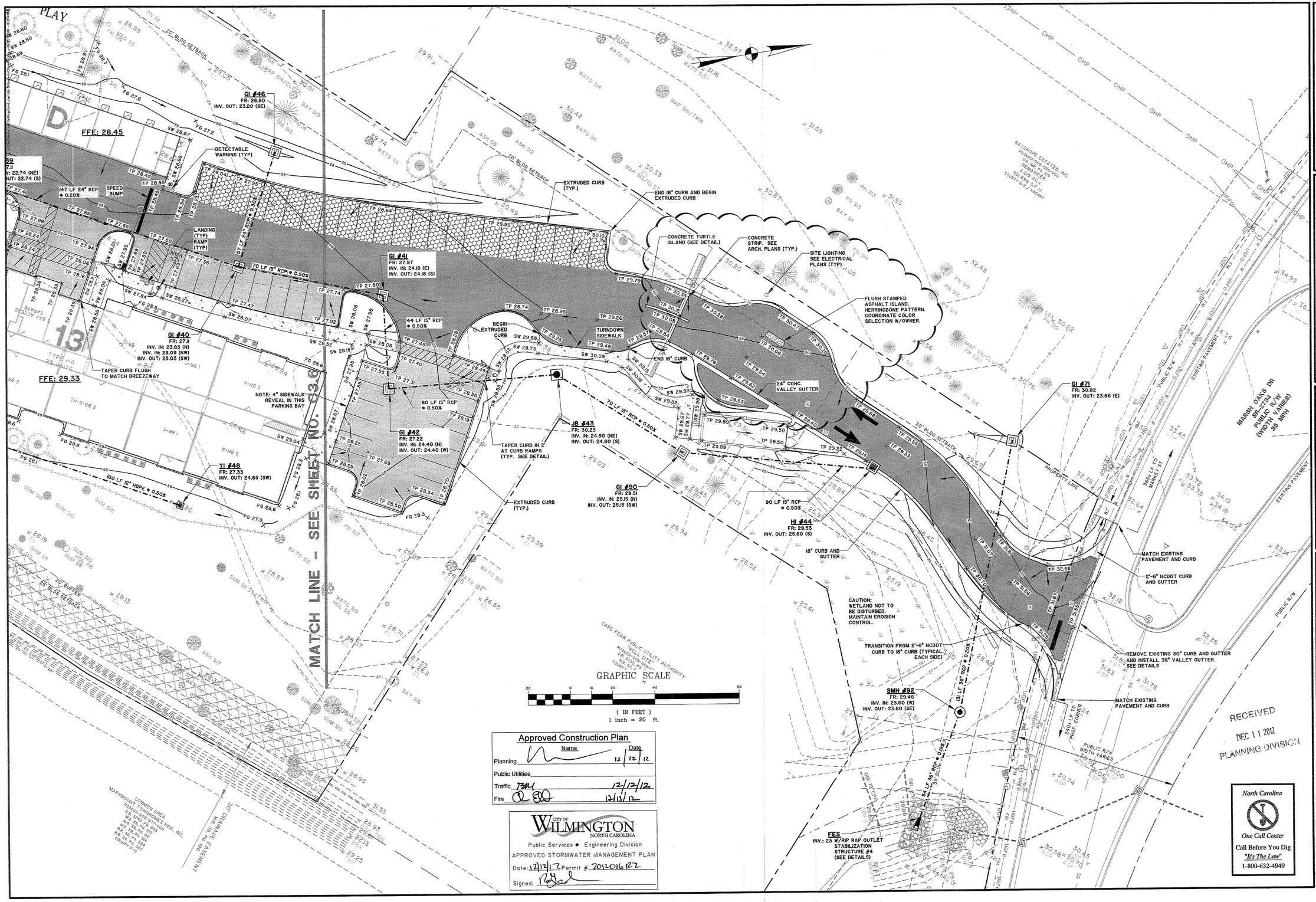

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Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016 R2
Signed:

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NORTH CAROLINA PROFESSIONAL SEAL 019871 ENGINEER JAMES D. HOLTON
NORTH CAROLINA PROFESSIONAL SEAL 12/05/12 ENGINEER JAMES D. HOLTON

NO.	BY	DATE
14	SEE REVISION SUMMARY ON SHEET G1.0	BDR 12/05/12
13	ADD LABEL FOR STORM MH #92 & UPSTREAM PIPE	BDR 09/13/12
12	ADD PREVIOUS REVISIONS TO SHEET G1.0	BDR 09/27/12
6	REVISE COMPACTION BY ADDING & DRAINAGE	BDR 05/18/12
4	SEE REVISION SUMMARY ON SHEET G1.0	BDR 04/23/12
1	SEE REVISION SUMMARY ON SHEET G1.0	BDR 01/23/12

REVISIONS

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Wilmington, NC 28403 • 910.332.3360
www.thomasandhutton.com
Savannah, GA | Brunswick, GA | Charleston, SC | Myrtle Beach, SC

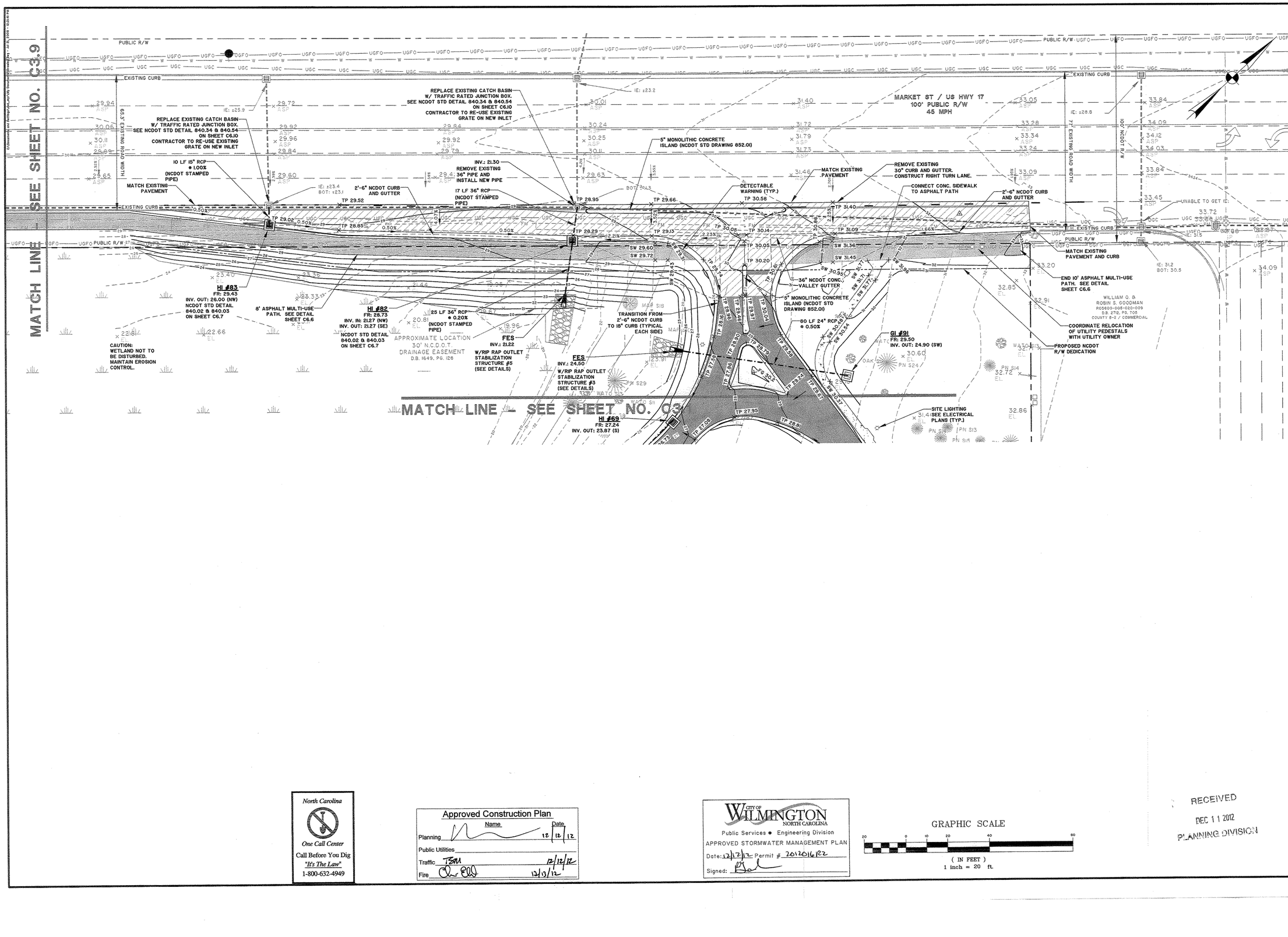
FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC

AMBERLEIGH SHORES

GRADING AND DRAINAGE PLAN

JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 20'

C3.7



NO.	REVISIONS	BY	DATE
2	ADD PREVIOUS REVISION NOTES	BDR	08/27/12
4	SEE REVISION SUMMARY ON SHEET G1.0	BDR	04/23/12
1	SEE REVISION SUMMARY ON SHEET G1.0	BDR	01/25/12

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AMBERLEIGH SHORES

GRADING AND DRAINAGE PLAN

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DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 20'

C3.8

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	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TBM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/17/12 Permit # 201201622
Signed:

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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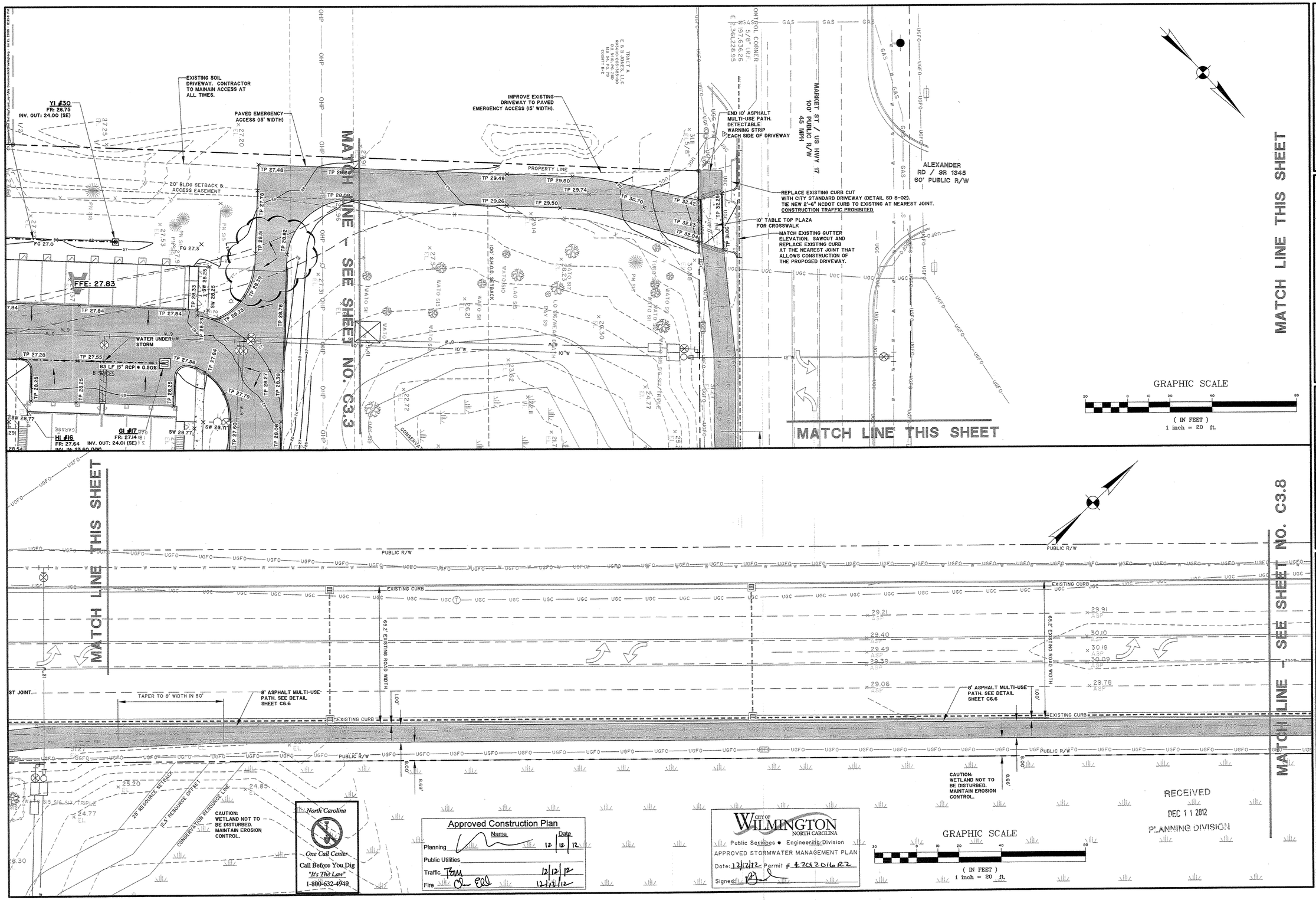

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Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/12/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 4201201622
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NORTH CAROLINA PROFESSIONAL SEAL 28179 JAMES D. WHITAKER
12/05/12

NO.	REVISIONS	BY	DATE
14	DELETE CONCRETE STRIP AT EMERGENCY GATE.	BDR	12/05/12
12	ADD PREVIOUS REVISION NOTES	BDR	08/27/12
10	REDUSE EMERGENCY ACCESS DRIVEWAY LOCATION	BDR	07/30/12
9	REDUSE EMERGENCY ACCESS SPOT GRADES.	BDR	07/03/12
8	SEE REVISION SUMMARY ON SHEET 8.0	BDR	06/18/12
6	SEE REVISION SUMMARY ON SHEET 8.0	BDR	04/23/12

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AMBERLEIGH SHORES

GRADING AND DRAINAGE PLAN

JOB NO:	J-22667
DATE:	11/15/11
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APPROVED:	JDR
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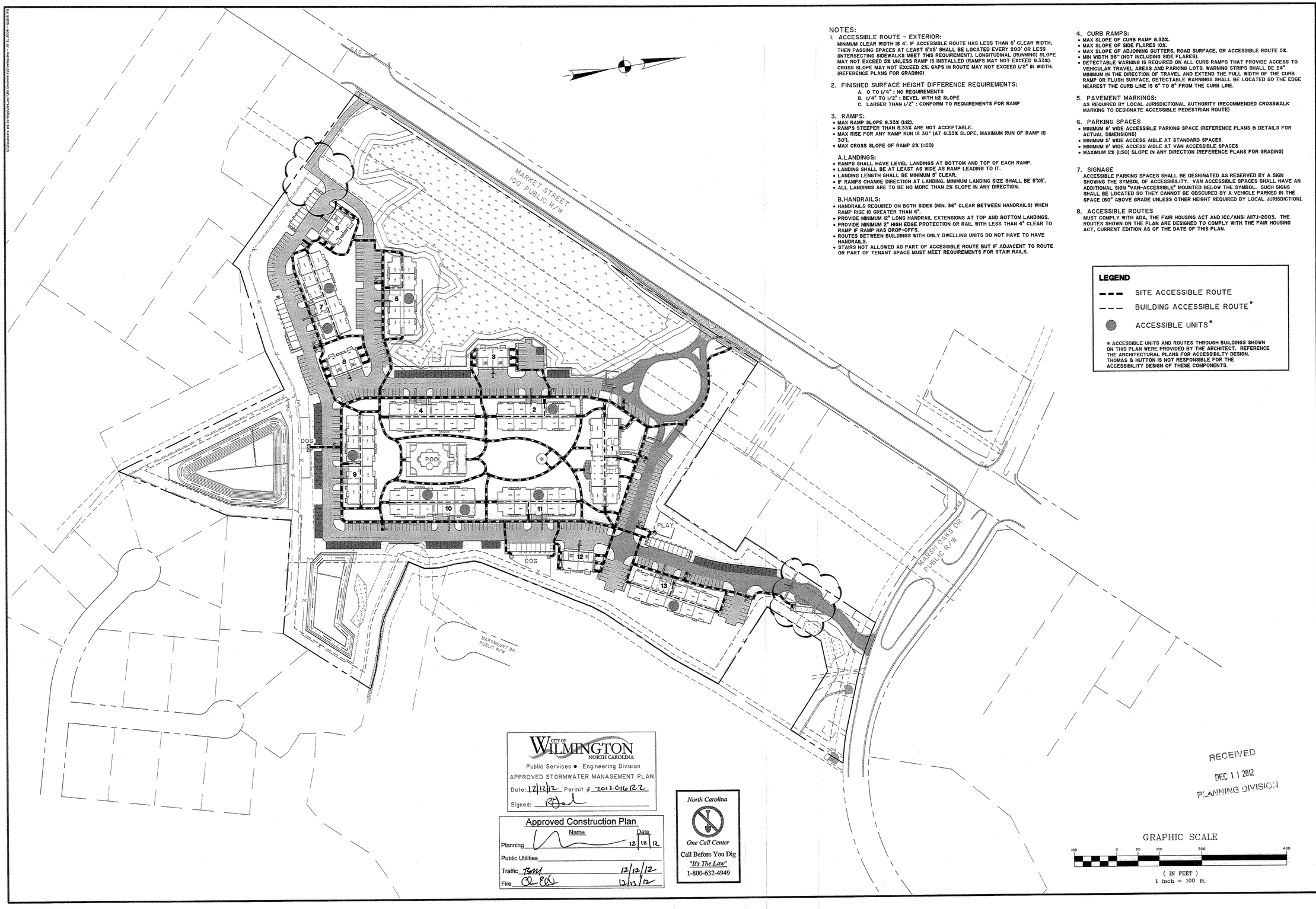
C3.9



NOTES:

1. ACCESSIBLE ROUTE - EXTERIOR:
   MINIMUM CLEAR WIDTH IS 4'. IF ACCESSIBLE ROUTE HAS LESS THAN 5' CLEAR WIDTH, THEN PASSING SPACES AT LEAST 5'X5' SHALL BE LOCATED EVERY 200' OR LESS (INTERSECTING SIDEWALKS MEET THIS REQUIREMENT). LONGITUDINAL (RUNNING) SLOPE MAY NOT EXCEED 5% UNLESS RAMP IS INSTALLED (RAMPS MAY NOT EXCEED 8.33%). CROSS SLOPE MAY NOT EXCEED 2%. GAPS IN ROUTE MAY NOT EXCEED 1/2" IN WIDTH. (REFERENCE PLANS FOR GRADING)

2. FINISHED SURFACE HEIGHT DIFFERENCE REQUIREMENTS:
   A. 0 TO 1/4" : NO REQUIREMENTS
   B. 1/4" TO 1/2" : BEVEL WITH 1:2 SLOPE
   C. LARGER THAN 1/2" : CONFORM TO REQUIREMENTS FOR RAMP

3. RAMPS:
   - MAX RAMP SLOPE 8.33% (1:12).
   - RAMPS STEEPER THAN 8.33% ARE NOT ACCEPTABLE.
   - MAX RISE FOR ANY RAMP RUN IS 30" (AT 8.33% SLOPE, MAXIMUM RUN OF RAMP IS 30').
   - MAX CROSS SLOPE OF RAMP 2% (1:50)

   A. LANDINGS:
   - RAMPS SHALL HAVE LEVEL LANDINGS AT BOTTOM AND TOP OF EACH RAMP.
   - LANDING SHALL BE AT LEAST AS WIDE AS RAMP LEADING TO IT.
   - LANDING LENGTH SHALL BE MINIMUM 5' CLEAR.
   - IF RAMPS CHANGE DIRECTION AT LANDING, MINIMUM LANDING SIZE SHALL BE 5'X5'.
   - ALL LANDINGS ARE TO BE NO MORE THAN 2% SLOPE IN ANY DIRECTION.

   B. HANDRAILS:
   - HANDRAILS REQUIRED ON BOTH SIDES (MIN. 36" CLEAR BETWEEN HANDRAILS) WHEN RAMP RISE IS GREATER THAN 6".
   - PROVIDE MINIMUM 12" LONG HANDRAIL EXTENSIONS AT TOP AND BOTTOM LANDINGS.
   - PROVIDE MINIMUM 2" HIGH EDGE PROTECTION OR RAIL WITH LESS THAN 4" CLEAR TO RAMP IF RAMP HAS DROP-OFFS.
   - ROUTES BETWEEN BUILDINGS WITH ONLY DWELLING UNITS DO NOT HAVE TO HAVE HANDRAILS.
   - STAIRS NOT ALLOWED AS PART OF ACCESSIBLE ROUTE BUT IF ADJACENT TO ROUTE OR PART OF TENANT SPACE MUST MEET REQUIREMENTS FOR STAIR RAILS.

4. CURB RAMPS:
   - MAX SLOPE OF CURB RAMP 8.33%.
   - MAX SLOPE OF SIDE FLARES 10%.
   - MAX SLOPE OF ADJOINING GUTTERS, ROAD SURFACE, OR ACCESSIBLE ROUTE 5%.
   - MIN WIDTH 36" (NOT INCLUDING SIDE FLARES).
   - DETECTABLE WARNING IS REQUIRED ON ALL CURB RAMPS THAT PROVIDE ACCESS TO VEHICULAR TRAVEL AREAS AND PARKING LOTS. WARNING STRIPS SHALL BE 24" MINIMUM IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. DETECTABLE WARNINGS SHALL BE LOCATED SO THE EDGE NEAREST THE CURB LINE IS 6" TO 8" FROM THE CURB LINE.

5. PAVEMENT MARKINGS:
   AS REQUIRED BY LOCAL JURISDICTIONAL AUTHORITY (RECOMMENDED CROSSWALK MARKING TO DESIGNATE ACCESSIBLE PEDESTRIAN ROUTE)

6. PARKING SPACES
   - MINIMUM 8' WIDE ACCESSIBLE PARKING SPACE (REFERENCE PLANS & DETAILS FOR ACTUAL DIMENSIONS)
   - MINIMUM 5' WIDE ACCESS AISLE AT STANDARD SPACES
   - MINIMUM 8' WIDE ACCESS AISLE AT VAN ACCESSIBLE SPACES
   - MAXIMUM 2% (1:50) SLOPE IN ANY DIRECTION (REFERENCE PLANS FOR GRADING)

7. SIGNAGE
   ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED BY A SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. VAN ACCESSIBLE SPACES SHALL HAVE AN ADDITIONAL SIGN "VAN-ACCESSIBLE" MOUNTED BELOW THE SYMBOL. SUCH SIGNS SHALL BE LOCATED SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE (60" ABOVE GRADE UNLESS OTHER HEIGHT REQUIRED BY LOCAL JURISDICTION).

8. ACCESSIBLE ROUTES
   MUST COMPLY WITH ADA, THE FAIR HOUSING ACT AND ICC/ANSI A117.1-2003. THE ROUTES SHOWN ON THE PLAN ARE DESIGNED TO COMPLY WITH THE FAIR HOUSING ACT, CURRENT EDITION AS OF THE DATE OF THIS PLAN.

LEGEND

- - - - SITE ACCESSIBLE ROUTE
- - - - BUILDING ACCESSIBLE ROUTE*
● ACCESSIBLE UNITS*

* ACCESSIBLE UNITS AND ROUTES THROUGH BUILDINGS SHOWN ON THIS PLAN WERE PROVIDED BY THE ARCHITECT. REFERENCE THE ARCHITECTURAL PLANS FOR ACCESSIBILITY DESIGN. THOMAS & HUTTON IS NOT RESPONSIBLE FOR THE ACCESSIBILITY DESIGN OF THESE COMPONENTS.

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016022
Signed:

Approved Construction Plan

	Name	Date
Planning		12/12/12
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NORTH CAROLINA PROFESSIONAL SEAL — THOMAS & HUTTON ENGINEERING CO. — CERTIFICATE OF AUTHORITY No. F-0871 — JACK D. REEVES, III

NO.	BY	DATE	REVISIONS
14	BDR	12/05/12	SEE PLAN REVISON SUMMARY SHEET 6.0
12	BDR	09/27/12	SEE PLAN REVISON SUMMARY SHEET 6.0
11	BDR	09/07/12	SEE PLAN REVISON SUMMARY SHEET 6.0
10	BDR	07/24/12	SEE PLAN REVISON SUMMARY SHEET 6.0
9	BDR	07/20/12	SEE PLAN REVISON SUMMARY SHEET 6.0
6	BDR	05/18/12	SEE PLAN REVISON SUMMARY SHEET 6.0
4	BDR	04/23/12	SEE REVISION SUMMARY ON SHEET 6.0
1	BDR	02/29/12	SEE REVISION SUMMARY ON SHEET 6.0

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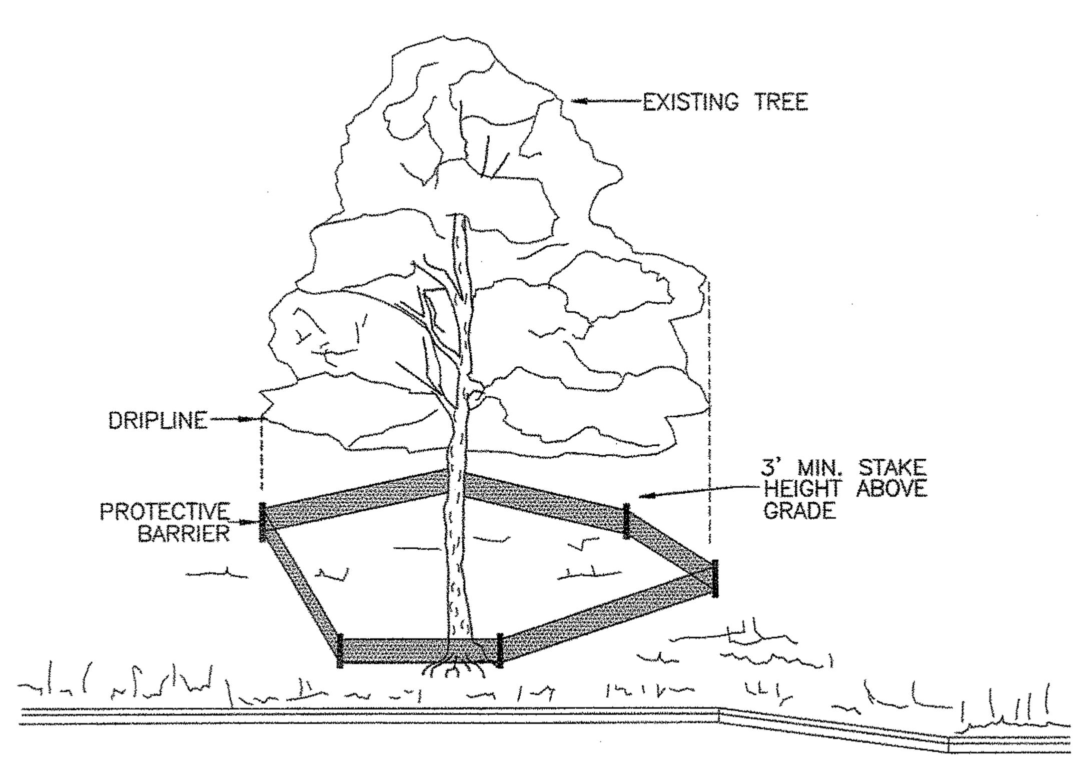
AMBERLEIGH SHORES

ACCESSIBLE ROUTE PLAN

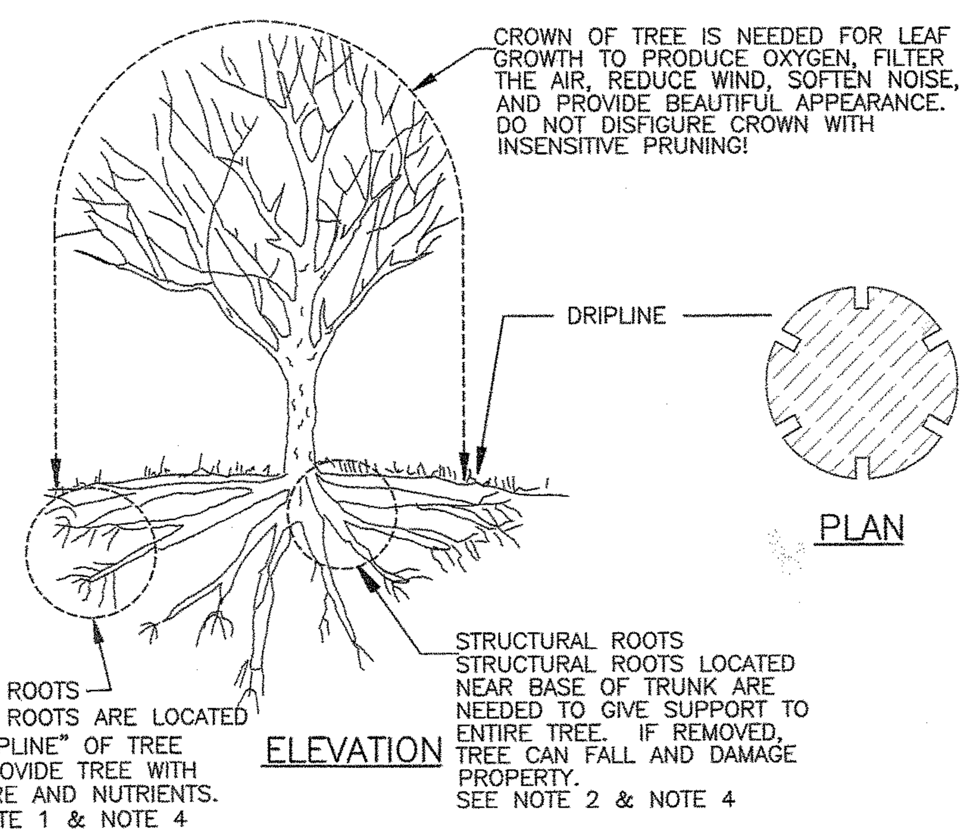
JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 100'

C5.0



NOTE:
TREES TO BE SAVED WILL BE CLEARLY MARKED PRIOR TO CONSTRUCTION AND A PROTECTIVE BARRIER IS TO BE INSTALLED AT THE DRIPLINE.
DRIP LINE – THE AREA OF SOIL DIRECTLY BENEATH THE TREE EXTENDING OUT TO THE TIPS OF THE OUTERMOST BRANCHES.
ALL CONTRACTORS MUST RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
NO EQUIPMENT OR STAGING OF MATERIALS IS ALLOWED WITHIN THE PROTECTED ZONE OF TREES TO BE SAVED.

METHOD OF TREE PROTECTION DURING CONSTRUCTION
SD 15–08
NOT TO SCALE



TREE PROTECTION DURING CONSTRUCTION

1. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO HEAVY MATERIALS SHALL BE STORED BENEATH TREES. RESULTS OF COMPACTION CAUSE WATER AND AIR NOT TO REACH THE ROOTS AND THE TREE WILL DIE. THESE "FEEDING ROOTS" OCCUR WELL AWAY FROM THE BASE OF THE TREE TO THE EDGE OF THE OVERHEAD BRANCH CANOPY. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. APROTECTIVE BARRIER SHOULD PREVENT DAMAGE FROM OCCURING DURING CONSTRUCTION.
2. NO CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK. THESE ARE ESSENTIAL IN SUPPORTING THE TREE AND HOLDING IT UPRIGHT IN HIGH WINDS. REMOVAL OF THESE ROOTS ALONG ONE SIDE IS OFTEN DONE BECAUSE OF A WALK, PAVING OR BUILDING WHICH IS BEING CONSTRUCTED.
3. AVOID CUT AND FILL WITHIN DIAMETER OF TREE CROWN DURING EXCAVATION.
4. MAINTAIN PROTECTIVE FENCING THROUGHOUT CONSTRUCTION.
5. ALL CONTRACTORS MUST RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
6. NO EQUIPMENT OR STAGING OF MATERIALS IS ALLOWED WITHIN THE PROTECTED ZONE OF TREES TO BE SAVED.

