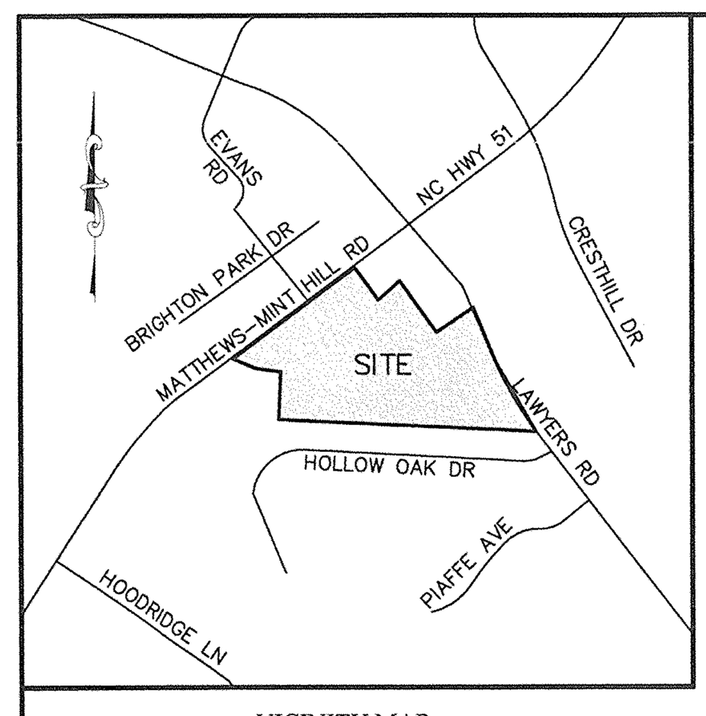
MINT HILL COMMONS
PHASE 1
MINT HILL, NORTH CAROLINA



VICINITY MAP
NOT TO SCALE

DEVELOPMENT DATA

PARCEL ID:	195-182-31
TOTAL SITE ACREAGE:	54.429 ACRES
PHASE 1 ACREAGE:	10.821 ACRES
FUTURE DEVELOPMENT ACREAGE:	43.608 ACRES
ZONING:	B-G DO-B (CD) & R-DO-A (CD)
COUNTY:	MECKLENBURG COUNTY
TOWN:	MINT HILL
WATERSHED DISTRICT:	GOOSE CREEK
PUBLIC UTILITIES:	CMUD PUBLIC SEWER AND PUBLIC WATER
ENGINEER/LAND SURVEYOR:	THE ISAACS GROUP, P.C. 8720 RED OAK BLVD., STE. 420 CHARLOTTE, NC 28217 Ph: (704) 527-3440 / Fax: (704) 527-8335
OWNER/DEVELOPER/APPLICANT:	MINT HILL PARTNERS, LLC BETH MIDDLETON 8514 McALPINE PARK DRIVE SUITE 190 CHARLOTTE, NC 28211 EMAIL: beth.middleton@stiles.com PH: (704) 594-7942

Town of Mint Hill NORTH CAROLINA
Approved
7/14/2014
The approval of these plans are applicable only to the pertinent parts reviewed by the approval agencies for the type of review under which they were submitted. Refer to the EPM FAQ for more information.
This review is for revisions to approved plans/add'l EC
Mecklenburg County Land Development - Adam Nowocin P.E.
Date: 07/15/2014 Signature: Adam Nowocin
Note: This review was carried out based on the information provided by the design engineer. This review was done using the minimum acceptable standards of the town and county.
No review performed by Town of Mint Hill

SHEET INDEX:

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C1.1	PROJECT NOTES
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C1.4	ACCESSIBILITY PLAN
C1.5	VEHICLE TURNING MOVEMENT PLAN
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C3.2	HIGHWAY 51 IMPROVEMENTS
C3.3	HWY 51 & LAWYERS RD SIGHT DIST.
C3.4	HIGHWAY 51 CROSS SECTIONS
C3.5	HIGHWAY 51 CROSS SECTIONS
C3.6	HIGHWAY 51 CROSS SECTIONS
C3.7	HWY 51 TRAFFIC CONTROL
C3.7	HWY 51 TRAFFIC CONTROL
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C4.1	LAWYERS ROAD IMPROVEMENTS
C4.2	LAWYERS ROAD CROSS SECTIONS
C4.3	LAWYERS ROAD CROSS SECTIONS
C4.4	LAWYERS ROAD CROSS SECTIONS
C4.5	LAWYERS ROAD TRAFFIC CONTROL
C5.0	ROAD PROFILE
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C6.1	GRADING PLAN
C6.2	GRADING PLAN
C6.3	PLAZA & LOADING DOCK GRADING PLAN
C6.4	STORM PROFILES
C7.0	PRE DEVELOPED DA MAP
C7.1	POST DEVELOPED DA MAP
C7.2	WATER QUALITY PLAN
C7.3	WATER QUALITY PLAN
C7.4	BMP DETAILS AND SPECIFICATIONS
C8.0	PHASE 1 EROSION CONTROL
C8.1	PHASE 2 EROSION CONTROL
C9.0	DETAILS AND SPECIFICATIONS
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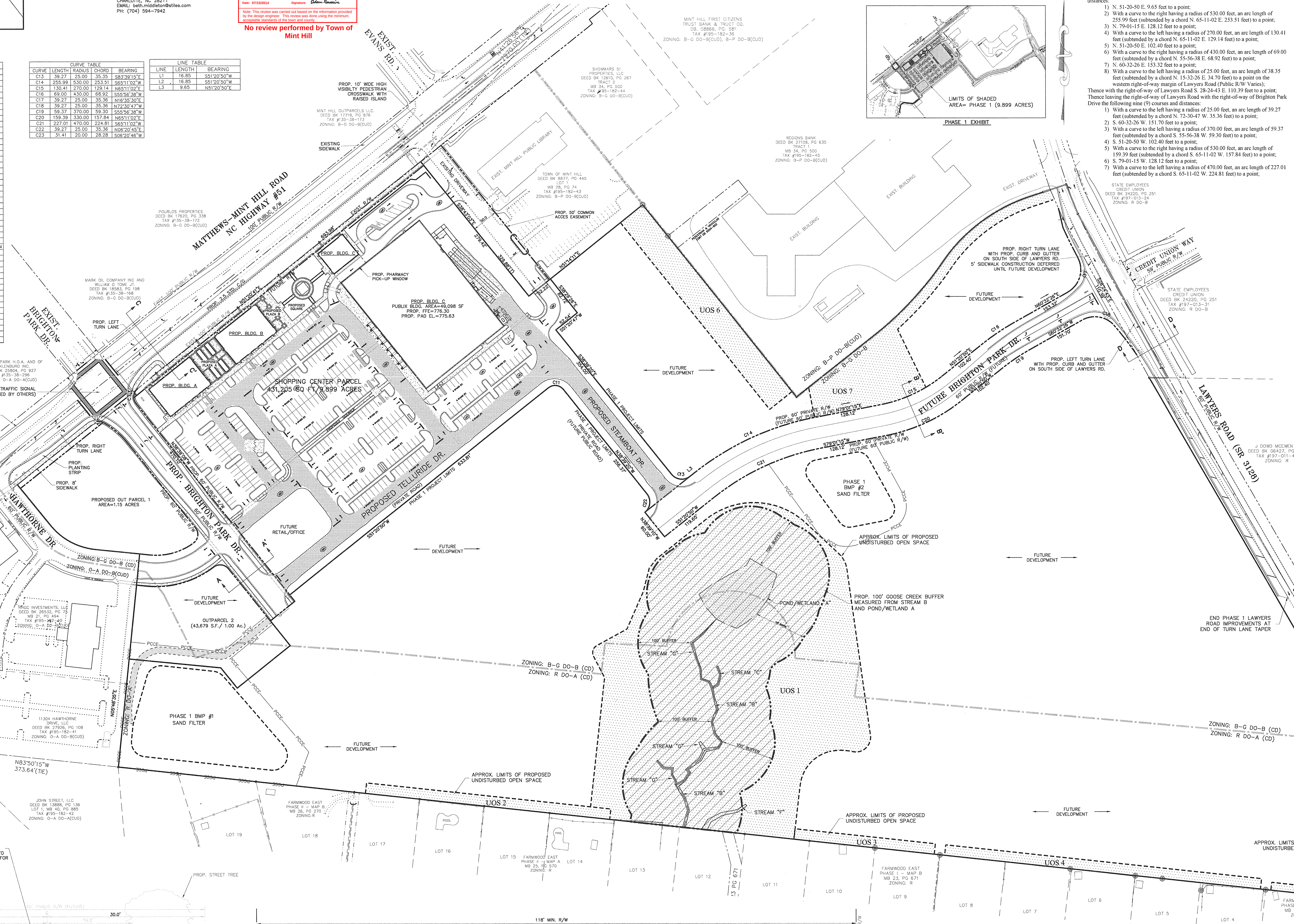
L1.0	PLANTING PLAN
L2.0	IRRIGATION PLAN
L3.0	HARDSCAPE ENLARGEMENTS
L4.0	HARDSCAPE DETAILS
L5.0	PLANTING DETAILS

CURVE TABLE

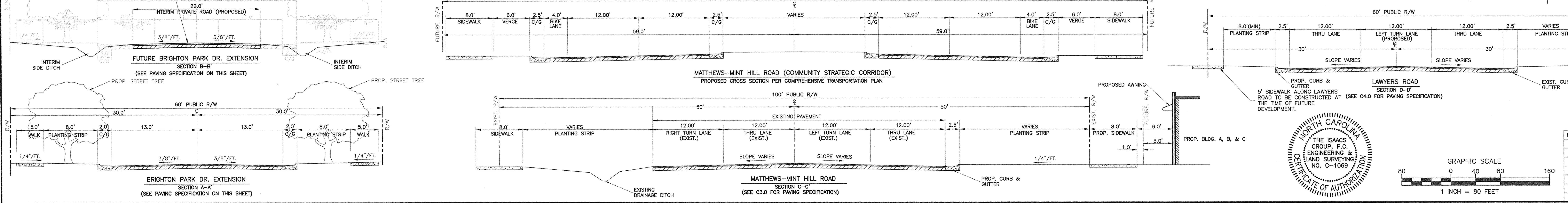
CURVE	LENGTH	RADIUS	CHORD	BEARING
C13	39.27	25.00	35.35	S83°39'15"E
C14	255.99	530.00	253.51	S65°11'02"W
C15	130.41	270.00	129.14	N65°11'02"E
C16	69.00	430.00	68.92	S55°56'38"W
C17	39.27	25.00	35.36	N16°35'30"E
C18	39.27	25.00	35.36	N72°30'47"W
C19	59.37	370.00	59.30	S55°56'38"W
C20	159.39	330.00	157.84	N65°11'02"E
C21	227.01	470.00	224.81	S65°11'02"W
C22	39.27	25.00	35.36	N06°20'45"E
C23	31.41	20.00	28.28	S06°20'46"W

LINE TABLE

LINE	LENGTH	BEARING
L1	16.85	S51°20'50"W
L2	16.85	S51°20'50"W
L3	9.65	N51°20'50"E



NOTE:
22' EP-EP INTERIM PRIVATE DRIVE W/ SIDE DITCH DRAINAGE TO BE CONSTRUCTED DURING PHASE 1. FUTURE DEVELOPMENT ALONG THIS ROADWAY WILL WARRANT ADDITIONAL PAVEMENT, CURB/GUTTER, STORM DRAINAGE, PLANTING STRIP AND SIDEWALK TO CONFORM WITH TOWN OF MINT HILL REQUIREMENTS FOR PUBLIC STREET AND PUBLIC R/W DEDICATED FOR BRIGHTON PARK DRIVE.



