IS NECESSARY DUE TO EXCAVATION OF THE SEDIMENT TRAP/BASIN, PLACE A DOUBLE ROW OF SILT FENCE 10 FEET APART AT THE LIMITS OF THE STOCKPILE AREA SHOWN ON THIS PLAN. TREES AND GROUNDCOVER MAY BE REMOVED ONLY AS NECESSARY FOR THIS STOCKPILE.
9. PROVIDE TEMPORARY GROUNDCOVER FOR DIVERSION DITCHES AND SEDIMENT TRAPS/BASINS WITHIN 3 DAYS OF COMPLETION.
10. NOTIFY THE DURHAM COUNTY S&E SITE INSPECTOR AFTER MEASURES HAVE BEEN INSTALLED AND PROJECT HAS STARTED.
11. BEGIN CLEARING, GRUBBING AND GRADING OF SITE IN ACCORDANCE WITH THE APPROVED S&E CONTROL PLAN.
12. PROVIDE ALL DISTURBED AREAS WITH GROUND COVER AS PER SEC. 12.10.4(B) OF THE DURHAM COUNTY UDO AFTER COMPLETION OF ANY PHASE OF CLEARING, GRUBBING OR GRADING. THE SEEDING, SEEDBED PREPARATION, MULCH AND/OR ROLLED EROSION CONTROL PRODUCT INSTALLATION MUST BE IN ACCORDANCE WITH THE SEEDING SCHEDULE PROVIDED IN THIS S&E PLAN.
13. LAND LEFT EXPOSED SHALL BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION WITHIN THE APPLICABLE TIME PERIOD AFTER COMPLETION OF ANY PHASE OF GRADING OR PERIOD OF INACTIVITY AS FOLLOWS: SEVEN DAYS FOR A STEEP SLOPE; TEN DAYS FOR A MODERATE SLOPE; 14 DAYS FOR LAND WITH NO SLOPE OR INCLINATION. FOR PURPOSES OF THIS SECTION, A MODERATE SLOPE MEANS AN INCLINED AREA, THE INCLINATION OF WHICH IS LESS THAN OR EQUAL TO THREE UNITS OF HORIZONTAL DISTANCE TO ONE UNIT OF VERTICAL DISTANCE; AND A STEEP SLOPE MEANS AN INCLINED AREA, THE INCLINATION OF WHICH IS GREATER THAN THREE UNITS OF HORIZONTAL DISTANCE TO ONE UNIT OF VERTICAL DISTANCE. NO OTHER CRITERIA APPLY.
14. AT THE CONCLUSION OF BUILDING OR IF LAND-DISTURBING ACTIVITY IS STOPPED TEMPORARY OR PERMANENT VEGETATIVE COVER SHALL BE INSTALLED IN ACCORDANCE WITH AS PER SEC. 12.10.4(B) OF THE DURHAM COUNTY UDO.
15. FOR ANY AREA OF LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICABLE, BUT IN NO CASE LATER THAN SEVEN DAYS AFTER COMPLETION OF GRADING.
16. REMOVE ALL EROSION CONTROL MEASURES AFTER THE DURHAM COUNTY S&E OFFICE APPROVAL OF PERMANENT STABILIZATION.

TREE PROTECTION NOTES

1. THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS. THE CONTRACTOR IS ALSO REQUESTED TO SAVE ALL OTHER EXISTING TREES AND SHRUBS WHERE POSSIBLE.
2. WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER AND IMMEDIATELY COVER ALL ROOT CUT SURFACES LARGER THAN TWO INCHES IN DIAMETER WITH TREE WOUND DRESSING. USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK.
3. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
4. NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/BRACKED AREAS.
5. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, CLEARING, GRADING OR CONSTRUCTION BEGINS AND IS NOT TO BE REMOVED UNTIL AFTER CONSTRUCTION.
6. TREE PROTECTION FENCE IS TO BE LOCATED 1 FOOT PER TREE DIAMETER INCH AWAY FROM THE TREE.

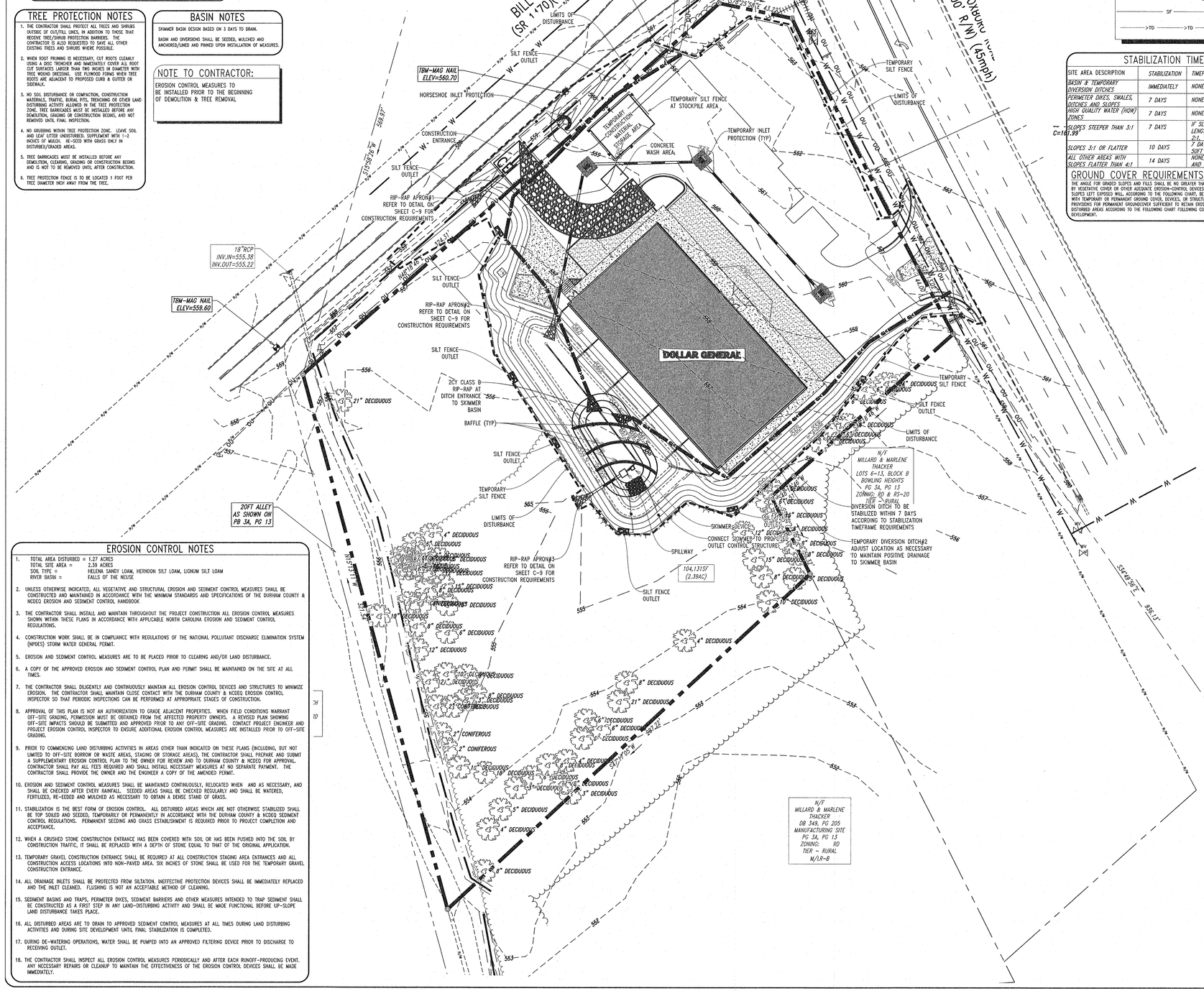
BASIN NOTES

SKIMMER BASIN DESIGN BASED ON 3 DAYS TO DRAIN.

BASIN AND DIVERSIONS SHALL BE SEEDED, MULCHED AND ANCHORED/LINED AND PINNED UPON INSTALLATION OF MEASURES.

NOTE TO CONTRACTOR:

EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL



STABILIZATION TIMEFRAME

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
BASIN & TEMPORARY DIVERSION DITCHES	IMMEDIATELY	NONE
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED. 7 DAYS FOR SLOPES GREATER THAN 50FT IN LENGTH
SLOPES 3:1 OR FLATTER	10 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	

GROUND COVER REQUIREMENTS:

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL ACCORDING TO THE FOLLOWING CHART, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PROVISIONS FOR PERMANENT GROUNDCOVER SUFFICIENT TO RETAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS ACCORDING TO THE FOLLOWING CHART FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

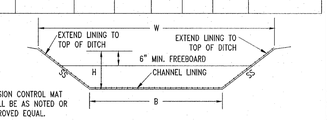
SEDIMENT & EROSION CONTROL NOTES

1. THE EROSION AND SEDIMENTATION CONTROL MEASURES (BMPS) WERE DESIGNED USING THE NORTH CAROLINA DURHAM COUNTY & NCDEQ REQUIREMENTS AND SHALL BE INSTALLED ACCORDINGLY. CONTRACTOR SHALL PERFORM ALL ACTIVITIES IN STRICT COMPLIANCE WITH THE NORTH CAROLINA NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (GENERAL PERMIT).
2. REFER TO THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS FOR EROSION CONTROL DETAILS AND DESIGN TABLES FOR SEDIMENT BASINS, DIVERSION DITCHES, AND CULVERTS, SLOPE DRAINS, RIP-RAP APRONS AND OTHER EROSION CONTROL MEASURES.
3. EXISTING BOUNDARIES, TOPOGRAPHY, 100-YR FLOODPLAIN, UTILITY AND ROAD INFORMATION TAKEN FROM AN EXISTING CONDITIONS SURVEY. ALL EXISTING INFORMATION IS TO BE FIELD VERIFIED BY THE CONTRACTOR.
4. SEE THE LANDSCAPE PLAN FOR LOCATIONS OF PROPOSED PLANTINGS AND FINAL STABILIZATION.
5. TEMPORARY DIVERSION DITCHES AND BERMS SHALL BE MAINTAINED AS THE SITE IS BROUGHT TO GRADE.
6. DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE EROSION CONTROL INSPECTORS SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
7. SEE THE GENERAL NOTES SHEET AND THE GRADING AND DRAINAGE PLAN FOR OTHER NOTES REGARDING GRADING ACTIVITIES.
8. SEE SITE PLAN, GRADING AND DRAINAGE PLAN, UTILITY PLAN, PLANTING PLAN AND OTHER PLAN SHEETS FOR DETAILED DESIGN INFORMATION OF PERMANENT SITE APPURTENANCES SHOWN ON THIS SHEET.
9. WHERE THE LIMITS OF DISTURBANCE AND TEMPORARY FENCE (SF, SF-PF, OR PF) LIMITS ARE ADJACENT, THE TEMPORARY FENCE LINE IS THE LIMITS OF DISTURBANCE. THE LINE TYPES ARE SHOWN SEPARATED FOR ILLUSTRATIVE PURPOSES ONLY.
10. CONTRACTOR SHALL NOT DISTURB ANY EXISTING VEGETATIVE GROUND COVER OR TREES OUTSIDE OF THE LIMITS OF DISTURBANCE OR WITHIN ANY REQUIRED BUFFER LIMITS UNLESS OTHERWISE NOTED OR ILLUSTRATED.
11. PROVIDE CONTROLS OF POLLUTANTS, INCLUDING, BUT NOT LIMITED TO DUST CONTROL, DE-WATERING, SOLID WASTE DISPOSAL, AND HAZARDOUS MATERIALS.
12. CLEAR ONLY AS REQUIRED TO INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES. MASS CLEARING AND GRUBBING CAN BEGIN ONLY AFTER ALL DOWNSTREAM MEASURES HAVE BEEN INSTALLED.
13. USE ROCK OR WASHED STONE TO BRING CONSTRUCTION EXIT TO GRADE. IMPLEMENT WHEEL WASHES AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION.
14. DIVERT STORM WATER RUNOFF OFF THE FACE OF THE SEDIMENT BASIN SLOPES USING DIVERSION DITCHES AND SLOPE DRAINS. CONTRACTOR SHALL MAINTAIN AND RELOCATE DIVERSION DITCHES AND SLOPES DRAINS TO ENSURE STORM WATER RUNOFF DOES NOT ERODE THE FACE OF FINAL SLOPES.
15. MAINTAIN POSITIVE FLOW TO THE SEDIMENT BASINS THROUGHOUT ALL PHASES OF CONSTRUCTION. PLACE EXCAVATED SOILS ALONG DOWNSTREAM EDGE OF THE DIVERSION DITCHES TO PROVIDE ADDITIONAL CAPACITY.
16. REFER TO THE GRADING AND DRAINAGE PLAN FOR FINAL SITE AND PAVEMENT GRADES AND ELEVATIONS OF THE PROPOSED STORM SEWER SYSTEMS.
17. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE APPROVED EROSION AND SEDIMENT CONTROL DRAWINGS DURING CONSTRUCTION OPERATIONS.
18. GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
19. ALL WORK SHALL BE CONFINED TO PERMIT LIMITS SHOWN ON PLANS. UNLESS OTHERWISE NOTED, THE SITE PLAN PROPERTY LIMITS SHALL BE CONSIDERED THE PERMIT LIMITS.
20. SUFFICIENT EROSION CONTROL PRACTICES MUST BE INSTALLED AND MAINTAINED TO RETAIN SEDIMENT WITHIN THE BOUNDARIES OF THE SITE.
21. ADDITIONAL EROSION CONTROL MEASURES OR SILT BARRIERS TO BE PLACED AS SHOWN AND/OR DIRECTED BY THE PROJECT ENGINEER AND/OR LOCAL JURISDICTIONAL INSPECTOR.
22. FOR ALL CONSTRUCTION ALONG AND/OR ACROSS WATERWAYS, BANK PROTECTION AND STABILIZATION SHALL BE REQUIRED AS PER LOCAL JURISDICTIONAL EROSION CONTROL LAWS.
23. ALL TREE PROTECTION AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION AND SHALL BE MAINTAINED IN PROPER WORKING ORDER UNTIL ALL DISTURBED AREAS ARE STABILIZED AND GROUND COVER IS ESTABLISHED. CONSTRUCTION ENTRANCE PADS SHALL BE INSTALLED BY THE CONTRACTOR AT CONSTRUCTION ACCESS POINTS PRIOR TO LAND DISTURBANCE.
24. ALL EASEMENTS DISTURBED MUST BE DRESSED AND GRASSED TO CONTROL EROSION IN ACCORDANCE WITH EASEMENT PLATS PRIOR TO ACCEPTANCE.
25. CONSTRUCTION LIMITS SHALL NOT BE EXCEEDED WITHOUT THE APPROVAL OF DURHAM COUNTY & NCDEQ.

EROSION CONTROL NOTES

1. TOTAL AREA DISTURBED = 1.27 ACRES
   TOTAL SITE AREA = 2.39 ACRES
   SOIL TYPE = HELENA SANDY LOAM, HERNDON SILT LOAM, LIGNUM SILT LOAM
   RIVER BASIN = FALLS OF THE NEUSE
2. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE DURHAM COUNTY & NCDEQ EROSION AND SEDIMENT CONTROL HANDBOOK
3. THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS.
4. CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
5. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
7. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE DURHAM COUNTY & NCDEQ EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
8. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. A REVISED PLAN SHOWING OFF-SITE IMPACTS SHOULD BE SUBMITTED AND APPROVED PRIOR TO ANY OFF-SITE GRADING. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.
9. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO DURHAM COUNTY & NCDEQ FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
10. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RE-SEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
11. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE DURHAM COUNTY & NCDEQ SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
12. WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
13. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA. SIX INCHES OF STONE SHALL BE USED FOR THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
14. ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
15. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP-SLOPE LAND DISTURBANCE TAKES PLACE.
16. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS COMPLETED.
17. DURING DE-WATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
18. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

DITCH	FLOW Q(25)	LONG. SLOPE(%)	H	B	W	SS	CHANNEL LINING
TEMPORARY DITCH #1	2.0 CFS	1.0%	1.0'	1.0'	5.0'	2:1	STRAW WITH NET NAG D575
TEMPORARY DITCH #2	2.0 CFS	1.0%	1.0'	1.0'	5.0'	2:1	STRAW WITH NET NAG D575



EROSION CONTROL MAT SHALL BE AS NOTED OR APPROVED EQUAL.

1 TEMPORARY DIVERSION DITCH DATA BLOCK
REFER TO DETAIL SHEET FOR TEMPORARY DITCH DETAIL

BEFORE YOU DIG STOP CALL 1 800 632-4949 N.C. ONE-CALL CENTER IT'S THE LAW

811 Know what's below. Call before you dig.

GRAPHIC SCALE
30 0 15 30 60 120
1 INCH = 30 FEET

TRIANGLE SITE DESIGN

CONSULTANT:
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Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24401 ENGINEER WALTHER E. LOWDER

DOLLAR GENERAL

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US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: EROSION CONTROL PLAN

SHEET NUMBER: C-5

DG#20605-Rougemont, NC

UTILITY SERVICE NOTES

WATER SERVICE
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 1" WATER SERVICE LINE FROM WATER MAIN TO BUILDING PER MUNICIPAL REQUIREMENTS.
CONTACT: DURHAM COUNTY PUBLIC UTILITIES
TELEPHONE: 919-560-9039

ELECTRIC SERVICE
"POWER CO." TO PROVIDE UNDERGROUND 120/208/3 PHASE SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL TWO 4" DIA. CONDUIT W/ PULL WIRE TO UTILITY COMPANY POINT OF CONNECTION.
CONTACT: PROGRESS ENERGY
TELEPHONE: 800-636-0501

TELEPHONE SERVICE
"TELEPHONE CO." TO PROVIDE NEW UNDERGROUND SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" DIA. PVC CONDUIT W/ PULL WIRE FROM PHONE PANEL BOARD TO UTILITY COMPANY POINT OF CONNECTION.
CONTACT:
TELEPHONE:

SANITARY SEWER
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" SCHEDULE 40 PVC FROM PROPOSED SANITARY SEWER SEPTIC SYSTEM TO LAST CLEAN OUT OUTSIDE OF BUILDING. (MIN. 1% SLOPE). PROVIDE CLEAN OUTS EVERY 75' (TYPICAL).
CONTACT: DURHAM COUNTY ENVIRONMENTAL HEALTH
TELEPHONE: 919-560-7800

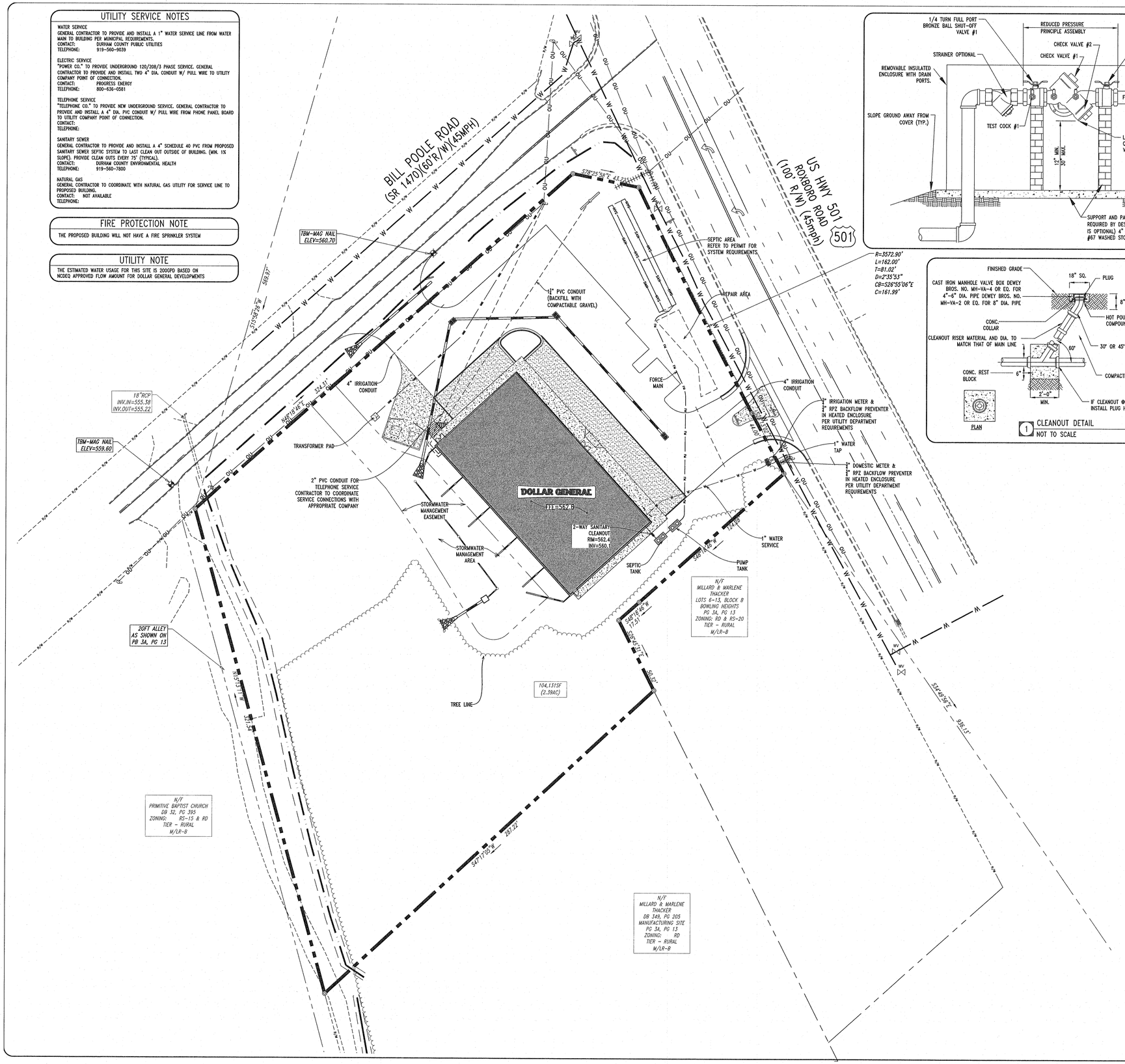
NATURAL GAS
GENERAL CONTRACTOR TO COORDINATE WITH NATURAL GAS UTILITY FOR SERVICE LINE TO PROPOSED BUILDING.
CONTACT: NOT AVAILABLE
TELEPHONE:

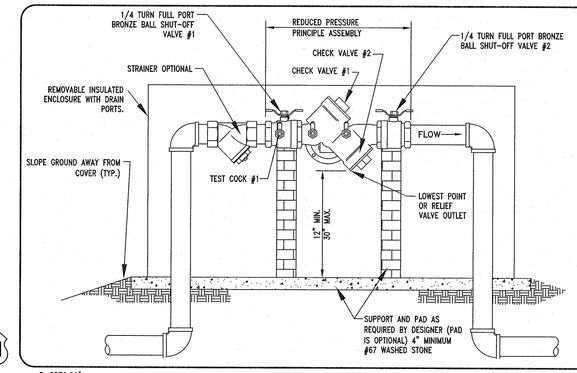
FIRE PROTECTION NOTE

THE PROPOSED BUILDING WILL NOT HAVE A FIRE SPRINKLER SYSTEM

UTILITY NOTE

THE ESTIMATED WATER USAGE FOR THIS SITE IS 2000GPD BASED ON NCDEQ APPROVED FLOW AMOUNT FOR DOLLAR GENERAL DEVELOPMENTS



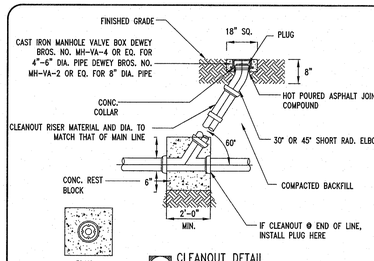


APPROVED RPZ ASSEMBLIES	
3/4" ASSEMBLIES	
CONBRACO	40-204-02
FEBCO	825Y-BV, 825YA-BV
HERSEY	FRP II
RAINBIRD	RP-QT-075
WATTS	909 QT, 009M1 QT, 009M2 QT
WILKINS	975XL

BACKFLOW PREVENTION NOTES:

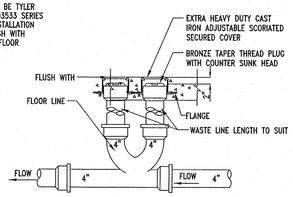
1. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPARTMENT CONNECTION POINTS OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND IT'S UTILITY DEPARTMENT REQUIRED BACKFLOW PREVENTER.
2. EACH UTILITY DEPARTMENT REQUIRED BACKFLOW PREVENTER ASSEMBLY IS REQUIRED TO BE TESTED BY AN APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM INTO SERVICE.

3 RPZ BACKFLOW PREVENTER
NOT TO SCALE



1 CLEANOUT DETAIL
NOT TO SCALE

NOTE:
CLEAN-OUT TO BE TYLER PIPE MODEL 003533 SERIES OR EQUAL. INSTALLATION SHALL BE FLUSH WITH SURROUNDING FLOOR SURFACES.



2 2-WAY CLEANOUT DETAIL
NOT TO SCALE

UTILITY NOTES

1. THE CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTACT THE LOCAL MUNICIPALITY PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK FOR UTILITY LOCATING SERVICES. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND HAVE BEEN COMPILED FROM THE LATEST AVAILABLE MAPPING. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DURHAM COUNTY UTILITY & HEALTH DEPARTMENTS
3. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE DURHAM COUNTY UTILITY & HEALTH DEPARTMENTS WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SANITARY SEWER LINES.
4. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. A PRE-CONSTRUCTION MEETING WITH THE VARIOUS UTILITY COMPANIES IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
5. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTOR 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
6. THE CONTRACTOR SHALL COORDINATE ANY INTERRUPTION OF UTILITY SERVICE WITH THE OWNER AND THE UTILITY COMPANY. ANY PLANNED INTERRUPTION OF UTILITY SERVICE SHALL BE GIVEN A 48 HOUR NOTICE TO THE UTILITY COMPANY AND THE OWNER.
7. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED UTILITIES BE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER IMMEDIATELY FOR DIRECTIONS.
8. PRESSURE REDUCING VALVES WILL BE REQUIRED ON THE DOMESTIC WATERLINES FOR EACH BUILDING IF THE STATIC PRESSURE IN THE WATER MAIN EXCEEDS 80 PSI. SEE MECHANICAL/PLUMBING PLANS.
9. ROUTES SHOWN FOR WATER SERVICES, ELECTRIC, SANITARY SEWER BUILDING LATERALS AND ROOF DRAIN PIPING ARE SUBJECT TO CHANGE.
10. THE CONTRACTOR SHALL SAW CUT, REMOVE, AND REPLACE ASPHALT PAVEMENT AS NECESSARY TO INSTALL UNDERGROUND ELECTRIC, TELEPHONE, SEWER, AND WATER.
11. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SEWERS CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT OWNER IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
12. THE CONTRACTOR SHALL INSURE THAT ALL UTILITY COMPANIES AND DURHAM COUNTY UTILITY & HEALTH DEPARTMENTS STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATIONS, INSPECTIONS, AND DEMOLITION.
13. THIS PLAN DETAILS PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO THE BUILDING DRAWINGS FOR BUILDING CONNECTIONS. SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.
14. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT AND REPLACED IN ACCORDANCE WITH THE PAVEMENT REPAIR REQUIREMENTS OF THE DURHAM COUNTY UTILITY & HEALTH DEPARTMENTS AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
15. MAINTAIN MINIMUM 10'-0" HORIZONTAL SEPARATION BETWEEN ON-SITE SANITARY SEWER AND DOMESTIC OR IRRIGATION WATER PIPING WHENEVER POSSIBLE. WHERE WATER PIPING MUST CROSS OVER SANITARY SEWER PIPING, MAINTAIN A MINIMUM 18" VERTICAL SEPARATION. WHERE SANITARY SEWER PIPING MUST CROSS OVER WATER PIPING, MAINTAIN A MINIMUM 24" VERTICAL SEPARATION AND PROVIDE MIN. 4" THICK CONCRETE ENCASEMENT OR 4" CONTINUOUS CAST IRON PIPE SLEEVE ON WATER PIPING FOR A MINIMUM OF 10'-0" ON EACH SIDE OF THE SAN. SEWER CROSSING. WHERE PERMITTED BY LOCAL CODE, DOMESTIC WATER AND SANITARY SEWER SERVICE PIPING MAY BE INSTALLED IN A COMMON TRENCH. TRENCH AND PIPING PLACEMENT SHALL COMPLY WITH ALL GOVERNING CODES AND REGULATIONS.

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Know what's below.
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GRAPHIC SCALE
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1 INCH = 30 FEET

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SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24464 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL®
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Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
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gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
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LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

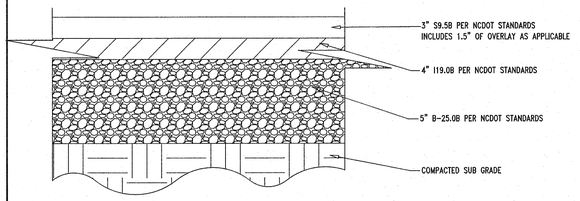
TITLE:
UTILITY PLAN

SHEET NUMBER:
C-6

DG#20605-Rougemont, NC

MATERIALS AND CONSTRUCTION REQUIREMENTS PER THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION

* REFER TO NCDOT DRIVEWAY PERMIT FOR ADDITIONAL REQUIREMENTS



NCDOT PAVEMENT SECTION

SCALE: NOT TO SCALE

PAVEMENT GENERAL NOTES:

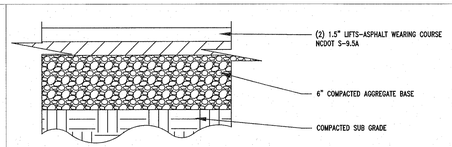
1. DETAILS ARE DOLLAR GENERAL MINIMUM REQUIREMENTS AND MAY INCREASE WITH VARIOUS SOIL CONDITIONS. A GEOTECHNICAL INVESTIGATION WITH PAVEMENT DESIGN RECOMMENDATIONS SHALL BE COMPLETED FOR EACH DEVELOPMENT. THE FOLLOWING DETAILS ARE MINIMUM DOLLAR GENERAL PAVEMENT REQUIREMENTS. INCREASED RECOMMENDATIONS ARE TO BE USED.

2. THE SUBGRADE MATERIALS SHALL BE PROOF ROLLED AND/OR SCARIFIED AND COMPACTED PRIOR TO PLACEMENT OF BASE MATERIAL. WHERE EXISTING SUBGRADE MATERIALS ARE UNSUITABLE, THEY SHALL BE REMOVED AND REPLACED WITH COMPACTED SELECT MATERIAL IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS.

3. HEAVY DUTY CONCRETE PAVEMENT AND STANDARD DUTY CONCRETE PAVEMENT (AS RECOMMENDED BY THE GEOTECHNICAL REPORT OR DOLLAR GENERAL MINIMUMS) SHALL BE STEEL REINFORCED. REINFORCEMENT TYPE SHALL BE PRIOR APPROVED BY DOLLAR GENERAL.

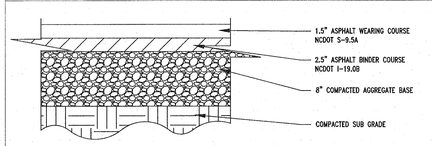
4. CONCRETE PAVEMENT PLAN SHALL BE PROVIDED TO DOLLAR GENERAL FOR PRIOR APPROVAL. ALL JOINTS MUST BE SEALED WITH AN APPROVED SEALANT. STEEL REINFORCING SHALL BE USED AT JOINTS. REFER TO ACI 330R (GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS) FOR JOINT DESIGN AND LAYOUT.

ASPHALTIC PAVEMENT



STANDARD DUTY ASPHALT DETAIL

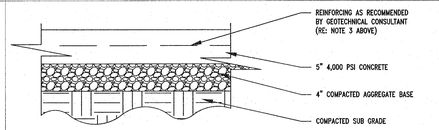
SCALE: NOT TO SCALE



HEAVY DUTY ASPHALT DETAIL

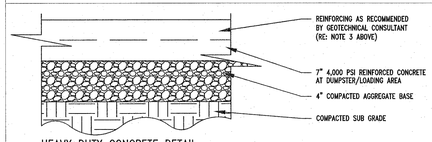
SCALE: NOT TO SCALE

CONCRETE PAVEMENT



STANDARD DUTY CONCRETE DETAIL

SCALE: NOT TO SCALE



HEAVY DUTY CONCRETE DETAIL

SCALE: NOT TO SCALE

1 PAVEMENT DETAILS

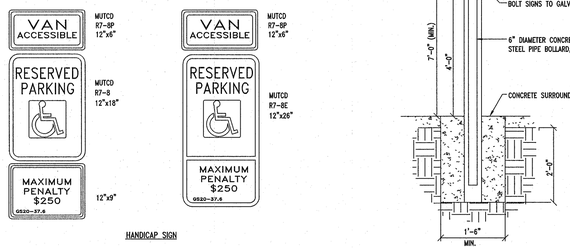
NOT TO SCALE

MATERIALS AND CONSTRUCTION REQUIREMENTS PER THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION

* REFER TO NCDOT DRIVEWAY PERMIT FOR ADDITIONAL REQUIREMENTS
* REFER TO PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS

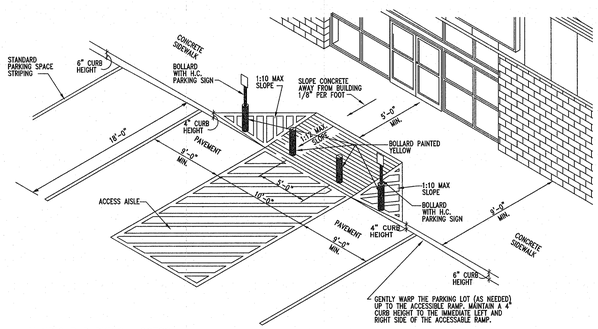
ACCESSIBLE PARKING SIGNAGE NOTES:

1. ALL LETTERS ARE TO BE PER THE LATEST EDITION OF THE MUTCD.
2. TOP PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
4. FINE NOTIFICATION SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER. CONTRACTOR SHALL VERIFY FINE AMOUNT AND ORDINANCE NUMBER.
5. ONE (1) SIGN REQUIRED FOR EACH ACCESSIBLE PARKING SPACE.
6. INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)
7. SIGN MAY BE MOUNTED ON BUILDING/WALL, AT PROPER HEIGHT, IF ALIGNED WITHIN 12" OF CENTER OF PARKING SPACE.



2 HANDICAP PARKING SIGN DETAIL

NOT TO SCALE

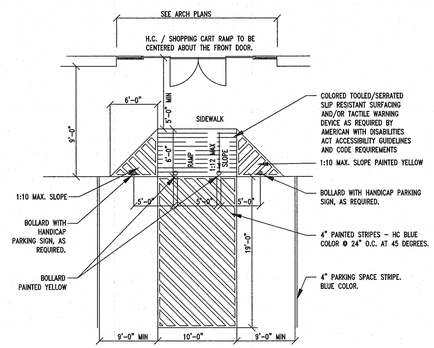


3 HANDICAP PARKING, ACCESS RAMP AND ACCESS AISLE DETAILS

NOT TO SCALE

SITE ACCESSIBILITY DETAIL NOTES:

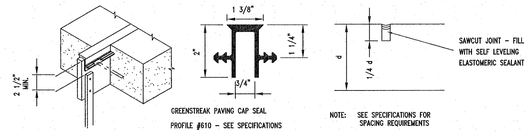
1. REFER TO SITE PLAN FOR EXACT LOCATION OF HANDICAP PARKING, WALKWAYS AND RAMPS.
2. ALL WALKWAYS, RAMPS, AND HANDICAP PARKING SIGNAGE, ETC. SHALL MEET APPROVED AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS AND LOCAL ACCESSIBILITY CODE.
3. ONE OUT OF EVERY SIX (6) ACCESSIBLE PARKING SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE.
4. ALL CONCRETE ACCESSIBLE RAMPS (3000 PSI) SURFACES SHALL HAVE COLORED TOOLED/SERRATED SLIP RESISTAND SURFACING AND/OR TACTILE WARNING DEVICE PER ADA STANDARDS AND LOCAL ACCESSABILITY CODE.
5. ALL CONCRETE ACCESSIBLE RAMPS SHALL BE COLOR IMPREGNATED TO PROVIDE VISUAL CONTRAST (DARK TO LIGHT) WITH ADJOINING CONCRETE SURFACES (MINIMUM 70% COLOR CONTRAST).
6. THE MATERIAL USED TO PROVIDE COLOR CONTRAST IN CONCRETE ACCESSIBLE RAMPS SHALL BE AN INTEGRAL (PERMANENT) PART OF THE CONCRETE AND SHALL NOT BE PAINTED ON OR CAPABLE OF FADING OR WEARING OFF.
7. FINISHED GRADES OF PAVEMENT IN HC PARKING AND ACESSIBILITY AISLE SHALL NOT EXCEED 1:50 SLOPE IN ANY DIRECTION.



4 HANDICAP PARKING DETAIL

NOT TO SCALE

NOTE:
ALL HANDICAPPED RAMP AND ACCESS AISLES SHALL MEET ALL CODES AND ADAAG REGULATIONS.

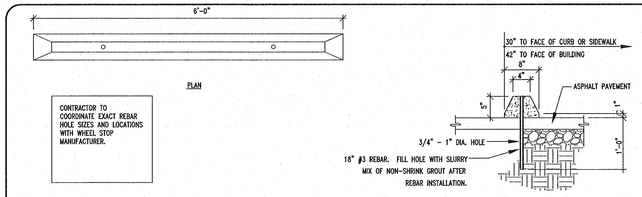


TYPICAL EXPANSION JOINT

TYPICAL CONTROL JOINT

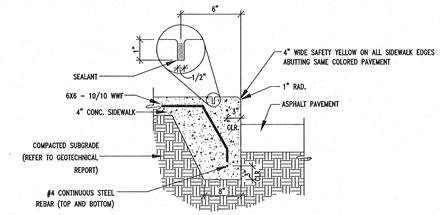
5 CONCRETE JOINTS

NOT TO SCALE



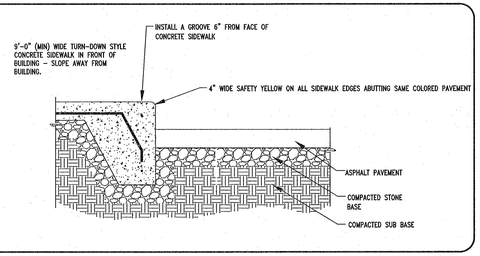
6 WHEEL STOP

NOT TO SCALE



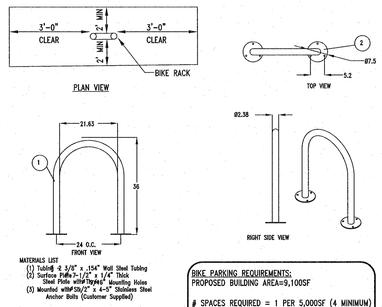
7 CURB EDGE CONCRETE SIDEWALK

NOT TO SCALE



8 SIDEWALK DETAIL

NOT TO SCALE



MATERIALS LIST
(1) Tubing @ 2 3/8" x .154" Wall Steel Tubing
(2) Surface Plate 7-1/2" x 1/4" Thick Steel Plate with 4 Mounting Holes
(3) Mounted with 5/8/2" x 4-5" Stainless Steel Anchor Bolts (Customer Supplied)

BIKE PARKING REQUIREMENTS:
PROPOSED BUILDING AREA=9,100SF

SPACES REQUIRED = 1 PER 5,000SF (4 MINIMUM)
4 SPACES REQUIRED

4 SPACES PROVIDED

9 BIKE RACK

NOT TO SCALE

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24435 ENGINEER MATTHEW E. LOWDER 12/10/19

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

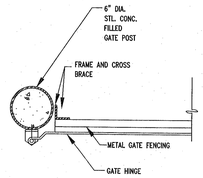
8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

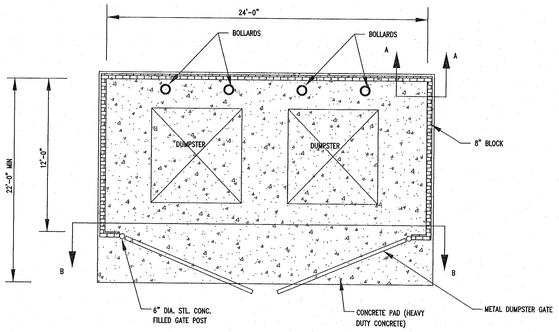
TITLE: CONSTRUCTION DETAILS

SHEET NUMBER: C-7

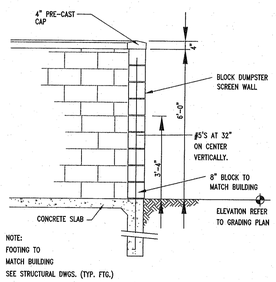
DG#20605-Rougemont, NC



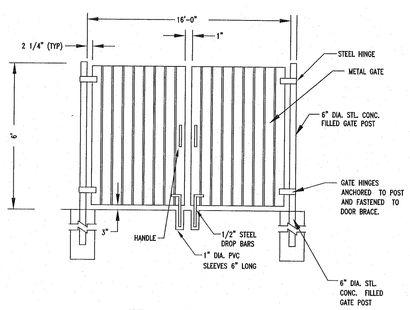
GATE POST DETAIL



DOUBLE DUMPSTER LAYOUT DETAIL



SECTION A-A - WALL SECTION

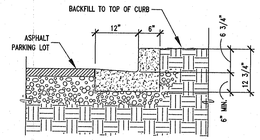


SECTION B-B - GATE

NOTES:
DUMPSTER SCREENING SHALL BE AT LEAST 6" TALLER THAN THE LARGEST DUMPSTER (UDO 9.7)

REFERENCE HTTP://DURHAMNC.GOV/DOCUMENT CENTER/VIEW/11089

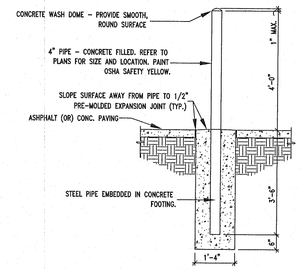
1 DOUBLE DUMPSTER DETAILS
NOT TO SCALE



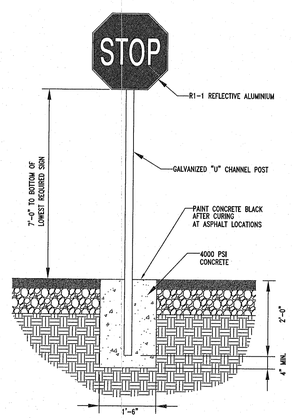
CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI IN 28. CONFIRM WITH GEOGRAPHICAL LOCATION OF THIS PARTICULAR PROJECT.

2 CURB/GUTTER DETAIL
NOT TO SCALE

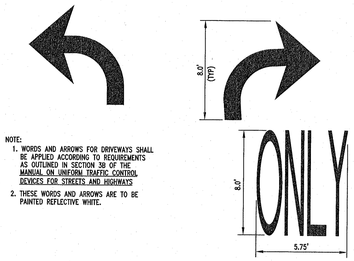
NOTE:
SET BOLLARD INTO CONCRETE FOOTER AS SHOWN. POUR CONCRETE SIDEWALK TO BOLLARD.



3 TYPICAL BOLLARD DETAIL
NOT TO SCALE

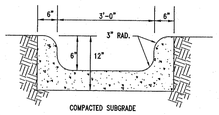


4 STOP SIGN DETAIL
NOT TO SCALE



NOTE:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS
2. THESE WORDS AND ARROWS ARE TO BE PAINTED REFLECTIVE WHITE.

5 PAVEMENT MARKINGS
NOT TO SCALE



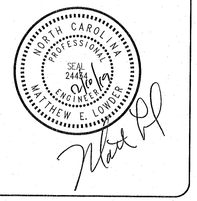
*NOTE: 1. ALL CONCRETE TO BE 3,600 PSI IN 28 DAYS.

7 CONCRETE FLUME
NOT TO SCALE

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:



DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
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gventers@vanguardpg.com

REVISIONS:

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LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
C-8

DG#20605-Rougemont, NC

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabric such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

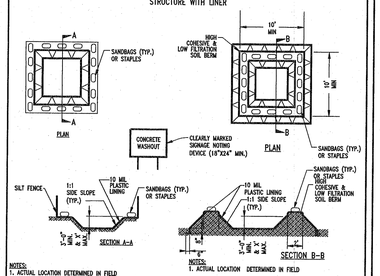
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit.

The following items pertaining to the E&SC plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is recurred upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(b) Anticipated bypasses and unanticipated bypasses.

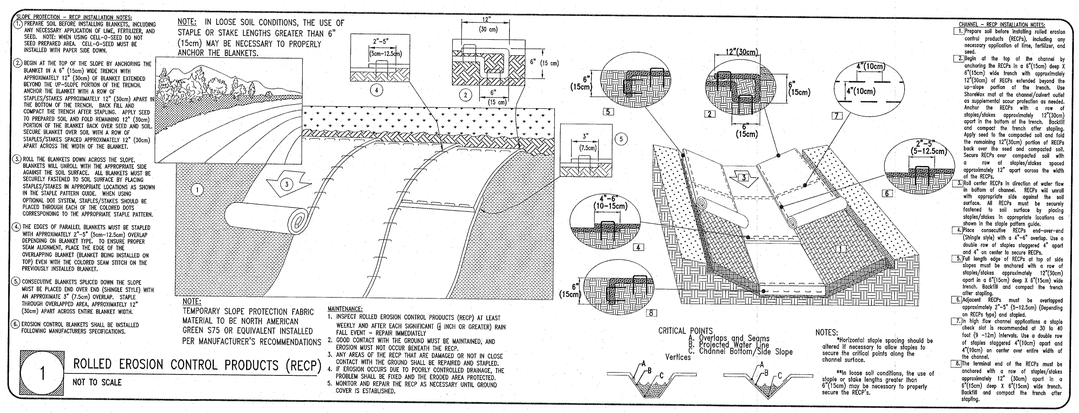
(c) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

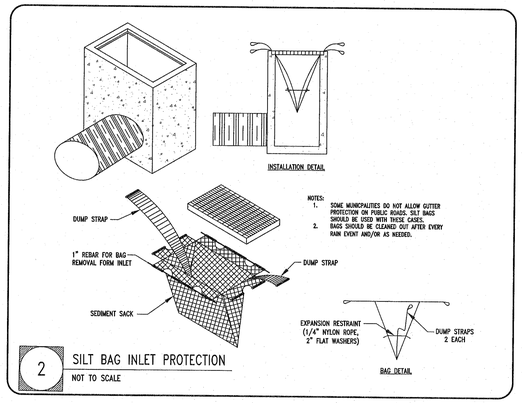
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	• *Within 24 hours*, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• *A report at least ten days before the date of the bypass, if possible.* The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19



1 ROLLED EROSION CONTROL PRODUCTS (RECP)
NOT TO SCALE



2 SILT BAG INLET PROTECTION
NOT TO SCALE

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24436 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL®

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: NC CONSTRUCTION GENERAL PERMIT (NCG01) NOTES

SHEET NUMBER:
C-9A

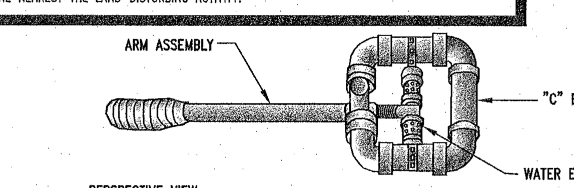
DG#20605-Rougemont, NC

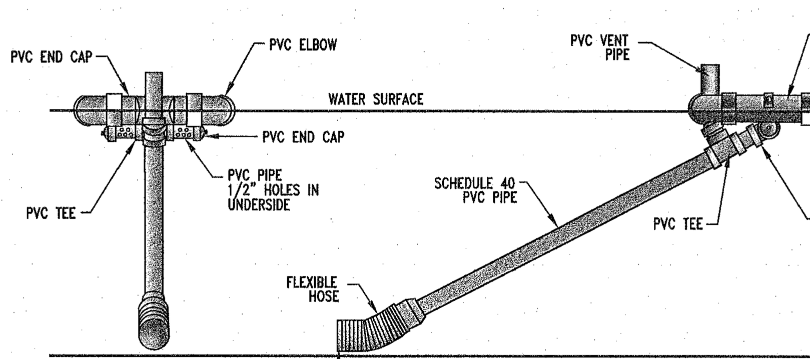
SEDIMENT BASIN REQUIREMENTS:

SEDIMENT BASINS AND TRAPS SHALL MEET THE FOLLOWING REQUIREMENTS:

A) OUTLET STRUCTURES SHALL BE UTILIZED THAT WITHDRAW WATER FROM THE SURFACE.
B) FOR BASINS OR TRAPS THAT HAVE A DRAINAGE AREA OF LESS THAN 1.0 ACRE, DRAW-DOWN DESIGNS SPECIFIED IN THE DIVISION OF LAND RESOURCES OR DELEGATED LOCAL PROGRAM REQUIREMENTS ARE ACCEPTABLE.
C) CHEMICAL TREATMENT:
   1) ALL TREATMENT CHEMICALS MUST BE STORED IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER STORM-RESISTANT COVER OR SURROUNDED BY SECONDARY CONTAINMENT STRUCTURES DESIGNED TO PROTECT ADJACENT SURFACE WATERS.
   2) ALL TREATMENT CHEMICALS MUST BE USED IN ACCORDANCE WITH DOSING SPECIFICATIONS AND APPLICATION RATES PROVIDED BY THE MANUFACTURER, SUPPLIER AND AS SPECIFIED BY THE DIVISION OF WATER QUALITY.
   3) THE PERMITTEE MUST ONLY USE CHEMICALS THAT HAVE BEEN APPROVED BY THE NC DIVISION OF WATER QUALITY AND POSTED ON THEIR "NORTH CAROLINA DIVISION OF WATER QUALITY APPROVED PAMS/FLOCCULANTS LIST" FOUND ON THEIR WEB SITE AT: http://portal.ncdenr.org/web/wq/ws/su.
   4) THE PERMITTEE MUST ROUTE STORMWATER TREATED WITH POLYMERS, FLOCCULANTS, OR OTHER TREATMENT CHEMICALS THROUGH SEDIMENT TRAPPING, FILTERING, AND/OR SETTLING DEVICES(S) TO ENSURE ADEQUATE REMOVAL OF SEDIMENT FLOCCULENT PRIOR TO DISCHARGE TO SURFACE WATERS.
D) DISCHARGE REQUIREMENT – DISCHARGES MUST MEET THE STATUTORY REQUIREMENTS OF THE SEDIMENT POLLUTION CONTROL ACT AND UTILIZE THE PROVISIONS OF SECTION 6.74 OF THE EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL TO ASSURE THAT BUFFERS AND VEGETATED AREAS WILL BE USED TO REDUCE THE POTENTIAL FOR VISIBLE SILTATION OUTSIDE OF THE 25% BUFFER ZONE NEAREST THE LAND-DISTURBING ACTIVITY.

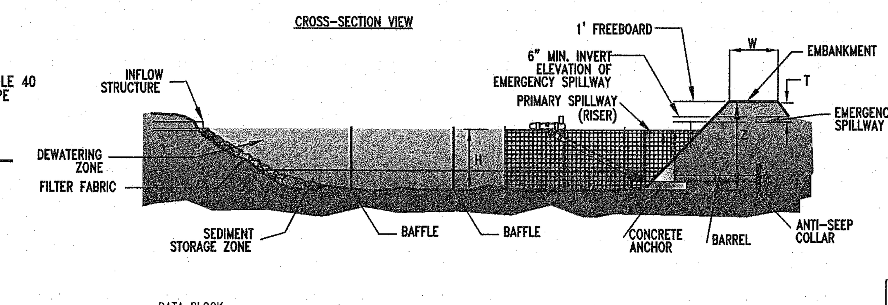
Skimmer Basin #1					
SURFACE AREA REQUIRED	1,467			SF	
SURFACE AREA PROVIDED	1,500			SF	
VOLUME REQUIRED	2,070			CF	
VOLUME PROVIDED	2,384			CF	
STORAGE DEPTH	2.0			FT	
STORAGE ELEVATION	60	x	25	FT	559.50
TOP OF DAM	68	x	33	FT	561.50
EMGY. SPILLWAY LENGTH	10			FT	560.00
BOTTOM OF BASIN	52	x	17	FT	557.50
SKIMMER SIZE	1.5			IN	
SKIMMER ORIFICE DIAMETER	1.0			IN	
SKIMMER ORIFICE RADIUS	0.5			IN	
SIDESLOPES	2:1				



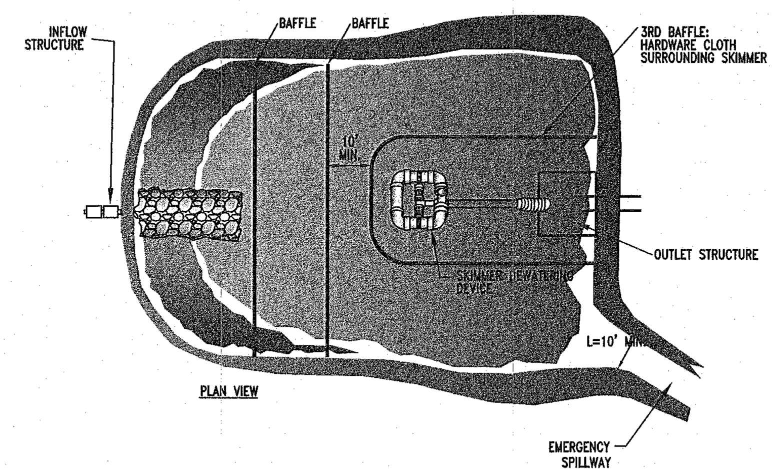


SKIMMERS SHALL BE FAIRCLOTH SKIMMERS REFER TO DETAILS FOR SKIMMER SIZE REQUIREMENTS

STANDARD SKIMMER DETAIL

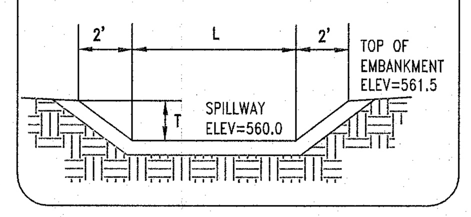


NOTES:
1. REFER TO NCESCPDM SECTION #6.61 FOR ADDITIONAL DESIGN SPECIFICATIONS REGARDING SEDIMENT BASINS.



