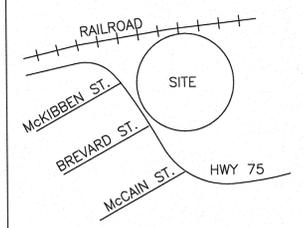
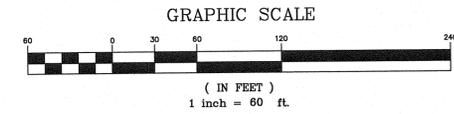
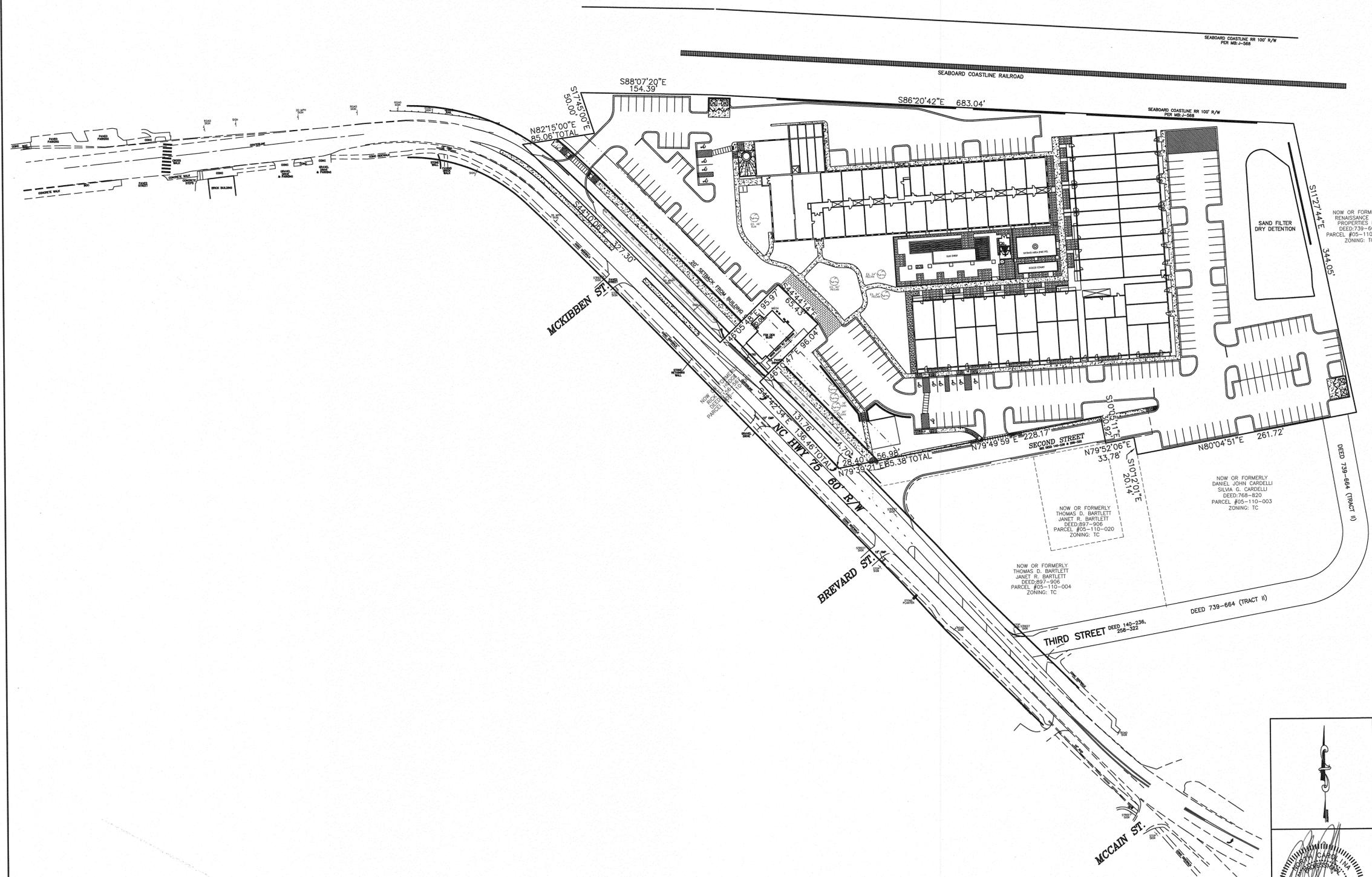


COTTON FLATS NC HIGHWAY 75 WAXHAW, NC UNION COUNTY

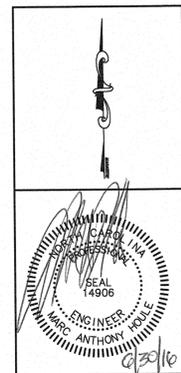
VICINITY MAP
NOT TO SCALE



- INDEX OF SHEETS**
- SHEET 1 COVER SHEET
 - SHEET 2 EXISTING CONDITIONS PLAN
 - SHEET 3 SITE PLAN
 - SHEET 4 OVERALL SITE PLAN
 - SHEET 5 DRAINAGE PLAN
 - SHEET 6 DRAINAGE PLAN- INTERIOR DRAINAGE
 - SHEET 7 DRAINAGE AREA PLAN
 - SHEET 8 GRADING PLAN
 - SHEET 9 PRE-DEVELOPMENT PLAN
 - SHEET 10 POST-DEVELOPMENT PLAN
 - SHEET 11 SAND FILTER DETAIL SHEET
 - SHEET 12 UTILITY PLAN- SEWER
 - SHEET 13 UTILITY PLAN- WATER
 - SHEET 14 CLEARING PHASE EROSION CONTROL PLAN
 - SHEET 15 EROSION CONTROL PLAN
 - SHEET 16 DETAIL SHEET #1
 - SHEET 17 DETAIL SHEET #2
 - SHEET 18 DETAIL SHEET #3
 - SHEET 19 DETAIL SHEET #4



**THIS PLAN IS A FINAL DRAWING-NOT
RELEASED FOR CONSTRUCTION
UNLESS INITIALLED/DATED AS APPROVED:**
APPROVED: *[Signature]* / *[Signature]*
INITIALS / DATE



NO.	DATE	REVISION	BY
1	06/27/15	REVISED PER COMMENTS	YWH

SHEET TITLE
COVER SHEET

PROJECT
COTTON FLATS
TOWN OF WAXHAW, UNION COUNTY, N.C.
FOR: DHD VENTURES

SCALE
1"=60'

DATE
7/24/15

DRAWN BY
BTG

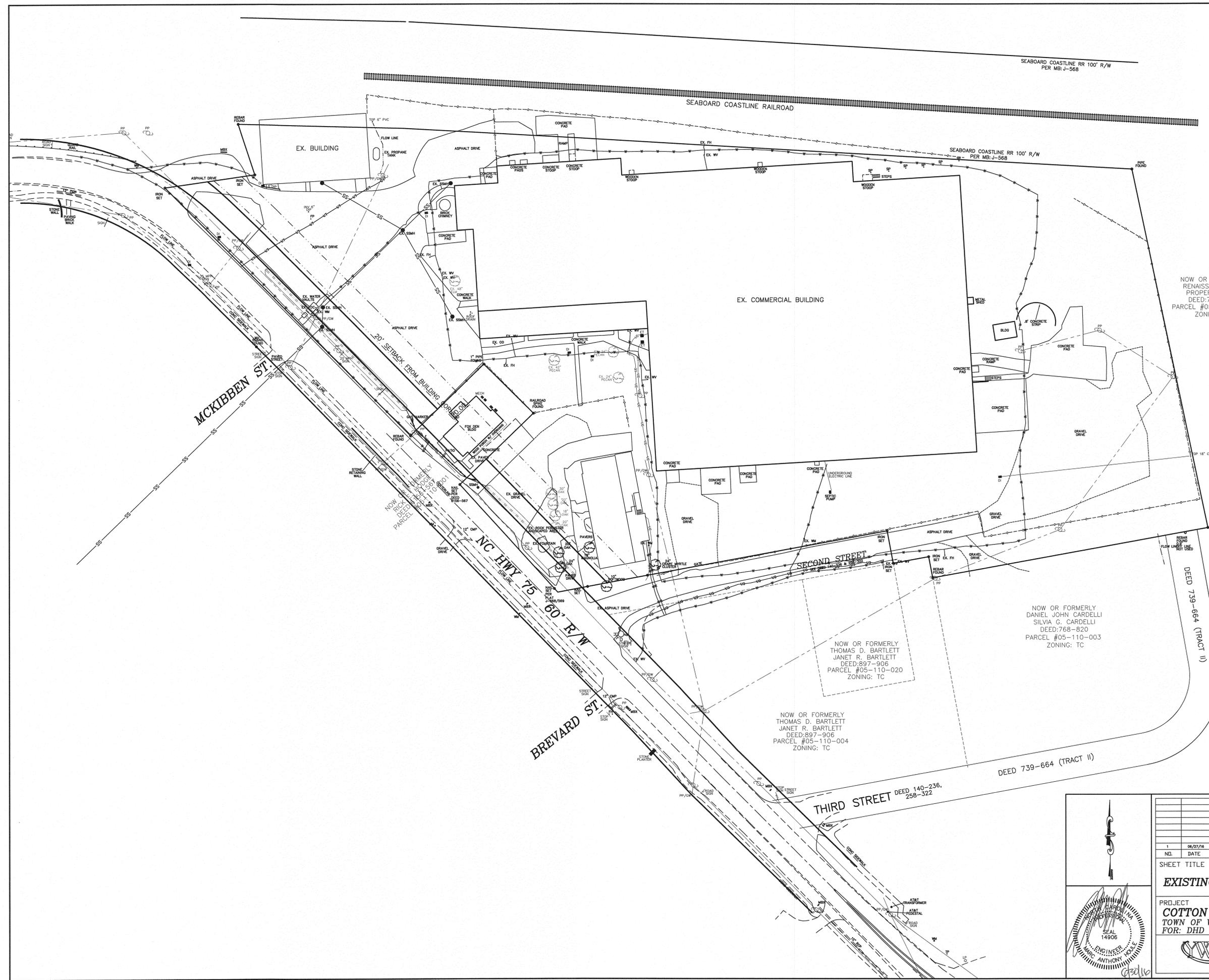
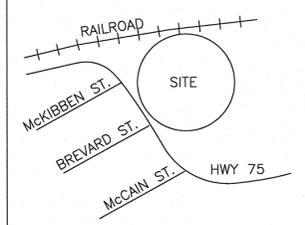
CHECKED BY
MAH

DRAWING NO.
249-46

SHT. 1 OF 19 SHTS

YARBROUGH-WILLIAMS & HOULE, INC.
Planning • Surveying • Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28841)
Charlotte, North Carolina
704.558.1990 704.558.6555(fax)

VICINITY MAP
NOT TO SCALE

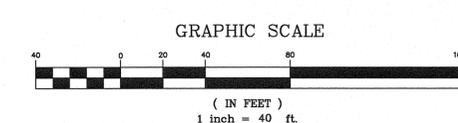


NOW OR FORMERLY
RENAISSANCE MILL
PROPERTIES LLC
DEED:739-664
PARCEL #05-110-002A
ZONING: TC

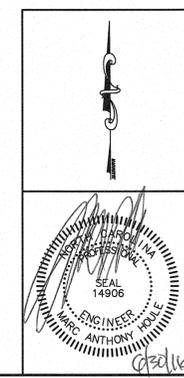
NOW OR FORMERLY
DANIEL JOHN CARDELLI
SILVIA G. CARDELLI
DEED:768-820
PARCEL #05-110-003
ZONING: TC

NOW OR FORMERLY
THOMAS D. BARTLETT
JANET R. BARTLETT
DEED:897-906
PARCEL #05-110-020
ZONING: TC

NOW OR FORMERLY
THOMAS D. BARTLETT
JANET R. BARTLETT
DEED:897-906
PARCEL #05-110-004
ZONING: TC



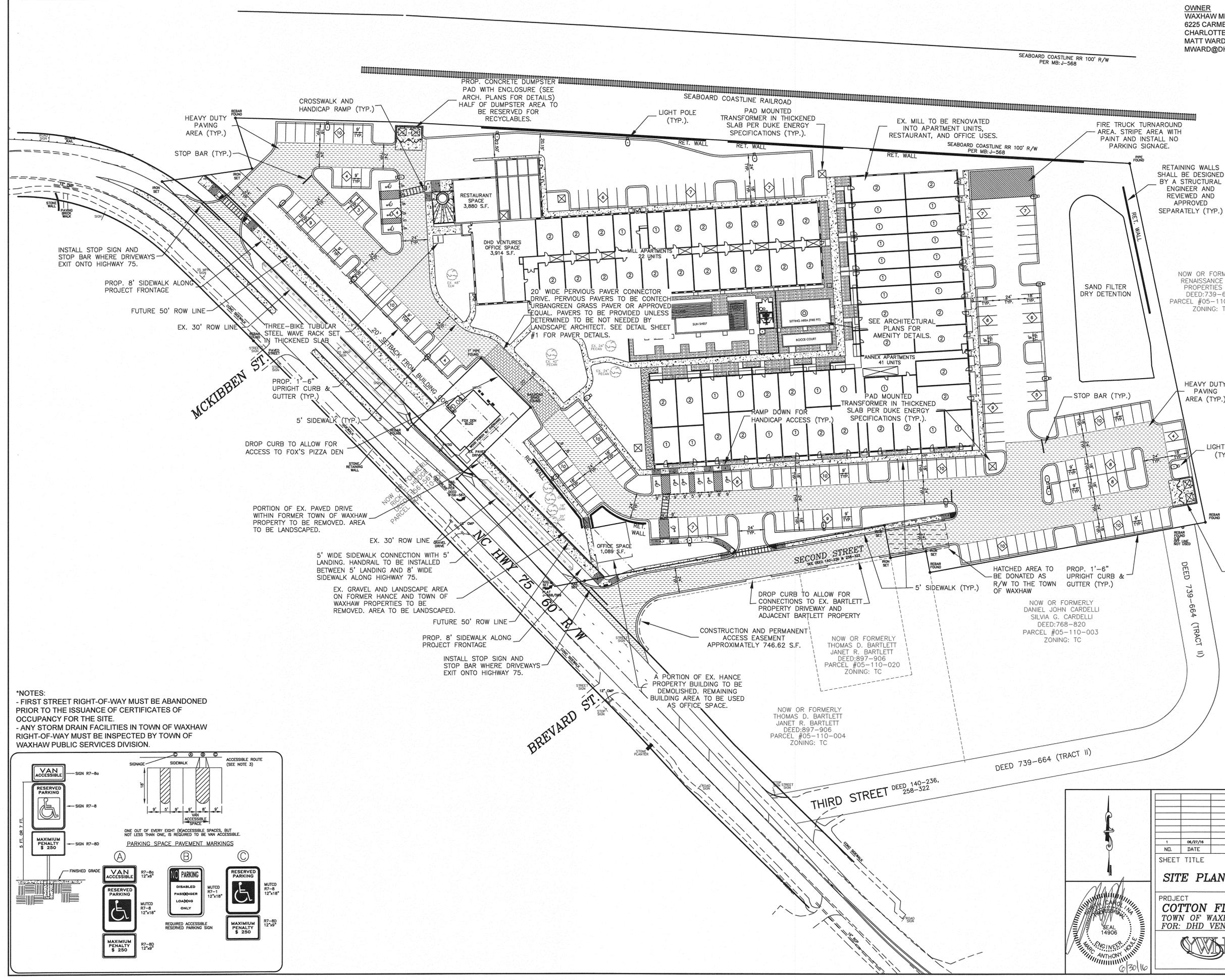
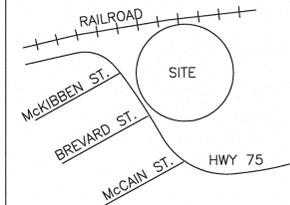
**THIS PLAN IS A FINAL DRAWING-NOT
RELEASED FOR CONSTRUCTION
UNLESS INITIALED/DATED AS APPROVED:**
APPROVED: *[Signature]* / *[Signature]*
INITIALS / DATE



NO.	DATE	REVISION	YWH
1	06/27/16	REVISED PER COMMENTS	BY
SHEET TITLE			PROJECT NO.
EXISTING CONDITIONS PLAN			SCALE 1" = 40'
PROJECT			DATE 7/24/15
COTTON FLATS			DRAWN BY BTG
TOWN OF WAXHAW, UNION COUNTY, N.C.			CHECKED BY MAH
FOR: DHD VENTURES			DRAWING NO. 249-45
YARBROUGH-WILLIAMS & HOULE, INC. Planning • Surveying • Engineering 730 Windsor Oak Court (28270) P.O. Box 7007 (28241) Charlotte, North Carolina 704.558.1900 704.558.0505(fax)			SHEET 2 OF 19 SHEETS

OWNER
 WAXHAW MILL VENTURES LLC
 6225 CARMEL RD
 CHARLOTTE, NC 28226
 MATT WARD: 704-507-2039
 MWARD@DHDVENTURES.COM

VICINITY MAP
 NOT TO SCALE



DEVELOPMENT DATA
 TAX PARCEL NO.: 05-110-002, 05-110-006, 05-110-007
 ZONING: TC
 SITE ADDRESS:
 MILL/ANNEX COMPLEX: 403 EAST SOUTH MAIN STREET
 HANCE BUILDING: 415 EAST SOUTH MAIN STREET
 PROPOSED USE: APARTMENTS, RESTAURANT, OFFICE

MIN. FRONT SETBACK: 20' FROM CLOSEST BUILDING POINT TO R/W OF HIGHWAY 75 (PER TOWN OF WAXHAW)
 MIN. SIDEYARD: 0'
 MIN. REARYARD: 0'

TOTAL SITE AREA: 6.816 AC.
 AREA DEDICATED AS R/W TO NCDOT: 0.384 AC.
 NET SITE AREA: 6.432 AC.