Shopping Center Parcel:

Beginning at a found #4 rebar on the southern right-of-way margin of Matthews-Mint Hill Road-N.C. Highway #51 (100' Public R/W), and a common corner with lands of the Town of Mint Hill (Deed Book 8877, Page 445); Thence with the shared Town of Mint Hill line the following two (2) courses and distances:

1) S. 38-43-03 E. (passing a found #4 rebar at 279.42 feet), a total distance of 329.88 feet to a found #4 rebar;
2) N. 51-14-11 E. 52.22 feet to a point;

Thence with a new line the following four (4) courses and distances:

1) S. 38-29-26 E. 82.72 feet to a point;
2) S. 51-20-47 W. 52.54 feet to a point;
3) S. 38-39-20 E. 354.00 feet to a point;
4) With a curve to the left having a radius of 25.00 feet, an arc length of 39.27 feet (subtended by a chord S. 83-39-15 E. 35.35 feet) to a point on the right-of-way of Brighton Park Drive (60' R/W);

Thence with the right-of-way of Brighton Park Drive the following eight (8) courses and distances:

1) N. 51-20-50 E. 9.65 feet to a point;
2) With a curve to the right having a radius of 530.00 feet, an arc length of 255.99 feet (subtended by a chord N. 65-11-02 E. 253.51 feet) to a point;
3) N. 79-01-15 E. 128.12 feet to a point;
4) With a curve to the left having a radius of 270.00 feet, an arc length of 130.41 feet (subtended by a chord N. 65-11-02 E. 129.14 feet) to a point;
5) N. 51-20-50 E. 102.40 feet to a point;
6) With a curve to the right having a radius of 430.00 feet, an arc length of 69.00 feet (subtended by a chord N. 55-56-38 E. 68.92 feet) to a point;
7) N. 60-32-26 E. 153.32 feet to a point;
8) With a curve to the left having a radius of 25.00 feet, an arc length of 38.35 feet (subtended by a chord N. 15-32-26 E. 34.70 feet) to a point on the western right-of-way margin of Lawyers Road (Public R/W Varies);

Thence with the right-of-way of Lawyers Road S. 28-24-43 E. 110.39 feet to a point;
Thence leaving the right-of-way of Lawyers Road with the right-of-way of Brighton Park Drive the following nine (9) courses and distances:

1) With a curve to the left having a radius of 25.00 feet, an arc length of 39.27 feet (subtended by a chord N. 72-30-47 W. 35.36 feet) to a point;
2) S. 60-32-26 W. 151.70 feet to a point;
3) With a curve to the left having a radius of 370.00 feet, an arc length of 59.37 feet (subtended by a chord S. 55-56-38 W. 59.30 feet) to a point;
4) S. 51-20-50 W. 102.40 feet to a point;
5) With a curve to the right having a radius of 530.00 feet, an arc length of 159.39 feet (subtended by a chord S. 65-11-02 W. 157.84 feet) to a point;
6) S. 79-01-15 W. 128.12 feet to a point;
7) With a curve to the left having a radius of 470.00 feet, an arc length of 227.01 feet (subtended by a chord S. 65-11-02 W. 224.81 feet) to a point;

PROPOSED PHASE 1 BUILDING TYPES:

BULDING TYPE PER MINT HILL U.D.O. SECTION 7:

PROPOSED BUILDING A (± 6,800 S,F, RETAIL/OFFICE) : SHOPFRONT BUILDING
PROPOSED BUILDING B (± 6,800 S,F, RETAIL/OFFICE) : SHOPFRONT BUILDING
PROPOSED BUILDING C (± 52,198 S,F, RETAIL/OFFICE) : WORKPLACE BUILDING
FUTURE BUILDING D (± 4,800 S,F, RETAIL/OFFICE) : SHOPFRONT BUILDING
FUTURE BUILDING D SIZE ESTIMATE OF +-4,800 S.F. IS USED FOR PARKING CALCULATIONS ONLY. APPLICANT RESERVES THE RIGHT TO INCREASE OR DECREASE THE SIZE OF THE BUILDING WITHOUT LIMITATIONS AT TIME OF FUTURE DEVELOPMENT, SUBJECT TO COMPLIANCE WITH MINT HILL UDO.

BULDING TYPE YARD REQUIREMENTS:
SHOPFRONT BUILDING:
REQUIRED FLOOR AREA: 20,000 SF (MAXIMUM)
SETBACKS: FRONT: 0 FT. - 25 FT.
SIDE: 0 FT.
REAR: 20 FT.
WORKPLACE BUILDING:
REQUIRED FLOOR AREA: GREATER THAN 20,000 SF
SETBACK: FRONT: 0 FT. - 25 FT.
SIDE: VARIES
REAR: 30 FT.
ACCESSORY BUILDING: 10 FT.

PARKING SUMMARY:

PROPOSED BUILDING FLOOR AREA:	
PROPOSED PUBLIX:	49,098 SF (RETAIL/OFFICE)
PROPOSED BUILDING A:	6,800 SF (RETAIL/OFFICE)
PROPOSED BUILDING B:	6,800 SF (RETAIL/OFFICE)
PROPOSED BUILDING C:	3,100 SF (RETAIL/OFFICE)
FUTURE BUILDING D:	4,800 SF (RETAIL/OFFICE)
TOTAL BLDG. AREA:	70,598 SF (RETAIL/OFFICE)

I. PROPOSED PUBLIX PARKING SUMMARY:
PROPOSED PUBLIX: 49,098 S.F.
MIN. PARKING REQ'D.=3.5 SPACES PER 1,000 S.F.=(49,098/1000)*3.5=172 SPACES (PER MINT HILL UDO)
MAX. PARKING ALLOWED=5 SPACES PER 1,000 S.F.=(49,098/1000)*5=246 SPACES (PER MINT HILL UDO)
PARKING PROVIDED (PUBLIX)=245 SPACES=4.99 SPACES/1,000 S.F. (SEE "P" PARKING THIS PLAN) = 235 (10' WIDE) SPACES + 10 (9' WIDE SPACES)

II. PROPOSED OFFICE/RETAIL BUILDING (EXCLUDING PUBLIX) PARKING SUMMARY:

PROPOSED BUILDING A:	6,800 SF (RETAIL/OFFICE)
PROPOSED BUILDING B:	6,800 SF (RETAIL/OFFICE)
PROPOSED BUILDING C:	3,100 SF (RETAIL/OFFICE)
FUTURE BUILDING D:	4,800 SF (RETAIL/OFFICE)
TOTAL BLDG. AREA:	21,500 SF (RETAIL/OFFICE)

MIN. PARKING REQ'D.=3.5 SPACES PER 1,000 S.F.=(21,500/1000)*3.5=75 SPACES (PER MINT HILL UDO)
MAX. PARKING ALLOWED=5 SPACES PER 1,000 S.F.=(21,500/1000)*5=108 SPACES (PER MINT HILL UDO)
PARKING PROVIDED=89 SPACES=4.14 SPACES/1,000 S.F.

III. PHASE 1 SHOPPING CENTER OVERALL PARKING SUMMARY:
PROPOSED BUILDING AREA (PUBLIX, BUILDING A, B, C, D): 70,598 S.F.
MIN. PARKING REQ'D.=3.5 SPACES PER 1,000 S.F.=(70,598/1000)*3.5=247 SPACES (PER MINT HILL UDO)
MAX. PARKING ALLOWED=5 SPACES PER 1,000 S.F.=(70,598/1000)*5=353 SPACES (PER MINT HILL UDO)
TOTAL PARKING PROVIDED=334 SPACES=4.73 SPACES/1,000 S.F.
H/C PARKING PROVIDED=13 SPACES

IV. BICYCLE PARKING SUMMARY: 10% MAX AUTO PARKING (PER MINT HIL UDO)
MAX. PARKING ALLOWED = (70,598/1000)*5 = 353 SPACES (PER MINT HILL UDO)
BICYCLE PARKING REQUIRED =353 SPACES*.10= 35 SPACES
BICYCLE PARKING PROVIDED =35 SPACES (28 PROPOSED AND 7 FUTURE)

UNDISTURBED OPEN SPACE / IMPERVIOUS AREA SUMMARY
TOTAL PROJECT AREA = 54.429 ACRES
TOTAL PHASE I IMPERVIOUS AREA (ON-SITE) = 332,211 S.F. / 7.627 ACRES
PHASE I PERCENT BUILT UPON AREA OF TOTAL SITE = 14.01%
PER MINT HILL UDO SECTION 6.4.1, A MINIMUM REQUIRED OPEN SPACE OF 15% OF THE TOTAL SITE AREA IS REQUIRED FOR PROJECTS WITH LESS THAN 20% BUA.
PHASE I UNISTURBED OPEN SPACE REQUIRED = 355,639 S.F.
PHASE I UNDISTURED OPEN SPACE PROVIDED =355,979 S.F.

UNDISTURBED OPEN SPACE SUMMARY:
UOS 1: 253,675 S.F.
UOS 2: 9,399 S.F.
UOS 3: 5,380 S.F.
UOS 4: 12,124 S.F.
UOS 5: 20,190 S.F.
UOS 6: 25,176 S.F.
UOS 7: 29,800 S.F.
TOTAL UNDISTURBED AREA PROVIDED : 355,744 S.F. / 8.17 AC. (15.00%)

ESTIMATED BUILT UPON AREA AT PROJECT COMPLETION AND FUTURE DEVELOPMENT = 55%.
*MAXIMUM BUILT UPON AREA ALLOWED WITHIN THE GOOSECREEK WATERSHED = 70% ; THEREFORE OK.

PER MINT HILL UDO SECTION 6.8.4 (PCCO ORDINANCE) GREATER OR EQUAL TO 50% BUILT UPON AREA REQUIRES MINIMUM UNDISTURBED OPEN SPACE OF 10% OF NET SITE AREA.

THE LOCATIONS OF UNDISTURBED OPEN SPACE SHOWN ON THESE PLANS ARE PRELIMINARY AND SUBJECT TO CHANGE DURING THE DETAILED DESIGN OF PHASE I AND BASED UPON FUTURE DEVELOPMENT. THE APPLICANT RESERVES THE RIGHT TO RE-CONFIGURE, REDUCE TO 10% AND RE-PLAT THE UNDISTURBED OPEN SPACE AND ALSO TO SEEK A REDUCTION IN THE REQUIRED AREA OF UNDISTURBED OPEN SPACE THRU MITIGATION AS DESCRIBED IN THE POST CONSTRUCTION CONTROLS ORDINANCE FOR THE TOWN OF MINT HILL DURING BOTH PHASE I AND FUTURE PHASES, WHILE AT ALL TIMES COMPLYING WITH THE MINT HILL ORDINANCE CRITERIA.

PAVING SPECIFICATIONS

PRIVATE STREET AND PARKING:

LIGHT DUTY PAVEMENT (LDP):
6" COMPACTED AGGREGATE BASE COURSE (CABC)
3" SURFACE COURSE, S9.5B (IN TWO 1.5" LIFTS EACH)

CONCRETE PAVEMENT:
6" COMPACTED AGGREGATE BASE COURSE (CABC)
6" 4000 PSI CONCRETE WITH 6" X 6" WIRE MESH REINFORCEMENT(10 GAUGE) PER ACI 330

CONCRETE SIDEWALK:
4" THICK, 3600 PSI CONCRETE (SEE NOTE 4)

HEAVY DUTY PAVEMENT (HDP):
8" COMPACTED AGGREGATE BASE COURSE (CABC)
2.5" INTERMEDIATE COURSE, TYPE I19.0B
1.5" SURFACE COURSE, S9.5B

PRIVATE BRIGHTON PARK:
10" COMPACTED AGGREGATE BASE COURSE (CABC)
2.5" INTERMEDIATE COURSE, TYPE I19.0B

PUBLIC ROAD:
10" COMPACTED AGGREGATE BASE COURSE (CABC)
2.5" INTERMEDIATE COURSE, TYPE I19.0B
3" ASPHALT CONCRETE SURFACE COURSE, S9.5B TO BE PLACED IN TWO 1.5" LIFTS EACH
(SEE SHEEET C3.0, C3.1 & C4.0 FOR MATTHEWS-MINT HILL RD. AND LAWYERS ROAD IMPROVEMENT PAVING SPEC'S.)

NOTES:

1. ALL FILL USED FOR RAISING SITE GRADES OR FOR REPLACEMENT OF MATERIAL THAT IS UNDERCUT SHOULD BE UNIFORMLY COMPACTED IN THIN LIFTS TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698). IN ADDITION, AT LEAST THE UPPER 18 INCHES OF SUBGRADE FILL BENEATH PAVEMENTS AND FLOOR SLABS AND 24 INCHES BELOW PAVEMENTS SUBJECT TO TRUCK TRAFFIC SHOULD BE COMPACTED TO 100 PERCENT OF THE SAME SPECIFICATION. THE ABOVE COMPACTION SPECIFICATION IS A RECOMMENDATION ONLY, SPECIFIC PAVEMENT OR FLOOR SLAB DESIGNS MAY REQUIRE A DIFFERENT COMPACTION STANDARD. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SITE WORK MEASURES IN STRICT ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS IN THE PROJECT SOILS REPORT AND/OR ON-SITE RECOMMENDATIONS PROVIDED BY A QUALIFIED GEOTECHNICAL ENGINEER DURING CONSTRUCTION.