SPILLWAY	L	T
BASIN	10 FT	1.5 FT

SPILLWAY SECTION



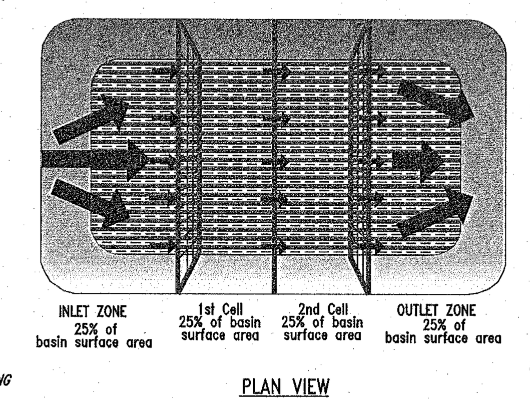
DATA BLOCK

BASIN	DRAINAGE AREA (ACRES)	DENUDED AREA (ACRES)	Q_{25}	RISER	BARREL	CLEANOUT DEPTH (FT.) H/2	H (FEET)	Z (FEET)	L (FEET)	T (FEET)	W (FEET)	CONCRETE ANCHOR
BASIN	1.15	1.15	4.5	4'x4'	15"	1.0	2.0	4.0	10	1.5	5.0	REFER TO BMP PLAN

SKIMMER CONTACT INFORMATION

J.W. FAIRCLOTH & SONS, INC.
P.O. BOX 757
HILLSBOROUGH, NC 27278
919-732-1244
919-732-1266 FX

NOTES:
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS
6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL

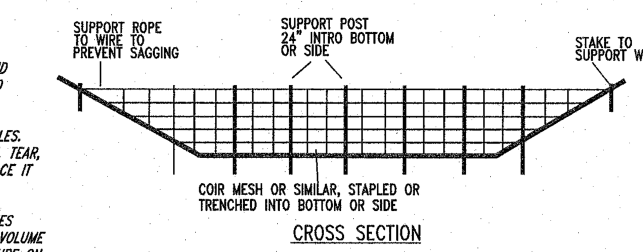


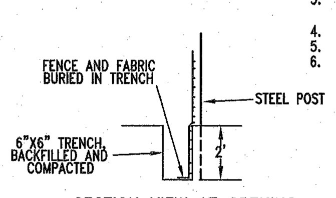
BAFFLE MAINTENANCE
INSPECT BAFFLES AT LEAST ONE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.





SKIMMER BASIN MAINTENANCE
INSPECT SKIMMER SEDIMENT BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.

IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.

IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.

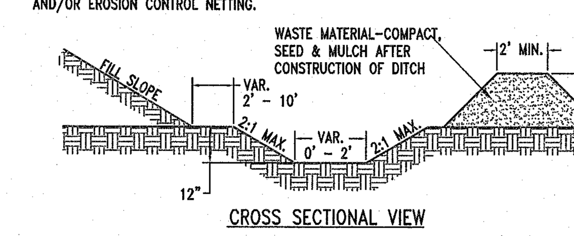
FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

CONSTRUCTION SPECIFICATIONS:
1. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER, AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
2. ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
3. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMER DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
4. PLACE THE BARREL (TYPICALLY 4-INCH SCHEDULE 40 PVC PIPE) ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES.
   PLACE A MIN. DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
5. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURERS INSTRUCTIONS, OR AS DESIGNED.
6. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOIN TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
7. EARTHEN SPILLWAYS–INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH A LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTIONS(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC WITH A TRENCH WITH STAPLES OR PINS.
8. INLETS– DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVER SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY.
9. EROSION CONTROL–CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
10. INSTALL POROUS BAFFLES AS SPECIFIED IN PRACTICE 6.65, POROUS BAFFLES.
11. AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY.

1 SKIMMER BASIN
NOT TO SCALE

MAINTENANCE:
INSPECT TEMPORARY DIVERSION DITCH ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION. REPAIR THE CHANNEL LINING AS NECESSARY PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED TO AVOID GULLY FORMATION. WHEN THE AREA ABOVE THE TEMPORARY DIVERSION DITCH IS PERMANENTLY STABILIZED, REMOVE THE DIVERSION AND FILL AND STABILIZE THE CHANNEL TO BLEND WITH THE NATURAL SURFACE.

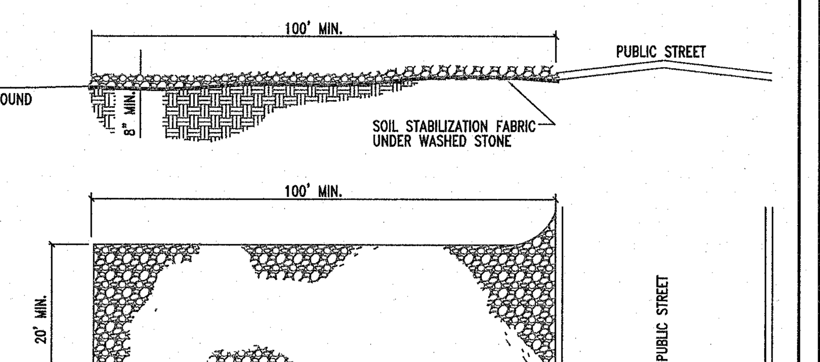
NOTES:
1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.



2 TEMPORARY DIVERSION DITCH
NOT TO SCALE

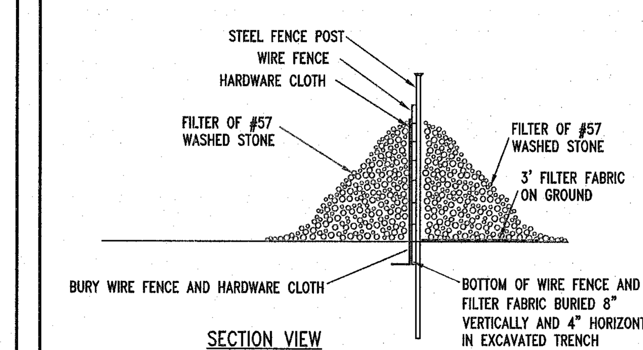
GENERAL NOTES:
1. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC STREET.
2. STONE TO BE 2"-3" WASHED STONE
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY. WHEN NECESSARY WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
5. FILTER FABRIC SHALL BE MIRAFI 500 OR EQUAL.
6. ENTRANCE SHALL BE A MINIMUM OF 20' IN WIDTH OR THE WIDTH OF THE EXIT, WHICHEVER IS GREATER.

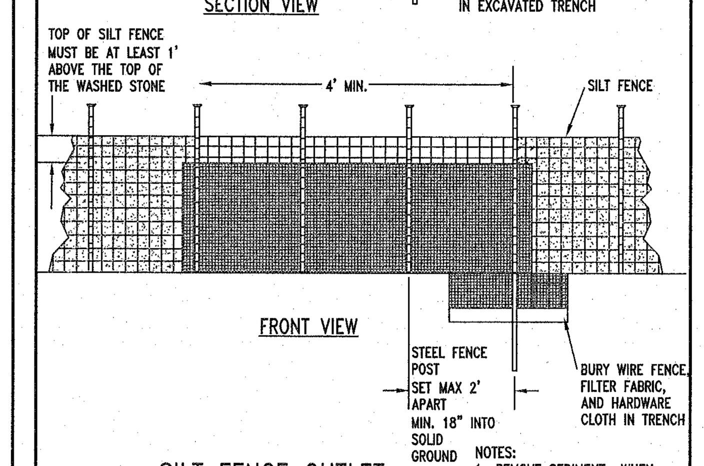
MAINTENANCE:
INSPECT CONSTRUCTION ENTRANCE PERIODICALLY FOR CONDITION OF SURFACE. TOP-DRESS WITH NEW GRAVEL AS NEEDED.



4 CONSTRUCTION ENTRANCE
NOT TO SCALE

MAINTENANCE NOTES:
1. *FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.*
2. *THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.*
3. *SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.*



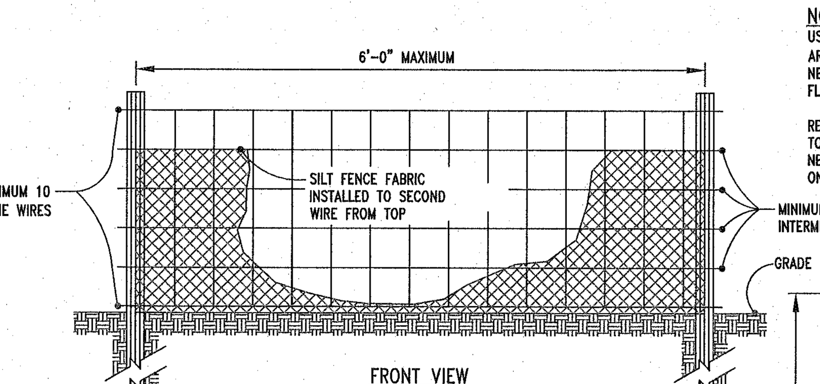


NOTES:
1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

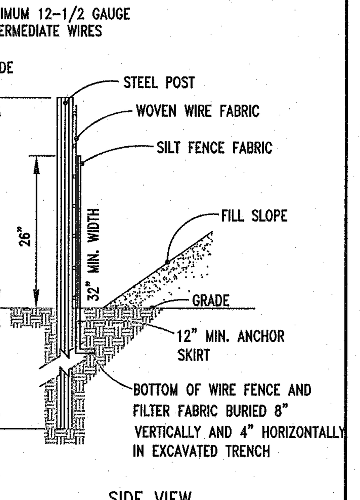
3 SILT FENCE OUTLET
NOT TO SCALE

NOTE:
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

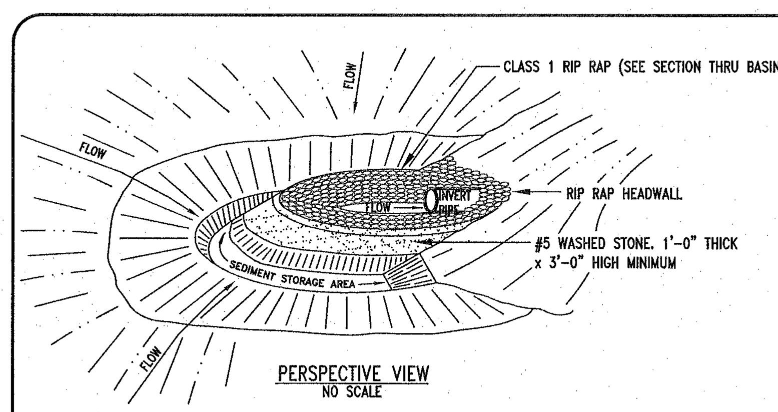
REMOVE SEDIMENT DEPOSITED AS NEEDED TO PROVIDE STORAGE VOLUME FOR THE NEXT RAIN AND TO REMOVE PRESSURE ON THE SILT FENCE.

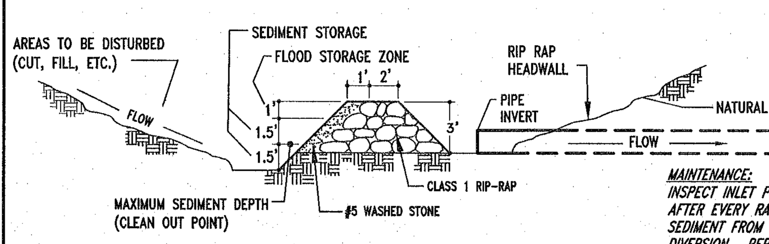


MAINTENANCE NOTES:
1. *FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.*
2. *THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.*
3. *SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH 6 INCHES. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.*



5 SILT FENCE
NOT TO SCALE

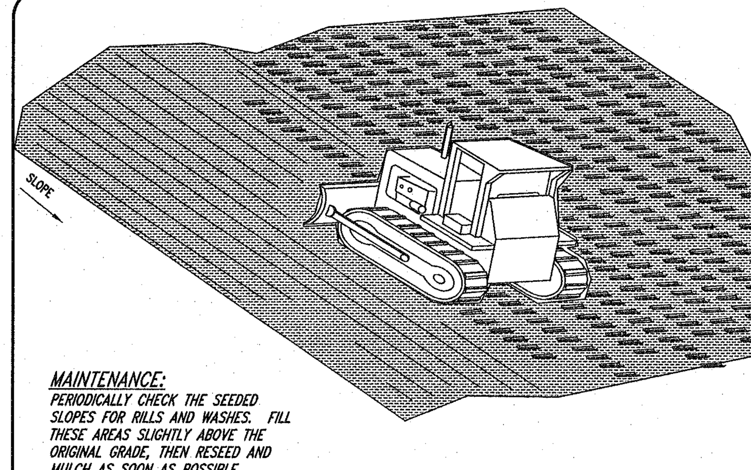




SECTION THRU CATCH BASIN, FILTER AND CULVERT PIPE
NO SCALE

MAINTENANCE:
INSPECT INLET PROTECTION ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION. REPAIR THE CHANNEL LINING AS NECESSARY PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED TO AVOID GULLY FORMATION. WHEN THE AREA ABOVE THE INLET PROTECTION IS PERMANENTLY STABILIZED, REMOVE THE PROTECTION AND FILL AND STABILIZE THE CHANNEL TO BLEND WITH THE NATURAL SURFACE.

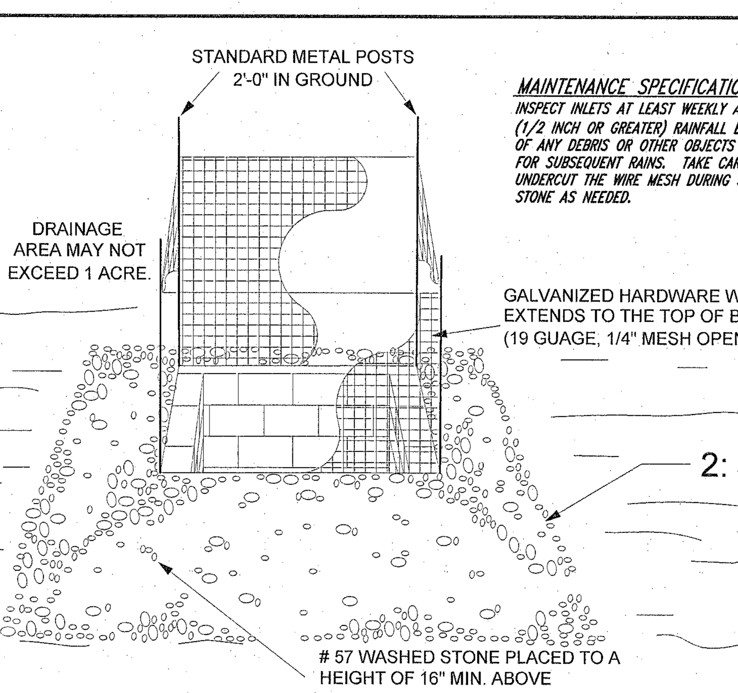
6 HORSESHOE INLET PROTECTION
NOT TO SCALE



MAINTENANCE:
PERIODICALLY CHECK THE SEEDED SLOPES FOR RILLS AND WASHES. FILL THESE AREAS SLIGHTLY ABOVE THE ORIGINAL GRADE, THEN RESEED AND MULCH AS SOON AS POSSIBLE.

NOTE:
USE DOZER TRACKS TO CREATE GROOVES PERPENDICULAR TO THE SLOPE. GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE SEDIMENT IN RUNOFF.

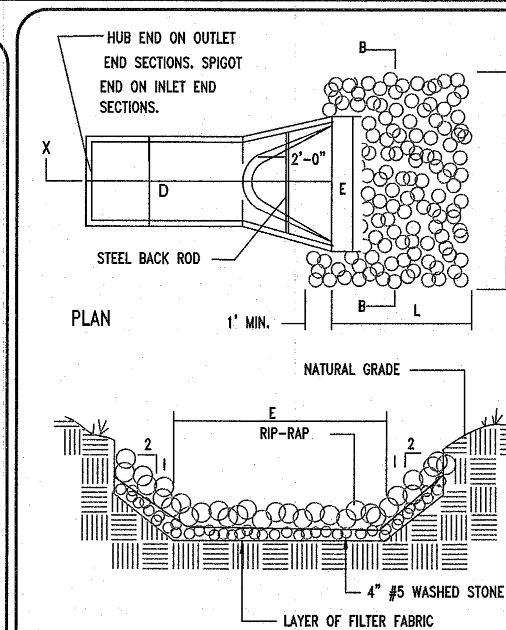
7 SLOPE TRACKING DETAIL
NOT TO SCALE



MAINTENANCE SPECIFICATIONS
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

CONSTRUCTION SPECIFICATIONS
1. UNIFORMLY GRADE SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAX. OF 4 FEET APART.
3. SURROUND THE POSTS WITH MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POLES AT THE TOP, MIDDLE AND BOTTOM. PLACING A 2-FOOT STRIP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE ARE HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZE IT WITH GROUNDCOVER.

9 TEMPORARY INLET PROTECTION
NOT TO SCALE



Rip-Rap Apron#1		
	DIMENSIONS	
ENTRY WIDTH	3.8	FT
LENGTH	7.5	FT
EXIT WIDTH	8.8	FT
MIN. THICKNESS	22	IN
MIN. STONE DIAMETER	6	IN
STONE CLASS	B	

Rip-Rap Apron#2		
	DIMENSIONS	
ENTRY WIDTH	3.8	FT
LENGTH	7.5	FT
EXIT WIDTH	8.8	FT
MIN. THICKNESS	22	IN
MIN. STONE DIAMETER	6	IN
STONE CLASS	B	

Rip-Rap Apron#3		
	DIMENSIONS	
ENTRY WIDTH	3.8	FT
LENGTH	7.5	FT
EXIT WIDTH	8.8	FT
MIN. THICKNESS	22	IN
MIN. STONE DIAMETER	6	IN
STONE CLASS	B	

NOTES

RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.

THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIP-RAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.

MAXIMUM TAPER TO RECEIVING CHANNEL 5:1.

THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL.

ALL SUBGRADE STRUCTURE TO BE COMPACTED TO 95% OR GREATER.

THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.

NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.

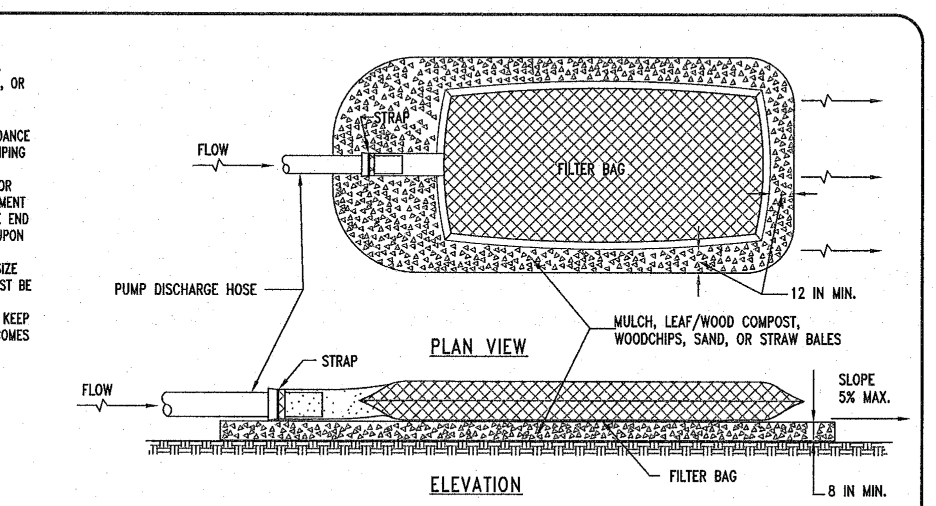
CONSTRUCTION SPECIFICATIONS

SUBGRADE PREPARATION–PREPARE THE SUBGRADE FOR RIPRAP AND FILTER TO THE REQUIRED LINES AND GRADES SHOWN ON THE PLANS. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY APPROXIMATING THAT OF THE SURROUNDING UNDISTURBED MATERIAL OR OVERFILL DEPRESSIONS WITH RIPRAP. REMOVE BRUSH, TREES, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. CUT THE SUBGRADE SUFFICIENTLY DEEP THAT THE FINISHED GRADE OF THE RIPRAP WILL BE AT THE ELEVATION OF THE SURROUNDING AREA. CHANNELS SHOULD BE EXCAVATED SUFFICIENTLY TO ALLOW PLACEMENT OF THE RIPRAP IN A MANNER SUCH THAT THE FINISHED INSIDE DIMENSIONS AND GRADE OF THE RIPRAP MEET DESIGN SPECIFICATIONS.
SYNTHETIC FILTER FABRIC–PLACE THE CLOTH FILTER DIRECTLY ON THE PREPARED FOUNDATION. OVERLAP THE EDGES BY AT LEAST 12 INCHES, AND SPACE ANCHOR PINS EVERY 3 FT ALONG THE OVERLAP. BURY THE UPSTREAM END OF THE CLOTH A MINIMUM OF 12 INCHES BELOW GROUND AND WHERE NECESSARY, BURY THE LOWER END OF THE CLOTH OR OVER LAP WITH THE NEXT SECTION AS REQUIRED. SEE FIGURE 6.14A PAGE 6.14.6. TAKE CARE NOT TO DAMAGE THE CLOTH WHEN PLACING RIPRAP. IF DAMAGE OCCURS REMOVE THE RIPRAP, AND REPAIR THE SHEET BY ADDING ANOTHER LAYER OF FILTER MATERIAL WITH A MINIMUM OVERLAP OF 12 INCHES AROUND THE DAMAGED AREA. IF EXTENSIVE DAMAGE IS SUSPECTED, REMOVE AND REPLACE THE ENTIRE SHEET. WHERE LARGE STONES ARE USED OR MACHINE PLACEMENT IS DIFFICULT, A 4-INCH LAYER OF FINE GRAVEL OR SAND MAY BE NEEDED TO PROTECT THE FILTER CLOTH.
STONE PLACEMENT–PLACEMENT OF RIPRAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER. PLACE RIPRAP SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY, AND CONTROLLED DUMPING DURING FINAL PLACEMENT. PLACE RIPRAP TO ITS FULL THICKNESS IN ONE OPERATION. DO NOT PLACE RIPRAP BY DUMPING THROUGH CHUTES OR OTHER METHODS THAT CAUSE SEGREGATION OF STONE SIZES. TAKE CARE NOT TO DISLODGE THE UNDERLYING BASE OR FILTER WHEN PLACING THE STONES.
THE TOE OF THE RIPRAP SLOPE SHOULD BE KEYED TO A STABLE FOUNDATION AT ITS BASE AS SHOWN IN FIGURE 6.15B. THE TOE SHOULD BE EXCAVATED TO A DEPTH ABOUT 1.5 TIMES THE DESIGN THICKNESS OF THE RIPRAP, AND SHOULD EXTEND HORIZONTALLY FROM THE SLOPE.
THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF STONE SIZES TO PRODUCE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE FINISHED GRADE OF THE RIPRAP SHOULD BLEND WITH THE SURROUNDING AREA. NO OVERFALL OR PROTRUSION OF RIPRAP SHOULD BE APPARENT

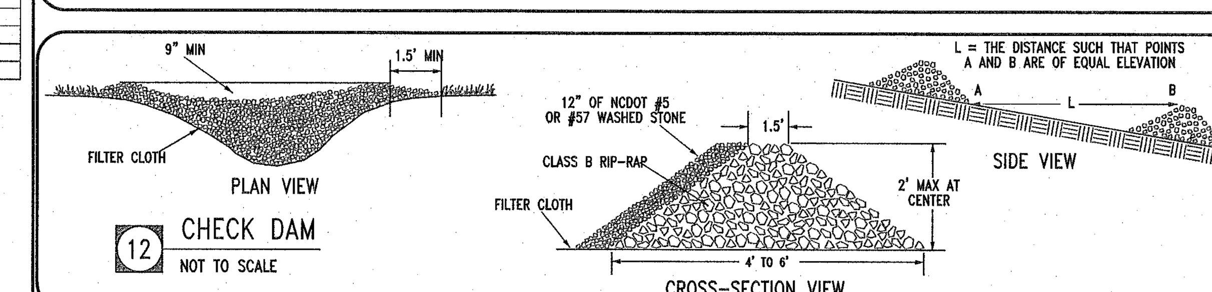
MAINTENANCE:
IN GENERAL, ONCE A RIPRAP INSTALLATION HAS BEEN PROPERLY DESIGNED AND INSTALLED IT REQUIRES VERY LITTLE MAINTENANCE. RIPRAP SHOULD BE INSPECTED PERIODICALLY FOR SCOUR OR DISLODGED STONES. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.

10 RIP-RAP APRON
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS
1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE
6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.



11 FILTER BAG
NOT TO SCALE



MAINTENANCE:
INSPECT CHECK DAM ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION. REPAIR THE CHANNEL LINING AS NECESSARY PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED TO AVOID GULLY FORMATION. WHEN THE AREA ABOVE THE CHECK DAM IS PERMANENTLY STABILIZED, REMOVE THE PROTECTION AND FILL AND STABILIZE THE CHANNEL TO BLEND WITH THE NATURAL SURFACE.

12 CHECK DAM
NOT TO SCALE

TEMPORARY SEEDING SPECIFICATIONS/SCHEDULE

Date	Type	Planting Rate
March – Oct.	Browntop Millet	40 lbs/acre
Nov. – Feb.	Winter Rye	120 lbs/acre

SEEDING SPECIFICATIONS/SCHEDULE

FOR SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1)

Date	Type	Planting Rate
Aug 15 – Nov 1	Tall Fescue	300 lbs/acre
Nov 1 – Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1 – Apr 15	Tall Fescue	300 lbs/acre
Apr 14 – Jun 30	Hulled Common Bermuda Grass	25 lbs/acre
Jul 1 – Aug 15	Tall Fescue & Browntop Millet or Sorghum-Sudan Hybrids	240 lbs/acre-Tall Fescue; 35 lbs/acre Browntop Millet; 30 lbs/acre Sorghum-Sudan Hybrids

FOR SHOULDERS, SIDE DITCHES, SLOPES (3:1 – 2:1)

Date	Type	Planting Rate
Mar 1 – Jun 1	Sericea Lespedeza (scarified) & use the following combinations:	50 lbs/acre (Serica Lespedeza)
Mar 1 – Apr 15	Add Tall Fescue	240 lbs/acre
Mar 1 – Jun 30	Or add Julled Common Bermuda Grass	25 lbs/acre
Jun 1 – Sep 1	Tall Fescue & Browntop Millet or Sorghum-Sudan Hybrids	240 lbs/acre Tall Fescue; 35 lbs/acre Browntop Millet; 30 lbs/acre Sorghum-Sudan Hybrids
Sep 1 – Mar 1	Sericea Lespedeza (Unhulled-Unscarafied & Tall Fescue	70 lbs/acre Sericea Lespedeza; 240 lbs/acre Tall Fescue
Nov 1 – Mar 1	Add Abruzzi Rye	25 lbs/acre

CONSULT S&EC ENGINEER FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

*** TEMPORARY: RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED P RMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHADED OUT.

SEEDBED PREPARATION:
1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE SEEDING MIXTURE).
5. CONTINUE TILLAGE UNITL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT S&EC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

SEEDING MIXTURE:

AGRICULTURE LIMESTONE:	2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)
FERTILIZER:	1,000 LBS/ACRE – 10-10-10
SUPERPHOSPHATE:	500 LBS/ACRE – 20% ANALYSIS
MULCH:	2 TONS/ACRE – SMALL GRAIN STRAW
ANCHOR:	ASPHALT EMULSION AT 400 GALS/ACRE

13 TEMPORARY SEEDING
NOT TO SCALE

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24434 MATTHEW E. LOWDER 12/10/19

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:

Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE:
EROSION CONTROL DETAILS

SHEET NUMBER:
C-9B

DG#20605-Rougemont, NC

BMP element:	Potential problem:	How I will remediate the problem
The entire BMP	Trash/debris is present	Remove the trash/debris
The perimeter of the bio-retention cell	Areas of bare soil and/or erosive gullies have formed	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application Maintain vegetation at a height of approximately six inches.
The inlet device: pipe, stone verge or swale	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment	Remove sediment and clogged stone and replace with clean stone.
The pretreatment area	Flow is bypassing pretreatment area and/or gullies have formed	Re-grade if necessary to route all flow to the pretreatment area. Restabilize the area after grading.
	Sediment has accumulated to a depth greater than three inches	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and restabilize the pretreatment area.
	Erosion has occured	Provide additional erosion protection such as reinforced turf matting or rip-rap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand.
The bio-retention cell: Vegetation	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	Tree stakes/wires are present six months after planting.	Remove tree stakes/wires (which can kill the tree if not removed)
The bio-retention cell: soils and mulch	Mulch is breaking down or has floated away.	Spot mulch if there are only random void areas. Replace whole mulch layer if necessary. Remove the remaining mulch and replace with triple shredded hard wood mulch at a maximum depth of three inches.
	Soils and/or mulch are clogged with sediment	Determine the extend of the clogging. Remove and replace either just the top layers or the entire media as needed. Dispose of the spoil in an appropriate off-site location. Use triple shredded hard wood mulch at a maximum depth of three inches. Search for the source of the sediment and remedy the problem if possible.
	An annual soil test shows that pH has dropped or heavy metals have accumulated in the soil media	Dolomitic lime shall be applied as recommended per the soil test and toxic soils shall be removed, disposed of properly and replaced with new planting material.
The underdrain system	Clogging has occurred.	Wash out the underdrain system
The drop inlet	Clogging has occured	Clean out the drop inlet. Dispose of the sediment off-site.
	The drop inlet is damaged.	Repair or replace the drop inlet.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the local NC Division of Water Quality Regional Office, or the 401 Oversight Unit at 919-733-1786.

STAGE/STORAGE TABLE

STAGE (FT)	ELEVATION (FT)	CONTOUR AREA (SF)	INCREMENTAL STORAGE (CF)	TOTAL STORAGE (CF)
0.0	557.5	2240	0	0
0.5	558.0	2650	1223	1223
1.0	558.5	3070	1430	2653 (WQv)
1.5	559.0	3500	1643	4295
2.0	559.5	3945	1861	6156

NOTE:
A PERMEABILITY SOIL REPORT SHALL BE PROVIDED AFTER BIO-RETENTION SOIL MIXTURE IS IN PLACE - REFER TO STORMWATER MANAGEMENT NOTES FOR REQUIREMENTS.

GRASS NOTE:
GRASS SHALL BE EITHER HYBRID BERMUDA GRASS OR CENTIPEDE

BIO-RETENTION SOIL MIXTURE:

Bio-retention Soil Mixture (BSM): shall be placed and graded using low ground-contact pressure equipment or by excavators and/or backhoes operating on the ground adjacent to the bio-retention facility. No heavy equipment shall be used within the perimeter of the bio-retention facility before, during, or after the placement of the BSM. The BSM shall be placed in horizontal layers not to exceed 12 inches for the entire area of the bio-retention facility. The BSM shall be compacted by saturating the entire area of the bio-retention facility after each lift of BSM is placed until water flows from the under-drain. Water for saturation shall be applied by spraying or sprinkling. An appropriate sediment control device shall be used to treat any sediment-laden water discharged from the under-drain. If the BSM becomes contaminated during the construction of the facility, the contaminated material shall be removed and replaced with uncontaminated material at no additional cost to the Administration. Final grading of the BSM shall be performed after a 24-hour settling period. Final elevations shall be within 2 inches of elevations shown on the Contract Plans.

The Bio-retention Soil Mixture (BSM) shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bio-retention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations.

Prior to placing the under-drain and the BSM, the bottom of the excavation shall be roto-tilled to a minimum depth of 6 inches to alleviate any compaction of the facility bottom. Any substitute method for roto-tilling must be approved by the Engineer prior to use. Any ponded water shall be removed from the bottom of the facility and the soil shall be friable before roto-tilling.

Once the BSM has been placed the entire bio-retention area shall be sodded with grass that has been grown in sandy soils or that has the roots washed clean of any clay or other materials that could clog the function of the bio-retention system.

OPERATION AND MAINTENANCE

North Carolina storm water rules require annual inspections by the regulating agency of bio-retention areas as a minimum. More frequent inspections by the land owner or system operator are strongly encouraged to ensure the proper operation of bio-retention areas.

A. Rainfall Event
   1. Inspect the basin after every runoff-producing rainfall event.

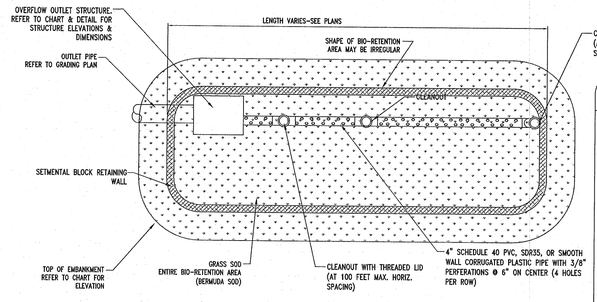
B. Monthly Inspection
   1. Inspect the basin monthly
   2. Check the bio-retention area side slopes; remove trash and repair eroded areas before the next rainfall event.
   3. Check the vegetative and rock filters for sediment accumulation, erosion and proper operation of the flow spreader mechanism and repair as necessary.
   4. Visually inspect and repair soil erosion on a monthly basis.
   5. Remulch any void area whenever necessary. Replacement of mulch layers may be necessary every two or three years. mulch should be replaced in the spring. When the mulch layer is replaced, the previous layer should be removed first.
   6. Remove and replace all dead and diseased vegetation considered beyond treatment. This should be done twice a year, once in the spring and once in the fall. Treat all diseased trees and shrubs that are not beyond treatment as needed.

C. Quarterly Inspection
   1. Inspect the collection system (i.e. catch basin, pipes and grass swales) for proper functioning. Clear accumulated trash from basin grates and basin bottoms. Check piping for obstructions.
   2. Check pond inlet pipes for undercutting, replace rip-rap and repair broken pipes.
   3. Reseed grassed swales, including the vegetated filter if applicable, twice a year as necessary. Repair eroded areas immediately.

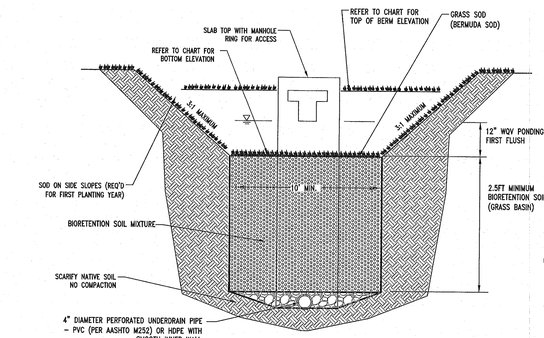
D. Six Month Inspection
   1. Remove accumulated sediment from the bottom of the outlet structure or other areas where accumulated sediment is noted.
   2. Inspect the embankment taking note of any wet areas where water may be seeping through the soil.

E. General Inspection
   1. Maximum grass height is to be 6in.
   2. No woody vegetation shall be allowed to grow in the bio-retention area.
   3. Debris shall be removed from blocking the inlet and outlet structures and from areas of potential clogging.
   4. Periodic removal of dead vegetation shall be accomplished.
   5. All components of the bio-retention system must be kept in good working order.

1 BIO-RETENTION DETAILS
N.T.S.



PLAN VIEW



BIO-RETENTION CROSS-SECTION

NOTES:

1. ALL BIO-RETENTION SHALL HAVE AN ACCESS EASEMENT CONNECTING TO A DEDICATED PUBLIC RIGHT OF WAY.
2. ALL DRAINAGE AREAS TO A BIO-RETENTION FACILITY ARE TO BE STABILIZED PRIOR TO INSTALLATION OF SOILS OR GRASS SOD.
3. WRAP PERFORATED UNDERDRAIN WITH FILTER FABRIC PRIOR TO BACKFILLING.
4. UNDERDRAIN PIPE SHOULD HAVE 3/8" PERFORATIONS SPACED AT 6" CENTERS, MIN. 4 HOLES PER ROW. MAX SPACING OF UNDERDRAIN PIPE IS 10 FEET ON CENTER.
5. UNDERDRAIN CLEANOUTS MUST EXTEND A MIN. OF 6 INCHES ABOVE TOP SURFACE OF GRASS LAYER, PREFERABLY TO THE TOP OF DESIGN MAXIMUM PONDING DEPTH IN THE BIO-RETENTION BASIN.

BIO-RETENTION SOIL MIXTURE

	PERCENT BY VOLUME	MATERIAL
SAND	85%-88%	CONSTRUCTION SAND
ITEM	8%-12%	SILT
ORGANIC MATTER	3%-5%	COMPOST/PEAT MOSS
PERMEABILITY	THE PERMEABILITY SHOULD FALL BETWEEN 1 AND 6 INCHES PER HOUR, AND 1-2 INCHES PER HOUR IS PREFERRED.	
PHOSPHOROUS INDEX	RANGE BETWEEN 10 AND 30 (CONFIRM WITH SOIL ANALYSIS REPORT FROM NCDA LAB)	

BIO-RETENTION CONSTRUCTION SEQUENCE:

Step 1. Construction of the bioretention area may only begin after the contributing drainage area has been stabilized. It may be necessary to block certain curb or other inlets while the bioretention area is being constructed. The proposed site should be checked for existing utilities prior to any excavation.

Step 2. Temporary E&S controls are needed during construction of the bioretention area to divert stormwater away from the bioretention area until it is completed. Maintain erosion control measures in place until bioretention area has been completed. Special protection measures such as erosion control fabrics may be needed to protect vulnerable slide slopes from erosion during the construction process.

Step 3. Excavators or backhoes should work from the sides to excavate the bioretention area to its appropriate design depth and dimensions. Excavating equipment should have scoops with adequate reach so they do not have to sit inside the footprint of the bioretention area. Contractors should use a cell construction approach in larger bioretention basins, whereby the basin is split into 500 to 1,000 sq. ft. temporary cells with a 10-15 foot earth bridge in between, so that cells can be excavated from the side.

Step 4. It may be necessary to rip the bottom soils to a depth of 6 to 12 inches to promote greater infiltration.

Step 5. Place geotextile fabric on the sides of the bioretention area with a 6-inch overlap on the sides. Place the appropriate depth of stone on the bottom, install the perforated underdrain pipe, place stone above the underdrain pipe, and add sand layer between the underdrain and the soil media layer.

Step 6. Deliver the soil media from an approved vendor, and store it on an adjacent impervious area or plastic sheeting. Apply the media in 12-inch lifts until the desired top elevation of the bioretention area is achieved. Wait a few days to check for settlement, and add additional media, as needed, to achieve the design elevation. CONTRIBUTING DRAINAGE AREA TO BIO-RETENTION POND TO BE STABILIZED PRIOR TO INSTALLING BIO-RETENTION SOIL MEDIA.

Step 7. Install the vegetation, and water accordingly.

Step 8. Coordinate with inspector and engineer to conduct the final construction inspection. Upon completion of bioretention facility remove temporary erosion control measures and complete final stabilization of the project.

STORMWATER MANAGEMENT NOTES:

1. *THE DEVELOPER OR HIS AGENT SHALL CONTACT THE ENGINEER WHEN THE BEST MANAGEMENT PRACTICE(S) ARE CONSTRUCTED AND ABOUT TO BECOME OPERATIONAL SO A FINAL INSPECTION CAN BE PERFORMED TO DETERMINE COMPLIANCE WITH THE APPROVED PLAN CAN BE PERFORMED.*
2. *PRIOR TO CONSTRUCTION, A SOIL TEST OF THE BIO-RETENTION FILTER MEDIA SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD WITH A COPY SENT TO THE ENGINEER. THE TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR pH, PHOSPHORUS, MAGNESIUM, AND POTASSIUM AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. ALL TESTING RESULTS SHALL COME FROM THE SAME TESTING FACILITY. THE NC DEPARTMENT OF AGRICULTURE (NCDA) LAB IS THE PREFERRED TESTING FACILITY. SHOULD THE pH FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE MODIFIED (RAISED) WITH LIME OR (LOWER) WITH IRON SULFATE PLUS SULFUR OR AS DIRECTED BY THE NCDA OR ENGINEER.*
3. *PRIOR TO CONSTRUCTION A COMPOSITION TEST OF THE BIO-RETENTION FILTER MEDIA SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD WITH A COPY SENT TO THE ENGINEER. FILTER MEDIA SHALL CONFORM TO THE FOLLOWING: 85-88% SAND (USDA TEXTURAL CLASSIFICATION), 8-12% FINES (SILT AND CLAY), AND 3-5% ORGANIC MATTER (PEAT/MOSS OR PINE BARK) BY VOLUME.*
4. *PERFORM A DOUBLE RING INFILTRATION TEST (MINIMUM OF 3 TESTS OR 1 PER 500 SF OF FILTER MEDIA WHICHEVER IS GREATER) AT THE COMPLETION OF THE BIO-RETENTION BMP. INFILTRATION RATE OF THE CONSTRUCTED BIO-RETENTION MEDIA SHALL BE BETWEEN 1-6 IN/HR. PROVIDE A COPY OF THE RESULTS TO THE ENGINEER.*
5. *ANNUAL MAINTENANCE INSPECTION AND REPORT REQUIRED - THE OWNER OF A PERMITTED STRUCTURAL STORMWATER BMP/CONTROL SHALL ANNUALLY SUBMIT A MAINTENANCE AND INSPECTION REPORT FOR EACH BMP TO THE STORMWATER ADMINISTRATOR. ANNUAL INSPECTIONS SHALL BEGIN WITHIN ONE YEAR OF THE RECORDATION OF ANY DEED(S) SHOWING STORMWATER BMPs/CONTROL STRUCTURES.*
6. *UPON COMPLETION OF THE PROJECT, AND BEFORE A CERTIFICATE OF OCCUPANCY SHALL BE GRANTED, THE ENGINEER OF RECORD SHALL CERTIFY THAT THE COMPLETED PROJECT IS IN ACCORDANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS AND DESIGNS.*
7. *A FINAL INSPECTION OF THE SITE AND STORMWATER MANAGEMENT BMP/CONTROLS TO BE SCHEDULED WITH AND COMPLETED BY THE ENGINEER & INSPECTOR.*
8. *THE ENGINEER'S CERTIFICATION OF COMPLETION WILL BE REQUIRED PRIOR TO THE FINAL PLAT OR CERTIFICATE OF OCCUPANCY. THE STORMWATER CONTROL IS TO BE INSPECTED TO ENSURE IT IS FUNCTIONING AS DESIGNED AND HAS FULL DESIGN VOLUME PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY.*

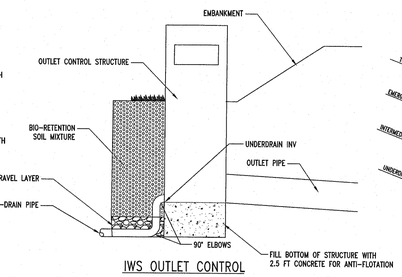
STORMWATER MANAGEMENT DESIGN
BIO-RETENTION POND

RIVER BASIN:	NEUSE
WATERSHED:	FALLS LAKE WATERSHED - LOWER ENO UNPROTECTED
RECEIVING STREAM:	MOUNTAIN CREEK
STREAM INDEX:	27-2-21-4-(1)
STREAM CLASS:	WS-II; HQW; NSW

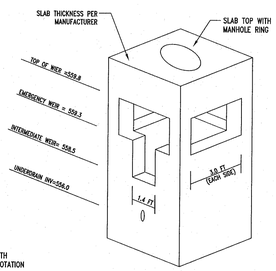
POND DESIGN SUMMARY

DRAINAGE AREA TO POND:	0.88 ACRES
SITE IMPERVIOUS AREA TO POND:	0.53 ACRES
OFF-SITE DESIGN IMPERVIOUS AREA TO POND:	0.0 ACRES
TOTAL DESIGN IMPERVIOUS AREA TO POND:	0.53 ACRES

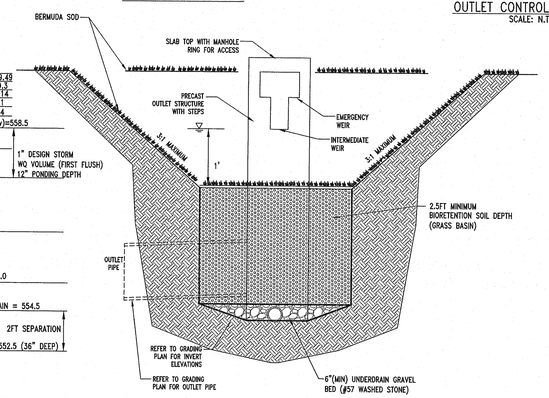
	PRE-DEVELOPED OVERALL	POST-DEVELOPED TO POND	POST DEVELOPED THROUGH POND	POND BY-PASS	TOTAL
DRAINAGE AREA:	2.39 AC	0.88 AC		1.51 AC	
CURVE NUMBER:	74.1	87.6		77.5	
TIME OF CONCENTRATION:	10 MIN	5 MIN		10 MIN	
1" STORM EVENT:		0.171 CFS	0.000 CFS		
1-YEAR STORM EVENT:	3.071 CFS	2.637 CFS	0.043 CFS	2.407 CFS	2.45 CFS
2-YEAR STORM EVENT:	4.605 CFS	3.479 CFS	0.460 CFS	3.453 CFS	3.913 CFS
10-YEAR STORM EVENT:	8.976 CFS	5.565 CFS	2.366 CFS	6.37 CFS	8.736 CFS
100-YEAR STORM EVENT:	16.16 CFS	8.669 CFS	6.761 CFS	11.01 CFS	17.771 CFS



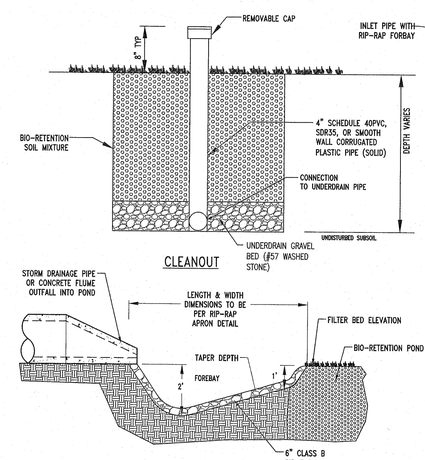
IWS OUTLET CONTROL



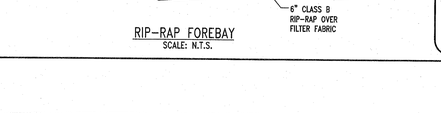
OUTLET CONTROL STRUCTURE
SCALE: N.T.S.



BIO-RETENTION CONTROL STRUCTURE



CLEANOUT



RIP-RAP FOREBAY
SCALE: N.T.S.