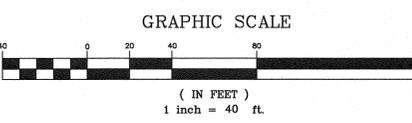
DATUM: NAVD 88- VERTICAL
 NAD 83- HORIZONTAL

MAX. PARKING SUMMARY
 RESTAURANT:
 REQUIRED: 1 SPACE PER 3 SEATS
 PROVIDED: 50 SPACES (FOR 150 SEAT RESTAURANT)
 OFFICE #1:
 REQUIRED: 3 SPACES PER 1,000 S.F.
 PROVIDED: 12 SPACES (FOR 3,914 S.F. OFFICE)
 OFFICE #2:
 REQUIRED: 3 SPACES PER 1,000 S.F.
 PROVIDED: 4 SPACES (FOR 1,089 S.F. OFFICE)
 RESIDENTIAL:
 REQUIRED: 1.5 SPACES PER BED
 PROVIDED: 152 SPACES (FOR 101 BEDS)
 TOTAL MAX. PARKING ALLOWED: 218 SPACES
 TOTAL SPACES PROVIDED: 218
 INCLUDES 11 HANDICAP SPACES (4 VAN ACCESSIBLE)

APARTMENT UNIT INFORMATION
 MILL APARTMENTS: 2- 1 BEDROOM UNITS
 20- 2 BEDROOM UNITS
 ANNEX APARTMENTS: 23- 1 BEDROOM UNITS
 18- 2 BEDROOM UNITS
 TOTAL: 25- 1 BEDROOM UNITS
 38- 2 BEDROOM UNITS
 63- TOTAL UNITS
 101- TOTAL BEDROOMS

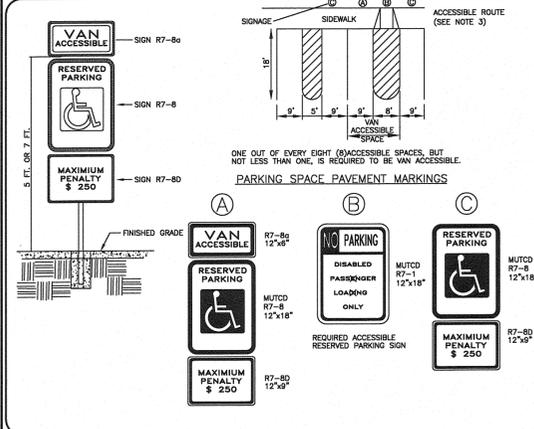
KEY
 ① = 1 BEDROOM APARTMENT UNIT
 ② = 2 BEDROOM APARTMENT UNIT

HEAVY DUTY PAVEMENT
 HEAVY DUTY PAVEMENT AREA = 44,245.47 S.F.



THIS PLAN IS A FINAL DRAWING--NOT RELEASED FOR CONSTRUCTION UNLESS INITIALED/DATED AS APPROVED:
 APPROVED: [Signature] / [Signature]
 INITIALS / DATE

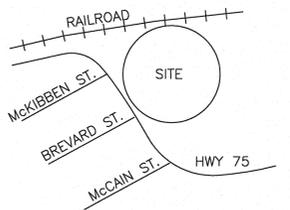
***NOTES:**
 - FIRST STREET RIGHT-OF-WAY MUST BE ABANDONED PRIOR TO THE ISSUANCE OF CERTIFICATES OF OCCUPANCY FOR THE SITE.
 - ANY STORM DRAIN FACILITIES IN TOWN OF WAXHAW RIGHT-OF-WAY MUST BE INSPECTED BY TOWN OF WAXHAW PUBLIC SERVICES DIVISION.



		YHW BY PROJECT NO. SCALE DATE DRAWN BY CHECKED BY DRAWING NO. 249-44 SHEET 3 OF 19 SHEETS
SHEET TITLE SITE PLAN PROJECT COTTON FLATS TOWN OF WAXHAW, UNION COUNTY, N.C. FOR: DHD VENTURES		
1 ND. DATE 06/27/16	REVISION PER COMMENTS REVISION	

OWNER
 WAXHAW MILL VENTURES LLC
 6225 CARMEL RD
 CHARLOTTE, NC 28226
 MATT WARD: 704-507-2039
 MWARD@DHDVENTURES.COM

VICINITY MAP
 NOT TO SCALE



DEVELOPMENT DATA
 TAX PARCEL NO.: 05-110-002, 05-110-006, 05-110-007
 ZONING: TC
 SITE ADDRESS:
 MILL/ANNEX COMPLEX: 403 EAST SOUTH MAIN STREET
 HANCE BUILDING: 415 EAST SOUTH MAIN STREET
 PROPOSED USE: APARTMENTS, RESTAURANT, OFFICE

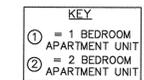
MIN. FRONT SETBACK: 20' FROM CLOSEST BUILDING POINT TO R/W OF HIGHWAY 75 (PER TOWN OF WAXHAW)
 MIN. SIDEYARD: 0'
 MIN. REARYARD: 0'

TOTAL SITE AREA: 6.816 AC.
 AREA DEDICATED AS R/W TO NCDOT: 0.384 AC.
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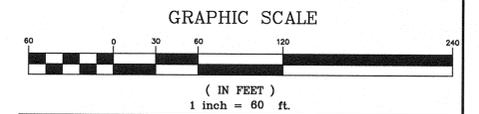
DATUM: NAVD 88- VERTICAL
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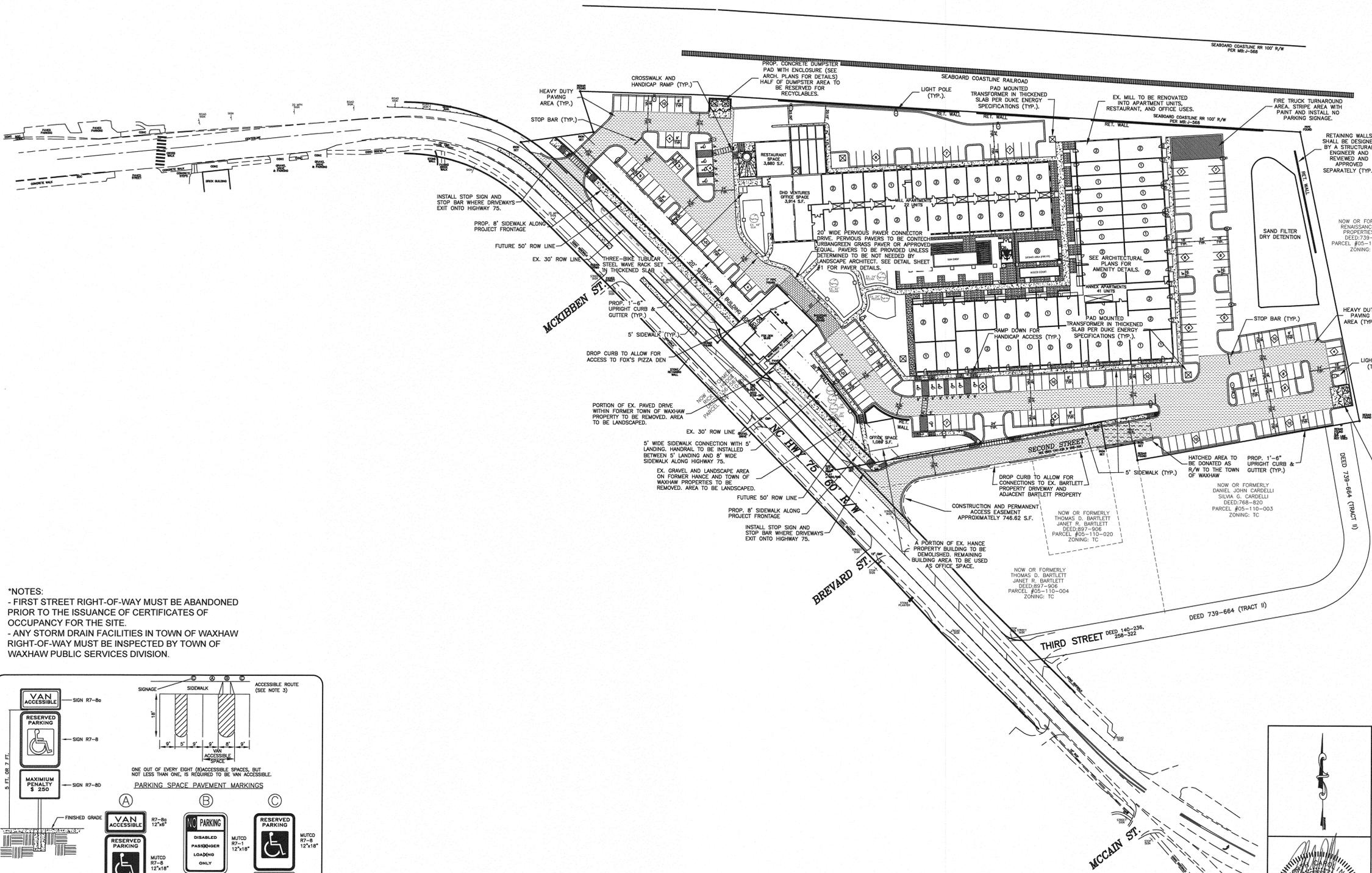
APARTMENT UNIT INFORMATION
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 ANNEX APARTMENTS: 23- 1 BEDROOM UNITS
 18- 2 BEDROOM UNITS
 TOTAL: 25- 1 BEDROOM UNITS
 38- 2 BEDROOM UNITS
 63- TOTAL UNITS
 101- TOTAL BEDROOMS



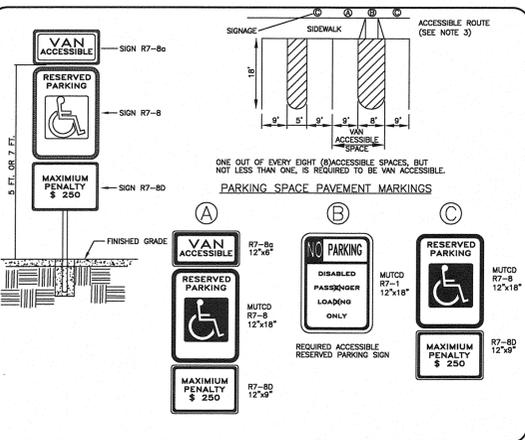
HEAVY DUTY PAVEMENT
 HEAVY DUTY PAVEMENT AREA = 44,245.47 S.F.



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 APPROVED: [Signature] / [Signature]
 INITIALS DATE

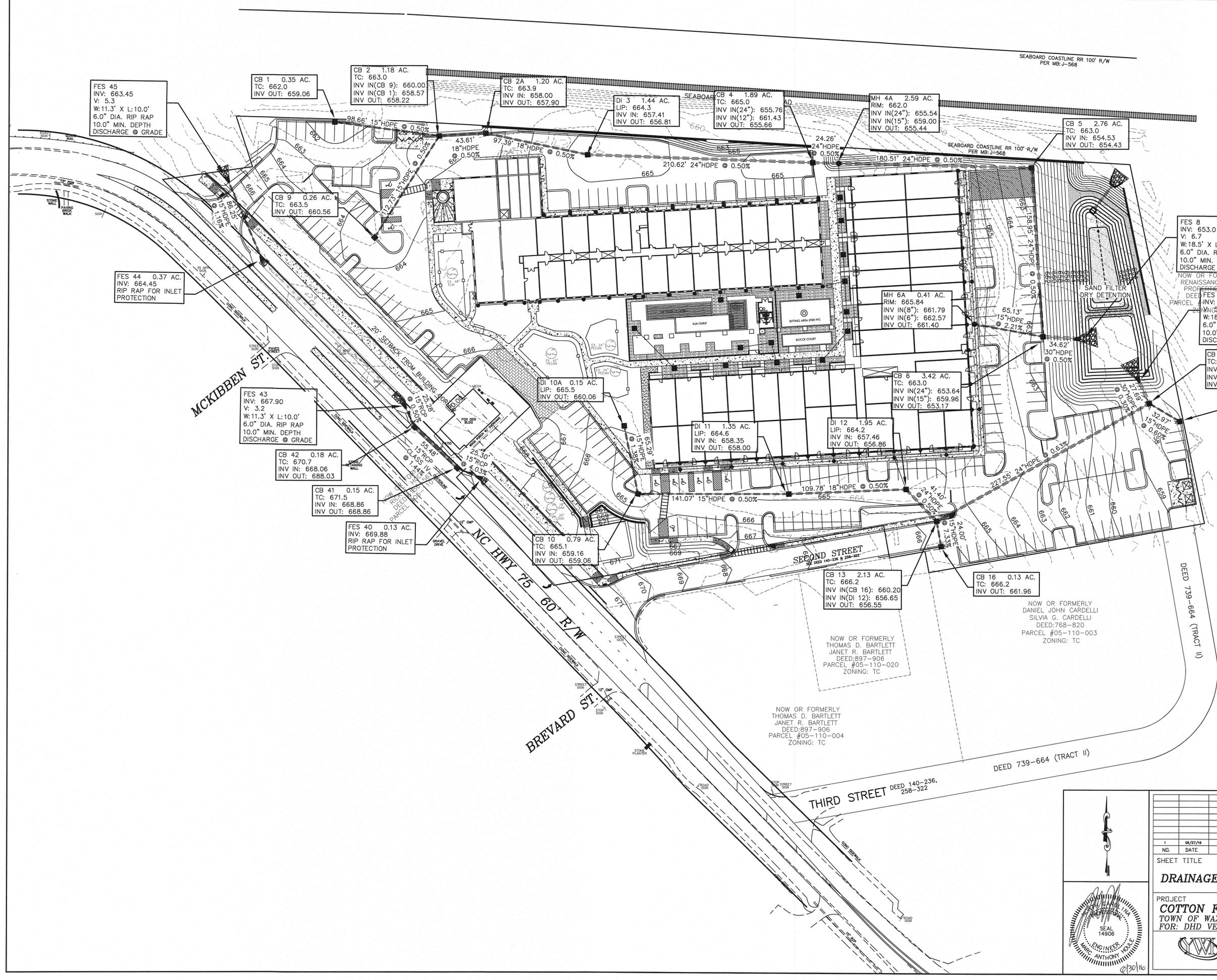
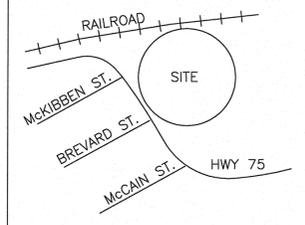


*NOTES:
 - FIRST STREET RIGHT-OF-WAY MUST BE ABANDONED PRIOR TO THE ISSUANCE OF CERTIFICATES OF OCCUPANCY FOR THE SITE.
 - ANY STORM DRAIN FACILITIES IN TOWN OF WAXHAW RIGHT-OF-WAY MUST BE INSPECTED BY TOWN OF WAXHAW PUBLIC SERVICES DIVISION.



1	05/27/15	REVISION	YWH
NO.	DATE	REVISION	BY
SHEET TITLE			PROJECT NO.
OVERALL SITE PLAN			SCALE: 1"=60'
PROJECT: COTTON FLATS			DATE: 7/24/15
TOWN OF WAXHAW, UNION COUNTY, N.C.			DRAWN BY: BTG
FOR: DHD VENTURES			CHECKED BY: MAH
YARBROUGH-WILLIAMS & HOULE, INC.			DRAWING NO.
Planning • Surveying • Engineering			249-43
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)			SHT 4 OF 19
Charlotte, North Carolina			
704.556.1990 704.556.0505(fax)			

VICINITY MAP
NOT TO SCALE



FES 8
INV: 653.0
V: 6.7
W: 18.5' X L: 16.0'
6.0" DIA. RIP RAP
10.0" MIN. DEPTH
DISCHARGE @ GRADE

NOW OR FORMERLY
RENAISSANCE MILL
PROPERTIES, LLC
DEED: FES 15
PARCEL # INV: 653.0
INV IN: 653.0
W: 18.5' X L: 16.0'
6.0" DIA. RIP RAP
10.0" MIN. DEPTH
DISCHARGE @ GRADE

CB 14 2.71 AC.
TC: 658.9
INV IN (CB 17): 653.36
INV IN (CB 13): 655.11
INV OUT: 653.08

*NOTE:
- ANY STORM DRAIN FACILITIES IN TOWN OF WAXHAW RIGHT-OF-WAY MUST BE INSPECTED BY TOWN OF WAXHAW PUBLIC SERVICES DIVISION.