METHOD OF TREE PROTECTION DURING CONSTRUCTION
SD 15–09
NOT TO SCALE

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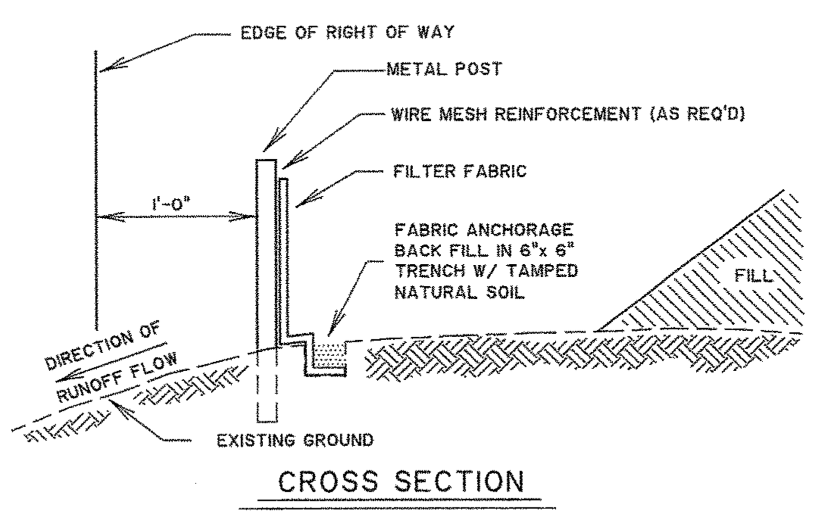
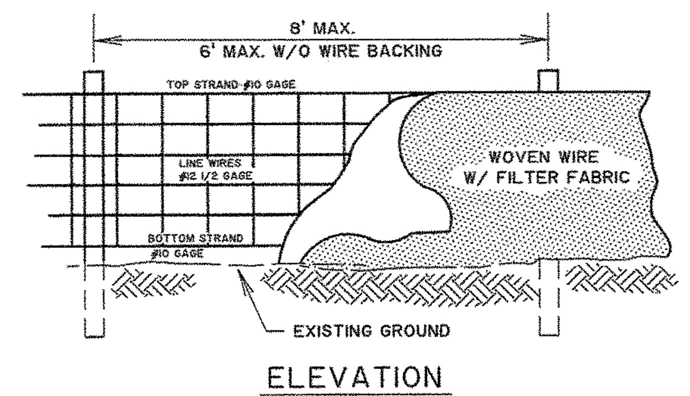
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016R2
Signed: [signature]



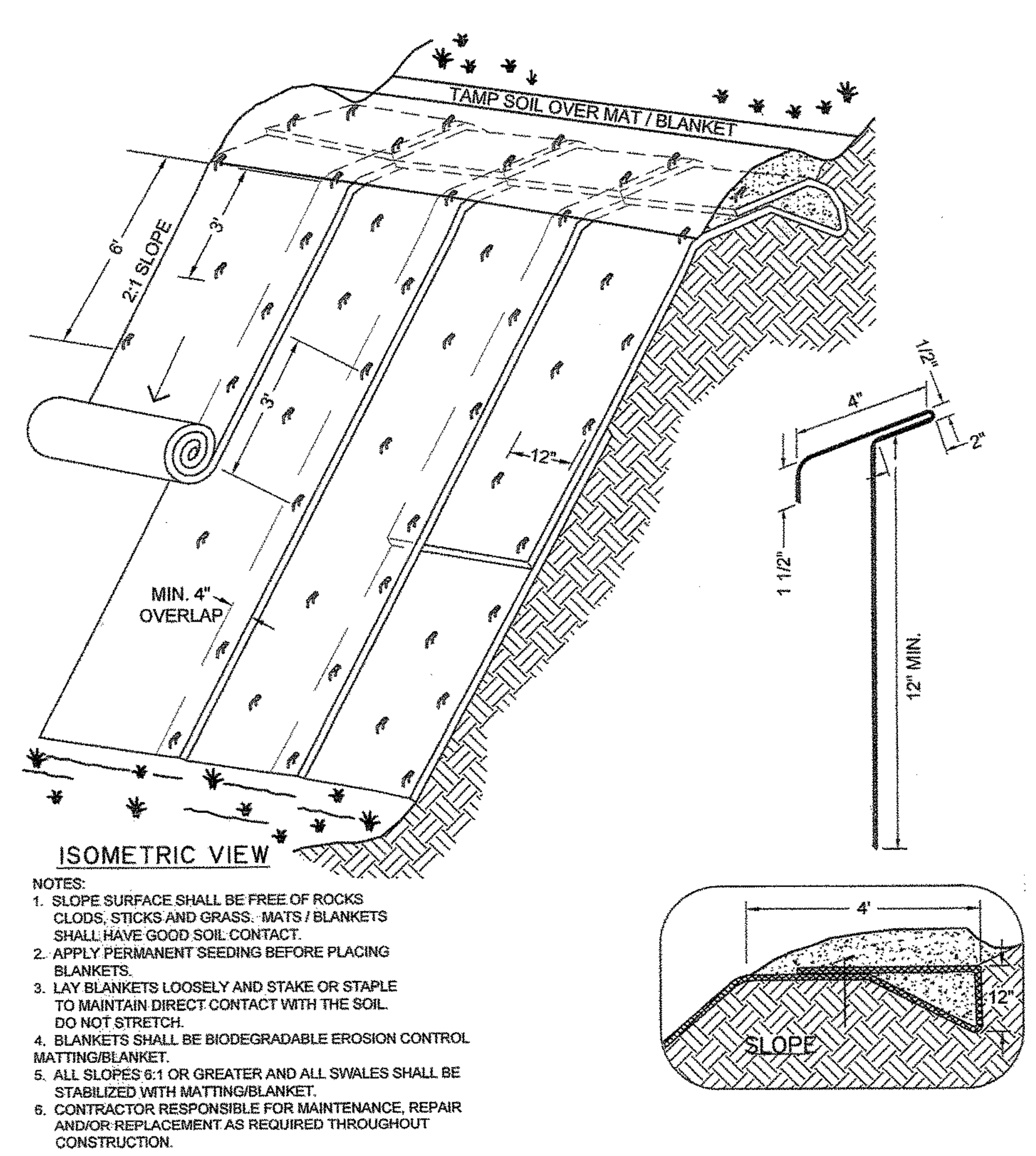


NOTES:
FILTER CLOTH FOR SILT FENCE SHALL BE A TREVIRA TYPE II PRODUCT, CATALOG NO. 1120 AS MANUFACTURED BY THE HOECHST CELANESE CORP.

WOVEN WIRE FENCE SHALL BE REQUIRED AS A BACKING FOR FILTER FABRIC WITH AN ELONGATION AS DETERMINED BY ASTM D 1682, OF 50% OR GREATER. THE WIRE FENCE SHALL BE A MINIMUM OF 32 INCHES IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12 INCH STAY SPACING. (WIRE BACKING MAY BE OMITTED IF STAKES ARE MAXIMUM OF 6' APART.)

ONLY STEEL POST MAY BE USED. STEEL POST SHALL BE A MINIMUM OF 5 FEET LONG, WEIGH A MINIMUM OF 1.3 POUNDS/FOOT, AND HAVE PROJECTIONS FOR FASTENING THE WIRE OR THE FABRIC TO THE POST. STEEL POST SHALL ALSO HAVE A METAL PLATE SECURELY ATTACHED SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW GROUND LEVEL FOR ADDITIONAL STABILITY. POSTS SHALL BE INSTALLED TO A DEPTH DIRECTED BY THE ENGINEER, WITH 1 TO 2 INCHES OF THE POST PROTRUDING ABOVE THE TOP OF THE WIRE FENCE OR FABRIC BEING IDEAL, BUT IN ANY CASE, NO MORE THAN 3 FEET OF THE POST SHALL PROTRUDE ABOVE THE GROUND.

TEMPORARY SILT FENCE DETAIL
NOT TO SCALE



NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS CLODS, STICKS AND GRASS. MATS / BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. BLANKETS SHALL BE BIODEGRADABLE EROSION CONTROL MATTING/BLANKET.
5. ALL SLOPES 6:1 OR GREATER AND ALL SWALES SHALL BE STABILIZED WITH MATTING/BLANKET.
6. CONTRACTOR RESPONSIBLE FOR MAINTENANCE, REPAIR AND/OR REPLACEMENT AS REQUIRED THROUGHOUT CONSTRUCTION.

EROSION CONTROL MATTING
NOT TO SCALE

Approved Construction Plan

	Name	Date
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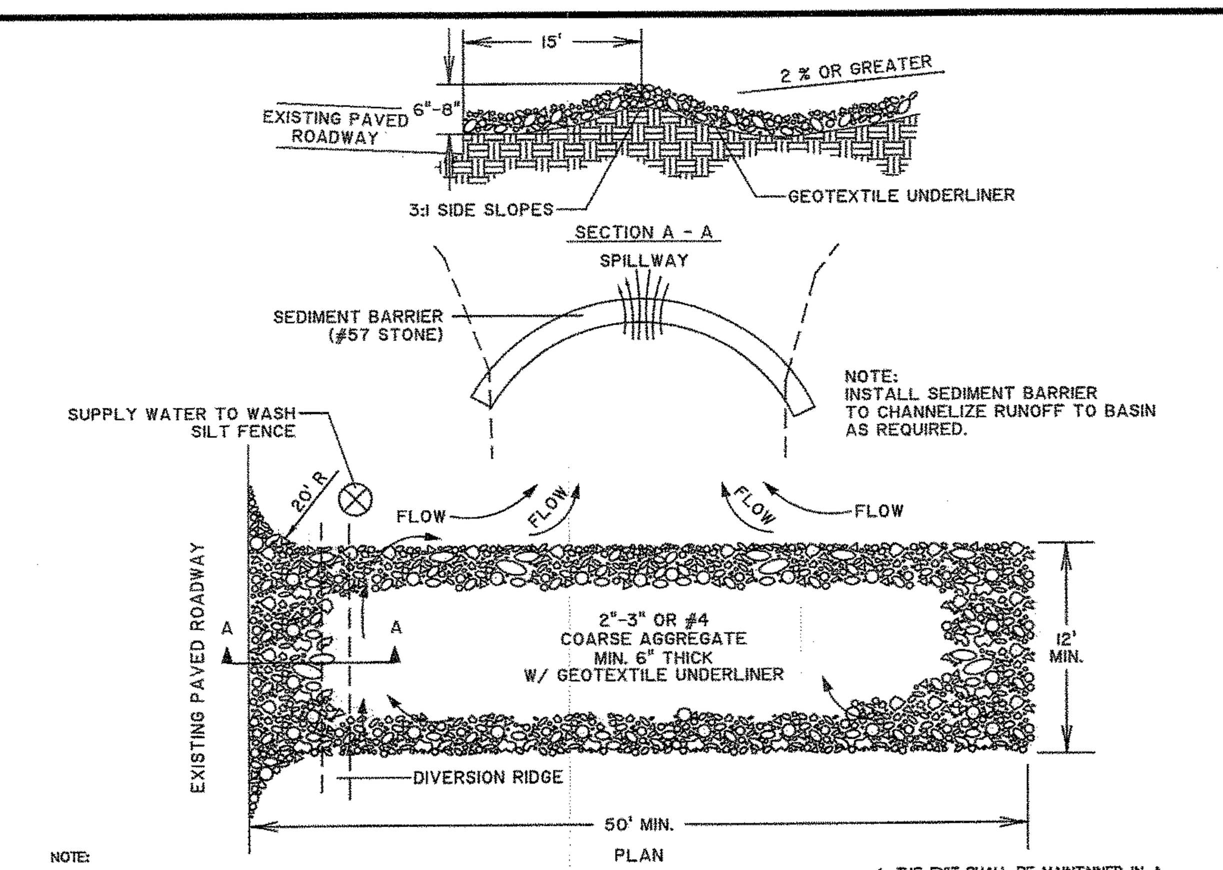
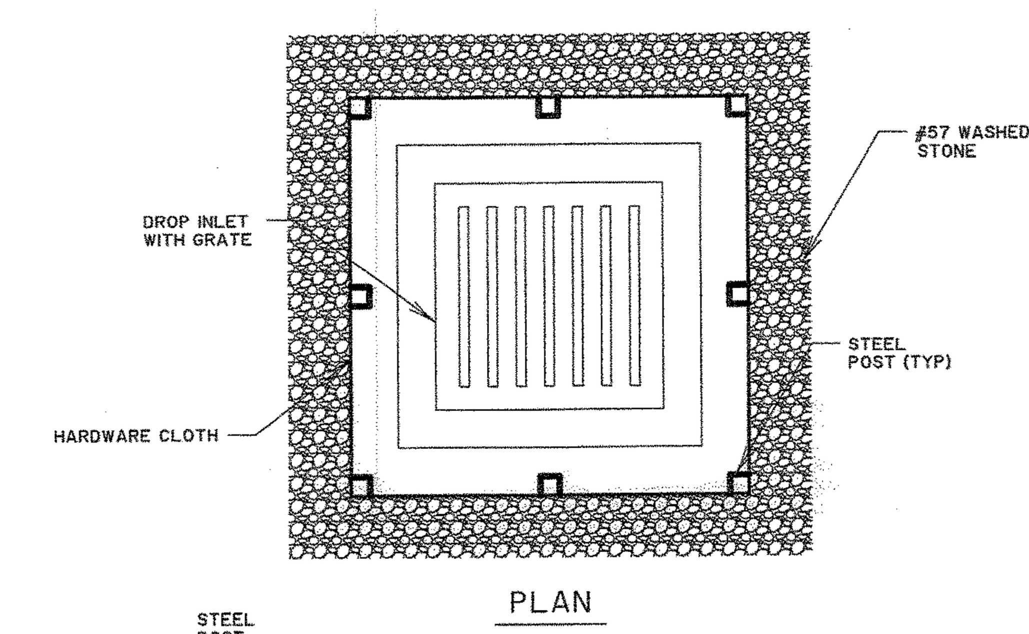
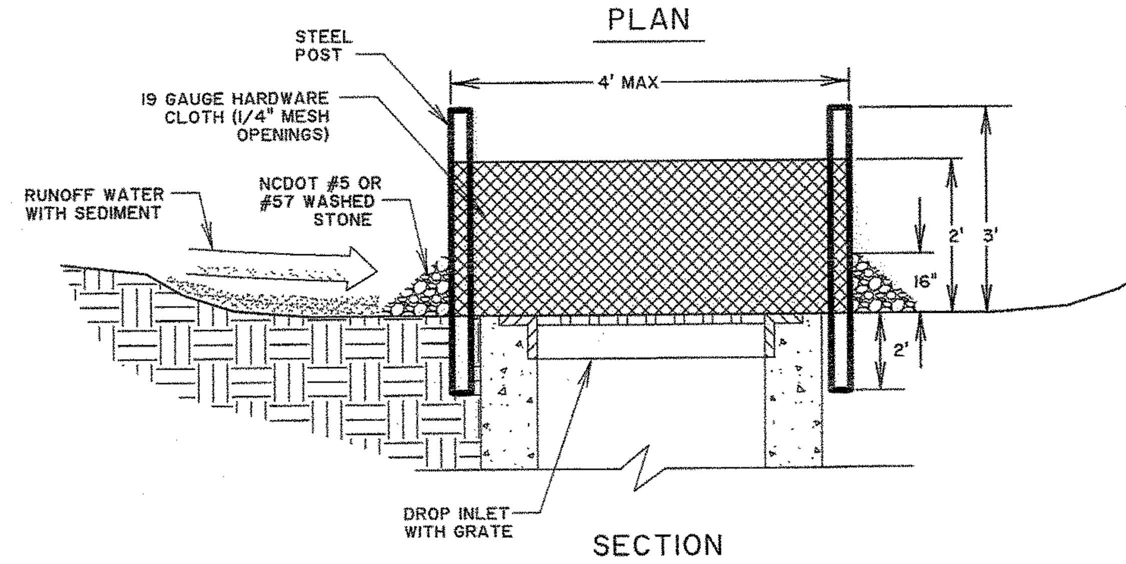
Public Utilities		
Traffic	[signature]	12/12/12
Fire	[signature]	12/13/12



NOTE:
1. IT IS RECOMMENDED THAT THE ENTRANCE AREA BE EXCAVATED TO A DEPTH OF 3 INCHES AND BE CLEARED OF ALL VEGETATION AND ROOTS.
2. ON SITES WHERE THE GRADE TOWARD THE PAVED AREA IS GREATER THAN 2%, A DIVERSION RIDGE 6 TO 8 INCHES HIGH WITH 3:1 SIDE SLOPES SHALL BE CONSTRUCTED ACROSS THE FOUNDATION APPROXIMATELY 15 FEET ABOVE THE ROAD.
3. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD DOES NOT SUFFICIENTLY REMOVE THE MUD, THE TIRES SHOULD BE WASHED PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND PROVISIONS THAT INTERCEPT THE SEDIMENT-LADEN RUNOFF AND DIRECT IT INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2 TO 3 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

TEMPORARY CONSTRUCTION EXIT
NOT TO SCALE





NOTE:
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT, LESS THAN 1 ACRE) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 CFS) ARE TYPICAL.
INLETS IN PAVED AREAS - ONCE PAVED, PROTECT INLET USING A SILT SACK UNTIL THE CONTRIBUTING DRAINAGE AREA IS PERMANENTLY STABILIZED. SEE DETAIL ON SHEET C6.1.

CONSTRUCTION SPECIFICATIONS

DROP INLET SEDIMENT FILTER

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

HARDWARE CLOTH AND GRAVEL INLET PROTECTION
NOT TO SCALE

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FERTILIZER REQUIREMENTS

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500lbs./ac. 1000lbs./ac. 400 lbs./ac.	50-100 lbs./ac. * 1 & 2 – 30
2. COOL SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500lbs./ac. 1000lbs./ac. 400 lbs./ac.	50-100 lbs./ac. * 1 – –
3. GROUND COVERS	FIRST SECOND MAINTENANCE	10-10-10 10-10-10 10-10-10	1300lbs./ac. * 3 1300lbs./ac. * 3 1100 lbs./ac.	– – –
4. PINE SEEDLINGS	FIRST	20-10-5	ONE 21-GRAM PELLET PER SEEDLING PLACED IN THE CLOSING HOLE	–
5. SHRUB LESPEDEZA	FIRST MAINTENANCE	0-10-10 0-10-10	700lbs./ac. 700lbs./ac. * 4	–
6. TEMPORARY COVER CROPS SEEDED ALONE	FIRST	10-10-10	500lbs./ac.	30 lbs./ac. * 5
7. WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500lbs./ac. 800lbs./ac. 400 lbs./ac.	50-100 lbs./ac. * 2 & 6 50-100 lbs./ac. 30 lbs./ac. * 2
8. WARM SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500lbs./ac. 1000lbs./ac. 400 lbs./ac.	50-100 lbs./ac. * 6

** 1 APPLY IN SPRING FOLLOWING SEEDING.*
** 2 APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED.*
** 3 APPLY IN 3 SPLIT APPLICATIONS.*
** 4 APPLY WHEN PLANTS ARE PRUNED.*
** 5APPLY TO GRASS SPECIES ONLY.*
** 6 APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.*

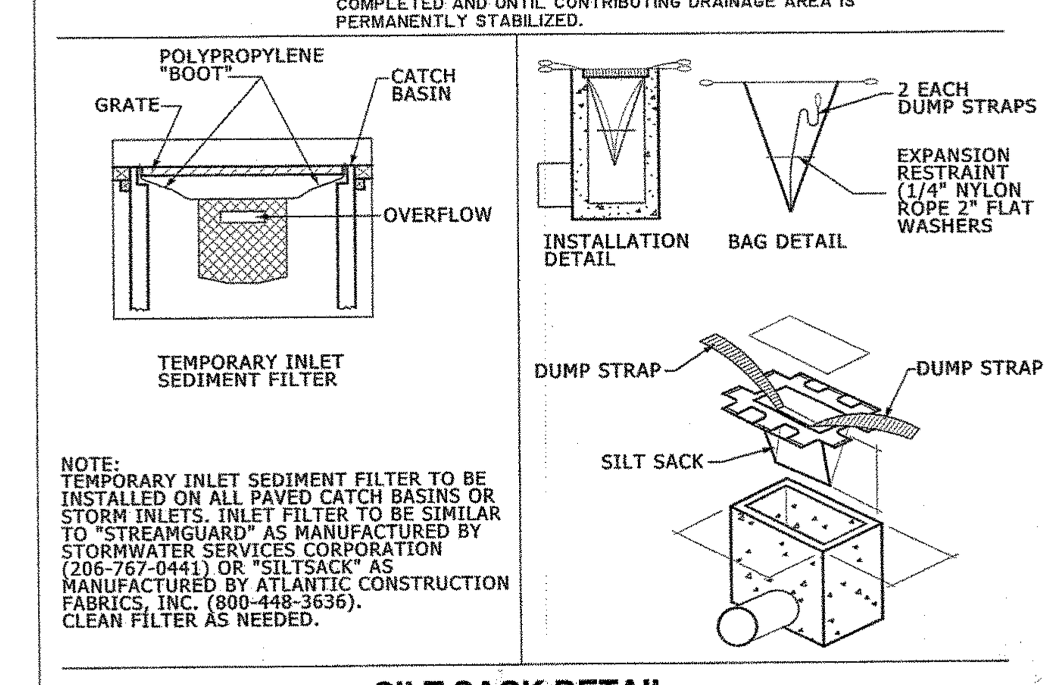
NOTE: SPREAD AGRICULTURAL LIMESTONE EVENLY OVER ALL SEEDED AREAS AT A RATE OF OF 1.5 TONS/ACRE.

SEEDING RATES FOR TEMPORARY & PERMANENT COVER

MONTH	TEMPORARY COVER	RATE PER ACRE SEEDED ALONE	RATE PER ACRE ADDED TO MIX	PERMANENT COVER	RATE PER ACRE SEEDED ALONE	RATE PER ACRE ADDED TO MIX
JANUARY	* LESPEDEZA, ANNUAL * RYE * RYE GRASS, ANNUAL * WHEAT	40 lbs. 3 bu. 40 lbs. 3 bu.	10 lbs .5 bu. – .5 bu.	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SERICEA 1	60 lbs. 10 lbs. – 75 lbs.	30 lbs. 6 lbs. – –
FEBRUARY	LESPEDEZA, ANNUAL * RYE * RYE GRASS, ANNUAL	40 lbs. 3 bu. 40 lbs.	10 lbs .5 bu. –	* BAHIA, PENSACOLA CENTIPEDE, SOD LESPEDEZA, SEDICEA 1 * LESPEDEZA, SEDICEA 2	60 lbs. – 75 lbs. 75 lbs.	30 lbs. – – –
MARCH	* LESPEDEZA, ANNUAL * RYE GRASS, ANNUAL * SUDAN GRASS	40 lbs. 40 lbs. 60 lbs.	10 lbs – –	BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD * LESPEDEZA, SEDICEA 1 LESPEDEZA, SEDICEA 2	60 lbs. 10 lbs. – 75 lbs. 75 lbs.	30 lbs. 6 lbs. – – –
APRIL	MILLET, BROWN TOP * MILLET, PEARL SUDAN GRASS	40 lbs. 50 lbs. 60 lbs.	10 lbs – –	BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD * LESPEDEZA, SEDICEA 1 LESPEDEZA, SEDICEA 2	60 lbs. 10 lbs. – 75 lbs. 75 lbs.	30 lbs. 6 lbs. – – –
MAY	MILLET, BROWN TOP MILLET, PEARL SUDAN GRASS	40 lbs. 50 lbs. 60 lbs.	10 lbs – –	BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD * LESPEDEZA, SEDICEA 1 LESPEDEZA, SEDICEA 2	60 lbs. 10 lbs. – 75 lbs. 75 lbs.	30 lbs. 6 lbs. – – –
JUNE	MILLET, BROWN TOP MILLET, PEARL SUDAN GRASS	40 lbs. 50 lbs. 60 lbs.	10 lbs – –	BAHIA, PENSACOLA * BERMUDA, UNHULLED * LESPEDEZA, SEDICEA 1 * LESPEDEZA, SEDICEA 2	60 lbs. 10 lbs. 75 lbs. 75 lbs.	30 lbs. 6 lbs. – –
JULY	* MILLET, BROWN TOP MILLET, PEARL SUDAN GRASS	40 lbs. 50 lbs. 60 lbs.	10 lbs – –	* BAHIA, PENSACOLA * LESPEDEZA, SEDICEA 1	60 lbs. 75 lbs.	30 lbs. –
AUGUST	* MILLET, PEARL * RYE GRASS, ANNUAL	50 lbs. 40 lbs.	– –	* BAHIA, PENSACOLA * LESPEDEZA, SEDICEA 1	60 lbs. 75 lbs.	30 lbs. –
SEPTEMBER	* BARLEY * OATS * RYE RYE GRASS, ANNUAL * WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	.5 bu. 1 bu. .5 bu. – .5 bu.	* BAHIA, PENSACOLA LESPEDEZA, SEDICEA 1	60 lbs. 75 lbs.	30 lbs. –
OCTOBER	BARLEY OATS RYE RYE GRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	.5 bu. 1 bu. .5 bu. – .5 bu.	* BAHIA, PENSACOLA LESPEDEZA, SEDICEA 1	60 lbs. 75 lbs.	30 lbs. –
NOVEMBER	BARLEY OATS RYE RYE GRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	.5 bu. 1 bu. .5 bu. – .5 bu.	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SEDICEA 1	60 lbs. 10 lbs. – 75 lbs.	30 lbs. 6 lbs. – –
DECEMBER	BARLEY OATS RYE RYE GRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	.5 bu. 1 bu. .5 bu. – .5 bu.	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SEDICEA 1	60 lbs. 10 lbs. – 75 lbs.	30 lbs. 6 lbs. – –

NOTES
ALL PERMANENT GRASS PLANTINGS SHALL BE MULCHED AND CRIMPED IN PLACE OR PROTECTED WITH EROSION MATTING TO ENSURE PROPER STABILIZATION. (SLOPES 6:1 OR GREATER MUST BE PROTECTED WITH EROSION MATTING)
** INDICATES MARGINAL (BUT PERMISSIBLE) PLANTING DATE*
1. UNSCARIFIED
2. SCARIFIED
3. CENTIPEDE SOD CAN BE USED AS PERMANENT COVER ANYTIME EXCEPT JUNE THRU OCTOBER

TO BE USED FOR INLETS IN PAVED AREAS ONCE PAVING IS COMPLETED AND UNTIL CONTRIBUTING DRAINAGE AREA IS PERMANENTLY STABILIZED.



NOTE:
TEMPORARY INLET SEDIMENT FILTER TO BE INSTALLED ON ALL PAVED CATCH BASINS OR STORM INLETS. INLET FILTER TO BE SIMILAR TO "STREAMGUARD" AS MANUFACTURED BY STORMWATER SERVICES CORPORATION (206-767-0441) OR "SILTSACK" AS MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS, INC. (800-448-3636).
CLEAN FILTER AS NEEDED.

SILT SACK DETAIL
NO SCALE

D-SESC- silt sack.pdf

NORTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. F-0871 CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL SEAL 28179 ENGINEER JACK D. REEL 8/27/12

NO.	REVISIONS	BY	DATE
12	ADD PREVIOUS REVISION NOTES	BDR	08/27/12
6	REVISE SILT FENCE DETAIL	BDR	05/18/12
4	ADD SILT SACK DETAIL	BDR	04/23/12
1	MISC. REVISIONS PER OWNER	BDR	01/25/12
A	OMIT "APPROVED EQUIVALENT" REFERENCES	BDR	01/16/12

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FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC

AMBERLEIGH SHORES

CIVIL SITE DETAILS

JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.0

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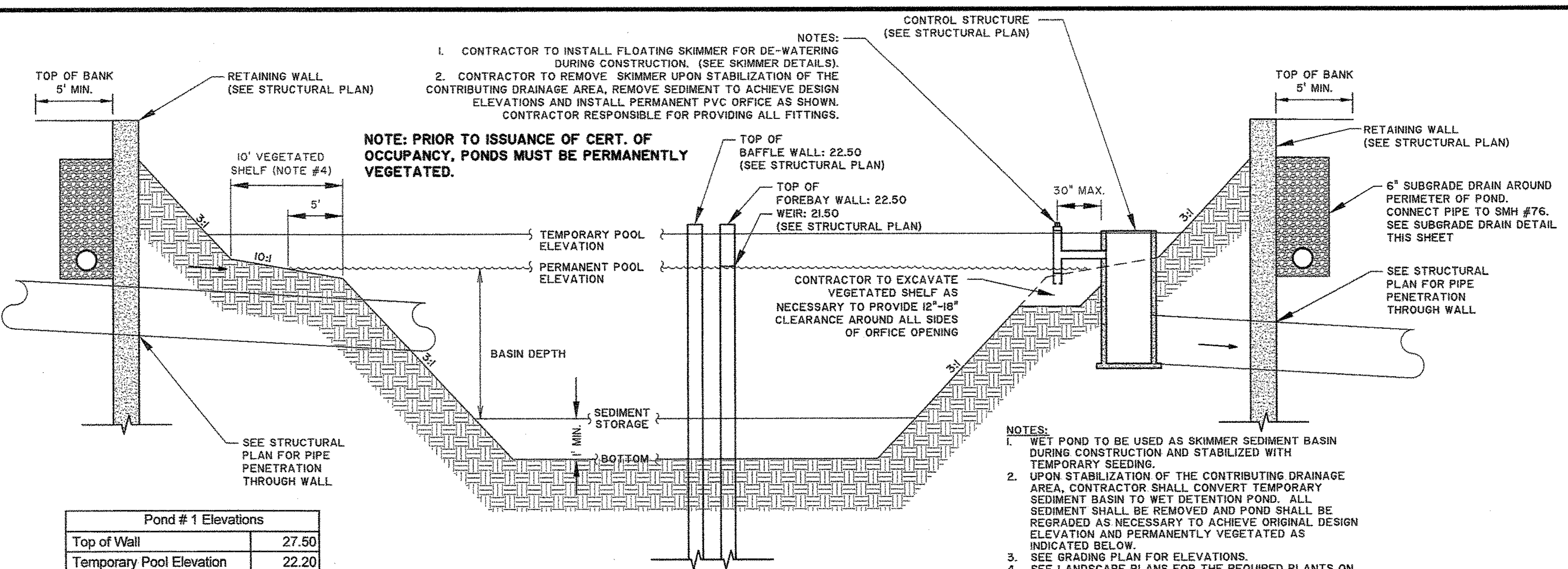
NOTES:
1. CONTRACTOR TO INSTALL FLOATING SKIMMER FOR DE-WATERING DURING CONSTRUCTION. (SEE SKIMMER DETAILS).
2. CONTRACTOR TO REMOVE SKIMMER UPON STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA, REMOVE SEDIMENT TO ACHIEVE DESIGN ELEVATIONS AND INSTALL PERMANENT PVC ORFICE AS SHOWN. CONTRACTOR RESPONSIBLE FOR PROVIDING ALL FITTINGS.

NOTE: PRIOR TO ISSUANCE OF CERT. OF OCCUPANCY, PONDS MUST BE PERMANENTLY VEGETATED.