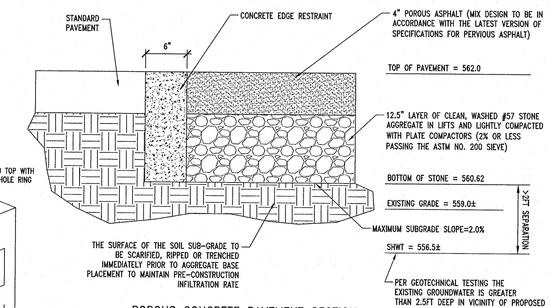
PERMEABLE PAVEMENT

ACTIVITIES PROHIBITED:
SANDING
RE-SEALING
RE-SURFACING
POWER WASHING
STORAGE OF MULCH OR SOIL
STORAGE OF SNOW PILES
STORAGE OF HEAVY LOADS
APPLICATION OF SALT OR DE-ICERS

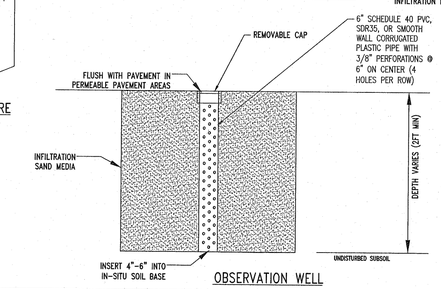
EXAMPLE PERMEABLE PAVEMENT SIGN

OPERATION & MAINTENANCE PROVISIONS (PERMEABLE PAVEMENT)

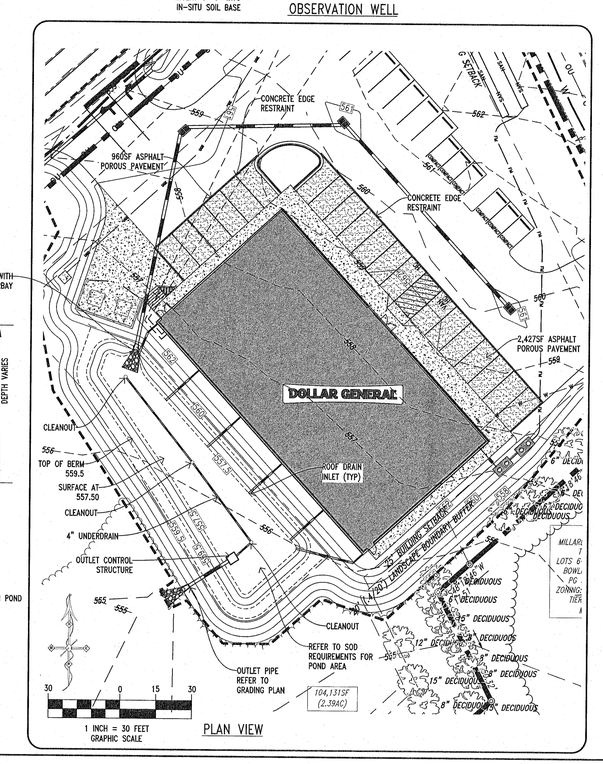
BMP element:	Potential problem:	How to remediate the problem
The perimeter of the permeable pavement	Areas of bare soil and/or erosive gullies	Regrade the soil if necessary to remove the gully, then plant ground cover and water until established
	A vegetated area drains toward the pavement	Regrade the area so that it drains away from the pavement, then plant ground cover and water until established
The surface of the permeable pavement	Trash/debris present	Remove the trash/debris
	Weeds	Do not pull the weeds (may pull out media as well). Spray them with a systemic herbicide such as glyphosate and then return within the week to remove them by hand. (Another option is to pour boiling water on them or steam them)
	Sediment	Vacuum sweep the pavement
	Rutting, cracking, or damaged structure	Consult and appropriate professional
Observation well	Water present more than five days after a storm event	Clean out clogged underdrain pipes. Consult an appropriate professional for clogged soil subgrade.
Educational sign	Missing or is damaged	Replace the sign



POROUS CONCRETE PAVEMENT SECTION



OBSERVATION WELL



PLAN VIEW

TRIANGLE SITE DESIGN
CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24434 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL®
Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

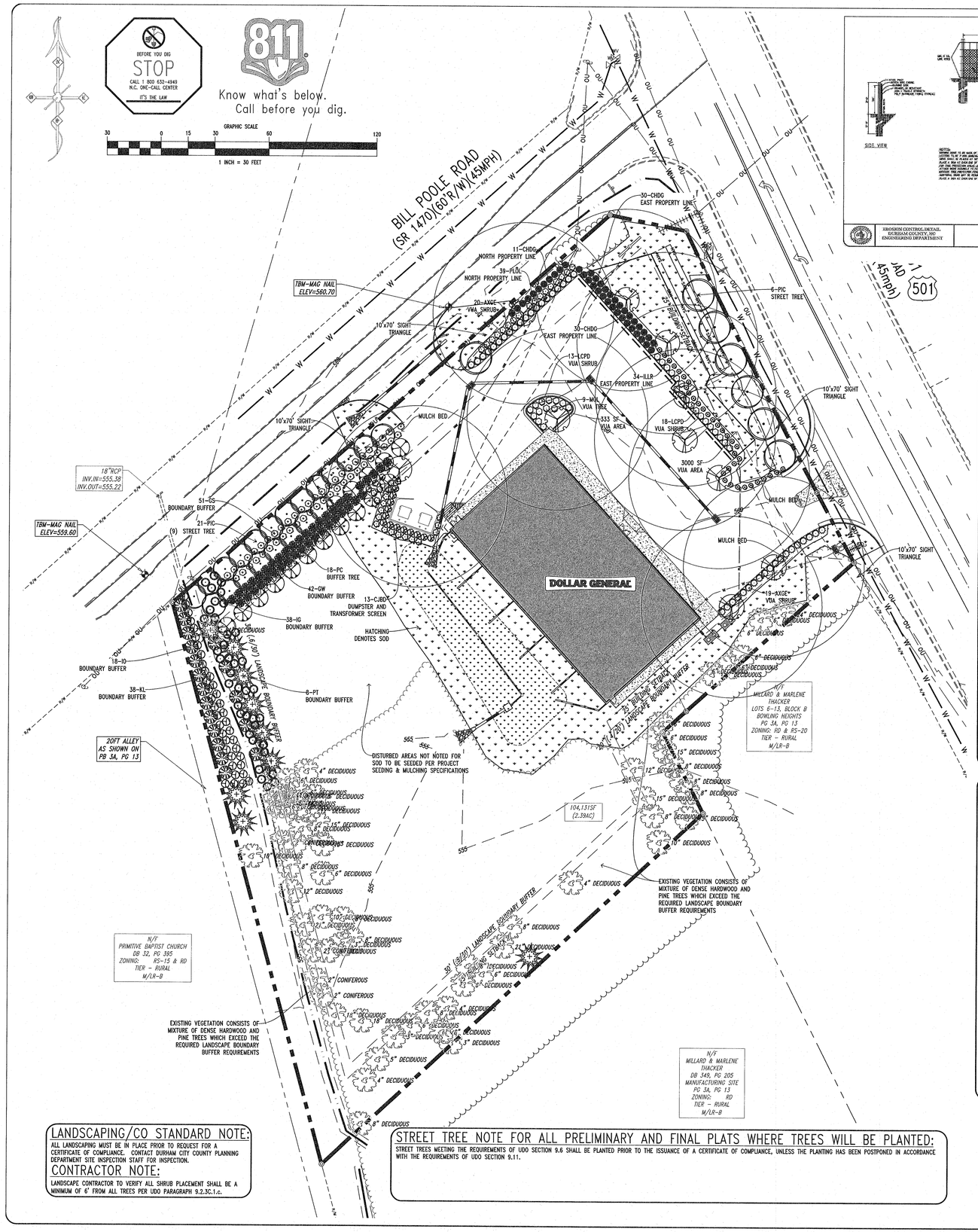
OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167
TITLE:	STORMWATER MANAGEMENT DETAILS
SHEET NUMBER:	C-10

DG#20605-Rougemont, NC



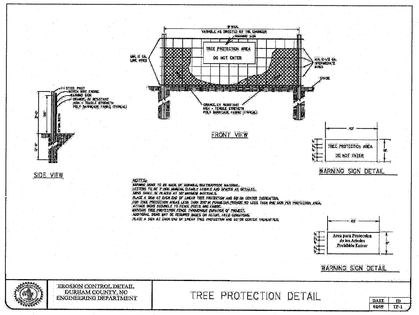


Figure 1, Tree Planting Detail

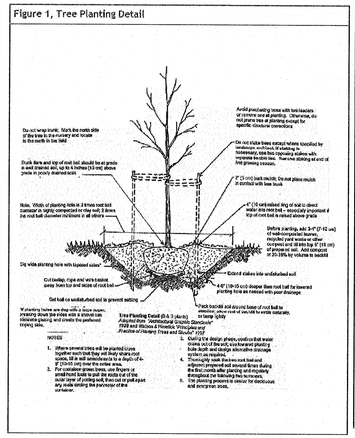
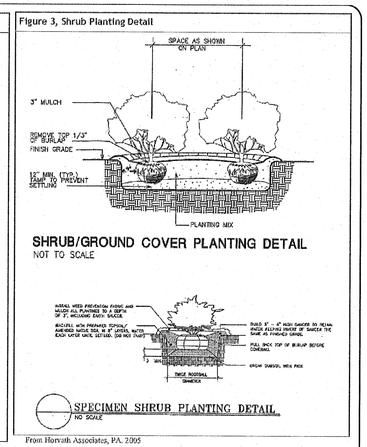


Figure 3, Shrub Planting Detail



From Horvath Associates, P.A. 2005

LANDSCAPE NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING ALL REQUIRED LANDSCAPING FOR THE ENTIRE SITE, TO INCLUDE BUT NOT LIMITED TO: SODDED/SEEDED AREAS, SHRUB BEDS, PARKING LOT ISLANDS, ROADSIDE SIGN BASE(S) AND MONUMENT PLANTERS.
2. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGARDING LANDSCAPING.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A HEALTHY STAND OF GRASS ON ALL SEEDED AREAS.
4. IN THE EVENT THAT PLANTING BEDS AND MULCH ARE REQUIRED, THE CONTRACTOR SHALL INSTALL BLACK FABRIC WEED BLOCK LANDSCAPE MESH UNDER THE MULCH TO PREVENT WEED GROWTH.
5. CONTRACTOR SHALL PROVIDE NATURAL TOPSOIL THAT IS FERTILE, FRIABLE, WITHOUT MIXTURE OF SUBSOIL MATERIALS, AND OBTAINED FROM A WELL DRAINED, AVAILABLE SITE. IT SHALL NOT CONTAIN SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL BE SCREENED AND FREE FROM CLAY, LUMPS, STONES, ROOTS, PLANTS, OR SIMILAR SUBSTANCES 1" OR MORE IN DIAMETER, DEBRIS, OR OTHER OBJECTS WHICH MIGHT BE A HINDERANCE TO PLANTING OPERATIONS. TOPSOIL SHALL CONTAIN AT LEAST 4-6% ORGANIC MATTER BY WEIGHT AND HAVE A PH RANGE OF 5.5 TO 7.0.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATERING AND THE MAINTENANCE OF ALL LANDSCAPED AREAS UNTIL THE LATER OF; (a) THIRTY (30) DAYS FOLLOWING THE PLANTING OF THE GRASS AND SHRUBS, OR (b) THE DATE THAT PROJECT OPENS FOR BUSINESS TO THE PUBLIC.
7. GENERAL CONTRACTOR IS TO CLEAN ENTIRE SITE OF ALL CONSTRUCTION DEBRIS AND RAKE ALL GRASS AREAS.
8. PROVIDE LANDSCAPE PLANS TO OWNER AND AS REQUIRED BY LOCAL JURISDICTION TO THE BLDG. DEPT. FOR REVIEW AND APPROVAL PRIOR TO START OF WORK.
9. ALL LANDSCAPING, TRESS, SHRUBS, ETC. SHALL NOT INTERFERE WITH THE VISIBILITY OF BUILDING SIGNAGE
10. CONTRACTOR TO VERIFY QUANTITIES PRIOR TO COMMENCING WORK.
11. OPEN AREAS WITHIN PLANTING BEDS SHALL BE MULCHED.
12. ALL CANOPY TREES LOCATED WITHIN VEHICULAR USE AREAS SHALL BE LIMBED UP TO A HEIGHT OF SIX FEET TO ALLOW FOR CLEAR VIEWS UNDER THEM.
13. ALL LIGHT POLES SHALL BE LOCATED A MINIMUM OF 10' FROM ANY CANOPY TREE.
14. 3' MINIMUM CLEARANCE SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. NO PLANTINGS OR OBSTRUCTIONS ALLOWED.
15. TREES AND LARGE BUSHES SHALL BE AT LEAST 5 FEET FROM PROPOSED STORM DRAINAGE.

GENERAL LANDSCAPE NOTES:

1. ANY DISTURBED AREAS NOT SCHEDULED FOR HARDSCAPE, PLANTINGS, OR MULCH SHALL BE SEEDED LAWN.
2. NO PLANT SUBSTITUTIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE.
3. ALL PLANT AND BED LINE LOCATIONS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
4. ALL PLANTINGS SHALL BE INSTALLED WITH THE SPECIFIED LAYER OF MULCH. REFERENCE DETAILS AND SPECIFICATIONS FOR DEPTH AND TYPE OF MULCH. ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS AND SHALL BE SEPARATED FROM TURF GRASS AREAS.
5. GRASS COVERAGE TO EXTEND FROM PROPERTY LINES TO BACK OF CITY SIDEWALKS AND/OR CURBS.
6. MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER (FOR SINGLE STEM TREES). ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 8 FEET TALL.
7. ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
8. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 18" NEW TOPSOIL, OR TILL AND AMEND THE TOP 18" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES.
9. LARGE MATURING TREES MAY NOT BE PLANTED WHERE THERE ARE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.
10. ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS, WATER, PHONE, AND ELECTRICAL LINES.)
11. ATTENTION LANDSCAPER: NOTIFY OWNER OF ANY SIGN, POWER LINE, OR OTHER CONFLICTS BEFORE PLANTING NEW TREES.

LANDSCAPE SUMMARY

TREE PERCENTAGES:

TOTAL TREES =	83
TOTAL SPECIES REQUIRED	3
TOTAL SPECIES PROVIDED	5
MAXIMUM % OF ANY SPECIES	50
MAXIMUM % PROVIDED	26

SHRUB PERCENTAGES:

TOTAL SHRUBS	366
TOTAL SPECIES REQUIRED	7
TOTAL SPECIES PROVIDED	10
MAXIMUM % OF ANY SPECIES	20%
MAXIMUM % PROVIDED	14%

REQUIREMENTS WITHIN VUA (UDO SECTION 9.8.3.B.2 a & d)

VUA:	17,257 SF
TREES:	1 (@ 2" CAL) PER 2,000SF
REQUIRED:	9
PROVIDED:	9
SHRUBS:	1 (@ >15" HT) PER 250 SF
REQUIRED:	70
PROVIDED:	70
VUA REQUIRED LANDSCAPING AREA	17,257*15% = 2,589
VUA PROVIDED	3,333 SF

VEHICULAR USE AREA VISIBLE FROM STREET

NORTH PROPERTY LINE = 148.0' OF PARKING VISIBLE FROM BILL POOLE ROAD

REQUIRED CANOPY TREES:	148/40 = 4
PROVIDED CANOPY TREES:	4 (STREET TREES & 1 VUA TREE)
REQUIRED SHRUBS:	148 = 50
PROVIDED SHRUBS:	50

EAST PROPERTY LINE = 191' OF PARKING VISIBLE FROM ROXBORO BLVD.

REQUIRED CANOPY TREES:	191/40 = 5
PROVIDED CANOPY TREES:	6 (6 STREET TREES)
REQUIRED SHRUBS:	191/3 = 64
PROVIDED SHRUBS:	64

STREET TREE (SEC. 9.6.2A):
1 TREE/40 LF OF STREET FRONTAGE (BILL POOLE ROAD)
324.31 LF FRONTAGE / 40 = 9 STREET TREES

1 TREE/40 LF OF STREET FRONTAGE (ROXBORO ROAD)
206 LF FRONTAGE / 40 = 6 STREET TREES

DUMPSTER SCREENING (SECTION 9.7.2.B)
VEGETATIVE SCREEN SHALL PROVIDE OPACITY OF AT LEAST 0.85 FROM THE GROUND TO THE HEIGHT OF THE OBJECT BEING SCREENED

PLANT LIST (WEST PROPERTY BUFFER - ALTERNATE 3 EVERGREEN

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
EVERGREEN CANOPY TREE	8	PT	PINUS TAEDA/LOBLOLLY PINE	--	10' HEIGHT	18' MINIMUM
EVERGREEN UNDERSTORY TREE	18	IO	ILEX OPACA 'DAM FENTON'/AMERICAN HOLLY	--	6' HEIGHT	12' MINIMUM
EVERGREEN SHRUBS	38	KL	KALMIA LATIFOLIA 'FIRECRACKER'/MOUNTAIN LAUREL	MIN 24" HEIGHT	--	--
	38	IG	ILEX GLABRA 'CAPE COD'/INKBERRY HOLLY	MIN 24"-HEIGHT	--	--

PLANT LIST (NORTH PROPERTY BUFFER - ALTERNATE 4 OVERHEAD UTILITY

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	21	PIC	PISTACIA CHINENSIS	--	10' HEIGHT	18' MINIMUM
EVERGREEN UNDERSTORY TREE	18	PC	PRUNUS CAROLINIANA 'COMPACTA'/CAROLINA CHERRYLAUREL	--	6' HEIGHT	12' MINIMUM
EVERGREEN SHRUBS	51	GS	GELSEMIUM SEMPERVIRENS/CAROLINA YELLOW JESSAMINE	MIN 24" HEIGHT	--	--
	42	GW	ILEX GLABRA 'GEORGIA WINE' GREEN BILLOW/INKBERRY HOLLY	MIN 24"-HEIGHT	--	--

PLANT LIST (NORTH PROPERTY LINE - VUA VISIBLE FROM STREET)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	3	PIC	PISTACIA CHINENSIS	2.5" CAL.	10' HEIGHT	18' MINIMUM
	1	MGL	MAGNOLIA GRANDIFLORA/LITTLE GEM MAGNOLIA	2.5" CAL.	10' HEIGHT	18' MINIMUM
EVERGREEN SHRUBS	39	PLOL	PRUNUS LAUROCERASUS/OTTO LUYKEN	MIN 24" HEIGHT	--	--
	11	CHDG	CEPHALOTAXUS HARRINGTONIA/DUKE GARDENS	MIN 24"-HEIGHT	--	--

PLANT LIST (EAST PROPERTY LINE - VUA VISIBLE FROM STREET)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	5	PIC	PISTACIA CHINENSIS	2.5" CAL	10' HEIGHT	18' MINIMUM
EVERGREEN SHRUBS	30	CHDG	CEPHALOTAXUS HARRINGTONIA/DUKE GARDENS	MIN 24" HEIGHT	--	--
	34	ILLR	ILEX/LITTLE RED	MIN 24" HEIGHT	--	--

PLANT LIST (BILL POOLE ROAD)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	9	PIC	PISTACIA CHINENSIS	2.5" CAL	10' HEIGHT	18' MINIMUM

PLANT LIST (ROXBORO ROAD)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	6	PIC	PISTACIA CHINENSIS	2.5" CAL	10' HEIGHT	18' MINIMUM

PLANT LIST (DUMPSTER AND TRANSFORMER SCREEN)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE						
EVERGREEN SHRUBS	13	CJBD	CRYPTOMERIA JAPANICO/BLACK DRAGON	MIN 8" ABOVE TRANSFORMER HEIGHT	--	--

PLANT LIST (PARKING LOT)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	9	MGL	MAGNOLIA GRANDIFLORA/LITTLE GEM MAGNOLIA	2.5" CAL.	10' HEIGHT	18' MINIMUM
EVERGREEN SHRUBS	39	AXGE	ABELIA x GRANDIFLORA / EDWARD GOUCHER	MIN 24" HEIGHT	--	--
	31	LCPD	LOROPETALUM CHINENSE / PURPLE DIAMOND	MIN 24" HEIGHT	--	--

LANDSCAPING/CO STANDARD NOTE:

ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE. CONTACT DURHAM CITY COUNTY PLANNING DEPARTMENT SITE INSPECTION STAFF FOR INSPECTION.

CONTRACTOR NOTE:

LANDSCAPE CONTRACTOR TO VERIFY ALL SHRUB PLACEMENT SHALL BE A MINIMUM OF 6' FROM ALL TREES PER UDO PARAGRAPH 9.2.3C.1.c.

STREET TREE NOTE FOR ALL PRELIMINARY AND FINAL PLATS WHERE TREES WILL BE PLANTED:

STREET TREES MEETING THE REQUIREMENTS OF UDO SECTION 9.6 SHALL BE PLANTED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE, UNLESS THE PLANTING HAS BEEN POSTPONED IN ACCORDANCE WITH THE REQUIREMENTS OF UDO SECTION 9.11.

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24454 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

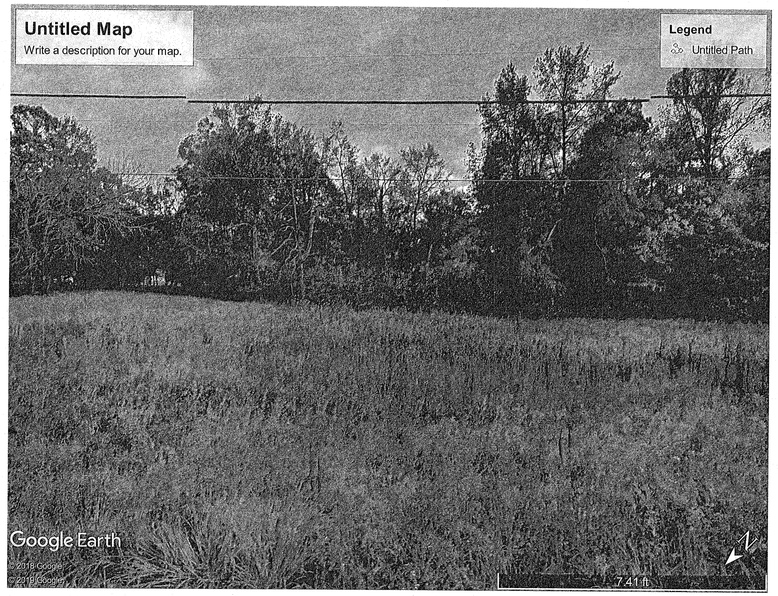
8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

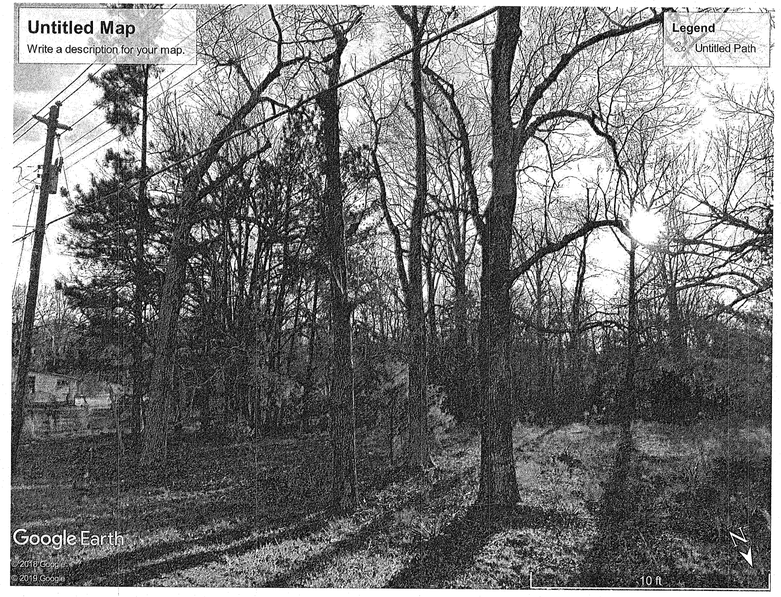
LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
C-11

DG#20605-Rougemont, NC





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SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24434 ENGINEER MATTHEW E. LOWDER

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LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: LANDSCAPE EXHIBIT EXISTING EAST PROPERTY LINE

SHEET NUMBER:
C-11B

DG#20605-Rougemont, NC

Glandon Forest Equity, LLC
3825 Barrett Drive, Suite 100
Raleigh, North Carolina 27609
(919) 459-2600

August 29, 2019

RE: 12807 & 12907 North Roxboro Road and 123 Bill Poole Road – Neighborhood Meeting Regarding Minor Special Use Permit

Dear Neighbor:

You are cordially invited to attend a neighborhood meeting to learn about and discuss the proposed project located at North Roxboro Road and Bill Poole Road. We previously held a neighborhood meeting on March 28, 2018 to discuss the rezoning of this property to Commercial Neighborhood (CN). The rezoning was approved by the Durham Board of Commissioners on June 24, 2019.

At this meeting, we will be discussing a Minor Special User Permit request that we have filed and plan to discuss with the Board of Adjustment. Under Commercial Neighborhood zoning, a minor special use permit must be granted for any building over 5,000 square feet. The proposed building for our project will be 9,100 square feet.

As the applicant, I will be available should you have any questions or concerns. I have enclosed my business card which has my email, office and mobile phone numbers.

We will be meeting in the Fellowship Hall at Rougemont United Methodist Church (105 Red Mountain Rd) on Thursday, September 12, at 6:00 pm.

Please let me know if you have any questions and I look forward to seeing you at the meeting.

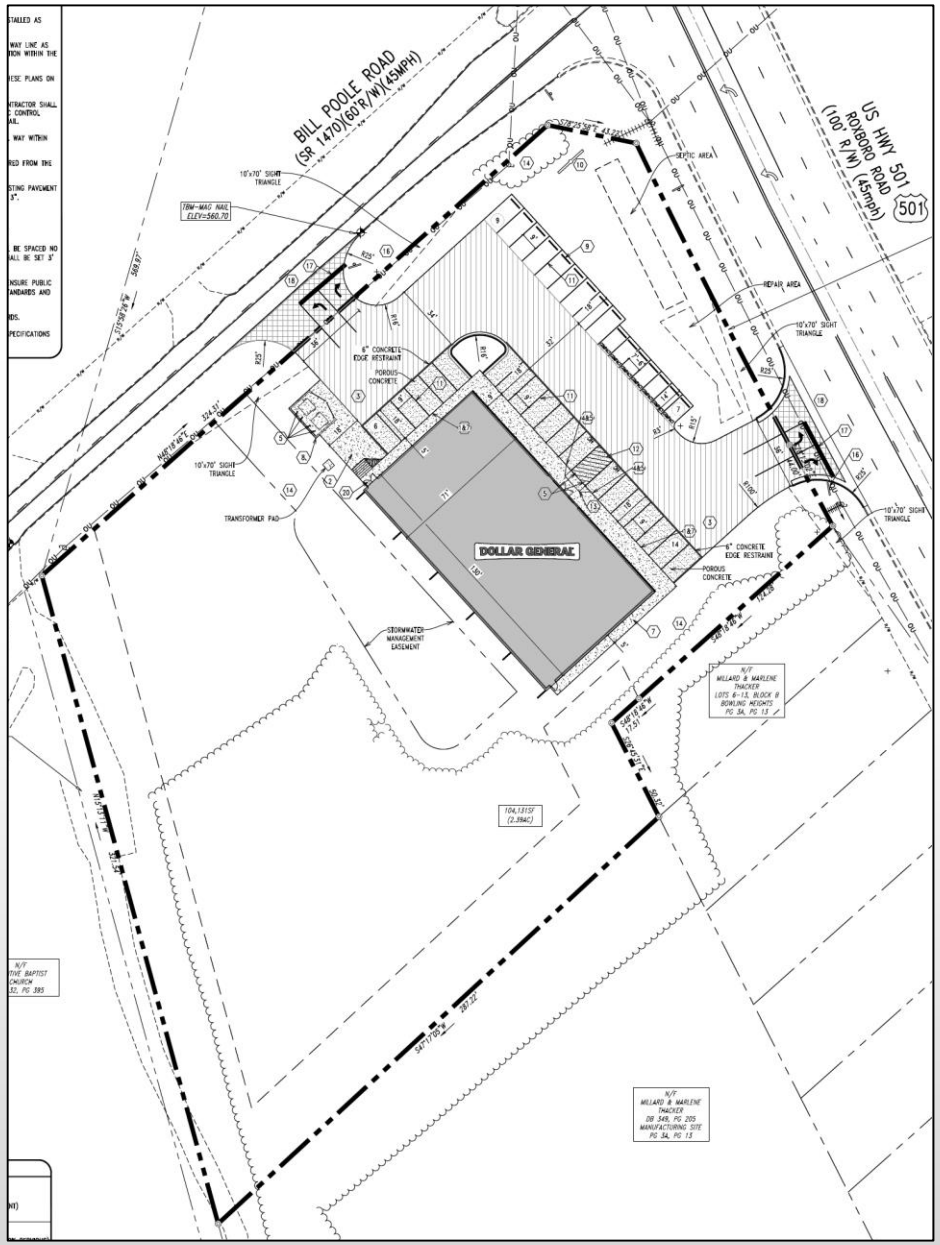
Sincerely,

George C. Venters, Jr.
Glandon Forest Equity, LLC

Project Identification Map

Neighborhood Meeting Regarding Minor Special Use Permit
12807 & 12907 North Roxboro Road and 123 Bill Poole Road
September 12, 2019, 6:00 pm

Name	Address	Phone	Email
MILLARD THACKER	140 Rassie Crabtree Rd, Rougemont	336-364-2744	MITHACKER@ROXBORO.NET
MARTY THACKER	" "	"	"
Sybil H. Ill	12908 Roxboro Rd, Rougemont	919-477-2974	libys6465@gmail.com
Winward Hedgspeth	2714 Red Valley Dr. Rougemont	(919)477-5410	lhedgspeth@gmail.com
Anne Hedgspeth	" "	"	"
IRENE Chisenhall	310 Bill Poole Rd Rougemont, NC 27572	919-801-2704	IreneChisenhall@outlook.com
KAREN WALKER	1171 Rougemont Rd 27572	919-280-3746	handyman43@gmail.com
Glenn Holtzman	305 Bill Poole Rd Rougemont NC 27572	252-432-2669	N/A
Bhavesh Patel	12924 Roxboro Rd Rougemont	919-471-1900	
Janet Dilley	114 Red Mountain Rd.	919-477-8539	
Shirley Holland	13023 Roxboro Rd. Rougemont NC	919-599-1226	
Wayne Powell	13016 HWY 501 Rougemont NC	~~919-477~~-336-583-0137	
David Clayton	501 & Poole Rd	919-818-3345	



12807 & 12907 North Roxboro Rd and 123 Bill Poole Road Rougemont, NC 27572

Topics to discuss

- Circulation
- Parking & Loading
- Service entrance and areas
- Lightning
- Signs Utilities
- Open Spaces
- Environmental protection
- Screening, Buffering and Landscaping
- Effect on Adjacent Property
- Compatibility
- Consistence with Policy
- Other factors – review factors for approving authority

Proposed Plan

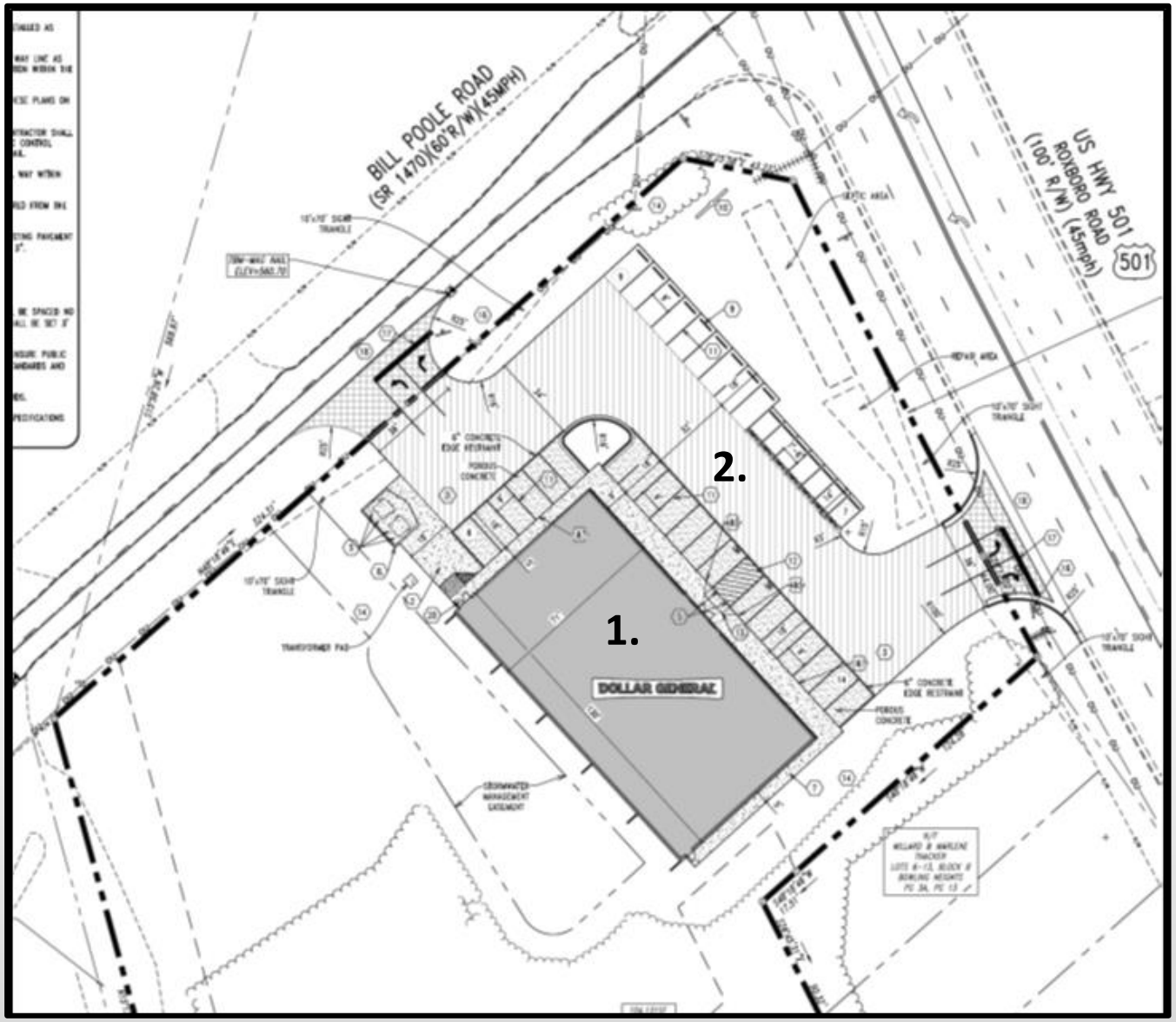
Parking and Loading

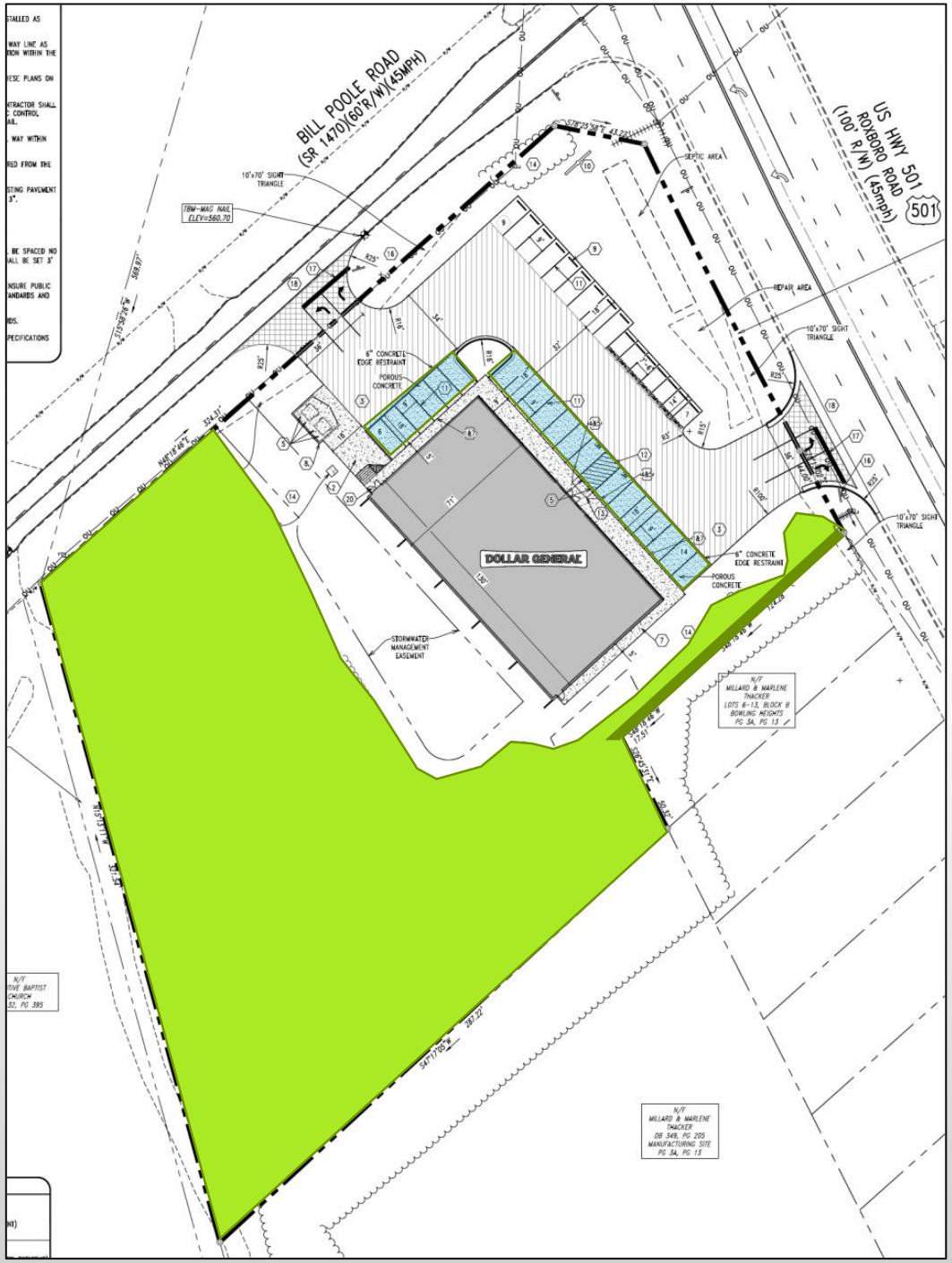
1. Building

- Zoning: Commercial (CN)
- Development area zoned Commercial
- Use: retail (General Merchandise)
- 1-story building
- Square footage: 9,100 sqft
  - Sales Floor: 7,302 SF
  - Storage: 982 SF
  - SPECIAL USE PERMIT REQUIRED FOR BUILDING OVER 5,000 SQUARE FEET
- Lake Mitchie/Little River watershed
- No Sprinkler system

2. Parking

- 36 parking places
- 2 ADA parking space plus access to ramp
- 4 bicycle spaces = 2 racks





Open Spaces and Environmental Protection

Open Spaces

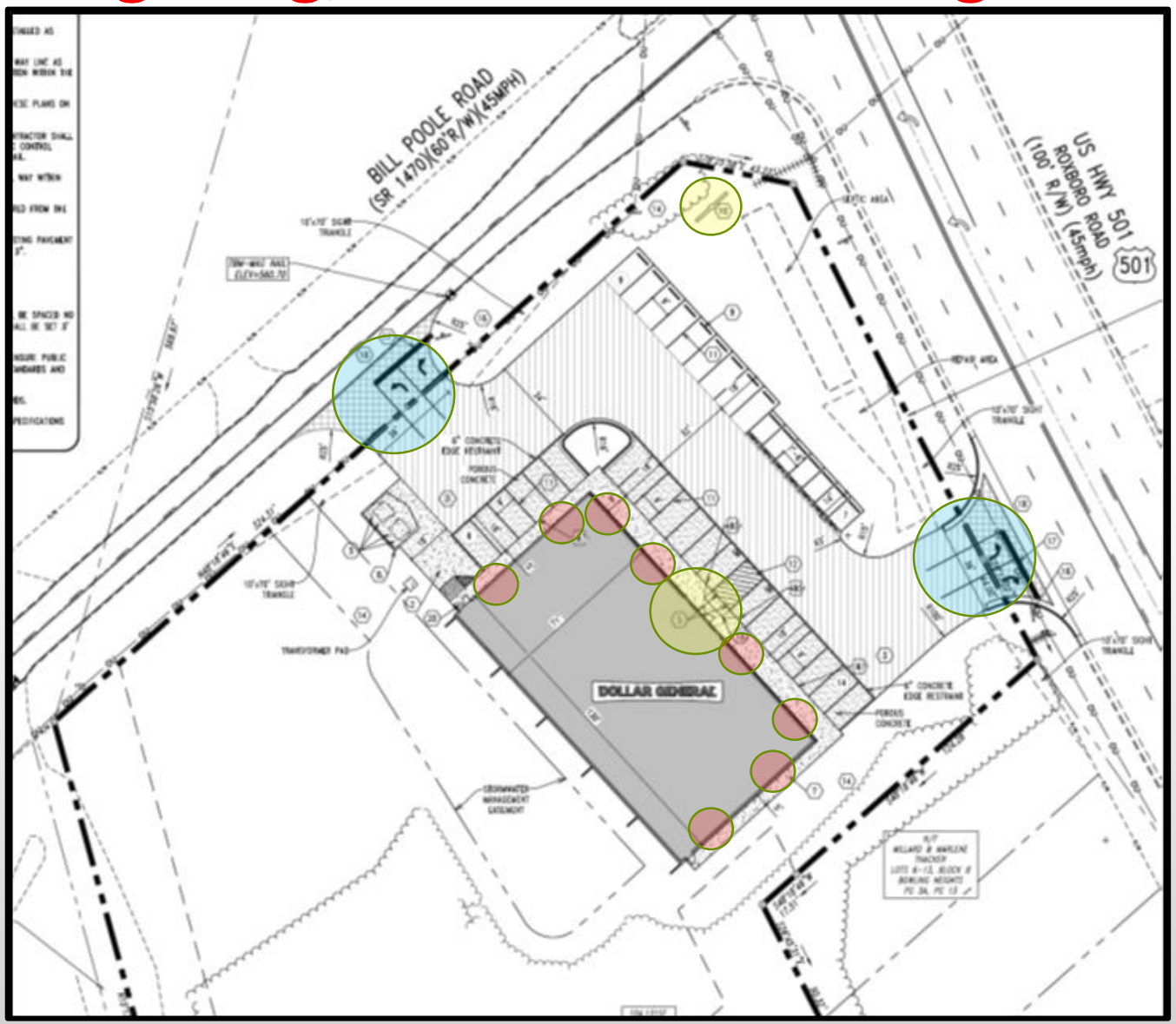
- Pursuant to watershed guidelines, the site will be over 70% pervious area (majority of site will be undeveloped)
- Undisturbed area
- project will be oriented closer to N. Roxboro Rd
- Tree line along southern property line to remain

Environmental Factors

- Complies with all Lake Mitchie/Little River watershed regulations
- Use of porous concrete in parking lot area to reduce stormwater run off
- Site is not heavily wooded
- No floodplains, streams or steep slopes on the site

Site Plan

Lighting, Circulation and Signs



Lightning

- **There will be no tall parking lot lights bordering the property**
- **Site is illuminated by LED lights on extended arms and shielded wall packs that point straight down and do not cause light pollution on surrounding properties**

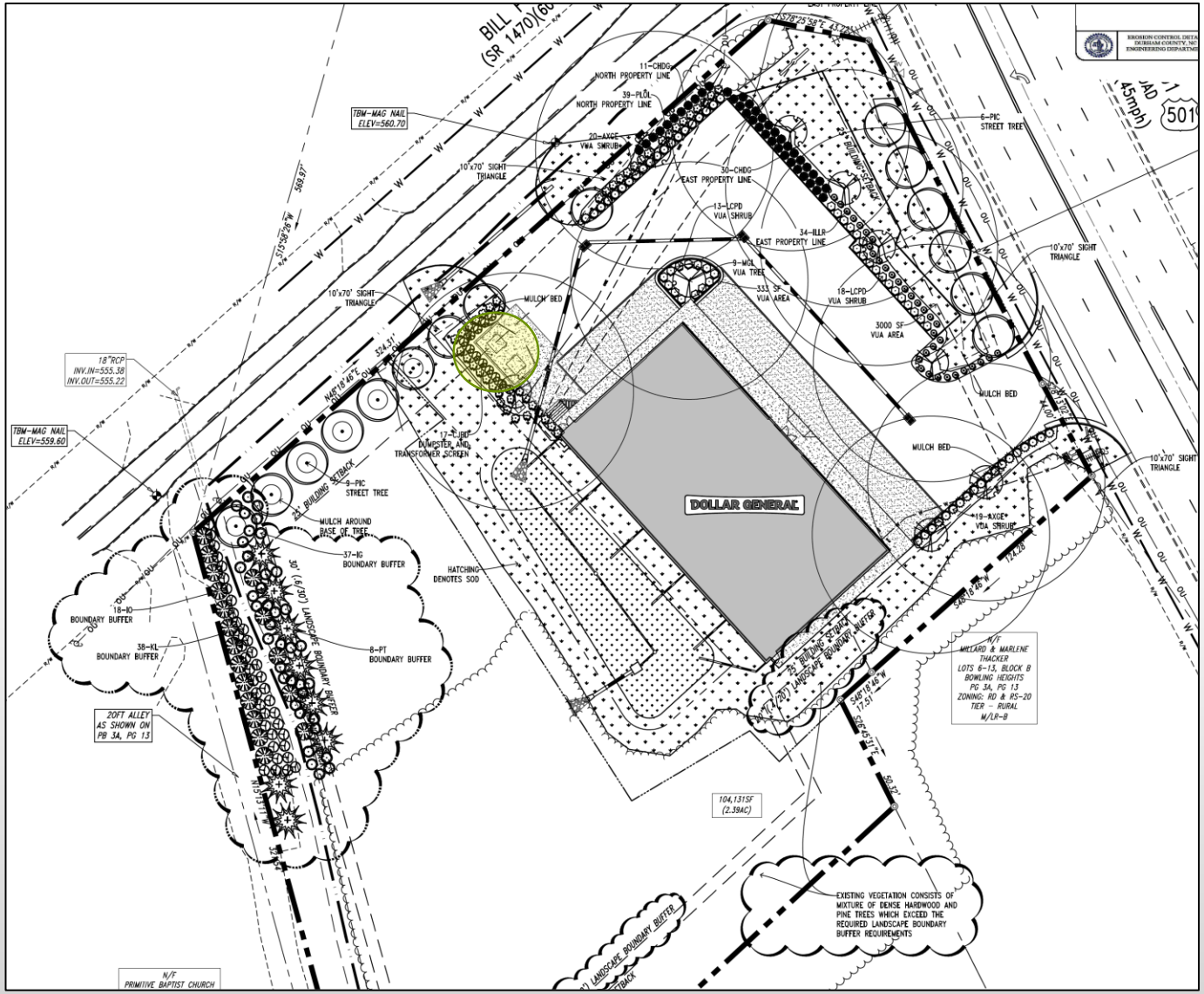
Circulation

- **Two means of ingress/egress**
- **Full movement on N. Roxboro Road and Bill Poole Road**

Signs

- **Signs will be compliant with Durham code requirements. There is will one pylon sign located at the corner and a building wall sign**

Screening, Buffering and Landscaping



Screening

- Woodend privacy fence to be installed to screen any adjacent residential uses
- Trash dumpsters will be located within masonry enclosures with metal gates.
- Mechanical equipment (HVAC) is rooftop-mounted and will be screened from view via building parapets

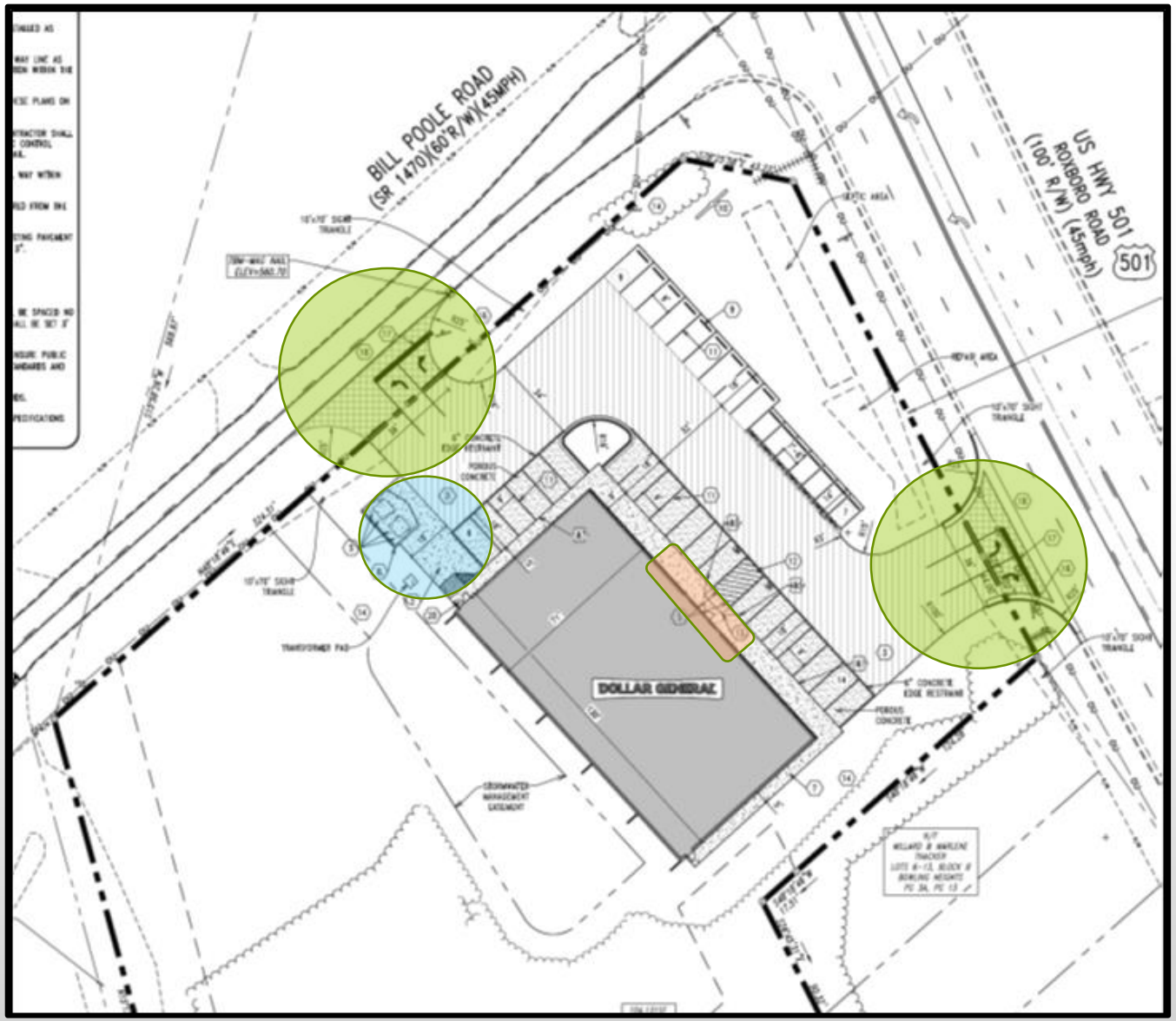
Buffers/Setbacks

- Side, front and rear buffers are designed pursuant to Durham County guidelines
- Proposed building setback is 90 feet from N. Roxboro Road and 72 feet from Bill Poole Road
- Rear building setback is 160 feet and the southern (side) building setback is 32 feet

Landscaping

- All landscaping shall be designed and installed pursuant to Durham County ordinance.
- Street trees located along N. Roxboro Road and Bill Poole Road
- Double row of shrubs will be installed along the parking lot edge to screen parking area and reduce vehicle light glare

Service Entrance and Access Areas



Property access

- **Full movement driveways on N. Roxboro Road and Bill Poole Road**
- **Fire Department can access the property at either driveway**

Building access

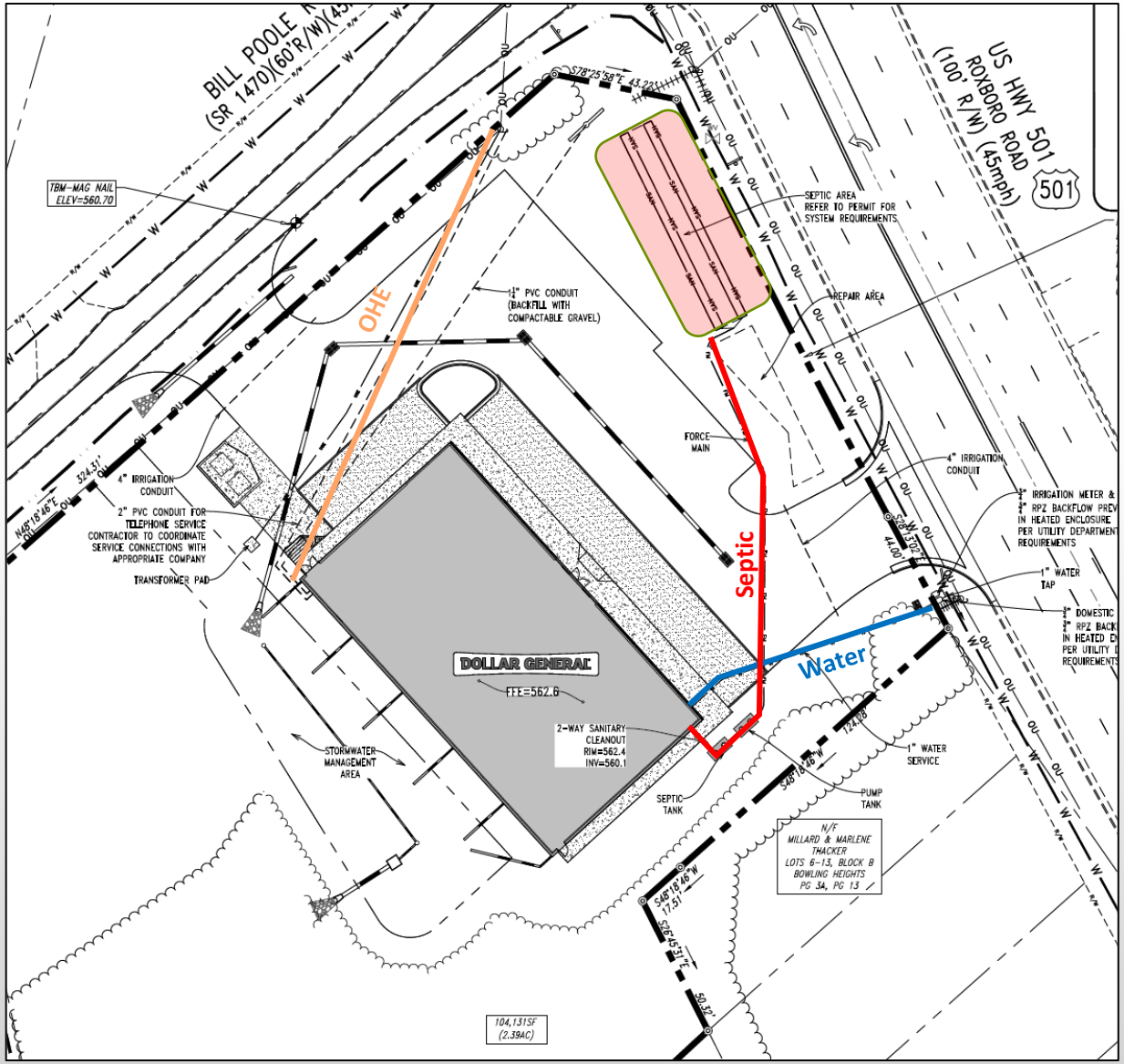
- **Customer entrance will face N. Roxboro Road**
- **Handicap parking places and ramp at front door**

Service Entrance

- **The trash dumpster and loading area is on the Bill Pool Road side of building**
- **Trash and recycling dumpsters will be located within a masonry enclosure with solid panel metal gates**

The site will be compliant with North Carolina accessibility code requirements

Utilities



- **Building will be served by:**
  - **County water coming off N. Roxboro Road**
  - **Septic – septic field located along N. Roxboro Road**
  - **Overhead electric power coming off of Bill Poole Road**
  - **The building has only two bathrooms and a mop sink**
  - **Uses less water than a single family home**

Effect on nearby properties

- No outdoor PA systems (such as with a fast food restaurant)
- Produces no noticeable odors (such as with a restaurant or gas station)
- Has less traffic that many other retail uses or convenience stores
- No currently occupied residential properties adjacent to site

Compatibility

- Few residential homes surrounding property other than a couple of homes across N. Roxboro Road, which is a five lane major thoroughfare
- Building fronts N. Roxboro Road, which carries 13,000-14,000 vpd
- Other commercial uses adjacent to site
- Highest and best use for property is for commercial development

Consistence with Policy

- Site is located within the Rougemont Commercial District on Durham County Future Land Use Map
- Intended use is compatible with uses allowed within Commercial Neighborhood District

Other factors

- Rougemont currently does not have a full service retail business to serve the community that can provide a wide variety of general merchandise and grocery items
- Allows residents a more convenient location for every day consumer staples and reduces drive times
- Durham County Board of Commissioners approved rezoning to Commercial Neighborhood on June 24, 2019

CONTACT DETAILS

George Venters
Vanguard Property Group
(919) 459-2602
gventers@vanguardpg.com

Thank you and have a great evening

Neighborhood Meeting Summary
Meeting Date: September 12, 2019 (6:00pm)
Location: Rougemont United Methodist Church

Attendance:

13 members of the community attended the meeting, many of which also attended the original Neighborhood Meeting prior to the rezoning, which was held on March 28, 2019.

Summary:

George Venters ("GV") explained where the project was in the permitting process (site plan review) and that the rezoning had been approved in June 2019. The purpose for this meeting was to share more details on the project with the community and that a Minor Special Use Permit was required since the proposed building was over 5,000 square feet.