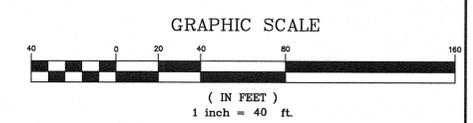
CALL
NO ONE CALL SYSTEM
BEFORE YOU DIG

1-800-632-4849
AVOID UTILITY DAMAGE

- 1) CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
- 2) CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGMEN, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
- 3) ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
- 4) SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

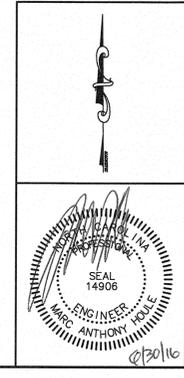
LEGEND

CB - CATCH BASIN
DCB - DOUBLE CATCH BASIN
DI - DROP INLET
DDI - DOUBLE DROP INLET
MH - MANHOLE
FES - FLARED END SECTION
INV - INVERT
TC - TOP OF CURB
SDE - STORM DRAINAGE EASEMENT
(X.XX AC.) DRAINAGE BASIN TO EACH STRUCTURE



THIS PLAN IS A FINAL DRAWING—NOT RELEASED FOR CONSTRUCTION UNLESS INITIALLED/DATED AS APPROVED:

APPROVED: *[Signature]* / *[Signature]*
INITIALS DATE



NO.	DATE	REVISION	REVISOR	BY
1	06/23/16			

SHEET TITLE
DRAINAGE PLAN

PROJECT
COTTON FLATS
TOWN OF WAXHAW, UNION COUNTY, N.C.
FOR: DHD VENTURES

SCALE
1" = 40'

DATE
7/24/15

DRAWN BY
BTG

CHECKED BY
MAH

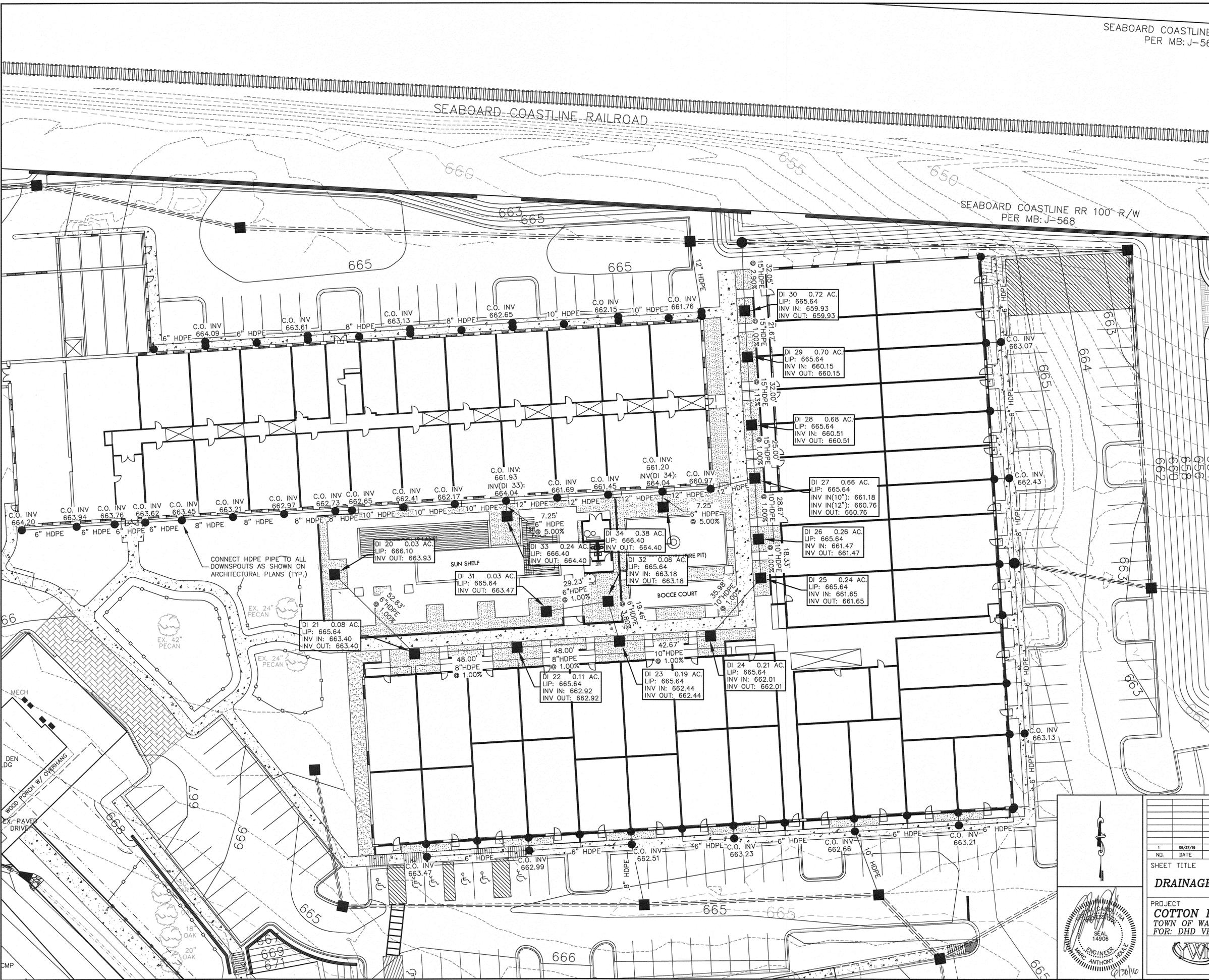
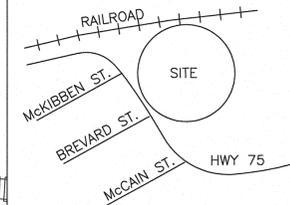
DRAWING NO.
249-42

5 OF 19 SHEETS

YARBROUGH-WILLIAMS & HOULE, INC.
ENGINEERING • SURVEYING • ENGINEERING
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.558.1990 704.558.0505(fax)

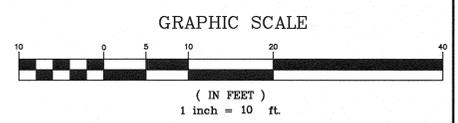
SEABOARD COASTLINE RR 100' R/W
PER MB: J-568

VICINITY MAP
NOT TO SCALE



- CALL
NC ONE CALL SYSTEM
BEFORE YOU DIG
1. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
 2. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGMEN, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
 3. ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
 4. SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

- LEGEND**
- CB - CATCH BASIN
 - DCB - DOUBLE CATCH BASIN
 - DI - DROP INLET
 - DDI - DOUBLE DROP INLET
 - MH - MANHOLE
 - FES - FLARED END SECTION
 - INV - INVERT
 - TC - TOP OF CURB
 - SDE - STORM DRAINAGE EASEMENT
 - (.XX AC.) DRAINAGE BASIN TO EACH STRUCTURE



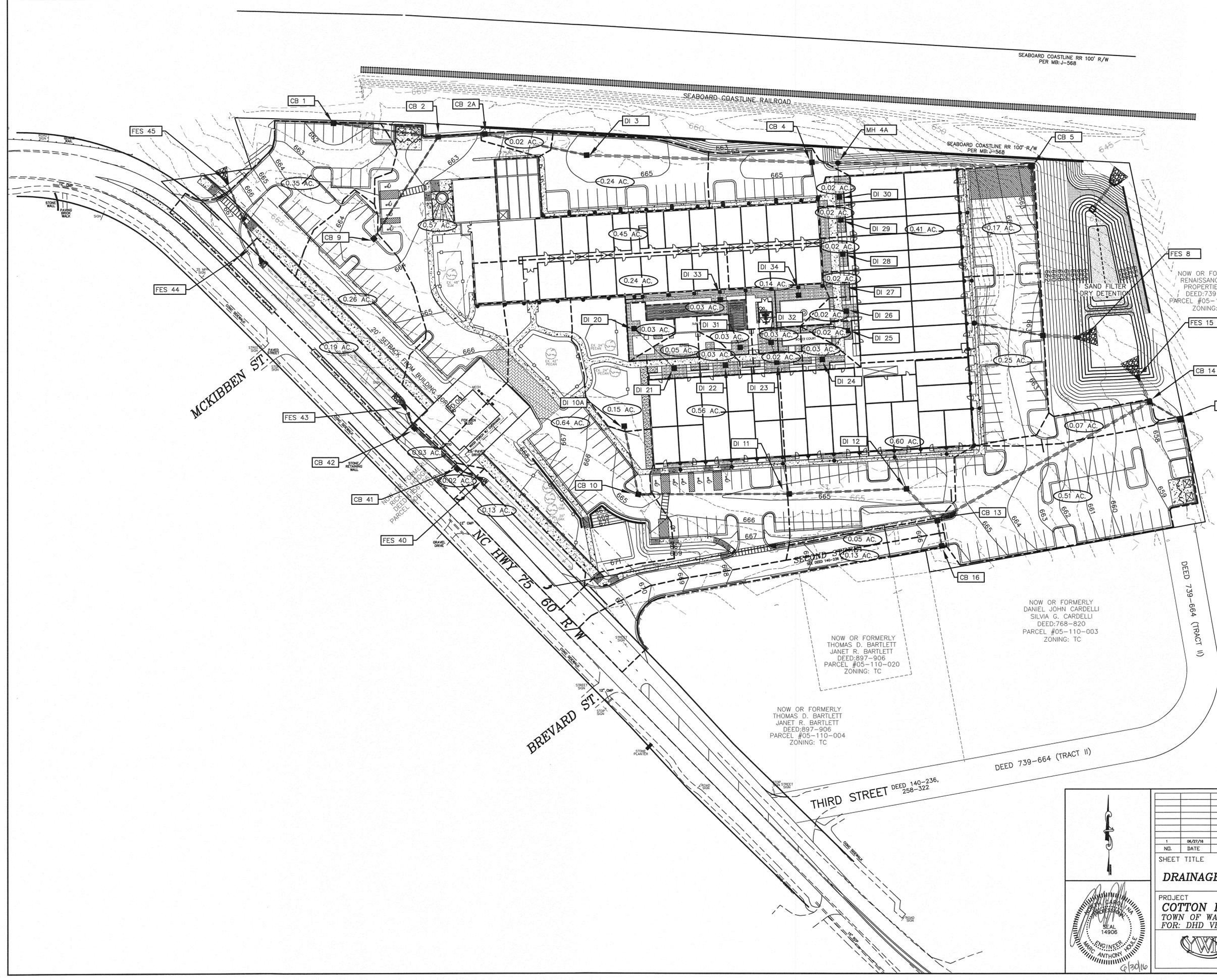
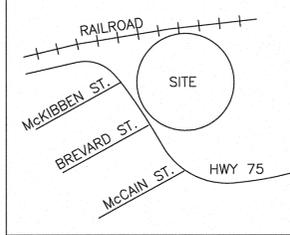
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APPROVED: *[Signature]* / *[Signature]*
INITIALS DATE



1	06/27/16	REVISED PER COMMENTS	YWH
NO.	DATE	REVISION	BY
SHEET TITLE			PROJECT NO.
DRAINAGE PLAN- INTERIOR DRAINAGE			SCALE: 1"=10'
PROJECT			DATE: 7/24/15
COTTON FLATS			DRAWN BY: BTG
TOWN OF WAXHAW, UNION COUNTY, N.C.			CHECKED BY: MAH
FOR: DHD VENTURES			DRAWING NO.
YARBROUGH-WILLIAMS & HOULE, INC.			249-41
Planning • Surveying • Engineering			SHT 6 OF 19
730 Windsor Oak Court (28278) P.O. Box 7007 (28241)			
Charlotte, North Carolina			
704.556.1990 704.556.0505(fax)			

VICINITY MAP
NOT TO SCALE



NOW OR FORMERLY
RENAISSANCE MILL
PROPERTIES LLC
DEED:739-664
PARCEL #05-110-002A
ZONING: TC

NOW OR FORMERLY
DANIEL JOHN CARDELLI
SILVIA G. CARDELLI
DEED:768-820
PARCEL #05-110-003
ZONING: TC

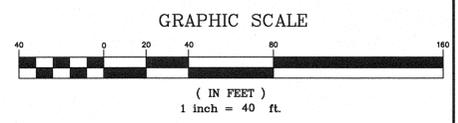
NOW OR FORMERLY
THOMAS D. BARTLETT
JANET R. BARTLETT
DEED:897-906
PARCEL #05-110-004
ZONING: TC

CALL
NC ONE CALL SYSTEM
BEFORE YOU DIG

1-800-632-4949
AVOID UTILITY DAMAGE

1. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
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4. SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

- LEGEND**
- CB - CATCH BASIN
 - DCB - DOUBLE CATCH BASIN
 - DI - DROP INLET
 - DDI - DOUBLE DROP INLET
 - MH - MANHOLE
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 - INV - INVERT
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 - SDE - STORM DRAINAGE EASEMENT
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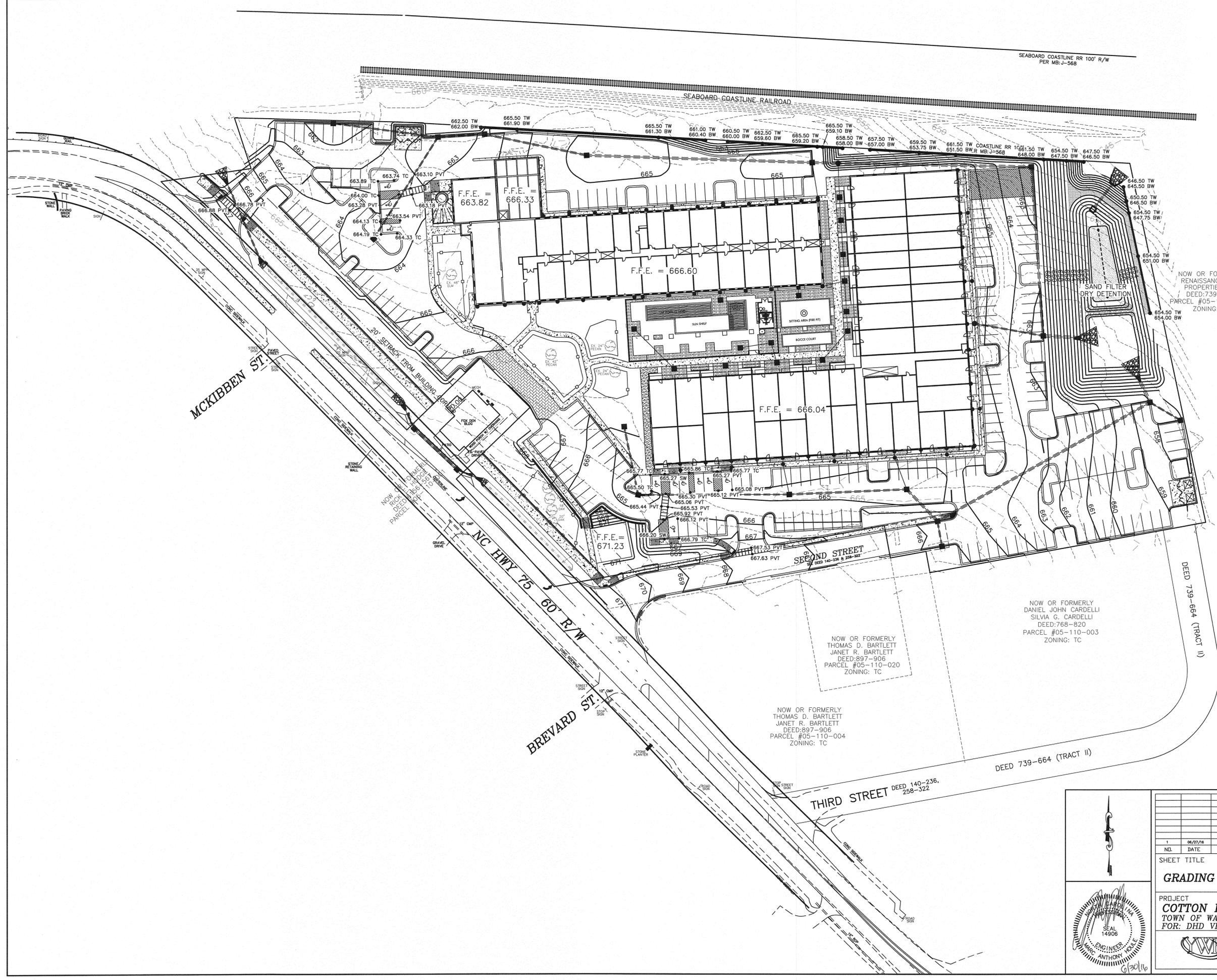
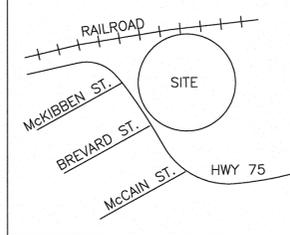


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APPROVED: _____ / _____
INITIALS DATE

		<p>1 06/27/16</p> <p>NDL DATE</p>	<p>REVISED PER COMMENTS</p> <p>REVISION</p>	<p>YWH</p> <p>BY</p>
<p>SHEET TITLE</p> <p>DRAINAGE AREA PLAN</p>		<p>PROJECT TITLE</p> <p>COTTON FLATS TOWN OF WAXHAW, UNION COUNTY, N.C. FOR: DHD VENTURES</p>		<p>PROJECT NO.</p> <p>SCALE</p> <p>1" = 40'</p> <p>DATE</p> <p>7/24/15</p> <p>DRAWN BY</p> <p>BTC</p> <p>CHECKED BY</p> <p>MAH</p>
<p>YARBROUGH-WILLIAMS & HOULE, INC. Planning • Surveying • Engineering 780 Windsor Oaks Court (28275) P.O. Box 7007 (28241) Charlotte, North Carolina 704.556.1990 704.556.0506(fax)</p>		<p>DRAWING NO.</p> <p>249-40</p>		<p>SHEET</p> <p>7 OF 19 SHEETS</p>

VICINITY MAP
NOT TO SCALE



NOW OR FORMERLY
RENAISSANCE MILL
PROPERTIES LLC
DEED:739-664
PARCEL #05-110-002A
ZONING: TC

NOW OR FORMERLY
DANIEL JOHN CARDELLI
SILVIA G. CARDELLI
DEED:768-820
PARCEL #05-110-003
ZONING: TC

NOW OR FORMERLY
THOMAS D. BARTLETT
JANET R. BARTLETT
DEED:897-906
PARCEL #05-110-020
ZONING: TC

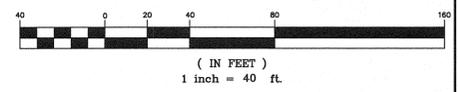
NOW OR FORMERLY
THOMAS D. BARTLETT
JANET R. BARTLETT
DEED:897-906
PARCEL #05-110-004
ZONING: TC

NOTE:
BOTTOM OF WALL ELEVATIONS (BW) ARE SET AT APPROXIMATE EXISTING GRADE OR PROPOSED CONTOUR GRADE AT INDICATED SPOT SHOT LOCATIONS. BOTTOM OF WALL GRADES SHALL BE VERIFIED IN FIELD DURING CONSTRUCTION. FOUNDATION DEPTHS AND ELEVATIONS FOR WALLS TO BE SET BY WALL ENGINEER/CONTRACTOR AS THEY SEE FIT BASED ON CONDITIONS.



1. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGMEN, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
3. ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
4. SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

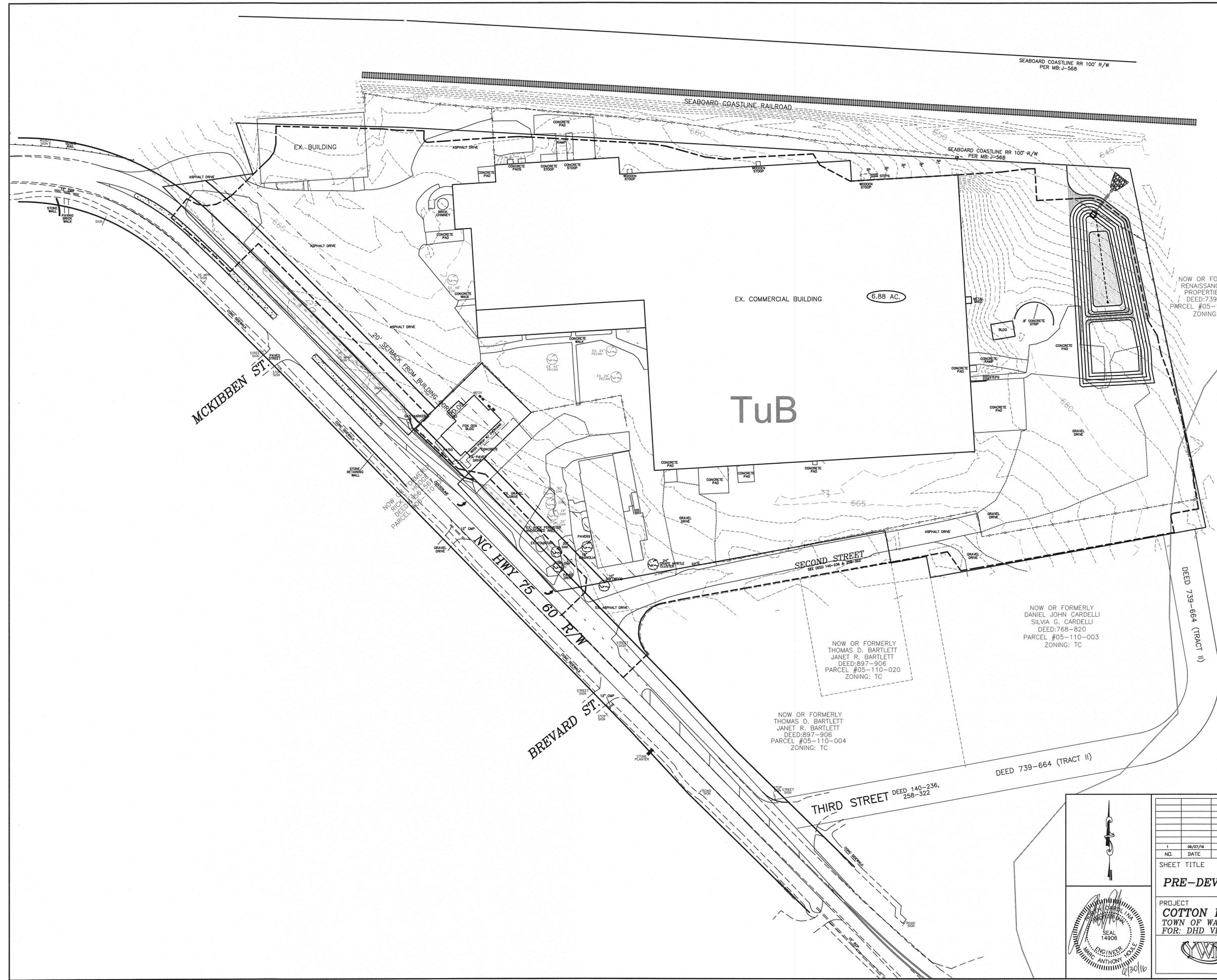
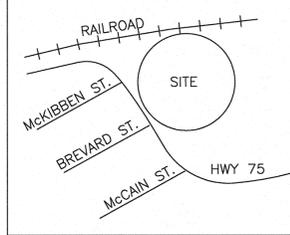
GRAPHIC SCALE



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APPROVED: *[Signature]* / *[Signature]*
INITIALS / DATE

1		06/27/16	REVISION PER COMMENTS	YWH
NO.	DATE		REVISION	BY
SHEET TITLE				PROJECT NO.
GRADING PLAN				SCALE 1" = 40'
PROJECT				DATE 7/24/15
COTTON FLATS				DRAWN BY BTG
TOWN OF WAXHAW, UNION COUNTY, N.C.				CHECKED BY MAH
FOR: DHD VENTURES				DRAWING NO. 249-39
				SHT 8 OF 19 SHEETS
YARBROUGH-WILLIAMS & HOULE, INC. Planning • Surveying • Engineering 750 Windsor Oaks Court (28275) P.O. Box 7007 (28241) Charlotte, North Carolina 704.558.1990 704.558.0500(fax)				

VICINITY MAP
NOT TO SCALE



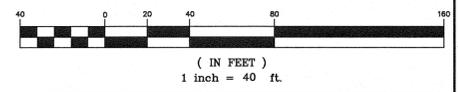
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CALL
NC ONE CALL SYSTEM
BEFORE YOU DIG

1-800-632-4949
AVOID UTILITY DAMAGE

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GRAPHIC SCALE



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APPROVED: *[Signature]* / *[Signature]*
INITIALS DATE

NO.	DATE	REVISION	BY
1	06/21/15	REVISED PER COMMENTS	YWH

SHEET TITLE
PRE-DEVELOPMENT PLAN

PROJECT
COTTON FLATS
TOWN OF WAXHAW, UNION COUNTY, N.C.
FOR: DHD VENTURES

SCALE
1" = 40'

DATE
7/24/15

DRAWN BY
BTG

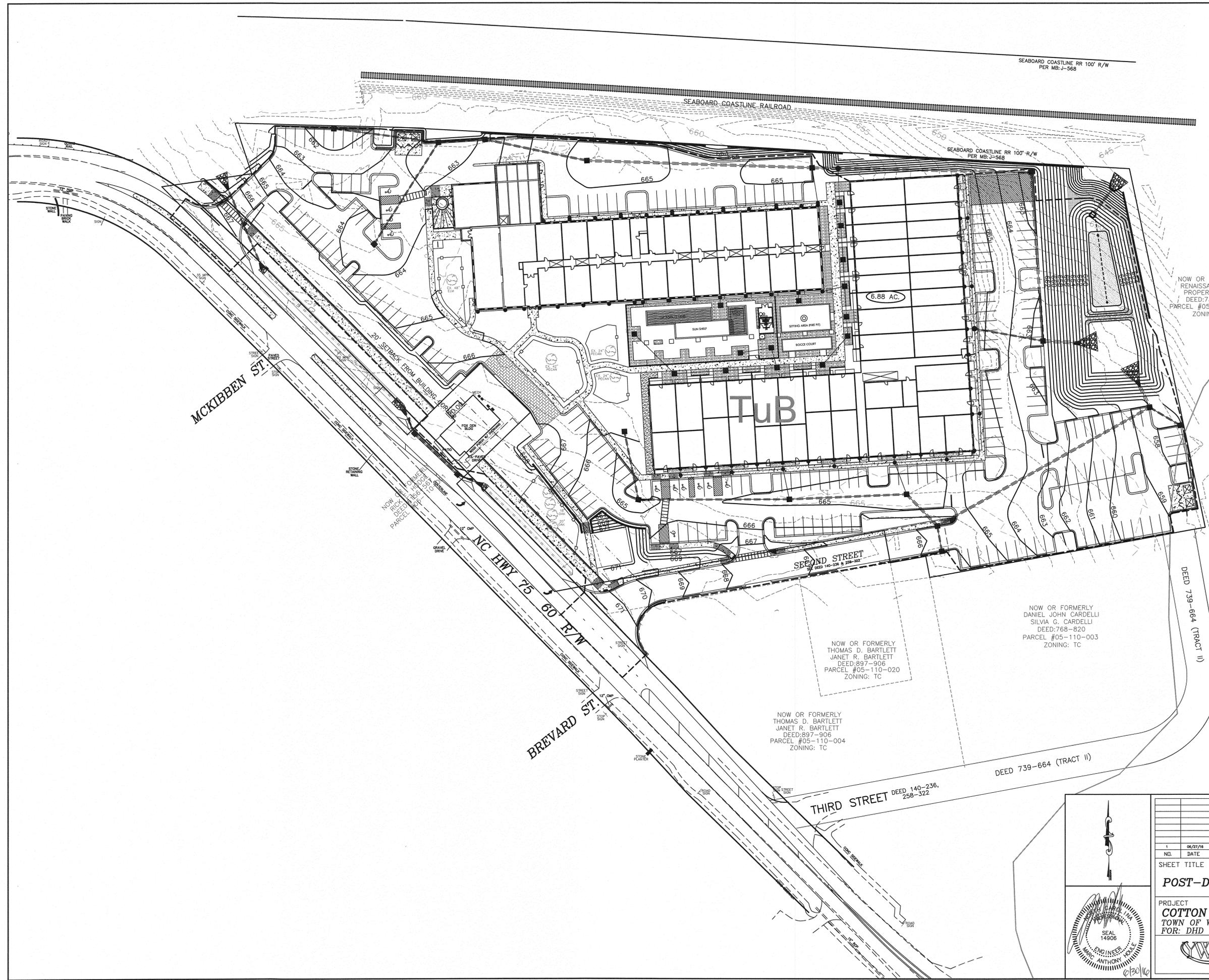
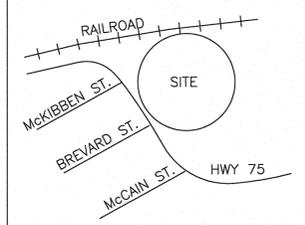
CHECKED BY
MAH

DRAWING NO.
249-38

SHEET
9 OF **19** SHEETS

YARBROUGH-WILLIAMS & HOULE, INC.
Planning • Surveying • Engineering
750 Windsor Oak Court (28275) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.558.1900 704.558.0505(fax)

VICINITY MAP
NOT TO SCALE



NOW OR FORMERLY
RENAISSANCE MILL
PROPERTIES LLC
DEED:739-664
PARCEL #05-110-002A
ZONING: TC

CeB2

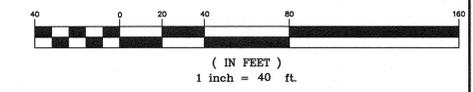
TuB

EXISTING IMPERVIOUS AREA: 197,926 S.F.
PROPOSED IMPERVIOUS AREA: 221,720 S.F.
DETENTION IS REQUIRED AND PROVIDED.
WATER QUALITY AND DETENTION BASIN AND
CALCULATIONS APPROVED BY NCDEQ.



- 1). CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
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GRAPHIC SCALE

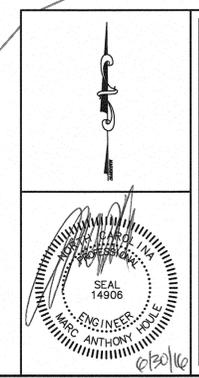


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APPROVED: MAH / 07/24/15
INITIALS DATE

NOW OR FORMERLY
THOMAS D. BARTLETT
JANET R. BARTLETT
DEED:897-906
PARCEL #05-110-020
ZONING: TC

NOW OR FORMERLY
DANIEL JOHN CARDELLI
SILVIA G. CARDELLI
DEED:768-820
PARCEL #05-110-003
ZONING: TC

NOW OR FORMERLY
THOMAS D. BARTLETT
JANET R. BARTLETT
DEED:897-906
PARCEL #05-110-004
ZONING: TC



NO.	DATE	REVISION	BY
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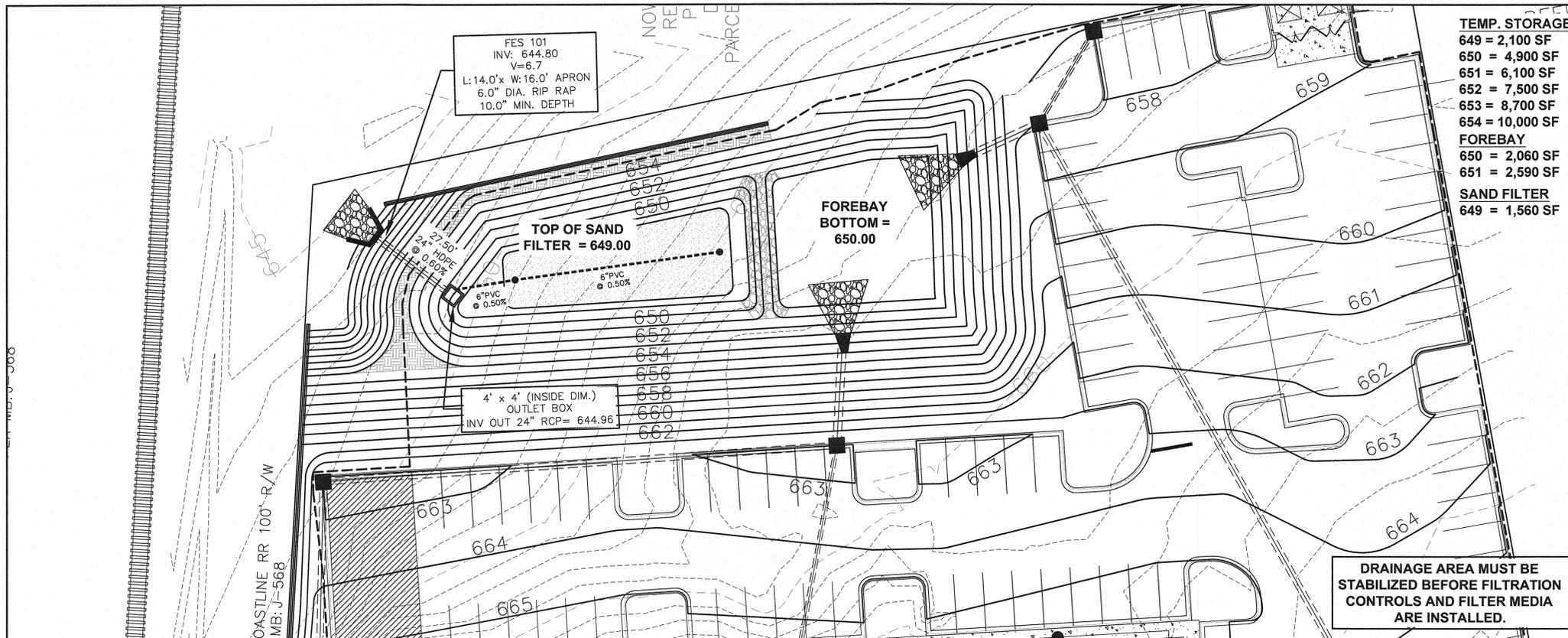
SHEET TITLE: **POST-DEVELOPMENT PLAN**

PROJECT: **COTTON FLATS**
TOWN OF WAXHAW, UNION COUNTY, N.C.
FOR: **DHD VENTURES**

SCALE: 1" = 40'
DATE: 7/24/15
DRAWN BY: BTG
CHECKED BY: MAH
DRAWING NO.: **249-37**

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Charlotte, North Carolina
704.558.1900 704.558.0506(fax)

10 of 19 SHEETS



TEMP. STORAGE
 649 = 2,100 SF
 650 = 4,900 SF
 651 = 6,100 SF
 652 = 7,500 SF
 653 = 8,700 SF
 654 = 10,000 SF
FOREBAY
 650 = 2,060 SF
 651 = 2,590 SF
SAND FILTER
 649 = 1,560 SF

Sand Filter Operation Maintenance

A maintenance record shall be kept on this BMP. This maintenance record will be kept in a log in a known set location. Any deficient BMP elements noted in the inspection will be corrected, repaired, or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the removal efficiency of the BMP.