Pond # 1 Elevations	
Top of Wall	27.50
Temporary Pool Elevation	22.20
Permanent Pool Elevation	21.50
Top of Vegetative Shelf	22.00
Bottom of Vegetative Shelf	20.50
Bottom of Pond	14.50
Sediment Cleanout Elevation	15.50
SHWT Elevation	25.70

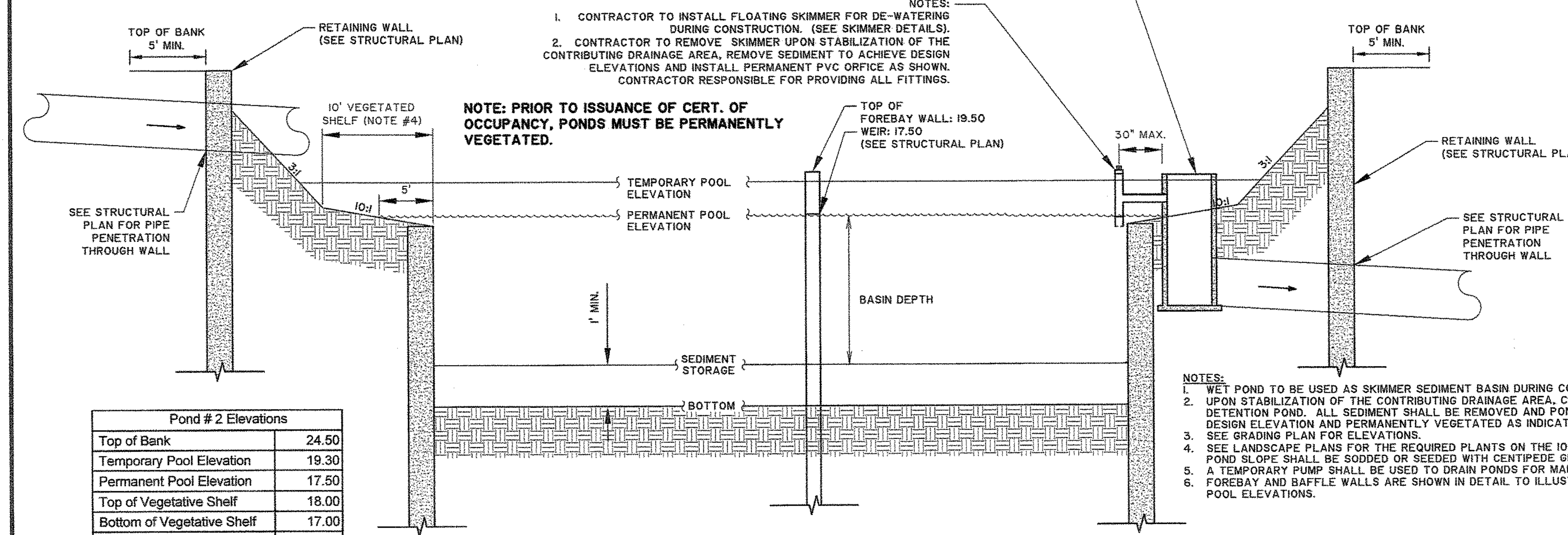
NOTES:
1. WET POND TO BE USED AS SKIMMER SEDIMENT BASIN DURING CONSTRUCTION AND STABILIZED WITH TEMPORARY SEEDING.
2. UPON STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA, CONTRACTOR SHALL CONVERT TEMPORARY SEDIMENT BASIN TO WET DETENTION POND. ALL SEDIMENT SHALL BE REMOVED AND POND SHALL BE REGRADED AS NECESSARY TO ACHIEVE ORIGINAL DESIGN ELEVATION AND PERMANENTLY VEGETATED AS INDICATED BELOW.
3. SEE GRADING PLAN FOR ELEVATIONS.
4. SEE LANDSCAPE PLANS FOR THE REQUIRED PLANTS ON THE 10' VEGETATED SHELF AND PERMANENT POND BANK STABILIZATION. POND SLOPE SHALL BE SODDED OR SEEDED WITH CENTIPEDE GRASS MIX AND COVERED WITH EXCELSIOR MATTING.
5. A TEMPORARY PUMP SHALL BE USED TO DRAIN PONDS FOR MAINTENANCE OR IN CASE OF EMERGENCY.
6. FOREBAY AND BAFFLE WALLS ARE SHOWN IN DETAIL TO ILLUSTRATE RELATIONSHIP BETWEEN TEMPORARY AND PERMANENT POOL ELEVATIONS.

PERMANENT WET DETENTION POND #1 DETAIL

NOT TO SCALE

NOTES:
1. CONTRACTOR TO INSTALL FLOATING SKIMMER FOR DE-WATERING DURING CONSTRUCTION. (SEE SKIMMER DETAILS).
2. CONTRACTOR TO REMOVE SKIMMER UPON STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA, REMOVE SEDIMENT TO ACHIEVE DESIGN ELEVATIONS AND INSTALL PERMANENT PVC ORFICE AS SHOWN. CONTRACTOR RESPONSIBLE FOR PROVIDING ALL FITTINGS.

NOTE: PRIOR TO ISSUANCE OF CERT. OF OCCUPANCY, PONDS MUST BE PERMANENTLY VEGETATED.

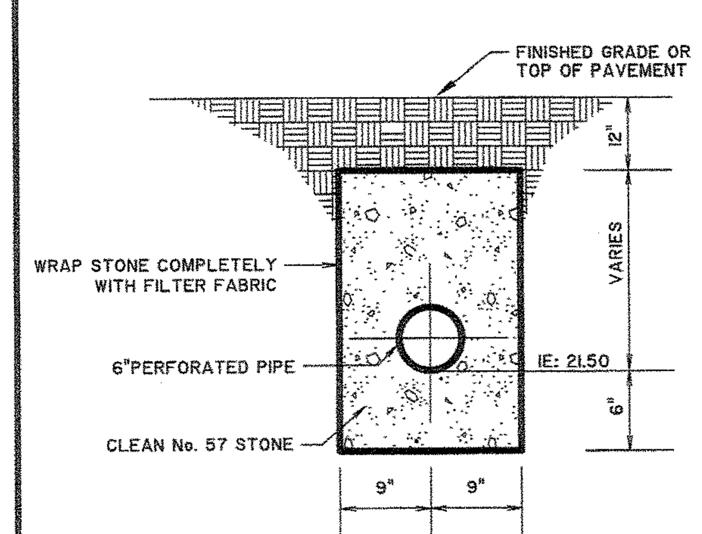


Pond # 2 Elevations	
Top of Bank	24.50
Temporary Pool Elevation	19.30
Permanent Pool Elevation	17.50
Top of Vegetative Shelf	18.00
Bottom of Vegetative Shelf	17.00
Bottom of Pond	9.50
Sediment Cleanout Elevation	10.50
SHWT Elevation	17.00

NOTES:
1. WET POND TO BE USED AS SKIMMER SEDIMENT BASIN DURING CONSTRUCTION AND STABILIZED WITH TEMPORARY SEEDING.
2. UPON STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA, CONTRACTOR SHALL CONVERT TEMPORARY SEDIMENT BASIN TO WET DETENTION POND. ALL SEDIMENT SHALL BE REMOVED AND POND SHALL BE REGRADED AS NECESSARY TO ACHIEVE ORIGINAL DESIGN ELEVATION AND PERMANENTLY VEGETATED AS INDICATED BELOW.
3. SEE GRADING PLAN FOR ELEVATIONS.
4. SEE LANDSCAPE PLANS FOR THE REQUIRED PLANTS ON THE 10' VEGETATED SHELF AND PERMANENT POND BANK STABILIZATION. POND SLOPE SHALL BE SODDED OR SEEDED WITH CENTIPEDE GRASS MIX AND COVERED WITH EXCELSIOR MATTING.
5. A TEMPORARY PUMP SHALL BE USED TO DRAIN PONDS FOR MAINTENANCE OR IN CASE OF EMERGENCY.
6. FOREBAY AND BAFFLE WALLS ARE SHOWN IN DETAIL TO ILLUSTRATE RELATIONSHIP BETWEEN TEMPORARY AND PERMANENT POOL ELEVATIONS.

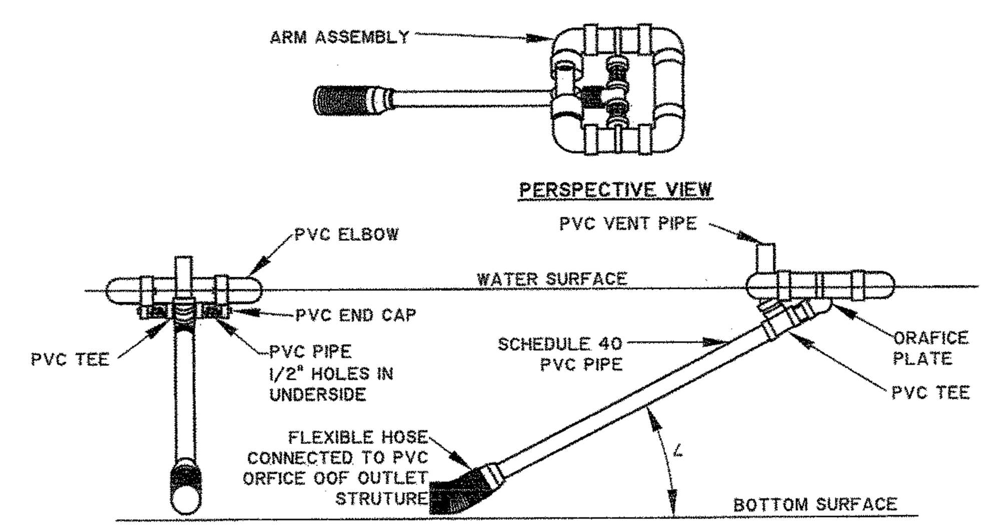
PERMANENT WET DETENTION POND #2 DETAIL

NOT TO SCALE



POND I SUBGRADE DRAIN DETAIL

NOT TO SCALE



NOTES:
1. CONTRACTOR TO REMOVE SKIMMER UPON STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA AND INSTALL PERMANENT PVC ORFICE PER OUTLET STRUCTURE DETAILS.

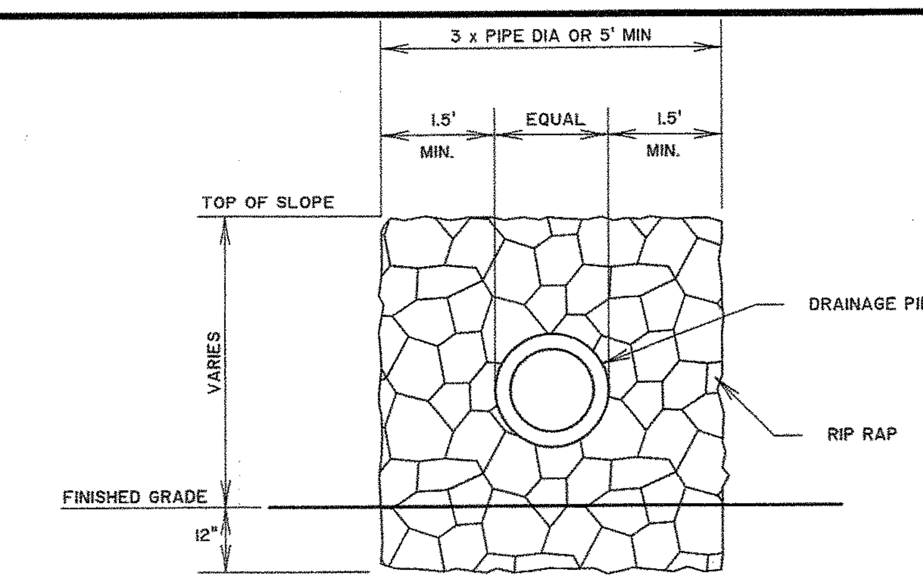
DESIGN CRITERIA:

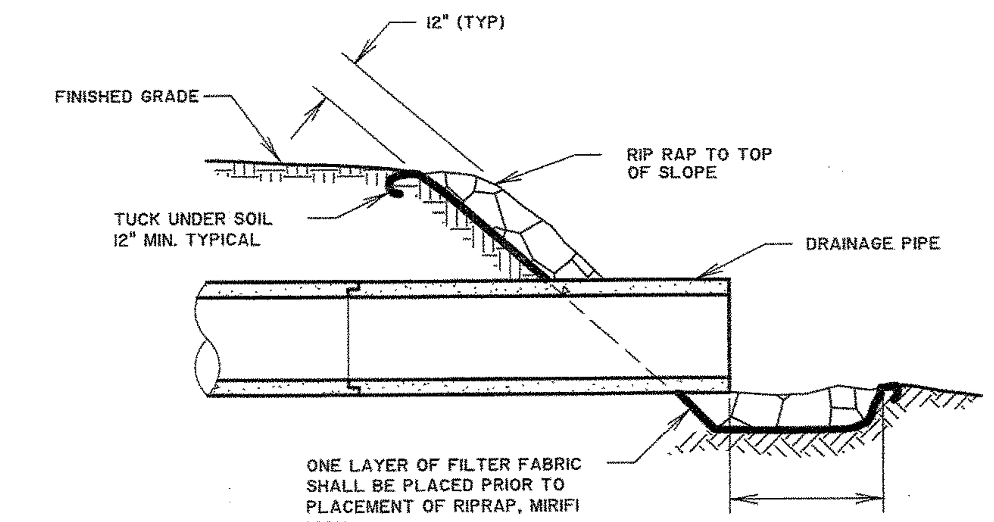
POND NUMBER	SKIMMER SIZE (IN)	ORFICE RADIUS (IN)	ORFICE DIA. (IN)	VOLUME* (CF)
1	4	1.7	3.4	43,205
2	5	2.2	4.5	78,242

*SKIMMER SIZE IS BASED ON THE VOLUME OF THE NEXT HIGHEST WEIR ELEVATION ABOVE NORMAL POOL WHICH IS GREATER THAN THE REQUIRED SEDIMENT BASIN VOLUME.

SKIMMER DETAIL (BY J.W. FAIRCLOTH & SON, INC.)

NOT TO SCALE



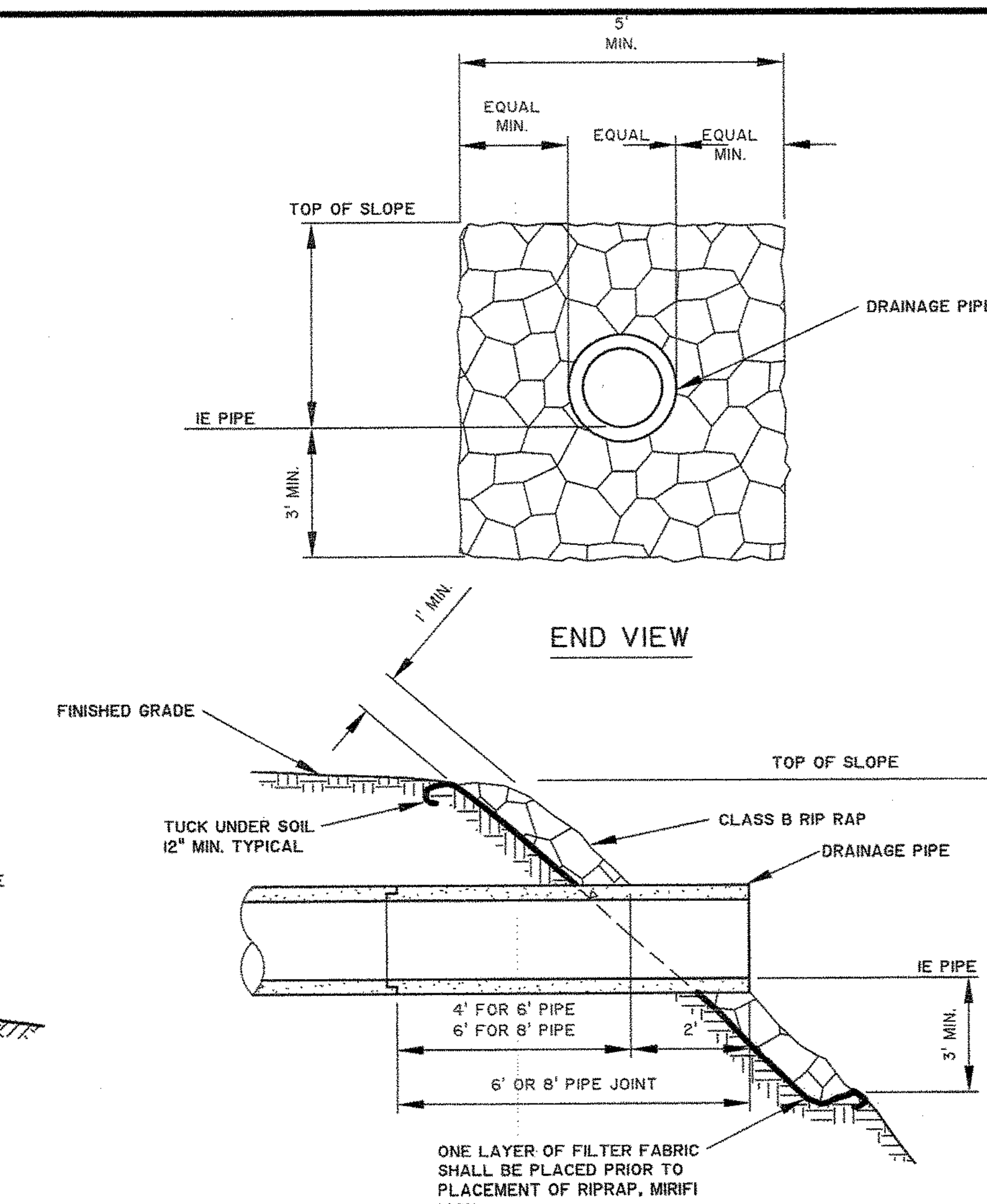


DESIGN CRITERIA:

NUMBER	RIP RAP TYPE	RIP RAP MIN SIZE (IN)	RIP RAP DEPTH (IN)	UPSTREAM APRON WIDTH (FT)	DOWNSTREAM APRON WIDTH (FT)	APRON LENGTH La (FT)
1	B	6	12	20	20	20
2	B	6	12	12	15	25
3	B	6	12	6	10	15
4	B	6	12	10	10	25
5	B	6	18	10	10	20
6	B	6	12	20	20	20

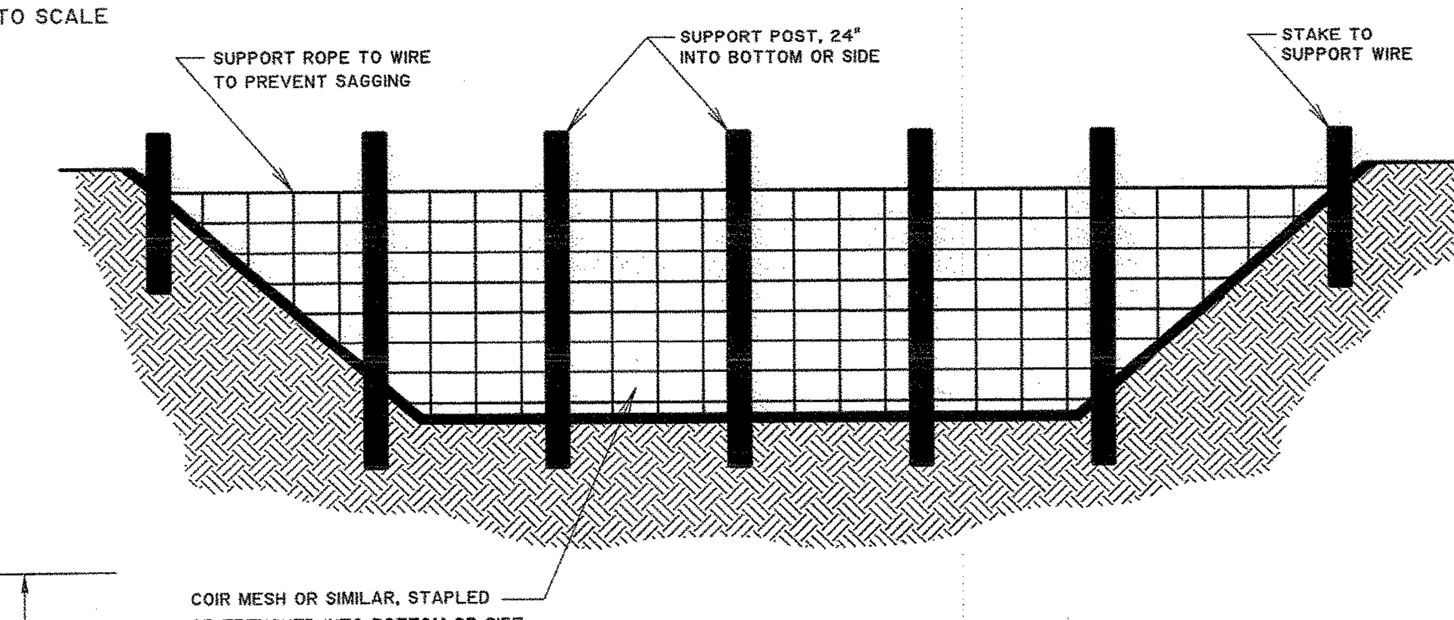
RIP RAP OUTLET STABILIZATION STRUCTURE

NOT TO SCALE



PIPE OUTLET TO LAKE WITH RIPRAP

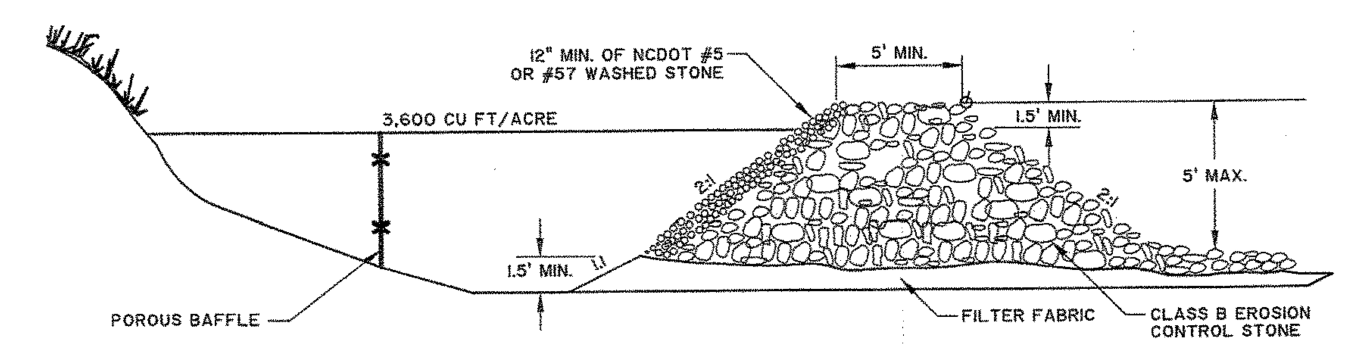
NOT TO SCALE

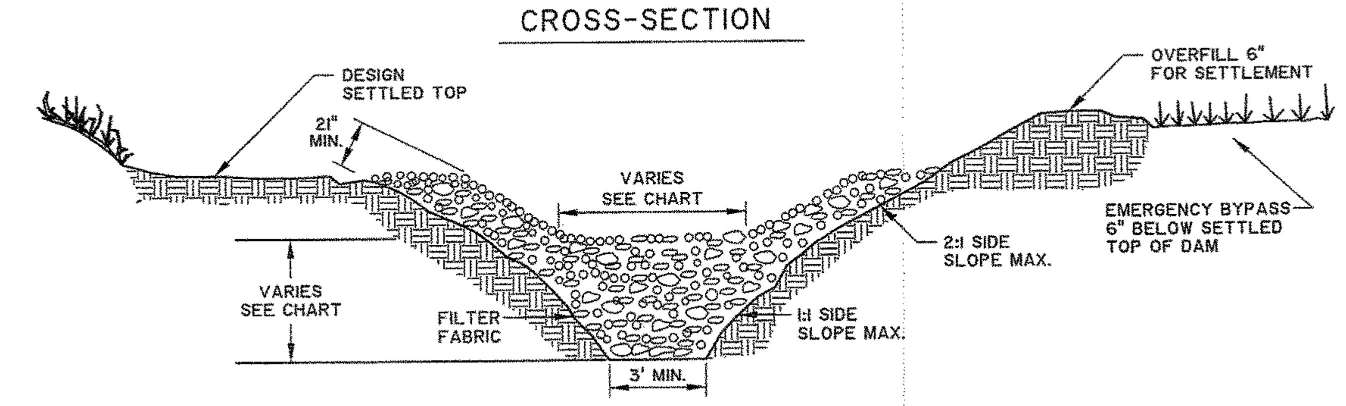


CONSTRUCTION SPECIFICATIONS:
1. INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP.
2. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART, AND INSTALLED UP THE SIDES OF THE BASIN AS WELL. THE TOP OF THE FABRIC SHOULD BE 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
3. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT.
4. WHEN USING POSTS, ADD A SUPPORT WIRE OR ROPE ACROSS THE TOP OF THE MEASURE TO PREVENT SAGGING.
5. WRAP POROUS MATERIAL, LIKE JUTE BACKED BY COIR MATERIAL, OVER THE TOP WIRE. THE FABRIC SHOULD HAVE FIVE TO TEN PERCENT OPENINGS IN THE WEAVE. ATTACH FABRIC TO A ROPE AND A SUPPORT STRUCTURE WITH ZIP TIES, WIRE, OR STAPLES.
6. THE BOTTOM SIDES OF THE FABRIC SHOULD BE ANCHORED IN A TRENCH OR PINNED WITH 8 INCH EROSION CONTROL MATTING STAPLES.
7. DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN.
8. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS, AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.

POROUS BAFFLE DETAIL

NOT TO SCALE





TRAP NUMBER	WIDTH X LENGTH	DEPTH (FT)	WEIR LENGTH (FT)
1	15' X 50'	3.5'	4'
2	15' X 35'	3.5'	4'

NOTES:
1. SET SEDIMENT CLEANOUT STAKE AT HALF THE DESIGN DEPTH (NOT TOP OF THE STAKE). REFERENCE MAINTENANCE PLAN FOR CLEANOUT SCHEDULE.
2. DIRECT EMERGENCY BYPASS TO NATURAL, STABLE AREAS. LOCATE BYPASS OUTLETS SO THAT FLOW WILL NOT DAMAGE EMBANKMENTS.
3. STABILIZE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE TRAP IMMEDIATELY AFTER CONSTRUCTION.
4. AFTER ALL SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL UNSTABLE SEDIMENT. GRADE THE AREA TO FINAL DESIGN ELEVATIONS AND STABILIZE PROPERLY.

TEMPORARY SEDIMENT TRAP DETAIL

NOT TO SCALE

RECEIVED
DEC 1 1 2012
PLANNING DIVISION

North Carolina
One Call Center
Call Before You Dig
"It's The Law"
1-800-632-4949

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016R2
Signed: [signature]

Approved Construction Plan

	Name	Date
Planning	[signature]	12/12/12
Public Utilities		
Traffic	TBM	12/12/12
Fire	[signature]	12/13/12

NORTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. F-0871 CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 26179 JACK D. REEL 8/27/12

NO.	REVISIONS	BY	DATE
12	ADD PREVIOUS REVISION NOTES	BDR	08/27/12
6	SEE REVISION SUMMARY ON SHEET G1.0	BDR	05/18/12
4	SEE REVISION SUMMARY ON SHEET G1.0	BDR	04/23/12
1	MISC. REVISIONS PER OWNER	BDR	01/25/12
B	OMIT ADD'L "APPROVED EQUIVALENT" REFERENCES	BDR	01/25/12
A	OMIT "APPROVED EQUIVALENT" REFERENCES	BDR	01/16/12

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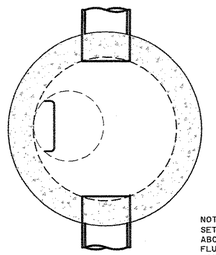
FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC
AMBERLEIGH SHORES
CIVIL SITE DETAILS

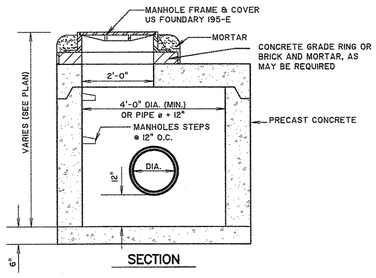
JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.1



NOTE:
SET TOPS OF MANHOLES 2" ABOVE NATURAL GROUND OR FLUSH WITH PAVING IN TRAFFIC AREAS.

PLAN

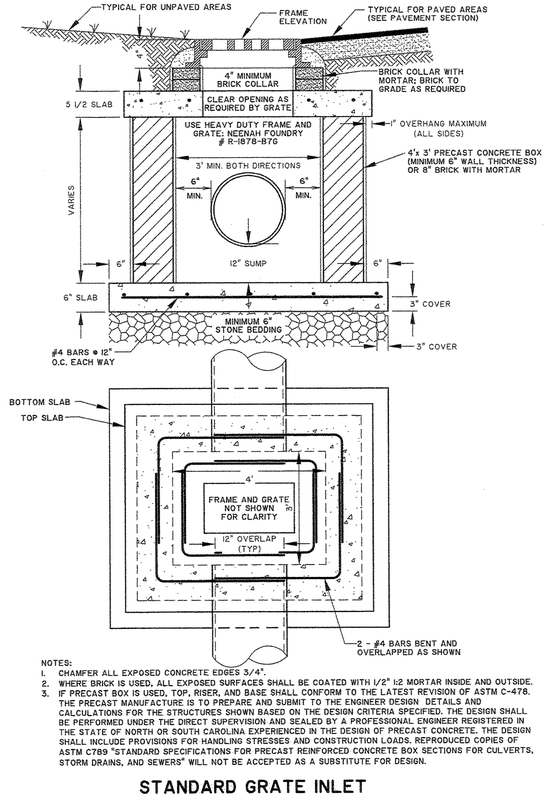


SECTION

NOTE:
THE PRECAST MANUFACTURE IS TO PREPARE AND SUBMIT TO THE ENGINEER DESIGN DETAILS AND CALCULATIONS FOR THE STRUCTURES SHOWN BASED ON THE DESIGN CRITERIA SPECIFIED. THE DESIGN SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA EXPERIENCED IN THE DESIGN OF PRECAST CONCRETE. THE DESIGN SHALL INCLUDE PROVISIONS FOR HANDLING STRESSES AND CONSTRUCTION LOADS. REPRODUCED COPIES OF ASTM C789 "STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE BOX SECTIONS FOR CULVERTS, STORM DRAINS, AND SEWERS" WILL NOT BE ACCEPTED AS A SUBSTITUTE FOR DESIGN.

STORM MANHOLE

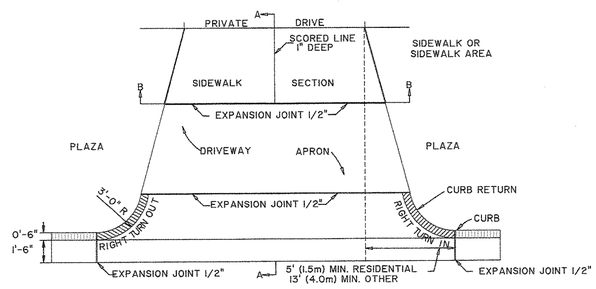
NOT TO SCALE



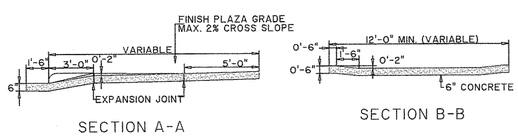
NOTES:
1. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4".
2. WHERE BRICK IS USED, ALL EXPOSED SURFACES SHALL BE COATED WITH 1/2" 1:2 MORTAR INSIDE AND OUTSIDE.
3. IF PRECAST BOX IS USED, TOP, RISER, AND BASE SHALL CONFORM TO THE LATEST REVISION OF ASTM C-478. THE PRECAST MANUFACTURE IS TO PREPARE AND SUBMIT TO THE ENGINEER DESIGN DETAILS AND CALCULATIONS FOR THE STRUCTURES SHOWN BASED ON THE DESIGN CRITERIA SPECIFIED. THE DESIGN SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH OR SOUTH CAROLINA EXPERIENCED IN THE DESIGN OF PRECAST CONCRETE. THE DESIGN SHALL INCLUDE PROVISIONS FOR HANDLING STRESSES AND CONSTRUCTION LOADS. REPRODUCED COPIES OF ASTM C789 "STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE BOX SECTIONS FOR CULVERTS, STORM DRAINS, AND SEWERS" WILL NOT BE ACCEPTED AS A SUBSTITUTE FOR DESIGN.

STANDARD GRATE INLET

NOT TO SCALE



PAVEMENT PLAN



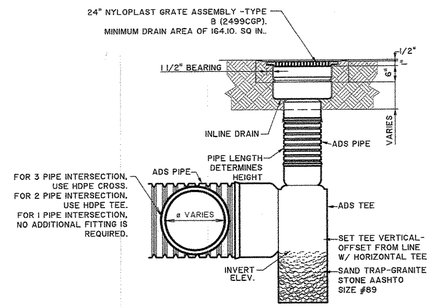
SECTION A-A

SECTION B-B

CONSTRUCTION/EMERGENCY ACCESS STANDARD DRIVEWAY DETAIL

SD 8-02

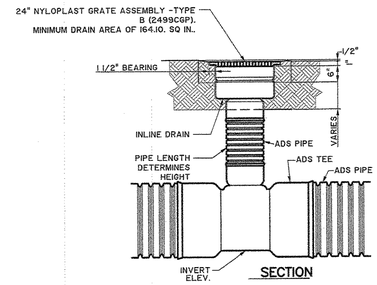
NOT TO SCALE



SECTION

SPECIAL YARD INLET END OF LINE SCENARIO

NOT TO SCALE

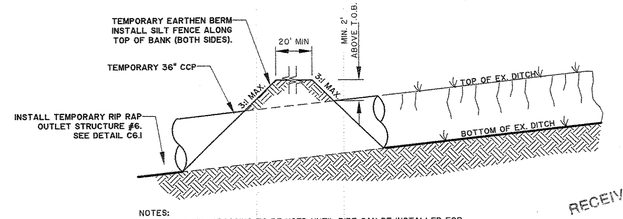


SECTION

NOTES:
1. CONTRACTOR'S OPTION TO PROVIDE 2'x2' PRECAST STRUCTURE WITH CAST IRON GRATE.