2. PAVEMENT SPECIFICATIONS LISTED ABOVE ARE RECOMMENDATIONS ONLY AND ARE SUBJECT TO CHANGE BASED UPON PROJECT CONDITIONS OR RECOMMENDATIONS CONTAINED WITHIN THE SOILS REPORT. PRIOR TO COMMENCEMENT OF PAVING, THE OWNER OR CONTRACTOR SHOULD HIRE A GEOTECHNICAL ENGINEER TO PROVIDE A PAVEMENT DESIGN BASED UPON ANTICIPATED VEHICULAR TRAFFIC AND PROJECT SOIL CONDITIONS. THE ISAACS GROUP ASSUMES NO RESPONSIBILITY FOR THE ADEQUACY OF THE PAVEMENT SPECIFICATION PROVIDED ABOVE.

3. UNLESS SPECIFIED/DETAILED WITHIN THE CONTRACT DRAWINGS, CONTRACTOR SHALL PREPARE A CONCRETE JOINT LAYOUT PLAN IN ACCORDANCE WITH ACI 224.3R-95 OR ACI 330.1-03 FOR CONCRETE SURFACES AND PROVIDE TO ENGINEER, OWNER AND ARCHITECT FOR SHOP DRAWING APPROVAL PRIOR TO CONCRETE INSTALLATION.

4. SIDEWALKS SHALL BE CONSTRUCTED OF NOT LESS THAN 3600 P.S.I. CONCRETE AND SHALL BE FOUR (4) INCHES THICK, CONSTRUCTED ON AN ADEQUATELY GRADED BASE, EXCEPT WHERE A SIDEWALK CROSSES A DRIVEWAY IT SHALL BE SIX (6) INCHES THICK. SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST. THE SURFACE OF THE SIDEWALK SHALL BE STEEL TROWEL AND LIGHT BROOM FINISHED AND CURED WITH AN ACCEPTABLE CURING COMPOUND. TOOLED JOINTS SHALL BE PROVIDED AT INTERVALS OF NOT LESS THAN FIVE (5) FEET AND EXPANSION JOINTS AT INTERVALS OF NOT MORE THAN FORTY-FIVE (45) FEET. THE SIDEWALK SHALL HAVE A LATERAL SLOPE OF ONE-QUARTER (1/4) INCH PER FOOT.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 026462 ANTHONY B. COWAN 11/18/13

NORTH CAROLINA THE ISAACS GROUP, P.C. ENGINEERING & LAND SURVEYING NO. C-1069 CERTIFICATE OF AUTHORIZATION

GRAPHIC SCALE
80 0 40 80 160
1 INCH = 80 FEET

NO.	BY	DATE	REVISION
1	RER	09/30/13	ISSUED FOR COUNTY/TOWN REVIEW
2	RER	11/12/13	REV. PER NCDOT/TOWN/LUESA REVIEW

Publix. WHERE SHOPPING IS A PLEASURE

Project: MINT HILL COMMONS PHASE 1 MINT HILL, NORTH CAROLINA

Title: SITE EXHIBIT

File #: 12097-PB.dwg	Date: 03/14/13	Project Egr: ABC
		Design By: ABC
		Drawn By: RER
		Scale: 1"=80'

THE ISAACS GROUP
CIVIL ENGINEERING DESIGN AND LAND SURVEYING
8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C1.0

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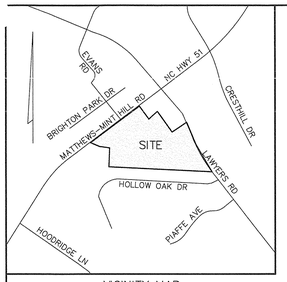

VICINITY MAP
NOT TO SCALE

FLOOD CERTIFICATION

THIS IS TO CERTIFY THAT THE PROPERTY SHOWN ON THIS PLAT IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, COMMUNITY NUMBER 371055-0200-J, DATED MARCH 2, 2009.

NCGS MON. "M 068"
N 527519.936
E 1509373.750
ELEV=737.78'

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD	BEARING
C1				
C2	633.99	189.40	188.70	N42°52'24"E
C3	325.33	212.50	208.74	N53°01'38"E

LINE TABLE		
LINE	LENGTH	BEARING
L1	26.52	N71°44'22"E

NOTES:

- MONUMENTATION FOUND OR SET AT ALL PROPERTY CORNERS UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN ON THIS MAP ARE HORIZONTAL GROUND UNLESS OTHERWISE NOTED.
- AREAS CALCULATED BY COORDINATE GEOMETRY.
- SUBJECT PARCEL TAX ID: #195-182-31
- CURRENT ZONING PER TOWN OF MINT HILL: "B-G DO-B" & "R DO-A"
- ADDRESS PER MECKLENBURG GIS: #11628 LAWYERS ROAD
- SUBJECT PARCEL REFERENCE: DEED BK 27109, PG 640
- DATE FIELDWORK COMPLETED: FEBRUARY 25, 2013.
- CONTOUR INTERVAL – 1 FOOT.
- CONTOURS AND MOST PLANIMETRIC FEATURES PROVIDED BY AERIAL INFORMATION FLOWN AND MAPPED BY IMC.

LEGEND:

R/W	RIGHT OF WAY
	MONUMENTATION FOUND/SET
E/P	EDGE OF PAVEMENT
	POINT COMPUTED
SS	SANITARY SEWER LINE
	SEWER MANHOLE
	SEWER LINE CLEANOUT
	FIRE HYDRANT
W	WATER LINE
	WATER VALVE
WM	WATER METER
	ELECTRIC MANHOLE
	LIGHT POLE
	UTILITY POLE
OU	OVERHEAD UTILITY LINE
	TELEPHONE MANHOLE
UT	TELEPHONE LINE
	UTILITY PEDESTAL
	GAS VALVE
G	GAS LINE
	GUY WIRE
	MONITORING WELL
	STORM DRAINAGE MANHOLE
WF	WETLAND FLAG
(T)	TOTAL
	TREELINE
T/U	TERMINUS UNKNOWN
NTS	NOT TO SCALE
	BENCHMARK

GRAPHIC SCALE
80 0 40 80 160
1 INCH = 80 FEET

P/1/13
NORTH CAROLINA PROFESSIONAL SEAL L-3509 LAND SURVEYOR STEPHEN L. DYER

NORTH CAROLINA THE ISAACS GROUP, P.C. ENGINEERING & LAND SURVEYING NO. C-1089 CERTIFICATE OF AUTHORIZATION

NO.	BY	DATE	REVISION
1	ABC	10/01/13	REFORMATTED SHEET SIZE

BOUNDARY/TOPOGRAPHIC SURVEY

McEWEN PROPERTY

TOWN OF MINT HILL
MECKLENBURG COUNTY, NORTH CAROLINA
PREPARED FOR: STILES

File #: 12097-BT | Date: 02-25-2013 | Project P.L.S.: SSD | Surveyed By: JH | Drawn By: MWJ | Scale: 1"=80'

THE ISAACS GROUP
CIVIL ENGINEERING DESIGN AND LAND SURVEYING

8720 RED OAK BLVD. SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C1.1A

P:\Stiles\Public Hwy 51 12097\Surveying\Drawings\Current\Boundary-Topo\12097-BT.dwg, 10/1/2013 7:58:27 AM, bowman, 1:80

NOTES FROM APPROVED MINT HILL ZONING PLAN:

PROPOSED SIGNAGE CRITERIA – MINT HILL COMMONS

I. BUILDING SIGNAGE

A. BUILDING SIGNAGE SHALL BE ALLOWED ON ANY FAÇADE WHICH FACES I) A PUBLIC RIGHT-OF-WAY, II) A PARKING AREA, OR III) A PUBLIC OPEN AREA. B. BUSINESSES SHALL BE ALLOWED A MAXIMUM OF 64 SF, WITH NOT MORE THAN 32 SF BEING ALLOWED ON ANY SINGLE FAÇADE. C. NOTWITHSTANDING THE FOREGOING, THE GROCERY STORE SHALL BE ALLOWED UP TO 165.5 SF OF COPY AREA ON ITS BUILDING SIGNAGE ON THE FRONT ELEVATION (PARKING LOT SIDE) AND 165.5 OF COPY AREA ON ITS BUILDING SIGNAGE ON THE LEFT ELEVATION (HWY 51).

II. PROJECT IDENTIFICATION SIGNAGE

A. THE MAIN SHOPPING CENTER PARCEL SHALL BE ALLOWED FREESTANDING SIGNAGE SUBJECT TO THE FOLLOWING REQUIREMENTS:

I. MAXIMUM OF 100 SF PER SIGN FACE (PER CURRENT MINT HILL UDO)
II. MAXIMUM HEIGHT OF 20 FEET ABOVE AVERAGE GRADE AS MEASURED TO THE TOP OF THE SIGN (PER CURRENT MINT HILL UDO).
III. SIGN FACE AREA SHALL BE ALLOWED TO CONTAIN THE SHOPPING CENTER NAME AND BUSINESSES LOCATED WITHIN THE SHOPPING CENTER AS WELL AS THE MINT HILL BRANCH LIBRARY.
IV. FREESTANDING SIGNS SHALL BE INTERNALLY ILLUMINATED AS TO NOT CREATE GLARE IN PUBLIC RIGHTS-OF-WAY AND OTHER PUBLIC AREAS.
V. FREESTANDING SIGNS SHALL BE GROUND MOUNTED, INCORPORATE BUILDING MATERIALS USED ON THE BUILDING WITHIN THE SHOPPING CENTER, AND INCLUDE AN ARCHITECTURAL BASE OR PEDESTAL. NO POLE OR PYLON STYLE SIGNS SHALL BE PERMITTED.

B. SEPARATELY PLATTED OUTPARCELS WITHIN THE SHOPPING CENTER SHALL BE ALLOWED INDIVIDUAL GROUND SIGNS SUBJECT TO THE FOLLOWING REQUIREMENTS:

I. MAXIMUM OF 60 SF PER SIGN FACE.
II. MAXIMUM HEIGHT OF 6 FEET ABOVE AVERAGE GRADE AS MEASURED TO THE TOP OF THE SIGN.
III. ONLY 1 GROUND SIGN PER OUTPARCEL SHALL BE ALLOWED.
IV. GROUND SIGNS SHALL BE INTERNALLY ILLUMINATED AS TO NOT CREATE GLARE IN PUBLIC RIGHTS-OF-WAY AND OTHER PUBLIC AREAS.
V. ALL GROUND SIGNS SHALL INCORPORATE BUILDING MATERIALS USED ON THE BUILDING WITHIN THE SHOPPING CENTER, AND INCLUDE AN ARCHITECTURAL BASE OR PEDESTAL. NO POLE OR PYLON STYLE SIGNS SHALL BE PERMITTED.

C. DIRECTIONAL SIGNAGE

I. THE MAIN SHOPPING CENTER SHALL BE ALLOWED UP TO 5 DIRECTIONAL SIGNS TO PROMOTE PEDESTRIAN AND VEHICULAR WAY FINDING THROUGHOUT THE CENTER.
II. DIRECTIONAL SIGNS SHALL CONTAIN TEXT DIRECTING VEHICLES, PEDESTRIANS AND CYCLISTS TO CERTAIN BUSINESSES, DRIVE THRU(S), PARKING, AND AMENITIES WITHIN THE CENTER AS WELL AS THE MINT HILL BRANCH LIBRARY.
III. MAXIMUM 4 SF PER SIGN FACE. IV. MAXIMUM OF 6 FEET IN HEIGHT AS MEASURED FROM THE BASE OF THE SIGN TO THE TOP OF THE SIGN.

MINT HILL COMMONS UDO CODE EXCEPTIONS:

1. BRIGHTON PARK DRIVE AND HAWTHORNE LANE PAVEMENT WIDTHS
ROADWAY WIDTH OF 30' (MIN.) BACK OF CURB TO BACK OF CURB REQUIRED AS NEEDED TO ACCOMMODATE DELIVERY TRUCK TURNING MOVEMENTS INTO HAWTHORNE LANE, BRIGHTON PARK DRIVE AND PROPOSED PHASE I COMMERCIAL DEVELOPMENT AND AVOID DAMAGE TO LANDSCAPED TREE ISLANDS. 13' LANE WIDTHS PROPOSED EXCEED THE MINT HILL UDO LANE WIDTH RECOMMENDATION OF 12' BY 1 (ONE) FOOT.