- Important maintenance procedures:
- The drainage area will be carefully managed to reduce the sediment load to the sand filter.
 - The sedimentation chamber or forebay will be cleaned out whenever sediment depth exceeds six inches.
 - Once a year, sand media will be skimmed.
 - The sand filter media will be replaced whenever it fails to function properly after maintenance.

The sand filter will be inspected quarterly and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County). Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How I will remediate the problem:
Entire Bmp	Trash/debris is present	Remove the trash/debris.
Adjacent pavement(if applicable)	Sediment is present on the pavement surface	Sweep or vacuum the sediment as soon as possible.
Fenestration of sand filter	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.
	Vegetation is too short or too long	Maintain vegetation at an appropriate height.
Flow diversion structure	The structure is clogged	Unclog the conveyance and dispose of any sediment offsite.
	The structure is damaged	Make any necessary repairs or replace if damage is too large for repair.
Forebay or pretreatment area	Sediment has accumulated to a depth of greater than six inches	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and stabilize or dispose of it in a location where it will not cause impacts to streams or the BMP.
	Erosion has occurred	Provide additional erosion protection such as reinforced turf matting or nprap if needed to prevent future erosion problems.
Filter bed and underdrain collection system	Water is ponding on the surface for more than 24 hours after a storm.	Check to see if the collector system is clogged and flush if necessary. If water still ponds, remove the top few inches of filter bed media and replace. If water still ponds, then consult an expert.
	Wetlands are present	Remove the weeds, preferably by hand. If a pesticide is used, wipe it on the plants rather than spraying.
Outlet device	Water is ponding on the surface for more than 24 hours after a storm.	Check to see if the collector system is clogged and flush if necessary. If water still ponds, remove the top few inches of filter bed media and replace. If water still ponds, then consult an expert.
	The outlet device is damaged	Repair or replace the outlet device.
Receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the NC Division of Water Quality 401 Oversight Unit at 919-733-1756.

DRAINAGE AREA MUST BE STABILIZED BEFORE FILTRATION CONTROLS AND FILTER MEDIA ARE INSTALLED.

Excavate the Basin Area and Prepare Subgrade

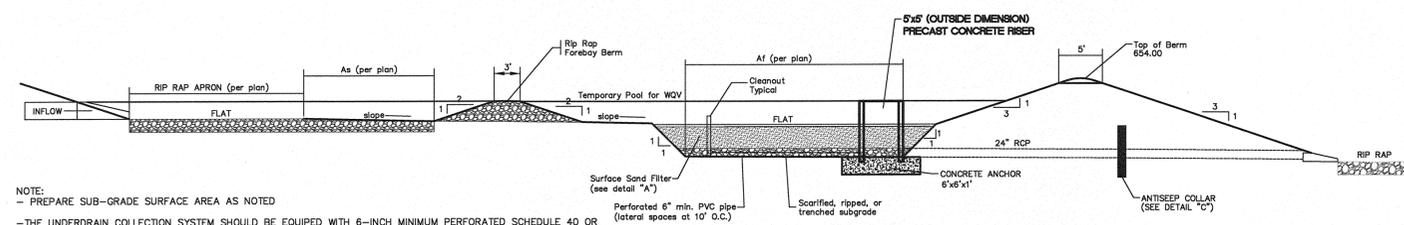
- Clear and excavate the area for the Basin while protecting and maintaining subgrade infiltration rates using the following steps:
- Excavate in dry subgrade conditions and avoid excavating immediately after storms without a sufficient drying period.
 - Do not allow equipment to cross the Basin area after excavation has begun
 - Operate excavation equipment from outside the Basin area of from unexcavated portions of the area using and excavation staging plan.
 - Use equipment with tracks rather than tires to minimize soil compaction when equipment on the subgrade surface is unavoidable.
 - Dig the final 9 to 12 in. by using the teeth of the excavator bucket to loosen soil and do not smear the subgrade soil surface. Final grading or smoothing of the subgrade should be done by hand if possible.
 - Minimize the time between excavation and placement of the aggregate.

The final subgrade slope shall not exceed 0.5%. The slope of the subgrade shall be checked before proceeding.

After verifying the subgrade slope, scarify, rip or trench the soil subgrade surface to maintain the soils pre-disturbance infiltration rate. These treatments must occur while the soil is dry. To scarify the surface, use backhoe bucket's teeth to rake the surface of the subgrade. To rip the subgrade, use a subsoil ripper to make parallel rips 6 to 9 in. deep spaced 3 ft apart along the length of the basin excavation. In silty or clayey soils, clean coarse sand must be placed over the ripped surface to keep it free-flowing. The sand layer should be adequate to fill the rips.

An alternate to scarification and ripping is trenching. If trenching, then parallel trenches 12 in. wide by 12 in. deep shall be made along the length of the basin excavation. Excavate trenches every 6 ft (measured from center to center of each trench) and fill with 1/2 in. of clean coarse sand and 11-1/2 in of ASTM No. 67 aggregate.

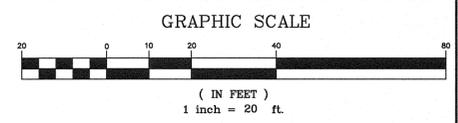
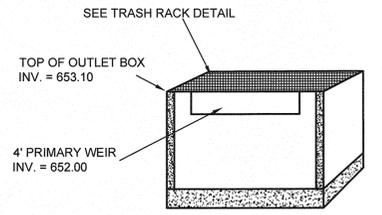
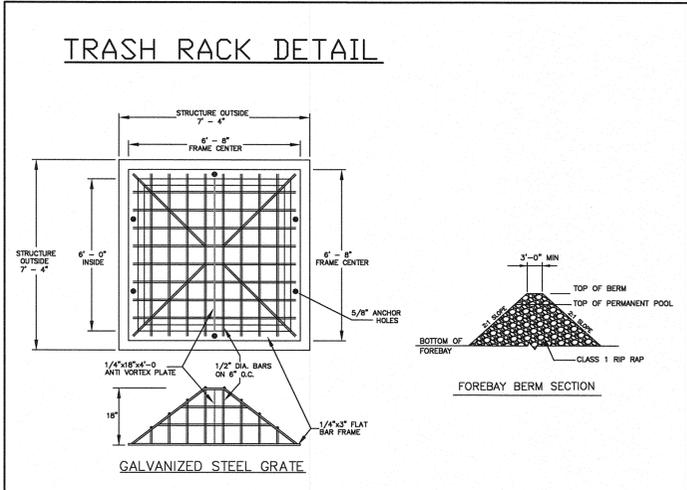
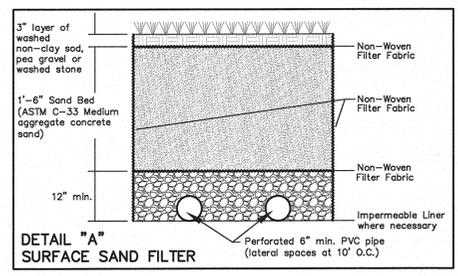
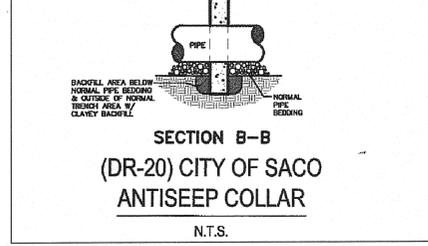
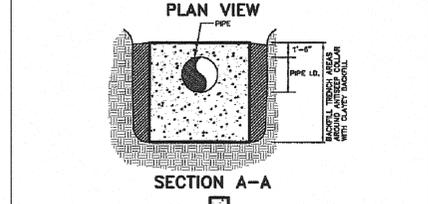
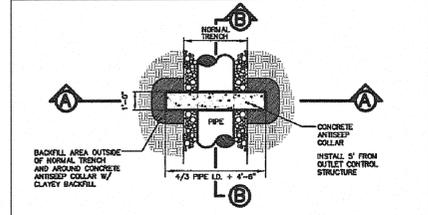
Ripped or trenched (uncompacted) soil subgrade can settle after basin installation and compaction. Therefore, base compaction requires special attention to means and methods in the specifications and during construction inspection to minimize future settlement from ripped or trenched soil subgrades.



NOTE:
 - PREPARE SUB-GRADE SURFACE AREA AS NOTED

- THE UNDERDRAIN COLLECTION SYSTEM SHOULD BE EQUIPPED WITH 6-INCH MINIMUM PERFORATED SCHEDULE 40 OR STRONGER PVC PIPE OR DOUBLE WALL "HDPE" PIPE. PERFORATIONS SHALL BE PER AASHTO M278 FOR PVC PIPE, AASHTO M252 FOR DOUBLE WALL "HDPE" PIPE, OR BE 3/8-INCH IN DIAMETER SPACED 3 INCHES ON CENTER ALONG 4 LONGITUDINAL RINGS THAT ARE SPACED 90° APART. THE PIPES SHALL HAVE A MINIMUM SLOPE OF 0.50% AND A MAXIMUM SPACING OF 10 FEET ON CENTER.
- CLEANOUTS OF 6-INCH SOLID PVC MUST BE PROVIDED FOR EVERY 50 LINEAR FEET OF UNDERDRAIN, AT ALL BENDS, AND ENDS OF THE SYSTEM FOR MAINTENANCE PURPOSES. THE TOP OF THE CLEANOUTS SHOULD EXTEND 6 INCHES ABOVE THE TOP OF FILTER AND HAVE A WATER-TIGHT, VANDAL-PROOF CAP. AT LEAST ONE CLEANOUT SHALL BE INSTALLED AS AN EMERGENCY DRAIN THAT IS FLUSH WITH THE TOP OF FILTER AND HAVE A 6-INCH THREADED EXTENSION PIPE. THE FURTHEST CLEANOUT FROM THE OUTLET MUST HAVE THE MINIMUM REQUIRED FILTER DEPTH.

CONCRETE ANCHOR
 A. BOUYANCY
 AREA OF RISER - INSIDE 16 S.F./OUTSIDE 25 S.F.
 $V_{\text{riser}} = V_{\text{riser}} + V_{\text{base Footing}} = 8.14' (25 \text{ SF}) + 1' (36 \text{ SF}) = 239.5 \text{ CF}$
 $\text{FLOATATION} = V_{\text{riser}} \times V_{\text{water}} = 239.5 \text{ CF} \times 62.40 \text{ LB/CF} = 14,944.8 \text{ LBS.}$
 B. COUNTER BOUYANCY
 $\text{CONC. WL.} = V_{\text{water}} \times \text{Unit Wt.} = (73.26 + 36) \times 150 \text{ LB/CF} = 16,389 \text{ LBS.}$
 $\text{Earth WL. on Ring} = V_{\text{water}} \times \text{Earth Unit Wt.} = (36 - 25) \times 5.04 \times 115 \text{ LB/CF} = 5,216.4 \text{ LBS.}$
 $\text{Anti-Floatation} = 16,389 + 5,216.4 = 21,605.4 \text{ LBS. (safety factor} = 1.4)$



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- GENERAL BMP MAINTENANCE TASKS**
1. Emergency Maintenance shall be performed immediately after floods and other emergencies. Replanting and repairs to structures may be necessary. Obstructions and debris deposited should be removed immediately.
 2. Regularly remove debris and litter.
 3. Monitor BMP for sediment removal. Proper disposal of the sediment removed is required.
 4. Maintain a healthy ground cover in and around the BMP to promote stability and erosion control.
 5. Routinely inspect, exercise and provide preventative maintenance on all mechanical components.
 6. Vegetation Maintenance shall include inspection for distressed vegetation, bare spots, and fills. Treatment of these areas and revegetation shall be immediate to prevent spreading.
 7. Maintain a permanent pool of water to promote a healthy aquatic environment.
 8. Inspect and treat permanent pool for mosquitoes and other insects.
 9. Immediately after the wet detention basin is established. The plants on the vegetated shelf and perimeter of the basin should be watered twice weekly if needed, until the plants become established (commonly six weeks).
 10. No portion of the wet detention pond should be fertilized after the first initial fertilization that is required to establish the plants on the vegetated shelf.
 11. Stable groundcover should be maintained in the drainage area to reduce the sediment load to the wet detention basin.
 12. If the basin must be drained for an emergency or to perform maintenance, the flushing of sediment through the emergency drain should be minimized to the maximum extent practical.
 13. Once a year, a Professional Engineer should inspect the embankments.
 14. Dewatering Pump: Piranha P200- 2 HP, 180 gpm or equal

1 06/27/16 REVISED PER COMMENTS

NO. DATE REVISION

SHEET TITLE
SAND FILTER DETAIL SHEET

PROJECT
COTTON FLATS
 TOWN OF WAXHAW, UNION COUNTY, N.C.
 FOR: DHD VENTURES

SCALE
 1" = 20'

DATE
 7/24/15

DRAWN BY
 BTG

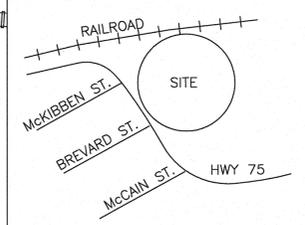
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 MAH

DRAWING NO.
249-36

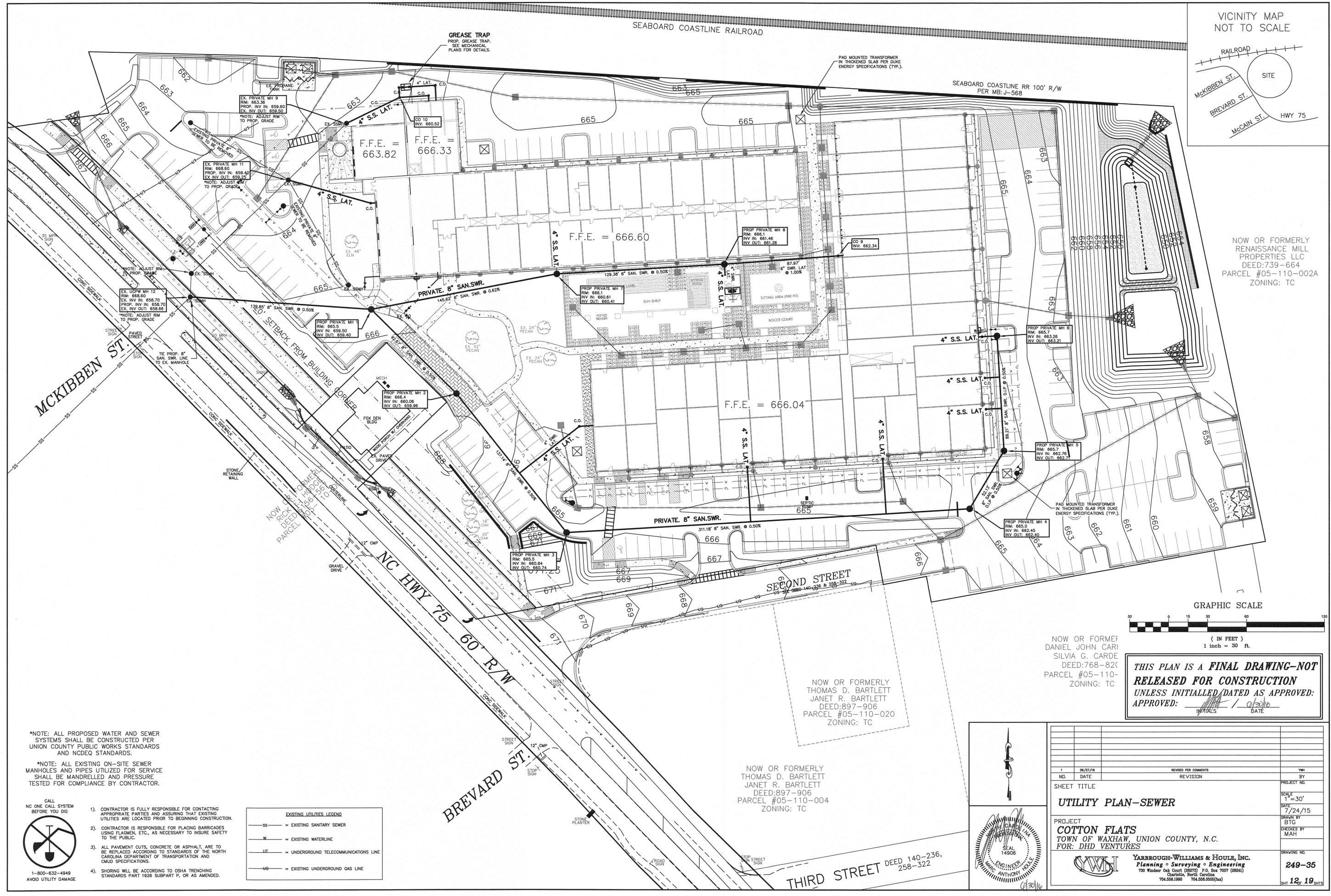
DATE
 11 OF 19 SHEETS

YARBROUGH-WILLIAMS & HOULE, INC.
 Planning • Surveying • Engineering
 730 Windsor Oak Court (28275) P.O. Box 7007 (28241)
 Charlotte, North Carolina
 704.558.1990 704.558.0505(fax)

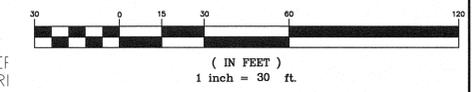
VICINITY MAP
NOT TO SCALE



NOW OR FORMERLY
RENAISSANCE MILL
PROPERTIES LLC
DEED: 739-664
PARCEL #05-110-002A
ZONING: TC



GRAPHIC SCALE



NOW OR FORMERLY
DANIEL JOHN CARI
SILVIA G. CARDE
DEED: 768-820
PARCEL #05-110-
ZONING: TC

NOW OR FORMERLY
THOMAS D. BARTLETT
JANET R. BARTLETT
DEED: 897-906
PARCEL #05-110-020
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DEED: 897-906
PARCEL #05-110-004
ZONING: TC

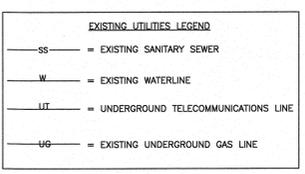
THIRD STREET DEED 140-236,
258-322

*NOTE: ALL PROPOSED WATER AND SEWER SYSTEMS SHALL BE CONSTRUCTED PER UNION COUNTY PUBLIC WORKS STANDARDS AND NCDEQ STANDARDS.