SPECIAL YARD INLET

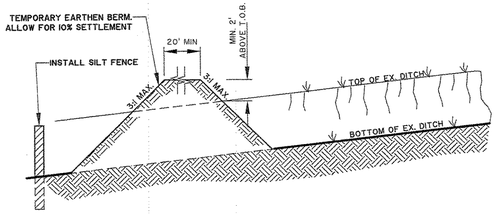
NOT TO SCALE



NOTES:
1. TEMPORARY CROSSING TO BE USED UNTIL PIPE CAN BE INSTALLED FOR DITCH RELOCATION. EXISTING DITCH TO BE PROTECTED UNTIL PIPE IS INSTALLED.
2. STABILIZE SLOPES WITH TEMPORARY SEEDING AND EROSION CONTROL MATTING.

TEMPORARY DITCH CROSSING DETAIL

NOT TO SCALE

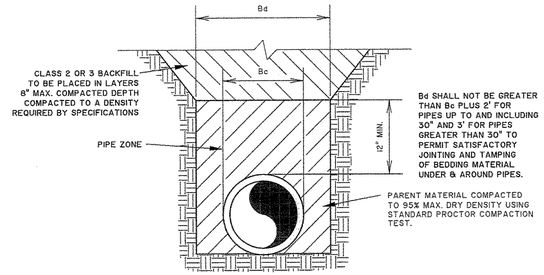


NOTES:
1. PRIOR TO INSTALLATION OF TEMPORARY DITCH PLUG, THE DITCH RELOCATION PIPE MUST COMPLETELY INSTALLED INCLUDING EROSION CONTROL MEASURES.
2. FILLING OF DITCH MUST BE SCHEDULED SUCH THAT WORK CAN BE COMPLETED PRIOR TO ANY ANTICIPATED RAIN EVENT.
3. COMPACTED BERM HEIGHT MUST BE A MINIMUM OF 2' ABOVE EXISTING TOP OF BANK.
4. LEAVE SUFFICIENT AREA TO PERMIT CLEAN OUT AND RE-GRADING ONCE DITCH IS FILLED.

TEMPORARY DITCH PLUG DETAIL

NOT TO SCALE

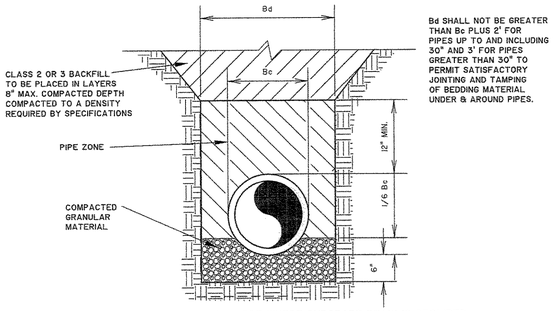
RECEIVED
DEC 11 2012
PLANNING DIVISION



ALL STORM PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP), CONFORMING TO ASTM C-76 CLASS III, UNLESS OTHERWISE NOTED.

STORM LINE BEDDING DETAIL

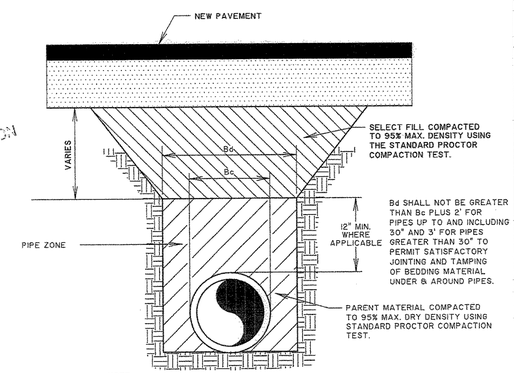
NOT TO SCALE



NOTE: TO BE USED WHERE WHERE SUBGRADE DRAIN IS REQUIRED. (SEE GRATE INLET DETAIL)

ALTERNATE STORM LINE BEDDING DETAIL

NOT TO SCALE



NOTE:
ALL JOINTS SHALL BE WRAPPED WITH FILTER FABRIC

STORM LINE BEDDING DETAIL FOR PAVED AREAS

NOT TO SCALE

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/13/12 Permit # 20120160122
Signed:

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

North Carolina
One Call Center
Call Before You Dig
"It's The Law"
1-800-632-4949

NO.	REVISIONS	BY	DATE
14	DELETE HOODED INLET DETAIL / USE NCDOT DETAILS	BDR	12/05/09
12	ADD PREVIOUS REVISION NOTES	BDR	08/27/12
6	DELETE INTERCEPTOR DETAIL SD 15-06 / ADD SD8-02	BDR	05/18/12
4	SEE REVISION SUMMARY ON SHEET 0.0	BDR	04/23/12
1	MISC REVISIONS PER OWNER	BDR	01/25/12
A	OMIT "APPROVED EQUIVALENT" REFERENCES	BDR	01/16/12

NORTH CAROLINA PROFESSIONAL SEAL 28179 ENGINEER RICK D. RED. 12/05/12

NORTH CAROLINA NOLL'S PROFESSIONAL THOMAS & HUTTON ENGINEERING CO. No. F-0871 CERTIFICATE OF AUTHORIZATION

THOMAS & HUTTON
Engineering | Surveying | Planning | GIS | Consulting
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Wilmington, NC 28403 • 910.332.3360
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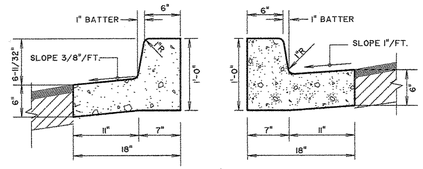
Savannah, GA | Brunswick, GA | Charleston, SC | Myrtle Beach, SC

FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC
AMBERLEIGH SHORES
CIVIL SITE DETAILS

JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.2



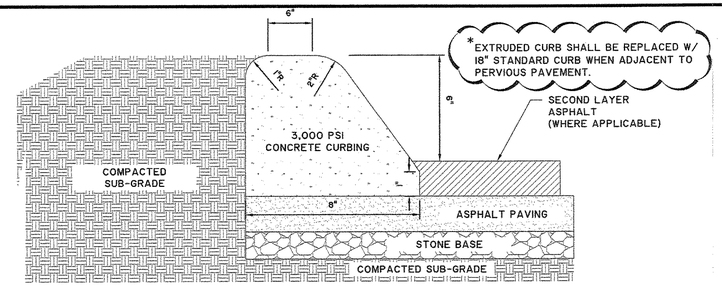
PITCH CURB

NORMAL CURB

NOTES:
1. ALL CONCRETE SHALL BE 3,000 PSI.
2. PROVIDE CONTROL JOINTS EVERY TEN FEET (10').
3. PROVIDE EXPANSION JOINTS EVERY FIFTY FEET (50).
4. PROVIDE EXPANSION JOINT WHERE CURB ABUTS SIDEWALKS, OR OTHER STRUCTURES.
5. PROVIDE LIGHT BROOM FINISH.

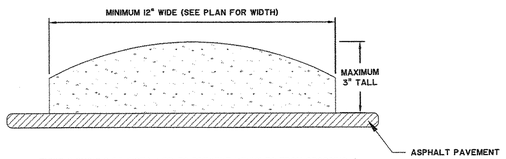
18" STANDARD CURB & GUTTER

NOT TO SCALE



TYPICAL EXTRUDED CONCRETE CURB

NOT TO SCALE

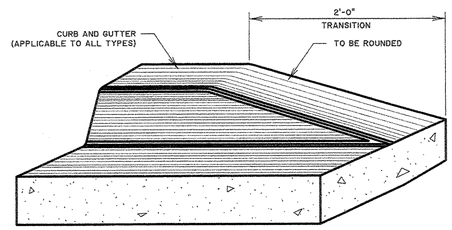


TURTLE SHOULD BE INSTALLED TO PREVENT VEHICLES FROM CROSSING INTO INCORRECT LAND AND FOR PROPER FUNCTIONING OF GATE SYSTEM

LANE DIVISION TECHNIQUES, EQUIPMENT, APPARATUS, BUMPS, STYLE, METHODS MUST BE APPROVED BY THE PROJECT MANAGER OF FLOURNOY.

TURTLE DIVIDER AT GATES

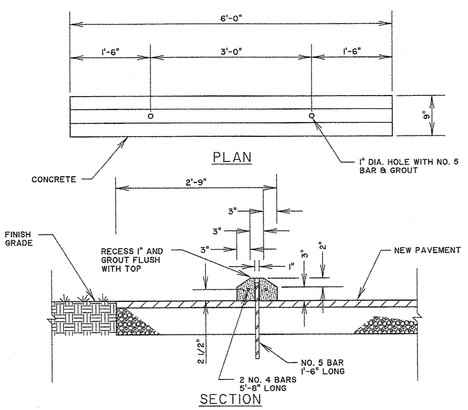
NOT TO SCALE



NOTES:
1. REQUIRED AT ALL SIDEWALK RAMPS AND WHERE INDICATED ON PLANS.

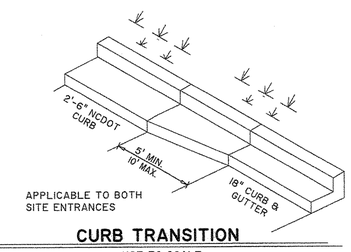
CURB AND GUTTER TAPER DETAIL

NOT TO SCALE



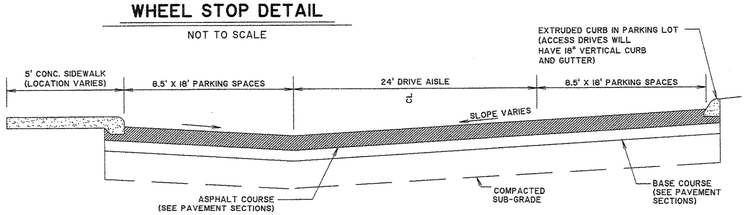
HEAVY DUTY WHEEL STOP DETAIL

NOT TO SCALE



CURB TRANSITION

NOT TO SCALE

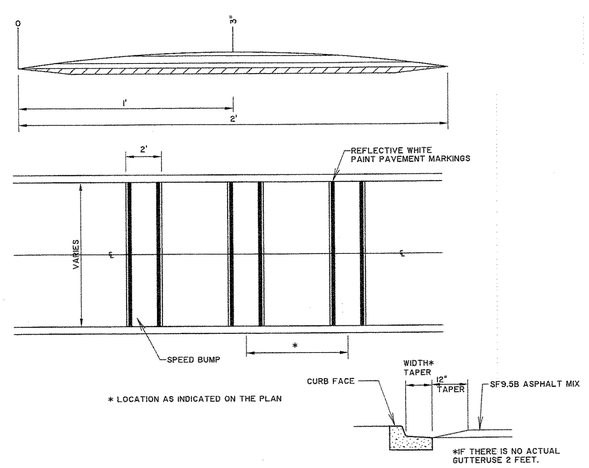


NOTE: FINAL PAVEMENT SECTION DESIGN TO BE DETERMINED BASED ON SITE GEO-TECHNICAL EXPLORATION AND NCDOT SUBDIVISION ROAD STANDARDS.

TYPICAL PARKING LOT CROSS SECTION

NOT TO SCALE

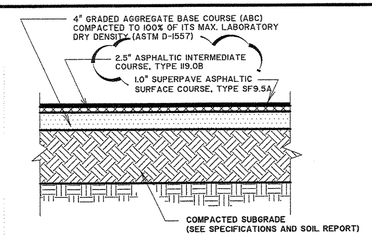
TRAFFIC NOTES:
1. THE NEED FOR STREET NAMES WILL BE DETERMINED WITH THE CITY OF WILMINGTON.
2. ALL PAVEMENT MARKINGS WITHIN NCDOT PUBLIC RIGHTS-OF-WAY SHALL BE THERMOPLASTIC AND MEET NCDOT SPECIFICATIONS.
3. TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARD, CURRENT EDITION.
4. DETECTABLE WARNING MATS SHALL BE PLACED AT ACCESSIBLE CURB RAMPS.



SPEED HUMP INSTALLATION DETAILS
1. SPEED BUMPS SHALL NOT BE PLACED OVER MANHOLES, WATERVALVES STORM DRAIN STRUCTURES, ETC.
2. ALL ASPHALT CONCRETE PAVEMENT INSTALLATION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ASPHALT PAVEMENT.

SPEED BUMP DETAIL

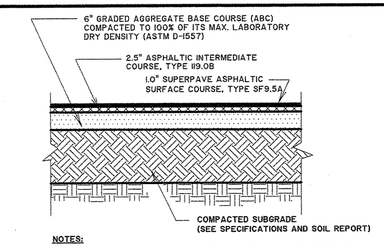
NOT TO SCALE



NOTES:
1. PAVEMENT AND AGGREGATE BASE COURSES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, CURRENT EDITION.
2. THE SUBGRADE SHALL BE COMPACTED TO 98% STANDARD PROCTOR (ASTM D-698) AND SHALL BE PREPARED ACCORDING TO THE NCDOT STANDARD SPECIFICATIONS. SUBGRADE SHALL BE FREE OF ROCKS AND DEBRIS LARGER THAN 1" IN DIAMETER. COMPACTION TESTS MUST BE SUBMITTED TO THE ENGINEER PRIOR TO APPLICATION OF ANY BASE MATERIAL.
3. CORE, DENSITY AND GRADATIONS ARE REQUIRED AND SHALL MEET NCDOT SPECIFICATIONS
4. SUBGRADE AND THE CURBLINE MUST PASS PROOF ROLL BEFORE THE CURB IS INSTALLED (IF ANY CURB IS SHOWN).

ASPHALT PAVING SECTION LIGHT DUTY

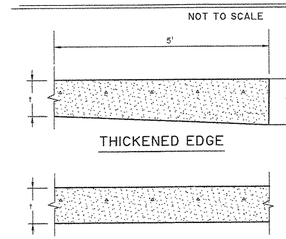
NOT TO SCALE



NOTES:
1. PAVEMENT AND AGGREGATE BASE COURSES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, CURRENT EDITION.
2. THE SUBGRADE SHALL BE COMPACTED TO 98% STANDARD PROCTOR (ASTM D-698) AND SHALL BE PREPARED ACCORDING TO THE NCDOT STANDARD SPECIFICATIONS. SUBGRADE SHALL BE FREE OF ROCKS AND DEBRIS LARGER THAN 1" IN DIAMETER. COMPACTION TESTS MUST BE SUBMITTED TO THE ENGINEER PRIOR TO APPLICATION OF ANY BASE MATERIAL.
3. CORE, DENSITY AND GRADATIONS ARE REQUIRED AND SHALL MEET NCDOT SPECIFICATIONS
4. SUBGRADE AND THE CURBLINE MUST PASS PROOF ROLL BEFORE THE CURB IS INSTALLED (IF ANY CURB IS SHOWN).

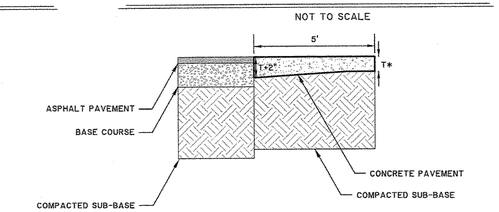
ASPHALT PAVING SECTION HEAVY DUTY

NOT TO SCALE



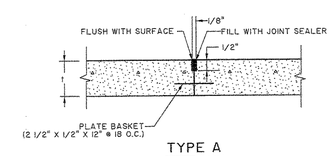
THICKENED EDGE

TYPICAL SECTION



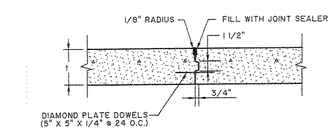
CONCRETE-ASPHALT TRANSITION DETAIL

NOTE:
REFER TO PAVEMENT SECTION DETAIL FOR THICKNESS (T*) OF CONCRETE PAVEMENT



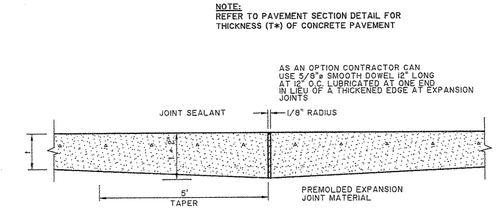
TYPE A

SAWED

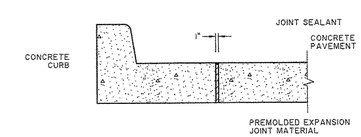


TYPE B

LONGITUDINAL CONSTRUCTION JOINT



EXPANSION JOINT



EXPANSION JOINT AT CURB

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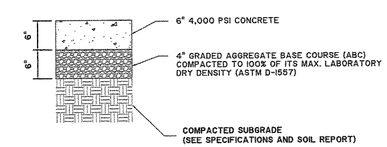
PLANNING DIVISION



SECTION A-A

HEAVY DUTY RIGID PAVEMENT (TRASH COMPACTOR)

NOT TO SCALE

North Carolina
One Call Center
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1-800-632-4949

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120162.2
Signed:

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

NORTH CAROLINA PROFESSIONAL SEAL 019108 ENGINEER VINCENT D. TUCCI

NO.	REVISIONS	BY	DATE
14	ADD NOTE TO EXTRUDED CURB/REV PVMT SECTION	BDR	12/05/12
12	ADD PREVIOUS REVISION NOTES	BDR	09/27/12
4	SEE REVISION SUMMARY ON SHEET G1.0	BDR	04/23/12
1	SEE REVISION SUMMARY ON SHEET G1.0	BDR	02/24/12

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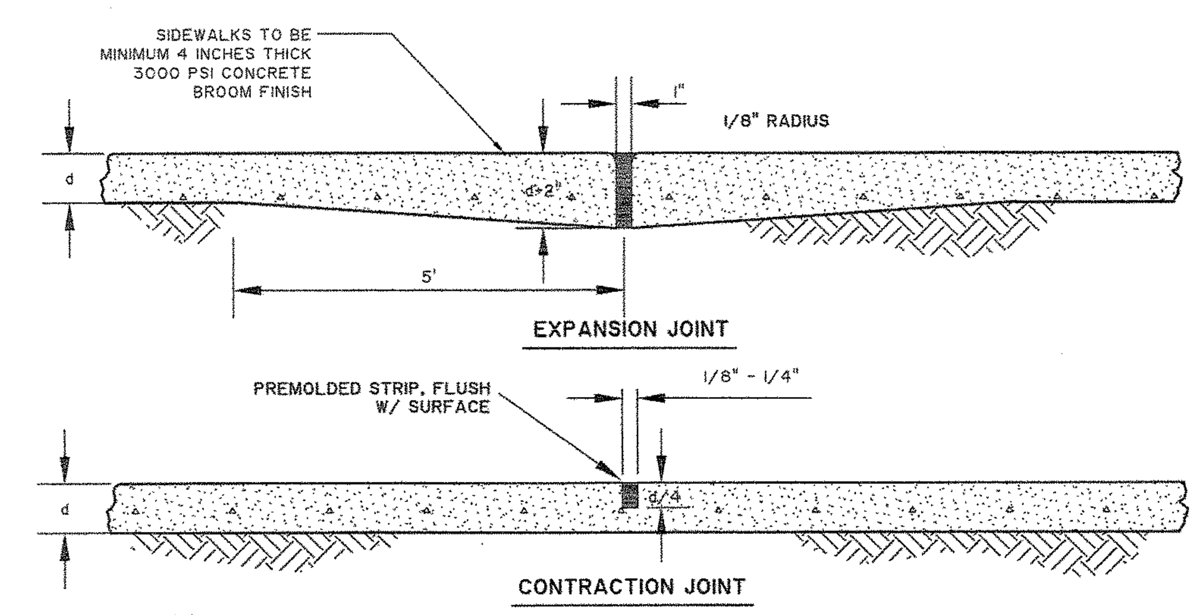
FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC

AMBERLEIGH SHORES

CIVIL SITE DETAILS

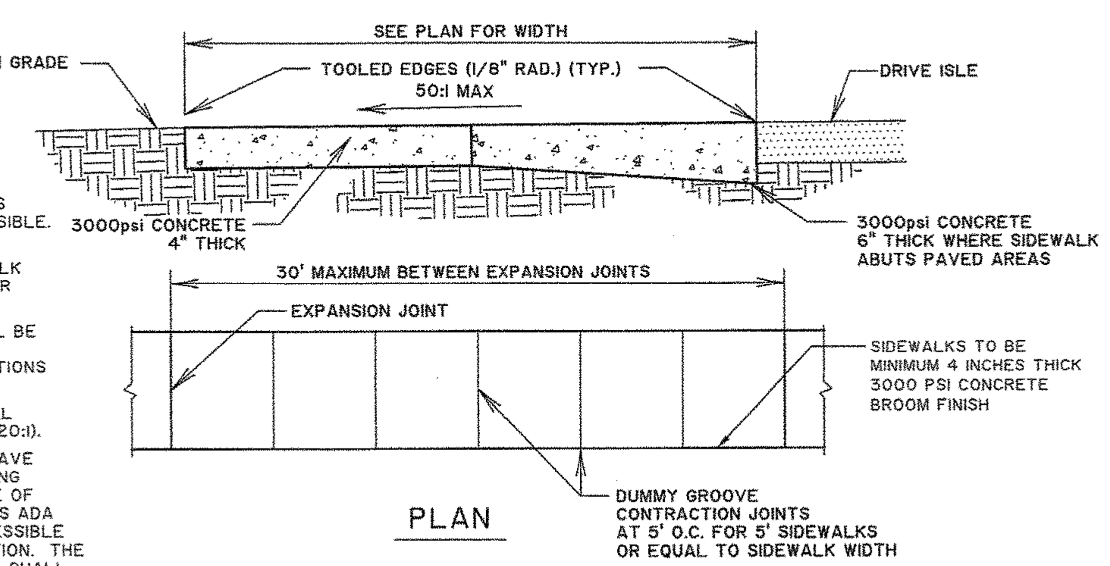
JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.3



SIDEWALK JOINT DETAILS

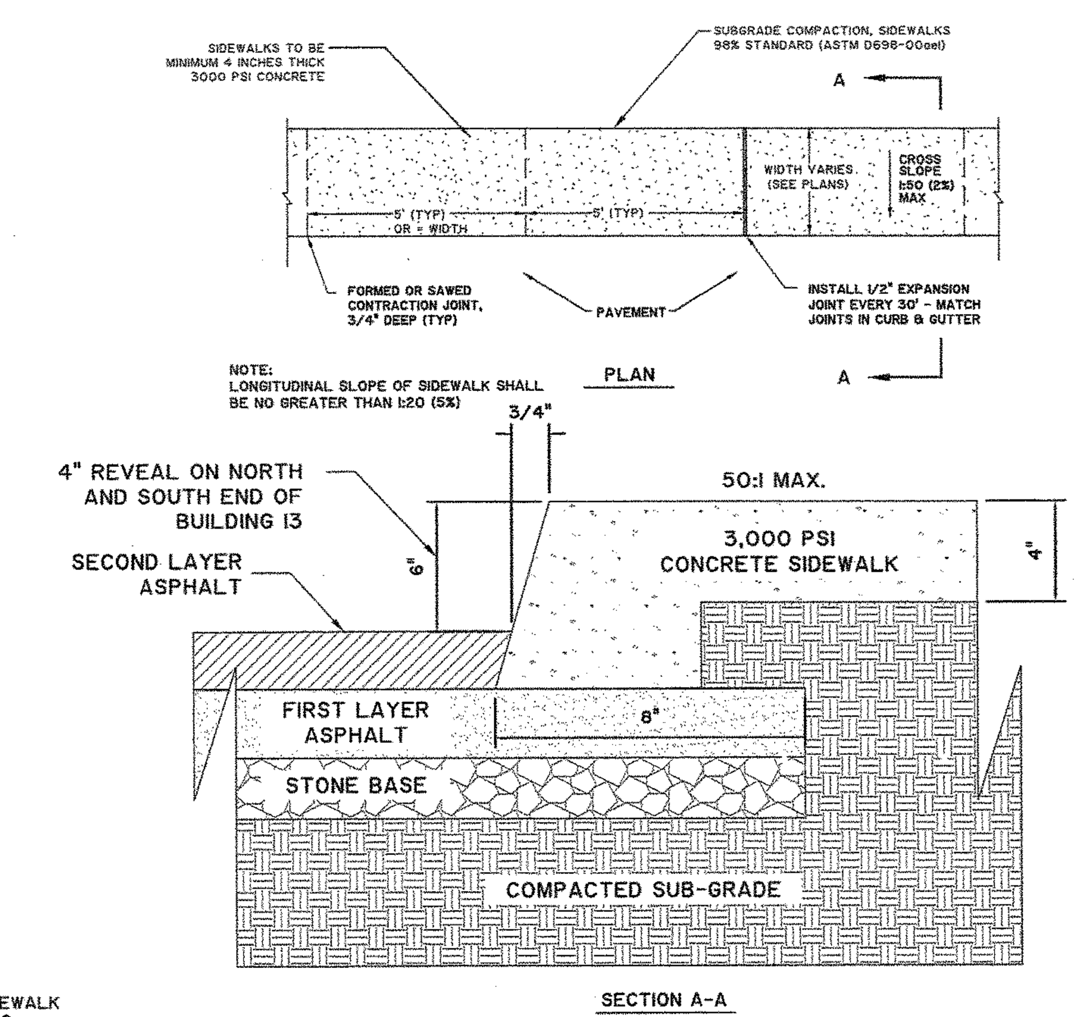
NOT TO SCALE



NOTES:
1. ALL SIDEWALK GRADES SHALL BE ADA ACCESSIBLE.
2. PROVIDE EXPANSION JOINTS WHERE SIDEWALK ABUTS STRUCTURES OR OTHER SIDEWALKS.
3. ALL SIDEWALKS SHALL BE BROOM FINISHED. SEE TECHNICAL SPECIFICATIONS FOR DETAILS.
4. MAXIMUM LONGITUDINAL SLOPE SHALL BE 5% (20:1).
5. CURB RAMPS SHALL HAVE A DETECTABLE WARNING COMPLYING WITH CODE OF FEDERAL REGULATIONS ADA STANDARDS FOR ACCESSIBLE DESIGN, CURRENT EDITION. THE DETECTABLE WARNING SHALL EXTEND FULL WIDTH AND DEPTH OF CURB RAMP.

SIDEWALK DETAIL

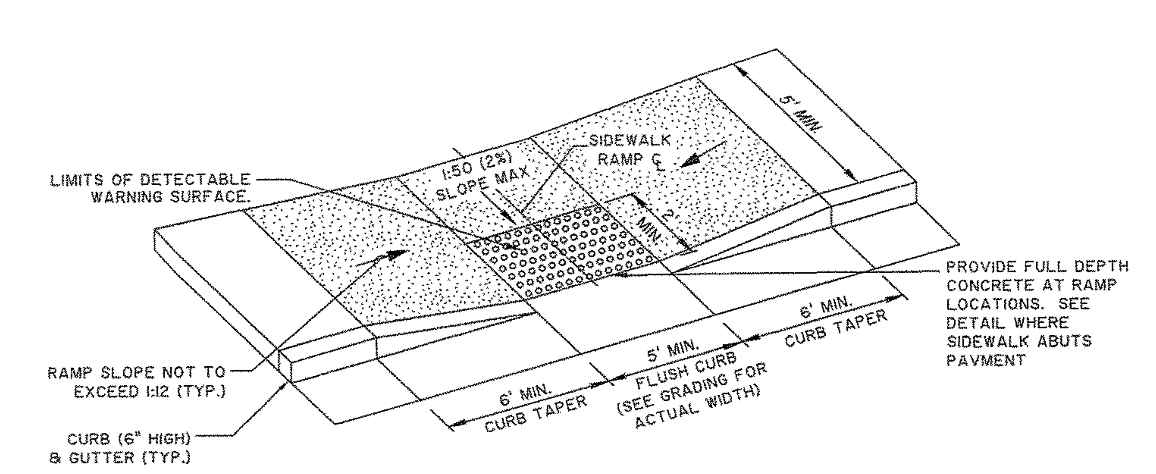
NOT TO SCALE



NOTES:
1. ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND SPECIFICATIONS, AND TO THE TECHNICAL SPECIFICATIONS INCLUDING, BUT NOT LIMITED TO, SECTION 02200 - EARTHWORK AND SECTION 03300 - CAST-IN-PLACE CONCRETE.
2. CURB RAMPS SHALL BE INSTALLED AT EACH INTERSECTION OR DESIGNATED CROSSWALK LOCATION AND MUST MEET THE MOST CURRENT ADA STANDARDS AND SPECIFICATIONS AT THE TIME OF CONSTRUCTION.
3. ON ACCESSIBLE ROUTES WHERE SIDEWALK IS LESS THAN 5' WIDE, PASSING SPACES AT LEAST 5'X5' SHALL BE LOCATED AT REASONABLE INTERVALS NOT TO EXCEED 200'.

RAISED SIDEWALK WITH THICKENED EDGE DETAIL

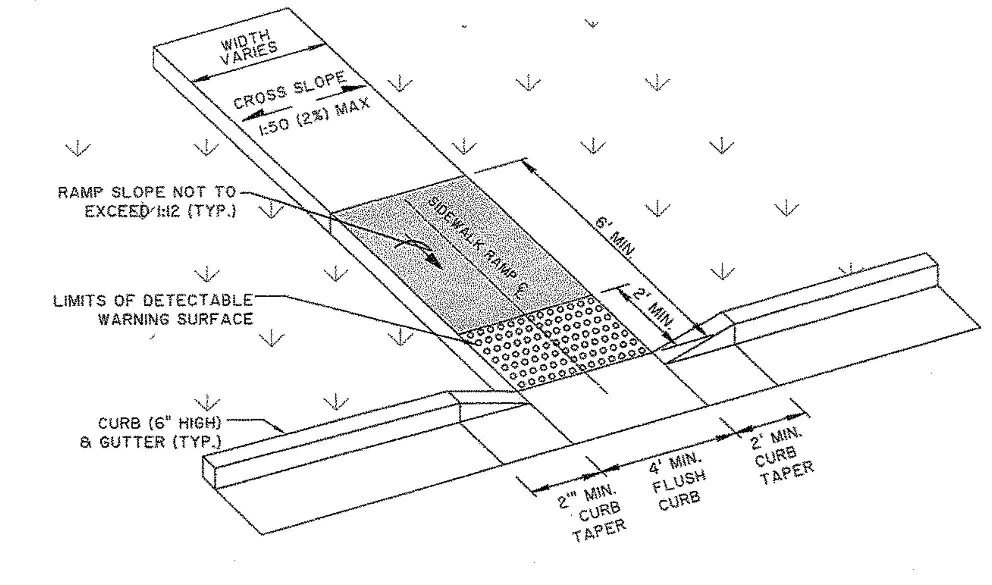
NOT TO SCALE



NOTES:
1. CONSTRUCTION OF ACCESSIBLE CURB RAMP SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
2. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20 (5%)
3. CURB RAMP SHALL HAVE A DETECTABLE WARNING THAT EXTENDS THE FULL WIDTH OF CURB RAMP. SEE DETECTABLE WARNING DETAIL.

CURB RAMP "TYPE B"

NOT TO SCALE



NOTES:
1. CONSTRUCTION OF ACCESSIBLE CURB RAMP SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
2. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20 (5%)
3. CURB RAMP SHALL HAVE A DETECTABLE WARNING THAT EXTENDS THE FULL WIDTH OF CURB RAMP. SEE DETECTABLE WARNING DETAIL.
4. LONGITUDINAL SLOPE OF SIDEWALK TO BE NO GREATER THAN 1:20 (5%).