GV passed out copies of the presentation materials and methodically explained the following and how it relates to the special use permit:

- Building and Parking layout
- What portion of the site was to be developed and disturbed including an explanation of the Lake Mitchie /Little River watershed and how the project was designed to adhere to the storm water regulations
- Building lighting
- Parking lot lighting
- Building and site signage
- Project buffers, landscaping and screening
- Property access/driveways and circulation
- Utilities serving the building
- Effect on nearby properties
- Compatibility with surrounding property and consistency with Durham County Land Use Plan

Questions Asked by Neighbors:

In general, there were very few questions asked or concerns raised at the meeting from the attendees.

There was open conversation regarding:

- Traffic- As with the pre-rezoning neighborhood meeting, the neighbors think that the speed limit in Rougemont is too high and would like to see NCDOT lower the speed limit
    - GV pointed out that the project was designed with two driveways and points of access so that customers coming down Bill Poole Road did not have to get out onto N. Roxboro Road to access the store

    - One neighbor noted this access would be better than the Timberlake store which has only one means of ingress and egress
- Lighting- the neighbors asked how the site would be lighted and if it would be 'too bright'
    - GV explained that the building has several LED arm lights that protrude off the building that have full cut off fixtures and point down so not to shine light horizontally across the road or spill light over the property boundary.
    - The building lights are designed to illuminate the parking lot so site lighting with tall parking lot poles would be minimized or not needed.
- Building Signage – neighbors asked where the signs would be located
    - GV explained that there would be one building sign over the front door and one pylon sign at the corner of Bill Poole Road and Roxboro Road.

There was a general discussion of the project and questions if the store in Timberlake would close (it will remain open). The neighbors seemed to be pleased that something new was coming to town and they would not have to drive to Timberlake or into Durham to buy everyday convenience items.

Meeting concluded about 6:45 pm.

GV received no follow up calls or questions from neighbors.

MINOR SPECIAL USE PERMIT

12907 N. ROXBORO ROAD PARKING REDUCTION B1900051

Meeting Date: January 28, 2020

Reference Name	12907 North Roxboro Road Parking Reduction (Case B1900051)		**Jurisdiction**	County
Request	A minor special use permit to reduce parking by more than 20%.			
Site Characteristics	**Tier:**	Rural		
	Use:	Commercial Retail		
	Zoning:	Commercial Neighborhood [CN(D)]		
	Overlays:	Lake Michie/ Little River Protected Area(M/LR-B) and Rougemont Rural Village		
	Size:	2.39 acres		
Applicant	George Venters		**Submittal Date**	October 2, 2019
Location	12907 N. Roxboro Road, 12807 N. Roxboro Road & 123 Bill Poole Road			
PID(s)	189743, 189742 & 189744			
Staff Recommendation	Staff will make a recommendation following the hearing.			

A. Summary

George Venters, the applicant requests a minor special use permit to reduce the amount of required parking by more than 20%. The site is located in the Rural Development Tier, in the Rural Village of Rougemont, and is currently vacant. The applicant is proposing a retail development. Per Unified Development Ordinance (UDO) Section 10.3.1B.10, Except for the Compact Neighborhood Tiers, reductions of more than 20% of required motor vehicle parking require the approval of a Minor Special Use Permit. Per sections 10.3.1A.4 and 10.3.1B.1 of the UDO, a minimum of 46 parking spaces, at a rate of 1 per 200 square feet of floor area, are required for the site. The minor special use permit is required because the applicant has proposed 36 parking spaces, a more than 20% reduction in spaces.

B. Summary of the Issues

No issues were found at the time of this report.

Recommended Conditions of Approval

1. The improvements shall be substantially consistent with the information submitted to the Board as part of the application and site plan case number D1900178.

C. UDO Section 3.9.8: Criteria for Approval

1. UDO Section 3.9.8A General Findings

Applications for major or minor special use permits shall be approved only if the approving authority finds that the use as proposed, or the use as proposed with conditions, is:

1. *In harmony with the area and not substantially injurious to the value of properties in the general vicinity;*
2. *In conformance with all special requirements applicable to the use;*
3. *Will not adversely affect the health or safety of the public; and*
4. *Will adequately address the review factors identified below.*

If the Board of Adjustment fails to find conformance with the conditions listed above, or makes findings which are inconsistent with those conditions listed above, then the proposed permit must be denied.

The Board should consider the information provided in the staff analysis and conclusions for the following review factors when making determinations on the general findings.

2. UDO Section 3.9.8B Review Factors

UDO Section 3.9.8B requires consideration of the review factors shown below:

a. *Circulation*

Number and location of access points to the property and the proposed structures and uses with particular reference to automotive, bicycle, mass transit and pedestrian safety and convenience, traffic flow and control, and access in case of fire or catastrophe.

Staff Analysis. The applicant is proposing two access driveways, one off North Roxboro Road and one off Bill Poole Road to access the site. The width of these driveways and the drive aisle shown on Attachment 4, Site Plan – D1900178 show that there is adequate access area for all vehicles, including emergency vehicles.

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

b. *Parking and Loading*

Location of off-street parking and loading areas.

Staff Analysis. Per sections 10.3.1A.4 and 10.3.1B.1 of the UDO, a minimum of 46 parking spaces are required for the site. The applicant is providing 36 parking spaces. This includes 7 compact spaces. This is a decrease of required parking by more than 20%. (See Attachment 4, Site Plan – D1900178, Cover Sheet)

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

c. ***Service Entrances and Areas***
Locations of refuse and service areas with particular reference to ingress and egress of service vehicles.

Staff Analysis. The owner has chosen to use dumpsters for refuse. Waste will be stored in a dumpster off Bill Poole Road, which meets all screening requirements per UDO Section 9.7.2 (See Attachment 4, Site Plan – D1900178, Sheet C-2)

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

d. ***Lighting***
Locations of exterior lighting with reference to glare, traffic safety, economic effect, and compatibility with other properties in the area.

Staff Analysis. All proposed lighting has been reviewed during site plan review for compliance with UDO Section 7.4.

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

e. ***Signs***
Appropriateness of signs considering location, color, height, size, and design within the context of other properties in the area.

Staff Analysis. Any proposed signs will require a separate review and permit. The signs will be reviewed for compliance in with the Ordinance signage requirements. Signs are not reviewed during site plan review nor during the minor special use permit process. Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

f. ***Utilities***
Location and availability of utilities.

Staff Analysis. The proposed building will be serviced by county water and sewer will operate on a septic system, (See Attachment 4, Site Plan – D19000178, Sheet C-6)

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

g. ***Open Spaces***
Location of required yards and other open spaces, and preservation of existing trees and other natural features.

Staff Analysis. There are no tree coverage requirements for development in CN zoning districts in the Rural Tier per UDO Section 6.10.1 A.18.3.1B.1. However, the site plan shows by a tree line that there are some trees to remain on the property see sheet (See Attachment 4, Site Plan – D19000178, Sheet C-6). Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

h. ***Environmental Protection***
Preservation of tree cover, Durham Inventory Sites, floodplain, stream buffers, wetlands, steep slopes, open space and other natural features, and protection of water quality.

Staff Analysis. There are no Durham Inventory Sites, floodplain, stream buffers, wetlands, or steep slopes located on the site. Per UDO Section 6.10.1 A.1, there is no requirement for open space to be located on the site.

The site is in the Lake Michie/Little River Protected Area (M/LR-B) Watershed Protection Overlay District and has an impervious surface limit of 24% utilizing the high density option for Rural Villages, per UDO Section 8.7.2B.1. The proposed impervious surface is .57 acres, or 23.99 %.

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

i. ***Screening, Buffering and Landscaping***
Installation of screening, buffering, fencing, and landscaping where necessary to protect adjacent property.

Staff Analysis.

The northwest side of the development is adjacent to a RS-10 zoning district and a CN zoning district. For CN zoning district to the CN zoning district there is no project boundary buffer requirement. From the RS-10 zoning district to the CN zoning district, a 30-foot buffer with 60% opacity is required, per UDO Section 9.4. The northeast side of the development faces a right-of-way that has a width greater than 60 feet and has no required project boundary buffer, per UDO Section 9.4.2A.2. The southwest side is adjacent to a CN zoning district, where no project boundary buffer is required, as well as a RR zoning district, where a 30-foot buffer with 60% opacity is required, per UDO Section 9.4. The southeast side abuts a RS-10 zoning district and requires a 30-foot buffer with 60% opacity, per UDO Section 9.4. The applicant is providing all required buffers. (See Attachment 4, Site Plan, Sheet C-3).

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

j. *Effect on Nearby Property*

Effects of the proposed use on nearby properties, including, but not limited to, the effects of noise, odor, lighting, and traffic.

Staff Analysis. The table below notes the surrounding uses and zoning districts:

Surrounding Uses and Zoning Districts				
	Use	**Zoning District**	**Overlay**	**Tier**
Northwest	Convenience Center	RS-10 & CN	Lake Michie/Little River Protected Area; Rural Village of Rougemont	Rural
Southeast	Single-Family Residential & Vacant	RS-20 & RR	Lake Michie/Little River Protected Area; Rural Village of Rougemont	Rural
Northeast	Residential	RS-20	Lake Michie/Little River Protected Area; Rural Village of Rougemont	Rural
Southwest	Place of Worship	RS-10 & RR	Lake Michie/Little River Protected Area; Rural Village of Rougemont	Rural

There will be no adverse effects on the nearby properties in regards to lighting, odor, noise, or traffic. The proposed lighting improvements shown on site plan D1900178 have been reviewed to ensure compliance with UDO Section 7.4, Outdoor Lighting.

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

k. *Compatibility*

The level of general compatibility with nearby properties and impacted neighborhoods, including, but not limited to, the appropriateness of the scale, design, and use in relationship to other properties.

Staff Analysis.

The subject site is bordered by commercial retail, residential, and vacant residential uses. The proposed used is also commercial retail and will have no compatibility issues with the existing uses. There should be sufficient project boundary buffers or distance between uses, limiting impact to adjacent residential uses.

Refer to Attachment 3, Application – B1900051, for the applicant's response to this finding.

l. *Consistency with Policy*

Consistency with the Durham Comprehensive Plan and applicable development tier guidelines, overlay purposes, and zoning district intent statements in Article 4, Zoning Districts.

UDO Section 4.1.2A.1 Rural Tier Intent Statement

The Rural Tier – That area of Durham that lies outside the Suburban Tier and largely within watershed critical areas within which development should maintain a rural focus to encourage preservation of agriculture and protect important water resources. Development within this area should feature large lots to minimize demands on infrastructure, with limited commercial areas.

UDO Section 4.3.2 Commercial Neighborhood Intent Statement

The CN District is established to provide for modest-scale commercial centers (as defined in Article 6) in close proximity to residential areas that offer limited commercial uses to satisfy the needs of the surrounding neighborhood. Compatibility is facilitated through design standards and buffering that provide for walkable, pedestrian-oriented development that complements nearby residential neighborhoods. The district is not intended for use by major or large-scale commercial sales, service or automotive-oriented activities. The CN District is only appropriate in locations that have direct access to residential neighborhoods.

UDO Section 17.3 Rural Village

Rural Village- An area delineated on the Future Land Use Map, within the Rural Tier, that can include residential, commercial, office, institutional, and open space/recreation land uses.

Staff Analysis. The development on the subject site is located in a CN zoning district within the Rural Tier. Retail sales and service uses are permitted by right within CN

zoning districts as the use meets the intent of being within close proximity to residential neighborhoods that it serves.

m. *Other Factors*

Any other review factors which the approving authority considers to be appropriate to the property in question.

Staff Analysis. There are no other review factors applicable to this report at this time.

D. Notification

Staff certifies that newspaper advertisements, letters to property owners within 600 feet of the site and the posting of a sign on the property has been carried out in accordance with UDO Section 3.2.5 of the UDO. In addition, email notice was provided per the Durham Planning Public Notification Service.

E. Staff Contact

Cole Renigar, CZO, 919-560-4137 ext. 28234, or Cole.Renigar@durhamnc.gov

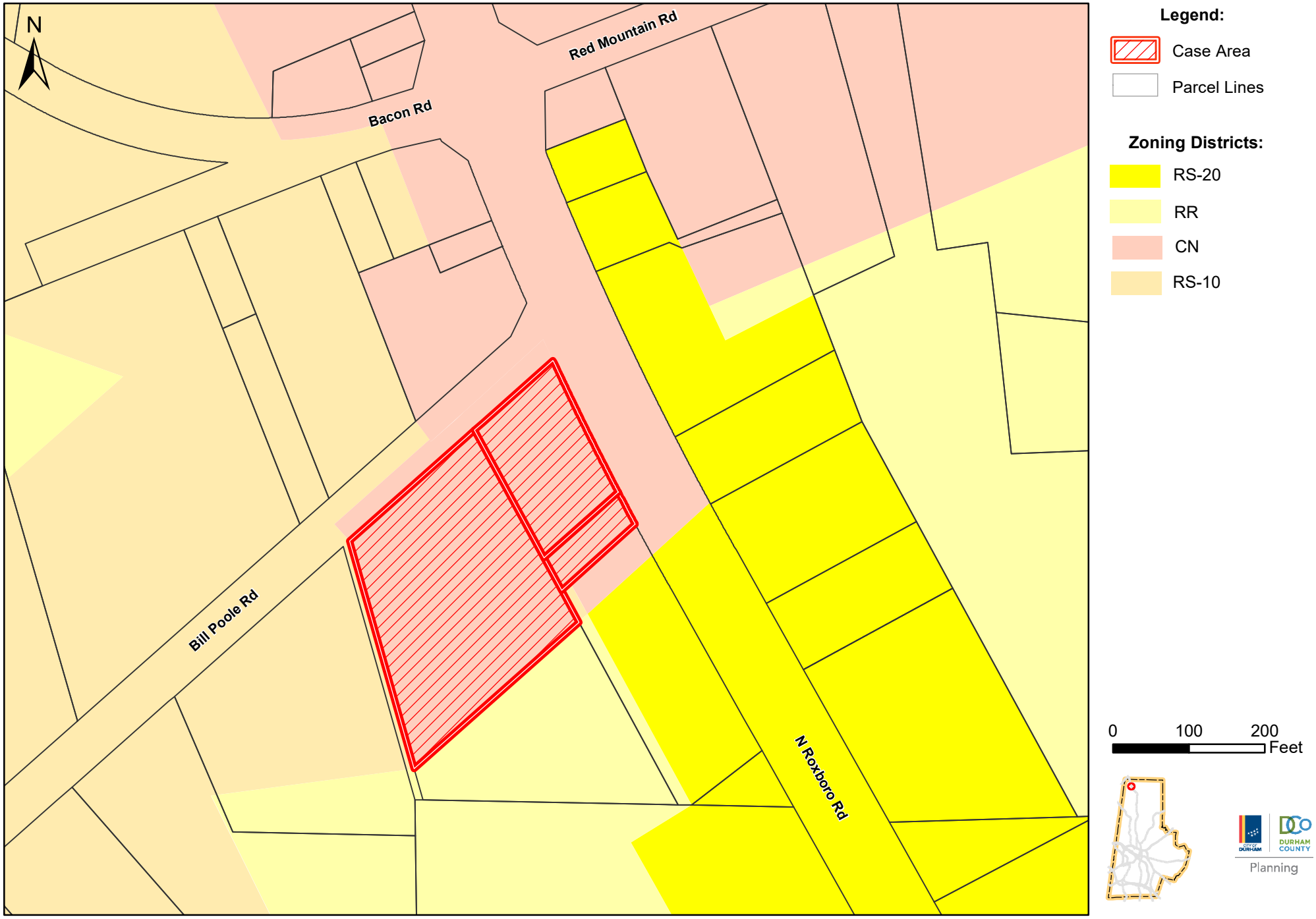
Attachments

1. Context Map
2. Durham GIS Aerial Photo
3. Application – B1900051
4. Site Plan – D1900178

Attachment 1

B1900051 12907 N Roxboro Road Parking Reduction

Context Map



Durham City-County Planning Department, 6/19/19

B1900051 12907 North Roxboro Road Parking Reduction

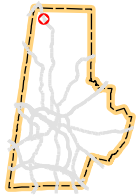
Aerial Map

Attachment 2

Legend:

- Case Area
- Parcel Lines

0 50 100 Feet



Planning

Durham City-County Planning Department, 12/5/2019

DURHAM 1869 CITY OF MEDICINE

Durham City-County Planning Department

MINOR AND MAJOR SPECIAL USE PERMIT (SUP) APPLICATION

(A Pre-submittal conference must be held prior to submission)

DURHAM COUNTY

Tracking Information (Staff Only)		
Case Number: B1900051	Date/Time rec'd: 10/2 @ 9:00 AM	Rec'd by: Eliza Monroe

About this Application

ONLY COMPLETE APPLICATIONS CAN BE ACCEPTED

Minor special use permits are heard by the Board of Adjustment as a quasi-judicial public hearing. ***Major special use permits*** are heard by the Governing Body (City Council if City, Board of Commissioners if County) as a quasi-judicial public hearing.

Submittal: **Applications are accepted by appointment only**. Deadlines are discussed at the pre-submittal meeting and are available online at http://durhamnc.gov/340/Applications-Application-Materials. Applications should be submitted in-person, and fees are due at time of submittal.

The application is a form of written testimony, and used both to show how Ordinance considerations are addressed and to provide evidence that the required findings for approval can be made. In addition to the application materials, the applicant may provide any other written, drawn or photographed material to support his/her request and as permitted by the Board of Adjustment or Governing Body, as applicable. Any such additional material submitted will become part of the application, and as such cannot be returned.

Attendance at the hearing is required. Applicants may represent themselves or may be represented by someone appropriate for quasi-judicial public hearings. The applicant has the **burden of proof** and must provide sufficient evidence in order for the required findings to be made. The public hearing will allow the applicant, proponents, opponents and anyone else the opportunity to testify in regards to the request. An application may be approved, approved with conditions, continued for more information, or denied. **Decisions can be appealed to Superior Court within 30 days.**

Contact Information: If you have any questions, please contact the City-County Planning Department at 560-4137 between 8:00 a.m. and 5:00 p.m. on weekdays.

Application Requirements	Applicant Initial	Staff Initial
Record of the pre-submittal meeting (copies provided at the meeting)	GV	EM
Fee	GV	EM
Completed application and responses: ORIGINAL signatures required	GV	EM
Submitted Site Plan (Digital and 11x17), if required, or Plot Plan	GV	EM
Responses to general findings and review factors: Section 3.9.8A and B of the UDO	GV	EM
Responses to Additional Findings and/or Review Factors, as applicable	GV	
Responses to Limited Use Standards, as applicable	GV	
Floorplan, as applicable	GV	
Elevations, as applicable	GV	
Note: Additional supporting documents may also be submitted		

Case #_____

Property Information	
Site Address: ROXBORO ROAD (US Hwy 501)	PID(s): ~~0829-01-17-~~ 189742, 189743, 189744
Zoning District(s) : CN(D)	PIN(s): 0829-01-17-7629 0829-01-17-9708 0829-01-17-8867
Overlay District(s):	SUP Type: Minor (msup) Major (MSUP)
Current Use: VACANT	Jurisdiction: City (County) Both

Property Owner	
Name(s) (Print): DAVID CLAYTON	Telephone:
Contact Person:	Email: David.clayton@frontier.com
Clayton Owner Signature	9-30-2019 Date

Applicant	
Name(s): GLANDON FOREST EQUITY, LLC	
Contact Person: GEORGE VENTERS	Telephone: 919-459-2602
Address: 3825 BARRETT DR SUITE 100	Fax:
City/State/ZIP: RALEIGH NC 27609	Email: gventers@vanguardpg.com
I certify that all of the information presented by me in this application is accurate to the best of my knowledge, information, and belief.	
Applicant Signature	9/30/19 Date

Agent (if different than applicant)	
Name:	
Contact Person:	Telephone:
Address:	Fax:
City/State/ZIP:	Email:

Case #_____

Complete and respond to the following with an attachment (suggested), or in the space provided:

Applicant's Name: I, GEORGE VENTERS, do hereby petition the City of Durham/County of Durham for a Special Use Permit to allow the following:
REDUCTION OF REQUIRED PARKING SPACES TO MEET THE USE'S STANDARDS AND TO DECREASE THE IMPERVIOUS AREA OF THE DEVELOPMENT.

Section 3.9.8 of the UDO: Criteria for Approval of Major and Minor Special Use Permits

A. General Findings

Applications for minor or major special use permits shall be approved only if the Board of Adjustment or Governing Body, as applicable, finds that the use as proposed, or the use as proposed with conditions, is:

1. In harmony with the area and not substantially injurious to the value of properties in the general vicinity;
   Applicant's Response:

2. In conformance with all special requirements applicable to the use;
   Applicant's Response:

3. Will not adversely affect the health or safety of the public; and
   Applicant's Response:

4. Lighting

Applicant's Response: The reduction in parking size allows for less lighting around the parking spaces. All the building lights will have full cut off fixtures and all parking lot lights will shine straight down on the parking areas to minimize light pollution onto adjacent properties and right-of-ways. The surrounding commercial business have similar site lights to illuminate the parking areas.

5. Signs

Appropriateness of signs considering location, color, height, size and design within the context of other property in the area.

Applicant's Response: The reduction in parking does not impact the sign requirements. The building and pylon signage for the building will not be increase due to the parking reduction. All signs will be designed and permitted within current Durham County sign ordinances.

6. Utilities

Location and availability of utilities.

Applicant's Response: The building will be served with county water and septic. The building has only two bathrooms and a mop sink, and uses less water than a single family home. The reduction in parking does not have negative impact on the utilities.

7. Open Spaces

Location of required yards and other open spaces and preservation of existing trees and other natural features.

Applicant's Response: The reduction of parking spaces allows for more open space, existing trees and other natural features.

8. Environmental Protection

Preservation of tree cover, Durham Inventory Sites, floodplain, stream buffers, wetlands, steep slopes, open space and other natural features, and protection of water quality.

Applicant's Response: The reduction in parking spaces dot not require the removal of more trees. There are no floodplains, stream buffers, wetlands, steep slopes or other natural features on the site.

9. Screening, Buffering and Landscaping

Installation of screening, buffering, fencing and landscaping where necessary to protect adjacent property.

Applicant's Response: All landscaping will meet Durham ordinances. Wooden privacy fences will be used to screen any existing and adjacent residential uses from the building and parking lot. Reduction in parking spaces does not materially necessitate the need for additional screening.

10. Effect on Adjacent Property

Effects of the proposed use on nearby properties, including but not limited to, the effect of noise, odor, lighting and traffic.

Applicant's Response: The reduction of parking spaces will not increase or have an increase impact on nearby properties by increasing noise, odor or lighting.

11. Compatibility

The level of general compatibility with nearby properties and impacted neighborhoods, including but not limited to the appropriateness of scale, design, and use in relationship to other properties.

Applicant's Response: The reduction in parking spaces would not negatively impact nearby properties or neighborhoods. There are a very few residential homes within the surrounding areas with the exception of a few single family homes across North Roxboro Road.

Case #_____

12. **Consistency with Policy**
Consistency with the Comprehensive Plan and applicable development tier guidelines, overlay purposes, and zoning district intent statements in Article 4, Zoning Districts.
Applicant's Response:

13. **Other Factors**
Any other review factors which the approving authority considers to be appropriate to the property in question.

NOTE: Please address the requirements of any applicable "Limited Use Standards" or other special requirements of the use as an attachment of the application.

Read and sign below:

In granting a Minor or Major Use Permit, conditions may be placed to assure that adequate mitigation measures are associated with the use. The conditions shall become part of the special use permit approval. Violations of any of the conditions shall be treated in the same manner as other violations of the Ordinance. Furthermore, Special Use Permits shall become null and void in any of the following cases (Section 3.9.13 of the UDO):

A. If a site plan is not approved within 12 months of the date of permit approval.

B. If an approved site plan or building permit expires.

C. If a building permit is not issued within two years of the date of approval, in cases where a site plan is not required.

D. If a substantial violation of the conditions of the permit, as determined by the Planning Director or designee occurs. The addition of language to the special use permit regarding such voiding shall not be required.

_____ 9/30/19
Applicant Signature **Date**

GENERAL CONDITIONS OF APPROVAL

1. THE PROJECT AREA IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS AS SHOWN ON FIRM PANEL 3720082800K, DATED OCT. 19, 2018.
2. OWNER/DEVELOPER SHALL NOTIFY THE DURHAM CITY-COUNTY PLANNING DEPARTMENT SITE COMPLIANCE STAFF AT THE COMPLETION OF CONSTRUCTION AND LANDSCAPING TO REQUEST AN INSPECTION PRIOR TO USE OF THE FACILITY.
3. PINE STRAW NOT BE USED AS MULCH OR GROUND COVER WITHIN TEN FEET OF ANY STRUCTURE CONSISTING OF EXTERIOR COMBUSTIBLE CONSTRUCTION AS SPECIFIED BY DURHAM CITY CODE SECTION 46-87.
4. ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE. CONTACT DURHAM CITY-COUNTY PLANNING DEPARTMENT SITE COMPLIANCE STAFF FOR INSPECTION.
5. EACH LANDSCAPING COMPLIANCE INSPECTION AFTER THE INITIAL INSPECTION WILL INCUR A RE-INSPECTION FEE. PAYMENT MUST BE RECEIVED BY THE DURHAM CITY-COUNTY PLANNING DEPARTMENT PRIOR TO RE-INSPECTION.
6. CONSTRUCTION IN PRESERVED TREE COVERAGE AREAS:

A. PRESERVED TREE COVERAGE AREAS SHALL NOT BE USED FOR ACTIVE RECREATIONAL PURPOSES, EXCEPT FOR WALKING PATHS AND FOOT TRAILS CONSTRUCTED WITH MINIMAL DISTURBANCE OF TREE ROOTS AND EXISTING VEGETATION PROVIDE A REGISTERED ARBORIST HAS CERTIFIED THAT THE CONSTRUCTION OF THE TRAIL HAS BEEN DESIGNED TO MINIMIZE IMPACT TO THE EXISTING TREES. NO TREE OVER 10 INCHES SHALL BE REMOVED FOR THE CONSTRUCTION OF THE TRAILS IN PRESERVED TREE COVERAGE AREAS.

B. ALL BUILDINGS SHALL BE SET BACK AT LEAST 10 FEET FROM THE EDGE OF ANY PRESERVED TREE COVERAGE AREA.

C. UTILITY LINES AND DRAINAGE CHANNELS SHALL BE MINIMIZED WITHIN THE ROOT PROTECTION ZONES OF THE TREES TO BE SAVED. PREFERABLY, SUCH FACILITIES SHOULD BE LOCATED ADJACENT TO DRIVEWAYS AND IN GROUPINGS ALLOWED BY SOUND ENGINEERING PRACTICES.

7. TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE, OR ISSUANCE OF A GRADING PERMIT AND SHALL INCLUDE WARNING SIGNS POSTED IN BOTH ENGLISH AND SPANISH, AS FOLLOWS: "NO TRESPASSING/TREE PROTECTION AREA/PROHIBIDO ENTRAR/ZONA PROTECTORA PARA LOS ARBOLES."
8. ROOT PROTECTION ZONE EQUALS ONE FOOT OF RADIUS FOR EVERY INCH OF DIAMETER OF EXISTING TREES, OR SIX FOOT RADIUS, WHICHEVER IS GREATER. NO DISTURBANCE ALLOWED WITHIN THIS AREA. AREA MUST BE PROTECTED WITH BOTH TREE PROTECTION FENCING AND WARNING SIGNS.
9. AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA PRIOR TO OR AT THE SAME TIME AS SILT FENCE AND OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FURTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREE IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED THE BOUNDARY OF THE PROTECTED AREA.
10. MEASURES SHALL BE PROVIDED TO PREVENT LIGHT SPILLOVER ONTO ADJACENT PROPERTIES AND GLARE TOWARD MOTOR VEHICLE OPERATORS AND SHALL BE INDICATED ON THE SITE PLAN. EXTERIOR LIGHTS SHALL BE SHIELDED SO THAT THEY DO NOT CAST DIRECT LIGHT BEYOND PROPERTY LINE. IN ACCORDANCE WITH THESE STANDARDS:

A. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO RESIDENTIAL ZONING IS 0.5 FOOT CANDLES.

B. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO NONRESIDENTIAL ZONING IS 5.0 FOOT CANDLES.

C. THE MAXIMUM ILLUMINATION AT THE EDGE OF THE PROPERTY LINE ADJACENT TO A STREET IS 5.0 FOOT CANDLES.

D. THE LEVEL OF ILLUMINATION AS MEASURED IN FOOT CANDLES AT ANY ONE POINT SHALL MEET THE STANDARDS IN THE TABLE IN UDO SECTION 7.4 WITH MINIMUM AND MAXIMUM LEVELS MEASURED ON THE PAVEMENT WITHIN THE LIGHTED AREA.

E. THE MAXIMUM HEIGHT FOR DIRECTION OR FULL-CUTOFF LIGHTING FIXTURES (FIXTURES DESIGNED TO INSURE THAT NO LIGHT IS EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND) SHALL BE 30 FEET ABOVE GRADE, MEASURED TO THE TOP OF THE FIXTURE.

F. THE MAXIMUM HEIGHT FOR NON-DIRECTIONAL LIGHTING FIXTURES, WHICH ARE DESIGNED TO ALLOW LIGHT TO BE EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND, SHALL BE 15 FEET ABOVE GRADE, MEASURED TO THE TOP OF THE FIXTURE.

G. THESE STANDARDS MUST BE VERIFIED BY FIELD SURVEY (BY USE OF PHOTOMETRIC SURVEY) PRIOR TO THE CERTIFICATE OF COMPLIANCE BEING ISSUED. ALL OF THIS INFORMATION, INCLUDING DETAILS, WILL BE REQUIRED ON BUILDING PLANS PRIOR TO ISSUANCE OF BUILDING PERMIT.

11. COUNTY AND SOIL EROSION CONTROL:

A. IF AN OFFSITE SOIL SPOIL OR BURROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BURROW SITE MUST BE INCLUDED IN THE LAND DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BURROW SITE HAS A LAND-DISTURBANCE PERMIT.

B. A TREE PROTECTION INSPECTION IS REQUIRED PRIOR TO ISSUANCE OF EROSION CONTROL PERMIT.

C. IF MORE THAN 5 ACRES IS DISTURBED, A SURETY WILL BE REQUIRED.

12. BY REFERENCING ROADWAY IMPROVEMENTS ON THE PLAN, THE APPLICANT AGREES TO CONSTRUCT SAID IMPROVEMENT PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY IN A MANNER THAT WILL ALLOW THEM TO FUNCTION AS NOTED ON THE PLAN AND IN ACCORDANCE WITH NCDOT AND CITY OF DURHAM STANDARDS AND POLICIES. THIS INCLUDES (WHERE APPROPRIATE) BUT IS NOT LIMITED TO : ADEQUATE TRANSITION TAPERS, ALIGNMENT OF LANES THROUGH INTERSECTIONS, ASSOCIATED SIGNAL MODIFICATIONS, PAVEMENT MARKINGS, ASSOCIATED SIGNAGE, CURB AND GUTTER, COORDINATION WITH OTHER PROPOSED ROADWAY IMPROVEMENTS AND BIKE LANES. THE APPLICANT ALSO ACCEPTS THE FINANCIAL RESPONSIBILITY FOR ACQUISITION OF ANY ADDITIONAL RIGHT-IF-WAY NECESSARY TO ACCOMMODATE THESE IMPROVEMENTS AND ANY REQUIRED SIDEWALK CONSTRUCTION.
13. THE LOCATION OF THE SIDEWALK SHOWN ON THIS PLAN IS SCHEMATIC. A CITY OF DURHAM AND/OR NCDOT ENCROACHMENT PERMIT IS REQUIRED PRIOR TO ANY CONSTRUCTION. AFTER OBTAINING THE REQUIRED PERMITS, PLEASE CONTACT THE CITY OF DURHAM ENGINEERING CONSTRUCTION INSPECTION OFFICE AT 919-560-4326 FIR A PRE-CONSTRUCTION CONFERENCE AND FIELD VISIT PRIOR TO ANY WORK ON THE PROPOSED SIDEWALK.
14. SOLID WASTE:

A. SOLID WASTE CONTAINMENT CAPACITY AND COLLECTION FREQUENCY WILL PREVENT THE ILLEGAL PLACEMENT OF GARBAGE AND RECYCLABLES.

PUBLIC WORKS CONDITIONS OF APPROVAL

1. THE DESIGNING PROFESSIONAL (A NCPE, NCPLS OR NCRLA - AS REQUIRED) SHALL SUBMIT THREE (3) SETS OF CONSTRUCTION DRAWINGS TO THE PUBLIC WORKS DEPARTMENT - DEVELOPMENT REVIEW FOR REVIEW AND APPROVAL. CONSTRUCTION DRAWING APPROVAL IS REQUIRED PRIOR TO COMMENCING CONSTRUCTION (SEE CONSTRUCTION PLAN APPROVAL PROCESS). THE APPROVAL OF CONSTRUCTION DRAWINGS IS SEPARATE FROM SITE PLAN APPROVAL. CITY OFFICIALS SHALL REVIEW ALL SIZES, MATERIALS, SLOPES, LOCATIONS, EXTENSIONS AND DEPTHS FOR ALL PROPOSED UTILITIES (WATERLINES, SANITARY SEWER LINES AND STORM DRAINAGE CONVEYANCE SYSTEMS) FOR COMPLIANCE WITH ALL APPLICABLE REGULATORY STANDARDS, SPECIFICATIONS, AND BEST MANAGEMENT PRACTICES.
2. THE DESIGNING PROFESSIONAL (A NCPE, NCPLS OR NCRLA - AS REQUIRED) SHALL SUBMIT ONE (1) SET OF AS-BUILT DRAWINGS TO THE PUBLIC WORKS DEPARTMENT - DEVELOPMENT REVIEW FOR REVIEW AND APPROVAL. AS-BUILT DRAWING APPROVAL IS REQUIRED PRIOR TO WATER METER INSTALLATION AND/OR SANITARY SEWER SERVICE CONNECTION AND PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
3. FIRE FLOW ANALYSIS REQUIRED FOR REVIEW AND APPROVAL AS PART OF THE CONSTRUCTION DRAWING APPROVAL AS PART OF THE CONSTRUCTION DRAWING PROCESS. TO SCHEDULE A FLOW TEST COMPLETE THE ONLINE APPLICATION (http://durhamnc.gov/1538/Fire-Flow-Test-Request).
4. WATER PERMIT REQUIRED AFTER CONSTRUCTION DRAWING APPROVAL AND PRIOR TO COMMENCING WATER MAIN INSTALLATION.
5. SEWER PERMIT REQUIRED FROM DURHAM COUNTY AFTER CONSTRUCTION DRAWING APPROVAL AND PRIOR TO COMMENCING SANITARY SEWER MAIN INSTALLATION.
6. PIPES AND/OR STRUCTURES SHOWN IN THE EROSION CONTROL PLAN OF THE SITE PLAN THAT ARE PROPOSED TO BE PERMANENT WILL BE REVIEWED AND APPROVED AS PART OF THE GRADING PLAN DURING CONSTRUCTION DRAWING REVIEW. THESE PIPES AND/OR STRUCTURES MAY NOT BE INSTALLED PRIOR TO CONSTRUCTION DRAWING APPROVAL AND PAYMENT OF INSPECTION FEES.
7. PROWAG STANDARDS ARE TO BE USED. SEE CITY OF DURHAM CURB CUTS DETAILS (http://durhamnc.gov/DocumentCenter/Home/View/2114).
8. AN NCDOT OR CITY OF DURHAM DRIVEWAY PERMIT IS REQUIRED.
9. BACKFLOW PREVENTORS ARE REQUIRED ON THIS PROJECT. BACKFLOW PREVENTOR INSTALLER MUST OBTAIN A BACKFLOW PREVENTOR PERMIT (ONLINE) PRIOR TO BEGINNING BACKFLOW PREVENTOR INSTALLATIONS. CONTACT THE CROSS CONNECTION CONTROL OFFICE AT 919-560-4194 TO OBTAIN ADDITIONAL INFORMATION AND INSTALLATION REQUIREMENTS.
10. THE SITE PLAN CANNOT BE APPROVED UNTIL NUTRIENT MITIGATION OFFSET PAYMENT RECEIPT HAS BEEN RECEIVED BY THE CITY OF DURHAM CONFIRMING THE PAYMENT FOR ______ LB/YR OF TOTAL NITROGEN REMOVAL.
11. NOTE THAT AT THE TIME OF CONSTRUCTION DRAWINGS (CD'S) IT SHALL BE SHOWN THAT THE PROPOSED BMP(S) CAN BE SUSTAINED ON SITE, THIS INCLUDES BUT NOT LIMITED TO THE DETERMINATION OF SEASONALLY HIGH WATER TABLE (SHWT) ON THE BMP FOOTPRINT DURING THE APPROPRIATE TIME OF THE YEAR, AS REQUIRED FOR THE PROPOSED BMP(S). HOWEVER, PLEASE NOTE THAT THE SUITABILITY OF PROPOSED BMP SHOULD BE A CRITICAL DESIGN FACTOR IN BMP CHOICE AT THE SITE PLANNING STAGE.
12. IF IT IS DETERMINED AT THE CD STAGE THAT THE PROPOSED BMP(S) IS UNSUSTAINABLE ON SITE OR OTHERWISE FOUND UNSUITABLE FOR THE SITE, ALTERNATE BMP'S SHALL BE REQUIRED ON SITE TO MEET THE SITE REQUIREMENTS. IF ALTERNATE BMP'S ARE REQUIRED, AS DETERMINED IN CD STAGE, A REVISED OR AMENDED SITE PLAN MAY BE REQUIRED TO MEET THE STORMWATER PERFORMANCE STANDARDS EXISTING AT THAT TIME.
13. NOTE THAT THE APPROVAL OF BMP'S DOES NOT OCCUR UNTIL THE CONSTRUCTION DRAWING STAGE.
14. AN AS-BUILT CERTIFICATION SHALL BE PROVIDED BY THE DESIGN ENGINEER FOR THE CONSTRUCTION OF THE STORMWATER BMP(S) REQUIRED FOR THIS SITE AND SHALL BE APPROVED BY THE CITY OF DURHAM PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
15. FOR EACH STORMWATER BMP FACILITY, A COMPLETED CITY OF DURHAM DESIGN SUMMARY SHALL BE PROVIDED BO LATER THAN AT THE FIRST CONSTRUCTION DRAWING SUBMITTAL.
16. AN EXECUTED STORMWATER FACILITY OPERATION AND MAINTENANCE PERMIT AGREEMENT (PREPARED BY STORMWATER SERVICES, CITY OF DURHAM), PAYMENT OF STORMWATER FACILITY PERMIT FEE ($3,500 PER DETENTION/ WATER QUALITY DEVICE) AND PERPETUAL SURETY FOR THE CONTINUED MAINTENANCE OF THE FACILITY.
17. TO RECEIVE SITE PLAN/PRELIMINARY PLAT APPROVAL FOR DEVELOPMENTS OTHER THAN SINGLE FAMILY DETACHED RESIDENTIAL DEVELOPMENTS THAT ARE MAKING USE OF NUTRIENT BANKS, THE APPROVAL OF THE SITE PLAN/PRELIMINARY PLAT IS CONTINGENT UPON THE PURCHASE OF NUTRIENT CREDITS FROM AN APPROVED NUTRIENT BANK. IF A REVISED SITE PLAN/PRELIMINARY PLAT IS SUBMITTED FOR THIS DEVELOPMENT, THE REVISED SITE PLAN/PRELIMINARY PLAT WILL BE SUBJECT TO ANY ORDINANCES IN PLACE AT THE TIME OF THE REVISED SITE/PRELIMINARY PLAT SUBMISSION. PRIOR TO THE APPROVAL OF THE SITE PLAN/PRELIMINARY PLAT, A LETTER SHOWING THE PURCHASE OF THE NUTRIENT CREDITS FOR THE DEVELOPMENT AND A COPY OF THE NUTRIENT BANK LEDGER, SHOWING THE TOTAL NUTRIENT CREDITS AVAILABLE MINUS ANY AND ALL DEDUCTIONS, IS TO BE PROVIDED TO THE CITY OF DURHAM STORMWATER SERVICE SECTION.

DURHAM COUNTY EROSION CONTROL GENERAL NOTES:

1. IF MORE THAN 20,000 SQ.FT IS DISTURBED, A SEDIMENTATION AND EROSION CONTROL PLAN MUST BE SUBMITTED AND APPROVED PRIOR TO THE ISSUANCE OF A LAND-DISTURBANCE PERMIT.
2. IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA OF THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.

SPECIAL CONDITIONS OF APPROVAL

1. AT A MINIMUM, THE STORMWATER DESIGN DETAILS FOR THIS PROJECT SHALL BE GOVERNED BY THE MINIMUM STANDARDS OF THE MOST RECENT EDITION OF THE DURHAM COUNTY ORDINANCE FOR DEVELOPMENT (RGD) AND ANY LETTERS TO INDUSTRY (POSTED ON THE COUNTY'S WEBSITE) OR SUPPLEMENTAL NOTIFICATIONS OF RGD UPDATES (ALSO POSTED ON CITY'S WEBSITE) THAT ARE IN EFFECT THE DATE CONSTRUCTION DRAWINGS ARE FIRST RECEIVED FOR REVIEW BY THE COUNTY. NON-COMPLIANCE WITH ANY OF THESE MINIMUM STANDARDS SHALL RENDER THE APPROVAL OF SUCH ITEMS NULL AND VOID. IT WILL BE THE RESPONSIBILITY OF THE OWNER TO CORRECT ANY DEFICIENCIES NOTES DURING THE LIFE OF THIS PROJECT TO THE SATISFACTION OF THE COUNTY.
2. FINAL DESIGN CALCULATIONS FOR THE STORMWATER BEST MANAGEMENT PRACTICES(S) (BMP[S]) WILL REQUIRE THE USE OF STORAGE INDICATION ROUTING METHODOLOGY SUCH AS TR-20 OR HEC-1 MODELS. FOR EACH BMP, AS APPLICABLE, PROVIDE STAGE-STORAGE RELATIONSHIP AND INFLOW AND OUTFLOW HYDROGRAPHS. PROVIDE ALL TABULATED DATA INCLUDING CALCULATIONS SHOWING OUTLET UNDER ORIFICE CONTROL, BARREL CONTROL AND WEIR CONTROL, AS APPROPRIATE, TO SHOW HOW THE ROUTING WAS DEVELOPED.
3. STORMWATER BEST MANAGEMENT PRACTICE(S) (BMP[S]) PERMIT FEE(S), THE EXECUTED STORMWATER FACILITY AGREEMENT AND COVENANTS (PREPARED BY THE CITY OF DURHAM STORMWATER SERVICES SECTION) AND EITHER A PAYMENT INTO THE STORMWATER REPLACEMENT FUND OR THE PROVISION OF AN ALTERNATE SECURITY ARE REQUIRED FOR ALL BMP(S) ASSOCIATED WITH THIS DEVELOPMENT. CONSTRUCTION OF THE DEVELOPMENT IS NOT ALLOWED TO COMMENCE UNTIL THESE ITEMS ARE PROVIDED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OUTLINED IN THE STORMWATER FACILITY AGREEMENT AND COVENANTS. THE DESIGNER SHALL SUBMIT A CERTIFIED CONSTRUCTION COST ESTIMATE FOR EVERY STORMWATER BMP PROPOSED IN THE DEVELOPMENT AT THE FIRST SUBMITTAL OF THE CONSTRUCTION DRAWINGS.
4. AN AS-BUILT CERTIFICATION FOR THE STORMWATER BEST MANAGEMENT PRACTICE(S) (BMP[S]), PROVIDED BY THE DESIGN ENGINEER, IS REQUIRED. THE AS-BUILT SHALL BE SUBMITTED IN ACCORDANCE WITH THE CITY OF DURHAM BMP CERTIFYING ENGINEER (BCE) PROGRAM, REFER TO SECTION 8.6, BMP CERTIFYING ENGINEER PROGRAM FOR STORMWATER BMPS IN THE CITY OF DURHAM, OF THE REFERENCE GUIDE FOR DEVELOPMENT, APPROVED BY THE STORMWATER SERVICES SECTION (S3), AND THE BMP(S) SHALL BE INSPECTED AND APPROVED BY S3 PRIOR TO ISSUANCE OF ANY CERTIFICATES OF OCCUPANCY OR CERTIFICATES OF COMPLIANCE FOR THE PROJECT.
5. A COMPLETED CITY OF DURHAM DESIGN SUMMARY IS REQUIRED FOR EACH STORMWATER BEST MANAGEMENT PRACTICE(S) NO LATER THAN AT THE FIRST CONSTRUCTION DRAWING SUBMITTAL.
6. STORMWATER NEST MANAGEMENT PRACTICE(S) (BMP[S]) DESIGN CALCULATIONS WILL NOT BE REVIEWED OR APPROVED WITH THE SITE PLAN/PRELIMINARY PLAT SUBMITTAL. ALL BMP DESIGNS WILL BE REVIEWED AND APPROVED DURING THE CONSTRUCTION DRAWING SUBMITTAL PROCESS. IF, AT THE TIME OF THE CD SUBMITTAL, IT IS FOUND THAT THE PROPOSED BMP(S) IS UNDERSIZED OR OTHERWISE INSUFFICIENT OR UNSUITABLE FOR THE SITE , IT IS THE RESPONSIBILITY OF THE APPLICANT TO INSURE THAT THE PLAT MAY BE REQUIRED IF THE ORIGINALLY PROPOSED BMP(S) ARE FOUND INSUFFICIENT OR UNSUITABLE AND ALTERNATIVE BMP(S) ARE REQUIRED.
7. TO RECEIVE SITE PLAN/PRELIMINARY PLAT APPROVAL FOR DEVELOPMENTS OTHER THAN SINGLE FAMILY DETACHED RESIDENTIAL DEVELOPMENTS THAT ARE MAKING USE OF NUTRIENT BANKS, THE APPROVAL OF THE SITE PLAN/PRELIMINARY PLAT IS CONTINGENT UPON PURCHASE OF NUTRIENT CREDITS FROM AN APPROVED NUTRIENT BANK. IF A REVISED SITE PLAN/PRELIMINARY PLAT IS SUBMITTED FOR THIS DEVELOPMENT, THE REVISED SITE PLAN/PRELIMIMARY PLAT WILL BE SUBJECT TO AN ORDINANCE IN PLACE AT THE TIME OF THE REVISED SITE PLAN/PRELIMINARY PLAT SUBMISSION. PRIOR TO THE APPROVAL OF THE SITE PLAN/PRELIMINARY PLAT, A LETTER SHOWING THE PURCHASE OF THE NUTRIENT CREDITS FOR THIS DEVELOPMENT AND A COPY OF THE NUTRIENT BANK LEDGER, SHOWING THE TOTAL NUTRIENT CREDITS AVAILABLE MINUS ANY AND ALL DEDUCTIONS, IS TO BE PROVIDED TO THE CITY OF DURHAM STORMWATER SERVICES SECTIONS.
8. CONSTRUCTION DRAWING APPROVAL FOR THIS PROJECT IS CONTINGENT UPON THE FUTURE PURCHASE OF NUTRIENT CREDITS FROM AN APPROVED NUTRIENT BANK. IF REVISED SITE PLAN/PRELIMINARY PLAT IS SUBMITTED FOR THE SITE, THE REVISED SITE PLAN/PRELIIMINARY PLAT WILL BE SUBJECT TO ANY ORDINANCES IN PLACE AT THE TIME OF THE REVISED SITE PLAN/PRELIMINARY PLAT SUBMISSION. PRIOR TO THE APPROVAL OF ANY CONSTRUCTION DRAWINGS OR PRIOR TO THE RELEASE OF ANY BUILDING PERMITS PERTAINING TO THIS DEVELOPMENT, WHICH EVER COMES FIRST, A LETTER SHOWING THE PURCHASE OF THE NUTRIENT CREDITS FOR THIS DEVELOPMENT AND A COPY OF THE NUTRIENT BANK LEDGER, SHOWING THE TOTAL NUTRIENT CREDITS AVAILABLE MINUS ANY AND ALL DEDUCTIONS, IS TO BE PROVIDED TO STORMWATER SERVICES.
9. NO BUILDING PERMIT SHALL BE ISSUED BEFORE A PLAT TO REMOVE THE PROPERTY LINES IS RECORDED
10. CONSTRUCTION DRAWINGS WILL NOT BE APPROVED UNTIL APPROPRIATE NUTRIENT OFFSET PAYMENTS HAVE BEEN MADE.

GENERAL NOTES:

1. THE CONTRACTOR SHALL EMPLOY ALL NECESSARY BARRICADES, SIGNS, FENCES, FLASHING LIGHTS, FLAGMEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED BY CITY OF DURHAM, DURHAM COUNTY AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, FOR DETAILS OF TRAFFIC CONTROL STANDARDS AND DEVICES.
2. THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION.
3. APPROVAL OF THESE PLANS IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
4. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION "STANDARD DETAILS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND APPLICABLE CITY OF DURHAM AND DURHAM COUNTY CODES AND ORDINANCES. THE CONTRACTOR SHALL MAINTAIN A CURRENT EDITION OF THE STATE AND LOCAL CODES, ORDINANCES, STANDARD SPECIFICATION AND STANDARD DETAILS ON THE PROJECT SITE FOR REFERENCE DURING CONSTRUCTION OF THE PROJECT.
6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND SHALL REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS THE OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY. CONTRACTOR SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING WITH WORK.
7. THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
8. THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
9. THE CONTRACTOR SHALL REPAIR, RESURFACE, RECONSTRUCT OR REFURBISH ANY AREAS DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, HIS SUBCONTRACTORS OR SUPPLIERS AT NO ADDITIONAL COST TO THE OWNER.
10. ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
11. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF TRUCK DOCKS, EXIT DOORS, SIDEWALKS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
12. ALL PAINT STRIPING, PAVEMENT MARKINGS, AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR AS OTHERWISE SPECIFIED. ALL REFERENCED SIGN STANDARDS ARE TAKEN FROM THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". ALL NEW SIGNS SHALL BE MOUNTED ON GALVANIZED POSTS AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
13. CONTRACTOR SHALL INSTALL ACCESSIBLE RAMPS PER LOCAL MUNICIPALITY AND ADA STANDARDS AT ALL DRIVE AND BUILDING LOCATIONS AS REQUIRED.
14. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY THE CITY OF DURHAM AND DURHAM COUNTY PUBLIC UTILITIES DEPARTMENTS FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.
15. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY OWNER OF ANY UNACCEPTABLE AREAS.
16. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES AND STORM DRAINAGE) TO OWNER PRIOR TO COMPLETION OF CONSTRUCTION
17. LANDSCAPE MULCH: PINE STRAW SHALL NOT BE USED AS MULCH OR GROUNDCOVER WITHIN TEN FEET OF ANY STRUCTURES CONSISTING OF EXTERIOR COMBUSTIBLE CONSTRUCTION AS SPECIFIED BY DURHAM CITY COD SECTON46-87.
18. FOR COUNTY SOIL AND EROSION CONTROL:
    A: A SEDIMENTATION AND EROSION CONTROL PLAN MUST BE SUBMITTED AND APPROVED PRIOR TO THE ISSUANCE OF A LAND-DISTURBANCE PERMIT.
    B: IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BARROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BARROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.
19. PROVIDE FIRE PLANS EXAMINER ONE COPY OF UTILITY CONSTRUCTION DRAWINGS, SHOWING UNDERGROUND PIPING LAYOUT AND ALL FIRE APPURTENANCES. PERMIT FOR INSTALLATION OF PRIVATE FIRE HYDRANT(S) MUST BE ISSUED BY FIRE PLANS EXAMINER PRIOR TO INSTALLATION OF SAID HYDRANTS.

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

DURHAM COUNTY EROSION CONTROL GENERAL NOTES:

1. IF MORE THAN 20,000 SQ.FT IS DISTURBED, A SEDIMENTATION AND EROSION CONTROL PLAN MUST BE SUBMITTED AND APPROVED PRIOR TO THE ISSUANCE OF A LAND-DISTURBANCE PERMIT.
2. IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA OF THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.

SOLID WASTE NOTE:

GARBAGE AND RECYCLING (INCLUDING CARDBOARD) SHALL BE COLLECTED AS OFTEN AS NECESSARY TO PREVENT THE ILLEGAL PLACEMENT OF GARBAGE AND RECYCLABLES. THE PROPOSED TENANT WILL UTILIZE AN EXISTING CARDBOARD RECYCLING PROGRAM WHERE CARDBOARD IS RETURNED ON REGULARLY SCHEDULED DELIVERY TRUCKS TO AN APPROVED RECYCLING FACILITY.

DURHAM COUNTY STORMWATER NOTE:

PER NC STORMWATER MANUAL, CHAPTER C-5, MDC 2, A SOIL INVESTIGATION SHALL BE PERFORMED IF PERMEABLE PAVEMENT IS PROPOSED FOR STORMWATER CREDIT. THIS WILL BE REQUIRED PRIOR TO APPROVAL OF CONSTRUCTION DRAWINGS.