*NOTE: ALL EXISTING ON-SITE SEWER MANHOLES AND PIPES UTILIZED FOR SERVICE SHALL BE MANDRELLED AND PRESSURE TESTED FOR COMPLIANCE BY CONTRACTOR.

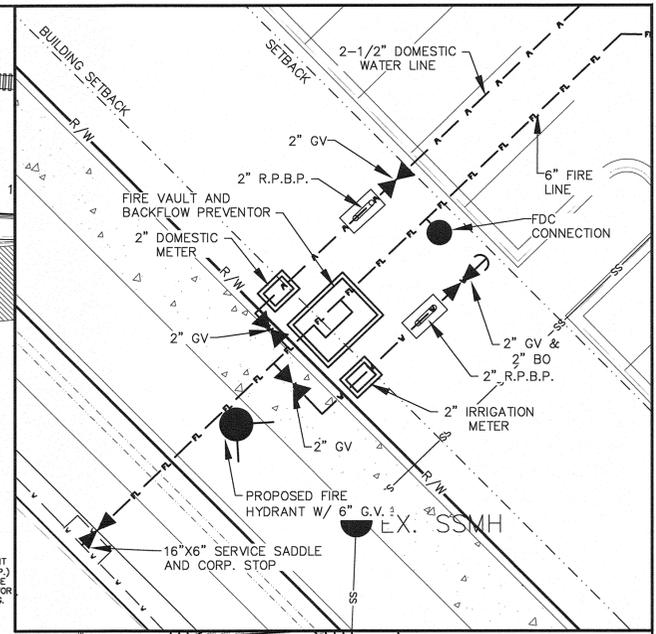
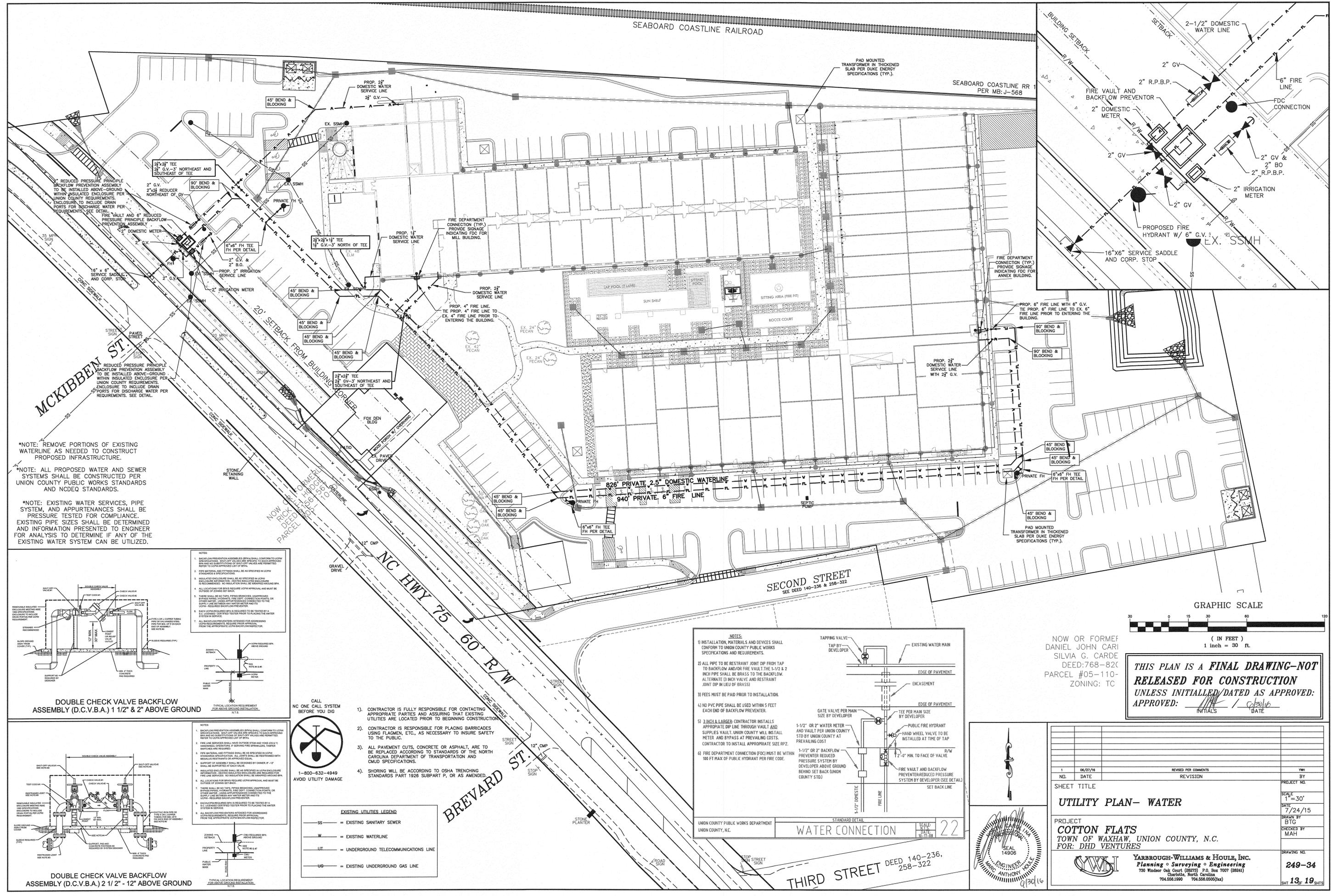


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APPROVED: [Signature] / [Signature] / 07/20/16
INITIALS DATE

1 06/27/16		REVISED PER COMMENTS	YWH
NO.	DATE	REVISION	BY
SHEET TITLE			PROJECT NO.
UTILITY PLAN—SEWER			SCALE 1"=30'
PROJECT			DATE 7/24/15
COTTON FLATS			DRAWN BY BTG
TOWN OF WAXHAW UNION COUNTY, N.C.			CHECKED BY MAH
FOR: DHD VENTURES			DRAWING NO. 249-35
YARBROUGH-WILLIAMS & HOULE, INC. Planning • Surveying • Engineering 780 Windsor Oak Court (28275) P.O. Box 7007 (28241) Charlotte, North Carolina 704.556.1990 704.556.0506(fax)			DATE 12, 19

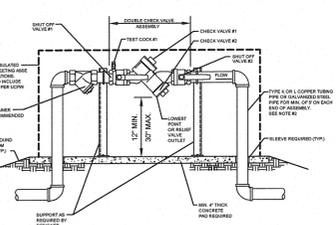


*NOTE: REMOVE PORTIONS OF EXISTING WATERLINE AS NEEDED TO CONSTRUCT PROPOSED INFRASTRUCTURE.

*NOTE: ALL PROPOSED WATER AND SEWER SYSTEMS SHALL BE CONSTRUCTED PER UNION COUNTY PUBLIC WORKS STANDARDS AND NCEQ STANDARDS.

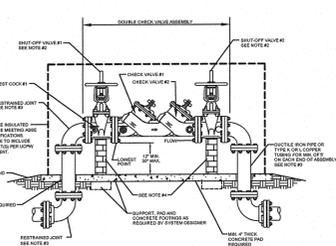
*NOTE: EXISTING WATER SERVICES, PIPE SYSTEM, AND APPURTENANCES SHALL BE PRESSURE TESTED FOR COMPLIANCE. EXISTING PIPE SIZES SHALL BE DETERMINED AND INFORMATION PRESENTED TO ENGINEER FOR ANALYSIS TO DETERMINE IF ANY OF THE EXISTING WATER SYSTEM CAN BE UTILIZED.

- NOTES:
1. BACKFLOW PREVENTION ASSEMBLIES SHALL CONFORM TO UPCW SPECIFICATIONS. ONLY UNIFORM VALVES AND PRESSURE RATED BRASS AND SUBSTITUTIONS OF SOLID COP VALVES ARE PERMITTED. REFER TO CONSTRUCTION SPECIFICATIONS FOR DETAILS.
 2. PIPE MATERIALS AND FITTINGS SHALL BE AS SPECIFIED IN UPCW SPECIFICATIONS.
 3. INSULATED ENCLOSURES SHALL BE AS SPECIFIED IN UPCW SPECIFICATIONS. UNPROTECTED OTHER WATER - USED APPURTENANCES CONNECTED TO THE SYSTEM SHALL BE WRAPPED WITH INSULATION.
 4. ALL LOCATIONS FOR ERV'S REQUIRE UPCW APPROVAL AND MUST BE OUTSIDE OF ZONING SETBACK.
 5. ERV'S SHALL BE NO TAP, PIPING BRANCHES, UNPROTECTED OTHER WATER - USED APPURTENANCES CONNECTED TO THE SYSTEM SHALL BE WRAPPED WITH INSULATION.
 6. EACH UNPROTECTED BRANCH IS REQUIRED TO BE TESTED BY A LICENSED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.
 7. ALL BACKFLOW PREVENTERS MUST BE TESTED FOR ADDRESSING CONFORMANCE REQUIREMENTS. REFER TO THE APPROPRIATE UPCW BACKFLOW PREVENTER SPECIFICATIONS.



DOUBLE CHECK VALVE BACKFLOW ASSEMBLY (D.C.V.B.A.) 1 1/2" & 2" ABOVE GROUND

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 4. ALL LOCATIONS FOR ERV'S REQUIRE UPCW APPROVAL AND MUST BE OUTSIDE OF ZONING SETBACK.
 5. ERV'S SHALL BE NO TAP, PIPING BRANCHES, UNPROTECTED OTHER WATER - USED APPURTENANCES CONNECTED TO THE SYSTEM SHALL BE WRAPPED WITH INSULATION.
 6. EACH UNPROTECTED BRANCH IS REQUIRED TO BE TESTED BY A LICENSED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.
 7. ALL BACKFLOW PREVENTERS MUST BE TESTED FOR ADDRESSING CONFORMANCE REQUIREMENTS. REFER TO THE APPROPRIATE UPCW BACKFLOW PREVENTER SPECIFICATIONS.

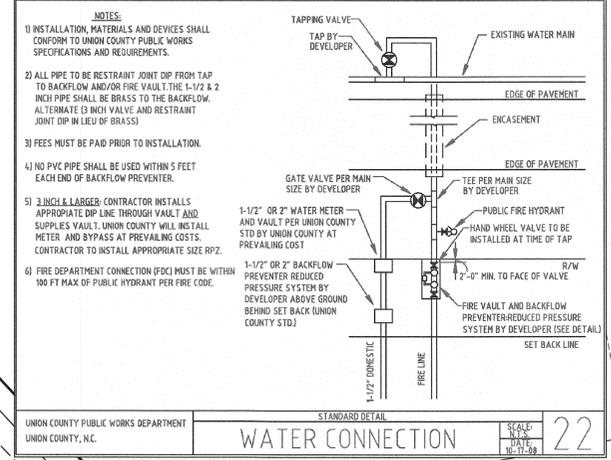
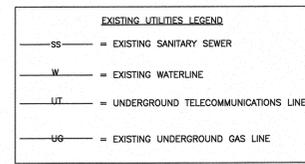


DOUBLE CHECK VALVE BACKFLOW ASSEMBLY (D.C.V.B.A.) 2 1/2" - 12" ABOVE GROUND

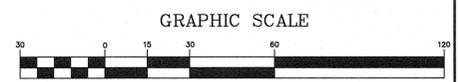


1-800-632-4949
AVOID UTILITY DAMAGE

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4. SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.



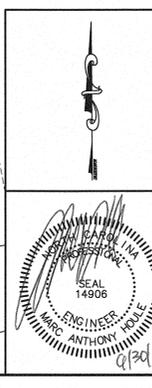
UNION COUNTY PUBLIC WORKS DEPARTMENT
UNION COUNTY, N.C.
STANDARD DETAIL
WATER CONNECTION
SCALE: 1" = 30'
22



NOW OR FORMER
DANIEL JOHN CARL
SILVIA G. CARDE
DEED: 768-820
PARCEL #05-110-
ZONING: TC

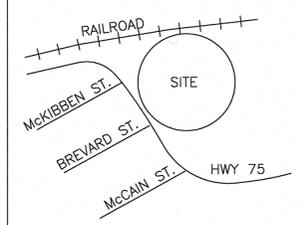
**THIS PLAN IS A FINAL DRAWING - NOT
RELEASED FOR CONSTRUCTION
UNLESS INITIALED/DATED AS APPROVED:**
APPROVED: [Signature] / [Signature]
INITIALS / DATE

SHEET TITLE		REVISION		YMH	
NO.	DATE	REVISION	BY	PROJECT NO.	SCALE
1	06/27/16				1" = 30'
PROJECT					
COTTON FLATS					
TOWN OF WAXHAW, UNION COUNTY, N.C.					
FOR: DHV VENTURES					
DRAWN BY: BTG					
CHECKED BY: MAH					
DRAWING NO.: 249-34					
SHEET 13 OF 19					



YARBROUGH-WILLIAMS & HOULE, INC.
Planning • Surveying • Engineering
780 Windsor Oak Court (28270) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.558.1990 704.558.0506(fax)

VICINITY MAP
NOT TO SCALE



TOTAL SITE AREA: 6.432 AC.
TOTAL DENUDED AREA: 7.93 AC.

LEGEND OF SYMBOLS

- DENUDED LIMIT
- CATCH BASIN PROTECTION
- ROCK CHECK DAM
- SILT FENCE
- GRAVEL & RIP RAP FILTER BERM BASIN
- DOUBLE SILT FENCE
- DIVERSION DITCH
- GRAVEL ENTRANCE
- TEMP. SKIMMER BASIN
- HIGH HAZARD SILT FENCE

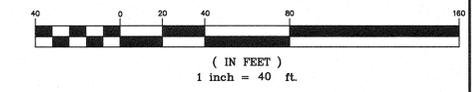
ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
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GRADING ONE ACRE OR MORE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE TOWN EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
ALL AREAS MUST BE SEEDED AND MULCHED WITHIN 21 CALENDAR DAYS. REFER TO EROSION CONTROL ORDINANCE FOR ADDITIONAL REQUIREMENTS.
ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE TOWN ENGINEERING DEPARTMENT.
A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING THAT WAS NOT PREVIOUSLY APPROVED. GEOTEXTILE FABRICS MUST BE PLACED UNDER ROCK WEIRS TO PREVENT BASIN BYPASSING.
FAILURE TO SCHEDULE AN ON-SITE MEETING WITH THE TOWN EROSION CONTROL COORDINATOR 48 HRS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 16 OF THE CITY CODE AND IS SUBJECT TO A FINE.
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ANY LAND DISTURBING ACTIVITY MORE THAN 1 ACRE REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (PERMIT NO. NC0010000). ANY PERMIT NONCOMPLIANCE IS A VIOLATION OF THE CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES. (FOR QUESTIONS CONTACT MOORESVILLE REGIONAL OFFICE WATER QUALITY STAFF AT 704-663-1699).
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DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT OF WAY, MUST BE PRESENTED AT PRECONSTRUCTION MEETING.