CURB RAMP "TYPE B" W/ PERPENDICULAR SIDEWALK

NOT TO SCALE

North Carolina
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Call Before You Dig
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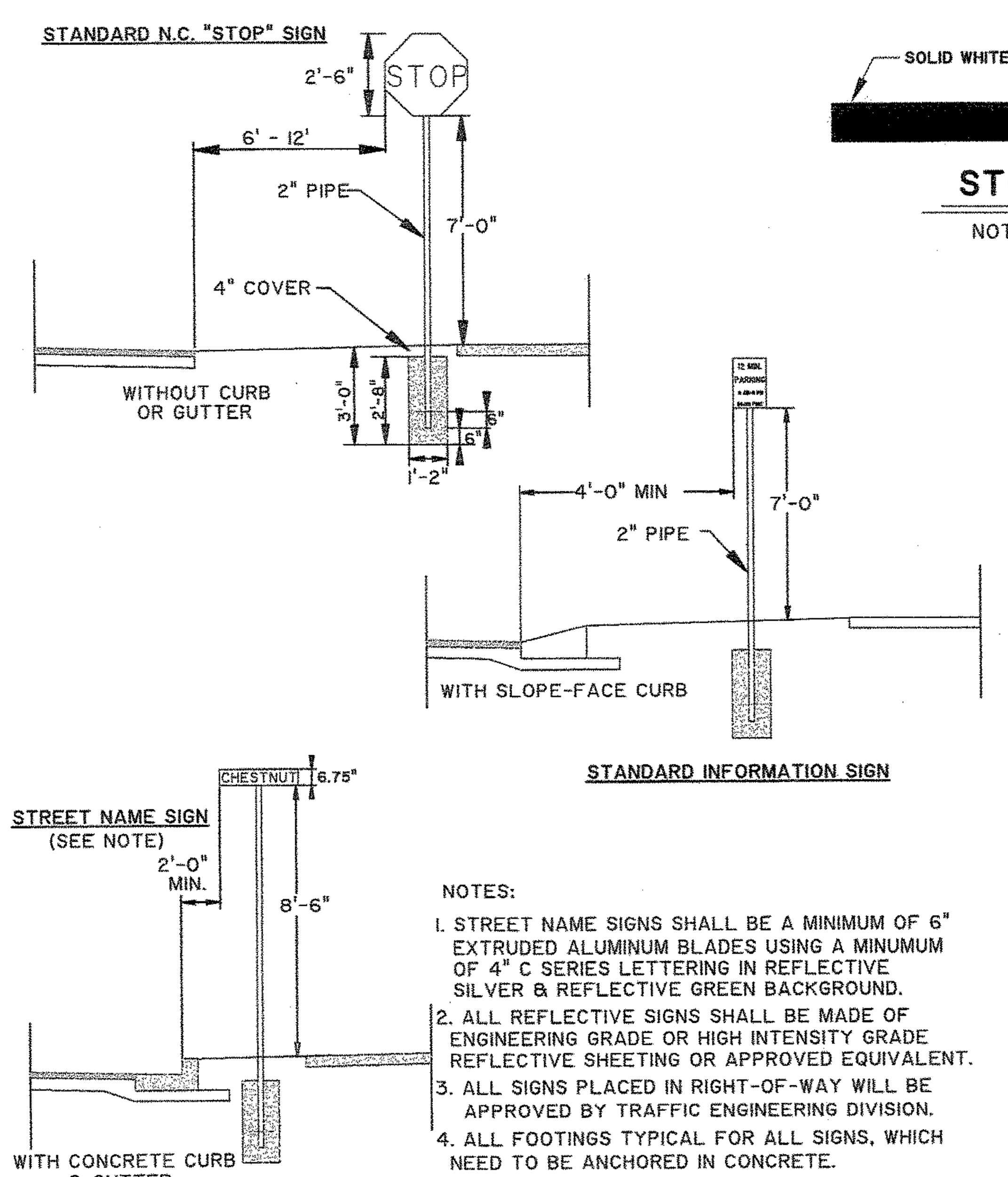
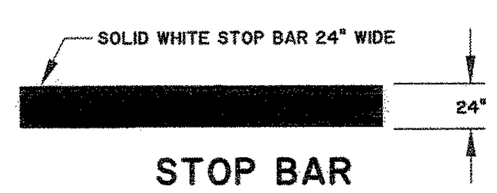


NOTES:
1. STREET NAME SIGNS SHALL BE A MINIMUM OF 6" EXTRUDED ALUMINUM BLADES USING A MINUMUM OF 4" C SERIES LETTERING IN REFLECTIVE SILVER & REFLECTIVE GREEN BACKGROUND.
2. ALL REFLECTIVE SIGNS SHALL BE MADE OF ENGINEERING GRADE OR HIGH INTENSITY GRADE REFLECTIVE SHEETING OR APPROVED EQUIVALENT.
3. ALL SIGNS PLACED IN RIGHT-OF-WAY WILL BE APPROVED BY TRAFFIC ENGINEERING DIVISION.
4. ALL FOOTINGS TYPICAL FOR ALL SIGNS, WHICH NEED TO BE ANCHORED IN CONCRETE.

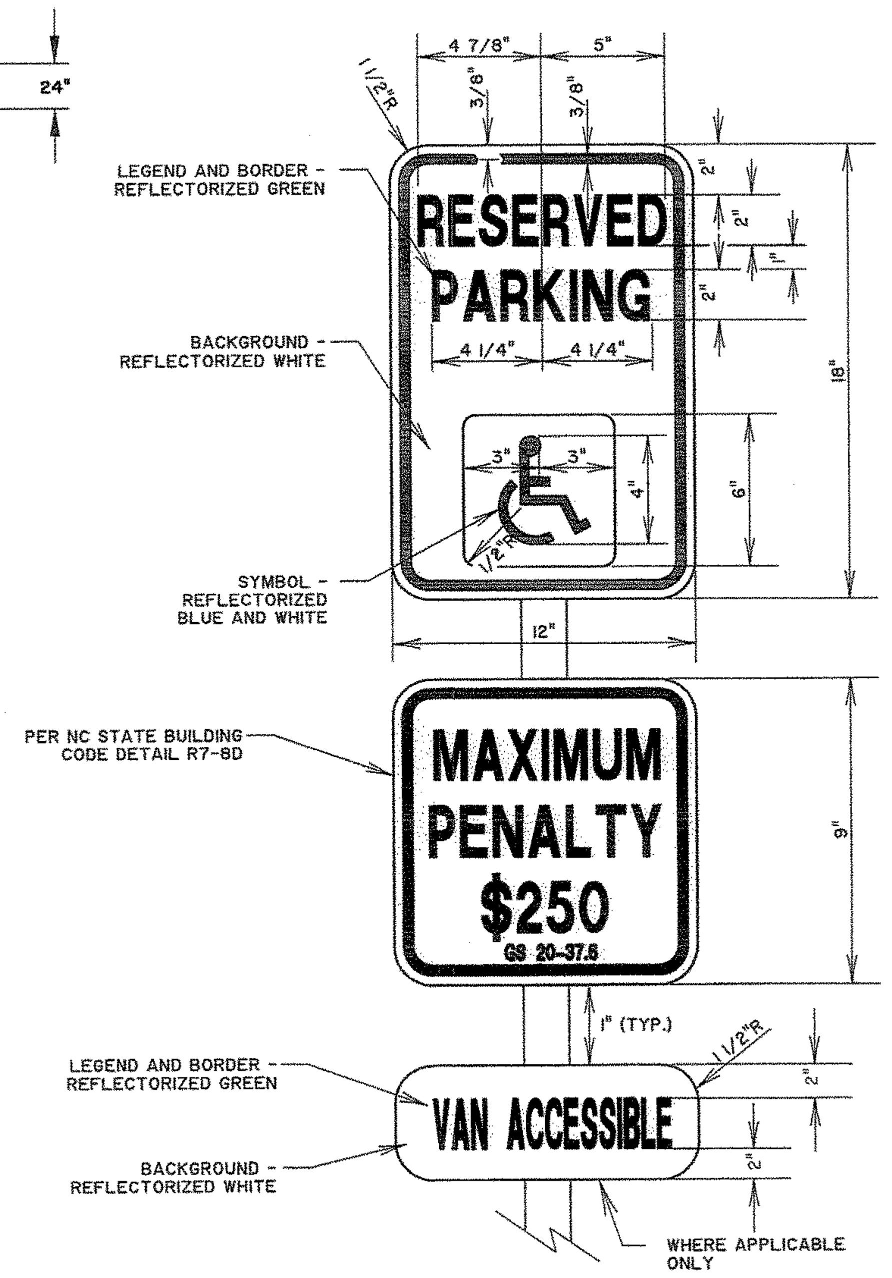
STANDARD SIGN INSTALLATION LOCATION SD 15-03

NOT TO SCALE



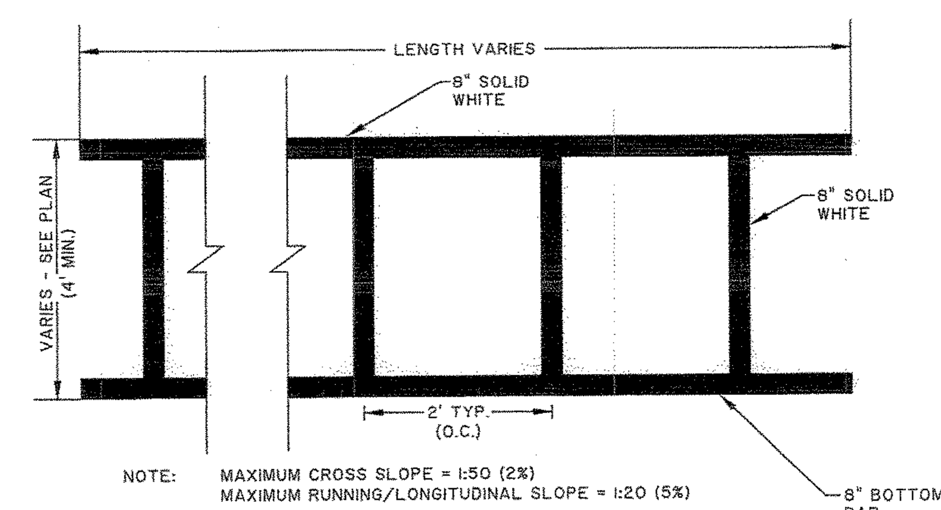
STOP BAR

NOT TO SCALE



HANDICAPPED PARKING SIGN

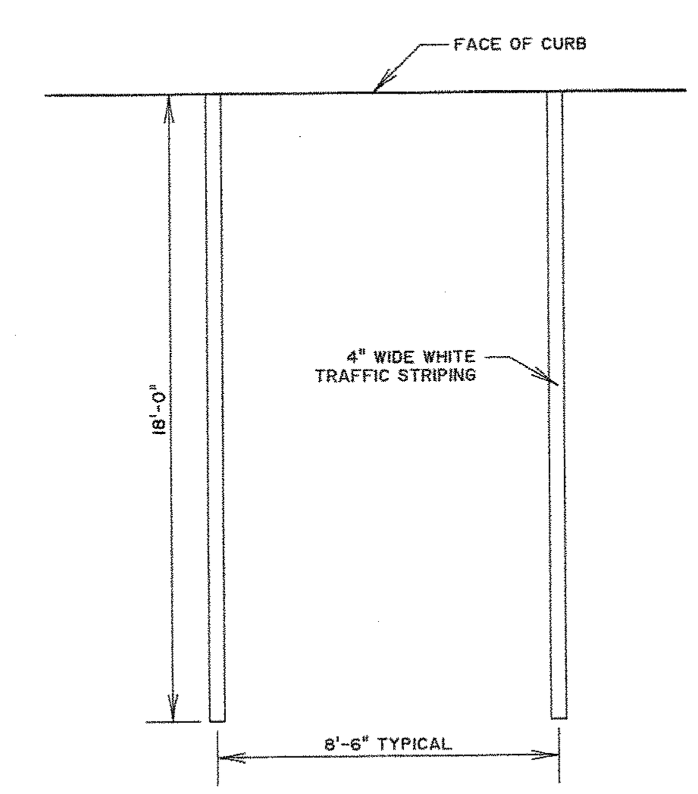
NOT TO SCALE



NOTE: MAXIMUM CROSS SLOPE = 1:50 (2%)
MAXIMUM RUNNING/LONGITUDINAL SLOPE = 1:20 (5%)

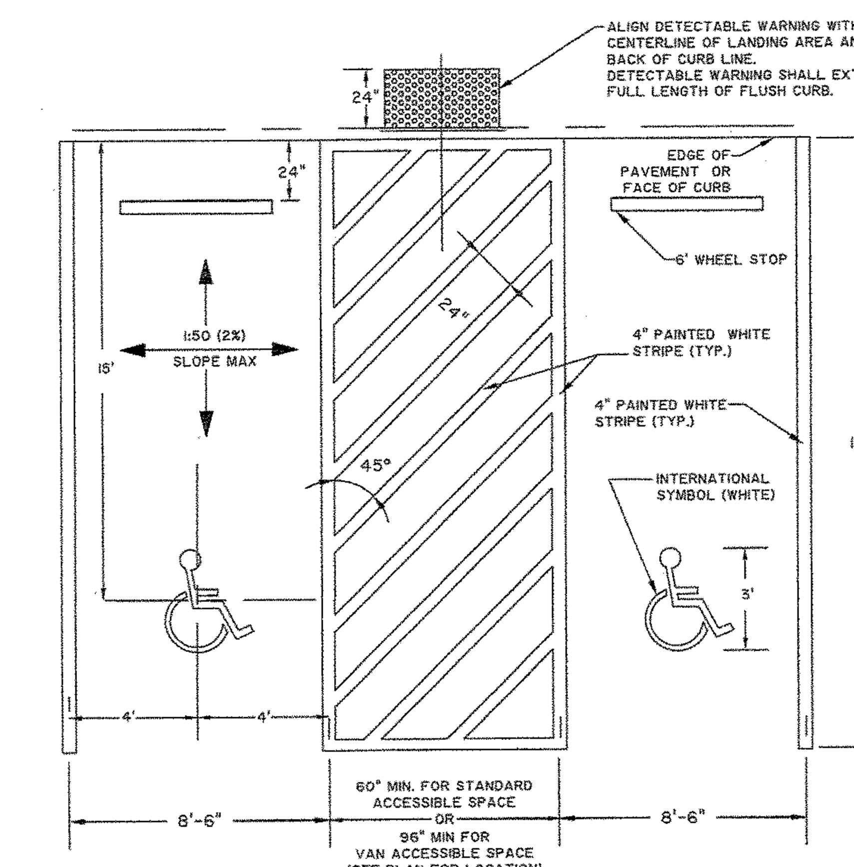
ONSITE CROSSWALK (N/A IN PUBLIC R/W NCDOT DETAIL)

NOT TO SCALE



TYPICAL PARKING SPACE

NOT TO SCALE



NOTES:
1. STRIPING AND CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND SPECIFICATIONS.
2. 2% MAXIMUM SLOPE IN ALL DIRECTIONS WITHIN ACCESSIBLE PARKING SPACE AND ACCESS AISLE.
3. ONE IN EVERY 8 ACCESSIBLE SPACES SHALL BE SERVED BY AN 8' WIDE ACCESS AISLE AND SHALL BE DESIGNATED "VAN ACCESSIBLE".

ACCESSIBLE PARKING SPACE STRIPING DETAIL

NOT TO SCALE

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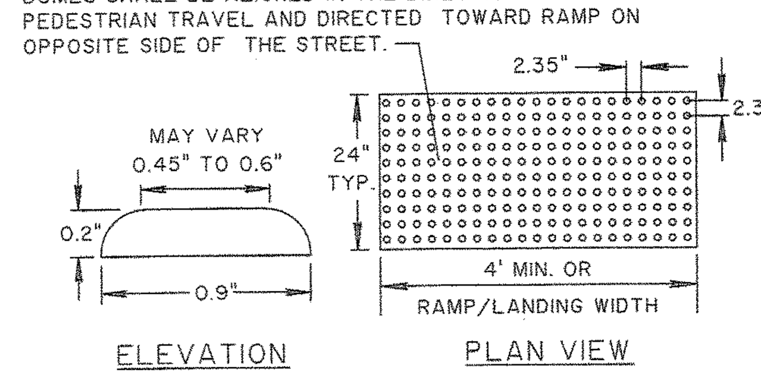
DEC 1 1 2012
PLANNING DIVISION

SHALL BE A SQUARE GRID, EQUAL IN BOTH DIRECTIONS. DOMES SHALL BE ALIGNED IN THE DIRECTION OF THE PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON OPPOSITE SIDE OF THE STREET.



NOTE:
1. DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF CONCRETE, THE WARNING AREA SHALL BE RED BRICK IN COLOR. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF RED BRICK, THE WARNING AREA SHALL BE GRAY IN COLOR. THE COLOR USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
2. BRICK PAVERS SHALL BE SET IN A WET MORTAR BED ON A 4" MIN. THICK CONCRETE FOUNDATION.

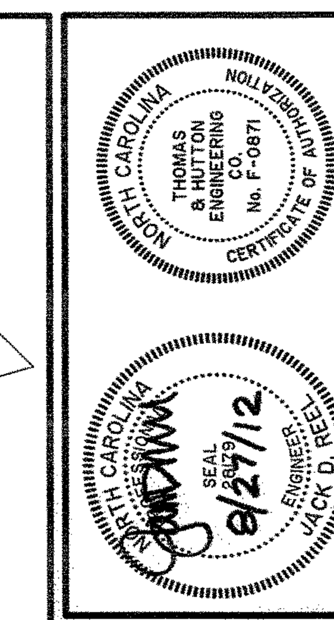
DETECTABLE WARNING DETAIL

NOT TO SCALE

Approved Construction Plan

	Name	Date
Planning	[signature]	12/12/12
Public Utilities		
Traffic	TBM	12/12/12
Fire	[signature]	12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016R2
Signed: [signature]



NO.	REVISIONS	BY	DATE
12	ADD PREVIOUS REVISION NOTES	BDR	08/27/12
4	SEE REVISION SUMMARY ON SHEET GLO	BDR	04/23/12
1	MISC REVISIONS PER OWNER	BDR	01/25/12

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AMBERLEIGH SHORES

CIVIL SITE DETAILS

JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.4

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-08

ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKER SPACING

SHEET 1 OF 3
1250.01

GENERAL NOTES

1- MARKERS ARE GENERALLY NOT REQUIRED ALONG EDGE LINES, EXCEPT IF DESIGNATED IN THE PLANS, OR DIRECTED BY THE ENGINEER. WHEN THEY ARE REQUIRED, SPACE THEM ON 20 FT. CENTERS, AND OFFSET 2 INCHES FROM THE EDGE LINE ON THE TRAFFIC SIDE.

2- PLACE CRYSTAL/RED MARKERS AT INTERSECTIONS AND INTERCHANGES WHERE WRONG-WAY MOVEMENTS ARE POSSIBLE. POSITION THE RED SIDE OF THE MARKER TO FACE "WRONG-WAY" TRAFFIC. WHEN USED, PLACE CRYSTAL/RED MARKERS ALONG THE ENTIRE LENGTH OF THE PROJECT.

3- DO NOT PLACE PAVEMENT MARKERS CLOSER THAN 2 INCHES TO A PAVEMENT CONSTRUCTION JOINT (AS FEASIBLE), EXCEPT WHEN PLACED BETWEEN DOUBLE YELLOW CENTER LINES, AND ALONG YELLOW SKIP LINES ON TWO-LANE, TWO-WAY ROADWAYS WHERE PASSING IS ALLOWED IN BOTH DIRECTIONS.

4- DO NOT PLACE PAVEMENT MARKERS DIRECTLY ON PAVEMENT MARKING LINES.

5- PLACE PAVEMENT MARKERS USED IN CONJUNCTION WITH DOUBLE YELLOW CENTER LINES MID-WAY BETWEEN THE LINES. PROVIDE A GAP BETWEEN THE LINES AND THE MARKER TO REDUCE OVERSPRAYING THE MARKER DURING REPAINTING OPERATIONS.

6- MARKERS ARE NOT REQUIRED ALONG MINI-SKIP LINES IN TAPERS.

PAVEMENT MARKER SPACING CHART

TYPE OF PAVEMENT MARKING	TYPICAL SPACING (FT)
SKIP LINES AND CENTER LINES ALONG THRU LANES	
ALONG TANGENT SECTIONS AND HORIZONTAL CURVES LESS THAN 6°	80
HORIZONTAL CURVES ≥ 6°	40
TURN-LANES - MINI SKIP LINES	30
SKIP LINES	40
SOLID LINES	20
CENTER LINES	40
MINI-SKIP LINES AT LANE DROP APPROACHES	30
TWO-WAY RAMP CENTER LINES	40
GORE LINES	20
PAINTED ISLANDS - WHITE	20
YELLOW	40
RAISED MEDIAN ISLANDS	40
WRONG WAY RAMP ARROW	5
TAPERS	40
NARROW BRIDGES - EDGE LINE	20
CENTER LINE	40
ONE LANE BRIDGES- EDGE LINE	20
WORK ZONE APPLICATIONS	
2-LANE, 2-WAY ON-SITE DIVERSION	20 FT. FOR CENTER LINE
ALL OTHER DIVERSIONS	½ NORMAL SPACING

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RALEIGH, N.C.

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ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKER SPACING

SHEET 1 OF 3
1250.01

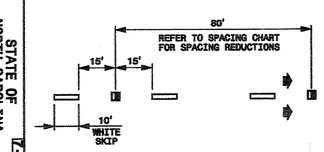
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-08

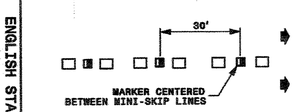
ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKER SPACING

SHEET 2 OF 3
1250.01

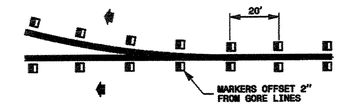
PLACEMENT ALONG WHITE SKIP LINES



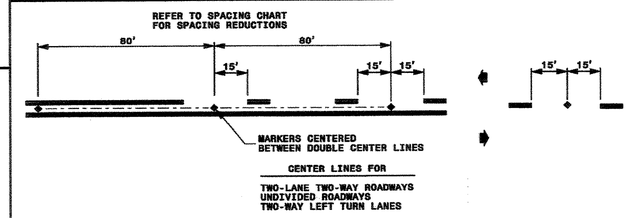
PLACEMENT ALONG WHITE MINI-SKIP LINES



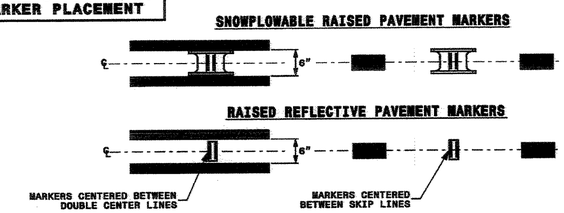
PLACEMENT ALONG WHITE GORE LINES



PLACEMENT ALONG YELLOW CENTER LINES



DETAIL OF PAVEMENT MARKER PLACEMENT



LEGEND

- CRYSTAL/RED PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-08

ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKER SPACING

SHEET 2 OF 3
1250.01

NO.	REVISIONS	BY	DATE
12	ADD PREVIOUS REVISION NOTES	BDR	08/27/12
4	REMOVE FENCE DETAILS / ADD NCDOT DETAILS	BDR	04/23/12
1	MISC REVISIONS PER OWNER	BDR	01/25/12

NORTH CAROLINA PROFESSIONAL ENGINEERING CERTIFICATE OF AUTHORIZATION
THOMAS & HUTTON ENGINEERING CO.
No. F-0871

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 28175
JACK D. REDDICK, JR.
8/27/12

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Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	BM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120162
Signed:

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

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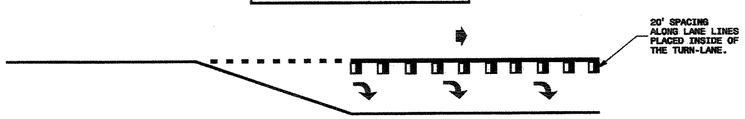
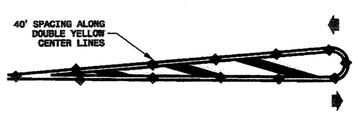
ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKER SPACING

SHEET 3 OF 3
1250.01

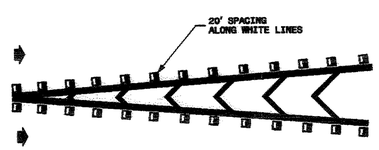
AUXILIARY TURN LANES



YELLOW PAINTED ISLANDS



WHITE PAINTED ISLANDS



LEGEND

- DIRECTION OF TRAFFIC FLOW
- CRYSTAL/RED PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- PAVEMENT MARKING SYMBOL

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DEPT. OF TRANSPORTATION
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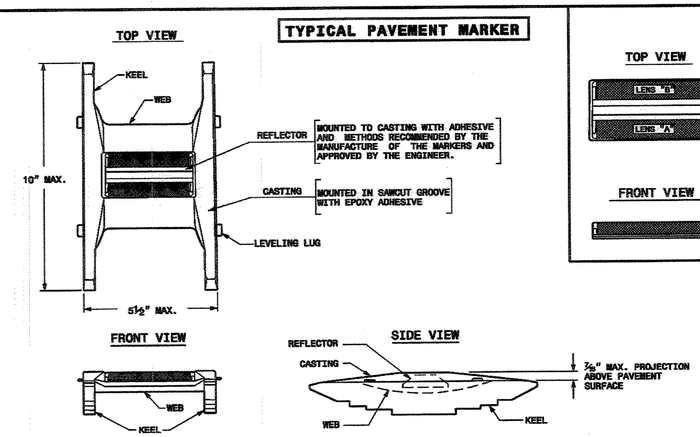
7-08

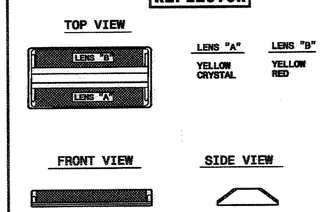
ENGLISH STANDARD DRAWING FOR
SNOWPLOWABLE RAISED PAVEMENT MARKERS

SHEET 1 OF 1
1253.01

TYPICAL PAVEMENT MARKER



REFLECTOR



GENERAL NOTES

1- USE A MINIMUM OF 1.44+/- SQ. INCH AREA FOR EACH REFLECTIVE LENS.

2- SAWCUT GROOVES TO DIMENSIONS PROVIDED BY THE MANUFACTURER.

3- CONTACT ALL LEVELING LUGS TO THE PAVEMENT SURFACE.

4- REFLECTOR DIMENSIONS CAN VARY, BUT DESIGNED TO FIT IN THE CASTING AND PROVIDE THE REQUIRED REFLECTIVITY.

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FLOURNOY DEVELOPMENT COMPANY
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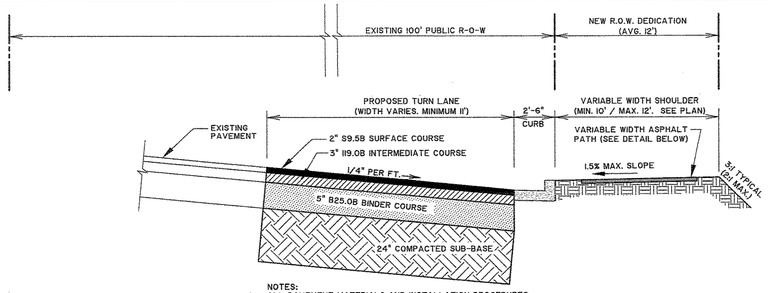
AMBERLEIGH SHORES
CIVIL SITE DETAILS

JOB NO:	J-22667
DATE:	8/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

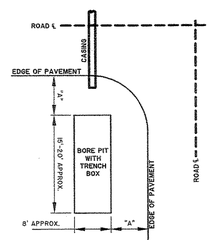
C6.5



NOTES:
1. ALL PAVEMENT MATERIALS AND INSTALLATION PROCEDURES SHALL MEET NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
2. PRIME AND TACK COATS SHALL BE APPLIED PER NCDOT SPECIFICATIONS.
2. EXISTING PAVEMENT CRACKS AND DEFICIENCIES TO BE CORRECTED PRIOR TO OVERLAYING.

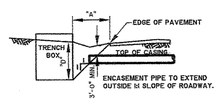
NCDOT TURN LANE SECTION

NOT TO SCALE



TYPICAL JACK & BORE PIT LOCATION

NOT TO SCALE

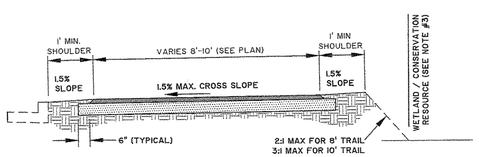


LAYOUT SCHEDULE (FT.)								
A	5	6	7	8	9	10	11	12
D	5	6	7	8	9	10	11	12

"A"= MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT (EP) IS BASED ON THE DEPTH OF PIT ("D") AND BY A RATIO OF 1:1 SLOPE. FOLLOW SAFETY REQUIREMENTS BY FENCING OFF OPEN PIT AND WORKING AREA.

SECTION THRU JACK & BORE PIT LOCATION

NOT TO SCALE



PAVEMENT DESIGN:
2" SF9.5A ASPHALT CONCRETE SURFACE COURSE
6" AGGREGATE BASE COURSE

NOTES:
1. ASPHALT PATH IS TO CONFORM TO ALL ADA REGULATIONS.
2. MINIMUM CROSS SLOPE OF PATH SHALL BE 1.0%, MAXIMUM CROSS SLOPE OF PATH SHALL BE 1.5%. MAXIMUM LONGITUDINAL SLOPE SHALL BE 4.5%.
3. DISTURBANCE WITHIN WETLAND / CONSERVATION RESOURCE IS PROHIBITED UNLESS OTHERWISE SPECIFIED ON PLANS.

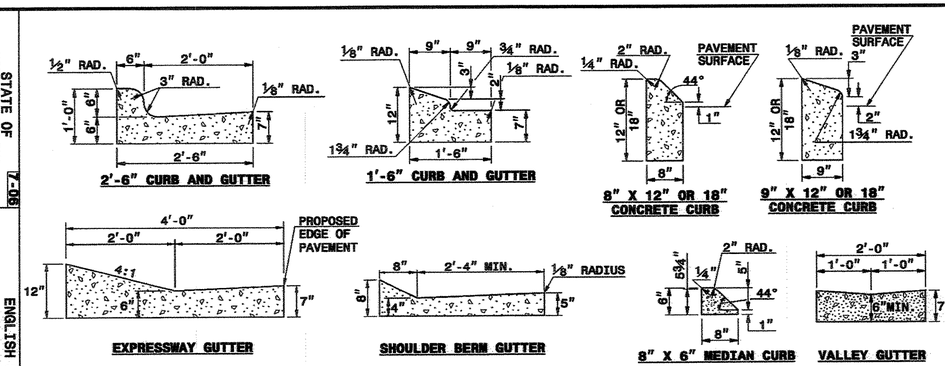
MARKET STREET PATH SECTION

NOT TO SCALE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

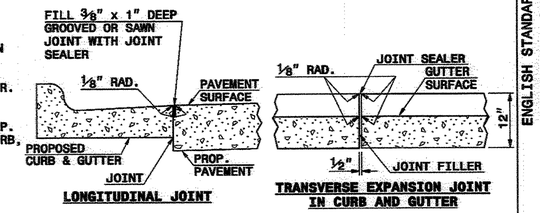
7-06

ENGLISH STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER



SECTION VIEW OF CURBS OR CURBS AND GUTTERS

GENERAL NOTES:
-PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
-JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
-CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2" DEEP.
-FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
-SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



LONGITUDINAL JOINT

TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

SECTION VIEW OF JOINTS

SHEET 1 OF 3
846.01

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER

SHEET 1 OF 3
846.01

NO.	REVISIONS	BY	DATE
12	ADD PREVIOUS REVISION NOTES	BDR	08/27/12
6	REVISIONS TO TURN LANE & PATH SECTION DETAILS	BDR	05/18/12
4	ADD MARKET ST PATH SECTION DETAIL	BDR	04/23/12
1	MISC REVISIONS PER OWNER	BDR	01/25/12

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Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TJM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20125160202
Signed:

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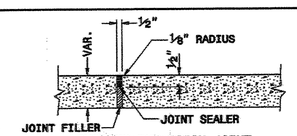
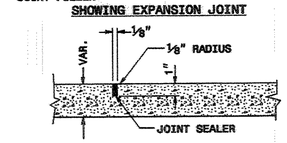


SHOWING EXPANSION JOINT



SHOWING GROOVED JOINT

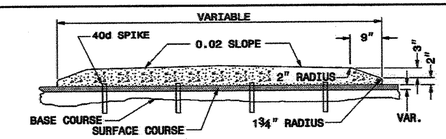
PARTIAL LONGITUDINAL SECTIONS OF PAVED ISLANDS

NOTE:
WHEN MONOLITHIC CONCRETE ISLAND IS ON TOP OF SURFACE COURSE, DRIVE 40d SPIKES INTO SURFACE UNDER MONOLITHIC CONCRETE ISLAND. STAGGER SPIKES ON 2' CENTERS EACH WAY.