2. BRIGHTON PARK DRIVE AND PROPOSED PHASE I COMMERCIAL PRIVATE STREET INTERSECTION CURB RADIUS:
PROPOSED CURB RADIUS OF 30' (MIN.) REQUIRED AT THE DRIVEWAY CONNECTION OF THE PRIVATE STREET AND BRIGHTON PARK DRIVE AS NEEDED TO ACCOMMODATE DELIVERY TRUCK TURNING MOVEMENTS AND AVOID DAMAGE TO LANDSCAPED TREE ISLANDS. A 20' RADIUS IS RECOMMENDED WITHIN THE MINT HILL UDO.

3. BRIGHTON PARK DRIVE / MATTHEWS-MINT HILL ROAD AND BRIGHTON PARK DRIVE / LAWYERS ROAD PROPOSED INTERSECTION CURB RADIUS:
30' (MIN.) REQUIRED AT THE ROADWAY CONNECTION OF BRIGHTON PARK DRIVE TO MATTHEWS-MINT HILL ROAD AND LAWYERS ROAD AS NEEDED TO COMPLY WITH NCDOT MINIMUM REQUIREMENTS FOR ROADWAY/DRIVEWAY CONNECTIONS ON TO NCDOT MAINTAINED ROADWAYS. A 20' RADIUS IS RECOMMENDED WITHIN THE MINT HILL UDO.

4. BUILDING C ROADWAY FRONTAGE: PROPOSED BUILDING C PROVIDES PARTIAL FRONTAGE ALONG MATTHEWS-MINT HILL ROAD AND THE APPLICANT SEEKS AN EXCEPTION FOR THE LONG AXIS OF THE PROPOSED BUILDING NOT FRONTING ON A PUBLIC STREET AS REQUIRED BY THE MINT HILL UDO SECTION 1.2.

5. PROPOSED 5' SIDEWALKS ALONG HAWTHORNE LANE AND BRIGHTON PARK DRIVE
PROPOSED 5' WIDE SIDEWALKS ARE PROPOSED IN PHASE I AND FUTURE DEVELOPMENT ALONG BRIGHTON PARK DRIVE AND HAWTHORNE LANE AS SHOWN ON PLANS AS NEEDED TO REDUCE THE OVERALL SITE BUILT UPON AREA WITHOUT COMPROMISING PEDESTRIAN ACCESSIBILITY. 8' WIDE WALKS REQUIRED BY THE MINT HILL UDO ARE BEING PROVIDED ALONG THE MATTHEWS-MINT HILL ROAD FRONTAGE SERVING THE PROPOSED COMMERCIAL USES.

SUPPLEMENTAL ZONING NOTES

1. PROPOSED 5' SIDEWALK ALONG LAWYERS ROAD WILL BE CONSTRUCTED AT TIME OF FUTURE RESIDENTIAL DEVELOPMENT OR 18 MONTHS FOLLOWING THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE PROPOSED GROCERY STORE WHICHEVER COMES FIRST.
2. APPLICANT AGREES TO INSTALL THE NECESSARY ADDITIONAL LANDSCAPING REQUIRED TO MEET A TYPE A BUFFER, PER THE MINT HILL UDO DOWNTOWN CODE, ADJACENT TO THE PROPOSED GROCERY ANCHOR'S LOADING DOCKS IF THE EXISTING LANDSCAPING ON THE MINT HILL LIBRARY TRACT DIES OR IS DAMAGED TO THE POINT WHERE SCREENING OF THE LOADING AREA IS NO LONGER ADEQUATE.
3. APPLICANT AGREES TO PROVIDE LONG TERM MAINTENANCE OF PHASE I BMP #1 SAND FILTER THAT SERVES 100% OF THE PROPOSED COMMERCIAL AREAS AND ALSO ACCOMMODATES A PORTION OF FUTURE RESIDENTIAL. PHASE I SAND FILTER BMP #2 WILL SERVE 100% FUTURE RESIDENTIAL AND APPLICANT PROPOSES THE TEMPORARY MAINTENANCE OF BMP #2 UNTIL SUCH TIME THAT THE FUTURE RESIDENTIAL IS CONSTRUCTED AND THE MAINTENANCE RESPONSIBILITY BEING TURNED OVER TO THE TOWN OF MINT HILL – PER THE PCCO ORDINANCE.
4. FUTURE RESIDENTIAL CONSTRUCTION ALONG THE PHASE I COMMERCIAL PROJECT LIMITS WILL PROVIDE ENHANCED LANDSCAPING AS NEEDED TO PROVIDE A SUBTLE BUFFER BETWEEN RESIDENTIAL AND COMMERCIAL USES IN AN APPROPRIATE MANNER SUBJECT TO RESIDENTIAL PRODUCT TYPE AND FINAL ORIENTATION.
5. APPLICANT AGREES TO CONSTRUCT THE PEDESTRIAN LIGHTS ON THE INWARD (PROPERTY) SIDE OF THE PAVER BANDS ALONG THE FRONTAGE BETWEEN HAWTHORNE DRIVE AND PROPOSED BRIGHTON PARK DRIVE, HOWEVER PROPOSES THE INSTALLATION OF THE LIGHTS ON THE HWY. 51 SIDE OF THE SIDEWALK ALONG THE COMMERCIAL FRONTAGE (AS SHOWN ON ZONING PLANS) DUE TO THE PROXIMITY OF THE POLES TO THE PROPOSED BUILDINGS AND PUBLIC WALKWAYS. (NOTE THAT THERE IS A PUBLIC PEDESTRIAN CORRIDOR BETWEEN BUILDINGS A AND B THAT WOULD BE OBSTRUCTED IF THE LIGHT LOCATION IS FLIPPED). ADDITIONALLY, PLEASE NOTE THAT OUR PROPOSAL ALLOWS A MORE LINEAR ALIGNMENT OF THE PEDESTRIAN LIGHTS ALONG MATTHEWS MINT HILL ROAD DUE TO THE INCREASED LANDSCAPE STRIP BETWEEN THE PROPOSED 8' SIDEWALKS FRONTING THE COMMERCIAL SECTION RELATIVE TO THE OUTPARCEL #1 FRONTAGE.
6. APPLICANT SHALL INSTALL PEDESTRIAN LIGHTS ALONG THE NON-RESIDENTIAL PORTION OF PROPOSED INTERIOR PUBLIC STREETS IN ACCORDANCE WITH THE TOWN OF MINT HILL DOWNTOWN OVERLAY CODE SECTION 7.0.
7. EXTERIOR BUILDING LIGHTING SHALL BE DECORATIVE (FULL CUT OFF TYPE), WITH THE EXCEPTION OF THE REAR LOADING DOCKS SERVING THE GROCERY STORE.
8. THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE GROCERY STORE IS DEPENDENT ON PHASE 1, AS DEPICTED AND DESCRIBED IN THE APPROVED ZONING PLAN AND ANY APPLICABLE ZONING CONDITION, TO BE INSPECTED AND APPROVED BY THE ZONING INSPECTOR – SPECIFICALLY BUILDINGS A, B AND C SHALL BE UNDER CONSTRUCTION PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE GROCERY STORE.
9. DEVELOPMENT OF THE SITE WILL BE GOVERNED BY THE ATTACHED SITE PLAN AND DEVELOPMENT STANDARDS (COLLECTIVELY REFERRED TO AS THE "ZONING PLAN") AS WELL AS THE APPLICABLE PROVISIONS OF THE TOWN OF MINT HILL UNIFIED DEVELOPMENT ORDINANCE (THE UDO)
10. ALL USES PERMITTED BY RIGHT IN THE DO-A AND DO-B ARE PERMITTED BY RIGHT FOR PHASE 1 AND FUTURE PHASES WITHOUT THE NEED FOR ANY AMENDMENT TO THIS CONDITIONAL ZONING PLAN; PROVIDED ALL APPLICABLE PROVISIONS OF THE MINT HILL UDO ARE SATISFIED. FOR CLARITY, CERTAIN USES THAT ARE NOT PERMITTED BY RIGHT IN THE DO-A AND DO-B DISTRICTS SUCH AS DRIVE-THRUS, CONVENIENCE STORES, GAS STATIONS AND CAR WASHES WOULD REQUIRE A NEW CONDITIONAL DISTRICT REZONING IN ACCORDANCE WITH THE TOWN OF MINT HILL UDO.
11. THE APPLICANT SHALL DEVELOP THE FUTURE RESIDENTIAL PORTION OF THE PROJECT IN ACCORDANCE WITH THE ARCHITECTURAL AND MATERIAL STANDARDS FOR RESIDENTIAL DEVELOPMENT AS DEFINED IN THE TOWN OF MINT HILL UDO DOWNTOWN OVERLAY DISTRICT AT THE TIME OF CONDITIONAL ZONING APPROVAL FOR PHASE 1 WITHOUT HAVING TO SEEK CONDITIONAL DISTRICT REZONING.
12. APPLICANT AGREES TO A "FUTURE NEIGHBORHOOD GREEN" IN PROXIMITY TO UNDISTURBED OPEN SPACE 1 (UOS1) AND RESERVES THE RIGHT TO ALLOW FUTURE RESIDENTIAL COMMON OPEN SPACE REQUIREMENTS TO BE MET AT THE RATE SPECIFIED IN THE UDO WITHOUT RESTRICTING THE USE OF THE "GREENWAY" OPEN SPACE TYPE IN EITHER THE DO-A AND DO-B DISTRICTS AS DEFINED IN THE UDO. IT IS UNDERSTOOD THAT THE ENTIRE AREA ALLOCATED TO UOS1, INCLUDING WALKWAYS, BENCHES, WOODS AND UNDISTURBED AREAS IN UOS1 TO COUNT TOWARD THE REQUIRED COMMON OPEN SPACE AREA REQUIREMENTS FOR FUTURE RESIDENTIAL. IT IS ALSO UNDERSTOOD THAT ANY ADDITIONAL REQUIRED OPEN SPACE AREA PER THE MINT HILL UDO IN EXCESS OF THE AREA ALLOCATED TO OS1 WILL BE PROVIDED WITHIN THE DEVELOPMENT AS REQUIRED. IN ACCORDANCE WITH SECTION 4 (4.4) OF THE POST CONSTRUCTION ORDINANCE, GREENWAY TRAILS ARE PERMITTED WITHIN AREAS DESIGNATED AS UNDISTURBED OPEN SPACE.
13. IN ACCORDANCE WITH SECTION 4 (4.4) OF THE POST CONSTRUCTION ORDINANCE, GREENWAY TRAILS ARE PERMITTED WITHIN AREAS DESIGNATED AS UNDISTURBED OPEN SPACE.
14. ALL METER BANKS, BACKFLOW PREVENTERS, REAR-SIDE PARAPET WALLS AND ROOF TOP EQUIPMENT WILL BE SCREENED FROM VIEW FROM PUBLIC STREETS.
15. THE APPLICANT AGREES TO MAINTAIN A SOLID HEDGEROW TO SERVE AS A LOW WALL NO LESS THAN FOUR (4) FOOT IN HEIGHT AT MATURITY (30" AT TIME OF PLANTING) TO SCREEN THE PORTION OF PARKING THAT ABUTS BRIGHTON PARK DRIVE.
16. THE APPLICANT AGREES TO MAINTAIN A SOLID HEDGEROW NO LESS THAN FOUR (4) FEET IN HEIGHT AT MATURITY (30" AT TIME OF PLANTING) TO HELP ENCLOSE AND SCREEN THE PUBLIC PARK FROM THE PARKING AREA BETWEEN BUILDINGS B AND C.
17. THE APPLICANT AGREES TO CONSTRUCT A SCREENING WALL WITH SUPPLEMENTAL LANDSCAPING FRONTING MATTHEWS MINT HILL ROAD ALONG THE SIDE OF BUILDING C AS SHOWN ON THE ZONING PLAN TO A HEIGHT OF APPROXIMATELY 3' TO 4' AS NEEDED TO SCREEN THE PROPOSED PARKING.
18. THE ADMINISTRATOR, COUNTY ENGINEER AND NCDOT SHALL APPROVE THE TYPE OF CROSSWALKS USED FOR THE PUBLIC RIGHT-OF-WAY AND FUTURE RIGHT-OF-WAY.

ROADWAY IMPROVEMENTS

THE APPLICANT AGREES TO CONSTRUCT THE VARIOUS ROADWAY AND PEDESTRIAN CONNECTIVITY IMPROVEMENTS ALONG MATTHEWS MINT HILL ROAD AND LAWYERS ROAD AS DESCRIBED IN THE FINAL TIA PREPARED BY DESIGN RESOURCES GROUP AND APPROVED BY THE NCDOT AND TOWN OF MINT HILL AS REQUIRED FOR PHASE I DEVELOPMENT.