ALL SCMs MUST BE DESIGNED IN ACCORDANCE WITH THE NC STORMWATER MANUAL MINIMUM DESIGN CRITERIA.

ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE CITY OF DURHAM AND NCDOT STANDARDS, SPECIFICATION AND DETAILS.

DEPARTMENT OF TRANSPORTATION NOTE:

SIGN AND/OR PAVEMENT MARKINGS TO BE INSTALLED BY THE DEVELOPER (NEW SUBDIVISIONS OR OFF-SITE ROADWAY IMPROVEMENTS THAT NEED NEW MARKINGS FOR EXAMPLE):

THE DEVELOPER IS RESPONSIBLE FOR FABRICATION AND INSTALLATION OF ALL REQUIRED SIGNS AND PLACEMENT MARKINGS WITHIN THE PUBLIC RIGHT-OF-WAY. THE DEVELOPER SHALL SUBMIT A SIGNING AND MARKINGS PLAN TO THE CITY AT CONSTRUCTION PLAN STAGE FOR REVIEW AND APPROVAL. ALL SIGNS AND PAVEMENT MARKINGS, SHOWN ON THE CONSTRUCTION PLANS, MUST BE IN PLACE PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY AND/OR STREET ACCEPTANCE, AS DETERMINED BY THE CITY. VARIATIONS TO THESE STANDARD NOTES MAY BE APPLIED WITH THE EXPRESS CONSENT OF THE TRANSPORTATION DIVISION.

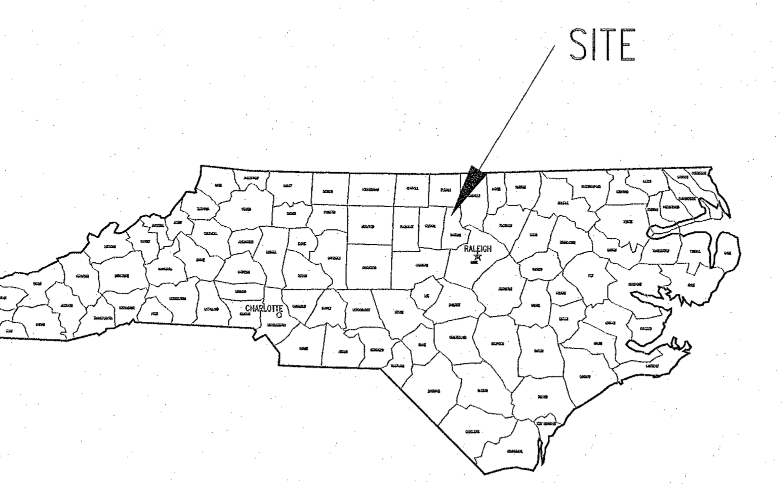
SIGNAGE AND MARKING PLAN CONSTRUCTION DRAWING NOTES:
1. ALL SIGNS, STREET MARKERS, AND PAVEMENT MARKINGS (EVERYTHING CALLED OUT ON THE SIGNING AND MARKING SHEET) MUST BE INSTALLED ON EACH STREET PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND/OR STREET ACCEPTANCE, AS DETERMINED BY THE CITY.
2. STOP BARS SHALL BE 2-FEET WIDE WHITE THERMOPLASTIC PER NCDOT SPECIFICATIONS.
3. ALL SIGNS MUST CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SITE DATA

OWNER/APPLICANT		GLANDON FOREST EQUITY, LLC 3825 BARRETT DRIVE, SUITE 100 RALEIGH, NC 27609 919-459-2602
PARCEL		PIN: 0829-01-17-7629 PARCEL ID: 189744 PIN: 0829-01-17-8867 PARCEL ID: 189743 PIN: 0829-01-17-9708 PARCEL ID: 189742
ZONING		CN(D) (COMMERCIAL NEIGHBORHOOD) ZONING CASE#Z1800037
TIER		RURAL TIER (ROUGEMONT RURAL VILLAGE AREA)
EXISTING USE		VACANT
PROPOSED USE		COMMERCIAL RETAIL
RIVER BASIN		NEUSE (UPPER FALLS LAKE)
EXISTING PARCEL AREA		GROSS: 2.39 AC (104,131 SF)
PROPOSED PARCEL AREA		NET: 2.39 AC (104,131 SF)
BUILDING HEIGHT	MAXIMUM	25'
	PROPOSED	20'
BUILDING COVERAGE	MAXIMUM	60%
	PROPOSED	9,100 SF (8.7%)
BUILDING AREA	PROPOSED	9,100 SF
SETBACK/YARD REQUIREMENTS	REQUIRED	STREET YARD: BILL POOLE ROAD: 25' U.S. HIGHWAY 501: 25FT
PARKING	REQUIRED	RETAIL: 1 SP/200 SF x 7,500 SF = 38 SP TOTAL: 38 SPACES MAX (CN)
	PROPOSED	35 SPACES (6 COMPACT SPACES - 17.1%)
HC PARKING	REQUIRED	2 SPACES
	PROPOSED	2 SPACES
HC VAN PARKING	REQUIRED	1 SPACES
	PROPOSED	1 SPACES
BICYCLE PARKING	REQUIRED	RETAIL: 1 SP/5,000 SF X 9,100 SF = 2 SP (MINIMUM 4 SPACES)
	PROPOSED	4 SPACES
WATERSHED PROTECTION OVERLAY DISTRICT		M/LR-B LAKE MITCHIE - LITTLE RIVER WATERSHED NEUSE - UPPER FALLS LAKE
IMPERVIOUS SURFACE	MAXIMUM	24% OF GROSS SITE AREA 0.57 AC PER SCM DESIGN CALCULATIONS
	EXISTING	3,160 SF, 0.07 AC (EXISTING DRIVE AISLE AND STRUCTURE)
	PROPOSED	0.57 AC (23.99%)
TREE COVERAGE	REQUIRED	NO TREE COVERAGE IS REQUIRED IN THE RURAL TIER

DOLLAR GENERAL®

Site Plan
Proposed
Dollar General
Case# D1900178
Roxboro Road (US Hwy 501)
Durham, NC
Durham County Jurisdiction



Civil Engineer

Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE#P-0619

TRIANGLE
SITE DESIGN

Developer

Glandon Forest Equity, LLC
3825 Barrett Drive, Suite 100
Raleigh, NC 27609
(919) 459-2602
gventers@vanguardpg.com

Property Owner:

David Clayton
1 Wayside Place
Durham, NC 27705

INDEX TO SHEETS

SHEET #	DESCRIPTION
C-1	COVER SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	SITE PLAN
C-4	GRADING AND DRAINAGE PLAN
C-5	EROSION CONTROL PLAN
C-6	UTILITY PLAN
C-7	CONSTRUCTION DETAILS
C-8	CONSTRUCTION DETAILS
C-9A	NC CONSTRUCTION GENERAL PERMIT (NCG01) NOTES
C-9B	EROSION CONTROL DETAILS
C-10A	STORMWATER MANAGEMENT DETAILS
C-11	LANDSCAPE PLAN
C-11B	LANDSCAPE EXHIBIT EXISTING EAST PROPERTY LINE

REVISIONS

NO.	DATE	DESCRIPTION
9		
8		
7		
6		
5		
4	12/10/19	*REVISED PER CITY/COUNTY REVIEW*
3	11/22/19	*REVISED PER CITY/COUNTY & NCDOT REVIEW*
2	10/22/19	*REVISED PER CITY/COUNTY & NCDOT REVIEW*
1	8/7/19	*REVISED PER CITY/COUNTY REVIEW*

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SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24434 MATTHEW E. LOWDER 12/20/19

SHEET: C-1

DATE: May 28, 2019

JOB NUMBER: 004154

APPROVAL STAMP - CASE # D1900178

Dollar General-Rougemont, Durham County, North Carolina

SURVEY NOTES

1.) ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES.

2.) SITE AREA = 2.39 ACRES (COMPUTED BY USING COORDINATE METHOD).

3.) THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FLOOD MAP PANEL 3720082800K, DATED OCT. 19, 2018.

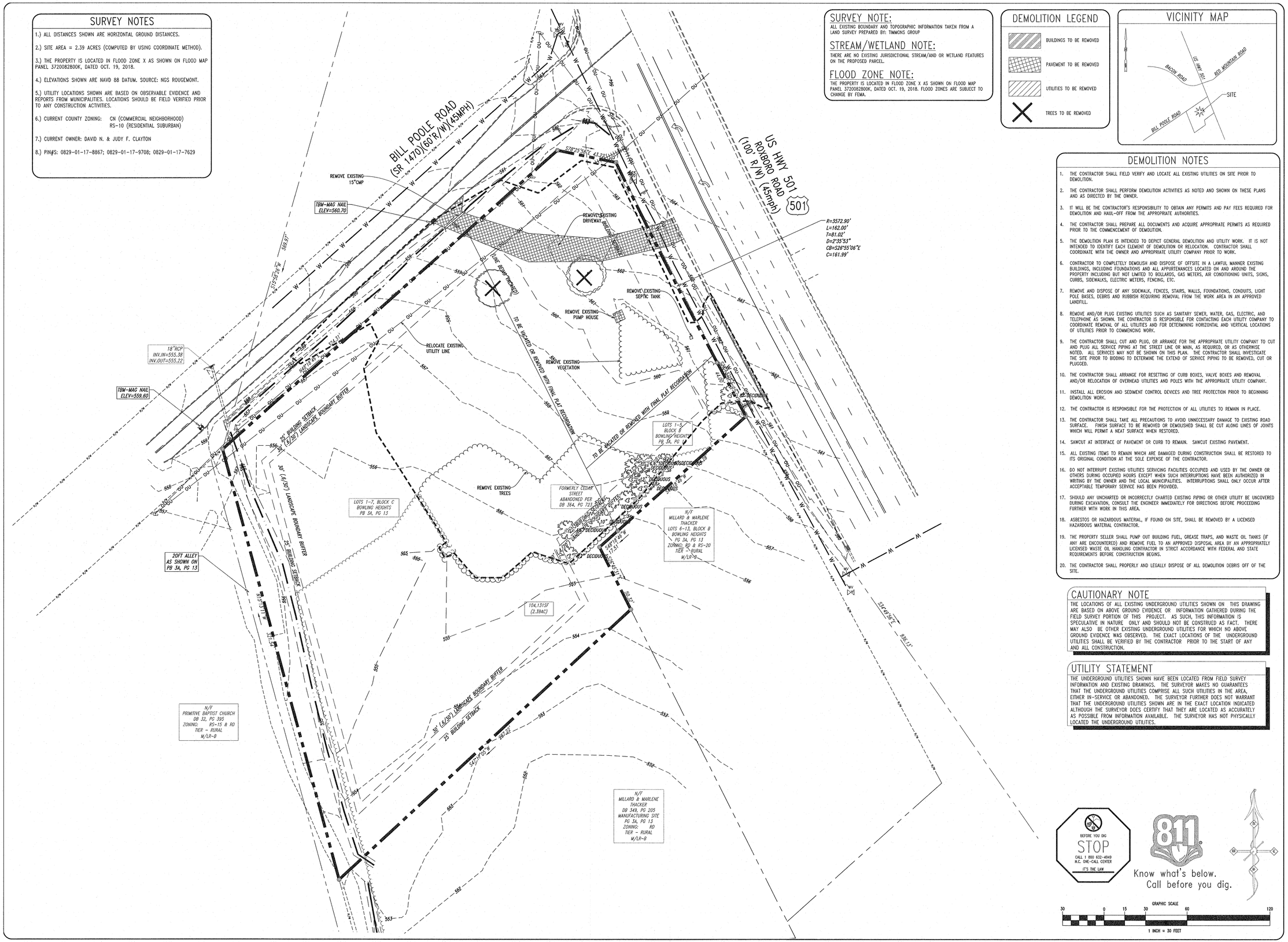
4.) ELEVATIONS SHOWN ARE NAVD 88 DATUM. SOURCE: NGS ROUGEMONT.

5.) UTILITY LOCATIONS SHOWN ARE BASED ON OBSERVABLE EVIDENCE AND REPORTS FROM MUNICIPALITIES. LOCATIONS SHOULD BE FIELD VERIFIED PRIOR TO ANY CONSTRUCTION ACTIVITIES.

6.) CURRENT COUNTY ZONING: CN (COMMERCIAL NEIGHBORHOOD)
RS-10 (RESIDENTIAL SUBURBAN)

7.) CURRENT OWNER: DAVID N. & JUDY F. CLAYTON

8.) PIN#S: 0829-01-17-8867; 0829-01-17-9708; 0829-01-17-7629



SURVEY NOTE:

ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY: TIMMONS GROUP

STREAM/WETLAND NOTE:

THERE ARE NO EXISTING JURISDICTIONAL STREAM/AND OR WETLAND FEATURES ON THE PROPOSED PARCEL.

FLOOD ZONE NOTE:

THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FLOOD MAP PANEL 3720082800K, DATED OCT. 19, 2018. FLOOD ZONES ARE SUBJECT TO CHANGE BY FEMA.

DEMOLITION LEGEND

- BUILDINGS TO BE REMOVED
- PAVEMENT TO BE REMOVED
- UTILITIES TO BE REMOVED
- TREES TO BE REMOVED

VICINITY MAP

DEMOLITION NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO DEMOLITION.
2. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY THE OWNER.
3. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS AND PAY FEES REQUIRED FOR DEMOLITION AND HAUL-OFF FROM THE APPROPRIATE AUTHORITIES.
4. THE CONTRACTOR SHALL PREPARE ALL DOCUMENTS AND ACQUIRE APPROPRIATE PERMITS AS REQUIRED PRIOR TO THE COMMENCEMENT OF DEMOLITION.
5. THE DEMOLITION PLAN IS INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK. IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY PRIOR TO WORK.
6. CONTRACTOR TO COMPLETELY DEMOLISH AND DISPOSE OF OFFSITE IN A LAWFUL MANNER EXISTING BUILDINGS, INCLUDING FOUNDATIONS AND ALL APPURTENANCES LOCATED ON AND AROUND THE PROPERTY INCLUDING BUT NOT LIMITED TO BOLLARDS, GAS METERS, AIR CONDITIONING UNITS, SIGNS, CURBS, SIDEWALKS, ELECTRIC METERS, FENCING, ETC.
7. REMOVE AND DISPOSE OF ANY SIDEWALK, FENCES, STAIRS, WALLS, FOUNDATIONS, CONDUITS, LIGHT POLE BASES, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED LANDFILL.
8. REMOVE AND/OR PLUG EXISTING UTILITIES SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO COORDINATE REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
9. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED, OR AS OTHERWISE NOTED. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTEND OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED.
10. THE CONTRACTOR SHALL ARRANGE FOR RESETTING OF CURB BOXES, VALVE BOXES AND REMOVAL AND/OR RELOCATION OF OVERHEAD UTILITIES AND POLES WITH THE APPROPRIATE UTILITY COMPANY.
11. INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
13. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACE. FINISH SURFACE TO BE REMOVED OR DEMOLISHED SHALL BE CUT ALONG LINES OF JOINTS WHICH WILL PERMIT A NEAT SURFACE WHEN RESTORED.
14. SAWCUT AT INTERFACE OF PAVEMENT OR CURB TO REMAIN. SAWCUT EXISTING PAVEMENT.
15. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.
16. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
17. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
18. ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.
19. THE PROPERTY SELLER SHALL PUMP OUT BUILDING FUEL, GREASE TRAPS, AND WASTE OIL TANKS (IF ANY ARE ENCOUNTERED) AND REMOVE FUEL TO AN APPROVED DISPOSAL AREA BY AN APPROPRIATELY LICENSED WASTE OIL HANDLING CONTRACTOR IN STRICT ACCORDANCE WITH FEDERAL AND STATE REQUIREMENTS BEFORE CONSTRUCTION BEGINS.
20. THE CONTRACTOR SHALL PROPERLY AND LEGALLY DISPOSE OF ALL DEMOLITION DEBRIS OFF OF THE SITE.

CAUTIONARY NOTE

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE BASED ON ABOVE GROUND EVIDENCE OR INFORMATION GATHERED DURING THE FIELD SURVEY PORTION OF THIS PROJECT. AS SUCH, THIS INFORMATION IS SPECULATIVE IN NATURE ONLY AND SHOULD NOT BE CONSTRUED AS FACT. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF THE UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF ANY AND ALL CONSTRUCTION.

UTILITY STATEMENT

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

BEFORE YOU DIG
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N.C. ONE-CALL CENTER
IT'S THE LAW

811
Know what's below.
Call before you dig.

GRAPHIC SCALE
30 0 15 30 60 120
1 INCH = 30 FEET

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
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SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24404 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
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919-459-2602
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gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: EXISTING CONDITIONS PLAN

SHEET NUMBER: C-2

DG#20605-Rougemont, NC

TRAFFIC CONTROL NOTES

THE DISTRICT OFFICE OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO CONSTRUCTION.

TRAFFIC MUST BE MAINTAINED AT ALL TIMES AND TRAFFIC CONTROL MUST COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND WITH THE CURRENT EDITION OF THE NCDOT STANDARDS AND SPECIFICATIONS.

ALL LANES OF TRAFFIC ARE TO BE OPEN DURING THE HOURS OF 6:00 AM TO 9:00 AM AND FROM 4:00 PM TO 6:00 PM. A MINIMUM OF ONE 12-FOOT LANE SHALL BE MAINTAINED AT ALL TIMES.

ALL ROADWAY SIGNS WHICH ARE TO BE REMOVED DURING CONSTRUCTION ARE TO BE REINSTALLED AS SOON AS POSSIBLE.

DURING NON-WORKING HOURS, EQUIPMENT IS TO BE PARKED AS CLOSE TO THE RIGHT OF WAY LINE AS POSSIBLE AND BE PROPERLY BARRICADED IN ORDER TO PREVENT ANY EQUIPMENT OBSTRUCTION WITHIN THE TRAVEL LANE.

ALL CONTRACTORS DOING WORK WITHIN STATE RIGHT OF WAY ARE TO HAVE A COPY OF THESE PLANS ON THE JOB SITE.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WITHIN 5' OF AN OPEN TRAVEL LANE, THE CONTRACTOR SHALL CLOSE THE OPEN TRAVEL LANE ADJACENT TO THE WORK AREA USING APPROPRIATE TRAFFIC CONTROL MEANS AND METHODS UNLESS WORK IN THAT AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

THE CONTRACTOR SHALL NOT WORK SIMULTANEOUSLY ON BOTH SIDES OF AN OPEN TRAVEL WAY WITHIN THE SAME LOCATION ON A TWO-LANE, TWO-WAY ROAD.

THE MAXIMUM LENGTH OF A LANE CLOSURE ON THE PROJECT SHALL BE ONE MILE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

THE CONTRACTOR SHALL BACKFILL AT 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF OF MORE THAN 3".

WHEN BACKFILL IS REQUIRED, IT SHALL BE AT NO EXPENSE TO THE OWNER.

THE MAXIMUM DIFFERENCE IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC SHALL BE 2".

WHEN LANE CLOSURES ARE NOT IN EFFECT, CHANNELIZING DEVICES IN WORK AREAS SHALL BE SPACED NO GREATER THAN TWICE THE POSTED SPEED LIMIT, EXCEPT 10' ON-CENTER IN RADII, AND SHALL BE SET 3' OFF THE EDGE OF AN OPEN TRAVELWAY.

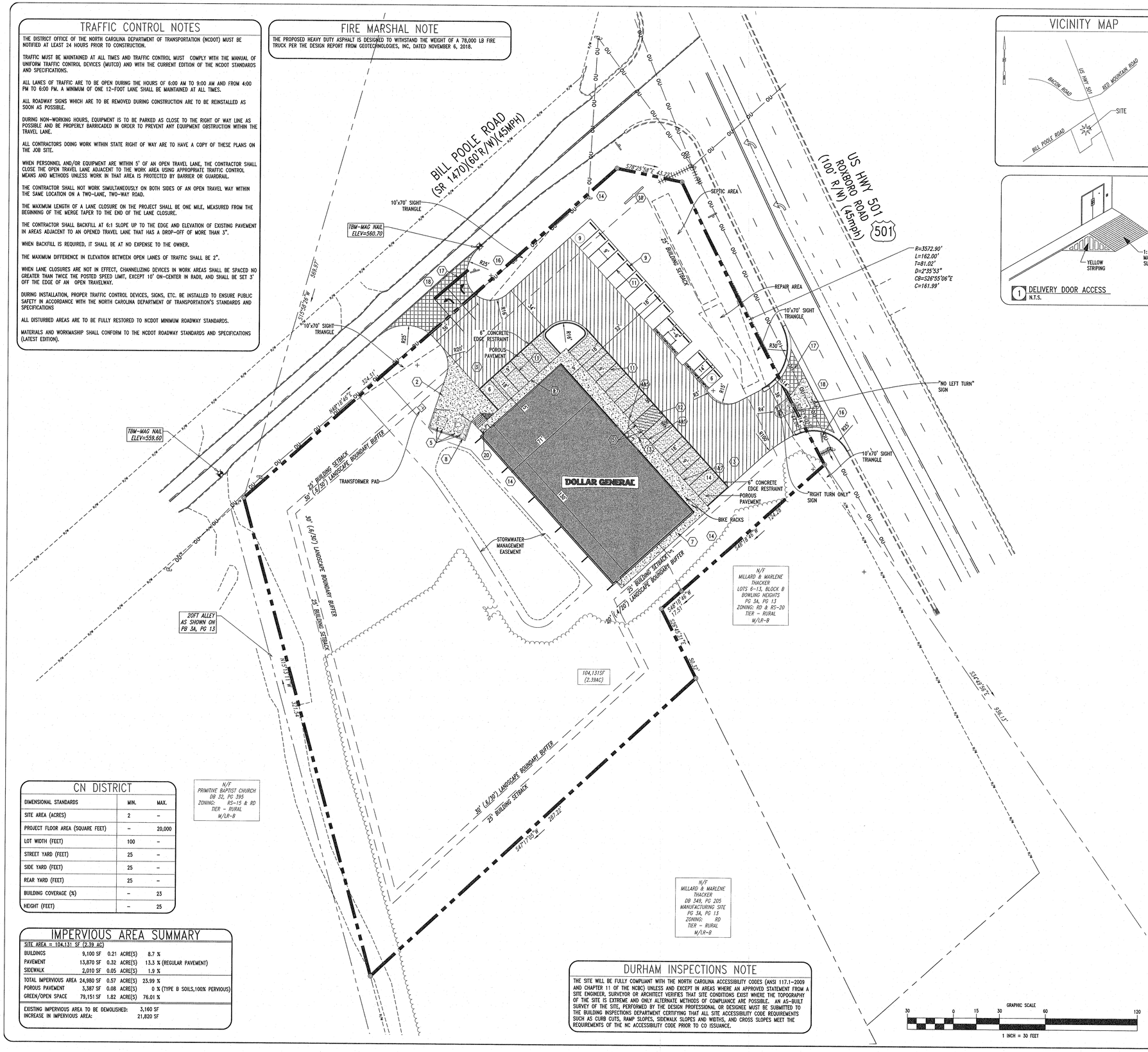
DURING INSTALLATION, PROPER TRAFFIC CONTROL DEVICES, SIGNS, ETC. BE INSTALLED TO ENSURE PUBLIC SAFETY IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS

ALL DISTURBED AREAS ARE TO BE FULLY RESTORED TO NCDOT MINIMUM ROADWAY STANDARDS.

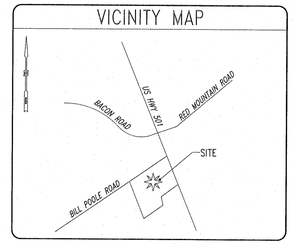
MATERIALS AND WORKMASHIP SHALL CONFORM TO THE NCDOT ROADWAY STANDARDS AND SPECIFICATIONS (LATEST EDITION).

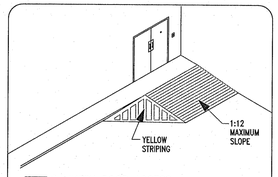
FIRE MARSHAL NOTE

THE PROPOSED HEAVY DUTY ASPHALT IS DESIGNED TO WITHSTAND THE WEIGHT OF A 78,000 LB FIRE TRUCK PER THE DESIGN REPORT FROM GEOTECHNOLOGIES, INC, DATED NOVEMBER 6, 2018.



VICINITY MAP





1 DELIVERY DOOR ACCESS
N.T.S.

GENERAL NOTES

1. THE CONTRACTOR SHALL EMPLOY ALL NECESSARY BARRICADES, SIGNS, FENCES, FLASHING LIGHTS, FLAGMEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED BY DURHAM COUNTY AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, FOR DETAILS OF TRAFFIC CONTROL STANDARDS AND DEVICES.
2. THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION.
3. APPROVAL OF THESE PLANS IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
4. COORDINATE ALL CURB AND STREET GRADES IN INTERSECTIONS WITH INSPECTOR.
5. NON-STANDARD ITEMS (I.E. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION BEFORE INSTALLATION.
6. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
7. EXISTING SITE CONDITIONS, GRADES, CONTOURS, UTILITIES AND OTHER EXISTING FEATURES FROM A SURVEY PREPARED BY TIMMONS GROUP.
8. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION "STANDARD DETAILS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND APPLICABLE DURHAM COUNTY CODES AND ORDINANCES. THE CONTRACTOR SHALL MAINTAIN A CURRENT EDITION OF THE STATE AND LOCAL CODES, ORDINANCES, STANDARD SPECIFICATION AND STANDARD DETAILS ON THE PROJECT SITE FOR REFERENCE DURING CONSTRUCTION OF THE PROJECT.
9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND SHALL REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS THE OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY. CONTRACTOR SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING WITH WORK.
10. THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
11. THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
12. THE CONTRACTOR SHALL REPAIR, RESURFACE, RECONSTRUCT OR REFURBISH ANY AREAS DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, HIS SUBCONTRACTORS OR SUPPLIERS AT NO ADDITIONAL COST TO THE OWNER.
13. ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
14. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF TRUCK DOCKS, EXIT DOORS, SIDEWALKS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
15. ALL PAINT STRIPING, PAVEMENT MARKINGS, AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR AS OTHERWISE SPECIFIED. ALL REFERENCED SIGN STANDARDS ARE TAKEN FROM THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". ALL NEW SIGNS SHALL BE MOUNTED ON GALVANIZED POSTS AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
16. CONTRACTOR SHALL INSTALL ACCESSIBLE RAMPS PER LOCAL MUNICIPALITY AND ADA STANDARDS AT ALL DRIVE AND BUILDING LOCATIONS AS REQUIRED.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY THE DURHAM COUNTY PUBLIC UTILITIES DEPARTMENTS FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.
18. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY OWNER/DOLLAR GENERAL OF ANY UNACCEPTABLE AREAS.
19. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES AND STORM DRAINAGE) TO OWNER/DOLLAR GENERAL PRIOR TO COMPLETION OF CONSTRUCTION

KEYNOTES

1. CONCRETE MONOLITHIC CURB/SIDEWALK - SEE DETAIL SHEET C-7
2. CONCRETE PAVEMENT DESIGN AS PER GEOTECHNICAL REPORT SPECIFICATIONS - SEE DETAIL SHEET C-7
   EXPANSION AND CONTROL JOINTS - SEE DETAILS SHEET C-7
3. ASPHALT PAVEMENT DESIGN AS PER GEOTECHNICAL REPORT SPECIFICATIONS - SEE DETAIL SHEET C-7
   - STANDARD DUTY PAVEMENT
   - HEAVY DUTY PAVEMENT
   - NCDOT PAVEMENT SECTION
4. HANDICAP PARKING SIGN - SEE DETAIL SHEET C-7
5. BOLLARD - SEE DETAIL SHEET C-8
6. CONCRETE LIGHT POLE BASE - NOT USED
7. CONCRETE SIDEWALK - SEE DETAIL SHEET C-7 FOR SIDEWALKS AROUND BUILDING.
8. DUMPSTER LAYOUT - 6' HIGH MASONRY ENCLOSURE W/GATES - SEE DETAIL SHEET C-8
9. 6'-0" LONG CONCRETE WHEEL STOP, PINNED TO PAVEMENT - SEE DETAIL SHEET C-7. LOCATE 2'-6" FROM FACE OF CURB OR SIDEWALK.
10. PYLON SIGN (UNDER SEPARATE PERMIT)
11. 4" WIDE PARKING STRIPE PAINTED YELLOW (TYP)
12. 4" WIDE PARKING DIAGONAL STRIPES
13. CONCRETE HANDICAP RAMP - MAXIMUM SLOPE 1:12 (8.33%) (PER A.D.A. REQUIREMENTS) ANY RAMPS LESS THAN 1:20 SHALL HAVE DETECTABLE WARNINGS AND CONTRASTING COLOR. SEE DETAIL SHEET C-7.
14. NEW GRASS/LANDSCAPE AREA
15. CONCRETE CURB AND GUTTER - SEE DETAIL SHEET C-8 (NOT USED)
16. STOP SIGN - SEE DETAIL SHEET C-8
17. PAVEMENT MARKINGS - SEE DETAIL SHEET C-8
18. NEW CURB CUT, MATCH EXISTING EOP & APPROACH PER LOCAL CODES & SPECS.
19. (NOT USED)
20. DELIVERY DOOR ACCESS - REFER TO DETAIL THIS SHEET
21. CONCRETE FLUME - REFER TO DETAIL ON SHEET C-8 (NOT USED)
22. 6' WOOD SCREEN FENCE - REFER TO DETAIL ON SHEET C-8 (NOT USED)
23. PROPOSED PARKING COUNT

CN DISTRICT

DIMENSIONAL STANDARDS	MIN.	MAX.
SITE AREA (ACRES)	2	-
PROJECT FLOOR AREA (SQUARE FEET)	-	20,000
LOT WIDTH (FEET)	100	-
STREET YARD (FEET)	25	-
SIDE YARD (FEET)	25	-
REAR YARD (FEET)	25	-
BUILDING COVERAGE (%)	-	23
HEIGHT (FEET)	-	25

IMPERVIOUS AREA SUMMARY

SITE AREA = 104,131 SF (2.39 AC)

BUILDINGS	9,100 SF	0.21	ACRE(S)	8.7 %
PAVEMENT	13,870 SF	0.32	ACRE(S)	13.3 % (REGULAR PAVEMENT)
SIDEWALK	2,010 SF	0.05	ACRE(S)	1.9 %
TOTAL IMPERVIOUS AREA	24,980 SF	0.57	ACRE(S)	23.99 %
POROUS PAVEMENT	3,387 SF	0.08	ACRE(S)	0 % (TYPE B SOILS,100% PERVIOUS)
GREEN/OPEN SPACE	79,151 SF	1.82	ACRE(S)	76.01 %

EXISTING IMPERVIOUS AREA TO BE DEMOLISHED: 3,160 SF
INCREASE IN IMPERVIOUS AREA: 21,820 SF

DURHAM INSPECTIONS NOTE

THE SITE WILL BE FULLY COMPLIANT WITH THE NORTH CAROLINA ACCESSIBILITY CODES (ANSI 117.1-2009 AND CHAPTER 11 OF THE NCBC) UNLESS AND EXCEPT IN AREAS WHERE AN APPROVED STATEMENT FROM A SITE ENGINEER, SURVEYOR OR ARCHITECT VERIFIES THAT SITE CONDITIONS EXIST WHERE THE TOPOGRAPHY OF THE SITE IS EXTREME AND ONLY ALTERNATE METHODS OF COMPLIANCE ARE POSSIBLE. AN AS-BUILT SURVEY OF THE SITE, PERFORMED BY THE DESIGN PROFESSIONAL OR DESIGNEE MUST BE SUBMITTED TO THE BUILDING INSPECTIONS DEPARTMENT CERTIFYING THAT ALL SITE ACCESSIBILITY CODE REQUIREMENTS SUCH AS CURB CUTS, RAMP SLOPES, SIDEWALK SLOPES AND WIDTHS, AND CROSS SLOPES MEET THE REQUIREMENTS OF THE NC ACCESSIBILITY CODE PRIOR TO CO ISSUANCE.

STRIPING LEGEND

YELLOW CURBING AND BOLLARDS - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY AND METAL SURFACES FREE OF HEAVY RUST 2 COATS SHERWIN WILLIAMS - KEM 4000 ACRYLIC ALKYD ENAMEL SAFETY YELLOW B55Y300
STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT YELLOW
HANDICAP STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT "H.C." BLUE

TRIANGLE SITE DESIGN

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4004 Barrett Drive
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SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24434 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL

Roxboro Road
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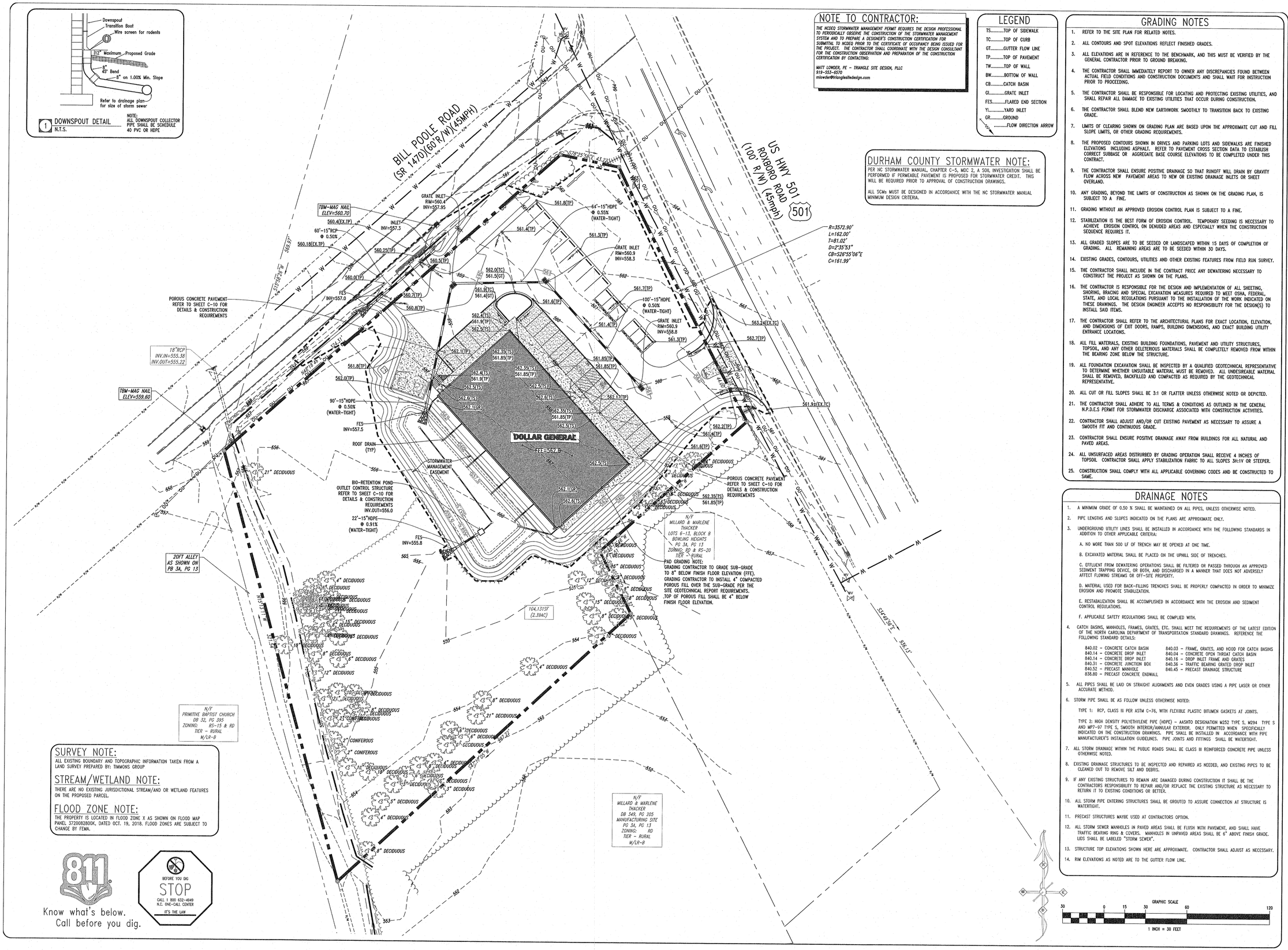
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: SITE PLAN

SHEET NUMBER: C-3

DG#20605-Rougemont, NC



1 DOWNSPOUT DETAIL
N.T.S.

NOTE:
ALL DOWNSPOUT COLLECTOR PIPE SHALL BE SCHEDULE 40 PVC OR HDPE

NOTE TO CONTRACTOR:

THE NCDEQ STORMWATER MANAGEMENT PERMIT REQUIRES THE DESIGN PROFESSIONAL TO PERIODICALLY OBSERVE THE CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM AND TO PREPARE A DESIGNER'S CONSTRUCTION CERTIFICATION FOR SUBMITTAL TO NCDEQ PRIOR TO THE CERTIFICATE OF OCCUPANCY BEING ISSUED FOR THE PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE DESIGN CONSULTANT FOR THE CONSTRUCTION OBSERVATION AND PREPARATION OF THE CONSTRUCTION CERTIFICATION BY CONTACTING:

MATT LOWDER, PE – TRIANGLE SITE DESIGN, PLLC
919-553-6570
mlowder@trianglesitedesign.com

LEGEND

TS	TOP OF SIDEWALK
TC	TOP OF CURB
GT	GUTTER FLOW LINE
TP	TOP OF PAVEMENT
TW	TOP OF WALL
BW	BOTTOM OF WALL
CB	CATCH BASIN
GI	GRATE INLET
FES	FLARED END SECTION
YI	YARD INLET
GR	GROUND
	FLOW DIRECTION ARROW

DURHAM COUNTY STORMWATER NOTE:

PER NC STORMWATER MANUAL, CHAPTER C-5, MDC 2, A SOIL INVESTIGATION SHALL BE PERFORMED IF PERMEABLE PAVEMENT IS PROPOSED FOR STORMWATER CREDIT. THIS WILL BE REQUIRED PRIOR TO APPROVAL OF CONSTRUCTION DRAWINGS.

ALL SCMs MUST BE DESIGNED IN ACCORDANCE WITH THE NC STORMWATER MANUAL MINIMUM DESIGN CRITERIA.

GRADING NOTES

1. REFER TO THE SITE PLAN FOR RELATED NOTES.
2. ALL CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
3. ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAKING.
4. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
7. LIMITS OF CLEARING SHOWN ON GRADING PLAN ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS, OR OTHER GRADING REQUIREMENTS.
8. THE PROPOSED CONTOURS SHOWN IN DRIVES AND PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
9. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET OVERLAND.
10. ANY GRADING, BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN, IS SUBJECT TO A FINE.
11. GRADING WITHOUT AN APPROVED EROSION CONTROL PLAN IS SUBJECT TO A FINE.
12. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON DENUDED AREAS AND ESPECIALLY WHEN THE CONSTRUCTION SEQUENCE REQUIRES IT.
13. ALL GRADED SLOPES ARE TO BE SEEDED OR LANDSCAPED WITHIN 15 DAYS OF COMPLETION OF GRADING. ALL REMAINING AREAS ARE TO BE SEEDED WITHIN 30 DAYS.
14. EXISTING GRADES, CONTOURS, UTILITIES AND OTHER EXISTING FEATURES FROM FIELD RUN SURVEY.
15. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DEWATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS.
16. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS. THE DESIGN ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE DESIGN(S) TO INSTALL SAID ITEMS.
17. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATION, ELEVATION, AND DIMENSIONS OF EXIT DOORS, RAMPS, BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
18. ALL FILL MATERIALS, EXISTING BUILDING FOUNDATIONS, PAVEMENT AND UTILITY STRUCTURES, TOPSOIL, AND ANY OTHER DELETERIOUS MATERIALS SHALL BE COMPLETELY REMOVED FROM WITHIN THE BEARING ZONE BELOW THE STRUCTURE.
19. ALL FOUNDATION EXCAVATION SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE TO DETERMINE WHETHER UNSUITABLE MATERIAL MUST BE REMOVED. ALL UNDESIREABLE MATERIAL SHALL BE REMOVED, BACKFILLED AND COMPACTED AS REQUIRED BY THE GEOTECHNICAL REPRESENTATIVE.
20. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED OR DEPICTED.
21. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
22. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
23. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
24. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER.
25. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.

DRAINAGE NOTES

1. A MINIMUM GRADE OF 0.50 % SHALL BE MAINTAINED ON ALL PIPES, UNLESS OTHERWISE NOTED.
2. PIPE LENGTHS AND SLOPES INDICATED ON THE PLANS ARE APPROXIMATE ONLY.
3. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

   A. NO MORE THAN 500 LF OF TRENCH MAY BE OPENED AT ONE TIME.

   B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.

   C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.

   D. MATERIAL USED FOR BACK-FILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.

   E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL REGULATIONS.

   F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
4. CATCH BASINS, MANHOLES, FRAMES, GRATES, ETC. SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS. REFERENCE THE FOLLOWING STANDARD DETAILS:

840.02 – CONCRETE CATCH BASIN	840.03 – FRAME, GRATES, AND HOOD FOR CATCH BASINS
840.14 – CONCRETE DROP INLET	840.04 – CONCRETE OPEN THROAT CATCH BASIN
840.14 – CONCRETE DROP INLET	840.16 – DROP INLET FRAME AND GRATES
840.31 – CONCRETE JUNCTION BOX	840.36 – TRAFFIC BEARING GRATED DROP INLET
840.52 – PRECAST MANHOLE	840.45 – PRECAST DRAINAGE STRUCTURE
838.80 – PRECAST CONCRETE ENDWALL	

5. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
6. STORM PIPE SHALL BE AS FOLLOW UNLESS OTHERWISE NOTED:

   TYPE 1: RCP, CLASS III PER ASTM C-76, WITH FLEXIBLE PLASTIC BITUMEN GASKETS AT JOINTS.

   TYPE 2: HIGH DENSITY POLYETHYLENE PIPE (HDPE) – AASHTO DESIGNATION M252 TYPE S, M294 TYPE S AND MP7-97 TYPE S, SMOOTH INTERIOR/ANNULAR EXTERIOR. ONLY PERMITTED WHEN SPECIFICALLY INDICATED ON THE CONSTRUCTION DRAWINGS. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER'S INSTALLATION GUIDELINES. PIPE JOINTS AND FITTINGS SHALL BE WATERTIGHT.
7. ALL STORM DRAINAGE WITHIN THE PUBLIC ROADS SHALL BE CLASS III REINFORCED CONCRETE PIPE UNLESS OTHERWISE NOTED.
8. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE SILT AND DEBRIS.
9. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
10. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
11. PRECAST STRUCTURES MAYBE USED AT CONTRACTORS OPTION.
12. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
13. STRUCTURE TOP ELEVATIONS SHOWN HERE ARE APPROXIMATE. CONTRACTOR SHALL ADJUST AS NECESSARY.
14. RIM ELEVATIONS AS NOTED ARE TO THE GUTTER FLOW LINE.

SURVEY NOTE:

ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY: TIMMONS GROUP

STREAM/WETLAND NOTE:

THERE ARE NO EXISTING JURISDICTIONAL STREAM/AND OR WETLAND FEATURES ON THE PROPOSED PARCEL.

FLOOD ZONE NOTE:

THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FLOOD MAP PANEL 3720082800K, DATED OCT. 19, 2018. FLOOD ZONES ARE SUBJECT TO CHANGE BY FEMA.

811
Know what's below.
Call before you dig.

BEFORE YOU DIG
STOP
CALL 1 800 632-4949
N.C. ONE-CALL CENTER
IT'S THE LAW

TRIANGLE SITE DESIGN

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NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24434 ENGINEER MATTHEW E. LOWDER
10/10/19

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
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REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

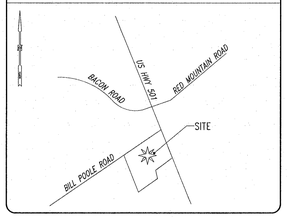
LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE:
GRADING AND DRAINAGE PLAN

SHEET NUMBER:
C-4

DG#20605-Rougemont, NC

VICINITY MAP



GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC. THAT MAY BE REQUIRED.
2. THE CONTRACTOR SHALL NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EVERY OFFSET, TRANSITION, FITTING, ETC. THAT MAY BE REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
3. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
4. CONTRACTOR SHALL MAINTAIN AN "AS BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE ENGINEER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE OWNER.
5. IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE WRITTEN PERMISSION OF THE OWNER.
6. THE CONTRACTOR MUST, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY HIM, HIS EMPLOYEES OR HIS WORK. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.

EROSION CONTROL NOTES

REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.

REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER THE FOR THE DEVELOPMENT.

STORMWATER NUTRIENT NOTE

IN COMPLIANCE WITH DURHAM CITY CODE CHAPTER 70, ARTICLE X. STORMWATER PERFORMANCE STANDARDS FOR DEVELOPMENT, SECTION 70-737 (c) NITROGEN AND PHOSPHORUS CONTROL REQUIREMENT, THE DEVELOPMENT OF THIS SITE IS MAKING USE OF A NUTRIENT BANK. THE APPROVAL OF THIS SITE PLAN IS CONTINGENT UPON THE PURCHASE OF NUTRIENT CREDITS FROM AN APPROVED NUTRIENT BANK. IF A REVISED SITE PLAN IS SUBMITTED FOR THIS SITE, THE REVISED SITE PLAN WILL BE SUBJECT TO ANY ORDINANCES IN PLACE AT THE TIME OF SUBMISSION. PRIOR TO THE APPROVAL OF THIS SITE PLAN PERTAINING TO THIS SITE, A LETTER SHOWING THE PURCHASE OF THE NUTRIENT CREDITS FOR THIS SITE AND A COPY OF THE NUTRIENT BANK LEDGER IS TO BE PROVIDED SHOWING THE TOTAL NUTRIENT CREDITS AVAILABLE MINUS ANY AND ALL REDUCTIONS IS TO BE PROVIDED TO THE CITY OF DURHAM STORMWATER SERVICES.

DURHAM COUNTY NOTE

IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.

EROSION CONTROL LEGEND

REFER TO DETAIL SHEET FOR CONSTRUCTION REQUIREMENTS

- CE — CONSTRUCTION ENTRANCE
- BIP RAP APRON
- TEMPORARY INLET PROTECTION
- HORSESHOE INLET PROTECTION
- TEMPORARY SILT FENCE OUTLET
- TEMPORARY CHECK DAM
- SF — TEMPORARY SILT FENCE
- >TD — >TD — TEMP. DIVERSION DITCH

MODEL ENFORECMENT AND CONSTRUCTION SEQUENCE FOR S&E

ENFORCEMENT NOTE 1. FAILURE TO FOLLOW THIS CONSTRUCTION SEQUENCE MAY RESULT IN LOCAL ENFORCEMENT ACTIONS, INCLUDING BUT NOT LIMITED TO CIVIL PENALTIES TO $5000 PER VIOLATION PER DAY, INJUNCTIVE RELIEF, CRIMINAL PENALTIES, AND PERMIT REVOCATION. ADDITIONALLY, OFF-SITE SEDIMENTATION MAY RESULT IN RESTORATION REQUIREMENTS.

ENFORCEMENT NOTE 2. IF THE DURHAM COUNTY S&E STAFF DETERMINES THAT EXCESSIVE SEDIMENT IS LEAVING THE SITE, A REVISED SEDIMENTATION AND EROSION CONTROL PLAN MAY BE REQUIRED, WITH ASSOCIATED REQUIREMENTS FOR ADDITIONAL S&E MEASURES.

CONSTRUCTION SEQUENCE

1. INSTALL TREE PROTECTION FENCING IN ACCORDANCE WITH THE APPROVED SITE PLAN.
2. INSPECT TREE FENCE AND SUBMIT A "TREE PROTECTION FENCING CERTIFICATION" FORM TO DURHAM COUNTY S & E OFFICE, FAX: (919)560-0740.
3. CALL DURHAM COUNTY S&E OFFICE FOR INSPECTION OF TREE FENCE INSTALLATION, (919)560-0735.
4. SCHEDULE AND HOLD PRE-CONSTRUCTION CONFERENCE PRIOR TO BEGINNING ANY LAND-DISTURBING ACTIVITIES. THIS CONFERENCE SHOULD BE ATTENDED BY A REPRESENTATIVE OF THE FINANCIALLY RESPONSIBLE PARTY AND/OR THE GENERAL CONTRACTOR, GRADING SUB-CONTRACTOR, EROSION CONTROL SUB-CONTRACTOR AND THE DURHAM COUNTY S&E OFFICE.
5. OBTAIN LAND DISTURBING PERMIT AND PLACARD, AND POST THE PLACARD ON SITE.
6. OBTAIN AN APPROVED (STAMPED) S&E CONTROL PLAN AND KEEP IT ON SITE, EITHER IN THE INSPECTION BOX, CONSTRUCTION OFFICE OR WITH THE CONTRACTOR.
7. INSTALL CONSTRUCTION EGRESS/EXIT, SILT FENCING, SEDIMENT TRAPS/BASINS, DIVERSION DITCHES, CHECK DAMS, AND OTHER INITIAL EROSION CONTROL MEASURES AS SPECIFIED IN THE PLAN. REMOVE ONLY TREES AND GROUND COVER NECESSARY TO INSTALL THESE DEVICES.
8. IF A STOCKPILE IS NECESSARY DUE TO EXCAVATION OF THE SEDIMENT TRAP/BASIN, PLACE A DOUBLE ROW OF SILT FENCE 10 FEET APART AT THE LIMITS OF THE STOCKPILE AREA SHOWN ON THIS PLAN. TREES AND GROUNDCOVER MAY BE REMOVED ONLY AS NECESSARY FOR THIS STOCKPILE.
9. PROVIDE TEMPORARY GROUNDCOVER FOR DIVERSION DITCHES AND SEDIMENT TRAPS/BASINS WITHIN 3 DAYS OF COMPLETION.
10. NOTIFY THE DURHAM COUNTY S&E SITE INSPECTOR AFTER MEASURES HAVE BEEN INSTALLED AND PROJECT HAS STARTED.
11. BEGIN CLEARING, GRUBBING AND GRADING OF SITE IN ACCORDANCE WITH THE APPROVED S&E CONTROL PLAN.
12. PROVIDE ALL DISTURBED AREAS WITH GROUND COVER AS PER SEC. 12.10.4(B) OF THE DURHAM COUNTY UDO AFTER COMPLETION OF ANY PHASE OF CLEARING, GRUBBING OR GRADING. THE SEEDING, SEEDBED PREPARATION, MULCH AND/OR ROLLED EROSION CONTROL PRODUCT INSTALLATION MUST BE IN ACCORDANCE WITH THE SEEDING SCHEDULE PROVIDED IN THIS S&E PLAN.
13. LAND LEFT EXPOSED SHALL BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION WITHIN THE APPLICABLE TIME PERIOD AFTER COMPLETION OF ANY PHASE OF GRADING OR PERIOD OF INACTIVITY AS FOLLOWS: SEVEN DAYS FOR A STEEP SLOPE; TEN DAYS FOR A MODERATE SLOPE; 14 DAYS FOR LAND WITH NO SLOPE OR INCLINATION. FOR PURPOSES OF THIS SECTION, A MODERATE SLOPE MEANS AN INCLINED AREA, THE INCLINATION OF WHICH IS LESS THAN OR EQUAL TO THREE UNITS OF HORIZONTAL DISTANCE TO ONE UNIT OF VERTICAL DISTANCE; AND A STEEP SLOPE MEANS AN INCLINED AREA, THE INCLINATION OF WHICH IS GREATER THAN THREE UNITS OF HORIZONTAL DISTANCE TO ONE UNIT OF VERTICAL DISTANCE. NO OTHER CRITERIA APPLY.
14. AT THE CONCLUSION OF BUILDING OR IF LAND-DISTURBING ACTIVITY IS STOPPED TEMPORARY OR PERMANENT VEGETATIVE COVER SHALL BE INSTALLED IN ACCORDANCE WITH AS PER SEC. 12.10.4(B) OF THE DURHAM COUNTY UDO.
15. FOR ANY AREA OF LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICABLE, BUT IN NO CASE LATER THAN SEVEN DAYS AFTER COMPLETION OF GRADING.
16. REMOVE ALL EROSION CONTROL MEASURES AFTER THE DURHAM COUNTY S&E OFFICE APPROVAL OF PERMANENT STABILIZATION.

TREE PROTECTION NOTES

1. THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS. THE CONTRACTOR IS ALSO REQUESTED TO SAVE ALL OTHER EXISTING TREES AND SHRUBS WHERE POSSIBLE.
2. WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER AND IMMEDIATELY COVER ALL ROOT CUT SURFACES LARGER THAN TWO INCHES IN DIAMETER WITH TREE WOUND DRESSING. USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK.
3. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
4. NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/BRACKED AREAS.
5. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, CLEARING, GRADING OR CONSTRUCTION BEGINS AND IS NOT TO BE REMOVED UNTIL AFTER CONSTRUCTION.
6. TREE PROTECTION FENCE IS TO BE LOCATED 1 FOOT PER TREE DIAMETER INCH AWAY FROM THE TREE.