IN THE CONCRETE PAVEMENT (ISLAND) AND CONCRETE ISLAND (MONOLITHIC) PLACE 1/2" EXPANSION JOINTS AT 30' INTERVALS AND GROOVED JOINTS 1" DEEP AT 10' INTERVALS BETWEEN EXPANSION JOINTS.

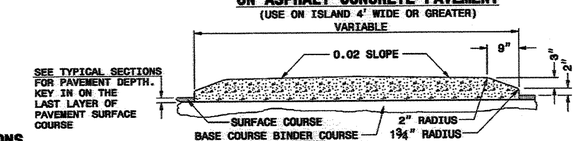
LINE UP THE JOINTS IN THE CONCRETE PAVEMENT (ISLAND) WITH THE JOINTS IN THE CURB OR CURB AND GUTTER. FILL AND SEAL THE TOP 1/2" OF THE EXPANSION JOINTS AND THE ENTIRE DEPTH OF GROOVED JOINTS WITH JOINT SEALER.

FOR JOINTS IN THE CURB AND/OR CURB AND GUTTER, SEE STANDARD NO. 846.01



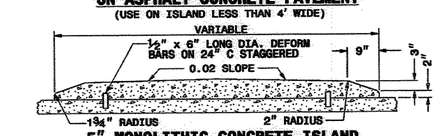
5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) ON ASPHALT CONCRETE PAVEMENT

(USE ON ISLAND 4' WIDE OR GREATER)

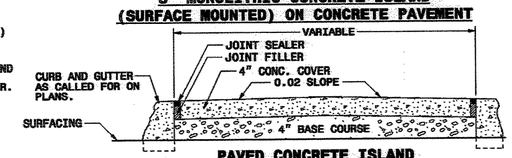


5" MONOLITHIC CONCRETE ISLAND (KEYED IN) ON ASPHALT CONCRETE PAVEMENT

(USE ON ISLAND LESS THAN 4' WIDE)



5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) ON CONCRETE PAVEMENT



PAVED CONCRETE ISLAND

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
CONCRETE ISLANDS

SHEET 1 OF 1
852.01

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
CONCRETE ISLANDS

SHEET 1 OF 1
852.01

FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC
AMBERLEIGH SHORES
CIVIL SITE DETAILS

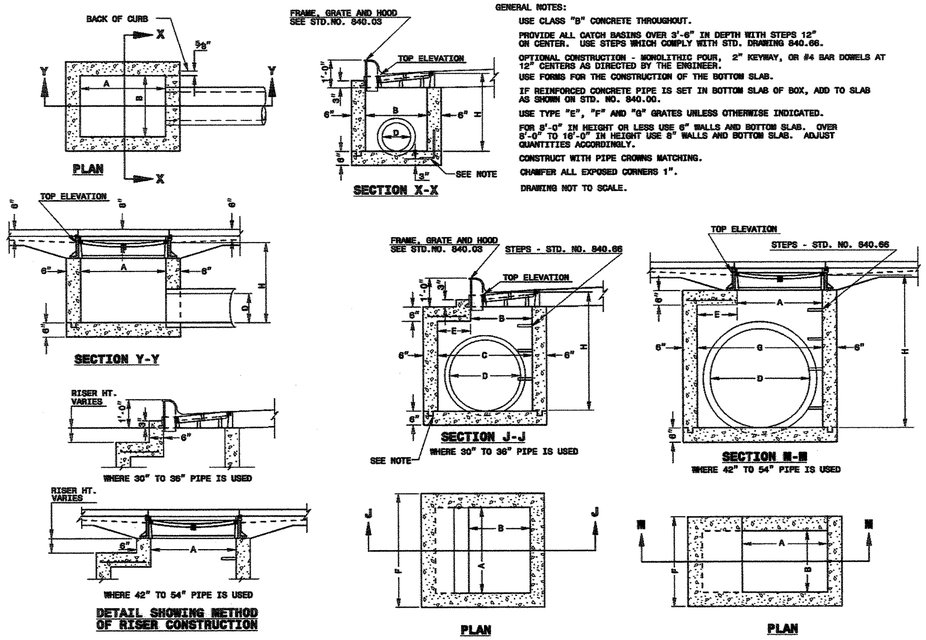
JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.6

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

CONSTRUCT WITH PIPE CROWNS MATCHING.

CHAMFER ALL EXPOSED CORNERS 1".

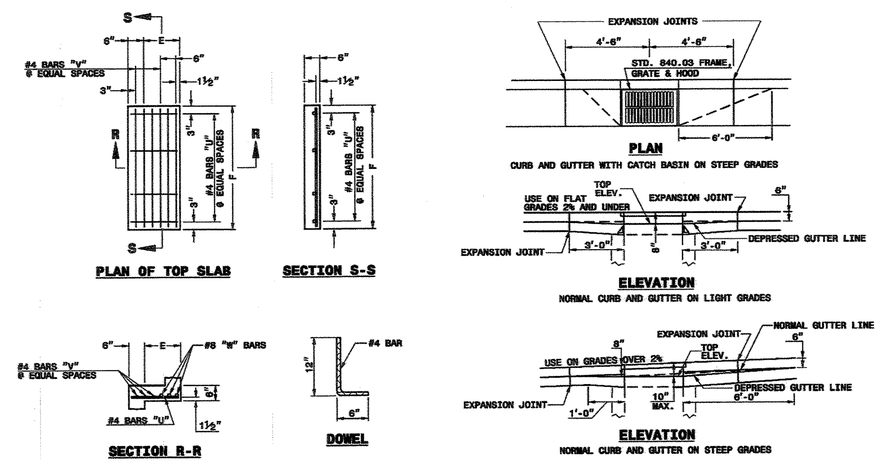
DRAWING NOT TO SCALE.

SHEET 1 OF 2
840.02

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER) *

PIPE	DIMENSIONS OF BOX AND PIPE A	B	C	G	H	COVER DIMENSION E	F	BARS-U NO.	LENGTH	BARS-V NO.	LENGTH	BARS-W NO.	LENGTH	TOTAL LBS.	TOP SLAB	BOTTOM SLAB	CU.YDS. CONC. IN BOX (INT. DIM. FOR MINIMUM HEIGHT, H) C.W.	R.C.	DEDUCTIONS ONE PIPE C.W.	R.C.
D																				
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	--	0.235	0.772	0.015	0.026
15"	3'-0"	2'-2"			3'-0"											0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"			3'-3"											0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"			3'-9"											0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.123	0.321	1.433	0.092	0.127
36"	3'-0"	2'-2"	3'-10"		4'-9"	1'-8"	4'-0"	4	1'-11"	3	3'-9"	3	3'-9"	43	0.161	0.358	1.714	0.132	0.176
42"	3'-0"	2'-2"		4'-5"	5'-3"	1'-5"	3'-2"	4	1'-8"	2	2'-11"	3	2'-11"	32	0.112	0.318	1.738	0.180	0.243
48"	3'-0"	2'-2"		5'-0"	5'-9"	2'-0"	3'-2"	4	2'-3"	3	2'-11"	3	2'-11"	35	0.145	0.352	2.052	0.235	0.317
54"	3'-0"	2'-2"		5'-7"	6'-3"	2'-7"	3'-2"	4	2'-10"	5	2'-11"	3	2'-11"	41	0.180	0.386	2.387	0.297	0.401

* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

SHEET 2 OF 2
840.02

NO.	REVISIONS	BY	DATE
12	UPDATE REVISION NOTE	BDR	08/27/12
1	MISC DETAIL COORDINATION	BDR	01/28/12

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Approved Construction Plan
Name Date
Planning 12/12/12
Public Utilities
Traffic 12/12/12
Fire 12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016182
Signed:

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
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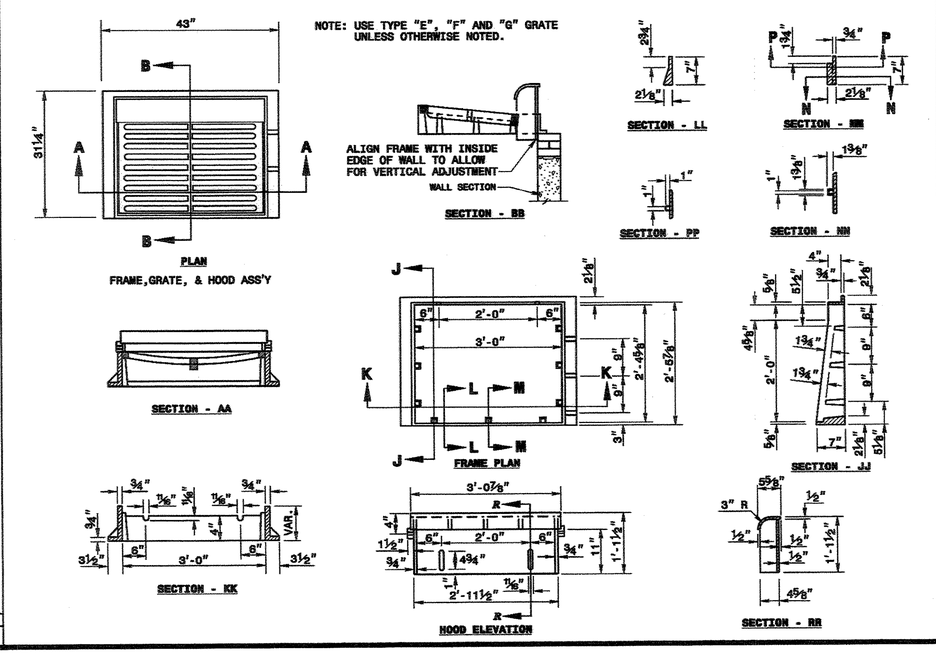
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN



SHEET 1 OF 2
840.03

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
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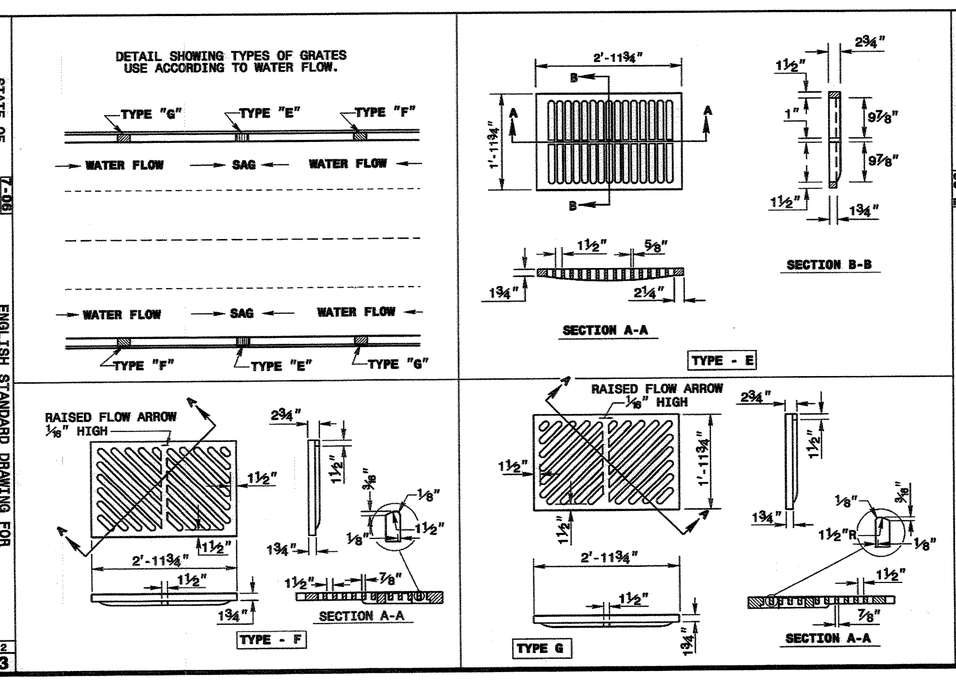
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN



SHEET 2 OF 2
840.03

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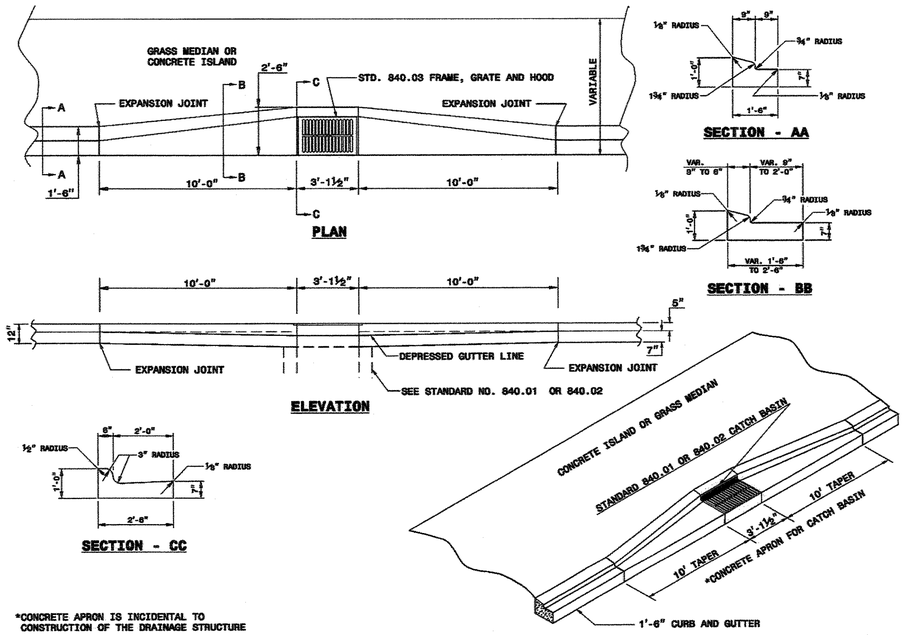
JOB NO:	J-22667
DATE:	8/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.7

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-08

ENGLISH STANDARD DRAWING FOR
MEDIAN CURB FOR CATCH BASIN
(FOR USE WITH 1'-6" CURB AND GUTTER)



*CONCRETE APRON IS INCIDENTAL TO CONSTRUCTION OF THE DRAINAGE STRUCTURE

SHEET 1 OF 1
852.05

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-08

ENGLISH STANDARD DRAWING FOR
MEDIAN CURB FOR CATCH BASIN
(FOR USE WITH 1'-6" CURB AND GUTTER)

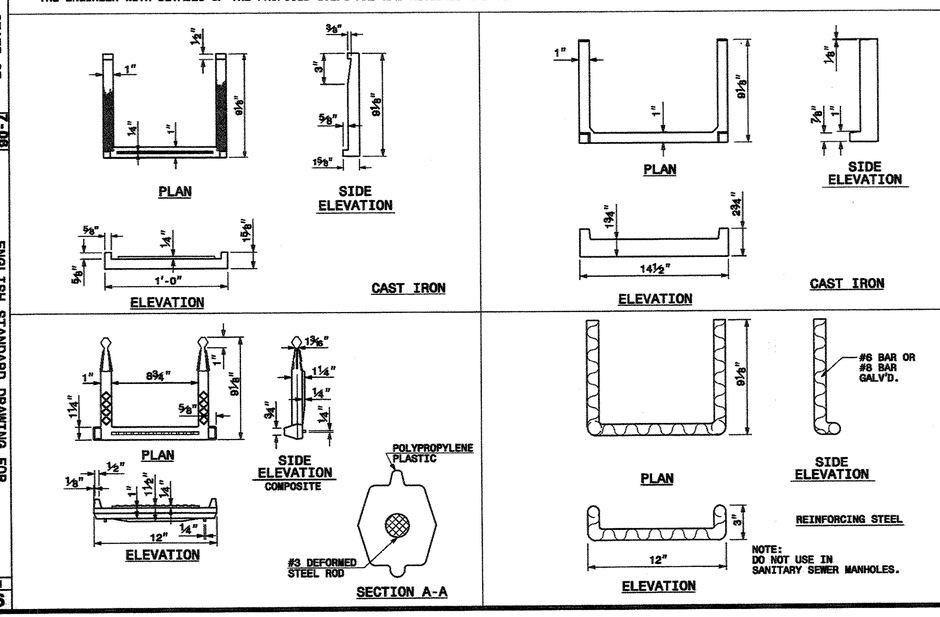
SHEET 1 OF 1
852.05

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-08

ENGLISH STANDARD DRAWING FOR
DRAINAGE STRUCTURE STEPS

NOTES:
INSTALL ALL STEPS PROTRUDING 4" FROM INSIDE FACE OF STRUCTURE WALL.
STEPS DIFFERING IN DIMENSIONS, CONFIGURATION, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THE CONTRACTOR HAS FURNISHED THE ENGINEER WITH DETAILS OF THE PROPOSED STEPS AND HAS RECEIVED WRITTEN APPROVAL FROM THE ENGINEER FOR THE USE OF SUCH STEPS.



NOTE:
DO NOT USE IN SANITARY SEWER MANHOLES.

SHEET 1 OF 1
840.66

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
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RALEIGH, N.C.

7-08

ENGLISH STANDARD DRAWING FOR
DRAINAGE STRUCTURE STEPS

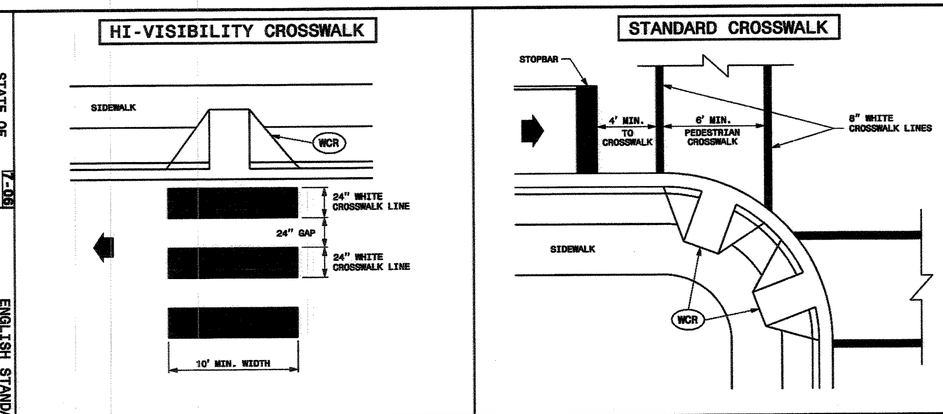
SHEET 1 OF 1
840.66

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-08

ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
PEDESTRIAN CROSSWALKS

SHEET 1 OF 1
1205.07



GENERAL NOTES

1- THE MINIMUM WIDTH OF STANDARD CROSSWALKS IS 8 FEET. THE MINIMUM WIDTH OF HI-VISIBILITY CROSSWALKS IS 10 FEET.

2- CENTER CROSSWALKS TO THEIR CORRESPONDING WHEELCHAIR RAMPS, BUT DO NOT SET THEM WITHIN THE INTERSECTION AREA ESTABLISHED BY BISECTING THE INTERSECTION RADII.

3- PLACE STOP BARS A MINIMUM OF 4 FEET FROM NEAREST CROSSWALK LINE, BUT NOT WITHIN THE AREA OF A WHEELCHAIR RAMP. PLACE STOP BARS PARALLEL TO CROSSWALK LINES, BUT CAN BE PLACED PERPINDICULAR TO TRAVEL LANES.

4- COORDINATE PLACEMENT OF CROSSWALKS IN ALL CASES WITH THE LOCATION OF WHEELCHAIR RAMPS. (SEE SIGNAL PLANS).

LEGEND

- DIRECTION OF TRAFFIC FLOW
- WCR WHEELCHAIR RAMP

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7-08

ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
PEDESTRIAN CROSSWALKS

SHEET 1 OF 1
1205.07

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Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TSM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120162
Signed:

NORTH CAROLINA PROFESSIONAL ENGINEERING COMPANY
THOMAS & HUTTON ENGINEERING CO.
No. F-0871
CERTIFICATE OF AUTHORITY

NORTH CAROLINA PROFESSIONAL SEAL
JACK D. REED
12/05/12

NO.	REVISIONS	BY	DATE
14	ADD NCDOT DETAIL 852.05	BDR	12/05/09
12	UPDATE REVISION NOTES	BDR	08/27/12
6	DELETE NCDOT DETAIL 840.31	BDR	05/18/12
4	ADD NCDOT PEDESTRIAN CROSSWALK DETAIL	BDR	04/23/12
1	MISC DETAIL COORDINATION PER OWNER	BDR	01/23/12

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JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.8

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
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RALEIGH, N.C.

7-06

CONTINUOUS LINES

EDGE LINE — YELLOW OR WHITE — 4"/6"*

TURN LANE LINE — WHITE — 4"/6"*

CENTER LINE — YELLOW — 4"/6"*

GORE LINE — WHITE — 6"/12"*

DIAGONAL LINE — YELLOW OR WHITE — 8"

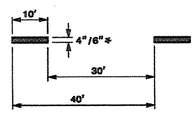
CROSSWALK LINE — WHITE — 8"/24"*

R/R LINE — WHITE — 16"

STOP OR TRANSVERSE BAR — WHITE — 24"

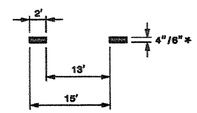
SKIP LINES

10' SKIP LINES
YELLOW OR WHITE



MINI-SKIP LINES

2' MINI-SKIP LINES
YELLOW OR WHITE



* GENERAL NOTES

1- WHERE TWO WIDTHS ARE INDICATED, THE FIRST WIDTH APPLIES TO A "NORMAL" WIDTH LINE, THE SECOND WIDTH APPLIES TO A "WIDE" LINE.

2- "WIDE" LINES ARE REQUIRED WHEN DESIGNATED IN THE PLANS, OR WHEN DIRECTED BY THE ENGINEER. REFER TO PAVEMENT MARKING GUIDELINES.

ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
LINE TYPES

SHEET 1 OF 2
1205.01

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
LINE TYPES

SHEET 1 OF 2
1205.01

STATE OF NORTH CAROLINA
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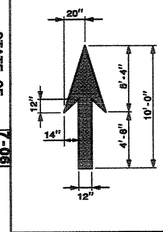
RALEIGH, N.C.

7-06

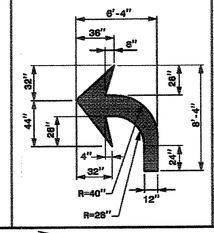
ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
ARROW SYMBOLS

SHEET 1 OF 7
1205.08

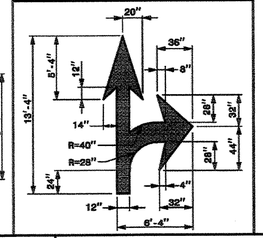
STRAIGHT ARROW



RIGHT OR LEFT TURN ARROW



COMBINATION STRAIGHT AND LEFT OR RIGHT TURN ARROW



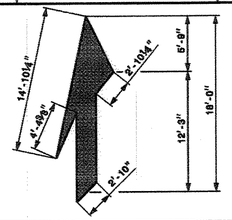
COMBINATION LEFT & RIGHT TURN ARROW

SAME DIMENSIONS APPLY AS FOR THE LEFT/RIGHT TURN ARROW

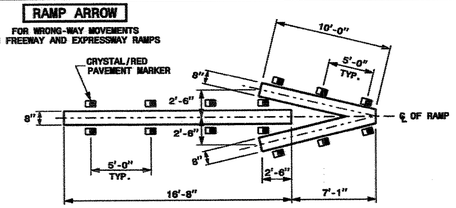
COMBINATION LEFT & STRAIGHT & RIGHT TURN ARROW

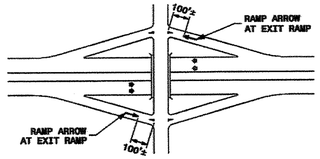
SAME DIMENSIONS APPLY AS FOR THE COMBINATION STRAIGHT AND LEFT/RIGHT TURN ARROW

MERGE ARROW
(OPTIONAL)



RAMP ARROW
FOR WRONG-WAY MOVEMENTS ON FREEWAY AND EXPRESSWAY RAMPS





GENERAL NOTES

1- USE THE COLOR WHITE FOR ALL PAVEMENT MARKING SYMBOLS.

2- DO NOT LOCATE PAVEMENT MARKING SYMBOLS AS TO ENCROACH INTO INTERSECTION AREAS.

3- DO NOT PLACE PAVEMENT MARKING SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CEMENT CONCRETE PAVEMENTS, UNLESS APPROVED BY THE ENGINEER.

4- CONFORM ALL SYMBOLS TO THE FHWA "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", (REFER TO SHEETS 4 THRU 7). SYMBOL DIMENSIONS CAN VARY AMONG MANUFACTURERS, THEREFORE SLIGHT VARIANCES ARE ACCEPTABLE, HOWEVER, ALL SYMBOLS ARE REQUIRED TO BE APPROVED BY THE DEPARTMENT.

STATE OF NORTH CAROLINA
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ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
ARROW SYMBOLS

SHEET 1 OF 7
1205.08

HOLLY SPRINGS, NORTH CAROLINA — THOMAS & HUTTON ENGINEERING CO. — No. F-0671 — CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL SEAL 019864 ENGINEER — VACK D. SHOWSER, JR.

8/27/12

NO.	BY	DATE
2	BDR	08/27/12
1	BDR	01/25/12

REVISIONS

2 UPDATE REVISION NOTE
1 MISC DETAIL COORDINATION

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Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TGM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120162
Signed:

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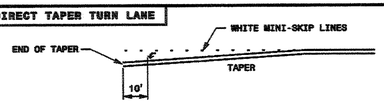
7-06

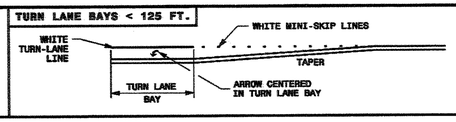
ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
TURN LANES

SHEET 1 OF 1
1205.05

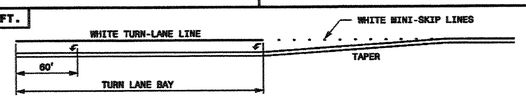
DIRECT TAPER TURN LANE



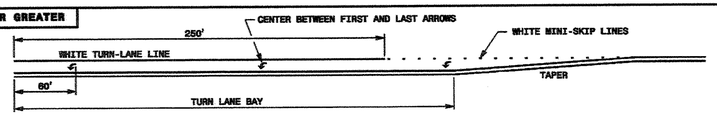
TURN LANE BAYS < 125 FT.



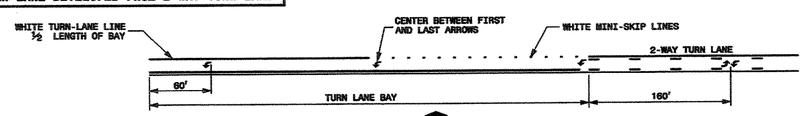
TURN LANE BAYS 125 - 250 FT.



TURN LANE BAYS 250 FT. OR GREATER

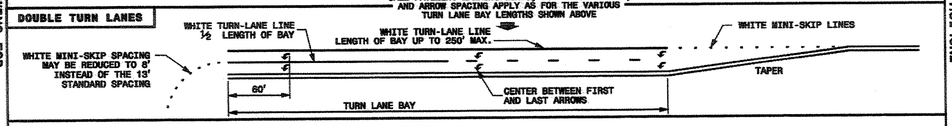


LEFT TURN LANE DEVELOPED FROM 2-WAY TURN LANE



SAME PAVEMENT MARKING LINES, NUMBER OF ARROWS, AND ARROW SPACING APPLY AS FOR THE VARIOUS TURN LANE BAY LENGTHS SHOWN ABOVE

DOUBLE TURN LANES



LEGEND
PAVEMENT MARKING SYMBOL

GENERAL NOTES

1- APPLY ALL TURN LANE MARKINGS AS SHOWN FOR RIGHT & LEFT TURN LANES.

2- THE NUMBER OF ARROWS SHOWN IS THE MINIMUM REQUIRED. USE ADDITIONAL ARROWS AS DETERMINED BY THE ENGINEER.

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RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
TURN LANES

SHEET 1 OF 1
1205.05

STATE OF NORTH CAROLINA
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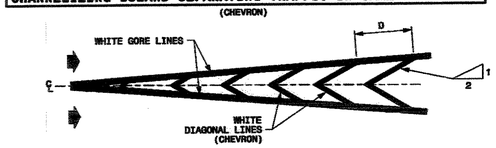
RALEIGH, N.C.

7-06

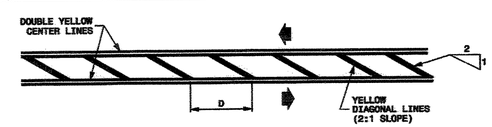
ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
PAINTED ISLANDS

SHEET 1 OF 1
1205.09

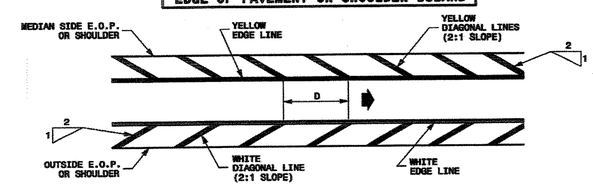
CHANNELIZING ISLAND SEPARATING TRAFFIC IN SAME DIRECTION
(CHEVRON)



MEDIAN ISLAND SEPARATING TRAFFIC IN OPPOSING DIRECTIONS



EDGE OF PAVEMENT OR SHOULDER ISLAND



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GENERAL NOTES:

1- D=SPACING OF DIAGONAL LINES (TYPICALLY EQUAL IN FEET TO THE POSTED SPEED LIMIT).

2- INCREASE SPACING OF DIAGONALS TO 200' OR MORE ON INTERSTATE ROADWAYS.

3- ADJUST SPACING OF DIAGONALS DEPENDING ON THE LENGTH OF THE ISLAND. SPACING MAY BE ADJUSTED AS DETERMINED BY THE ENGINEER.

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ENGLISH STANDARD DRAWING FOR
PAVEMENT MARKINGS
PAINTED ISLANDS

SHEET 1 OF 1
1205.09

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FLOURNOY DEVELOPMENT COMPANY
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AMBERLEIGH SHORES

CIVIL SITE DETAILS

JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.9

STATE OF NORTH CAROLINA
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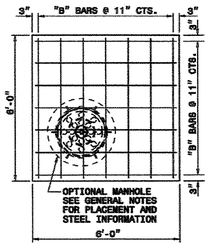
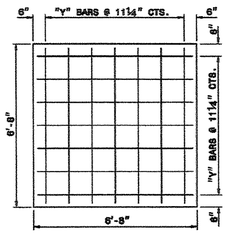
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER

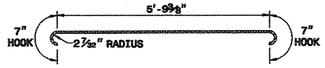


PLAN OF TOP SLAB



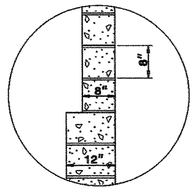
PLAN OF BOTTOM SLAB

DOWEL "C"



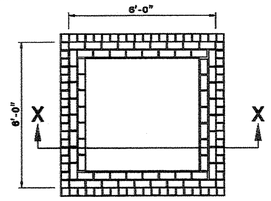
"Y" BARS

BAR DIMENSIONS ARE OUT TO OUT

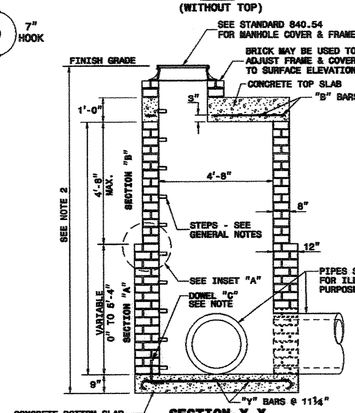


INSET "A"

CONCRETE BLOCK



PLAN
(WITHOUT TOP)



SECTION X-X
(WITH TOP)

NOTE 1: CONSTRUCT SECTION "B" OF THE PROPOSED WALL 8" THICK. AND SECTION "A" 12" THICK.
NOTE 2: IF PROPOSED STRUCTURE EXCEEDS 12'-0" VERTICAL HEIGHT A DESIGN WILL BE REQUIRED FOR APPROVAL.
NOTE 3: USE SINGLE MAT REINFORCING STEEL; EXCEPT DOUBLE MAT STEEL MAY BE USED IN LIEU OF HOOK BARS IN BASE SLAB.