SITE LIGHTING

SITE LIGHTING WILL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF MINT HILL UDO SECTION 7.4 (DOWNTOWN OVERLAY CODE) SUB-SECTION 7.0 (LIGHTING STANDARDS)

LANDSCAPING

LANDSCAPING SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF MINT HILL UDO SECTION 7.4 (DOWNTOWN OVERLAY CODE) SUB-SECTION 8.0 (LANDSCAPING) AND AS INDICATED ON SHEETS L1.0 AND L2.0 OF THE LANSCAPING PLANS.

POST CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP'S)

IN ACCORDANCE WITH THE TOWN OF MINT HILL POST CONSTRUCTION ORDINANCE, ALL PROPOSED STORM WATER BMP'S WILL BE LOCATED IN A RECORDED EASEMENT.

APPLICANT AGREES TO SCREEN ALL PROPOSED SAND FILTER BMP'S WITH A TYPE B (SEMI-OPAQUE SCREEN) ALONG ALL SIDES VISIBLE FROM PUBLIC STREETS.

PROPOSED 50' COMMON ACCESS EASEMENT BETWEEN MINT HILL COMMONS AND THE TOWN OF MINT HILL LIBRARY

APPLICANT AGREES TO WORK WITH THE TOWN OF MINT HILL AND MECKLENBURG COUNTY TO EXECUTE A LONG TERM MAINTENANCE AGREEMENT FOR THE AREA WITHIN THE PROPOSED 50' COMMON ACCESS EASEMENT PROPOSED ALONG THE EXISTING TOWN OF MINT HILL LIBRARY PARCEL AS SHOWN.

GOOSE CREEK BUFFER:

PROPOSED 100' BUFFER MEASURED FROM TOP OF BANK ON PERENNIAL STREAM B AND ORDINARY HIGH WATER LEVEL ON POND/WETLAND A AS FIELD LOCATED BY HART AND HICKMAN ENVIRONMENTAL AND FIELD SURVEYED BY THE ISAACS GROUP.

FLOOD CERTIFICATION

THIS IS TO CERTIFY THAT THE PROPERTY SHOWN ON THIS PLAT IS **NOT** LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, COMMUNITY NUMBER **371055-0200-J**, DATED **MARCH 2, 2009.**

LAND DEVELOPMENT NOTES:

1. COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR.
2. ALL IMPROVEMENTS AT MATTHEWS-MINT HILL ROAD AND LAWYERS ROAD ARE TO BE COORDINATED WITH TOWN OF MINT HILL AND NCDOT PRIOR TO CONSTRUCTION.
3. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
4. IN ROLLING AND HILLY TERRAINS, SWEEPING OF THE STONE BASE AND/OR APPLICATION OF A TACK COAT MAY BE REQUIRED NEAR INTERSECTIONS. THESE REQUIREMENTS WILL BE ESTABLISHED BY THE INSPECTOR AND BASED ON FIELD CONDITIONS.
5. 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.
6. IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB.
7. SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED NECESSARY BY THE INSPECTOR.
8. THE PURPOSE OF THE STORM DRAINAGE EASEMENT (SDE) IS TO PROVIDE STORM WATER CONVEYANCE AND ANY STRUCTURES AND/OR OBSTRUCTION TO STORM WATER FLOW IS PROHIBITED.
9. THE DEVELOPER SHALL MAINTAIN EACH STREAM, CREEK, OR BACKWASH CHANNEL IN AN UNOBSTRUCTED STATE AND SHALL REMOVE FROM THE CHANNEL AND BANKS OF THE STREAM ALL DEBRIS, LOGS, TIMBER, JUNK AND OTHER ACCUMULATIONS.
10. PE SEALED SHOP DRAWINGS FOR RETAINING WALLS MUST BE SUBMITTED TO TOWN/COUNTY ENGINEER PRIOR TO CONSTRUCTION. THE ENGINEER OF RECORD FOR THE RETAINING WALL(S) MUST CERTIFY THAT THE WALL(S) IS(ARE) CONSTRUCTED TO SPECIFICATIONS PRIOR TO CO.
11. "AS-BUILT" DRAWINGS AND PLANS OF THE STORM DRAINAGE SYSTEM, INCLUDING DESIGNED DITCHES, MUST BE SUBMITTED PRIOR TO SUBDIVISION FINAL INSPECTION TO THE TOWN/COUNTY ENGINEERING DEPARTMENT IN ACCORDANCE WITH THE TOWN/COUNTY SUBDIVISION ORDINANCE.
12. PRIOR TO CO, SURVEYOR SEALED AS-BUILT DRAWINGS OF BMPS SHALL BE SUBMITTED TO COUNTY FOR APPROVAL.
13. NON-STANDARD ITEMS (IE: 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.
14. RECORD MAP SHALL BE RE-RECORDED TO SHOW RELOCATED / ADDED PDE AND SDE'S AS A RESULT OF THIS DEVELOPMENT.
15. THE UTILITIES AND THE LOCATIONS THEREOF, SHOWN ON THE DRAWING, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, INVERTS, DEPTHS, AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER,TELEPHONE, GAS, ETC.) WITHIN THE CONSTRUCTION AREA WITH THE OWNER AND/OR THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING ANY EXCAVATION. THE OMISSION OF OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
16. THE DESIGN ENGINEER SHALL BE NOTIFIED WHEN FIELD LOCATED INFORMATION CONFLICTS WITH THE PROPOSED DESIGN. ANY NECESSITATING CHANGES, OR ADDITIONAL WORK SHALL BE APPROVED BY THE OWNER/ENGINEER PRIOR TO CONSTRUCTION.
17. ALL CONSTRUCTION AND CONSTRUCTION MATERIALS WITHIN CITY RIGHT-OF-WAY AND NCDOT RIGHT-OF-WAY SHALL CONFORM TO THEIR RESPECTIVE STANDARD SPECIFICATIONS.
18. CONTRACTOR TO PROVIDE ALL EROSION CONTROL MEASURES AS REQUIRED BY LOCAL AUTHORITIES.
19. TOP SOIL TO BE STRIPPED AND STOCKPILED IN AREA DESIGNATED BY ENGINEER. ANY UNSUITABLE MATERIALS ON SITE ARE TO BE QUALIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO REMOVING. CONTRACTOR MUST NOTIFY OWNER OR OWNER REPRESENTATIVE IN CASE UNSUITABLE MATERIAL IS UNCOVERED.
20. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER ANY SUBSURFACE DRAINAGE SYSTEMS TO BE INSTALLED.
21. THE OWNER SHALL ARRANGE FOR INDEPENDENT GEOTECHNICAL ENGINEER TO PROVIDE INSPECTION SERVICES TO MONITOR COMPACTION OF FILL PLACED ON SITE.
22. PROPOSED BMP ACCESS EASEMENTS, NATURAL AREAS SHOWN ON THESE PLANS, AND BMP OPERATION AND MAINTENANCE AGREEMENTS WILL BE RECORDED PRIOR TO BUILDING C.O..

GRADING NOTES:

1. THE UTILITIES AND THE LOCATIONS THEREOF, SHOWN ON THE DRAWING, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, INVERTS, DEPTHS, AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER,TELEPHONE, GAS, ETC.) WITHIN THE CONSTRUCTION AREA WITH THE OWNER AND/OR THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING ANY EXCAVATION. THE OMISSION OF OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. THE DESIGN ENGINEER SHALL BE NOTIFIED WHEN FIELD LOCATED INFORMATION CONFLICTS WITH THE PROPOSED DESIGN. ANY NECESSITATING CHANGES, OR ADDITIONAL WORK SHALL BE APPROVED BY THE OWNER/ENGINEER PRIOR TO CONSTRUCTION.
3. APPROVAL OF THIS PLAN IS NOT AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, CONTRACTOR MUST HAVE WRITTEN PERMISSION FROM THE OWNER(S) BEFORE PROCEEDING.
4. ALL CONSTRUCTION AND CONSTRUCTION MATERIALS WITHIN COUNTY RIGHT-OF-WAY AND NCDOT RIGHT-OF-WAY SHALL CONFORM TO THEIR RESPECTIVE STANDARD SPECIFICATIONS.
5. CONTRACTOR TO PROVIDE ALL EROSION CONTROL MEASURES AS REQUIRED BY LOCAL AUTHORITIES.
6. TOP SOIL TO BE STRIPPED AND STOCKPILED IN AREA DESIGNATED BY ENGINEER. ANY UNSUITABLE MATERIALS ON SITE ARE TO BE QUALIFIED BY A GEO-TECHNICAL ENGINEER PRIOR TO REMOVING. CONTRACTOR MUST NOTIFY OWNER OR OWNER REPRESENTATIVE IN CASE UNSUITABLE MATERIAL IS UNCOVERED.
7. CONTRACTOR TO COORDINATE WITH GEO-TECHNICAL ENGINEER ANY SUBSURFACE DRAINAGE SYSTEMS TO BE INSTALLED.
8. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF NCDENR EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
9. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF NCDENR EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
10. THE OWNER SHALL ARRANGE FOR INDEPENDENT GEO-TECHNICAL ENGINEER TO PROVIDE INSPECTION SERVICES TO MONITOR COMPACTION OF FILL PLACED ON SITE.
11. THE GEO-TECHNICAL ENGINEER IS RESPONSIBLE FOR ALL EMBANKMENT ACTIVITY. THE FINAL REPORT OF ALL TEST SHALL BE SENT TO UNION COUNTY FOR PART OF AS-BUILT AND BEFORE CERTIFICATE OF OCCUPANCY.
12. THE BMP'S ARE TO BE BUILT AFTER 99% OF CONTRIBUTING DRAINAGE AREAS ARE BUILT UPON AND STABILIZED.
13. BORROW MATERIAL SHALL BE CLASSIFIED AS ML, MH, SC, SM, CL OR CH SOILS ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) OR ANY MIXTURE OF THESE SOILS,
14. BORROW MATERIALS SHALL HAVE A LIQUID LIMIT (LL) BETWEEN 40 AND 60 AND A PLASTICITY INDEX (PI) BETWEEN 15 AND 30 (ASTM D4318).
15. MATERIALS SHALL BE FREE OF TOPSOIL, ORGANIC MATERIAL, ROOTS, STUMPS, BRUSH, ROCKS LARGER THAN 3 INCHES, SUBSOIL, DEBRIS, VEGETATION, AND OTHER FOREIGN MATTER.
16. ALL MATERIAL CLODS WILL BE BROKEN DOWN WITH TILLERS AND/OR DISCS TO PROVIDE A HOMOGENEOUS SOIL THAT IS FREE OF CLAY CLODS GREATER THAN 3 INCHES IN DIAMETER.

EMBANKMENT CONSTRUCTION (PER SECT. 4.0.6.2 OF BMP MANUAL)

17. STEP 1: SUBGRADE PREPARATION

–COMPACT SUB-GRADE TO DENSITY REQUIREMENTS FOR SUBSEQUENT FILL MATERIALS.

–CUT OUT SOFT AREAS OF SUB-GRADE NOT CAPABLE OF COMPACTION IN PLACE.

–SCARIFY SUB-GRADE SURFACE TO DEPTH OF 6 INCHES.

–PROOF ROLL SUB-GRADE TO IDENTIFY SOFT SPOTS; FILL AND COMPACT TO DENSITY EQUAL TO OR GREATER THAN REQUIREMENTS FOR SUBSEQUENT FILL MATERIAL.

18. STEP 2: SEEPAGE KEY PLACEMENT

–SEEPAGE KEY TRENCH WILL BE LOCATED BETWEEN EMBANKMENT ABUTMENTS.

–SEEPAGE KEY SHALL EXTEND TO A MINIMUM DEPTH OF 4 FEET OR AS REQUIRED THROUGH GEO-TECHNICAL SEEPAGE ANALYSIS. A MINIMUM BOTTOM TRENCH WIDTH SHALL BE 10 FEET AND THE TRENCH SIDEWALLS SHALL BE SLOPED OR BENCHED TO PROMOTE STABILITY AND BONDING BETWEEN THE SIDEWALL SOILS AND SEEPAGE KEY FILL.

19. STEP 3: EMBANKMENT FILL PLACEMENT

–EMBANKMENT FILL SHALL BE CONSTRUCTED AT 3(HORIZONTAL):1(VERTICAL) OR AS SHOWN ON THE DRAWINGS. DEMONSTRATION OF APPROPRIATE SAFETY FACTORS AGAINST FAILURE THROUGH GEO-TECHNICAL ANALYSIS SHALL BE REQUIRED FOR SLOPES STEEPER THAN 3(HORIZONTAL):1(VERTICAL).