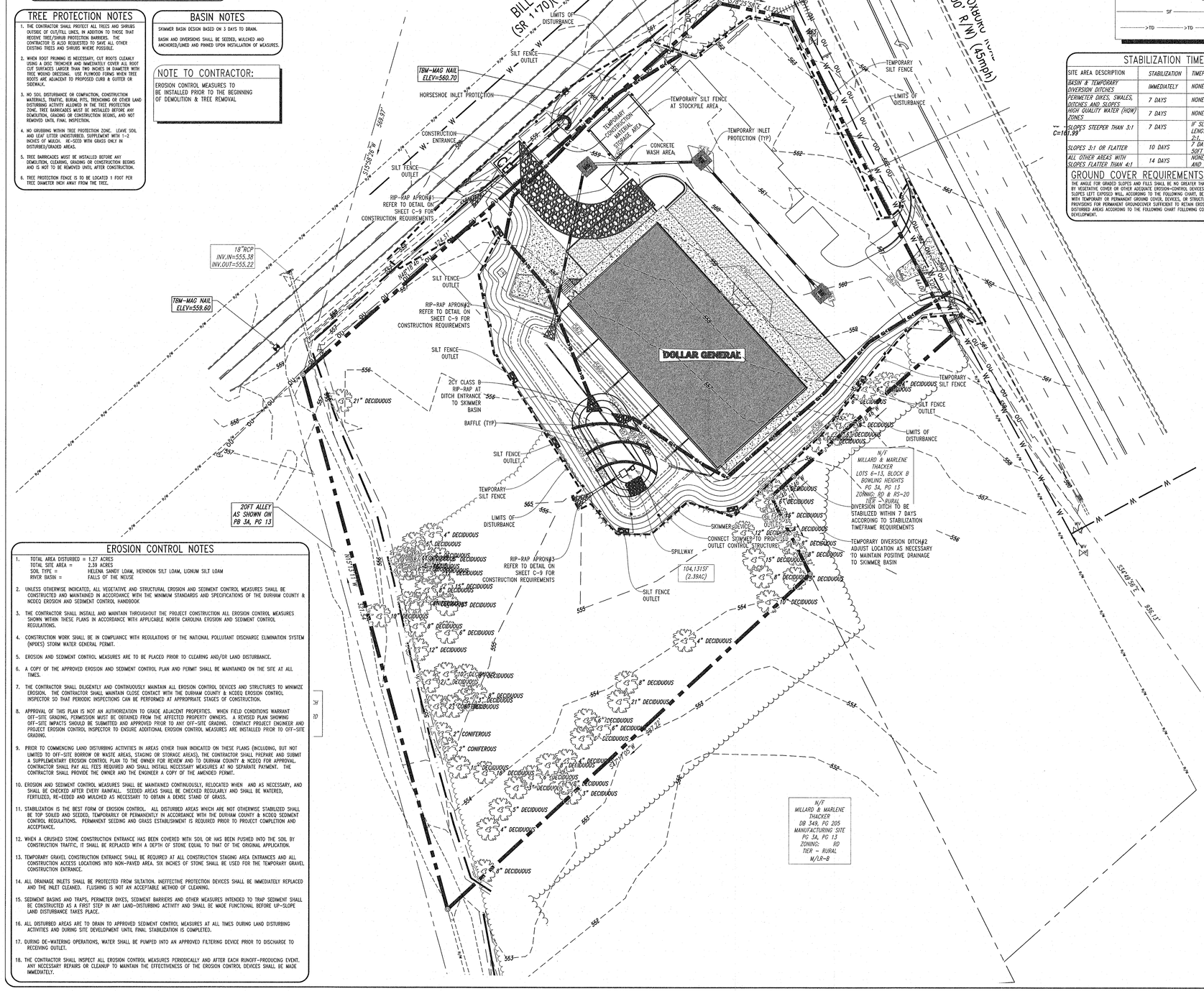
BASIN NOTES

SKIMMER BASIN DESIGN BASED ON 3 DAYS TO DRAIN.

BASIN AND DIVERSIONS SHALL BE SEEDED, MULCHED AND ANCHORED/LINED AND PINNED UPON INSTALLATION OF MEASURES.

NOTE TO CONTRACTOR:

EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL



STABILIZATION TIMEFRAME

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
BASIN & TEMPORARY DIVERSION DITCHES	IMMEDIATELY	NONE
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED. 7 DAYS FOR SLOPES GREATER THAN 50FT IN LENGTH
SLOPES 3:1 OR FLATTER	10 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	

GROUND COVER REQUIREMENTS:

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL ACCORDING TO THE FOLLOWING CHART, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PROVISIONS FOR PERMANENT GROUNDCOVER SUFFICIENT TO RETAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS ACCORDING TO THE FOLLOWING CHART FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

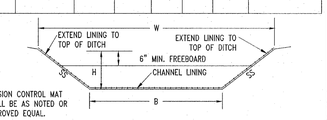
SEDIMENT & EROSION CONTROL NOTES

1. THE EROSION AND SEDIMENTATION CONTROL MEASURES (BMPS) WERE DESIGNED USING THE NORTH CAROLINA DURHAM COUNTY & NCDEQ REQUIREMENTS AND SHALL BE INSTALLED ACCORDINGLY. CONTRACTOR SHALL PERFORM ALL ACTIVITIES IN STRICT COMPLIANCE WITH THE NORTH CAROLINA NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (GENERAL PERMIT).
2. REFER TO THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS FOR EROSION CONTROL DETAILS AND DESIGN TABLES FOR SEDIMENT BASINS, DIVERSION DITCHES, AND CULVERTS, SLOPE DRAINS, RIP-RAP APRONS AND OTHER EROSION CONTROL MEASURES.
3. EXISTING BOUNDARIES, TOPOGRAPHY, 100-YR FLOODPLAIN, UTILITY AND ROAD INFORMATION TAKEN FROM AN EXISTING CONDITIONS SURVEY. ALL EXISTING INFORMATION IS TO BE FIELD VERIFIED BY THE CONTRACTOR.
4. SEE THE LANDSCAPE PLAN FOR LOCATIONS OF PROPOSED PLANTINGS AND FINAL STABILIZATION.
5. TEMPORARY DIVERSION DITCHES AND BERMS SHALL BE MAINTAINED AS THE SITE IS BROUGHT TO GRADE.
6. DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE EROSION CONTROL INSPECTORS SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
7. SEE THE GENERAL NOTES SHEET AND THE GRADING AND DRAINAGE PLAN FOR OTHER NOTES REGARDING GRADING ACTIVITIES.
8. SEE SITE PLAN, GRADING AND DRAINAGE PLAN, UTILITY PLAN, PLANTING PLAN AND OTHER PLAN SHEETS FOR DETAILED DESIGN INFORMATION OF PERMANENT SITE APPURTENANCES SHOWN ON THIS SHEET.
9. WHERE THE LIMITS OF DISTURBANCE AND TEMPORARY FENCE (SF, SF-PF, OR PF) LIMITS ARE ADJACENT, THE TEMPORARY FENCE LINE IS THE LIMITS OF DISTURBANCE. THE LINE TYPES ARE SHOWN SEPARATED FOR ILLUSTRATIVE PURPOSES ONLY.
10. CONTRACTOR SHALL NOT DISTURB ANY EXISTING VEGETATIVE GROUND COVER OR TREES OUTSIDE OF THE LIMITS OF DISTURBANCE OR WITHIN ANY REQUIRED BUFFER LIMITS UNLESS OTHERWISE NOTED OR ILLUSTRATED.
11. PROVIDE CONTROLS OF POLLUTANTS, INCLUDING, BUT NOT LIMITED TO DUST CONTROL, DE-WATERING, SOLID WASTE DISPOSAL, AND HAZARDOUS MATERIALS.
12. CLEAR ONLY AS REQUIRED TO INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES. MASS CLEARING AND GRUBBING CAN BEGIN ONLY AFTER ALL DOWNSTREAM MEASURES HAVE BEEN INSTALLED.
13. USE ROCK OR WASHED STONE TO BRING CONSTRUCTION EXIT TO GRADE. IMPLEMENT WHEEL WASHES AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION.
14. DIVERT STORM WATER RUNOFF OFF THE FACE OF THE SEDIMENT BASIN SLOPES USING DIVERSION DITCHES AND SLOPE DRAINS. CONTRACTOR SHALL MAINTAIN AND RELOCATE DIVERSION DITCHES AND SLOPES DRAINS TO ENSURE STORM WATER RUNOFF DOES NOT ERODE THE FACE OF FINAL SLOPES.
15. MAINTAIN POSITIVE FLOW TO THE SEDIMENT BASINS THROUGHOUT ALL PHASES OF CONSTRUCTION. PLACE EXCAVATED SOILS ALONG DOWNSTREAM EDGE OF THE DIVERSION DITCHES TO PROVIDE ADDITIONAL CAPACITY.
16. REFER TO THE GRADING AND DRAINAGE PLAN FOR FINAL SITE AND PAVEMENT GRADES AND ELEVATIONS OF THE PROPOSED STORM SEWER SYSTEMS.
17. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE APPROVED EROSION AND SEDIMENT CONTROL DRAWINGS DURING CONSTRUCTION OPERATIONS.
18. GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
19. ALL WORK SHALL BE CONFINED TO PERMIT LIMITS SHOWN ON PLANS. UNLESS OTHERWISE NOTED, THE SITE PLAN PROPERTY LIMITS SHALL BE CONSIDERED THE PERMIT LIMITS.
20. SUFFICIENT EROSION CONTROL PRACTICES MUST BE INSTALLED AND MAINTAINED TO RETAIN SEDIMENT WITHIN THE BOUNDARIES OF THE SITE.
21. ADDITIONAL EROSION CONTROL MEASURES OR SILT BARRIERS TO BE PLACED AS SHOWN AND/OR DIRECTED BY THE PROJECT ENGINEER AND/OR LOCAL JURISDICTIONAL INSPECTOR.
22. FOR ALL CONSTRUCTION ALONG AND/OR ACROSS WATERWAYS, BANK PROTECTION AND STABILIZATION SHALL BE REQUIRED AS PER LOCAL JURISDICTIONAL EROSION CONTROL LAWS.
23. ALL TREE PROTECTION AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION AND SHALL BE MAINTAINED IN PROPER WORKING ORDER UNTIL ALL DISTURBED AREAS ARE STABILIZED AND GROUND COVER IS ESTABLISHED. CONSTRUCTION ENTRANCE PADS SHALL BE INSTALLED BY THE CONTRACTOR AT CONSTRUCTION ACCESS POINTS PRIOR TO LAND DISTURBANCE.
24. ALL EASEMENTS DISTURBED MUST BE DRESSED AND GRASSED TO CONTROL EROSION IN ACCORDANCE WITH EASEMENT PLATS PRIOR TO ACCEPTANCE.
25. CONSTRUCTION LIMITS SHALL NOT BE EXCEEDED WITHOUT THE APPROVAL OF DURHAM COUNTY & NCDEQ.

EROSION CONTROL NOTES

1. TOTAL AREA DISTURBED = 1.27 ACRES
   TOTAL SITE AREA = 2.39 ACRES
   SOIL TYPE = HELENA SANDY LOAM, HERNDON SILT LOAM, LIGNUM SILT LOAM
   RIVER BASIN = FALLS OF THE NEUSE
2. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE DURHAM COUNTY & NCDEQ EROSION AND SEDIMENT CONTROL HANDBOOK
3. THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS.
4. CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
5. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
7. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE DURHAM COUNTY & NCDEQ EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
8. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. A REVISED PLAN SHOWING OFF-SITE IMPACTS SHOULD BE SUBMITTED AND APPROVED PRIOR TO ANY OFF-SITE GRADING. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.
9. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO DURHAM COUNTY & NCDEQ FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
10. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RE-SEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
11. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE DURHAM COUNTY & NCDEQ SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
12. WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
13. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA. SIX INCHES OF STONE SHALL BE USED FOR THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
14. ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
15. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP-SLOPE LAND DISTURBANCE TAKES PLACE.
16. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS COMPLETED.
17. DURING DE-WATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
18. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

DITCH	FLOW Q(25)	LONG. SLOPE(%)	H	B	W	SS	CHANNEL LINING
TEMPORARY DITCH #1	2.0 CFS	1.0%	1.0'	1.0'	5.0'	2:1	STRAW WITH NET NAG D575
TEMPORARY DITCH #2	2.0 CFS	1.0%	1.0'	1.0'	5.0'	2:1	STRAW WITH NET NAG D575



EROSION CONTROL MAT SHALL BE AS NOTED OR APPROVED EQUAL.

1 TEMPORARY DIVERSION DITCH DATA BLOCK
REFER TO DETAIL SHEET FOR TEMPORARY DITCH DETAIL

BEFORE YOU DIG STOP CALL 1 800 632-4949 N.C. ONE-CALL CENTER IT'S THE LAW

811 Know what's below. Call before you dig.

GRAPHIC SCALE
30 0 15 30 60 120
1 INCH = 30 FEET

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24401 ENGINEER WALTHER E. LOWDER

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TITLE: EROSION CONTROL PLAN

SHEET NUMBER: C-5

DG#20605-Rougemont, NC

UTILITY SERVICE NOTES

WATER SERVICE
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 1" WATER SERVICE LINE FROM WATER MAIN TO BUILDING PER MUNICIPAL REQUIREMENTS.
CONTACT: DURHAM COUNTY PUBLIC UTILITIES
TELEPHONE: 919-560-9039

ELECTRIC SERVICE
"POWER CO." TO PROVIDE UNDERGROUND 120/208/3 PHASE SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL TWO 4" DIA. CONDUIT W/ PULL WIRE TO UTILITY COMPANY POINT OF CONNECTION.
CONTACT: PROGRESS ENERGY
TELEPHONE: 800-636-0501

TELEPHONE SERVICE
"TELEPHONE CO." TO PROVIDE NEW UNDERGROUND SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" DIA. PVC CONDUIT W/ PULL WIRE FROM PHONE PANEL BOARD TO UTILITY COMPANY POINT OF CONNECTION.
CONTACT:
TELEPHONE:

SANITARY SEWER
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" SCHEDULE 40 PVC FROM PROPOSED SANITARY SEWER SEPTIC SYSTEM TO LAST CLEAN OUT OUTSIDE OF BUILDING. (MIN. 1% SLOPE). PROVIDE CLEAN OUTS EVERY 75' (TYPICAL).
CONTACT: DURHAM COUNTY ENVIRONMENTAL HEALTH
TELEPHONE: 919-560-7800

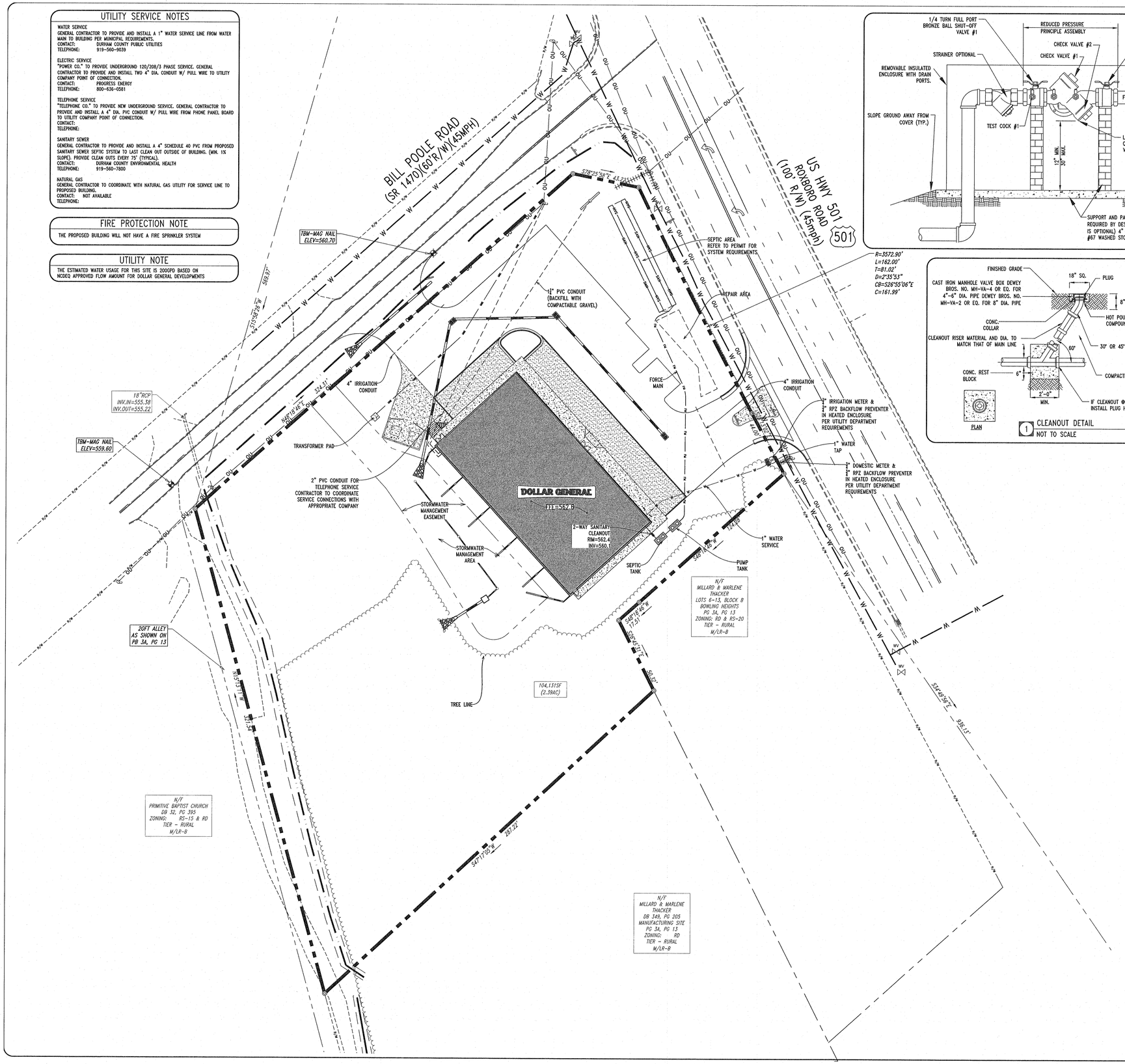
NATURAL GAS
GENERAL CONTRACTOR TO COORDINATE WITH NATURAL GAS UTILITY FOR SERVICE LINE TO PROPOSED BUILDING.
CONTACT: NOT AVAILABLE
TELEPHONE:

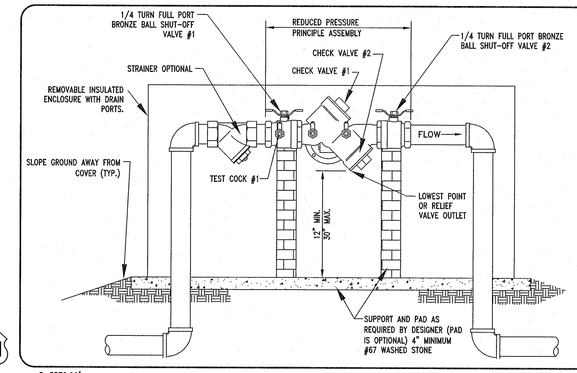
FIRE PROTECTION NOTE

THE PROPOSED BUILDING WILL NOT HAVE A FIRE SPRINKLER SYSTEM

UTILITY NOTE

THE ESTIMATED WATER USAGE FOR THIS SITE IS 2000GPD BASED ON NCDEQ APPROVED FLOW AMOUNT FOR DOLLAR GENERAL DEVELOPMENTS



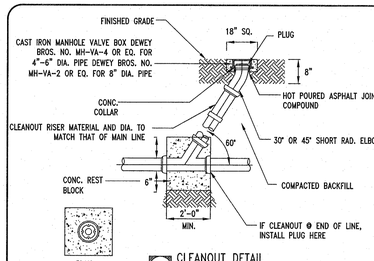


APPROVED RPZ ASSEMBLIES	
3/4" ASSEMBLIES	
CONBRACO	40-204-02
FEBCO	825Y-BV, 825YA-BV
HERSEY	FRP II
RAINBIRD	RP-QT-075
WATTS	909 QT, 009M1 QT, 009M2 QT
WILKINS	975XL

BACKFLOW PREVENTION NOTES:

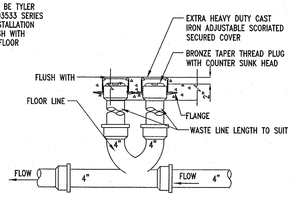
1. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPARTMENT CONNECTION POINTS OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND IT'S UTILITY DEPARTMENT REQUIRED BACKFLOW PREVENTER.
2. EACH UTILITY DEPARTMENT REQUIRED BACKFLOW PREVENTER ASSEMBLY IS REQUIRED TO BE TESTED BY AN APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM INTO SERVICE.

3 RPZ BACKFLOW PREVENTER
NOT TO SCALE



1 CLEANOUT DETAIL
NOT TO SCALE

NOTE:
CLEAN-OUT TO BE TYLER PIPE MODEL 003533 SERIES OR EQUAL. INSTALLATION SHALL BE FLUSH WITH SURROUNDING FLOOR SURFACES.



2 2-WAY CLEANOUT DETAIL
NOT TO SCALE

UTILITY NOTES

1. THE CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTACT THE LOCAL MUNICIPALITY PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK FOR UTILITY LOCATING SERVICES. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND HAVE BEEN COMPILED FROM THE LATEST AVAILABLE MAPPING. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DURHAM COUNTY UTILITY & HEALTH DEPARTMENTS
3. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE DURHAM COUNTY UTILITY & HEALTH DEPARTMENTS WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SANITARY SEWER LINES.
4. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. A PRE-CONSTRUCTION MEETING WITH THE VARIOUS UTILITY COMPANIES IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
5. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTOR 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
6. THE CONTRACTOR SHALL COORDINATE ANY INTERRUPTION OF UTILITY SERVICE WITH THE OWNER AND THE UTILITY COMPANY. ANY PLANNED INTERRUPTION OF UTILITY SERVICE SHALL BE GIVEN A 48 HOUR NOTICE TO THE UTILITY COMPANY AND THE OWNER.
7. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED UTILITIES BE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER IMMEDIATELY FOR DIRECTIONS.
8. PRESSURE REDUCING VALVES WILL BE REQUIRED ON THE DOMESTIC WATERLINES FOR EACH BUILDING IF THE STATIC PRESSURE IN THE WATER MAIN EXCEEDS 80 PSI. SEE MECHANICAL/PLUMBING PLANS.
9. ROUTES SHOWN FOR WATER SERVICES, ELECTRIC, SANITARY SEWER BUILDING LATERALS AND ROOF DRAIN PIPING ARE SUBJECT TO CHANGE.
10. THE CONTRACTOR SHALL SAW CUT, REMOVE, AND REPLACE ASPHALT PAVEMENT AS NECESSARY TO INSTALL UNDERGROUND ELECTRIC, TELEPHONE, SEWER, AND WATER.
11. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SEWERS CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT OWNER IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
12. THE CONTRACTOR SHALL INSURE THAT ALL UTILITY COMPANIES AND DURHAM COUNTY UTILITY & HEALTH DEPARTMENTS STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATIONS, INSPECTIONS, AND DEMOLITION.
13. THIS PLAN DETAILS PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO THE BUILDING DRAWINGS FOR BUILDING CONNECTIONS. SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.
14. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT AND REPLACED IN ACCORDANCE WITH THE PAVEMENT REPAIR REQUIREMENTS OF THE DURHAM COUNTY UTILITY & HEALTH DEPARTMENTS AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
15. MAINTAIN MINIMUM 10'-0" HORIZONTAL SEPARATION BETWEEN ON-SITE SANITARY SEWER AND DOMESTIC OR IRRIGATION WATER PIPING WHENEVER POSSIBLE. WHERE WATER PIPING MUST CROSS OVER SANITARY SEWER PIPING, MAINTAIN A MINIMUM 18" VERTICAL SEPARATION. WHERE SANITARY SEWER PIPING MUST CROSS OVER WATER PIPING, MAINTAIN A MINIMUM 24" VERTICAL SEPARATION AND PROVIDE MIN. 4" THICK CONCRETE ENCASEMENT OR 4" CONTINUOUS CAST IRON PIPE SLEEVE ON WATER PIPING FOR A MINIMUM OF 10'-0" ON EACH SIDE OF THE SAN. SEWER CROSSING. WHERE PERMITTED BY LOCAL CODE, DOMESTIC WATER AND SANITARY SEWER SERVICE PIPING MAY BE INSTALLED IN A COMMON TRENCH. TRENCH AND PIPING PLACEMENT SHALL COMPLY WITH ALL GOVERNING CODES AND REGULATIONS.

BEFORE YOU DIG
STOP
CALL 1 800 632-4949
N.C. ONE-CALL CENTER
IT'S THE LAW

811
Know what's below.
Call before you dig.

GRAPHIC SCALE
30 0 15 30 60 120
1 INCH = 30 FEET

TRIANGLE SITE DESIGN
CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24464 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL®
Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

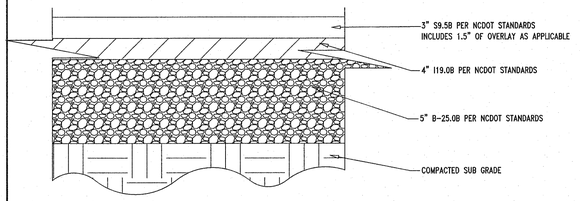
TITLE:
UTILITY PLAN

SHEET NUMBER:
C-6

DG#20605-Rougemont, NC

MATERIALS AND CONSTRUCTION REQUIREMENTS PER THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION

* REFER TO NCDOT DRIVEWAY PERMIT FOR ADDITIONAL REQUIREMENTS



NCDOT PAVEMENT SECTION

SCALE: NOT TO SCALE

PAVEMENT GENERAL NOTES:

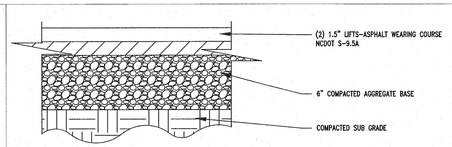
1. DETAILS ARE DOLLAR GENERAL MINIMUM REQUIREMENTS AND MAY INCREASE WITH VARIOUS SOIL CONDITIONS. A GEOTECHNICAL INVESTIGATION WITH PAVEMENT DESIGN RECOMMENDATIONS SHALL BE COMPLETED FOR EACH DEVELOPMENT. THE FOLLOWING DETAILS ARE MINIMUM DOLLAR GENERAL PAVEMENT REQUIREMENTS. INCREASED RECOMMENDATIONS ARE TO BE USED.

2. THE SUBGRADE MATERIALS SHALL BE PROOF ROLLED AND/OR SCARIFIED AND COMPACTED PRIOR TO PLACEMENT OF BASE MATERIAL. WHERE EXISTING SUBGRADE MATERIALS ARE UNSUITABLE, THEY SHALL BE REMOVED AND REPLACED WITH COMPACTED SELECT MATERIAL IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS.

3. HEAVY DUTY CONCRETE PAVEMENT AND STANDARD DUTY CONCRETE PAVEMENT (AS RECOMMENDED BY THE GEOTECHNICAL REPORT OR DOLLAR GENERAL MINIMUMS) SHALL BE STEEL REINFORCED. REINFORCEMENT TYPE SHALL BE PRIOR APPROVED BY DOLLAR GENERAL.

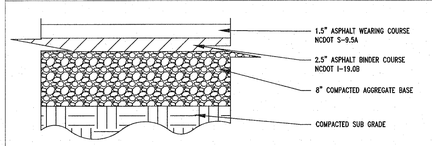
4. CONCRETE PAVEMENT PLAN SHALL BE PROVIDED TO DOLLAR GENERAL FOR PRIOR APPROVAL. ALL JOINTS MUST BE SEALED WITH AN APPROVED SEALANT. STEEL REINFORCING SHALL BE USED AT JOINTS. REFER TO ACI 330R (GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS) FOR JOINT DESIGN AND LAYOUT.

ASPHALTIC PAVEMENT



STANDARD DUTY ASPHALT DETAIL

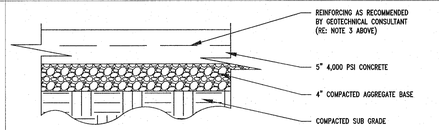
SCALE: NOT TO SCALE



HEAVY DUTY ASPHALT DETAIL

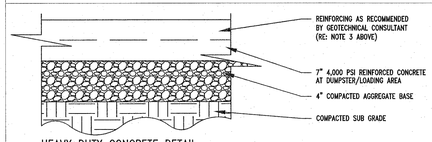
SCALE: NOT TO SCALE

CONCRETE PAVEMENT



STANDARD DUTY CONCRETE DETAIL

SCALE: NOT TO SCALE



HEAVY DUTY CONCRETE DETAIL

SCALE: NOT TO SCALE

1 PAVEMENT DETAILS

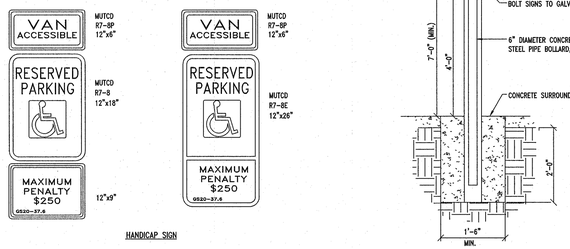
NOT TO SCALE

MATERIALS AND CONSTRUCTION REQUIREMENTS PER THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION

* REFER TO NCDOT DRIVEWAY PERMIT FOR ADDITIONAL REQUIREMENTS
* REFER TO PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS

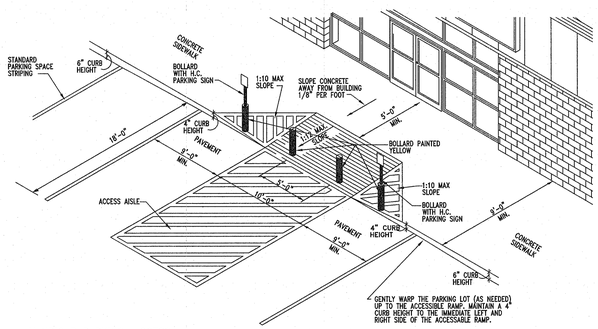
ACCESSIBLE PARKING SIGNAGE NOTES:

1. ALL LETTERS ARE TO BE PER THE LATEST EDITION OF THE MUTCD.
2. TOP PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
4. FINE NOTIFICATION SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER. CONTRACTOR SHALL VERIFY FINE AMOUNT AND ORDINANCE NUMBER.
5. ONE (1) SIGN REQUIRED FOR EACH ACCESSIBLE PARKING SPACE.
6. INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)
7. SIGN MAY BE MOUNTED ON BUILDING/WALL, AT PROPER HEIGHT, IF ALIGNED WITHIN 12" OF CENTER OF PARKING SPACE.



2 HANDICAP PARKING SIGN DETAIL

NOT TO SCALE

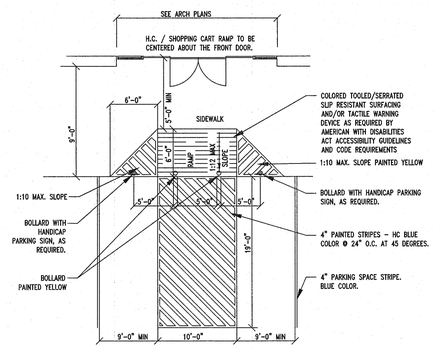


3 HANDICAP PARKING, ACCESS RAMP AND ACCESS AISLE DETAILS

NOT TO SCALE

SITE ACCESSIBILITY DETAIL NOTES:

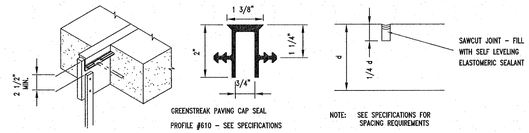
1. REFER TO SITE PLAN FOR EXACT LOCATION OF HANDICAP PARKING, WALKWAYS AND RAMPS.
2. ALL WALKWAYS, RAMPS, AND HANDICAP PARKING SIGNAGE, ETC. SHALL MEET APPROVED AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS AND LOCAL ACCESSIBILITY CODE.
3. ONE OUT OF EVERY SIX (6) ACCESSIBLE PARKING SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE.
4. ALL CONCRETE ACCESSIBLE RAMPS (3000 PSI) SURFACES SHALL HAVE COLORED TOOLED/SERRATED SLIP RESISTAND SURFACING AND/OR TACTILE WARNING DEVICE PER ADA STANDARDS AND LOCAL ACCESSABILITY CODE.
5. ALL CONCRETE ACCESSIBLE RAMPS SHALL BE COLOR IMPREGNATED TO PROVIDE VISUAL CONTRAST (DARK TO LIGHT) WITH ADJOINING CONCRETE SURFACES (MINIMUM 70% COLOR CONTRAST).
6. THE MATERIAL USED TO PROVIDE COLOR CONTRAST IN CONCRETE ACCESSIBLE RAMPS SHALL BE AN INTEGRAL (PERMANENT) PART OF THE CONCRETE AND SHALL NOT BE PAINTED ON OR CAPABLE OF FADING OR WEARING OFF.
7. FINISHED GRADES OF PAVEMENT IN HC PARKING AND ACESSIBILITY AISLE SHALL NOT EXCEED 1:50 SLOPE IN ANY DIRECTION.



4 HANDICAP PARKING DETAIL

NOT TO SCALE

NOTE:
ALL HANDICAPPED RAMP AND ACCESS AISLES SHALL MEET ALL CODES AND ADAAG REGULATIONS.

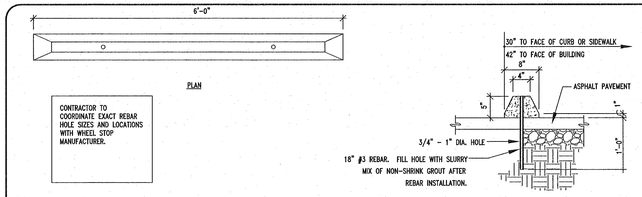


TYPICAL EXPANSION JOINT

TYPICAL CONTROL JOINT

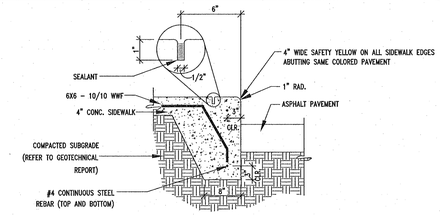
5 CONCRETE JOINTS

NOT TO SCALE



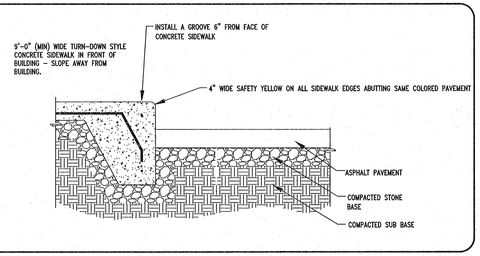
6 WHEEL STOP

NOT TO SCALE



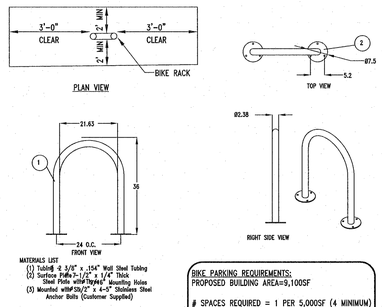
7 CURB EDGE CONCRETE SIDEWALK

NOT TO SCALE



8 SIDEWALK DETAIL

NOT TO SCALE



MATERIALS LIST
(1) Tubing @ 2 3/8" x .154" Wall Steel Tubing
(2) Surface Plate 7-1/2" x 1/4" Thick Steel Plate with 4 Mounting Holes
(3) Mounted with 5/8/2" x 4-5" Stainless Steel Anchor Bolts (Customer Supplied)

BIKE PARKING REQUIREMENTS:
PROPOSED BUILDING AREA=9,100SF

SPACES REQUIRED = 1 PER 5,000SF (4 MINIMUM)
4 SPACES REQUIRED

4 SPACES PROVIDED

9 BIKE RACK

NOT TO SCALE

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24435 ENGINEER MATTHEW E. LOWDER 12/10/19

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

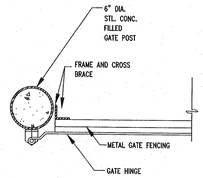
8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

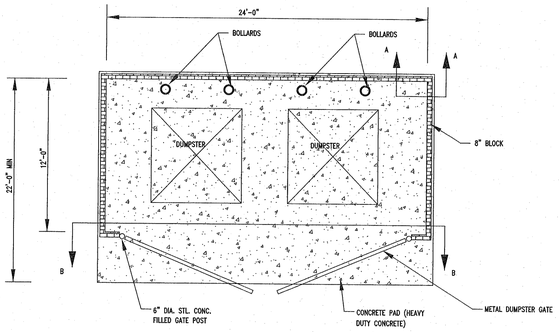
TITLE: CONSTRUCTION DETAILS

SHEET NUMBER: C-7

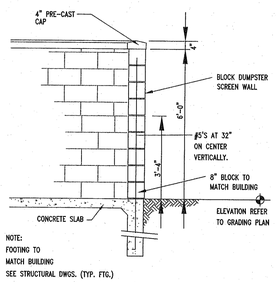
DG#20605-Rougemont, NC



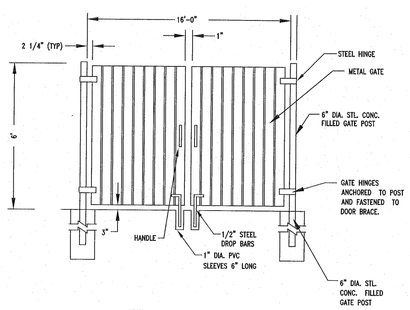
GATE POST DETAIL



DOUBLE DUMPSTER LAYOUT DETAIL



SECTION A-A - WALL SECTION

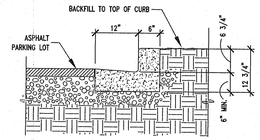


SECTION B-B - GATE

NOTES:
DUMPSTER SCREENING SHALL BE AT LEAST 6" TALLER THAN THE LARGEST DUMPSTER (UDO 9.7)

REFERENCE HTTP://DURHAMNC.GOV/DOCUMENT CENTER/VIEW/11089

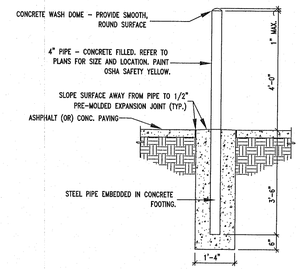
1 DOUBLE DUMPSTER DETAILS
NOT TO SCALE



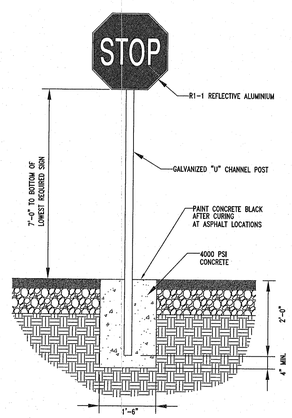
CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI IN 28. CONFIRM WITH GEOGRAPHICAL LOCATION OF THIS PARTICULAR PROJECT.

2 CURB/GUTTER DETAIL
NOT TO SCALE

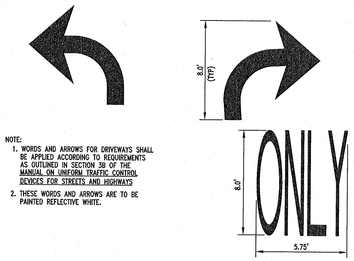
NOTE:
SET BOLLARD INTO CONCRETE FOOTER AS SHOWN. POUR CONCRETE SIDEWALK TO BOLLARD.



3 TYPICAL BOLLARD DETAIL
NOT TO SCALE

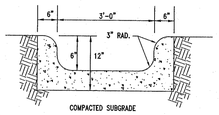


4 STOP SIGN DETAIL
NOT TO SCALE



NOTE:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS
2. THESE WORDS AND ARROWS ARE TO BE PAINTED REFLECTIVE WHITE.

5 PAVEMENT MARKINGS
NOT TO SCALE



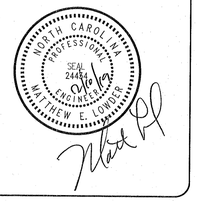
*NOTE: 1. ALL CONCRETE TO BE 3,600 PSI IN 28 DAYS.

7 CONCRETE FLUME
NOT TO SCALE

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:



DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
C-8

DG#20605-Rougemont, NC

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabric such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

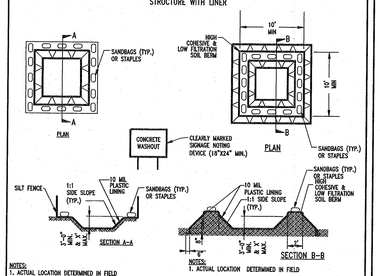
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit.

The following items pertaining to the E&SC plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is recurred upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(b) Anticipated bypasses and unanticipated bypasses.

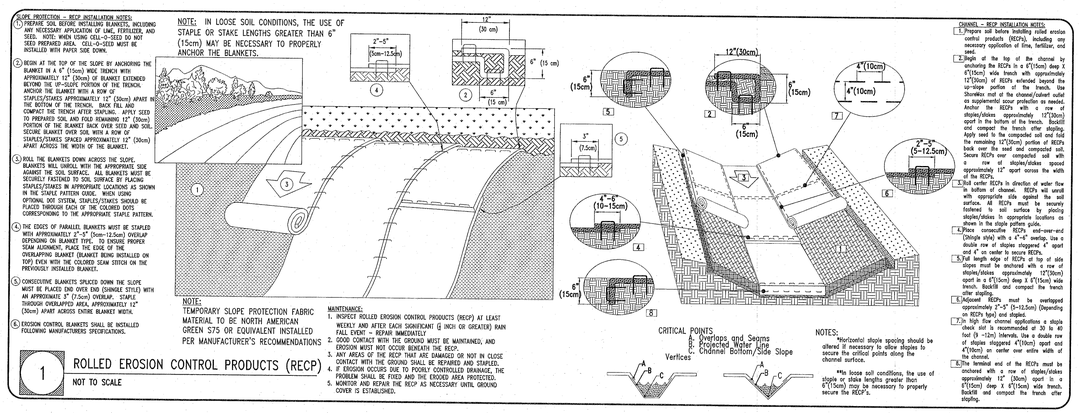
(c) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

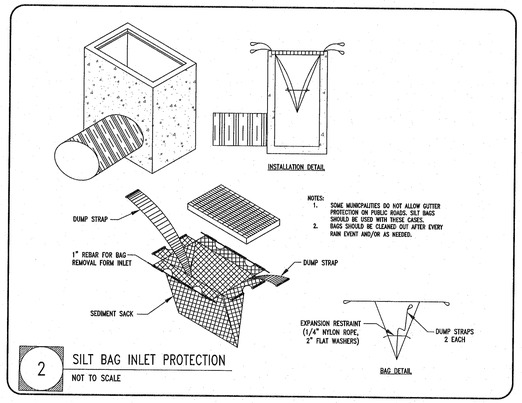
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	• *Within 24 hours*, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• *A report at least ten days before the date of the bypass, if possible.* The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19



1 ROLLED EROSION CONTROL PRODUCTS (RECP)
NOT TO SCALE



2 SILT BAG INLET PROTECTION
NOT TO SCALE

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24436 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL®

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
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8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
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12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: NC CONSTRUCTION GENERAL PERMIT (NCG01) NOTES

SHEET NUMBER:
C-9A

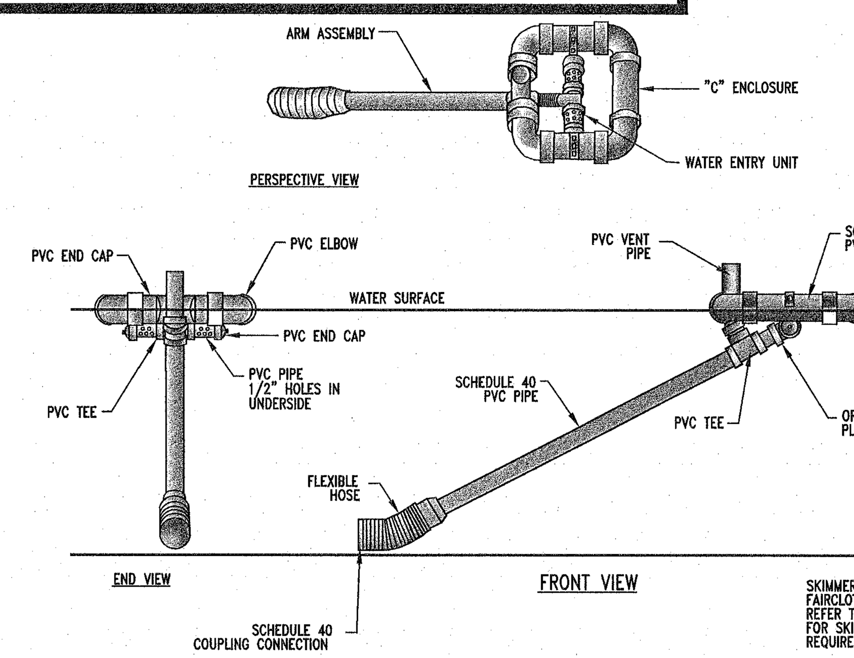
DG#20605-Rougemont, NC

SEDIMENT BASIN REQUIREMENTS:

SEDIMENT BASINS AND TRAPS SHALL MEET THE FOLLOWING REQUIREMENTS:

A) OUTLET STRUCTURES SHALL BE UTILIZED THAT WITHDRAW WATER FROM THE SURFACE.
B) FOR BASINS OR TRAPS THAT HAVE A DRAINAGE AREA OF LESS THAN 1.0 ACRE, DRAW-DOWN DESIGNS SPECIFIED IN THE DIVISION OF LAND RESOURCES OR DELEGATED LOCAL PROGRAM REQUIREMENTS ARE ACCEPTABLE.
C) CHEMICAL TREATMENT:
   1) ALL TREATMENT CHEMICALS MUST BE STORED IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER STORM-RESISTANT COVER OR SURROUNDED BY SECONDARY CONTAINMENT STRUCTURES DESIGNED TO PROTECT ADJACENT SURFACE WATERS.
   2) ALL TREATMENT CHEMICALS MUST BE USED IN ACCORDANCE WITH DOSING SPECIFICATIONS AND APPLICATION RATES PROVIDED BY THE MANUFACTURER, SUPPLIER AND AS SPECIFIED BY THE DIVISION OF WATER QUALITY.
   3) THE PERMITTEE MUST ONLY USE CHEMICALS THAT HAVE BEEN APPROVED BY THE NC DIVISION OF WATER QUALITY AND POSTED ON THEIR "NORTH CAROLINA DIVISION OF WATER QUALITY APPROVED PAMS/FLOCCULANTS LIST" FOUND ON THEIR WEB SITE AT: http://portal.ncdenr.org/web/wq/ws/su.
   4) THE PERMITTEE MUST ROUTE STORMWATER TREATED WITH POLYMERS, FLOCCULANTS, OR OTHER TREATMENT CHEMICALS THROUGH SEDIMENT TRAPPING, FILTERING, AND/OR SETTLING DEVICES(S) TO ENSURE ADEQUATE REMOVAL OF SEDIMENT FLOCCULENT PRIOR TO DISCHARGE TO SURFACE WATERS.
D) DISCHARGE REQUIREMENT – DISCHARGES MUST MEET THE STATUTORY REQUIREMENTS OF THE SEDIMENT POLLUTION CONTROL ACT AND UTILIZE THE PROVISIONS OF SECTION 6.74 OF THE EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL TO ASSURE THAT BUFFERS AND VEGETATED AREAS WILL BE USED TO REDUCE THE POTENTIAL FOR VISIBLE SILTATION OUTSIDE OF THE 25% BUFFER ZONE NEAREST THE LAND-DISTURBING ACTIVITY.

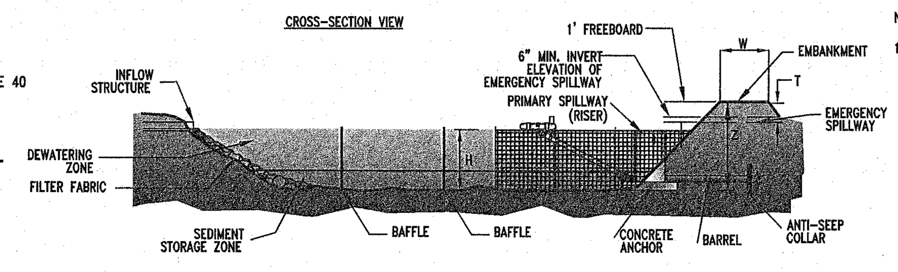
Skimmer Basin #1					
SURFACE AREA REQUIRED	1,467			SF	
SURFACE AREA PROVIDED	1,500			SF	
VOLUME REQUIRED	2,070			CF	
VOLUME PROVIDED	2,384			CF	
STORAGE DEPTH	2.0			FT	
STORAGE ELEVATION	60	x	25	FT	559.50
TOP OF DAM	68	x	33	FT	561.50
EMGY. SPILLWAY LENGTH	10			FT	560.00
BOTTOM OF BASIN	52	x	17	FT	557.50
SKIMMER SIZE	1.5			IN	
SKIMMER ORIFICE DIAMETER	1.0			IN	
SKIMMER ORIFICE RADIUS	0.5			IN	
SIDESLOPES	2:1				



SKIMMERS SHALL BE FAIRCLOTH SKIMMERS REFER TO DETAILS FOR SKIMMER SIZE REQUIREMENTS

STANDARD SKIMMER DETAIL

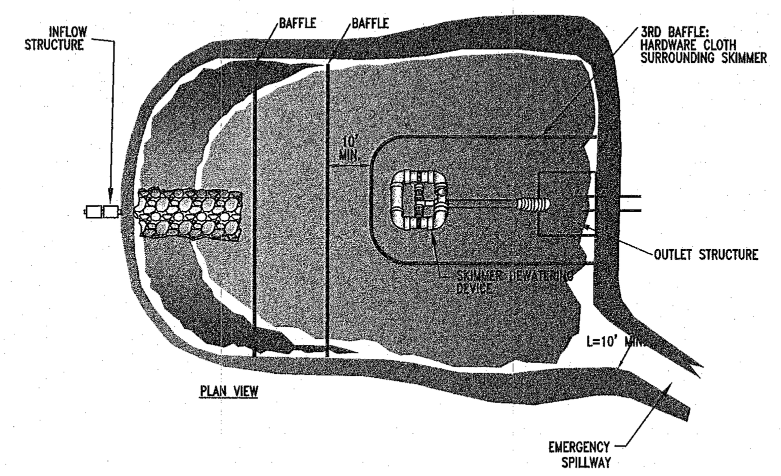
CROSS-SECTION VIEW



NOTES:
1. REFER TO NCESCPDM SECTION #6.61 FOR ADDITIONAL DESIGN SPECIFICATIONS REGARDING SEDIMENT BASINS.

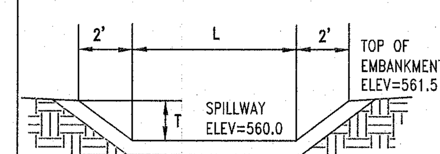
DATA BLOCK

BASIN	DRAINAGE AREA (ACRES)	DENUDED AREA (ACRES)	Q_{25}	RISER	BARREL	CLEANOUT DEPTH (FT.) H/2	H (FEET)	Z (FEET)	L (FEET)	T (FEET)	W (FEET)	CONCRETE ANCHOR
BASIN	1.15	1.15	4.5	4'x4'	15"	1.0	2.0	4.0	10	1.5	5.0	REFER TO BMP PLAN



SPILLWAY	L	T
BASIN	10 FT	1.5 FT

SPILLWAY SECTION



SKIMMER CONTACT INFORMATION

J.W. FAIRCLOTH & SONS, INC.
P.O. BOX 757
HILLSBOROUGH, NC 27278
919-732-1244
919-732-1266 FX

NOTES:
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS
6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL

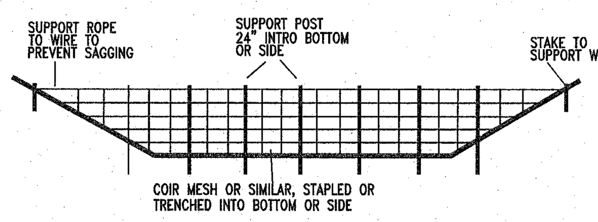
BAFFLE MAINTENANCE

INSPECT BAFFLES AT LEAST ONE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

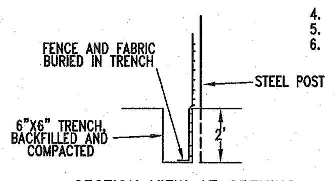
BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

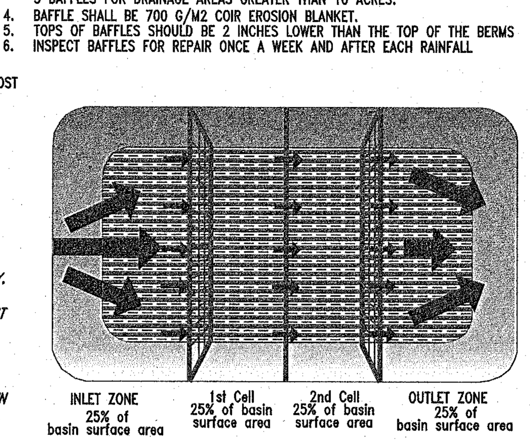
AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.