SHEET 1 OF 2
840.34

STATE OF NORTH CAROLINA
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RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER

SHEET 1 OF 2
840.34

STATE OF NORTH CAROLINA
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ENGLISH STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER

SHEET 2 OF 2
840.34

GENERAL NOTES:

USE STANDARD OR JUMBO BRICK FOR WALL CONSTRUCTION. SOLID CONCRETE BRICK OR BLOCK ARE OPTIONAL WALL CONSTRUCTION MATERIAL

PRECAST UNITS MADE OF CLASS "AA" CONCRETE MAY BE USED IN LIEU OF BRICK MASONRY CONTRUCTION. SUBMIT DESIGN OF PRECAST UNITS FOR APPROVAL PRIOR TO CONSTRUCTION.

INCLUDE ALL ADJUSTMENTS TO WALLS, SLABS OR REINFORCING MATERIAL IN THE UNIT PRICE BID FOR EACH UNIT.

INSTALL OPTIONAL MANHOLE IN POSITION AS DIRECTED BY THE ENGINEER. CUT OR BEND ALL REBAR CROSSING THIS OPENING TO ALLOW 2" MINIMUM CONCRETE COVERAGE. ENCLOSE THE OPENING WITH 8 "A" BARS TIED TO TO THE REBAR MAT AND SET SO A MINIMUM OF 3" CONCRETE COVER IS ATTAINED. REFERENCE STD. NO. 840.54 FOR MANHOLE INFORMATION.

PROVIDE JUNCTION BOXES WITH MAHNOLES OVER 3'-6" IN DEPTH WITH STEPS PLACED ON 12" CENTERS. REFERENCE STD. NO. 840.66.

SPACE DOWEL "C" BARS AT A MAXIMUM OF 12" CENTERS.

MAXIMUM DEPTH OF THIS UNIT AS SHOWN IS 12'.

CONSTRUCT THE JUNCTION BOX IN ACCORDANCE WITH SECTIONS 830, 832, 834 AND 840 OF THE STANDARD SPECIFICATIONS.

BILL OF MATERIAL

BAR	QTY.	SIZE	LENGTH	WEIGHT
A	8	#5	1'-2"	9.7
B	14	#5	5'-6"	80.3
C	26	#4	1'-6"	26.1
Y	14	#5	6'-11⅜"	101.5
STEEL TOTAL WEIGHT				217.6
CU. YDS. CLASS "AA" CONC.				2.6
CU. YDS. BRICK/FT. HT. (8")				0.53
CU. YDS. BRICK/FT. HT. (12")				0.84

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ENGLISH STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER

SHEET 2 OF 2
840.34

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 28879 JACK D. REDWINE 8/27/12

NO.	DELETE SHARK TEETH DETAIL PER NCDOT	BDR	07/03/12
6	ADD NCDOT DETAIL 840.34 & SHARK TEETH DETAIL	BDR	05/07/12
	REVISIONS	BY	DATE

North Carolina
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1-800-632-4949

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120162 2
Signed:

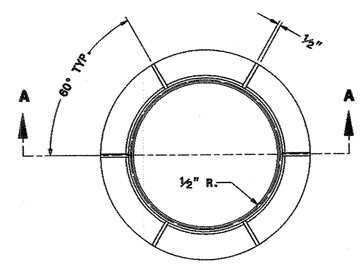
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

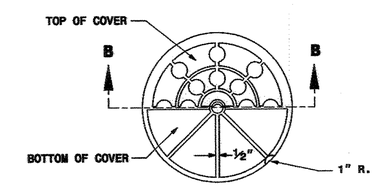
ENGLISH STANDARD DRAWING FOR
MANHOLE FRAME AND COVER

SHEET 1 OF 1
840.54

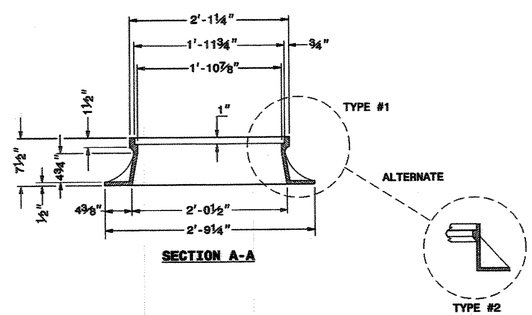
SOLID COVER SHOWN PERFORATED. PERFORATED AVAILABLE IF SPECIFIED.
STATE USE OF SYSTEM ON COVER
(I.E.: SEWER, STORM DRAIN, ELECTRICAL)



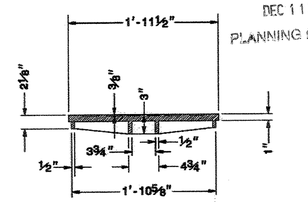
PLAN OF FRAME



PLAN OF COVER



SECTION A-A



SECTION B-B

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MINIMUM WEIGHTS - LBS.
FRAME - 180
COVER - 120
TOTAL - 300

SPECIFICATION
CLASS 30 IRON MEETING
ASTM A-48

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
MANHOLE FRAME AND COVER

SHEET 1 OF 1
840.54

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FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC
AMBERLEIGH SHORES
CIVIL SITE DETAILS

JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

C6.10

1.00 **GENERAL**

1.01 ALL CONSTRUCTION SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE 2006 EDITION. REFERENCE TO OTHER STANDARD SPECIFICATIONS OR CODES SHALL MEAN THE LATEST STANDARD OR CODE ADOPTED AND PUBLISHED.

1.02 DRAWINGS SHOW TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. FOR DETAILS NOT SPECIFICALLY SHOWN PROVIDE DETAILS SIMILAR TO THOSE SHOWN.

1.03 VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCY.

1.04 NOTIFY THE ENGINEER OF CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN ON THE CONTRACT DOCUMENTS.

1.05 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. THE STRUCTURAL ELEMENTS ARE NOT STABLE UNTIL THE STRUCTURE IS COMPLETE.

1.06 THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS. NOTIFY THE ENGINEER OF ANY DISCREPANCY BEFORE STARTING SHOP DRAWINGS OR ANY WORK.

1.07 REVIEW OF SHOP DRAWINGS AND OTHER SUBMITTALS BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL TO THE ENGINEER. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. CONTRACTOR IS ALSO RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.

2.00 **FOUNDATIONS AND EARTHWORK**

2.01 SIDES OF FOUNDATIONS SHALL BE FORMED.

2.02 SUPPORT BOTTOM REINFORCING IN FOOTINGS WITH CONCRETE BRICKS OR PLASTIC CHAIRS SPACED A MAXIMUM OF 3'-0" EACH WAY.

2.03 PROTECT STRUCTURES, UTILITIES, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.

2.04 PREPARE SUBGRADE FOR EARTHWORK OPERATIONS INCLUDING REMOVAL OF VEGETATION, TOPSOIL, DEBRIS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE AND UNDERCUTTING OF ENTIRE TANK AREA/PLUS 4 FEET OUTSIDE THE PERIMETER TO DEPTHS OF 5 FEET BELOW EXISTING GRADES TO REMOVE ALL NEAR SURFACE SOFT CLAYS AND VERY LOOSE SANDS.

2.05 PROTECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROLS.

2.06 PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.

2.07 PROTECT SUBGRADES FROM SOFTENING, UNDERMINING, WASHOUT, AND DAMAGE BY RAIN OR WATER ACCUMULATION.

2.08 REROUTE SURFACE WATER RUNOFF AWAY FROM EXCAVATED AREAS. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. DO NOT USE EXCAVATED TRENCHES AS TEMPORARY DRAINAGE DITCHES.

2.09 INSTALL A DEWATERING SYSTEM TO KEEP SUBGRADES DRY AND CONVEY GROUND WATER AWAY FROM EXCAVATIONS. MAINTAIN UNTIL DEWATERING IS NO LONGER REQUIRED.

2.10 EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS WITHIN A TOLERANCE OF PLUS OR MINUS 1 INCH.

2.11 DO NOT DISTURB BOTTOM OF EXCAVATION. EXCAVATE BY HAND TO FINAL GRADE JUST BEFORE PLACING CONCRETE REINFORCEMENT. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK.

2.12 DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. SUBGRADE IS TO BE PROOF ROLLED WITH A LOADED DUMP TRUCK TO IDENTIFY UNSTABLE OR SOFT AREAS. ANY UNSTABLE AREAS SHOULD THEN BE INVESTIGATED TO DETERMINE CAUSE OF INSTABILITY. ANY AREAS FOUND TO BE UNSTABLE DUE TO ORGANIC SOILS OR SOFT CLAYS AREA TO BE UNDERCUT TO FIRM SOIL REPLACED WITH APPROVED FILL.

2.13 PLACE BACKFILL AND FILL SOIL MATERIALS IN LAYERS NOT MORE THAN 6 INCHES IN LOOSED DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.

2.14 PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.

2.15 COMPACT SOIL MATERIALS TO NOT LESS THAN 95% OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 1557:
UNDER STRUCTURES, BUILDING SLABS, STEPS, AND PAVEMENTS, SCARIFY AND RECOMPACT TOP 12 INCHES OF EXISTING SUBGRADE AND EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 95 PERCENT. FILL MATERIALS SHALL CONSIST OF CLEAR, FREE DRAINING GRANULAR SOILS FREE OF ROOTS, CLAY LUMPS, ORGANICS OR OTHER DEBRIS. SOILS CLASSIFIED AS SW, SP, SP-SM, OR SM WITH A MAXIMUM OF 15% PANING A #200 SIEVE IS ACCEPTABLE.

2.16 PROTECT NEWLY GRADED AREAS FROM TRAFFIC, FREEZING, AND EROSION. KEEP FREE OF TRASH AND DEBRIS.

2.17 REPAIR AND REESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME ERODED, RUTTED, SETTLED, OR WHERE THEY LOSE COMPACTION DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER CONDITIONS. SCARIFY OR REMOVE AND REPLACE SOIL MATERIAL TO DEPTH AS DIRECTED BY ENGINEER; RESHAPE AND RECOMPACT.

2.18 WHERE SETTLING OCCURS BEFORE PROJECT CORRECTION PERIOD ELAPSES, REMOVE FINISHED SURFACING, BACKFILL WITH ADDITIONAL SOIL MATERIAL, COMPACT, AND RECONSTRUCT SURFACING. RESTORE APPEARANCE, QUALITY, AND CONDITION OF FINISHED SURFACING TO MATCH ADJACENT WORK, AND ELIMINATE EVIDENCE OF RESTORATION TO GREATEST EXTENT POSSIBLE.

2.19 DISPOSAL: REMOVE SURPLUS SATISFACTORY SOIL AND WASTE MATERIAL, INCLUDING UNSATISFACTORY SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF OWNER'S PROPERTY.

2.20 FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 100 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.

2.21 CONTRACTOR IS TO SEQUENCE BACKFILLING BEHIND WALLS TO ACCOMMODATE CONSTRUCTION OF CONTROL STRUCTURES AND ADJACENT WALLS AS NECESSARY.

3.00 **REINFORCED CONCRETE**

3.01 ALL CONCRETE WORK SHALL CONFORM TO ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", LATEST EDITION. DESIGN IS BASED ON ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", LATEST EDITION.

3.02 UNLESS NOTED OTHERWISE ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE THE FOLLOWING MINIMUM 28 DAY STRENGTHS:

FOUNDATIONS _____ 4,000 PSI

3.03 CONCRETE MIX DESIGNS, IN ACCORDANCE WITH ACI 318 SECTION 5.3, SHALL BE SUBMITTED TO THE ENGINEER AND TESTING AGENCY. THE TESTING AGENCY IS RESPONSIBLE FOR MIX DESIGN APPROVAL.

3.04 THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY. RESPONSIBILITY FOR OBTAINING THE REQUIRED CONCRETE DESIGN STRENGTH IS THE CONTRACTOR'S.

3.05 USE OF CALCIUM CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.

3.06 THE AIR CONTENT IN ALL CONCRETE EXPOSED TO WEATHER SHALL BE BETWEEN 3% AND 6%.

3.07 THE TESTING AGENCY SHALL SAMPLE AND TEST EACH 50 CU. YARDS OR FRACTION THEREOF OF EACH CLASS OF CONCRETE PLACED EACH DAY. SAMPLE CONCRETE IN ACCORDANCE WITH ASTM C172. PERFORM THE FOLLOWING TESTS IN ACCORDANCE WITH THE INDICATED STANDARD:

SLUMP: ASTM C143
AIR CONTENT: ASTM C173
COMPRESSIVE STRENGTH: ASTM C39, WITH ONE CYLINDER AT 7 DAYS, 2 CYLINDERS AT 28 DAYS, AND ONE SPECIMEN HELD IN RESERVE.

3.08 HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED ONLY WHERE INDICATED. LOCATION OF VERTICAL CONSTRUCTION JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED BY MECHANICAL MEANS, AND CLEANED.

3.09 DETAIL CONCRETE REINFORCEMENT AND ACCESSORIES IN ACCORDANCE WITH ACI 315 "DETAILING MANUAL", LATEST EDITION. SUBMIT SHOP DRAWINGS FOR APPROVAL SHOWING ALL FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND APPROVED.

3.10 DETAIL ALL CONCRETE BEAMS IN ELEVATION UNLESS SPECIFICALLY APPROVED OTHERWISE. CUT SECTIONS SHOWING BAR LOCATIONS AND CONCRETE COVER.

3.11 REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.

3.12 TIE ALL REINFORCING STEEL AND EMBEDMENTS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES. "STICKING" DOWELS INTO WET CONCRETE IS NOT PERMITTED.

3.13 PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE: SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE TENSION SPLICE (CLASS "B") UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH TENSION SPLICES (CLASS "B"). UNLESS NOTED OTHERWISE LAP LENGTHS EXPRESSED IN NUMBER OF BAR DIAMETERS SHALL BE AS FOLLOWS:

BAR SIZE	NORMAL WEIGHT CONCRETE, f'c (PSI)			
	3,000	4,000	5,000	6,000
#6 OR SMALLER	57 DIAM	49 DIAM	44 DIAM	40 DIAM
#7 OR LARGER	71 DIAM	62 DIAM	55 DIAM	50 DIAM

INCREASE THE ABOVE LAP LENGTHS BY 1.3 FOR TOP BARS AND BY 1.3 FOR LIGHT-WEIGHT CONCRETE.

3.14 REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH (NOT FORMED) _____ 3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER
#6 THROUGH #18 BARS _____ 2"
#5 BARS AND SMALLER _____ 1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER _____ 1"

4.00 **ALUMINUM SHEET PILING**

4.01 ALL MATERIALS SHALL BE MADE FROM ALUMINUM ALLOY 6061-T6 AND SHALL CONFORM TO ASTM B221.

4.02 MATERIALS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 38,000 PSI ULTIMATE.

4.03 ALUMINUM BOLTS SHALL CONFORM TO ASTM B221 ALLOY 6061-T6.

4.04 DRIVING OF SHEETING TO BE DRIVEN IN PAIRS, TEMPLATES ARE TO BE USED TO MAINTAIN SHEETING ALIGNMENT DURING DRIVING ACTIVITIES.

4.05 SHEETING TO BE INSTALLED BY MEANS OF VIBRATORY HAMMER.

4.06 ANY CUTS, HOLES, OR OTHER SUCH MODIFICATIONS SHALL BE MADE WITH EITHER A SAW OR DRILL. NO TORCHING OR BURNING OF THE SHEETS IS ALLOWED.

4.07 IT IS TO BE ANTICIPATED THAT THE INSTALLATION OF THE SHEETING IS TO BE PERFORMED PRIOR TO COMPLETION OF THE POND EXCAVATION. CONTRACTOR IS TO USE CARE TO AVOID DAMAGING THE SHEETS DURING EXCAVATION WORK.

5.00 **PRECAST CONCRETE**

5.01 PRECAST CONCRETE MANUFACTURE AND ERECTION SHALL CONFORM TO THE FOLLOWING:
A. ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION.
B. PCI MNL-117 "MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF PRECAST CONCRETE PRODUCTS", LATEST EDITION.
C. PCI DESIGN HANDBOOK, LATEST EDITION.

5.02 CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI.

5.03 REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.

5.04 SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. REVIEW OF SHOP DRAWINGS SHALL BE FOR GENERAL CONFORMANCE ONLY. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN APPROVED.

5.05 DURING HANDLING, STORAGE, AND TRANSPORTING, LIFT AND SUPPORT MEMBERS ONLY AT THE LIFTING AND SUPPORT POINTS SHOWN ON THE SHOP DRAWINGS. USE PROPER EQUIPMENT AND METHODS OF BRACING DURING TRANSPORTATION TO INSURE THAT MEMBERS WILL ARRIVE AT THE JOB SITE UNDAMAGED. PROVIDE PADDING TO PREVENT CHIPPING OF THE CONCRETE.

5.06 IF CAST-IN LIFTING LOOPS OR INSERTS ARE USED, CUT OFF LOOPS OR INSERTS A MINIMUM OF 1/2" BELOW SURFACE AND FILL RECESS WITH AN EPOXY GROUT APPROVED BY THE ENGINEER.

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Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TBM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120682
Signed:

NO.	REVISIONS	BY	DATE

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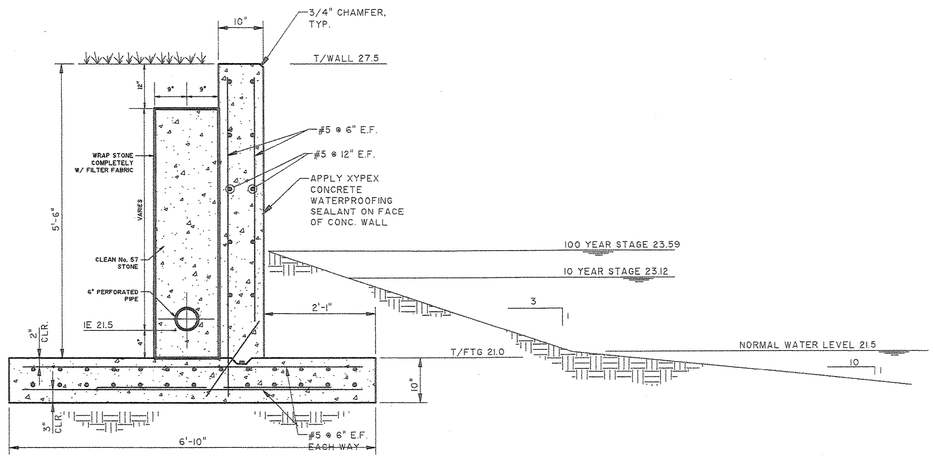
AMBERLEIGH SHORES
CIVIL STRUCTURAL NOTES

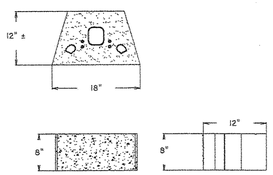
JOB NO:	J-22667
DATE:	11/15/11
DRAWN:	BDR
DESIGNED:	BDR
REVIEWED:	JDR
APPROVED:	JDR
SCALE:	1" = 1'

CS.01

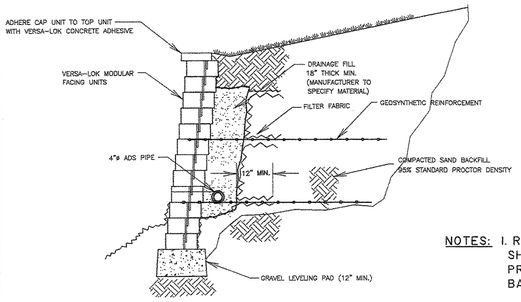


VOLCLAY WATERSTOP-RX, OR APPROVED EQUAL, TYP.

1 / S2.1 **POND NO.1 RETAINING WALL**
SCALE: 3/4"=1'-0"



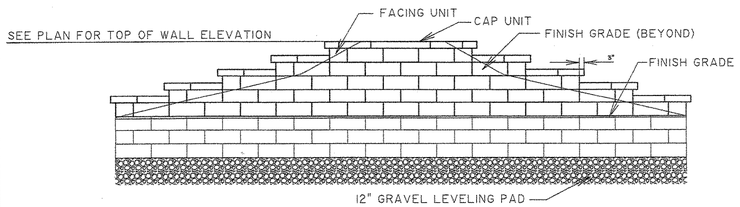
ALTERNATE POND I RET. WALL TYPICAL UNIT
NOT TO SCALE



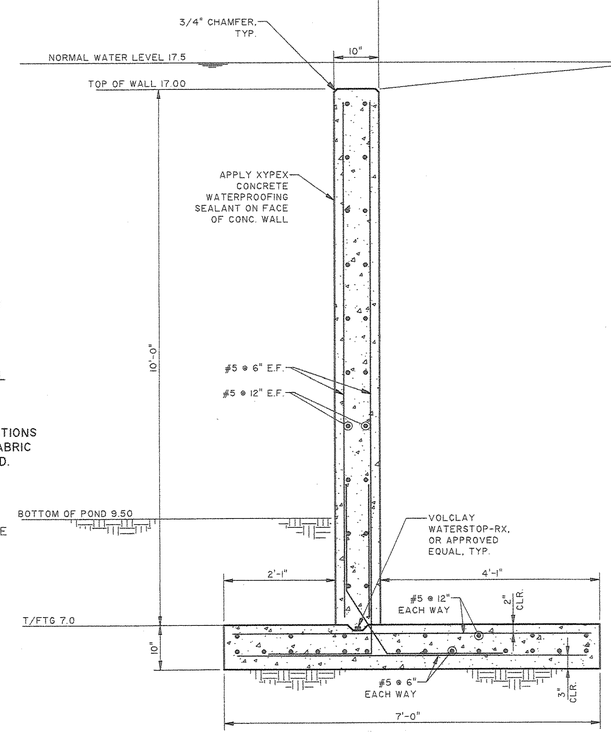
NOTE: MATCH TOP OF WALL ELEVATION TO FINISHED GRADE

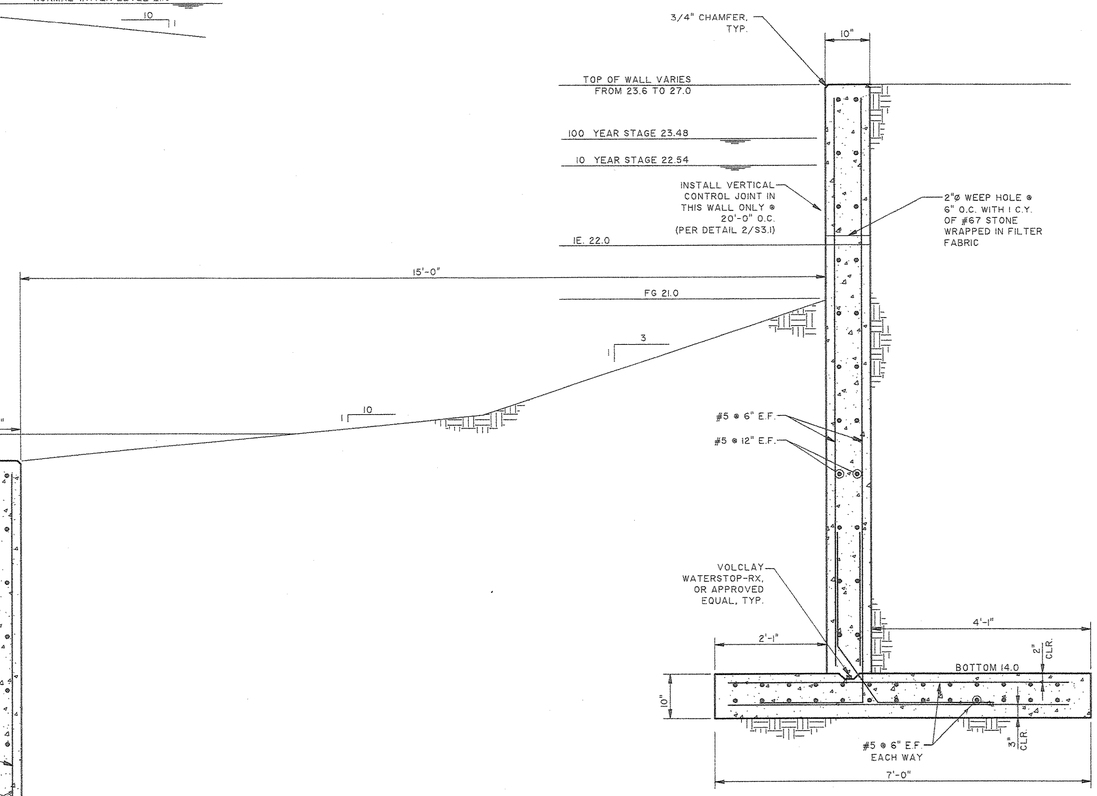
ALTERNATE POND I RET. WALL TYPICAL SECTION
NOT TO SCALE

NOTES:
1. RETAINING BLOCK WALL SUPPLIER SHALL BE RESPONSABLE FOR PROVIDING DESIGN CALCULATONS BASED ON SITE CONDITONS.
2. SEE PLAN VIEW FOR TOP OF WALL ELEVATION.
3. CONTRACTOR RESPONSIBLE FOR COORDINATING FENCE POST LOCATIONS W/MANUFACTURER TO ENSURE FABRIC TIE BACKS ARE NOT COMPROMISED.



ALTERNATE POND I RET. WALL TYPICAL ELEVATION
NOT TO SCALE





2 / S2.1 **POND NO.2 RETAINING WALL (TYPICAL)**
SCALE: 3/4"=1'-0"

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PLANNING DIVISION

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016122
Signed:

NO.	REVISIONS	BY	DATE
6	UPDATE EXTERIOR TOP OF WALL ELEV & 10 YR STAGE	BDR	06/07/12
4	REVISE POND ELEV./STAGES ADD SGD TO POND 1	BDR	04/02/12

THOMAS & HUTTON
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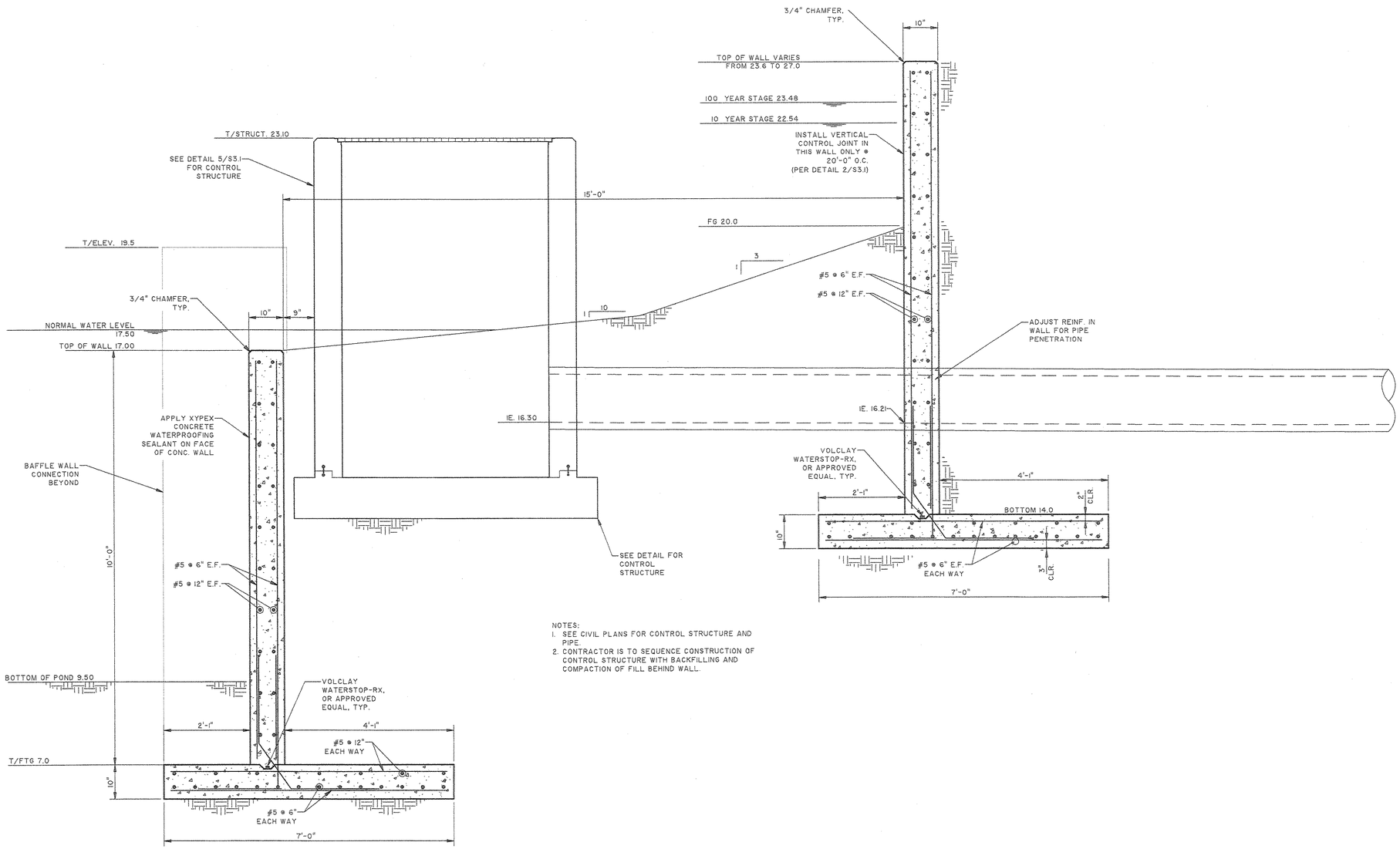
SAVANNAH, GA | Brunswick, GA | Charleston, SC | Myrtle Beach, SC

FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC
AMBERLEIGH SHORES
WALL SECTIONS AND DETAILS

JOB NO:	J-22667.0000
DATE:	12/23/11
DRAWN:	JWR
DESIGNED:	CLG
REVIEWED:	CLG
APPROVED:	CLG
SCALE:	AS SHOWN

CS2.1



NOTES:
1. SEE CIVIL PLANS FOR CONTROL STRUCTURE AND PIPE.
2. CONTRACTOR IS TO SEQUENCE CONSTRUCTION OF CONTROL STRUCTURE WITH BACKFILLING AND COMPACTION OF FILL BEHIND WALL.