–FILL SOILS SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 8 INCHES IN THICKNESS AND BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE SOILS STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY, OR AS SPECIFIED ON THE DRAWINGS.

–COMPACTED MOISTURE CONTENT SHALL BE BETWEEN 3 PERCENT BELOW AND 3 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT FOR ALL FILL PLACED, OR AS OTHERWISE APPROVED BY ENGINEER.

–FILL SOILS SHOULD BE PLACED IN CONTINUOUS, HORIZONTAL LAYERS FROM ABUTMENT TO ABUTMENT. EXISTING SLOPES GREATER THAN 4(HORIZONTAL):1(VERTICAL) SHALL BE BENCHED TO PROMOTE BONDING OF NEWLY PLACED FILL WITH EXISTING SOILS. BENCHING SHALL BE PERFORMED AT MAXIMUM OF 2 FEET VERTICAL INTERVALS AND SHALL EXTEND A MINIMUM OF 4 FEET HORIZONTALLY OR AS SPECIFIED ON DRAWINGS.

–WITHIN THE UPPER 12 INCHES OF EMBANKMENT, FILL SOILS SHOULD BE COMPACTED TO 100% OF ITS STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY.

–FILL AGAINST SUPPORTED STRUCTURES. DO NOT FILL AGAINST UNSUPPORTED STRUCTURES.

–PLACE FILL SIMULTANEOUSLY ON EACH SIDE OF UNSUPPORTED STRUCTURES UNTIL SUPPORTS ARE IN PLACE.

–PLACE A MINIMUM OF SIX INCHES OF TOPSOIL ACROSS DAM EMBANKMENT TO PROMOTE VEGETATIVE GROWTH.

20. STEP 4: OUTLET PIPE FILL PLACEMENT

–FILL OF THE CULVERTS SHALL BE PLACED AND COMPACTED IN 6INCH THICK LOOSE LIFTS AROUND THE DROP INLETS AND UP TO 2 FEET ABOVE THE CULVERTS.

–COMPACTION SHALL BE PERFORMED BY HAND TAMPERS OR SMALL HAND OPERATED COMPACTORS.

–COMPACTION SHALL BE AT A MINIMUM 95 PERCENT OF THE STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY. COMPACTED MOISTURE CONTENT SHALL BE BETWEEN 3 PERCENT BELOW AND 3 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT FOR ALL FILL PLACED, OR AS OTHERWISE APPROVED BY ENGINEER.

–ADDITIONAL COMPACTION OF LIFTS 2 FEET OR GREATER ABOVE CULVERTS SHALL CONFORM TO THE EMBANKMENT FILL PLACEMENT SECTION OF THIS SPECIFICATION.

21. STEP 5: FIELD QUALITY CONTROL

–LABORATORY TESTING
- PERFORM LABORATORY MATERIAL TESTS IN ACCORDANCE WITH ASTM D422, ASTM D698, ASTM D2216, AND ASTM D4318.
- TEST AT A FREQUENCY OF EVERY 500 CUBIC YARDS OF EMBANKMENT FILL MATERIAL PLACED, WHEN MATERIALS USING FOR EMBANKMENT FILL CHANGE, AND/OR AS DIRECTED BY THE ENGINEER.
- SAMPLE SIZE SHALL BE 50-LB.

–IN PLACE COMPACTION AND NATURAL MOISTURE CONTENT TESTS
- PERFORM IN PLACE COMPACTION TESTS IN ACCORDANCE WITH ASTM D1556, ASTM D2922, OR ASTM D2937 AND NATURAL MOISTURE CONTENT TEST IN ACCORDANCE WITH ASTM D2216.
- FREQUENCY OF COMPACTION/NATURAL MOISTURE CONTENT TESTS:
- EMBANKMENT FILL: EACH LIFT AT A MINIMUM FREQUENCY OF 1 PER 2,500 SQ. FT.
- PIPE INSTALLATION: EACH LIFT AT A MINIMUM FREQUENCY OF 1 PER 30 LF OF PIPE.

–WHEN TESTS INDICATE WORK DOES NOT MEET SPECIFIED REQUIREMENTS, REMOVE WORK, REPLACE AND RETEST.

22. EMBANKMENT SPECIFICATIONS MAY BE MODIFIED BASED ON SITE-SPECIFIC GEO-TECHNICAL INVESTIGATION AND ENGINEERING DESIGN.

NOTES:

1. THIS MAP IS NOT A CERTIFIED SURVEY. BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY RB PHARR & THE ISAACS GROUP.
2. THE UTILITIES SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THIS PLAN; THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED EXCAVATION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
3. PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY EXISTING UTILITY, IF BEING UTILIZED.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATION & PROTECTION OF EXISTING ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES. ANY AND ALL MAINS OR INDIVIDUAL SERVICES PRESENTLY IN SERVICE WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL EXPENSE TO THE UTILITY OWNER. ANY AND ALL MAINS OR INDIVIDUAL SERVICES PRESENTLY NOT IN SERVICE AND WHICH ARE TO BE REPLACED DURING THE COURSE OF CONSTRUCTION MAY BE REMOVED AND LEGALLY DISPOSED OF IF DAMAGED DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
6. HANDICAP SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH A.D.A STANDARDS AT H/C PARKING SPACES SHOWN.
7. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION. THESE PERMITS AND APPROVALS MAY INCLUDE BUT ARE NOT LIMITED TO GRADING, DEMOLITION, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION, SPECIAL USE, SEWER AND WATER.

COMPACTION NOTES:

1. IN TOWN AND NCDOT RIGHT OF WAYS COMPACT ALL MATERIAL TO A DEPTH OF 12 INCHES BELOW THE FINISHED SURFACE OF THE SUBGRADE TO A DENSITY EQUAL TO AT LEAST 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T99 AS MODIFIED BY THE DEPARTMENT. COMPACT THE SUBGRADE AT A MOISTURE CONTENT WHICH IS APPROXIMATELY THAT REQUIRED TO PRODUCE THE MAXIMUM DENSITY INDICATED BY THE ABOVE TEST METHOD. THE CONTRACTOR SHALL DRY OR ADD MOISTURE TO THE SUBGRADE WHEN REQUIRED TO PROVIDE A UNIFORMLY COMPACTED AND ACCEPTABLE SUBGRADE. ALL OTHER FILL AREAS/BACKFILL SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH AASHTO T99 AS MODIFIED BY THE NCDOT.
2. STRUCTURAL FILL IN THE SITE UNDER BUILDING, PARKING AND DRIVEWAYS SHOULD BE PLACED IN THIN (8 TO 12 INCHES) LIFTS AND COMPACTED TO A MIN. OF 98% OF THE SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) OR 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) AT NEAR OPTIMUM MOISTURE CONTENT. THE UPPER 1 FOOT OF STRUCTURAL FILL WITHIN THE BUILDING PAD, DRIVEWAY AND PARKING AREAS SHOULD BE COMPACTED TO A MINIMUM OF 100% OF THE SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) AT NEAR OPTIMUM MOISTURE CONTENT. SOME MANIPULATION OF THE MOISTURE CONTENT (SUCH AS WETTING, DRYING) MAY BE REQUIRED DURING THE FILLING OPERATION TO OBTAIN THE REQUIRED DEGREE OF COMPACTION. THE MANIPULATION OF THE MOISTURE CONTENT IS HIGHLY DEPENDENT ON WEATHER CONDITIONS AND SITE DRAINAGE CONDITIONS. THEREFORE, THE GRADING CONTRACTOR SHOULD BE PREPARED TO BOTH DRY AND WET THE FILL MATERIALS TO OBTAIN THE SPECIFIED COMPACTION DURING GRADING. SUFFICIENT DENSITY TESTS SHALL BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL FIRM TO CONFIRM THE REQUIRED COMPACTION OF THE FILL MATERIAL.
3. GRADING CONTRACTOR SHALL REFER TO ECS REPORT DATED JULY 25, 2013 FOR ANY GRADING AND UNDERCUTTING RECOMMENDATIONS.

SITE PREPARATION:

PRIOR TO CONSTRUCTION, THE PROPOSED CONSTRUCTION AREA SHOULD BE STRIPPED OF TOPSOIL, ORGANIC MATERIAL, EXISTING UNDOCUMENTED FILL AND OTHER SOFT OR UNSUITABLE MATERIAL. UPON COMPLETION OF STRIPPING OPERATIONS, THE EXPOSED SUBGRADE IN AREAS TO RECEIVE FILL SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR PNEUMATIC-TIRED VEHICLE HAVING A LOADED WEIGHT OF APPROXIMATELY 25 TONS. AFTER EXCAVATION, THE EXPOSED SUBGRADES IN CUT AREAS SHOULD BE SIMILARLY PROOFROLLED.

PROOFROLLING OPERATIONS SHOULD BE PERFORMED UNDER THE OBSERVATION OF A GEOTECHNICAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE. THE PROOFROLLING SHOULD CONSIST OF TWO (2) COMPLETE PASSES OF THE EXPOSED AREAS, WITH EACH PASS BEING IN A DIRECTION PERPENDICULAR TO THE PRECEDING ONE. ANY AREAS WHICH DEFLECT, RUT OR PUMP DURING THE PROOFROLLING, AND FAIL TO BE REMEDIED WITH SUCCESSIVE PASSES, SHOULD BE UNDERCUT TO SUITABLE SOILS AND BACKFILLED WITH COMPACTED FILL.

THE ABILITY TO DRY WET SOILS, AND THEREFORE THE ABILITY TO USE THEM FOR FILL, WILL LIKELY BE ENHANCED IF EARTHWORK IS PERFORMED DURING SUMMER OR EARLY FALL. IF EARTHWORK IS PERFORMED DURING WINTER OR AFTER APPRECIABLE RAINFALL THEN SUBGRADES MAY BE UNSTABLE DUE TO WET SOIL CONDITIONS, WHICH COULD INCREASE THE AMOUNT OF UNDERCUTTING REQUIRED. DRYING OF WET SOILS, IF ENCOUNTERED, MAY BE ACCOMPLISHED BY SPREADING AND DISCING OR BY OTHER MECHANICAL OR CHEMICAL MEANS.

IF EXCAVATIONS IN PORTIONS OF THE SITE ENCOUNTER VERY DENSE SOILS, PARTIALLY WEATHERED ROCK, OR BORINGS AND/OR ADDITIONAL TESTING SHOULD UNDER OWNER'S APPROVAL BE PERFORMED TO FURTHER IDENTIFY DEPTH TO PARTIALLY WEATHERED ROCK AND ROCK.

EXISTING ISOLATED BOULDERS IN THE SOIL MATRIX OR ERRATIC ROCK CONDITIONS CAN SOMETIMES REMAIN UNDETECTED DURING FIELD EXPLORATION. IT IS RECOMMENDED THAT EQUIPMENT CAPABLE OF HEAVY EXCAVATION BE USED DURING GRADING ACTIVITIES. STORM WATER PIPING PLANS SHOULD TAKE INTO ACCOUNT THE EXISTENCE OF DENSE MATERIALS AND ROCK PRIOR TO CONSTRUCTION.

PARTIALLY WEATHERED ROCK CAN SOMETIMES BE EXCAVATED WITHOUT BLASTING. IN MASS EXCAVATION FOR GENERAL SITE WORK, DENSE SOILS AND PARTIALLY WEATHERED ROCK CAN USUALLY BE REMOVED BY RIPPING WITH A SINGLE-TOOTH RIPPER ATTACHED TO A LARGE CRAWLER TRACTOR OR BY BREAKING IT OUT WITH A LARGE FRONT-END LOADER. SUBSURFACE MATERIALS WITH A STANDARD PENETRATION RESISTANCE VALUE OF 50/6, 50/5, AND 50/4 INCHES OF PENETRATION CAN LIKELY BE LOOSENED AND RIPPED AS NOTED ABOVE.

IN CONFINED EXCAVATIONS SUCH AS FOUNDATIONS, UTILITY TRENCHES, ELEVATOR PITS, ETC., REMOVAL OF PARTIALLY WEATHERED ROCK MAY REQUIRE USE OF HEAVY DUTY BACKHOES (SUCH AS A JOHN DEER 120C OR EQUIVALENT EXCAVATOR EQUIPPED WITH ROCK TEETH), PNEUMATIC SPADES, OR LIGHT BLASTING. THE EASE OF EXCAVATION DEPENDS ON THE QUALITY OF GRADING EQUIPMENT, SKILL OF THE EQUIPMENT OPERATORS AND GEOLOGIC STRUCTURE OF THE MATERIAL ITSELF, SUCH AS THE DIRECTION OF BEDDING, PLANES OF WEAKNESS AND SPACING BETWEEN DISCONTINUITIES. THEREFORE, A CONSERVATIVE APPROACH CONCERNING BUDGET ESTIMATES FOR UTILITY AND STORM WATER POND EXCAVATIONS IS RECOMMENDED. SUBSURFACE MATERIAL THAT EXHIBITED A STANDARD PENETRATION RESISTANCE VALUE OF 50/3, 50/2, AND 50/1 INCHES OF PENETRATION OR LESS WILL LIKELY REQUIRE BLASTING FOR REMOVAL.