CROSS SECTION



SECTION VIEW AT OPENING



PLAN VIEW

SKIMMER BASIN MAINTENANCE

INSPECT SKIMMER SEDIMENT BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.

IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.

IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.

FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

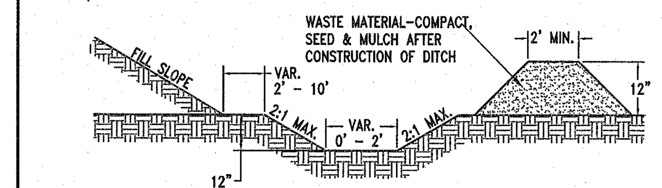
CONSTRUCTION SPECIFICATIONS:
1. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER, AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
2. ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
3. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMER DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
4. PLACE THE BARREL (TYPICALLY 4-INCH SCHEDULE 40 PVC PIPE) ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES.
   PLACE A MIN. DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
5. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURERS INSTRUCTIONS, OR AS DESIGNED.
6. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOIN TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
7. EARTHEN SPILLWAYS-INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH A LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTIONS(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC WITH A TRENCH WITH STAPLES OR PINS.
8. INLETS- DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVER SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY.
9. EROSION CONTROL-CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
10. INSTALL POROUS BAFFLES AS SPECIFIED IN PRACTICE 6.65, POROUS BAFFLES.
11. AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY.

1 SKIMMER BASIN
NOT TO SCALE

MAINTENANCE:

INSPECT TEMPORARY DIVERSION DITCH ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION. REPAIR THE CHANNEL LINING AS NECESSARY PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED TO AVOID GULLY FORMATION. WHEN THE AREA ABOVE THE TEMPORARY DIVERSION DITCH IS PERMANENTLY STABILIZED, REMOVE THE DIVERSION AND FILL AND STABILIZE THE CHANNEL TO BLEND WITH THE NATURAL SURFACE.

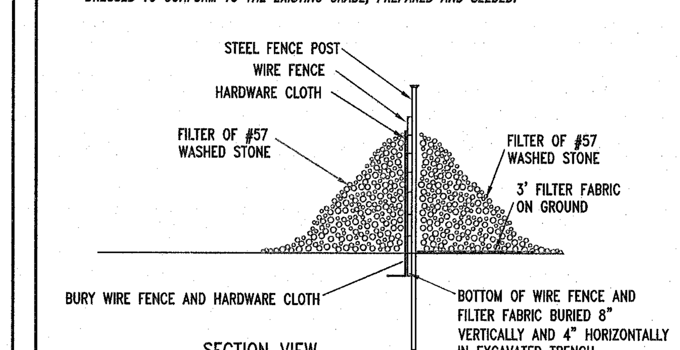
NOTES:
1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.



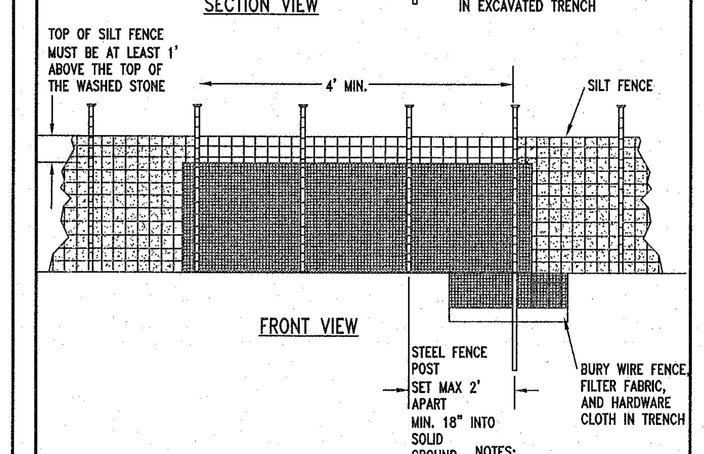
CROSS SECTIONAL VIEW

2 TEMPORARY DIVERSION DITCH
NOT TO SCALE

MAINTENANCE NOTES:
1. *FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.*
2. *THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.*
3. *SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.*



SECTION VIEW



FRONT VIEW

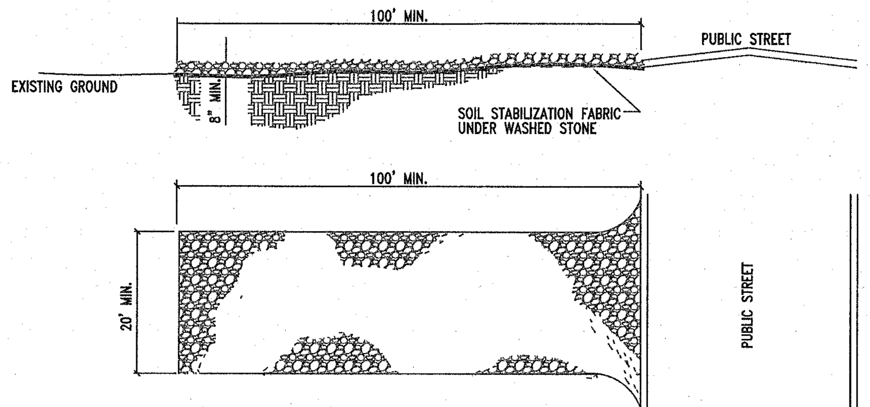
NOTES:
1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

3 SILT FENCE OUTLET
NOT TO SCALE

GENERAL NOTES:
1. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC STREET.
2. STONE TO BE 2"-3" WASHED STONE
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY. WHEN NECESSARY WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
5. FILTER FABRIC SHALL BE MIRAFI 500 OR EQUAL.
6. ENTRANCE SHALL BE A MINIMUM OF 20' IN WIDTH OR THE WIDTH OF THE EXIT, WHICHEVER IS GREATER.

MAINTENANCE:

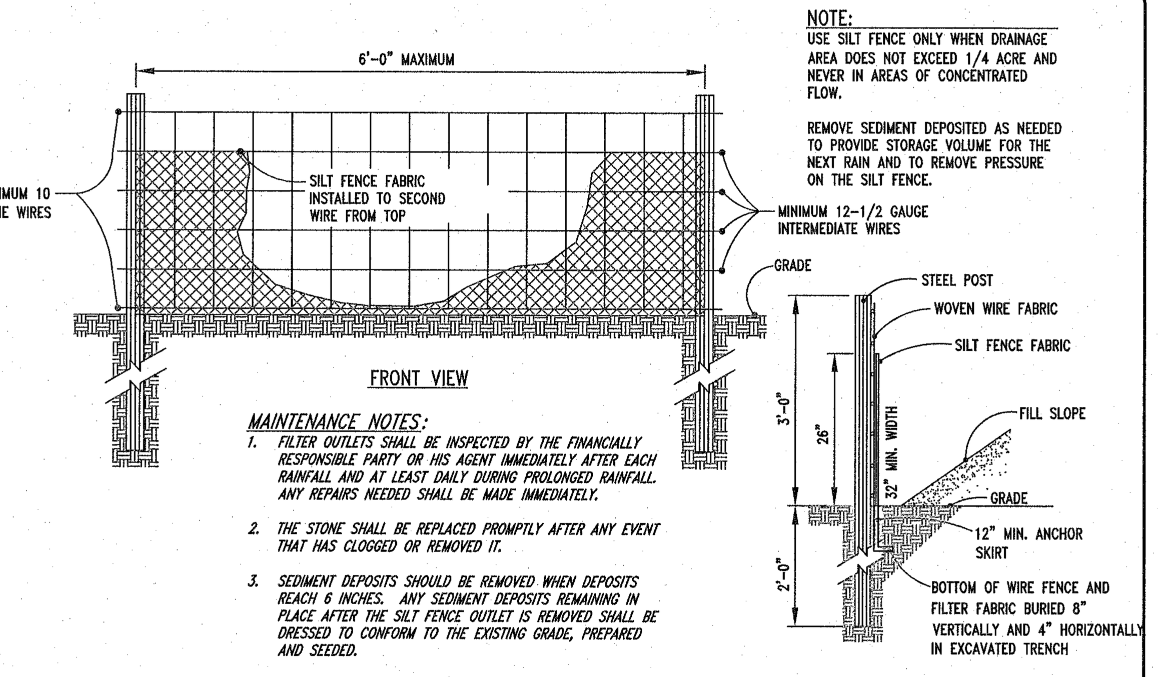
INSPECT CONSTRUCTION ENTRANCE PERIODICALLY FOR CONDITION OF SURFACE. TOP-DRESS WITH NEW GRAVEL AS NEEDED.



4 CONSTRUCTION ENTRANCE
NOT TO SCALE

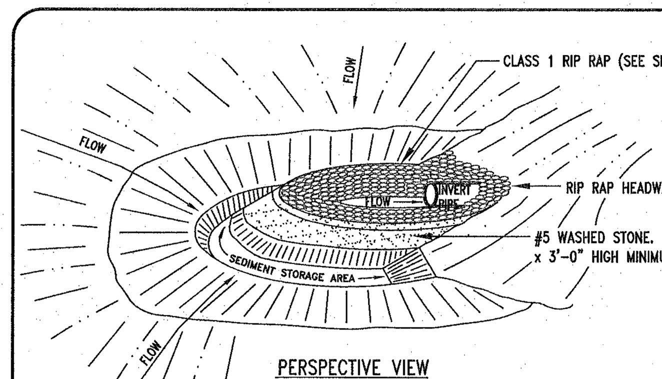
NOTE:
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

REMOVE SEDIMENT DEPOSITED AS NEEDED TO PROVIDE STORAGE VOLUME FOR THE NEXT RAIN AND TO REMOVE PRESSURE ON THE SILT FENCE.

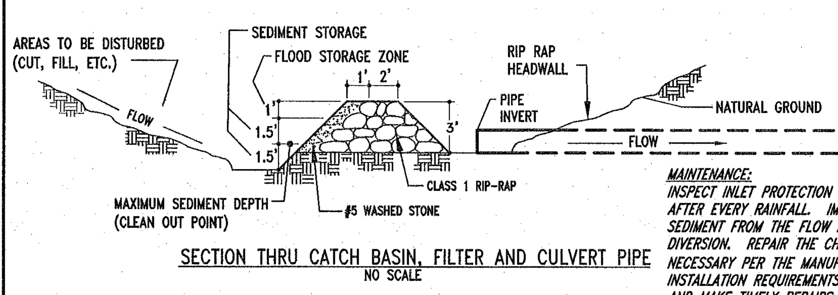


MAINTENANCE NOTES:
1. *FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.*
2. *THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.*
3. *SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH 6 INCHES. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.*

5 SILT FENCE
NOT TO SCALE



PERSPECTIVE VIEW
NO SCALE

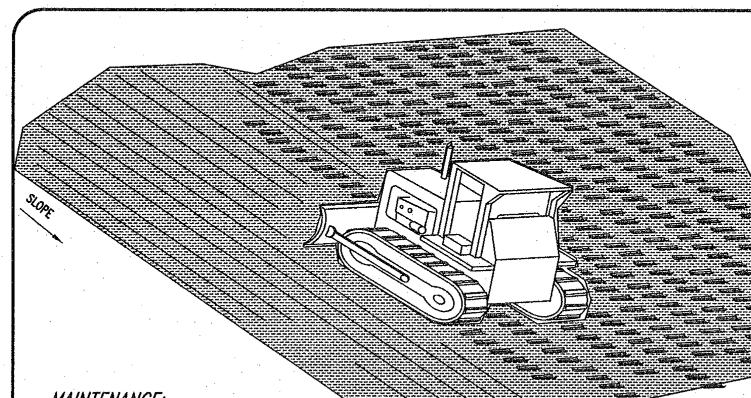


SECTION THRU CATCH BASIN, FILTER AND CULVERT PIPE
NO SCALE

MAINTENANCE:

INSPECT INLET PROTECTION ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION. REPAIR THE CHANNEL LINING AS NECESSARY PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED TO AVOID GULLY FORMATION. WHEN THE AREA ABOVE THE INLET PROTECTION IS PERMANENTLY STABILIZED, REMOVE THE PROTECTION AND FILL AND STABILIZE THE CHANNEL TO BLEND WITH THE NATURAL SURFACE.

6 HORSESHOE INLET PROTECTION
NOT TO SCALE

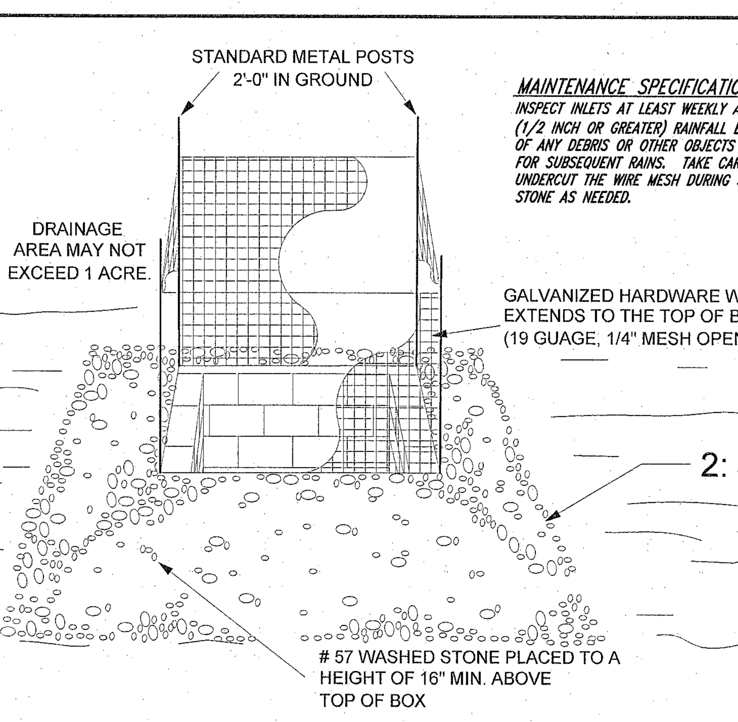


MAINTENANCE:

PERIODICALLY CHECK THE SEEDED SLOPES FOR RILLS AND WASHES. FILL THESE AREAS SLIGHTLY ABOVE THE ORIGINAL GRADE, THEN RESEED AND MULCH AS SOON AS POSSIBLE.

NOTE:
USE DOZER TRACKS TO CREATE GROOVES PERPENDICULAR TO THE SLOPE. GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE SEDIMENT IN RUNOFF.

7 SLOPE TRACKING DETAIL
NOT TO SCALE

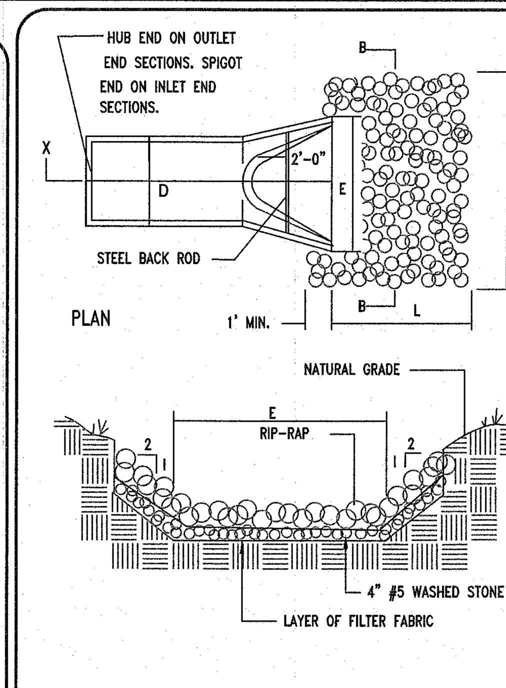


MAINTENANCE SPECIFICATIONS

INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

CONSTRUCTION SPECIFICATIONS
1. UNIFORMLY GRADE SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAX. OF 4 FEET APART.
3. SURROUND THE POSTS WITH MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POLES AT THE TOP, MIDDLE AND BOTTOM. PLACING A 2-FOOT STRIP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE ARE HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZE IT WITH GROUNDCOVER.

9 TEMPORARY INLET PROTECTION
NOT TO SCALE



Rip-Rap Apron#1		
	DIMENSIONS	
ENTRY WIDTH	3.8	FT
LENGTH	7.5	FT
EXIT WIDTH	8.8	FT
MIN. THICKNESS	22	IN
MIN. STONE DIAMETER	6	IN
STONE CLASS	B	

Rip-Rap Apron#2		
	DIMENSIONS	
ENTRY WIDTH	3.8	FT
LENGTH	7.5	FT
EXIT WIDTH	8.8	FT
MIN. THICKNESS	22	IN
MIN. STONE DIAMETER	6	IN
STONE CLASS	B	

Rip-Rap Apron#3		
	DIMENSIONS	
ENTRY WIDTH	3.8	FT
LENGTH	7.5	FT
EXIT WIDTH	8.8	FT
MIN. THICKNESS	22	IN
MIN. STONE DIAMETER	6	IN
STONE CLASS	B	

NOTES

RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.

THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIP-RAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.

MAXIMUM TAPER TO RECEIVING CHANNEL 5:1.

THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL.

ALL SUBGRADE STRUCTURE TO BE COMPACTED TO 95% OR GREATER.

THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.

NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.

CONSTRUCTION SPECIFICATIONS

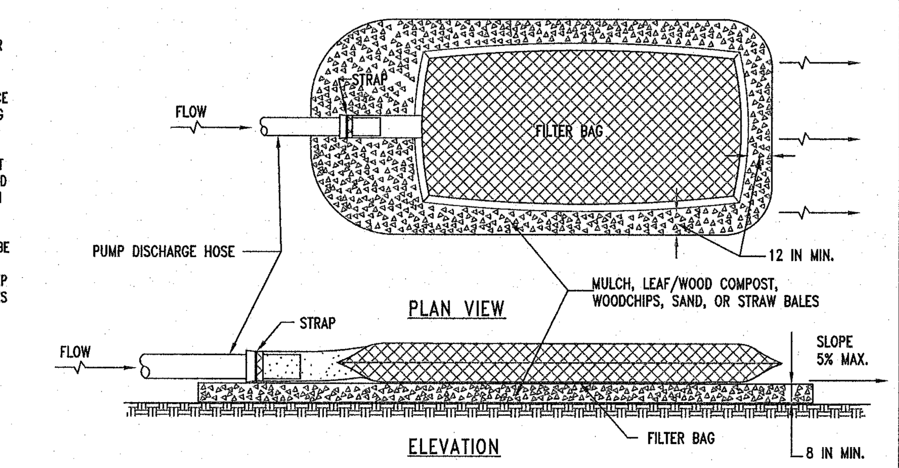
SUBGRADE PREPARATION–PREPARE THE SUBGRADE FOR RIPRAP AND FILTER TO THE REQUIRED LINES AND GRADES SHOWN ON THE PLANS. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY APPROXIMATING THAT OF THE SURROUNDING UNDISTURBED MATERIAL OR OVERFILL DEPRESSIONS WITH RIPRAP. REMOVE BRUSH, TREES, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. CUT THE SUBGRADE SUFFICIENTLY DEEP THAT THE FINISHED GRADE OF THE RIPRAP WILL BE AT THE ELEVATION OF THE SURROUNDING AREA. CHANNELS SHOULD BE EXCAVATED SUFFICIENTLY TO ALLOW PLACEMENT OF THE RIPRAP IN A MANNER SUCH THAT THE FINISHED INSIDE DIMENSIONS AND GRADE OF THE RIPRAP MEET DESIGN SPECIFICATIONS.
SYNTHETIC FILTER FABRIC–PLACE THE CLOTH FILTER DIRECTLY ON THE PREPARED FOUNDATION. OVERLAP THE EDGES BY AT LEAST 12 INCHES, AND SPACE ANCHOR PINS EVERY 3 FT ALONG THE OVERLAP. BURY THE UPSTREAM END OF THE CLOTH A MINIMUM OF 12 INCHES BELOW GROUND AND WHERE NECESSARY, BURY THE LOWER END OF THE CLOTH OR OVER LAP WITH THE NEXT SECTION AS REQUIRED. SEE FIGURE 6.14A PAGE 6.14.6. TAKE CARE NOT TO DAMAGE THE CLOTH WHEN PLACING RIPRAP. IF DAMAGE OCCURS REMOVE THE RIPRAP, AND REPAIR THE SHEET BY ADDING ANOTHER LAYER OF FILTER MATERIAL WITH A MINIMUM OVERLAP OF 12 INCHES AROUND THE DAMAGED AREA. IF EXTENSIVE DAMAGE IS SUSPECTED, REMOVE AND REPLACE THE ENTIRE SHEET. WHERE LARGE STONES ARE USED OR MACHINE PLACEMENT IS DIFFICULT, A 4-INCH LAYER OF FINE GRAVEL OR SAND MAY BE NEEDED TO PROTECT THE FILTER CLOTH.
STONE PLACEMENT–PLACEMENT OF RIPRAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER. PLACE RIPRAP SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY, AND CONTROLLED DUMPING DURING FINAL PLACEMENT. PLACE RIPRAP TO ITS FULL THICKNESS IN ONE OPERATION. DO NOT PLACE RIPRAP BY DUMPING THROUGH CHUTES OR OTHER METHODS THAT CAUSE SEGREGATION OF STONE SIZES. TAKE CARE NOT TO DISLODGE THE UNDERLYING BASE OR FILTER WHEN PLACING THE STONES.
THE TOE OF THE RIPRAP SLOPE SHOULD BE KEYED TO A STABLE FOUNDATION AT ITS BASE AS SHOWN IN FIGURE 6.15B. THE TOE SHOULD BE EXCAVATED TO A DEPTH ABOUT 1.5 TIMES THE DESIGN THICKNESS OF THE RIPRAP, AND SHOULD EXTEND HORIZONTALLY FROM THE SLOPE.
THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF STONE SIZES TO PRODUCE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE FINISHED GRADE OF THE RIPRAP SHOULD BLEND WITH THE SURROUNDING AREA. NO OVERFALL OR PROTRUSION OF RIPRAP SHOULD BE APPARENT

MAINTENANCE:

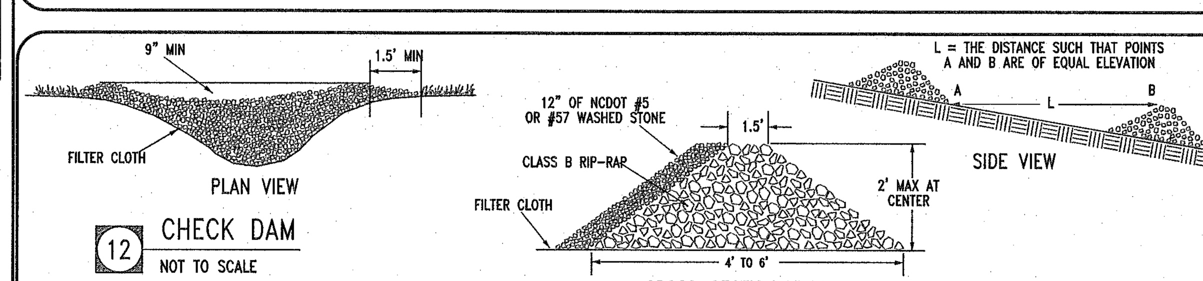
IN GENERAL, ONCE A RIPRAP INSTALLATION HAS BEEN PROPERLY DESIGNED AND INSTALLED IT REQUIRES VERY LITTLE MAINTENANCE. RIPRAP SHOULD BE INSPECTED PERIODICALLY FOR SCOUR OR DISLODGED STONES. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.

10 RIP-RAP APRON
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS
1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE
6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.



11 FILTER BAG
NOT TO SCALE



MAINTENANCE:

INSPECT CHECK DAM ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION. REPAIR THE CHANNEL LINING AS NECESSARY PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED TO AVOID GULLY FORMATION. WHEN THE AREA ABOVE THE CHECK DAM IS PERMANENTLY STABILIZED, REMOVE THE PROTECTION AND FILL AND STABILIZE THE CHANNEL TO BLEND WITH THE NATURAL SURFACE.

12 CHECK DAM
NOT TO SCALE

TEMPORARY SEEDING SPECIFICATIONS/SCHEDULE

Date	Type	Planting Rate
March – Oct.	Browntop Millet	40 lbs/acre
Nov. – Feb.	Winter Rye	120 lbs/acre

SEEDING SPECIFICATIONS/SCHEDULE

FOR SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1)

Date	Type	Planting Rate
Aug 15 – Nov 1	Tall Fescue	300 lbs/acre
Nov 1 – Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1 – Apr 15	Tall Fescue	300 lbs/acre
Apr 14 – Jun 30	Hulled Common Bermuda Grass	25 lbs/acre
Jul 1 – Aug 15	Tall Fescue & Browntop Millet or Sorghum-Sudan Hybrids	240 lbs/acre-Tall Fescue; 35 lbs/acre Browntop Millet; 30 lbs/acre Sorghum-Sudan Hybrids

FOR SHOULDERS, SIDE DITCHES, SLOPES (3:1 – 2:1)

Date	Type	Planting Rate
Mar 1 – Jun 1	Sericea Lespedeza (scarified) & use the following combinations:	50 lbs/acre (Serica Lespedeza)
Mar 1 – Apr 15	Add Tall Fescue	240 lbs/acre
Mar 1 – Jun 30	Or add Julled Common Bermuda Grass	25 lbs/acre
Jun 1 – Sep 1	Tall Fescue & Browntop Millet or Sorghum-Sudan Hybrids	240 lbs/acre Tall Fescue; 35 lbs/acre Browntop Millet; 30 lbs/acre Sorghum-Sudan Hybrids
Sep 1 – Mar 1	Sericea Lespedeza (Unhulled-Unscarafied & Tall Fescue	70 lbs/acre Sericea Lespedeza; 240 lbs/acre Tall Fescue
Nov 1 – Mar 1	Add Abruzzi Rye	25 lbs/acre

CONSULT S&EC ENGINEER FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

*** TEMPORARY: RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED P RMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHADED OUT.

SEEDBED PREPARATION:
1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE SEEDING MIXTURE).
5. CONTINUE TILLAGE UNITL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT S&EC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

SEEDING MIXTURE:

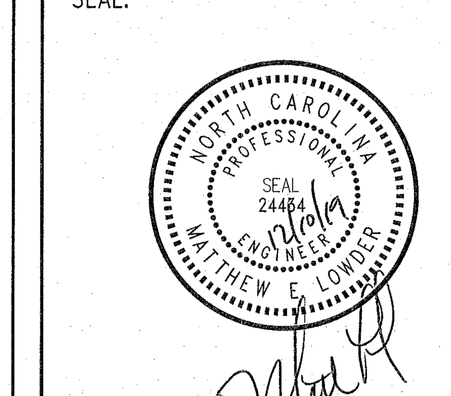
AGRICULTURE LIMESTONE:	2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)
FERTILIZER:	1,000 LBS/ACRE – 10-10-10
SUPERPHOSPHATE:	500 LBS/ACRE – 20% ANALYSIS
MULCH:	2 TONS/ACRE – SMALL GRAIN STRAW
ANCHOR:	ASPHALT EMULSION AT 400 GALS/ACRE

13 TEMPORARY SEEDING
NOT TO SCALE

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:



DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:

Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE:
EROSION CONTROL DETAILS

SHEET NUMBER:
C-9B

DG#20605-Rougemont, NC

BMP element:	Potential problem:	How I will remediate the problem
The entire BMP	Trash/debris is present	Remove the trash/debris
The perimeter of the bio-retention cell	Areas of bare soil and/or erosive gullies have formed	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application Maintain vegetation at a height of approximately six inches.
The inlet device: pipe, stone verge or swale	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment	Remove sediment and clogged stone and replace with clean stone.
The pretreatment area	Flow is bypassing pretreatment area and/or gullies have formed	Re-grade if necessary to route all flow to the pretreatment area. Restabilize the area after grading.
	Sediment has accumulated to a depth greater than three inches	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and restabilize the pretreatment area.
	Erosion has occured	Provide additional erosion protection such as reinforced turf matting or rip-rap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand.
The bio-retention cell: Vegetation	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	Tree stakes/wires are present six months after planting.	Remove tree stakes/wires (which can kill the tree if not removed)
The bio-retention cell: soils and mulch	Mulch is breaking down or has floated away.	Spot mulch if there are only random void areas. Replace whole mulch layer if necessary. Remove the remaining mulch and replace with triple shredded hard wood mulch at a maximum depth of three inches.
	Soils and/or mulch are clogged with sediment	Determine the extend of the clogging. Remove and replace either just the top layers or the entire media as needed. Dispose of the spoil in an appropriate off-site location. Use triple shredded hard wood mulch at a maximum depth of three inches. Search for the source of the sediment and remedy the problem if possible.
	An annual soil test shows that pH has dropped or heavy metals have accumulated in the soil media	Dolomitic lime shall be applied as recommended per the soil test and toxic soils shall be removed, disposed of properly and replaced with new planting material.
The underdrain system	Clogging has occurred.	Wash out the underdrain system
The drop inlet	Clogging has occured	Clean out the drop inlet. Dispose of the sediment off-site.
	The drop inlet is damaged.	Repair or replace the drop inlet.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the local NC Division of Water Quality Regional Office, or the 401 Oversight Unit at 919-733-1786.

STAGE/STORAGE TABLE

STAGE (FT)	ELEVATION (FT)	CONTOUR AREA (SF)	INCREMENTAL STORAGE (CF)	TOTAL STORAGE (CF)
0.0	557.5	2240	0	0
0.5	558.0	2650	1223	1223
1.0	558.5	3070	1430	2653 (WQv)
1.5	559.0	3500	1643	4295
2.0	559.5	3945	1861	6156

NOTE:
A PERMEABILITY SOIL REPORT SHALL BE PROVIDED AFTER BIO-RETENTION SOIL MIXTURE IS IN PLACE - REFER TO STORMWATER MANAGEMENT NOTES FOR REQUIREMENTS.

GRASS NOTE:
GRASS SHALL BE EITHER HYBRID BERMUDA GRASS OR CENTIPEDE

BIO-RETENTION SOIL MIXTURE:

Bio-retention Soil Mixture (BSM): shall be placed and graded using low ground-contact pressure equipment or by excavators and/or backhoes operating on the ground adjacent to the bio-retention facility. No heavy equipment shall be used within the perimeter of the bio-retention facility before, during, or after the placement of the BSM. The BSM shall be placed in horizontal layers not to exceed 12 inches for the entire area of the bio-retention facility. The BSM shall be compacted by saturating the entire area of the bio-retention facility after each lift of BSM is placed until water flows from the under-drain. Water for saturation shall be applied by spraying or sprinkling. An appropriate sediment control device shall be used to treat any sediment-laden water discharged from the under-drain. If the BSM becomes contaminated during the construction of the facility, the contaminated material shall be removed and replaced with uncontaminated material at no additional cost to the Administration. Final grading of the BSM shall be performed after a 24-hour settling period. Final elevations shall be within 2 inches of elevations shown on the Contract Plans.

The Bio-retention Soil Mixture (BSM) shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bio-retention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations.

Prior to placing the under-drain and the BSM, the bottom of the excavation shall be roto-tilled to a minimum depth of 6 inches to alleviate any compaction of the facility bottom. Any substitute method for roto-tilling must be approved by the Engineer prior to use. Any ponded water shall be removed from the bottom of the facility and the soil shall be friable before roto-tilling.

Once the BSM has been placed the entire bio-retention area shall be sodded with grass that has been grown in sandy soils or that has the roots washed clean of any clay or other materials that could clog the function of the bio-retention system.

OPERATION AND MAINTENANCE

North Carolina storm water rules require annual inspections by the regulating agency of bio-retention areas as a minimum. More frequent inspections by the land owner or system operator are strongly encouraged to ensure the proper operation of bio-retention areas.

A. Rainfall Event
   1. Inspect the basin after every runoff-producing rainfall event.

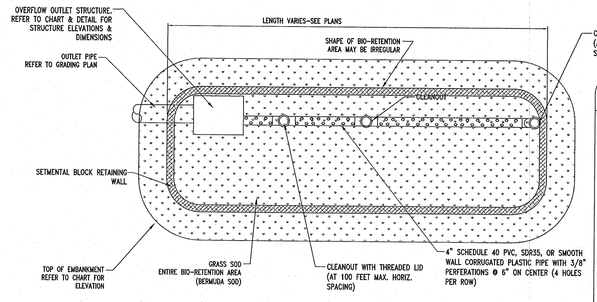
B. Monthly Inspection
   1. Inspect the basin monthly
   2. Check the bio-retention area side slopes; remove trash and repair eroded areas before the next rainfall event.
   3. Check the vegetative and rock filters for sediment accumulation, erosion and proper operation of the flow spreader mechanism and repair as necessary.
   4. Visually inspect and repair soil erosion on a monthly basis.
   5. Remulch any void area whenever necessary. Replacement of mulch layers may be necessary every two or three years. mulch should be replaced in the spring. When the mulch layer is replaced, the previous layer should be removed first.
   6. Remove and replace all dead and diseased vegetation considered beyond treatment. This should be done twice a year, once in the spring and once in the fall. Treat all diseased trees and shrubs that are not beyond treatment as needed.

C. Quarterly Inspection
   1. Inspect the collection system (i.e. catch basin, pipes and grass swales) for proper functioning. Clear accumulated trash from basin grates and basin bottoms. Check piping for obstructions.
   2. Check pond inlet pipes for undercutting, replace rip-rap and repair broken pipes.
   3. Reseed grassed swales, including the vegetated filter if applicable, twice a year as necessary. Repair eroded areas immediately.

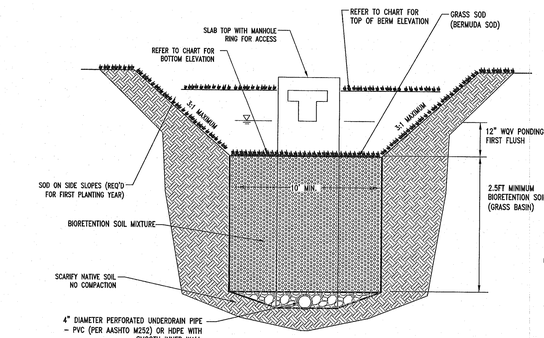
D. Six Month Inspection
   1. Remove accumulated sediment from the bottom of the outlet structure or other areas where accumulated sediment is noted.
   2. Inspect the embankment taking note of any wet areas where water may be seeping through the soil.

E. General Inspection
   1. Maximum grass height is to be 6in.
   2. No woody vegetation shall be allowed to grow in the bio-retention area.
   3. Debris shall be removed from blocking the inlet and outlet structures and from areas of potential clogging.
   4. Periodic removal of dead vegetation shall be accomplished.
   5. All components of the bio-retention system must be kept in good working order.

1 BIO-RETENTION DETAILS
N.T.S.



PLAN VIEW



BIO-RETENTION CROSS-SECTION

NOTES:

1. ALL BIO-RETENTION SHALL HAVE AN ACCESS EASEMENT CONNECTING TO A DEDICATED PUBLIC RIGHT OF WAY.
2. ALL DRAINAGE AREAS TO A BIO-RETENTION FACILITY ARE TO BE STABILIZED PRIOR TO INSTALLATION OF SOILS OR GRASS SOD.
3. WRAP PERFORATED UNDERDRAIN WITH FILTER FABRIC PRIOR TO BACKFILLING.
4. UNDERDRAIN PIPE SHOULD HAVE 3/8" PERFORATIONS SPACED AT 6" CENTERS, MIN. 4 HOLES PER ROW. MAX SPACING OF UNDERDRAIN PIPE IS 10 FEET ON CENTER.
5. UNDERDRAIN CLEANOUTS MUST EXTEND A MIN. OF 6 INCHES ABOVE TOP SURFACE OF GRASS LAYER, PREFERABLY TO THE TOP OF DESIGN MAXIMUM PONDING DEPTH IN THE BIO-RETENTION BASIN.

BIO-RETENTION SOIL MIXTURE

	PERCENT BY VOLUME	MATERIAL
SAND	85%-88%	CONSTRUCTION SAND
ITEM	8%-12%	SILT
ORGANIC MATTER	3%-5%	COMPOST/PEAT MOSS
PERMEABILITY	THE PERMEABILITY SHOULD FALL BETWEEN 1 AND 6 INCHES PER HOUR, AND 1-2 INCHES PER HOUR IS PREFERRED.	
PHOSPHOROUS INDEX	RANGE BETWEEN 10 AND 30 (CONFIRM WITH SOIL ANALYSIS REPORT FROM NCDA LAB)	

BIO-RETENTION CONSTRUCTION SEQUENCE:

Step 1. Construction of the bioretention area may only begin after the contributing drainage area has been stabilized. It may be necessary to block certain curb or other inlets while the bioretention area is being constructed. The proposed site should be checked for existing utilities prior to any excavation.

Step 2. Temporary E&S controls are needed during construction of the bioretention area to divert stormwater away from the bioretention area until it is completed. Maintain erosion control measures in place until bioretention area has been completed. Special protection measures such as erosion control fabrics may be needed to protect vulnerable slide slopes from erosion during the construction process.

Step 3. Excavators or backhoes should work from the sides to excavate the bioretention area to its appropriate design depth and dimensions. Excavating equipment should have scoops with adequate reach so they do not have to sit inside the footprint of the bioretention area. Contractors should use a cell construction approach in larger bioretention basins, whereby the basin is split into 500 to 1,000 sq. ft. temporary cells with a 10-15 foot earth bridge in between, so that cells can be excavated from the side.

Step 4. It may be necessary to rip the bottom soils to a depth of 6 to 12 inches to promote greater infiltration.

Step 5. Place geotextile fabric on the sides of the bioretention area with a 6-inch overlap on the sides. Place the appropriate depth of stone on the bottom, install the perforated underdrain pipe, place stone above the underdrain pipe, and add sand layer between the underdrain and the soil media layer.

Step 6. Deliver the soil media from an approved vendor, and store it on an adjacent impervious area or plastic sheeting. Apply the media in 12-inch lifts until the desired top elevation of the bioretention area is achieved. Wait a few days to check for settlement, and add additional media, as needed, to achieve the design elevation. CONTRIBUTING DRAINAGE AREA TO BIO-RETENTION POND TO BE STABILIZED PRIOR TO INSTALLING BIO-RETENTION SOIL MEDIA.

Step 7. Install the vegetation, and water accordingly.

Step 8. Coordinate with inspector and engineer to conduct the final construction inspection. Upon completion of bioretention facility remove temporary erosion control measures and complete final stabilization of the project.

STORMWATER MANAGEMENT NOTES:

1. *THE DEVELOPER OR HIS AGENT SHALL CONTACT THE ENGINEER WHEN THE BEST MANAGEMENT PRACTICE(S) ARE CONSTRUCTED AND ABOUT TO BECOME OPERATIONAL SO A FINAL INSPECTION CAN BE PERFORMED TO DETERMINE COMPLIANCE WITH THE APPROVED PLAN CAN BE PERFORMED.*
2. *PRIOR TO CONSTRUCTION, A SOIL TEST OF THE BIO-RETENTION FILTER MEDIA SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD WITH A COPY SENT TO THE ENGINEER. THE TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR pH, PHOSPHORUS, MAGNESIUM, AND POTASSIUM AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. ALL TESTING RESULTS SHALL COME FROM THE SAME TESTING FACILITY. THE NC DEPARTMENT OF AGRICULTURE (NCDA) LAB IS THE PREFERRED TESTING FACILITY. SHOULD THE pH FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE MODIFIED (RAISED) WITH LIME OR (LOWER) WITH IRON SULFATE PLUS SULFUR OR AS DIRECTED BY THE NCDA OR ENGINEER.*
3. *PRIOR TO CONSTRUCTION A COMPOSITION TEST OF THE BIO-RETENTION FILTER MEDIA SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD WITH A COPY SENT TO THE ENGINEER. FILTER MEDIA SHALL CONFORM TO THE FOLLOWING: 85-88% SAND (USDA TEXTURAL CLASSIFICATION), 8-12% FINES (SILT AND CLAY), AND 3-5% ORGANIC MATTER (PEAT/MOSS OR PINE BARK) BY VOLUME.*
4. *PERFORM A DOUBLE RING INFILTRATION TEST (MINIMUM OF 3 TESTS OR 1 PER 500 SF OF FILTER MEDIA WHICHEVER IS GREATER) AT THE COMPLETION OF THE BIO-RETENTION BMP. INFILTRATION RATE OF THE CONSTRUCTED BIO-RETENTION MEDIA SHALL BE BETWEEN 1-6 IN/HR. PROVIDE A COPY OF THE RESULTS TO THE ENGINEER.*
5. *ANNUAL MAINTENANCE INSPECTION AND REPORT REQUIRED - THE OWNER OF A PERMITTED STRUCTURAL STORMWATER BMP/CONTROL SHALL ANNUALLY SUBMIT A MAINTENANCE AND INSPECTION REPORT FOR EACH BMP TO THE STORMWATER ADMINISTRATOR. ANNUAL INSPECTIONS SHALL BEGIN WITHIN ONE YEAR OF THE RECORDATION OF ANY DEED(S) SHOWING STORMWATER BMPs/CONTROL STRUCTURES.*
6. *UPON COMPLETION OF THE PROJECT, AND BEFORE A CERTIFICATE OF OCCUPANCY SHALL BE GRANTED, THE ENGINEER OF RECORD SHALL CERTIFY THAT THE COMPLETED PROJECT IS IN ACCORDANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS AND DESIGNS.*
7. *A FINAL INSPECTION OF THE SITE AND STORMWATER MANAGEMENT BMP/CONTROLS TO BE SCHEDULED WITH AND COMPLETED BY THE ENGINEER & INSPECTOR.*
8. *THE ENGINEER'S CERTIFICATION OF COMPLETION WILL BE REQUIRED PRIOR TO THE FINAL PLAT OR CERTIFICATE OF OCCUPANCY. THE STORMWATER CONTROL IS TO BE INSPECTED TO ENSURE IT IS FUNCTIONING AS DESIGNED AND HAS FULL DESIGN VOLUME PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY.*

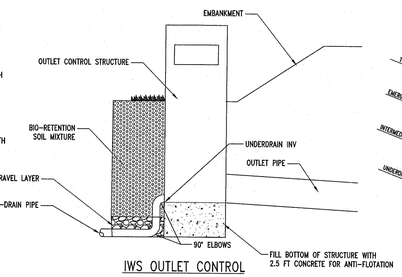
STORMWATER MANAGEMENT DESIGN
BIO-RETENTION POND

RIVER BASIN:	NEUSE
WATERSHED:	FALLS LAKE WATERSHED - LOWER ENO UNPROTECTED
RECEIVING STREAM:	MOUNTAIN CREEK
STREAM INDEX:	27-2-21-4-(1)
STREAM CLASS:	WS-II; HQW; NSW

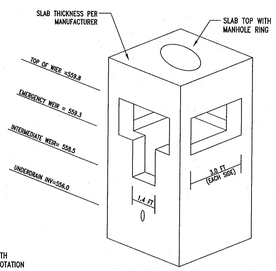
POND DESIGN SUMMARY

DRAINAGE AREA TO POND:	0.88 ACRES
SITE IMPERVIOUS AREA TO POND:	0.53 ACRES
OFF-SITE DESIGN IMPERVIOUS AREA TO POND:	0.0 ACRES
TOTAL DESIGN IMPERVIOUS AREA TO POND:	0.53 ACRES

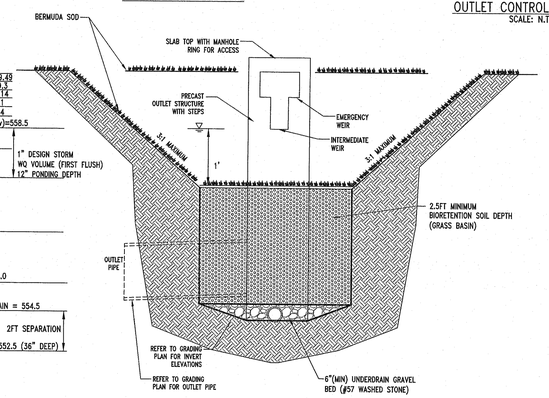
	PRE-DEVELOPED OVERALL	POST-DEVELOPED TO POND	POST DEVELOPED THROUGH POND	POND BY-PASS	TOTAL
DRAINAGE AREA:	2.39 AC	0.88 AC		1.51 AC	
CURVE NUMBER:	74.1	87.6		77.5	
TIME OF CONCENTRATION:	10 MIN	5 MIN		10 MIN	
1" STORM EVENT:		0.171 CFS	0.000 CFS		
1-YEAR STORM EVENT:	3.071 CFS	2.637 CFS	0.043 CFS	2.407 CFS	2.45 CFS
2-YEAR STORM EVENT:	4.605 CFS	3.479 CFS	0.460 CFS	3.453 CFS	3.913 CFS
10-YEAR STORM EVENT:	8.976 CFS	5.565 CFS	2.366 CFS	6.37 CFS	8.736 CFS
100-YEAR STORM EVENT:	16.16 CFS	8.669 CFS	6.761 CFS	11.01 CFS	17.771 CFS



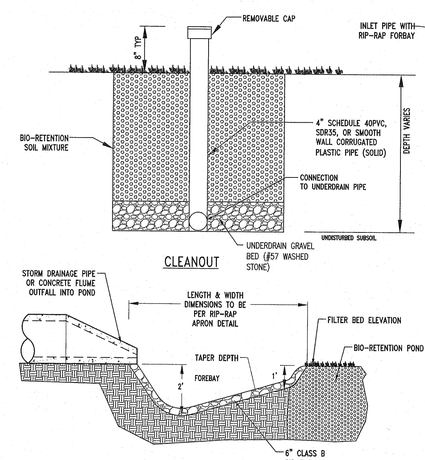
IWS OUTLET CONTROL



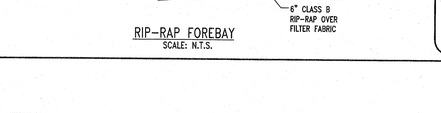
OUTLET CONTROL STRUCTURE
SCALE: N.T.S.



BIO-RETENTION CONTROL STRUCTURE



CLEANOUT



RIP-RAP FOREBAY
SCALE: N.T.S.

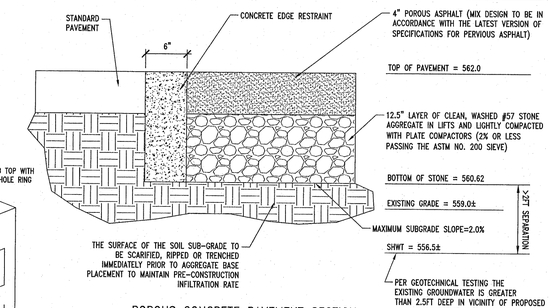
PERMEABLE PAVEMENT

ACTIVITIES PROHIBITED:
SANDING
RE-SEALING
RE-SURFACING
POWER WASHING
STORAGE OF MULCH OR SOIL
STORAGE OF SNOW PILES
STORAGE OF HEAVY LOADS
APPLICATION OF SALT OR DE-ICERS

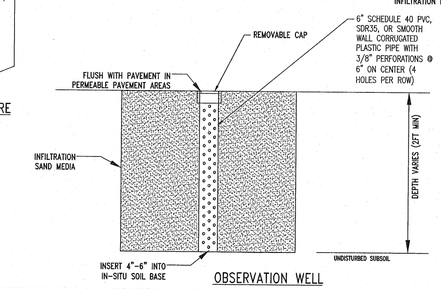
EXAMPLE PERMEABLE PAVEMENT SIGN

OPERATION & MAINTENANCE PROVISIONS (PERMEABLE PAVEMENT)

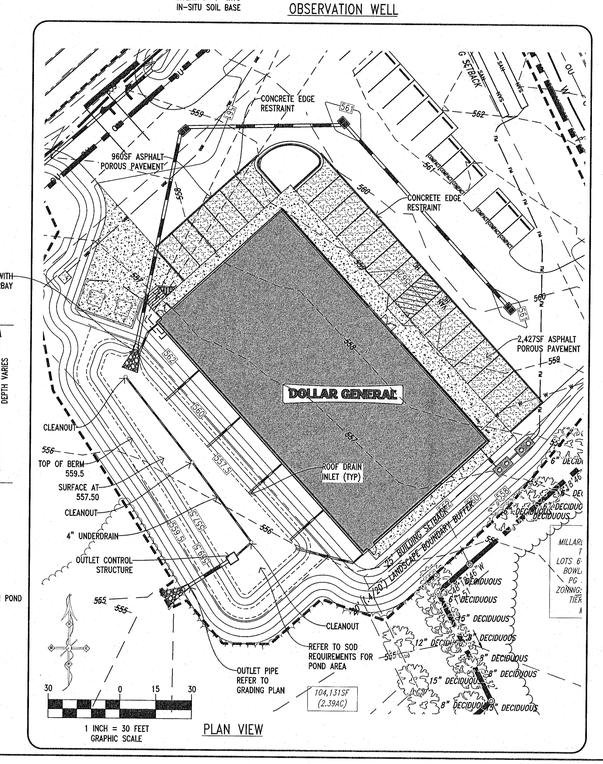
BMP element:	Potential problem:	How to remediate the problem
The perimeter of the permeable pavement	Areas of bare soil and/or erosive gullies	Regrade the soil if necessary to remove the gully, then plant ground cover and water until established
	A vegetated area drains toward the pavement	Regrade the area so that it drains away from the pavement, then plant ground cover and water until established
The surface of the permeable pavement	Trash/debris present	Remove the trash/debris
	Weeds	Do not pull the weeds (may pull out media as well). Spray them with a systemic herbicide such as glyphosate and then return within the week to remove them by hand. (Another option is to pour boiling water on them or steam them)
	Sediment	Vacuum sweep the pavement
	Rutting, cracking, or damaged structure	Consult and appropriate professional
Observation well	Water present more than five days after a storm event	Clean out clogged underdrain pipes. Consult an appropriate professional for clogged soil subgrade.
Educational sign	Missing or is damaged	Replace the sign



POROUS CONCRETE PAVEMENT SECTION



OBSERVATION WELL



PLAN VIEW

TRIANGLE SITE DESIGN
CONSULTANT:
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Rougemont, North Carolina
Durham County

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REVISIONS:

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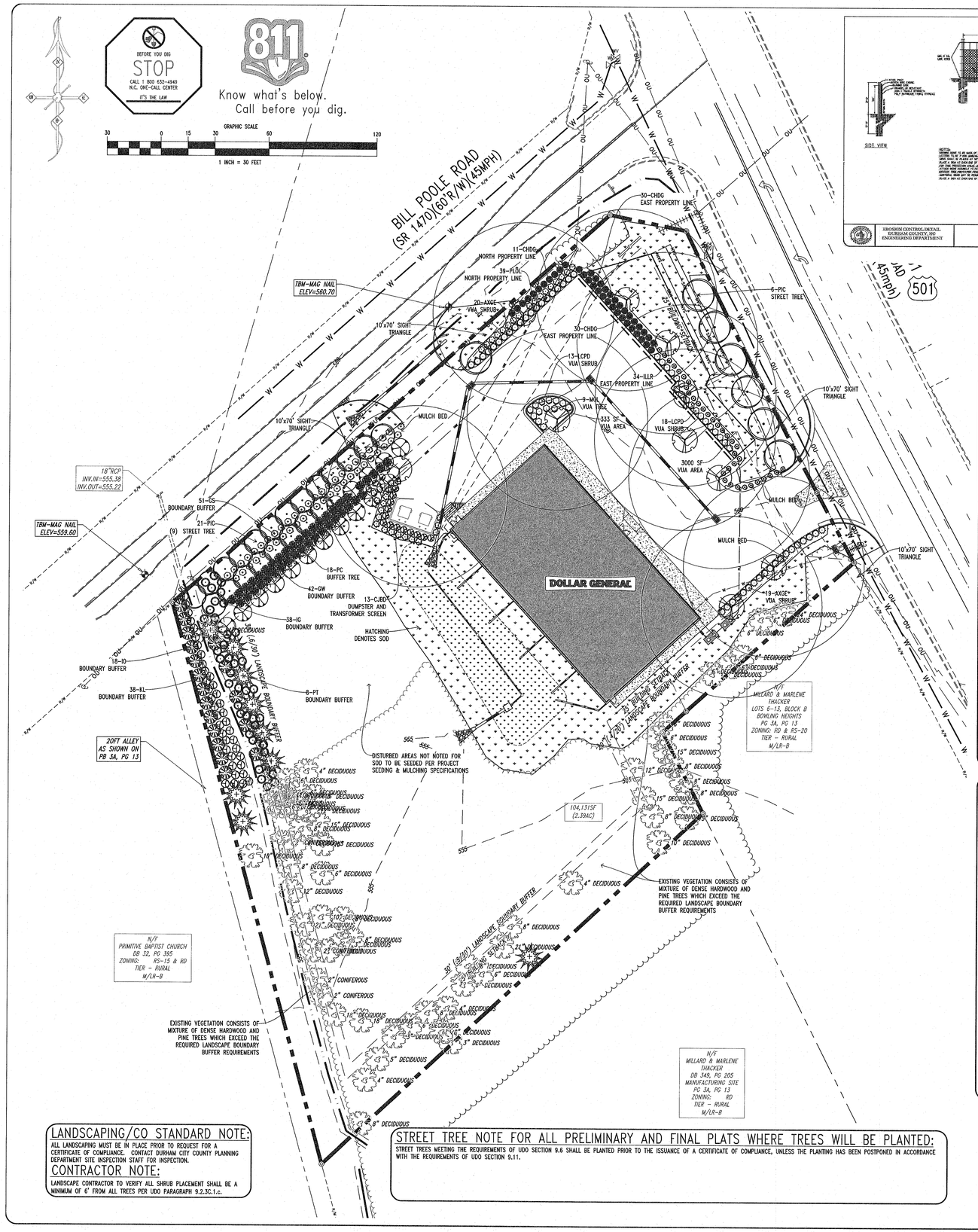
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167
TITLE:	STORMWATER MANAGEMENT DETAILS
SHEET NUMBER:	C-10

DG#20605-Rougemont, NC



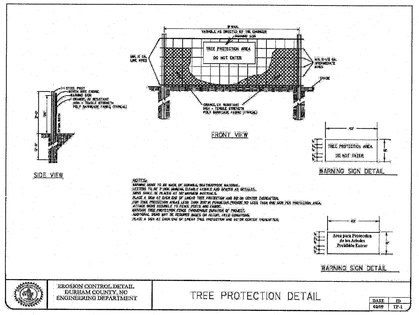


Figure 1, Tree Planting Detail

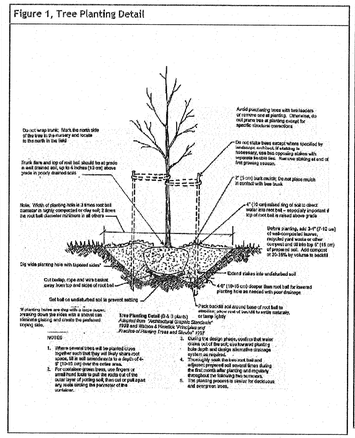
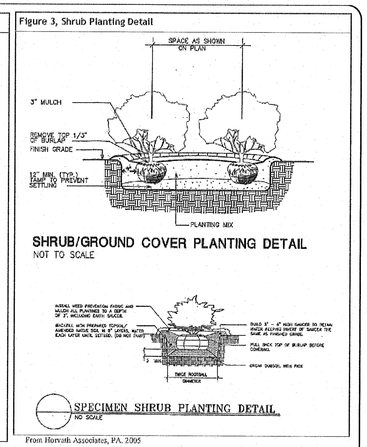


Figure 3, Shrub Planting Detail



From Horvath Associates, P.A. 2005

LANDSCAPE NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING ALL REQUIRED LANDSCAPING FOR THE ENTIRE SITE, TO INCLUDE BUT NOT LIMITED TO: SODDED/SEEDED AREAS, SHRUB BEDS, PARKING LOT ISLANDS, ROADSIDE SIGN BASE(S) AND MONUMENT PLANTERS.
2. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGARDING LANDSCAPING.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A HEALTHY STAND OF GRASS ON ALL SEEDED AREAS.
4. IN THE EVENT THAT PLANTING BEDS AND MULCH ARE REQUIRED, THE CONTRACTOR SHALL INSTALL BLACK FABRIC WEED BLOCK LANDSCAPE MESH UNDER THE MULCH TO PREVENT WEED GROWTH.
5. CONTRACTOR SHALL PROVIDE NATURAL TOPSOIL THAT IS FERTILE, FRIABLE, WITHOUT MIXTURE OF SUBSOIL MATERIALS, AND OBTAINED FROM A WELL DRAINED, AVAILABLE SITE. IT SHALL NOT CONTAIN SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL BE SCREENED AND FREE FROM CLAY, LUMPS, STONES, ROOTS, PLANTS, OR SIMILAR SUBSTANCES 1" OR MORE IN DIAMETER, DEBRIS, OR OTHER OBJECTS WHICH MIGHT BE A HINDERANCE TO PLANTING OPERATIONS. TOPSOIL SHALL CONTAIN AT LEAST 4-6% ORGANIC MATTER BY WEIGHT AND HAVE A PH RANGE OF 5.5 TO 7.0.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATERING AND THE MAINTENANCE OF ALL LANDSCAPED AREAS UNTIL THE LATER OF; (a) THIRTY (30) DAYS FOLLOWING THE PLANTING OF THE GRASS AND SHRUBS, OR (b) THE DATE THAT PROJECT OPENS FOR BUSINESS TO THE PUBLIC.
7. GENERAL CONTRACTOR IS TO CLEAN ENTIRE SITE OF ALL CONSTRUCTION DEBRIS AND RAKE ALL GRASS AREAS.
8. PROVIDE LANDSCAPE PLANS TO OWNER AND AS REQUIRED BY LOCAL JURISDICTION TO THE BLDG. DEPT. FOR REVIEW AND APPROVAL PRIOR TO START OF WORK.
9. ALL LANDSCAPING, TRESS, SHRUBS, ETC. SHALL NOT INTERFERE WITH THE VISIBILITY OF BUILDING SIGNAGE
10. CONTRACTOR TO VERIFY QUANTITIES PRIOR TO COMMENCING WORK.
11. OPEN AREAS WITHIN PLANTING BEDS SHALL BE MULCHED.
12. ALL CANOPY TREES LOCATED WITHIN VEHICULAR USE AREAS SHALL BE LIMBED UP TO A HEIGHT OF SIX FEET TO ALLOW FOR CLEAR VIEWS UNDER THEM.
13. ALL LIGHT POLES SHALL BE LOCATED A MINIMUM OF 10' FROM ANY CANOPY TREE.
14. 3' MINIMUM CLEARANCE SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. NO PLANTINGS OR OBSTRUCTIONS ALLOWED.
15. TREES AND LARGE BUSHES SHALL BE AT LEAST 5 FEET FROM PROPOSED STORM DRAINAGE.