CALL NC ONE CALL SYSTEM BEFORE YOU DIG

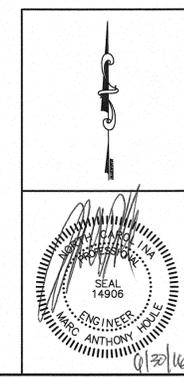
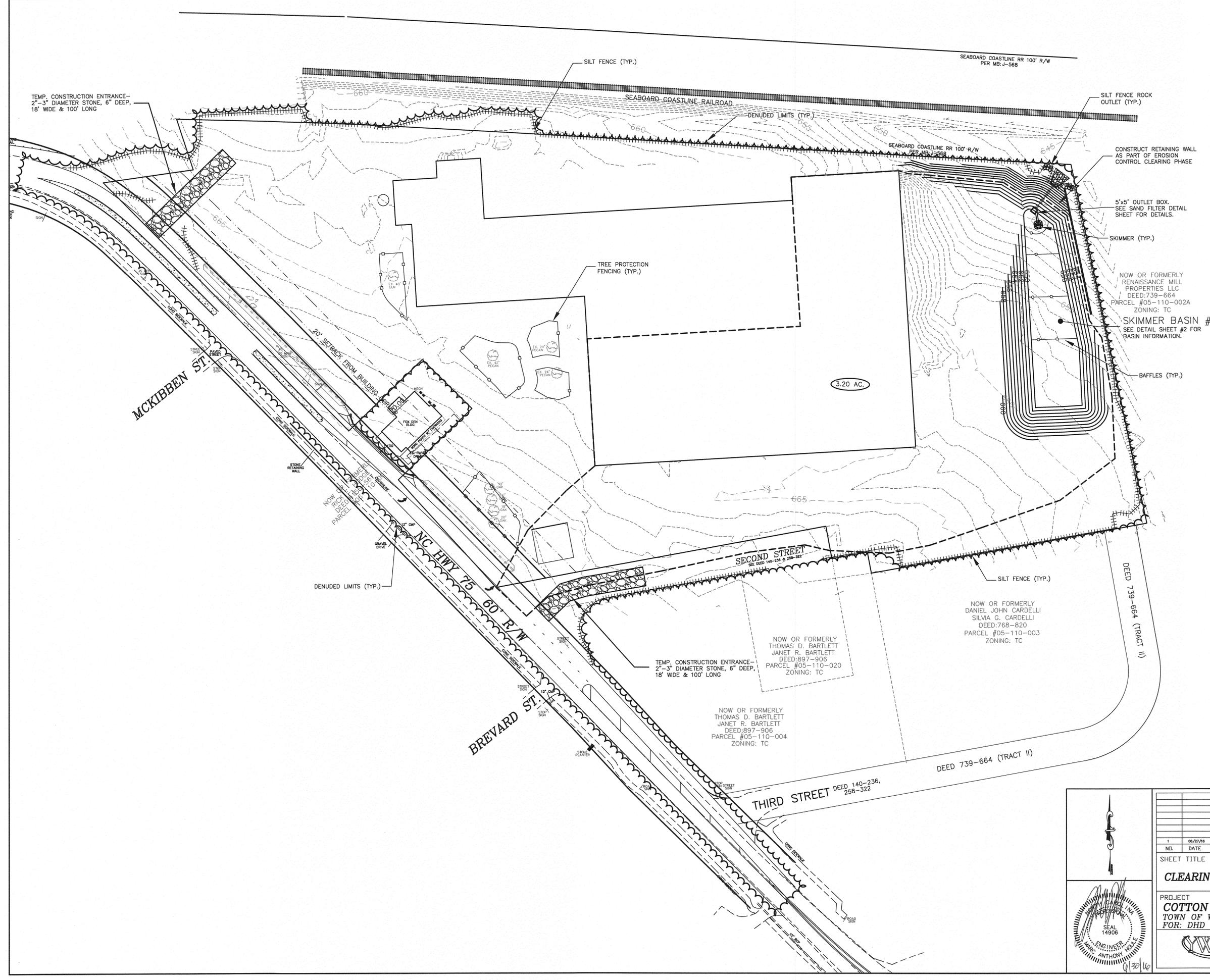
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GRAPHIC SCALE

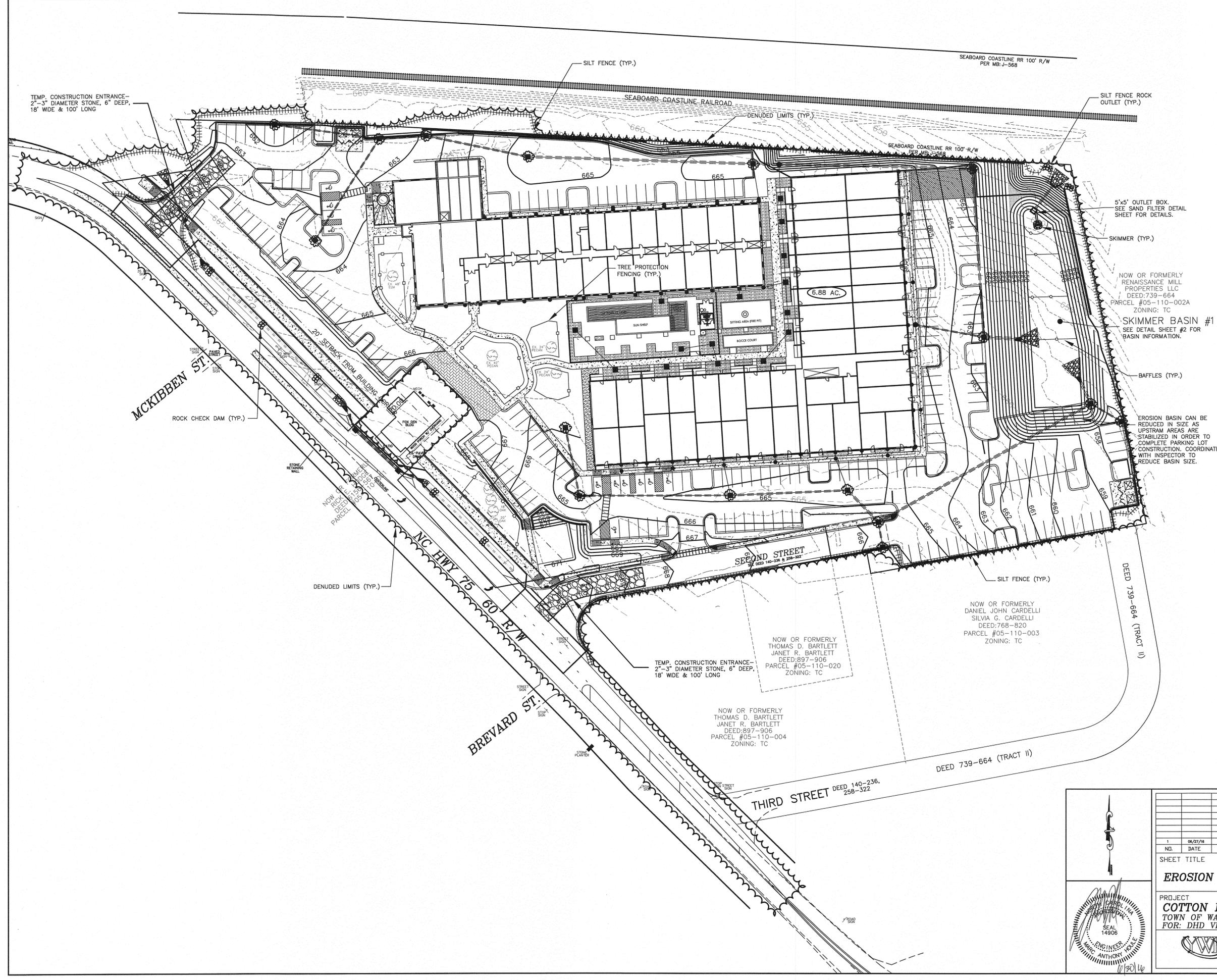
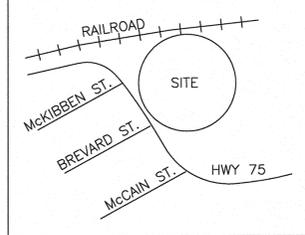


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APPROVED: / 07/24/15
INITIALS DATE



1	06/27/15	REVISION	YWH
NO.	DATE	REVISION	BY
SHEET TITLE			PROJECT NO.
CLEARING PHASE EROSION CONTROL PLAN			SCALE 1" = 40'
PROJECT			DATE 7/24/15
COTTON FLATS			DRAWN BY BTG
TOWN OF WAXHAW, UNION COUNTY, N.C.			CHECKED BY MAH
FOR: DHD VENTURES			DRAWING NO. 249-33
YARBROUGH-WILLIAMS & HOULE, INC. Planning • Surveying • Engineering 780 Windsor Oak Court (28270) P.O. Box 7007 (28241) Charlotte, North Carolina 704.558.1990 704.558.0505(fax)			SHEET 14 OF 15 SHEETS

VICINITY MAP
NOT TO SCALE



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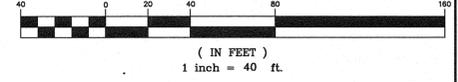
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GRAPHIC SCALE



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APPROVED: /
INITIALS / DATE

NO.	DATE	REVISION	YWH
1	06/27/16	REVISED PER COMMENTS	YWH

SHEET TITLE
EROSION CONTROL PLAN

PROJECT
COTTON FLATS
TOWN OF WAXHAW, UNION COUNTY, N.C.
FOR: DHD VENTURES

SCALE
1" = 40'

DATE
7/24/15

DRAWN BY
BTG

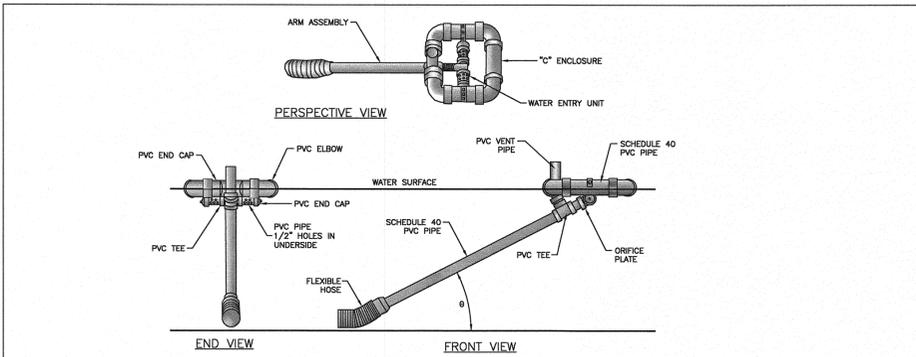
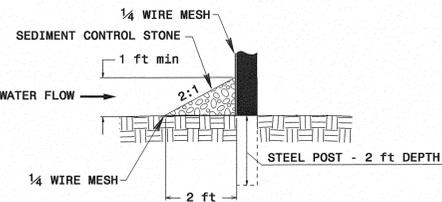
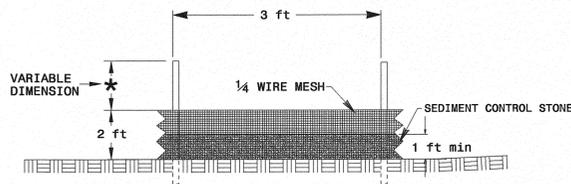
CHECKED BY
MAH

DRAWING NO.
249-32

DATE
15, 19

YARBROUGH-WILLIAMS & HOULE, INC.
Planning • Surveying • Engineering
730 Windsor Oak Court, (28279) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.558.1900 704.558.0505(fax)

GENERAL NOTES:
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.
USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH 1/4 INCH MESH OPENINGS.
INSTALL 5 FT. SELF FASTENER ANGLE STEEL POST 2 FT. DEEP MINIMUM.
SPACE POST A MAXIMUM OF 3 FT.



SKIMMER CONSTRUCTION SPECIFICATIONS
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. 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. Shape the basin to the specified dimensions. Prevent the skimming 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.

Place a 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 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. Core must be taken not to raise the pipe from the firm contact with its foundation when compacting under the pipe haunches. Place a minimum 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.

Assemble the skimmer following the manufacturers instructions, or as designed.

Lay the assembled skimmer on the bottom of the basin with the flexible joint at the inlet of the barrel pipe. Attach the flexible joint 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.

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 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 section(s) so that water cannot flow under the fabric. Secure the upper edge and sides of the fabric in a trench with staples or pins.

Inlets—Discharge water into the basin in a manner to prevent erosion. Use temporary slope drains or diversions with outlet protection to divert sedimentladen water to the upper end of the pool area to improve basin trap efficiency.

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.

Install porous baffles as specified in Practice 6.65, Porous Baffles.

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.

MAINTENANCE
Inspect skimmer sediment basins at least weekly and after each significant (one-half inch or greater) rainfall event and repair immediately. Remove sediment and restore 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.

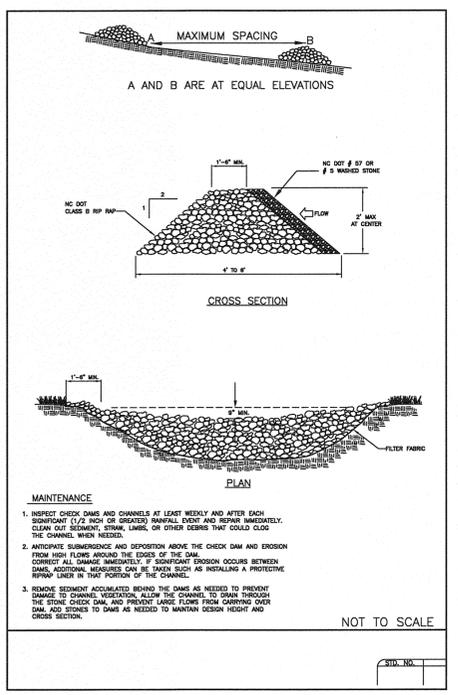
Repair the baffles if they are damaged. Re-anchor the baffles if water is flowing underneath or around them.

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.

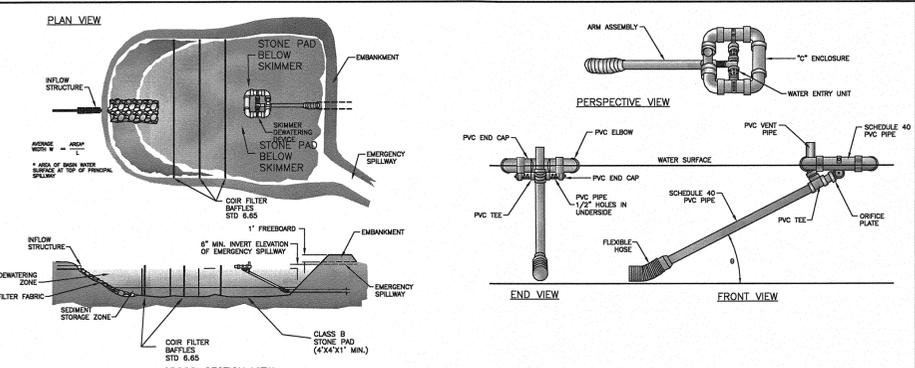
Freezing weather can result in ice forming in the basin. Some special precautions should be taken in the winter to prevent the skimmer from plugging with ice.



MAINTENANCE

1. INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STUMP, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNELS, WHEN NEEDED.
2. ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL.
3. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION. ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM AND PROVIDE LARGE FLOOD CHANNELS OVER THE DAM AND STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

NOT TO SCALE



6.64 SKIMMER SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS
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. 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. Shape the basin to the specified dimensions. Prevent the skimming 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.

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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.

SKIMMER BASIN - NCDENR STD. 6.64

SKIMMER BASIN NO.	DRAINAGE AREA (AC.)	DENUDED AREA (AC.)	Q10 (cfs)	REQUIRED STORAGE VOL. (CF)	STORAGE VOLUME (CF) PROVIDED	TOP OF STORAGE W(H) X L(F)	BOTTOM W(F) X L(F)	BASIN DIMENSIONS AT TOP OF DAM W(H) X L(F)	SPILLWAY WIDTH (FT)	HEAD (FT) AT SPILLWAY	BOTTOM ELEV.	TOP OF DAM ELEV.	SURFACE AREA (REQUIRED)	SURFACE AREA (ACTUAL)	SKIMMER DIAMETER (in.)	DEWATERING TIME (DAYS)
1	6.88	XXX	29.02	12,384	16,295	198' X 56'	186' X 40'	210' X 63'	16	0.5	650	654	9,431.45 SF	9,506.22 SF	2" W/ 2.0" ORIFICE	3

- NOTE:
- 1.) STOP STORM DRAINAGE ABOVE DIVERSION DITCHES AND SEDIMENT BASINS. SCHEDULE INSTALLATION OF REMAINING PIPE AFTER ROADS AND DENUDED AREAS HAVE BEEN STABILIZED AND SILT BASINS HAVE BEEN REMOVED.
 - 2.) SPILLWAY SIZE BASED ON $L = \frac{Q_{10}}{30}$ (MIN. SPILLWAY LENGTH = 10' ± 30 CFS)
 - 3.) INVERT OF BASIN IS THE MAXIMUM ELEVATION ALLOWED IN ORDER TO FUNCTION PROPERLY WITH THE STORM DRAINAGE SYSTEM. THIS ELEVATION MAY BE LOWERED BASED ON FIELD CONDITIONS.
 - 4.) TOP OF BERM DEPTH INCLUDES 1' FREEBOARD.
 - 5.) PLACE SILT FENCE AT TOE OF BERM FOR BASINS AND WRAP SILT FENCE TO BASIN OUTLETS. BERM SLOPES SHALL BE SEEDED UPON CONSTRUCTION OF BASINS.
 - 6.) SEDIMENT TRAPS AND BASINS SHALL BE STABILIZED IMMEDIATELY AFTER INSTALLATION.