RIP ROCK: ANY MATERIAL THAT CANNOT BE REMOVED BY SCRAPERS, LOADERS, PANS, DOZERS, OR GRADERS; AND REQUIRES THE USE OF A SINGLE-TOOTH RIPPER MOUNTED ON A CRAWLER TRACTOR HAVING A MINIMUM DRAW BAR PULL RATED AT NOT LESS THAN 56,000 POUNDS.

BLAST ROCK: ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A SINGLE-TOOTH RIPPER MOUNTED ON A CRAWLER TRACTOR HAVING A MINIMUM DRAW BAR PULL RATED AT NOT LESS THAN 56,000 POUNDS (CATERPILLAR 0-8 OR EQUIVALENT) OR BY A CATERPILLAR 977 FRONT-END LOADER OR EQUIVALENT; AND OCCUPYING AN ORIGINAL VOLUME OF AT LEAST ONE (1) CUBIC YARD.

BLAST ROCK: ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A BACKHOE HAVING A BUCKET CURLING FORCE RATED AT NOT LESS THAN 25,700 POUNDS (CATERPILLAR MODEL 225 OR EQUIVALENT), AND OCCUPYING AN ORIGINAL VOLUME OF AT LEAST ONE-HALF (1/2) CUBIC YARD.

BLASTING SHOULD ONLY BE CONDUCTED WHERE RIPPING CANNOT EXCAVATE MATERIALS. WE RECOMMEND THAT EXCAVATABLE SOILS BE REMOVED FIRST WITH CONVENTIONAL GRADING EQUIPMENT (SCRAPERS AND LOADERS). WE DO NOT RECOMMEND LEAVING SOIL OVERBURDEN IN PLACE DURING BLASTING BECAUSE DETERMINATION OF BLAST ROCK QUANTITIES BECOMES VERY DIFFICULT AND COSTS ARE GENERALLY GREATER. IN ADDITION, RESIDUAL SOIL OVERBURDEN WILL INCREASE THE CONFINING PRESSURE OF THE ROCK AND REDUCE THE EFFECTIVENESS OF BLAST CHARGES. LOOSE FILL OR BLASTING MATS CAN BE PLACED OVER THE BLAST AREA TO CONTROL FLY-ROCK. REMOVAL OF ROCK BY BLASTING IS VERY EXPENSIVE. HENCE, CONTROL OF QUANTITIES IS IMPORTANT. WE RECOMMEND A GEOTECHNICAL ENGINEER BE RETAINED TO PROVIDE ASSISTANCE FOR DETERMINING OR QUALIFYING THE BLAST ROCK QUANTITIES.

DRAINAGE NOTES:

1. REVERSE CURB AND GUTTER TO BE USED IN AREAS NOT CHANNELING STORM WATER RUNOFF.
2. THE PROPOSED CONTOURS WITHIN PAVED AREAS ARE GRAPHICAL REPRESENTATIONS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR GRADING UNIFORMLY BETWEEN SPOT ELEVATIONS.
3. CONTRACTOR TO GRADE ALL AREAS WITHIN PROJECT TO DRAIN STORM WATER. CARE SHALL BE TAKEN TO ENSURE THAT ALL AREAS WITHIN PARKING LOTS AND LANDSCAPED ISLANDS SHALL NOT HOLD WATER UPON PROJECT COMPLETION.
4. MIN. SLOPE ON ALL ASPHALT TO BE 1.5%.
5. MIN. SLOPE ON CURB AND GUTTER CARRYING STORM WATER TO BE 0.5%.
6. MIN. SLOPE ON REVERSE CURB AND GUTTER TO BE 0.0%.
7. ALL STORM PIPE TO BE CLASS III RCP UNLESS OTHERWISE SPECIFIED AND STAMPED BY NCDOT. USE OF HDPE PIPE WILL REQUIRE APPROVAL BY NCDOT PRIOR TO INSTALLATION.
8. ALL DRAINAGE STRUCTURES TO BE PER NCDOT STDS.

BUFFER DISTURBANCE NOTES:

1. A MINIMUM ZONE OF 10 FEET WIDE IMMEDIATELY ADJACENT TO THE WATER BODY WILL BE MANAGED SUCH THAT ONLY VEGETATION THAT POSES A HAZARD OR HAS THE POTENTIAL TO GROW TALL ENOUGH TO INTERFERE WITH THE LINE IS REMOVED
2. WOODY VEGETATION WILL BE CLEARED BY HAND. NO LAND GRUBBING OR GRADING IS ALLOWED.
3. VEGETATIVE ROOT SYSTEMS WILL BE LEFT INTACT TO MAINTAIN THE INTEGRITY OF THE SOIL. STUMPS WILL REMAIN WHERE TREES ARE CUT.
4. NO FERTILIZER WILL BE USED OTHER THAN A ONE-TIME APPLICATION TO RE-ESTABLISH VEGETATION.
5. CONSTRUCTION ACTIVITIES WILL MINIMIZE THE REMOVAL OF WOODY VEGETATION, THE EXTENT OF THE DISTURBED AREA, AND THE TIME IN WHICH AREAS REMAIN IN A DISTURBED STATE.
6. ACTIVE MEASURES WILL BE TAKEN AFTER CONSTRUCTION AND DURING ROUTINE MAINTENANCE TO ENSURE DIFFUSE FLOW OF STORM WATER THROUGH THE STREAM BUFFER.

NEW STABILIZATION TIMEFRAMES
(Effective Aug. 3, 2011)

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, 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.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.*

* HWQ ZONE: WATERSHED CLASSIFICATIONS WS-I, WSII, ORW, or SA

EROSION CONTROL CONSTRUCTION SEQUENCE:

1. OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM THE MECKLENBURG COUNTY LUESA.
2. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH THE FOLLOWING DEPARTMENTS: (THE TERRITORY FOR INSPECTORS IS LISTED BELOW): LUESA EROSION CONTROL INSPECTOR, LAND DEVELOPMENT INSPECTOR AND ZONING INSPECTOR. FAILURE TO SCHEDULE SUCH CONFERENCE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS SUBJECT TO FINE.
3. INSTALL SILT FENCE, INLET PROTECTION, SEDIMENT TRAPS, DIVERSION DITCH ES, TREE PROTECTION, AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
4. CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, INSPECTOR ISSUES THE GRADING PERMIT AND CLEARING AND GRUBBING MAY BEGIN.
5. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
6. FOR PHASED EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING WITH EACH PHASE OF EROSION CONTROL MEASURES.
7. THE LAND DEVELOPMENT INSPECTOR SHOULD BE CALLED TO CONDUCT INSPECTIONS ON STORM DRAINAGE, SIDEWALKS, DRIVEWAY ON STORM DRAINAGE, SIDEWALKS, DRIVE WAY IMPROVEMENTS, AND ALL ASPECTS OF ROAD CONSTRUCTION
8. STABILIZE SITE AS AREAS ARE BROUGHT TO FINISHED GRADE.
9. COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.
10. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N. C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U. S. DEPT. OF AGRICULTURE , MECKLENBURG COUNTY EROSION CONTROL ORDINANCE, AND THE CHARLOTTE MECKLENBURG LAND DEVELOPMENT STANDARDS.
11. CALL THE WATER QUALITY INSPECTOR TO SET UP A BMP PRE-CONSTRUCTION MEETING PRIOR TO STARTING ANY WORK ON BMPS. THIS MEETING SHOULD TAKE PLACE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION ON ANY BMP. THE INSPECTOR WILL VERIFY THAT THE CONTRIBUTING DRAINAGE AREA IS COMPLETELY STABILIZED AND STORM DRAINAGE PIPES ARE CLEAN BEFORE INSTALLATION OF ANY BMP.

EROSION CONTROL & WATER QUALITY INSPECTOR :
JASON KLINGLER – MINT HILL
(980) 721 – 3567

LAND DEVELOPMENT INSPECTOR:
MITCH COMBS – MATTHEWS, MINT HILL, PINEVILLE
(980) 722 – 8468

ZONING INSPECTOR:
DAVID BARLEY – MATTHEWS, MINT HILL, PINEVILLE
(704) 507 – 3380

EROSION CONTROL NOTES:

1. ALL "STD." NUMBERS REFER TO THE MECKLENBURG COUNTY LAND DEVELOPMENT STANDARDS MANUAL (MCLDS).
2. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
3. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
4. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
5. ALL PERIMETER AREAS AND SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITHIN 7 DAYS. GROUND STABILIZATION ON ALL OTHER AREAS MUST BE COMPLETED WITHIN 14 DAYS. REFER TO THE EROSION CONTROL ORDINANCE FOR ADDITIONAL REQUIREMENTS.
6. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE COUNTY.
7. A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING EXCEEDING ONE ACRE THAT WAS NOT PREVIOUSLY APPROVED.
8. TEMPORARY DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT OF WAY MUST BE PRESENTED AT PRE-CONSTRUCTION MEETING.
9. ALL EMBANKMENTS MUST BE CONSTRUCTED PER SECTION 4.0.6 EMBANKMENT REQUIREMENTS IN THE BMP DESIGN MANUAL.
10. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. SLOPES GREATER THAN 10 FEET REQUIRE ADEQUATE TERRACING (MCLDSM # 30.16). SOILS ENGINEER TO VERIFY STABILITY OF SLOPES GREATER THAN 2:1.
11. SOIL COMPACTION TESTS ARE REQUIRED ON ANY BERM >= 5' IN HEIGHT FROM THE NATURAL GRADE. SOIL COMPACTION MUST BE AT 95% PROCTOR AND CERTIFIED BY A LICENSED SOIL ENGINEER.
12. TOTAL DISTURBED AREA = 24.35 ACRES. (4)

ENHANCED EROSION CONTROL NOTES:

1. SURFACE WATER DRAW DOWN DEVICES (RISERS OR SKIMMERS) SHALL BE INSTALLED IN ALL SEDIMENT BASINS. FOREBAYS SHALL BE USED IN CONJUNCTION WITH ALL SEDIMENT BASINS. ROCK FOREBAY EMBANKMENTS MAY BE USED IN LIEU OF POROUS BAFFLES.
2. POLYACRYLAMIDES (PAM) SHALL BE USED TO REDUCE TURBIDITY AND SUSPENDED SOLIDS WHENEVER A SEDIMENT TRAP, BASIN, PIT, HOLE, OR BUILDING FOUNDATION IS BEING PUMPED OUT TO REMOVE SEDIMENT LADEN WATER. THIS ACTIVITY MUST BE INSPECTED AND APPROVED BY THE MECKLENBURG COUNTY EROSION CONTROL INSPECTOR.
3. DOUBLE SILT FENCE SHALL BE USED ALONG WETLANDS, STREAMS, LAKES OR OTHER SURFACE WATER BODIES AS WELL AS ADJACENT TO ALL S.W.I.M. OR OTHER WATER QUALITY BUFFERS. HIGH HAZARD SILT FENCE WITH WIRE BACKING AND WASHED STONE WILL BE INSTALLED AS DETERMINED NECESSARY BY THE COUNTY ENGINEER OR FIELD INSPECTOR.
4. THE AMOUNT OF UNCOVERED AREA AT ANY ONE TIME SHALL BE LIMITED TO NO MORE THAN 20 ACRES, UNLESS APPROVED BY THE COUNTY ENGINEERING.
5. A 10-FOOT UNDISTURBED BUFFER SHALL BE PROVIDED AROUND THE OUTSIDE EDGE OF DRAINAGE FEATURES SUCH AS INTERMITTENT AND PERENNIAL STREAMS, PONDS, AND WETLANDS. INCIDENTAL DRAINAGE IMPROVEMENTS OR REPAIRS WILL BE PERMITTED WITHIN THE BUFFER AS APPROVED BY COUNTY STAFF.
6. INSTALLATION OF TEMPORARY GROUND COVER OR SEEDING MUST BE P ERFORMED WITHIN FIVE (5) WORKING DAYS OR SLOPE DRAINS INSTALLED AFTER FILL SLOPES ARE BROUGHT UP TO HEIGHT.
7. PERMANENT TERRACES SHALL BE INSTALLED ON 2:1 OR STEEPER SLOPES OVER 10 FEET IN HEIGHT TO REDUCE RUNOFF VELOCITY COMING DOWN THE SLOPES.