GENERAL LANDSCAPE NOTES:

1. ANY DISTURBED AREAS NOT SCHEDULED FOR HARDSCAPE, PLANTINGS, OR MULCH SHALL BE SEEDED LAWN.
2. NO PLANT SUBSTITUTIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE.
3. ALL PLANT AND BED LINE LOCATIONS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
4. ALL PLANTINGS SHALL BE INSTALLED WITH THE SPECIFIED LAYER OF MULCH. REFERENCE DETAILS AND SPECIFICATIONS FOR DEPTH AND TYPE OF MULCH. ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS AND SHALL BE SEPARATED FROM TURF GRASS AREAS.
5. GRASS COVERAGE TO EXTEND FROM PROPERTY LINES TO BACK OF CITY SIDEWALKS AND/OR CURBS.
6. MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER (FOR SINGLE STEM TREES). ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 8 FEET TALL.
7. ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
8. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 18" NEW TOPSOIL, OR TILL AND AMEND THE TOP 18" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES.
9. LARGE MATURING TREES MAY NOT BE PLANTED WHERE THERE ARE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.
10. ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS, WATER, PHONE, AND ELECTRICAL LINES.)
11. ATTENTION LANDSCAPER: NOTIFY OWNER OF ANY SIGN, POWER LINE, OR OTHER CONFLICTS BEFORE PLANTING NEW TREES.

LANDSCAPE SUMMARY

TREE PERCENTAGES:

TOTAL TREES =	83
TOTAL SPECIES REQUIRED	3
TOTAL SPECIES PROVIDED	5
MAXIMUM % OF ANY SPECIES	50
MAXIMUM % PROVIDED	26

SHRUB PERCENTAGES:

TOTAL SHRUBS	366
TOTAL SPECIES REQUIRED	7
TOTAL SPECIES PROVIDED	10
MAXIMUM % OF ANY SPECIES	20%
MAXIMUM % PROVIDED	14%

REQUIREMENTS WITHIN VUA (UDO SECTION 9.8.3.B.2 a & d)

VUA:	17,257 SF
TREES:	1 (@ 2" CAL) PER 2,000SF
REQUIRED:	9
PROVIDED:	9
SHRUBS:	1 (@ >15" HT) PER 250 SF
REQUIRED:	70
PROVIDED:	70
VUA REQUIRED LANDSCAPING AREA	17,257*15% = 2,589
VUA PROVIDED	3,333 SF

VEHICULAR USE AREA VISIBLE FROM STREET

NORTH PROPERTY LINE = 148.0' OF PARKING VISIBLE FROM BILL POOLE ROAD

REQUIRED CANOPY TREES:	148/40 = 4
PROVIDED CANOPY TREES:	4 (STREET TREES & 1 VUA TREE)
REQUIRED SHRUBS:	148 = 50
PROVIDED SHRUBS:	50

EAST PROPERTY LINE = 191' OF PARKING VISIBLE FROM ROXBORO BLVD.

REQUIRED CANOPY TREES:	191/40 = 5
PROVIDED CANOPY TREES:	6 (6 STREET TREES)
REQUIRED SHRUBS:	191/3 = 64
PROVIDED SHRUBS:	64

STREET TREE (SEC. 9.6.2A):
1 TREE/40 LF OF STREET FRONTAGE (BILL POOLE ROAD)
324.31 LF FRONTAGE / 40 = 9 STREET TREES

1 TREE/40 LF OF STREET FRONTAGE (ROXBORO ROAD)
206 LF FRONTAGE / 40 = 6 STREET TREES

DUMPSTER SCREENING (SECTION 9.7.2.B)
VEGETATIVE SCREEN SHALL PROVIDE OPACITY OF AT LEAST 0.85 FROM THE GROUND TO THE HEIGHT OF THE OBJECT BEING SCREENED

PLANT LIST (WEST PROPERTY BUFFER - ALTERNATE 3 EVERGREEN

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
EVERGREEN CANOPY TREE	8	PT	PINUS TAEDA/LOBLOLLY PINE	--	10' HEIGHT	18' MINIMUM
EVERGREEN UNDERSTORY TREE	18	IO	ILEX OPACA 'DAM FENTON'/AMERICAN HOLLY	--	6' HEIGHT	12' MINIMUM
EVERGREEN SHRUBS	38	KL	KALMIA LATIFOLIA 'FIRECRACKER'/MOUNTAIN LAUREL	MIN 24" HEIGHT	--	--
	38	IG	ILEX GLABRA 'CAPE COD'/INKBERRY HOLLY	MIN 24"-HEIGHT	--	--

PLANT LIST (NORTH PROPERTY BUFFER - ALTERNATE 4 OVERHEAD UTILITY

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	21	PIC	PISTACIA CHINENSIS	--	10' HEIGHT	18' MINIMUM
EVERGREEN UNDERSTORY TREE	18	PC	PRUNUS CAROLINIANA 'COMPACTA'/CAROLINA CHERRYLAUREL	--	6' HEIGHT	12' MINIMUM
EVERGREEN SHRUBS	51	GS	GELSEMIUM SEMPERVIRENS/CAROLINA YELLOW JESSAMINE	MIN 24" HEIGHT	--	--
	42	GW	ILEX GLABRA 'GEORGIA WINE' GREEN BILLOW/INKBERRY HOLLY	MIN 24"-HEIGHT	--	--

PLANT LIST (NORTH PROPERTY LINE - VUA VISIBLE FROM STREET)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	3	PIC	PISTACIA CHINENSIS	2.5" CAL.	10' HEIGHT	18' MINIMUM
	1	MGL	MAGNOLIA GRANDIFLORA/LITTLE GEM MAGNOLIA	2.5" CAL.	10' HEIGHT	18' MINIMUM
EVERGREEN SHRUBS	39	PLOL	PRUNUS LAUROCERASUS/OTTO LUYKEN	MIN 24" HEIGHT	--	--
	11	CHDG	CEPHALOTAXUS HARRINGTONIA/DUKE GARDENS	MIN 24"-HEIGHT	--	--

PLANT LIST (EAST PROPERTY LINE - VUA VISIBLE FROM STREET)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	5	PIC	PISTACIA CHINENSIS	2.5" CAL	10' HEIGHT	18' MINIMUM
EVERGREEN SHRUBS	30	CHDG	CEPHALOTAXUS HARRINGTONIA/DUKE GARDENS	MIN 24" HEIGHT	--	--
	34	ILLR	ILEX/LITTLE RED	MIN 24" HEIGHT	--	--

PLANT LIST (BILL POOLE ROAD)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	9	PIC	PISTACIA CHINENSIS	2.5" CAL	10' HEIGHT	18' MINIMUM

PLANT LIST (ROXBORO ROAD)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	6	PIC	PISTACIA CHINENSIS	2.5" CAL	10' HEIGHT	18' MINIMUM

PLANT LIST (DUMPSTER AND TRANSFORMER SCREEN)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE						
EVERGREEN SHRUBS	13	CJBD	CRYPTOMERIA JAPANICO/BLACK DRAGON	MIN 8" ABOVE TRANSFORMER HEIGHT	--	--

PLANT LIST (PARKING LOT)

	QTY	KEY	PLANT NAME	SIZE (MIN)	HEIGHT	SPACING SINGLE TRUNK
DECIDUOUS CANOPY TREE	9	MGL	MAGNOLIA GRANDIFLORA/LITTLE GEM MAGNOLIA	2.5" CAL.	10' HEIGHT	18' MINIMUM
EVERGREEN SHRUBS	39	AXGE	ABELIA x GRANDIFLORA / EDWARD GOUCHER	MIN 24" HEIGHT	--	--
	31	LCPD	LOROPETALUM CHINENSE / PURPLE DIAMOND	MIN 24" HEIGHT	--	--

LANDSCAPING/CO STANDARD NOTE:

ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE. CONTACT DURHAM CITY COUNTY PLANNING DEPARTMENT SITE INSPECTION STAFF FOR INSPECTION.

CONTRACTOR NOTE:

LANDSCAPE CONTRACTOR TO VERIFY ALL SHRUB PLACEMENT SHALL BE A MINIMUM OF 6' FROM ALL TREES PER UDO PARAGRAPH 9.2.3C.1.c.

STREET TREE NOTE FOR ALL PRELIMINARY AND FINAL PLATS WHERE TREES WILL BE PLANTED:

STREET TREES MEETING THE REQUIREMENTS OF UDO SECTION 9.6 SHALL BE PLANTED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE, UNLESS THE PLANTING HAS BEEN POSTPONED IN ACCORDANCE WITH THE REQUIREMENTS OF UDO SECTION 9.11.

TRIANGLE SITE DESIGN

CONSULTANT:
Triangle Site Design, PLLC
4004 Barrett Drive
Suite 101
Raleigh, NC 27609
(919)553-6570
mlowder@trianglesitedesign.com
NC LICENSE #P-0619

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24454 ENGINEER MATTHEW E. LOWDER

DOLLAR GENERAL

Roxboro Road
US Highway 501
Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:
Glandon Forest Equity, LLC
3825 Barrett Drive
Suite 100
Raleigh, NC 27609
919-459-2602
919-459-2604 fx
gventers@vanguardpg.com

REVISIONS:

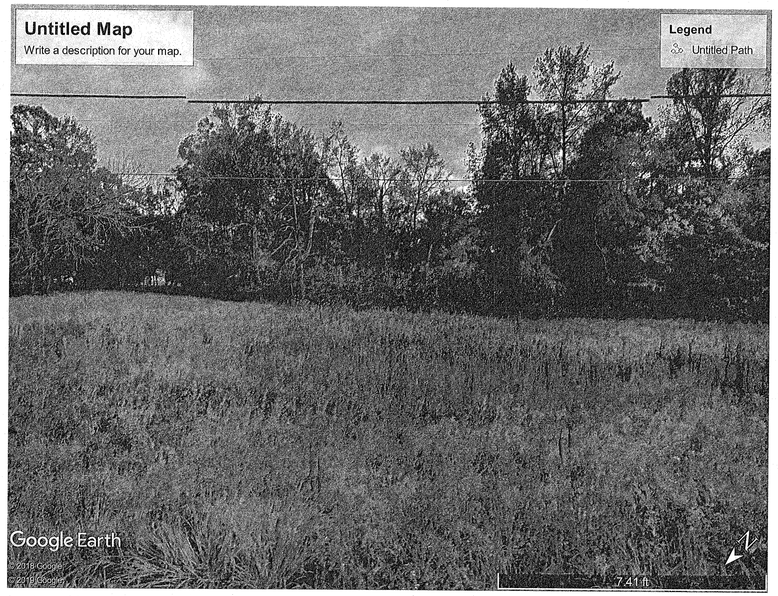
8/7/19	Revised per City/County Review
10/22/19	Revised per City/County and NCDOT Review
11/22/19	Revised per City/County and NCDOT Review
12/10/19	Revised per City/County Review

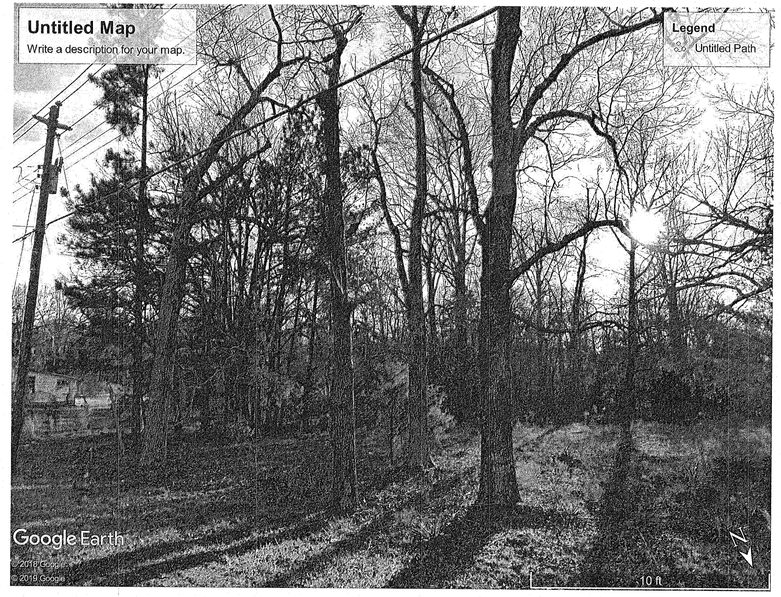
LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
C-11

DG#20605-Rougemont, NC





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SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 24434 ENGINEER MATTHEW E. LOWDER

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Rougemont, North Carolina
Durham County

OWNER/DEVELOPER:

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REVISIONS:

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12/10/19	*Revised per City/County Review*

LAYOUT COORD:	MEL
PLANNING MGR.	MEL
DRAWING BY:	MEL
DATE:	May 28, 2019
JOB NUMBER:	004167

TITLE: LANDSCAPE EXHIBIT EXISTING EAST PROPERTY LINE

SHEET NUMBER:
C-11B

DG#20605-Rougemont, NC

VARIANCE STAFF REPORT

2202 EASTWOOD DRIVE STREET YARD VARIANCE B1900052

Meeting Date: January 28, 2019

Reference Name	2202 Eastwood Drive Street Yard Variance (B1900052)	**Jurisdiction**	City of Durham
Request	A request for a variance from the street yard setback requirements for the addition of a roof over an existing deck.		
Site Characteristics	**Tier**	Suburban	
	Zoning District	Residential Suburban (RS-20)	
	Overlays	None	
	Site Acreage	0.341 Acres	
Applicant	Hyrum Lee	**Submittal Date**	November 25, 2019
Location	2202 Eastwood Drive		
PID(s)	156303		

A. Summary

Hyrum Lee, the applicant, submits a request for a variance from the street yard requirements for the addition of a roof over an existing front deck located at 2202 Eastwood Drive. The site is zoned Residential-Suburban (RS-20) and is located within the Suburban Development Tier.

Per Section 7.1.2B of the Unified Development Ordinance (UDO), the required street yard setback for a single-family detached house in a RS-20 zoning district is 35 feet. The applicant is requesting a variance of 5 feet and 3 inches for a 29-feet and 9-inch street yard. Per UDO Section 6.12, Decks, uncovered terraces and at-grade patios can extend up to 8 feet in any required street yard. This deck is now being covered and no longer meets this exemption; therefore, this new requires a variance.

B. Summary of Issues

No issues identified at time of submittal.

C. UDO Section 3.14 Variance

The Board of Adjustment may vary certain requirements of this Ordinance, in harmony with the general purpose of these regulations, where special conditions applicable to the property in question would make the strict enforcement of the regulations impractical or result in a hardship in making reasonable use of the property.

UDO Section 3.14.8 establishes the findings listed below that the Board of Adjustment must make in granting any variance.

1. ***Unnecessary hardship would result from the strict application of the Ordinance. It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property.***

   Staff Analysis. The subject site is zoned Residential-Suburban (RS-20) in the Suburban Development Tier. Per UDO Section 7.1.2B, a single-family house within this zoning district requires a 35-feet street yard. Strict application of the Ordinance limits the ability to cover the front deck with a roof. The applicant is proposing a reduction to a 29-feet and 9-inches street yard to permit the construction of roof over an existing deck.

   See Attachment 3, Application, for the applicant's responses to unnecessary hardship resulting from the strict application of the Ordinance.

2. ***The hardship results from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance.***

   Staff Analysis. The lot is approximately 14,711 square feet but the minimum lot area required for this zoning district for a single-family dwelling, per UDO Section 7.1.2B, is 20,000 square feet, making this lot non-conforming. However, per Durham County Tax records this house was built in 1962 predating the Unified Development Ordinance with the deck located in the street yard. The deck being built in the setback would still be allowed under current Ordinance requirements.

   See Attachment 3, Application, for the applicant's response to the hardship resulting from conditions that are peculiar to the property.

3. ***The hardship did not result from actions taken by the applicant or the property owner. The act of purchasing property with knowledge that circumstances exist that may justify granting a variance shall not be regarded as a self-created hardship.***

   Staff Analysis. The applicant has not done any construction or made changes to the property to create a hardship.

   See Attachment 3, Application, for the applicant's response contending that the hardship did not result from actions taken by the property owner.

4. ***The requested variance is consistent with the spirit, purpose, and intent of the Ordinance, such that public safety is secured, and substantial justice achieved.***

   Staff Analysis. The intent of the Ordinance is to promote the health, safety, and general welfare of the residents of the Durham City and County. In this spirit, the

Ordinance provides development standards and, when necessary, aims to prescribe uniformity for specific types of development. Strict application of the ordinance would prohibit the applicant and property owner from covering the front deck.

See Attachment 3, Application, for the applicant's response contending that the request is consistent with the spirit, purpose, and intent of the Ordinance.

D. Notification

Staff certifies that newspaper advertisements, letters to property owners within 600 feet of the site and the posting of a sign on the property has been carried out in accordance with UDO Section 3.2.5 of the UDO. In addition, email notice was provided per the Durham Planning Public Notification Service.

E. Staff Contact

Cole Renigar, CZO, 919-560-4137 ext. 28234, or Cole.Renigar@durhamnc.gov

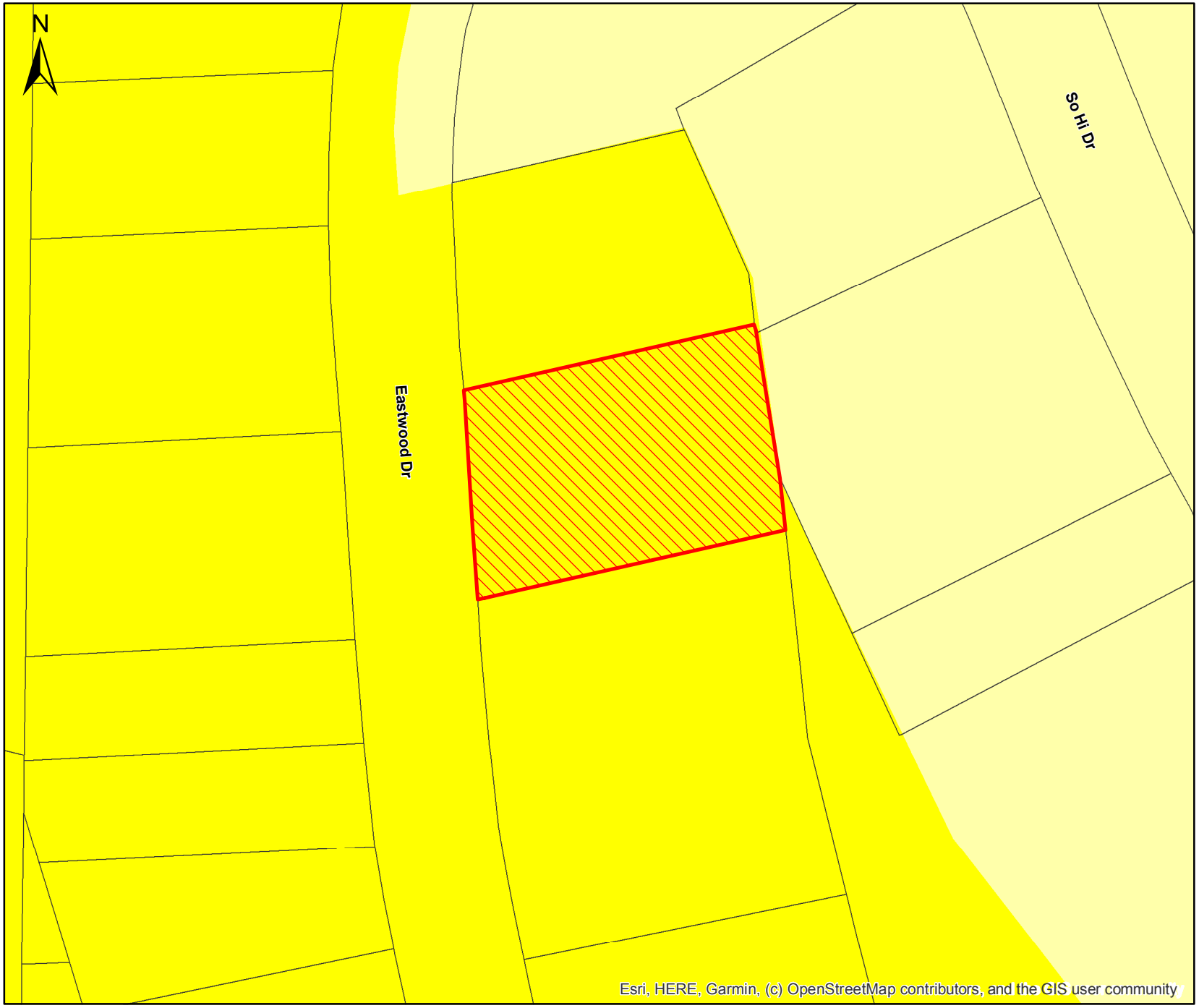
A. Attachments

1. Context Map
2. Durham GIS Aerial Photo
3. Application – B1900052
4. Plot Plan
5. Building Design
6. Appraisal
7. Photos by Applicant.

Attachment 3

B1900052 2202 Eastwood Drive Variance

Context Map



Legend:

- Case Area
- Parcel Lines
- RS-20
- RR

0 25 50 Feet

Planning

Durham City-County Planning Department, 12/4/2019

B1900052 2202 Eastwood Drive Variance

Aerial Map

Attachment 2

Legend:

Case Area

Parcel Lines

0 50 100 Feet

Durham County Planning

Durham City-County Planning Department, 12/4/2019

Rev. 07/2014

DURHAM 1869 CITY OF MEDICINE

Durham City-County Planning Department

VARIANCE APPLICATION

(A Pre-submittal conference must be held prior to submission)

DURHAM COUNTY

Tracking Information (Staff Only)		
Case Number: B1900052	Date/Time rec'd: 11/25/19 9:07am	Rec'd by: Cole Renziger

About this Application

ONLY COMPLETE APPLICATIONS CAN BE ACCEPTED

Variances are heard by the Board of Adjustment as a quasi-judicial public hearing.

Submittal: Applications are due by noon on the submittal deadline date. Deadlines are discussed at the pre-submittal meeting and are available online at http://durhamnc.gov/ich/cb/ccpd/Pages/Board-of-Adjustment.aspx Applications should be submitted in-person, and fees are due at time of submittal.

The application is a form of written testimony, and used to provide evidence that the required findings for approval can be made. In addition to the application materials, the applicant may provide any other written, drawn or photographed material to support his/her request and as permitted by the Board of Adjustment. Any such additional material submitted will become part of the application, and as such cannot be returned.

Attendance at the hearing is required. Applicants may represent themselves or may be represented by someone appropriate for quasi-judicial public hearings. The applicant has the **burden of proof** and must provide sufficient evidence in order for the required findings to be made. The public hearing will allow the applicant, proponents, opponents and anyone else the opportunity to speak and ask questions in regards to the request. An application may be approved, approved with conditions, continued for more information, or denied. **Decisions can be appealed to Superior Court within 30 days.**

Contact Information: If you have any questions, please contact the City-County Planning Department at 919-560-4137 between 8:00 a.m. and 5:00 p.m. on weekdays.

Required Application Attachments	Applicant Initial	Staff Initial
Record of the pre-submittal meeting (copies provided at the meeting)	HL	CR
Fee	HL	CR
Completed application and responses: ORIGINAL signatures required	HL	CR
SITE PLAN (full size and 11x17) or PLOT PLAN, as determined at pre-submittal meeting	HL	CR
Responses to general findings: Section 3.14.8 of the UDO	HL	CR
Responses to Additional Findings and/or Review Factors, as applicable	HL	CR
Floorplan, as applicable	HL	CR
Elevations, as applicable	HL	CR
Note: Additional supporting documents may also be submitted	HL	CR

Case #_____

Property Information		
Site Address: 2202 Eastwood Dr Durham NC 27703		PIN(s): 0739-02-57-2580
Zoning District(s): RS-20	Overlay District(s): —	PID(s): 156303
Current Use(s):		☐ City ☐ County ☐ Both

Property Owner	
Name(s) (Print): Lyn Scott	Telephone: 919-937-7646
Contact Person: Hyrum Lee	Email: devanldw@nc.rr.com
Lyn Scott Owner Signature	~~25 NOV~~ 25 NOV 19 Date

Applicant	
Name(s): Hyrum Lee	
Contact Person: Hyrum Lee	Telephone: 919-606-7216
Address: 7717 Digon Mill RD	Fax:
City/State/ZIP: Wake Forest NC 27587	Email: hhomeimprovement@AOL.com

I certify that all of the information presented by me in this application is accurate to the best of my knowledge, information, and belief.

Hyrum Lee Applicant Signature	11-25-19 Date

Agent (if different than applicant)	
Name:	
Contact Person:	Telephone:
Address:	Fax:
City/State/ZIP:	Email:

Case #_____

Complete and respond to the following with an attachment (suggested), or in the space provided:

Burden of Proof: The applicant seeking the variance shall have the burden of presenting evidence sufficient to allow the Board of Adjustment to reach the conclusions set forth below, as well as the burden of persuasion on those issues.

Ordinance provision(s) from which a variance is requested:
UDO Sec. 7.1.2.B

This is what I want to do: Add a shingled roof cover over existing front porch foot print. It encroches into the current setback.

Ordinance provisions require: 35 ft street set back

I, Hyoun Lee, hereby petition the Durham Board of Adjustment for a Variance from the literal provisions cited above to allow use of the property as described on this form and in material submitted with this request.

Section 3.14.8 of the Unified Development Ordinance (UDO) calls out the following "Findings" which the Board of Adjustment must make in granting any variance:

1. Unnecessary hardship would result from the strict application of the Ordinance. It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property.

Applicant's Response:

2. The hardship results from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance.

Applicant's Response:

3. The hardship did not result from actions taken by the applicant or the property owner. The act of purchasing property with knowledge that circumstances exist that may justify granting a variance shall not be regarded as a self-create hardship.

Applicant's Response:

4. The requested variance is consistent with the spirit, purpose, and intent of the Ordinance, such that public safety is secured, and substantial justice achieved.

Applicant's Response:

Lyn Scottt (home owner)

2202 Eastwood Drive

Durham, N.C, 27614

To: Durham City-County Planning Department

101 City Hall Plaza, Ground Floor Suite G500

Durham, N.C. 27614

11/25/2019

Findings 3.14.8 for the board of adjustments:

1. When the house was built the existing front porch was built within the existing setback and because there was no roof over the porch this was not an issue.

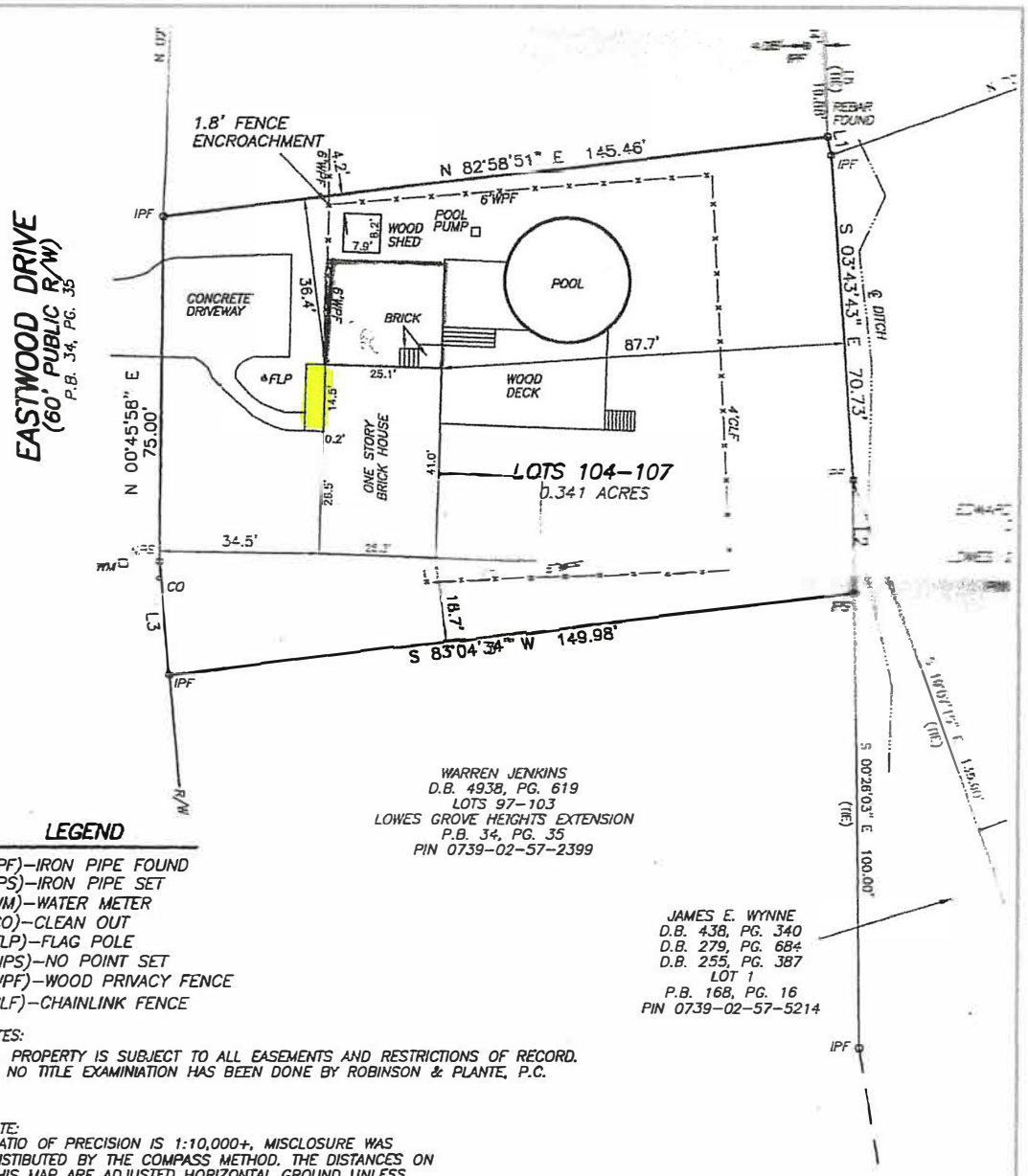
2. Because the house was built within the setback, I am unable to install a roof over the existing front porch pad. Adding a roof over the porch would increase the value of the house as well as curb appeal to the property and neighborhood.

3. The hardships have been placed on my family are health circumstances that did not exist when I purchsed my home.

4. The request for granting a variance to build a roof over the existing porch is to keep my family out of inclement weather, keep them safe, keep them healthy, and the request is consistent with other homes in the neighborhood.

Sincerely,

Lyn Scott



LEGEND

(IPF)–IRON PIPE FOUND
(IPS)–IRON PIPE SET
(WM)–WATER METER
(CO)–CLEAN OUT
(FLP)–FLAG POLE
(NPS)–NO POINT SET
(WPF)–WOOD PRIVACY FENCE
(CLF)–CHAINLINK FENCE

NOTES:

1. PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD. NO TITLE EXAMINIATION HAS BEEN DONE BY ROBINSON & PLANTE, P.C.

NOTE:
RATIO OF PRECISION IS 1:10,000+, MISCLOSURE WAS DISTIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND UNLESS NOTED OTHERWISE. ALL AREAS ARE CALCULATED BY COORDINATE COMPUTATION.

LOTS 104–407 LOWES GROVE HEIGHTS EXTENSION
2202 EASTWOOD DR.
DURHAM COUNTY
DURHAM, N.C. 27703

RS–20 SETBACKS
STREET YARD–35'
SIDE YARD–SINGLE 12'
TOTAL 30'
REAR YARD–25'

LY

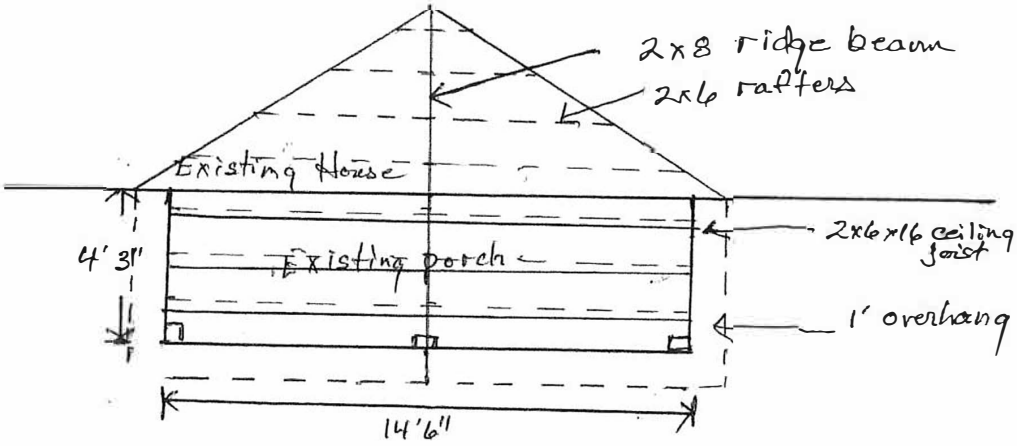
0'

REFERENCE: BOOK OF MAPS 2006 PAGE 1208–1216

I CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION DESCRIPTION RECORDED INREFERENCES AS SHOWN; THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION

NORTH CAROLINA PROFESSIONAL

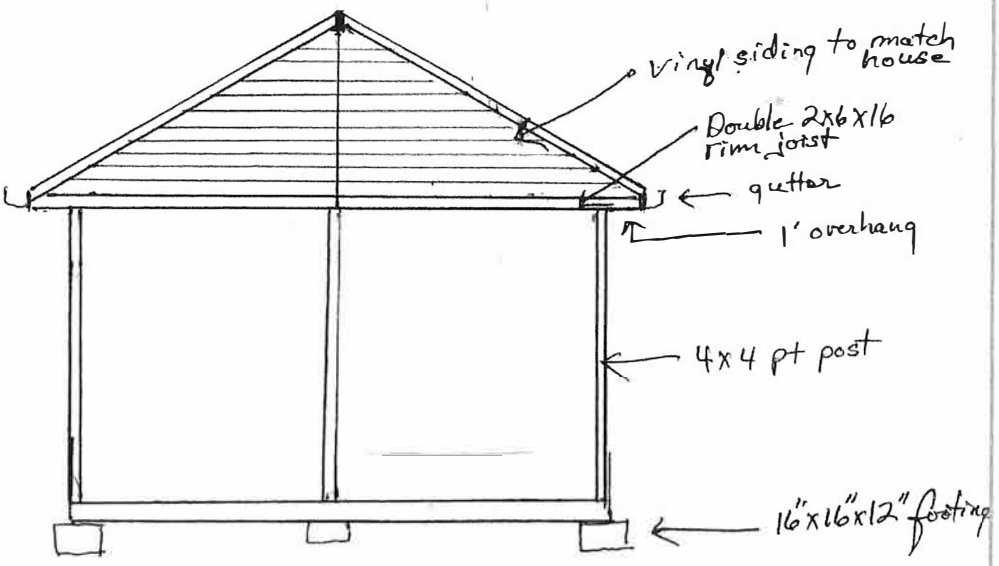
RC



- install 16" x 16" x 12" footings.
- install 4 x 4 x 8' pt post with metal anchor boots for each post.

Framing

- Double 2x6 header
- 2x6 rafters 16" o/c
- 2x6x16 ceiling joist
- roof deck 7/16 osb, black paper, shingles to match house 4/12 pitch
- install gutter on each side of roof cover
- install vinyl siding to match house.
- install fascia and soffit to match house



Garrison Appraisal
12003 Heatherview Dr #102
Raleigh, NC 27614
(910) 496-5471

11/21/2019

Lyn Scott
2202 Eastwood Dr
Durham, NC 27703

Re: Property:	2202 Eastwood Dr Durham, NC 27703
Borrower:	Lyn Scott
File No.:	SMG190367-HA

Overall Findings:	Positive Neighborhood Impact w/ no Injurious Effect
Effective Date:	11/15/2019

In accordance with your request, we have reviewed your plans to build a roof over the existing front porch at the address shown above. Furthermore, you have requested that we provide an opinion regarding the fact that this roof addition is in harmony with the area and not substantially injurious to the value of properties in the general vicinity, as part of the requirements of the City of Durham Special Use Permit Ordinance conditions.

This opinion is based on a physical analysis of the site and improvements and a locational analysis of the property within the neighborhood and city.

This opinion reported above is as of the stated effective date shown above and is contingent upon construction per the plans and data provided and included as part of this report.

It has been a pleasure to assist you. Please do not hesitate to contact me or any of my staff if we can be of additional service to you.

Sincerely,

STEVEN M. GARRISON
STATE CERTIFIED
NORTH CAROLINA
A5111
REAL ESTATE APPRAISER
RESIDENTIAL APPRAISER

Steven M Garrison
License or Certification #: A5111
State: NC Expires: 06/30/2020
garrison_appraisal@mindspring.com

OPINION OF VALUE IMPACT

LOCATED AT
2202 Eastwood Dr
Durham, NC 27703
PROP-WHITFORD LYN/LT#104- 107

FOR
Lyn Scott
2202 Eastwood Dr
Durham, NC 27703

OPINION OF VALUE
Positve Neighborhood Value Impact

AS OF
11/15/2019

BY
Steven M Garrison
Garrison Appraisal
12003 Heatherview Dr #102
Raleigh, NC 27614
(910) 496-5471
garrison_appraisal@mindspring.com

Covered Porch Commentary

File No. SMG190367-HA

Borrower/Client	Lyn Scott						
Property Address	2202 Eastwood Dr						
City	Durham	County	Durham	State	NC	Zip Code	27703
Lender	Lyn Scott						

VALUE COMMENTARY REGARDING ADDITION OF A COVERED FRONT PORCH

This commentary is specific to the Durham City Special Use Permits, Sec A, Item 1 which states that the special use as proposed or the use as proposed with conditions is "in harmony with the area and not substantially injurious to the value of properties in the general vicinity".

Our client, Ms Scott, has requested that we provide an opinion regarding the fact that this roof addition will meet the Sec A, Item 1 conditions as stated.

In an effort to become familiar with this project, we have reviewed the plans (see attachments) to build a roof over the existing front porch. We have also conducted an "unscientific" survey of the immediate neighborhood to determine what percentage of homes have similar covered porches. In addition, we have considered the value of adding this porch and its value impact, positive or negative, to this neighborhood.

Our Findings:

Porch Plans - it is noted that there is no addition or change to the existing porch footprint. The design is "minimal" with little impact to the existing roof and creating a mostly "unnoticeable" change in the appearance of the front of the home.

Neighborhood Porch Survey - a review of the porch types in the immediate neighborhood finds that about half of the homes have as similar covered porch while the remaining half have open stoops or porches. Those with covered porches are typically of a simple design with some railings and most are "slab" type porches. These are noted to be very common for this era of construction.

Value Impact - The cost to add this roof structure is estimated at over $10,000. While the "appraised value" of adding such a structure is likely somewhat below the actual cost to build, this roof addition does ADD VALUE TO THE HOME. And, given the existence of similar porch designs in neighborhood and the value addition and appearance improvement of the home, there can only be a positive (or at minimum neutral) impact on the value of the neighboring properties.

Summary:

Based on the data provided by the client, consideration of the Durham City requirements and the analysis stated above, *we find that this covered porch addition would certainly be in "harmony" with the area and would furthermore enhance the neighborhood with the anticipated increase in home value.*

+ The opinion reported is as of the stated effective date shown above and is contingent upon construction per the plans and data provided by the client and included as part of this report.

Signature		Signature	
Name	Steven M Garrison	Name	
Date Signed	11/21/2019	Date Signed	
State Certification #	A5111 State NC	State Certification #	State
Or State License #	State	Or State License #	State

STEVEN M. GARRISON STATE CERTIFIED NORTH CAROLINA REAL ESTATE APPRAISER A5111 RESIDENTIAL APPRAISER

Subject Photograph Addendum

Borrower/Client	Lyn Scott						
Property Address	2202 Eastwood Dr						
City	Durham	County	Durham	State	NC	Zip Code	27703
Lender	Lyn Scott						

Subject Front

Subject Street

Porch Area Photograph Addendum

Borrower/Client	Lyn Scott						
Property Address	2202 Eastwood Dr						
City	Durham	County	Durham	State	NC	Zip Code	27703
Lender	Lyn Scott						

Porch - Right View

Porch - Left View

Porch - Front View

DRAFT

December 10, 2019, 8:30 a.m.
Committee Room, 2nd Floor, City Hall
101 City Hall Plaza, Durham, NC

I. Call to Order

Chair Rogers called the meeting to order at 8:32 a.m.

II. Roll Call

Members Present:
Jacob Rogers, Chair
Regina deLacy
Chris Burnham
Ian Kipp
Michael Retchless
Jessica Major, Designated Alternate
Teisha Wymore

Members Absent:
Fredrick Davis
Chad Meadows, Vice Chair

Staff Present:
Jessica Dockery, Planning Manager
Bryan Wardell, County Attorney's Office
Don O'Toole, City Attorney's Office
Eliza Monroe, Planner
Susan Cole, Clerk

III. Adjustments to the Agenda

None

IV. Swearing-In of Witnesses

Chair Rogers read the following statement:

This Board is a quasi-judicial Board of record and, as such, all testimony will be recorded. The proceedings of this Board will be governed by the Unified Development Ordinance, as recorded.

As Chair of the Durham Board of Adjustment, I would like to explain the procedures used for Board hearings. The hearings are quasi-judicial. The process is similar to a court proceeding. First, a staff member of the City-County Planning Department will present an overview of the case. Then the applicant presents its evidence. The opponents, if there are any, will present their evidence. The applicant may then present its rebuttal. Board members are asked to refrain from questions until each speaker has completed his or her presentation. All testimony is given under oath. In a few moments, I will give the oath to all witnesses as a group. All witnesses are asked to sign the roster at the podium if you have not done so.

Testimony should consist of facts each witness knows, not hearsay. All witnesses should come forward to the podium, and identify themselves each time they approach the podium. Speak directly into the microphone so their testimony can be recorded on tape. Before each application, I will read the findings that must be made to approve an application, and any testimony should be relevant to the criteria that the Board uses to determine whether to approve an application.

Any written evidence or exhibits must be presented to the Chair (Vice Chair) and a determination will be made whether it should be accepted. Written evidence or exhibits can be inspected by the opposing party. All evidence, written or oral, or exhibits can be objected to.

Witnesses are subject to cross-examination. Opposing representatives will have an opportunity to question witnesses after all witnesses for the other side have testified. If you wish to cross-examine, you may raise your hand when I ask for other speakers in favor or against the application and I will recognize you. I would also like to remind everyone in attendance to be courteous and ask questions respectfully. If there are numerous people who will be providing the same or similar testimony either for or against an application, in the interest of time, I would request that you please select a representative to present that testimony.

I would like to note that Board members may have visited each site under consideration as part of their preparation for this meeting.

The Board will vote on each case after the presentation of all the evidence, for and against an application, and discussion among themselves concerning the case. North Carolina law requires that in order for an applicant's request to be granted for a City application before the Board, five (5) of the seven (7) voting Board members must approve the request. For a County variance request, North Carolina law requires that in order for an applicant's request to be granted, six (6) of the seven (7) voting Board members must approve the request. For other County requests, including applications for a minor special use permit, four (4) of the seven Board members, or a simple majority, must approve the request.

All decisions of this Board are subject to appeal to the Durham Superior Court. Anyone in the audience, other than the applicant, who wishes to receive a copy of the formal order issued by this Board on a particular case, must submit a written request for a copy of the order at this hearing. Forms for this purpose are available from the City-County Planning Staff.

V. Hearing and Determination of Cases

Case B1900029 – City: A minor special use permit for a development of a new project over 5,000 square feet within the Commercial Neighborhood (CN) zoning district without a development plan. The subject site is located at 5444 Fayetteville Road, is zoned Commercial Neighborhood (CN) and Residential Suburban – 20 (RS-20); within the Falls of the Neuse/Jordan Lake Protected Area (F/J-B), and in the Suburban Tier.

Seated: Burnham, deLacy, Kipp, Rogers, Retchless, Major, Wymore

Staff Report: Eliza Monroe presented the case and asked that all staff reports and materials submitted at the meeting be made part of the permanent record with any additions, deletions, or corrections that may be necessary.

Speakers: Michael McQuillen, Fran van Beurden and Nicholas Kirkland spoke in support and no one spoke in opposition.

MOTION: Burnham made a motion that case **B1900029**, an application for a request for a minor special use permit on property located at **5444 FAYETTEVILLE ROAD** has successfully met the applicable requirements of the Unified Development Ordinance and is hereby granted subject to the following conditions:

- The improvements shall be substantially consistent with the plans and information submitted to the board as part of the application and the site plan case D1900068.

(Burnham, Kipp 2nd)

MOTION: Carried, 7-0.

Case B1900044 - County: A request for a variance from the required rear and side yard setbacks for the construction of a garage and addition. The subject site is located at 1032 Kent Street, is zoned Residential Urban-5(2) [RU-5(2)]; and in the Urban Tier.

Seated: Burnham, deLacy, Kipp, Rogers, Retchless, Major, Wymore

Staff Report: Eliza Monroe presented the case and asked that all staff reports and materials submitted at the meeting be made part of the permanent record with any additions, deletions, or corrections that may be necessary.

Speakers: Jason Sager spoke in support and no one spoke in opposition.

MOTION: Burnham made a motion that case **B1900044**, an application for a request for a variance from the requested rear and side setbacks for the construction of a garage and addition on property located at **1032 KENT STREET** has successfully met the applicable requirements of the Unified Development Ordinance and is hereby granted subject to the following conditions:

- The improvements shall be substantially consistent with the information submitted to the Board as part of the application.

(Burnham, Retchless 2nd)

ACTION: Carried, 7-0.

VI. Approval of Summary Minutes from October 22, 2019

MOTION: Approve the Minutes from October 22, 2019. (Retchless, Burnham 2nd).
ACTION: Carried, 6-0. (deLacy could not vote due to being absent at October meeting.)

VII. Approval of Orders

Case B1800025
MOTION: Approve the order for case B1800025 (Retchless, Major 2nd).
ACTION: Carried, 2-0.

Case B1900041
MOTION: Approve the order for case B1900041 (Burnham, Retchless 2nd).
ACTION: Carried, 3-0.

Case B1900046
MOTION: Approve the order for case B1900046 (deLacy, Retchless 2nd).
ACTION: Carried, 6-0 (Burnham was absent so she could not vote on this order).

Case B1900029
MOTION: Approve the order for case B1900029 (deLacy, Burnham 2nd).
ACTION: Carried, 7-0.

Case B1900044
MOTION: Approve the order for case B1900044 (Burnham, deLacy 2nd).
ACTION: Carried, 7-0.

VIII. Old Business - None

IX. New Business –

Chair Rogers announced that himself, Major and Wymore would be absent at the January meeting.

Mr. Wardell noted the BOA would hold a closed session before rehearing the Discovery Charter School minor special use permit case.

X. Adjournment

The meeting adjourned at 9:34 AM. (deLacy, Burnham 2nd)

Respectfully Submitted,
Susan Cole, Clerk to the Board