THIS PLAN IS A FINAL DRAWING—NOT RELEASED FOR CONSTRUCTION UNLESS INITIALED/DATED AS APPROVED:
APPROVED: [Signature] / 02/20/16
INITIALS DATE

NO.		DATE		REVISION		BY	
SHEET TITLE							
DETAIL SHEET #2							
PROJECT							
COTTON FLATS TOWN OF WAXHAU, UNION COUNTY, N.C. FOR: DHJ DRAWINGS							
YARBROUGH-WILLIAMS & HOULE, INC. Planning & Surveying & Engineering 730 Windsor Oak Court (28273) P.O. Box 7007 (28241) Charlotte, North Carolina 704.558.1900 704.558.0506(fax)							
DRAWING NO.						249-30	
SHEET						17 OF 19 SHEETS	

Section 2721
Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

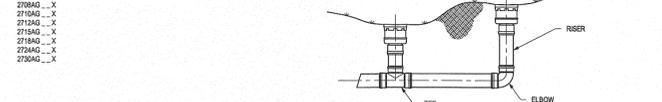
MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D2321 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F437. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The main material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D754-01H class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for sizes 6", 10", 12", 15", 18", 24" and 30" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A306 grade 70-50-05. Grates and covers shall be provided painted black.

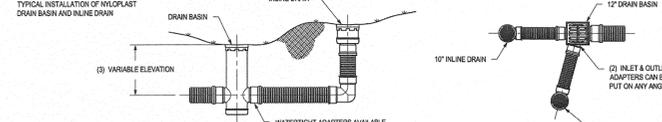
INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or class 2 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No back, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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DATE 4-10-10	PROJECT NO. 110-110-001	TITLE 8 IN. 30 IN. DRAIN BASIN SPECIFICATIONS	DWG NO. 700-110-011
REVISIONS	SCALE 1:1	SHEET 1 OF 1	REV. G

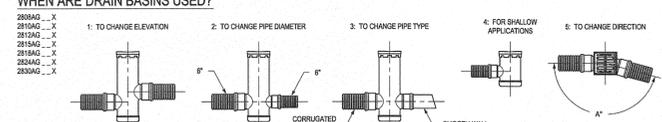
WHEN ARE INLINE DRAINS USED?



TYPICAL INSTALLATIONS



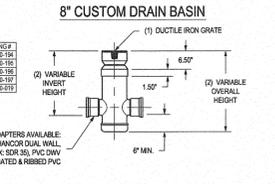
WHEN ARE DRAIN BASINS USED?



1 - STRUCTURES & ADAPTERS AVAILABLE IN SIZES 6" - 30"	THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONSTITUTE, IN WHOLE OR IN PART, A TRANSFER OF OR LICENSE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. ANY REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE OR REFERENCE, FOR THE DISCLOSURE TO OTHERS IS PROHIBITED, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.	DRAWN BY AWA	MATERIAL PVC	318 VERONA AVE BURLINGAME, CA 94010 PH (774) 882-2440 FAX (774) 882-2440 WWW.NYLOPLAST.COM
2 - ADAPTERS CAN BE INSTALLED ON ANY ANGLE UP TO 90°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 700-110-012	DATE 4-10-10	PROJECT NO. 110-110-001	TITLE 8 IN. 30 IN. TYPICAL INSTALLATION OPTIONS	DWG NO. 700-110-042
3 - SHOWN WHEN THE CUSTOMER WANTS ACCESS TO MAIN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 8" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 700-110-050	REVISIONS	SCALE 1:48	SHEET 1 OF 1	REV. D

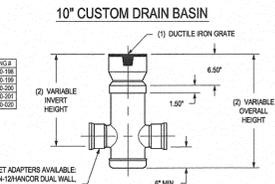
2808AG_X

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
STANDARD	LIGHT DUTY	1280000	700-110-104
STEEL COVER	LIGHT DUTY	1280000	700-110-104
BRIDGE	HEAVY	1280000	700-110-104
ROCK	N/A	1280000	700-110-104
FOR PAV. GRATE	LIGHT DUTY	1280000	700-110-104



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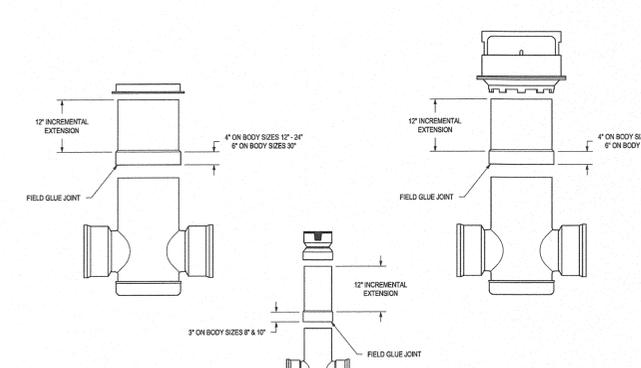
GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
STANDARD	LIGHT DUTY	1280000	700-110-104
STEEL COVER	LIGHT DUTY	1280000	700-110-104
BRIDGE	HEAVY	1280000	700-110-104
ROCK	N/A	1280000	700-110-104
FOR PAV. GRATE	LIGHT DUTY	1280000	700-110-104



- GRATE/STEEL COVER SHALL BE DUCTILE IRON PER ASTM A306 GRADE 70-50-05 WITH THE EXCEPTION OF THE BRIDGE GRATE.
- CUSTOM DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO MAIN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 8" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 700-110-050.
- DRAINAGE CONNECTION TO EXISTING LINE SHALL CONFORM TO ASTM D2321 FOR CORRUGATED HOPE (ADS IN 12" HANCOCK DUAL WALL & ADS-HANCOCK SINGLE WALL, PVC SEWER (EX. SER. 30), PVC DWV (EX. SCH 40), PVC CORRUGATED CORRUGATED & RIBBED PVC.
- STANDARD DRAIN BASIN HAS FIXED ADAPTER LOCATIONS OF 4" & 8" MIN. CUSTOM DRAIN BASIN ADAPTERS CAN BE INSTALLED ON ANY ANGLE UP TO 90°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 700-110-012.
- ADAPTERS CAN BE INSTALLED ON ANY ANGLE UP TO 90°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 700-110-012.
- DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.

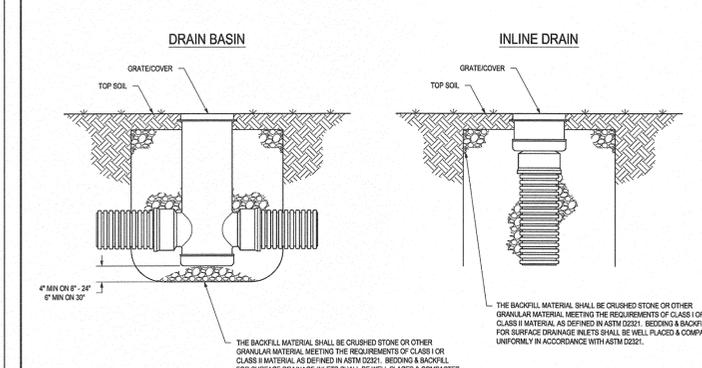
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DATE 4-11-10	PROJECT NO. 110-110-001	TITLE 8 IN. 30 IN. DRAIN BASIN DESIGN DETAILS	DWG NO. 700-110-045
REVISIONS	SCALE N/A	SHEET 1 OF 1	REV. G

NYLOPLAST RISER EXTENSION: 29 _ _ AG



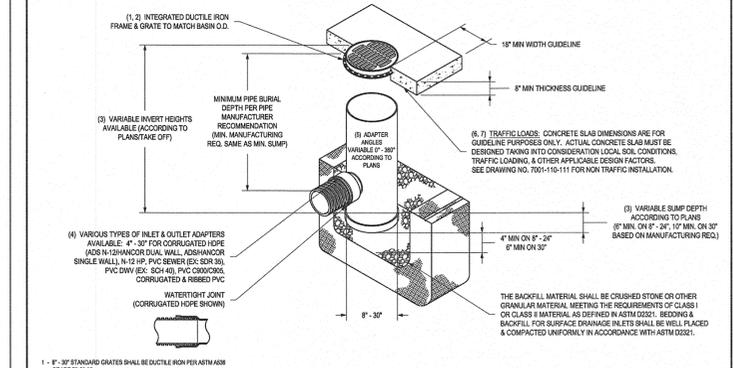
1. NYLOPLAST RISER JOINTS SHALL BE FIELD INSTALLED USING THE GUIDELINES OUTLINED IN ASTM D2321.	THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONSTITUTE, IN WHOLE OR IN PART, A TRANSFER OF OR LICENSE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. ANY REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE OR REFERENCE, FOR THE DISCLOSURE TO OTHERS IS PROHIBITED, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.	DRAWN BY CJA	MATERIAL PVC	318 VERONA AVE BURLINGAME, CA 94010 PH (774) 882-2440 FAX (774) 882-2440 WWW.NYLOPLAST.COM
2. PVC CEMENT USED SHALL MEET THE REQUIREMENTS OF ASTM D2321.	DATE 4-10-10	PROJECT NO. 110-110-001	TITLE 8 IN. 30 IN. RISER EXTENSION	DWG NO. 700-110-048
3. PVC PRIMER USED SHALL MEET THE REQUIREMENTS OF ASTM F855.	REVISIONS	SCALE 1:30	SHEET 1 OF 1	REV. D

NON TRAFFIC INSTALLATION



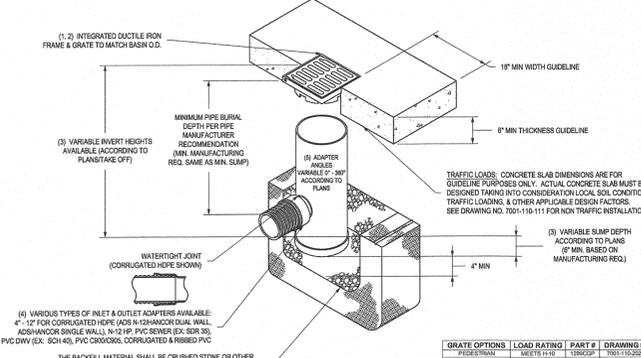
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DATE 4-10-10	PROJECT NO. 110-110-001	TITLE 8 IN. 30 IN. NON TRAFFIC INSTALLATION	DWG NO. 700-110-111
REVISIONS	SCALE 1:24	SHEET 1 OF 1	REV. D

NYLOPLAST DRAIN BASIN WITH STANDARD GRATE



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DATE 1-23-11	PROJECT NO. 110-110-001	TITLE 8 IN. 30 IN. DRAIN BASIN WITH STANDARD GRATE	DWG NO. 700-110-144
REVISIONS	SCALE 1:48	SHEET 1 OF 1	REV. G

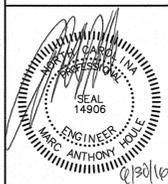
NYLOPLAST 12" DRAIN BASIN: 2812AG _ _ X



1. GRATE/STEEL COVER SHALL BE DUCTILE IRON PER ASTM A306 GRADE 70-50-05 WITH THE EXCEPTION OF THE BRIDGE GRATE.	THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONSTITUTE, IN WHOLE OR IN PART, A TRANSFER OF OR LICENSE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. ANY REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE OR REFERENCE, FOR THE DISCLOSURE TO OTHERS IS PROHIBITED, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.	DRAWN BY CJA	MATERIAL PVC	318 VERONA AVE BURLINGAME, CA 94010 PH (774) 882-2440 FAX (774) 882-2440 WWW.NYLOPLAST.COM
2. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO MAIN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 8" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 700-110-050.	DATE 4-10-10	PROJECT NO. 110-110-001	TITLE 12 IN. DRAIN BASIN GRATE SPEC. INSTALLATION DETAIL	DWG NO. 700-110-109
3. DRAINAGE CONNECTION TO EXISTING LINE SHALL CONFORM TO ASTM D2321 FOR CORRUGATED HOPE (ADS IN 12" HANCOCK DUAL WALL & ADS-HANCOCK SINGLE WALL, PVC SEWER (EX. SER. 30), PVC DWV (EX. SCH 40), PVC CORRUGATED CORRUGATED & RIBBED PVC.	REVISIONS	SCALE 1:30	SHEET 1 OF 1	REV. D

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APPROVED: [Signature] / [Signature]
INITIALS / DATE

NO.	DATE	REVISION	BY
SHEET TITLE			PROJECT NO.
DETAIL SHEET #4			SCALE N.T.S.
PROJECT COTTON FLATS TOWN OF WAXHAU, UNION COUNTY, N.C. FOR: DHD VENTURES			DATE 7/24/15
DRAWN BY BTG			CHECKED BY MAH
DRAWING NO.			249-28
SHT. 19, 19S			

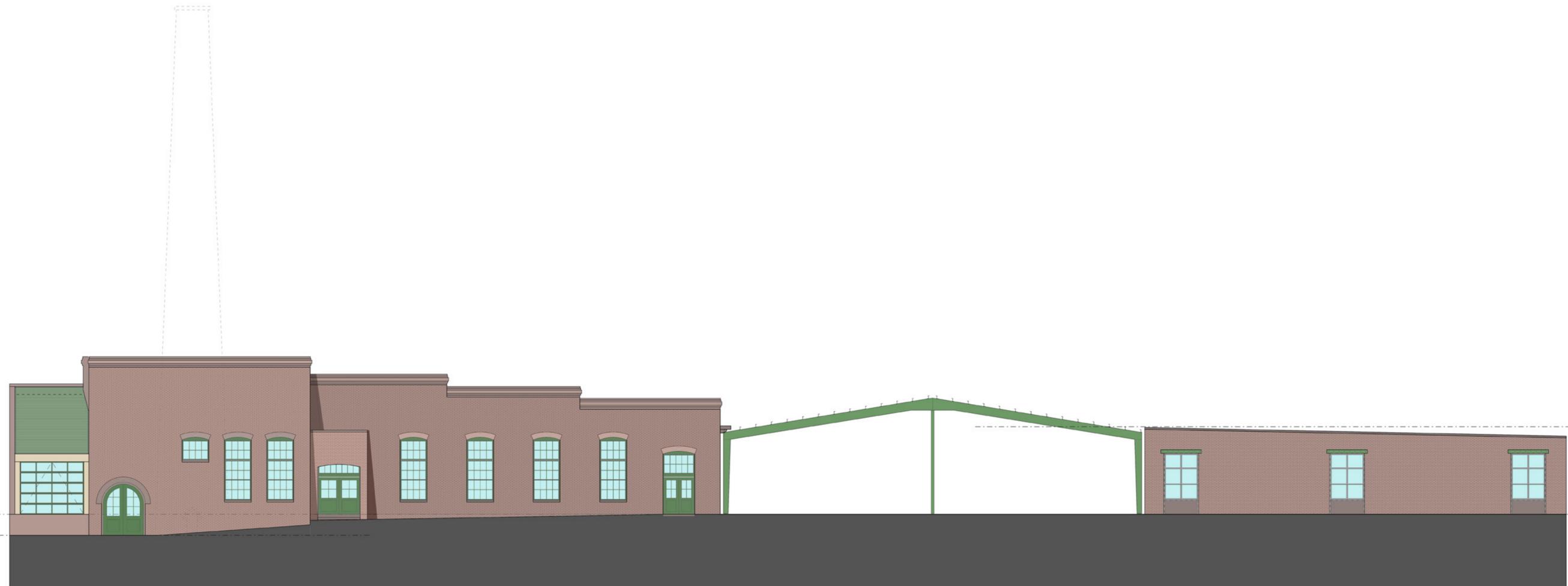


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704.558.1990 704.558.0505(fax)

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FRONT ELEVATION MAIN MILL AND ANNEX



REAR ELEVATION ANNEX BUILDING (SIDE SIMILAR)

 <p>JONES PIERCE 553-3 AMSTERDAM AVENUE ATLANTA, GA 30306 404.688.1050</p>		<p>Seal</p>		<p>Project</p>		<p>Drawing Title</p>	
		<p>568 HWY 75 (E SOUTH MAIN STREET) WASBAH, NC 28173</p>		<p>ELEVATIONS</p>			
<p>No. 1 REVISIONS/SUBMISSIONS</p>		<p>Date 12/4/2015</p>		<p>Project No. 15085</p>		<p>Drawing No.</p>	
<p>1 DEMOLITION SET (GENERAL BUILDING/SITE)</p>		<p>Date 12/4/2015</p>		<p>Release</p>		<p>Scale 1/8" = 1' 0"</p>	
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