FLOCCULANT NOTES:

1. POLYACRYLAMIDES (PAM) SHALL BE USED TO REDUCE TURBIDITY AND SUSPENDED SOLIDS.
2. PAM SHALL BE USED IN ACCORDANCE WITH NCDENR SEDIMENT AND CONTROL PLANNING DESIGN MANUAL CHAPTER 6.86
3. PAM IMPLEMENTATION SHALL BE APPLIED ON COIR LOGS WITHIN 50 YARDS OF ANY SKIMMER BASIN AT A RATE OF ½ CUP PER COIR LOG.
4. PAM SHALL BE APPLIED TO RIP RAP FOREBAY BERMS IN SEDIMENT BASINS AT NCDENR RECOMMENDED RATE.
5. PAM USE SHALL BE INSPECTED AND APPROVED BY THE MECKLENBURG COUNTY EROSION CONTROL INPSECTOR.
6. SEE NCDENR APPROVED LIST OF PAMS ON SHEET C1.1. PAM TO BE USED SHALL BE DETERMINED IN THE FIELD BY INSPECTOR/CONTRACTOR.
7. USE COIR LOGS INSTEAD OF CHECK DAMS AT THE LOCATIONS WHERE PAM IS TO BE USED.
8. THE CONTRACTOR IS TO REVIEW IN THE FIELD WITH THE EROSION CONTROL INSPECTOR ON WHICH CHECK DAM LOCATIONS ARE TO BE COIR LOGS.
9. THE EROSION CONTROL INSPECTOR WILL DEMONSTRATE IN THE FIELD ON THE USE OF FLOCCULANTS/PAM.

SEDIMENT BASIN NOTE:

INSPECT TEMPORARY SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROLS. 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 RISER AND POOL AREA.

DEMOLITION NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ITEMS SHOWN ON DEMOLITION PLAN. ANY ITEMS NOT INDICATED ON PLANS AND ARE IN QUESTION SHALL BE VERIFIED BY THE OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. CONTRACTOR TO REMOVE ALL ABANDONED UTILITIES ON SITE.
3. INSTALL APPROPRIATE EROSION CONTROL MEASURES PRIOR TO DEMOLITION.
4. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF DEBRIS AND REFUSE IN AN APPROVED LOCATION.
5. OWNER SHALL CONTRACT WITH A STATE CERTIFIED WELL ABANDONMENT CONTRACTOR TO ABANDON THE FOUR (4) EXISTING WELL ON SITE.

NORTH CAROLINA – THE ISAACS GROUP, P.C. ENGINEERING & LAND SURVEYING NO. C-1069 – CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA – PROFESSIONAL – SEAL 026462 – ENGINEER – ANTHONY B. COWAN
06/06/14

UTILITY NOTES:

1. EXACT LOCATIONS OF WATER SERVICE CONNECTIONS ARE REQUIRED FOR AS BUILT RECORDS.
2. MINIMUM COVER OF 36" FOR WATER AND SEWER LINES.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITY DAMAGED DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
5. PROP. EMPTY CONDUITS AND LATERALS TO BE CAPPED AND MARKED AT EACH END WITH 1/2" REBAR DRIVEN 3' INTO THE GROUND AND FLAGGED.(TYP.)
6. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS COUNTY-REQUIRED BACK FLOW PREVENTER.
7. EACH COUNTY-REQUIRED BACK FLOW PREVENTION ASSEMBLY IS REQUIRED TO BE TESTED BY A COUNTY-APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.
8. NO PLASTIC PIPING IS ALLOWED WITHIN 5' EITHER END OF THE BACK FLOW PREVENTION ASSEMBLY.
9. THE SIZE AND LOCATION OF ALL EXISTING UTILITY LINES SHALL BE VERIFIED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL COORDINATE ALL PROPOSED SEWER AND WATER CONNECTIONS TO EXISTING MAINS WITH CHARLOTTE-MECKLENBURG UTILITIES.
11. MATERIAL AND WORKMANSHIP REQUIREMENTS TO BE IN ACCORDANCE WITH CHARLOTTE-MECKLNEBUYRG UTILITIES POLICIES, PROCEDURES, STANDARDS AND SPECIFICATIONS AND EXTENSION POLICY.
12. ALL 6" SANITARY SEWER LATERALS SHALL HAVE MIN. 1.0% SLOPE.
13. D.I.P. REQUIRED FOR WATER AND SEWER LINES IF FOLLOWING CONDITIONS ARE NOT MET. IF THESE SEPARATIONS CANNOT BE OBTAINED, SANITARY SEWER LINES AND WATER LINES MUST BE DUCTILE IRON PIPE (D.I.P.). AT CROSSINGS D.I.P. MUST BE USED 10' EITHER SIDE OF THE CROSSING.
–12" CLEARANCE FROM GAS MAINS, TELEPHONE DUCT BANKS AND UNDERGROUND CABLES.
–24" CLEARANCE FROM STORM SEWERS
–18" VERTICAL CLEARANCE FOR WATER LINE INSTALLED ABOVE SEWER LINE.
–WATER LINE CROSSING UNDER SEWER LINE.
–10' HORIZONTAL SEPARATION FOR WATER PARALLEL TO SEWER LINE.
14. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ISAACS GROUP A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES TO ALLOW A REPRESENTATIVE FROM THE ISAACS GROUP TO PERIODICALLY BE ON-SITE DURING INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN AS-BUILT SURVEY OF THE WATER AND SEWER LINES TO THE ISAACS GROUP UPON COMPLETION OF INSTALLATION.
15. CONTRACTOR IS RESPONSIBLE FOR CONTACTING CHARLOTTE-MECKLENBURG UTILITIES A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION.
16. DRIVEWAYS ARE NOT TO BE LOCATED OVER WATER METERS. METERS WILL NOT BE SET IF WATER METER BOXES, SEWER CLEAN-OUTS OR THEIR APPURTENANCES ARE DAMAGED OR IMPROPERLY POSITIONED.
17. CONTRACTOR SHALL NOT PLANT ANY TREES OVER WATER AND SEWER MAINS.
18. REFER TO CHARLOTTE-MECKLENURG UTILITIES SPECIFICATIONS AND TO CMU PUBLIC WATER AND SANITARY SEWER EXTENSION POLICY AND GUIDELINES.
19. RIMS OF PROPOSED SS MANHOLES OUTSIDE OF PAVEMENT SHALL BE SET 1.5' ABOVE FINISHED GRADE.
20. ONE (1) ROLL OF MASTIC & A 6 INCH EXTERNAL JOINT/SEAM WRAP INSTALLED ON EACH MANHOLE SECTION.
21. FIRE HYDRANT PLACEMENT (FIRE HYDRANTS SHALL BE PLACED A MINIMUM DISTANCE OF 6 FEET BACK OF CURB AND GUTTER SECTIONS AND BACK OF DITCH IN ROADWAY.)
22. FIRE HYDRANT SHALL HAVE A CLEAR SPACE OF 3 FEET FROM ANY PERMANENT STRUCTURES.
23. CONTRACTOR TO COORDINATE INSTALLATION OF ANY UNDERGROUND ELECTRIC LINE TO BE COORDINATED WITH DUKE ENERGY.

DE-WATERING NOTES:

THE CONTRACTOR SHALL AT ALL TIMES PROVIDE AND MAINTAIN AMPLE MEANS AND EQUIPMENT WITH WHICH TO REMOVE AND PROPERLY DISPOSE OF ANY AND ALL WATER ENTERING THE EXCAVATION OR OTHER PARTS OF THE WORK AND KEEP ALL EXCAVATIONS DRY UNTIL SUCH TIME AS PIPE LAYING AND GRADING IS COMPLETED AND STRUCTURES TO BE BUILT THEREIN ARE COMPLETED. NO WATER SHALL BE ALLOWED TO RISE AROUND THE PIPE IN UNBACKFILLED TRENCHES NOR SHALL IT BE ALLOWED TO RISE OVER MASONRY UNTIL THE CONCRETE OR MORTAR HAS SET (MINIMUM 24 HOURS). ALL WATER PUMPED OR DRAINED FROM THE WORK SHALL BE DISPOSED OF IN SUCH A MANNER AS TO PREVENT SILTATION AND EROSION TO ADJACENT PROPERTY OR OTHER CONSTRUCTION.

UTILITY CONSTRUCTION SEQUENCE:

1. CONTRACTOR TO MARK OR FLAG ALL EXISTING UTILITIES.
2. CONTRACTOR TO SCHEDULE PRE-CONSTRUCTION MEETING WITH CMU INSPECTOR PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO ENSURE THAT WATER SERVICE TO EXISTING BUSINESSES REMAINS UNINTERRUPTED DURING BUSINESS HOURS AT ALL TIMES DURING CONSTRUCTION.
4. CONTRACTOR TO INSTALL NEW WATER AND SEWER LINES AS PER THESE PLANS.
5. CONTRACTOR TO COORDINATE REQUIRED TESTING W/ CMU AND ENGINEER.

LIST OF UTILITY CONTACTS:

CHARLOTTE MECKLENBURG UTILITIES: 704-432-5804

DUKE ENERGY: 1-800-653-5307

PIEDMONT NATURAL GAS: 1-800-752-7504

TIME WARNER CABLE: 1-877-566-4892

AT&T: 704-424-1193

North Carolina DWQ Approved PAMS/Flocculants List

Updated 9/20/12

(Listed in chrological order of approval by DWQ)

Company	Product	Maximum Recommended Concentration*
Applied Polymer System	APS 705	27.7 ppm
	APS 712	59.3 ppm
	APS 730	5.6 ppm
	APS 740	5.2 ppm
	APS 703d	**
	APS 703d#3	**
	APS 706b	**
Leaner Meaner Greener, Inc	L.M.G. Dust Magnet 281 Solution	0.05%
	L.M.G. Dust Magnet 163 powder	0.5 mg/L
Paschal Associates Sales	PFR P251	25 ppm
Storm Klear	3% Liqui-Floc	9.4 mg/L
	DBP-2100	28.125 mg/L
Terra Novo	EarthGuard	.000625 mL/L
Southeastern Laboratories	SEL FLOC 6026	7.5 ppm
HaloSource, Inc.	GelFloc	2.56 mg/L
HaloSource, Inc.	LBP-2101	500 mg/L
Ashland Hercules Water Tech	Ashland Charge Pac 55	10 mg/L
Cape Fear Consulting	PAX-CFC39A	5 ppm
Cape Fear Consulting	CFC-4330	4.5 ppm
Green Techniques	Soil Defender	Land surface application only at 0.008%
Aquamark, Inc	AQ100	Land surface application only at 39.7 ppm
Aquamark, Inc	AQ109	Land surface application only at 0.180g/l
Carolina Hydrologics	HYDROLOC PAM	Land surface application only at 3.0 mg/l
NTU	GeoScrub 10, 13, 20, 23, 34	10 mg/L
NTU	GeoScrub Bubbles	1 mg/L
Innovative Turf Solutions	HydroPam	200 mg/L
Innovative Turf Solutions	Erosion Guard Powder, Erosion Guard Logs/Erosion Guard Flats	200 mg/L
Innovative Turf Solutions	FLOC 1106	650 mg/L
Ashland Hercules Water Tech	Ashland Zalta MC 9500	10 mg/L
Hanes Geo Components	TerraGuard Granular PAM	3.25mg/L
Nalco	Nalco 8187	100 ppm

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Town of Mint Hill NORTH CAROLINA
Plan Sheet Is Part Of The Overall Approval As Of The Following Date 07/15/2014

NO.	BY	DATE	REVISION
1	RER	09/30/13	ISSUED FOR COUNTY/TOWN REVIEW
2	RER	11/12/13	REV. PER NCDOT/TOWN/LUESA REVIEW
3	RER	12/20/13	REV. PER NCDOT/TOWN/LUESA REVIEW
4	RER	06/04/14	UPDATE DISTURBED AREA

Publix. WHERE SHOPPING IS A PLEASURE

Project: MINT HILL COMMONS
PHASE 1
MINT HILL, NORTH CAROLINA

Title: PROJECT NOTES

File #: 12097-PB.dwg Date: 03/14/13
Project Egr: ABC
Design By: ABC
Drawn By: RER
Scale: NTS

THE ISAACS GROUP
CIVIL ENGINEERING DESIGN AND LAND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

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