1 / S2.2 POND NO.2 RETAINING WALL (NORTH SIDE @ CONTROL STRUCTURE)

SCALE: 3/4"=1'-0"

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PLANNING DIVISION

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TJM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120116R2
Signed:

NO	REVISIONS	BY	DATE
6	UPDATE EXTERIOR TOP OF WALL ELEV & 10 YR STAGE	BDR	05/18/12
4	REVISED ELEVATIONS	BDR	04/02/12

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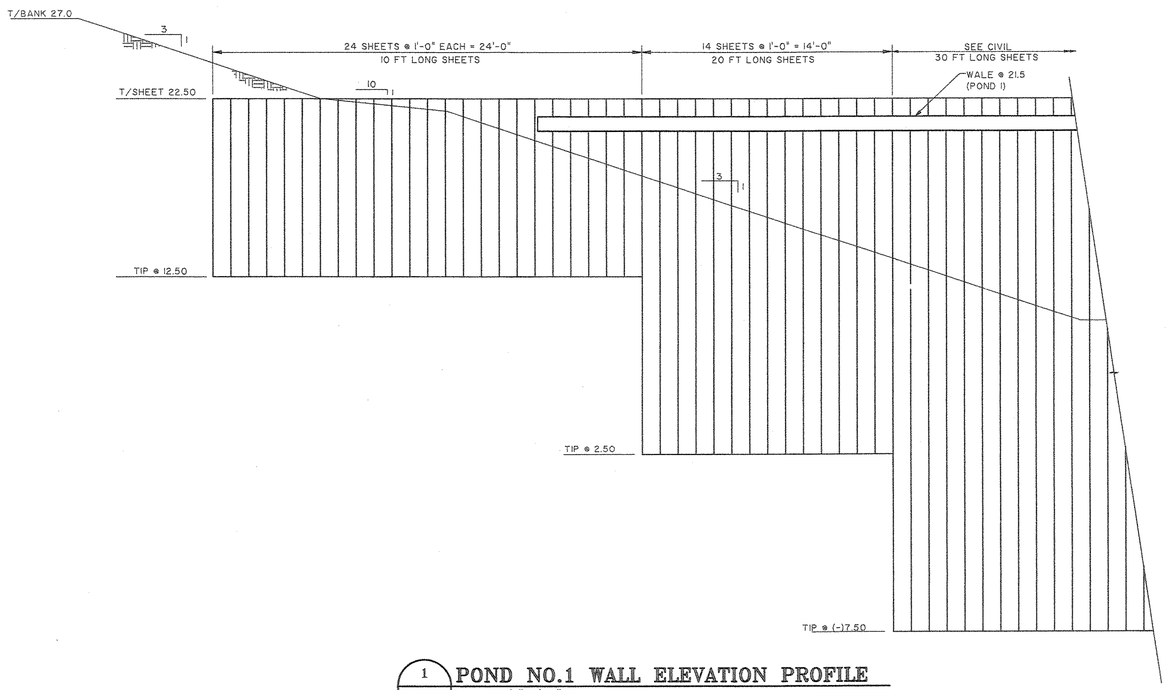
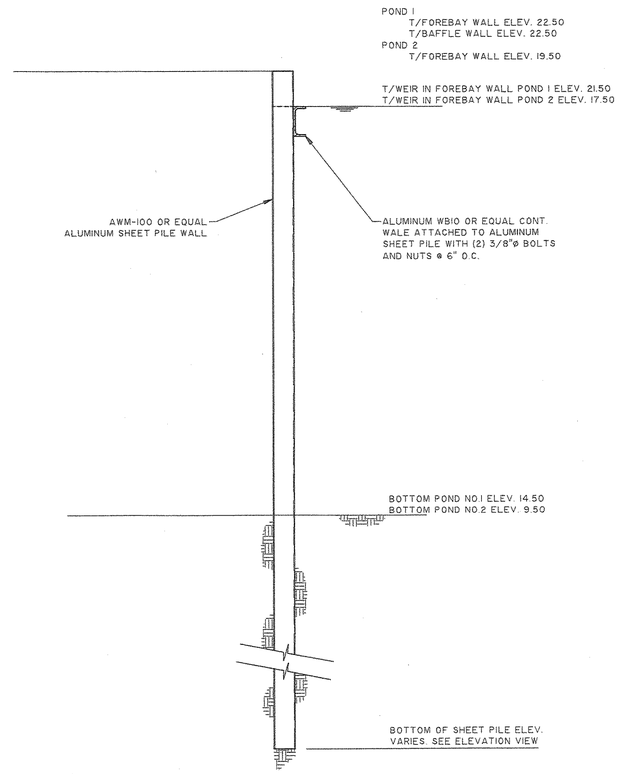
FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC
AMBERLEIGH SHORES
WALL & OUTELT STRUCTURE DETAILS

JOB NO:	J-22667.0000
DATE:	12/23/11
DRAWN:	JWR
DESIGNED:	CLG
REVIEWED:	CLG
APPROVED:	CLG
SCALE:	AS SHOWN

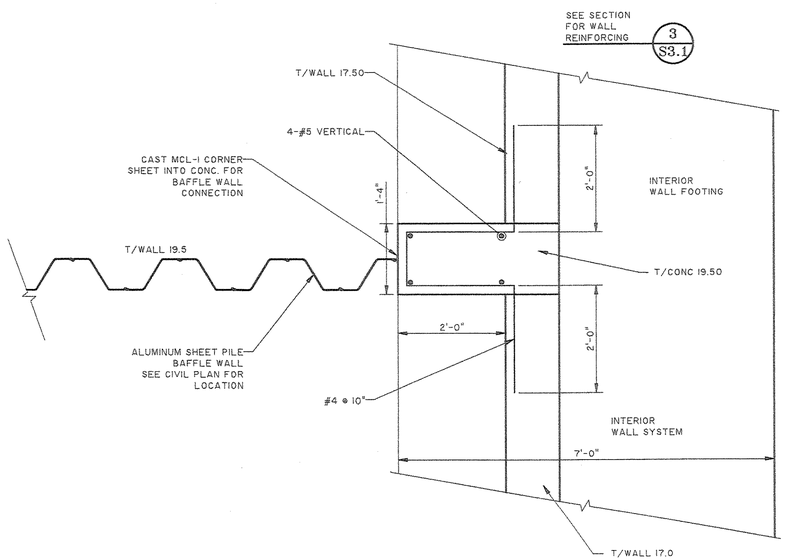
CS2.2



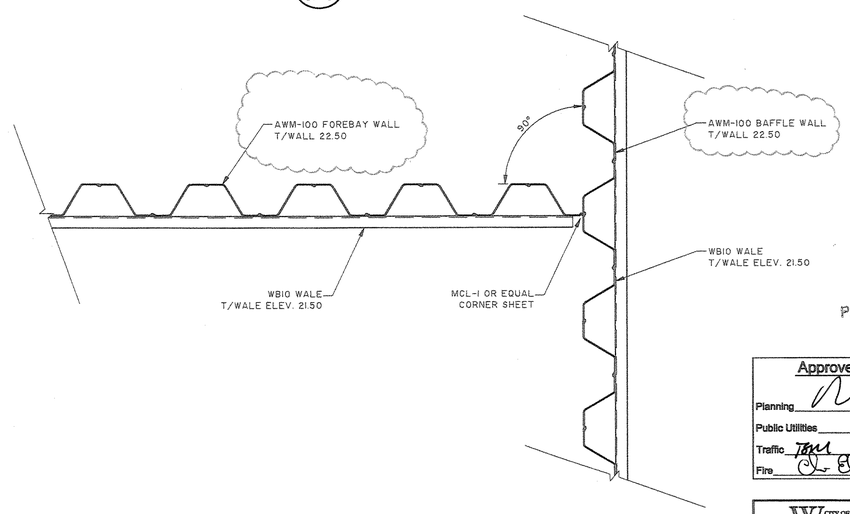
1 / S2.3 **POND NO.1 WALL ELEVATION PROFILE**
SCALE: 1/4"=1'-0"



2 / S2.3 **TYPICAL POND FOREBAY/BAFFLE WALL SECTION**
SCALE: 1/2"=1'-0"



3 / S2.3 **POND 2 BAFFLE WALL / RETAINING WALL CONNECTION DETAIL**
SCALE: 1/4"=1'-0"



4 / S2.3 **POND NO.1 FOREBAY/BAFFLE WALL DETAIL**
SCALE: 3/4"=1'-0"

RECEIVED
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PLANNING DIVISION

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 201201162122
Signed:

NO.	REVISIONS	BY	DATE
12	REVISED SHEET PILE MATERIAL REFERENCE TO "AWM"	BOR	06/27/12
4	REVISED ELEVATIONS	BOR	04/02/12

THOMAS & HUTTON
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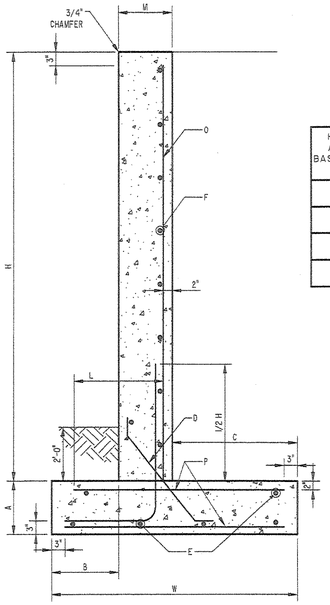
FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC
AMBERLEIGH SHORES
BAFFLE WALL SECTIONS AND DETAILS

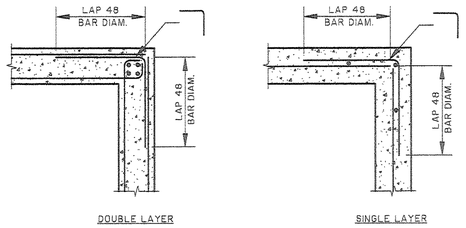
JOB NO:	J-22667.0000
DATE:	12/23/11
DRAWN:	JWR
DESIGNED:	CLG
REVIEWED:	CLG
APPROVED:	CLG
SCALE:	AS SHOWN

CS2.3

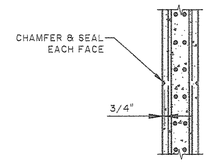


HEIGHT ABOVE BASE DEPTH (H)	STEM THICKNESS (M)	FOOTING THICKNESS (A)	HEEL (C)	WIDTH OF BASE (W)	"O" BARS	DOWELS INTO STEM	"D" BARS	"P" BARS	"E" BARS	"F" BARS
4	1'-0"	1'-0"	4'-4"	6'-2"	#5-10	#5@10"	#5@10"	#5@8"	#5@10"	#5@8"
5	1'-2"	1'-0"	4'-0"	7'-0"	#5-10	#5@10"	#5@10"	#5@8"	#5@10"	#5@8"
6	1'-2"	1'-0"	5'-0"	8'-0"	#5-8	#5@8"	#5@8"	#5@8"	#5@8"	#5@8"
7	1'-2"	1'-2"	5'-10"	10'-0"	#5-8	#5@8"	#5@8"	#5@8"	#5@8"	#5@8"

4 / S3.1 **TYPICAL SITE CONCRETE RETAINING WALL**
SCALE: 3/4"=1'-0"

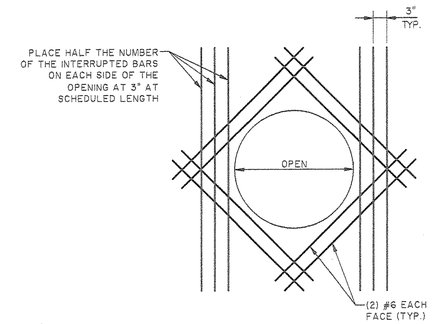


1 / S3.1 **WALL CORNER DETAIL**
SCALE: 3/4"=1'-0"



2 / S3.1 **WALL CONTROL JOINT DETAIL**
SCALE: 3/4"=1'-0"

NOTES:
1. COORDINATE WITH ARCHITECT FOR LOCATIONS OF JOINTS, HOWEVER DO NOT EXCEED 25'-0"
2. STOP 50% OF THE HORIZONTAL REINFORCEMENT AT EACH SIDE OF THE JOINT

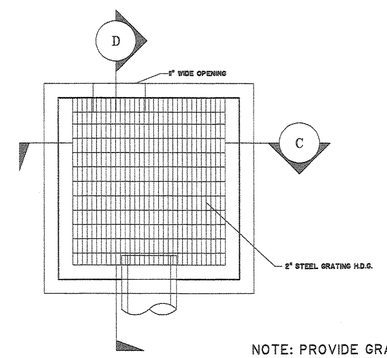


ROUND OPENING

3 / S3.1 **TYPICAL PIPE PENETRATION THRU CONCRETE WALL**
SCALE: 3/4"=1'-0"

NOTE:
REINFORCING SHOWN ABOVE IS IN ADDITION TO REGULAR WALL REINFORCING.

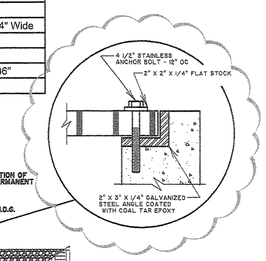
NOTE:
THE PRECAST MANUFACTURER IS TO PREPARE AND SUBMIT TO THE ENGINEER DESIGN DETAILS AND CALCULATIONS FOR THE STRUCTURES SHOWN BASED ON THE DESIGN CRITERIA SPECIFIED. THE DESIGN SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH OR SOUTH CAROLINA EXPERIENCED IN THE DESIGN OF PRECAST CONCRETE. THE DESIGN SHALL INCLUDE PROVISIONS FOR HANDLING STRESSES AND CONSTRUCTION LOADS. REPRODUCED COPIES OF ASTM C789 "STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE BOX SECTIONS FOR CULVERTS, STORM DRAINS, AND SEWERS" WILL NOT BE ACCEPTED AS A SUBSTITUTE FOR DESIGN.

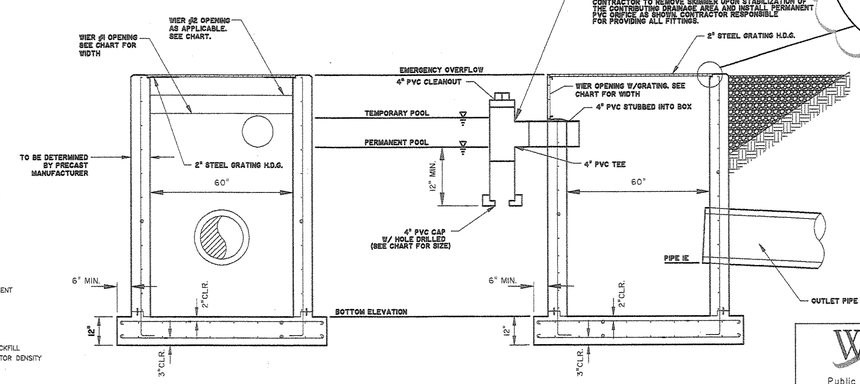


TOP VIEW

NOTE: PROVIDE GRATING FRAMING AND TAMPER RESISTANT CLIPS

Outlet Structure Dimensions		
Pond Outlet Structure	1	2
Permanent Pool Elev.	21.50	17.50
Temporary Pool Elevation	22.20	19.30
Orifice Hole Size	2.5"	2.5"
Weir # 1 Elev. / Width	22.20 / 60" Wide	21.80 /54" Wide
Weir # 2 Elev. / Width	N / A	N / A
Emergency Overflow (Top)	23.50	23.10
Pipe Invert / Size	18.70 / 30"	16.30 / 36"
Bottom Elevation	17.50	15.00

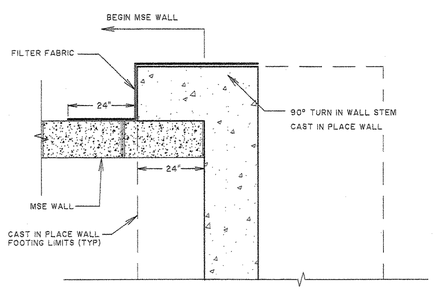




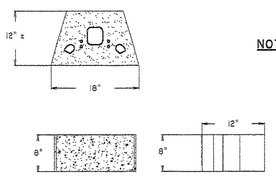
C / SECTION

D / SECTION

5 / S3.1 **POND OUTLET STRUCTURE DETAILS**
NOT TO SCALE

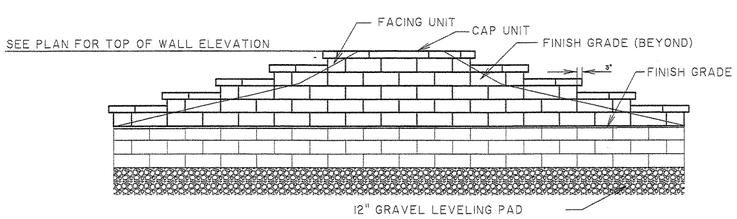


MSE & CAST IN PLACE WALL TRANSITION DETAIL
NOT TO SCALE

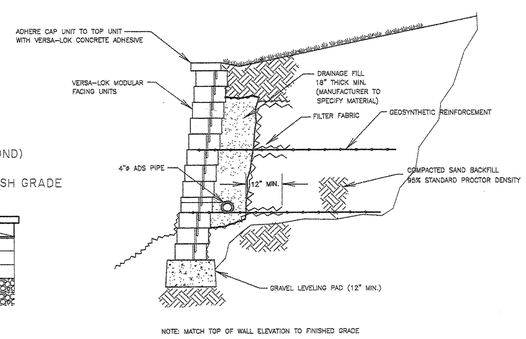


ALTERNATE SITE RET. WALL TYPICAL UNIT
NOT TO SCALE

NOTES:
1. RETAINING BLOCK WALL SUPPLIER SHALL BE RESPONSABLE FOR PROVIDING DESIGN CALCULATONS BASED ON SITE CONDITONS.
2. SEE PLAN VIEW FOR TOP OF WALL ELEVATION.
3. CONTRACTOR RESPONSIBLE FOR COORDINATING FENCE POST LOCATIONS W/MANUFACTURER TO ENSURE FABRIC TIE BACKS ARE NOT COMPROMISED.



ALTERNATE SITE RET. WALL TYPICAL ELEVATION
NOT TO SCALE



NOTE: MATCH TOP OF WALL ELEVATION TO FINISHED GRADE

ALTERNATE SITE RET. WALL TYPICAL SECTION
NOT TO SCALE

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PLANNING DIVISION

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit #: 2012016122
Signed:

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TGM	12/12/12
Fire		12/13/12

NO.	REVISIONS	BY	DATE
14	ADD GRATE CONNECTION DETAIL TO OUTLET STRUC.	BDR	11/09/12
6	REVISE POND I TEMPORARY POOL ELEVATION	BDR	05/18/12
4	REVISE ELEVATION CHART FOR OUTLET STRUCTURES	BDR	04/02/12
A	ADD MSE & CAST IN PLACE WALL TRANSITION DETAIL	BDR	01/16/12

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FLOURNOY DEVELOPMENT COMPANY
NEW HANOVER COUNTY, NC
AMBERLEIGH SHORES
POND OUTLET DETAILS/SITE WALL DETAILS

JOB NO:	J-22667.0000
DATE:	12/23/11
DRAWN:	JWR
DESIGNED:	CLG
REVIEWED:	CLG
APPROVED:	CLG
SCALE:	AS SHOWN

CS3.1

NOTES:
EXISTING VEGETATION TO REMAIN AND IS TO BE USED TO SATISFY BUFFER REQUIREMENT.

REQUIRED SUPPLEMENTAL PLANTING TO OCCUR OUTSIDE WETLAND AREAS; TO BE DETERMINED BY CITY STAFF DURING CONSTRUCTION

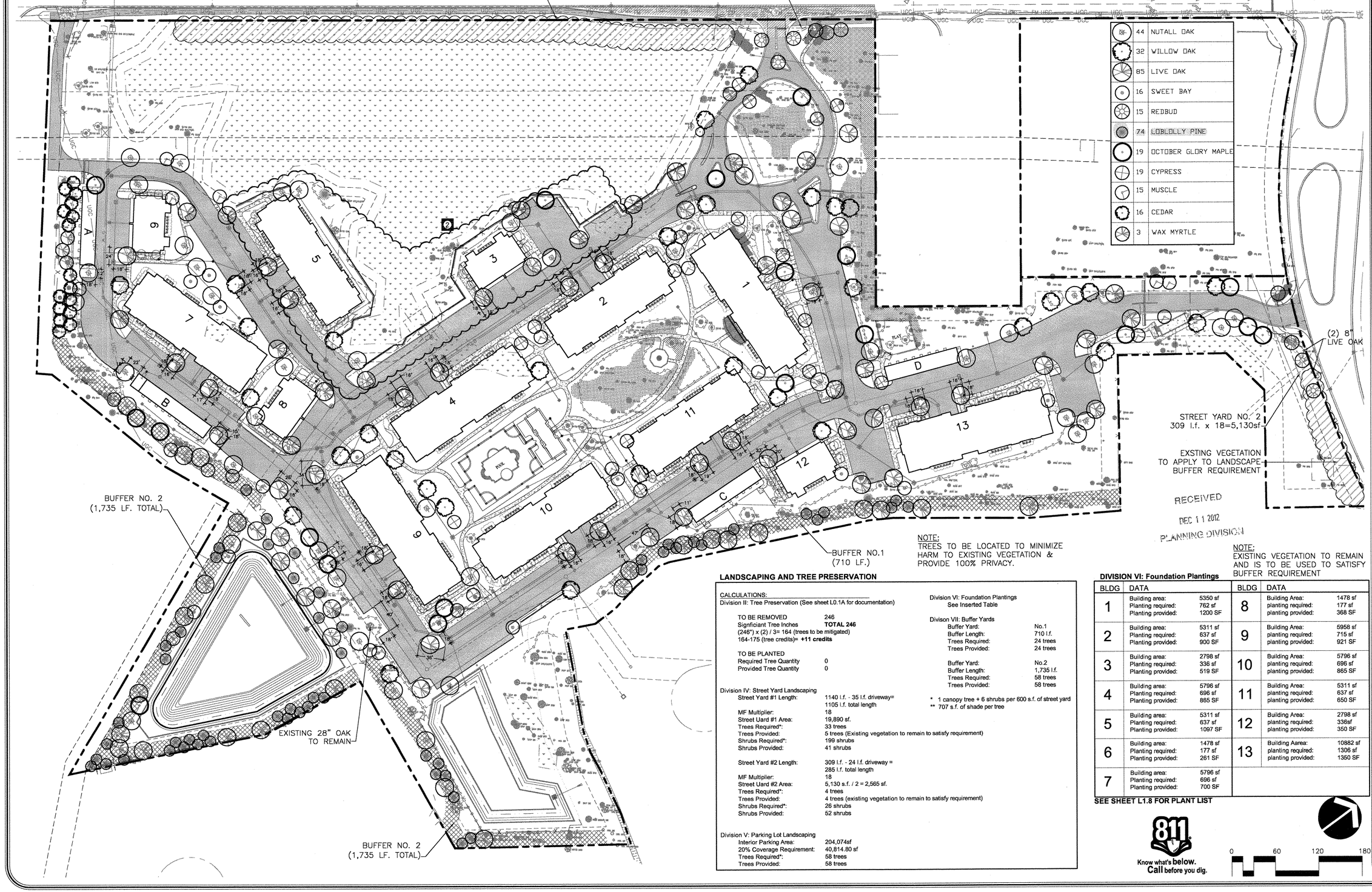
EXSTING VEGETATION TO APPLY TO LANDSCAPE BUFFER REQUIREMENT

STREET YARD NO. 1
1140 l.f. x 18=19,890 sf.

Approved Construction Plan

	Name	Date
Planning		12/10/12
Public Utilities		
Traffic	TBM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016022
Signed:



44	NUTALL OAK	
32	WILLOW OAK	
85	LIVE OAK	
16	SWEET BAY	
15	REDBUD	
74	LOBLOLLY PINE	
19	OCTOBER GLORY MAPLE	
19	CYPRESS	
15	MUSCLE	
16	CEDAR	
3	WAX MYRTLE	

RECEIVED
DEC 11 2012
PLANNING DIVISION

NOTE:
TREES TO BE LOCATED TO MINIMIZE HARM TO EXISTING VEGETATION & PROVIDE 100% PRIVACY.

NOTE:
EXISTING VEGETATION TO REMAIN AND IS TO BE USED TO SATISFY BUFFER REQUIREMENT

LANDSCAPING AND TREE PRESERVATION

CALCULATIONS:
Division II: Tree Preservation (See sheet L0.1A for documentation)

TO BE REMOVED	246
Signficiant Tree Inches	**TOTAL 246**
(246") x (2) / 3= 164 (trees to be mitigated)	
164-175 (tree credits)=	**+11 credits**
TO BE PLANTED	
Required Tree Quantity	0
Provided Tree Quantity	0

Division IV: Street Yard Landscaping

Street Yard #1 Length:	1140 l.f. - 35 l.f. driveway= 1105 l.f. total length
MF Multiplier:	18
Street Uard #1 Area:	19,890 sf.
Trees Required*:	33 trees
Trees Provided:	5 trees (Existing vegetation to remain to satisfy requirement)
Shrubs Required*:	199 shrubs
Shrubs Provided:	41 shrubs
Street Yard #2 Length:	309 l.f. - 24 l.f. driveway = 285 l.f. total length
MF Multiplier:	18
Street Uard #2 Area:	5,130 s.f. / 2 = 2,565 sf.
Trees Required*:	4 trees
Trees Provided:	4 trees (existing vegetation to remain to satisfy requirement)
Shrubs Required*:	26 shrubs
Shrubs Provided:	52 shrubs

Division V: Parking Lot Landscaping

Interior Parking Area:	204,074sf
20% Coverage Requirement:	40,814.80 sf
Trees Required*:	58 trees
Trees Provided:	58 trees

Division VI: Foundation Plantings
See Inserted Table

Divison VII: Buffer Yards

Buffer Yard:	No.1
Buffer Length:	710 l.f.
Trees Required:	24 trees
Trees Provided:	24 trees
Buffer Yard:	No.2
Buffer Length:	1,735 l.f.
Trees Required:	58 trees
Trees Provided:	58 trees

* 1 canopy tree + 6 shrubs per 600 s.f. of street yard
** 707 s.f. of shade per tree

DIVISION VI: Foundation Plantings

BLDG	DATA		BLDG	DATA	
1	Building area: Planting required: Planting provided:	5350 sf 762 sf 1200 SF	8	Building Area: planting required: planting provided:	1478 sf 177 sf 368 SF
2	Building area: Planting required: Planting provided:	5311 sf 637 sf 900 SF	9	Building Area: planting required: planting provided:	5958 sf 715 sf 921 SF
3	Building area: Planting required: Planting provided:	2798 sf 336 sf 519 SF	10	Building Area: planting required: planting provided:	5796 sf 696 sf 865 SF
4	Building area: Planting required: Planting provided:	5796 sf 696 sf 865 SF	11	Building Area: planting required: planting provided:	5311 sf 637 sf 650 SF
5	Building area: Planting required: Planting provided:	5311 sf 637 sf 1097 SF	12	Building Area: planting required: planting provided:	2798 sf 336sf 350 SF
6	Building area: Planting required: Planting provided:	1478 sf 177 sf 261 SF	13	Building Aarea: planting required: planting provided:	10882 sf 1306 sf 1350 SF
7	Building area: Planting required: Planting provided:	5796 sf 696 sf 700 SF			

SEE SHEET L1.8 FOR PLANT LIST

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

0 60 120 180

RAGAN•SMITH
LAND PLANNERS·LANDSCAPE ARCHITECTS
N.C. CORP. LIC• C-270
RAGAN-SMITH-ASSOCIATES, INC.
216 NORTH WILMINGTON STREET RALEIGH, N.C. 27604
(919) 244-8591 FAX (919)244-6739 WWW.RAGANSMITH.COM

NORTH CAROLINA LANDSCAPE ARCHITECT LICENSE 2/14/12 SHEET ALAN SMITH

Amberleigh Shores
City Of Wilmington, New Hanover County, North Carolina
Overall Landscape Plan

3 08/14/12-(DRS) PER LOBLOLLY CLARIFICATION.
2 08/07/12-(DRS) PER SITE / WETLAND REV.
REVISIONS

DESIGNED BY:	M. Kahnle
DRAWN BY:	M. Kahnle
APPROVED BY:	B. Smith
SCALE:	1"=60'
DATE:	June 6, 2012
JOB NO. 11-053	WK. ORDER 9399

SHEET NO.
L1.0

MARKET STREET

LEGEND

SIGNIFICANT TREES TO BE REMOVED

REGULATED TREES TO BE REMOVED

ON-SITE TREE TO REMAIN

TREE PRESERVATION CALCULATIONS

REGULATED TREES

ALL REGULATED TREES TO BE REMOVED ARE INCIDENTAL TO FUTURE BUILDINGS, PARKING, AND DRIVE AISLES.

SIGNIFICANT TREES

CALIPER INCHES TO BE REMOVED: 246"
CREDITS FOR TREES TO BE PRESERVED: 175
(246")(100%) = **164 TREES**

164 TREES - 175 CREDITS= +11 CREDITS

30' POWER LINE EASEMENT

TREE SAVE AREA

TREE SAVE AREA

TREE SAVE AREA

POOL

PLAY

#1 #2 #3 #5 #8 #10 #11 #12 #13

SIGNIFICANT TREES TO BE REMOVED

no.	tree	caliper
#1	ASH S24	24
#2	GUM S30	30
#3	HOL S8	8
#4	HOL S8	8
#5	HOL S9	9
#6	HOL S10TWIN	10
#7	LO S56	56
#8	MAG S8	8
#9	MAG S9	9
#10	MAG S11	11
#11	MAP S24	24
#12	POP S24	24
#13	WATO S25	25

TOTAL 246

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TSM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016RZ
Signed:

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DEC 11 2012
PLANNING DIVISION

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LAND PLANNERS·LANDSCAPE ARCHITECTS
N.C. CORP. LIC# C-270
RAGAN-SMITH-ASSOCIATES, INC.
315 W. HARGETT ST. RALEIGH, N.C. 27601 27606
(919) 244-8591 FAX: (919)244-9739 WWW.RAGANSMITH.COM

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT BRETT ALAN SMITH

Amberleigh Shores

City Of Wilmington, New Hanover County, North Carolina

Tree Preservation Plan

REVISIONS	
2 08/07/12-(DRS) PER SITE WETLAND REV.	
DESIGNED BY:	M. Kahnle
DRAWN BY:	M. Kahnle
APPROVED BY:	B. Smith
SCALE:	1"=40'
DATE:	June 6, 2012
JOB NO. 10-059	WK. ORDER 9205
SHEET NO.	L0.1A

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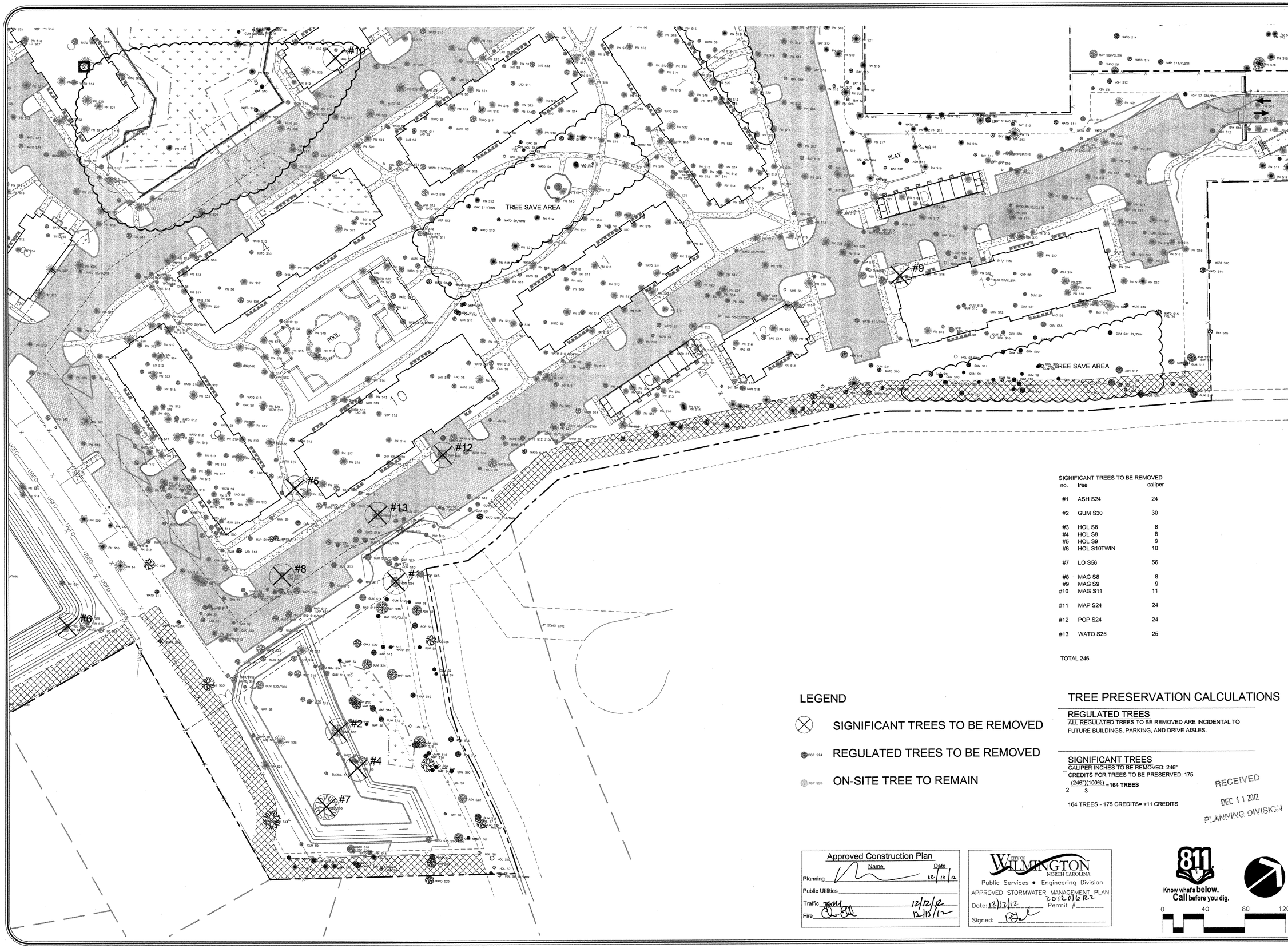

SIGNIFICANT TREES TO BE REMOVED

no.	tree	caliper
#1	ASH S24	24
#2	GUM S30	30
#3	HOL S8	8
#4	HOL S8	8
#5	HOL S9	9
#6	HOL S10TWIN	10
#7	LO S56	56
#8	MAG S8	8
#9	MAG S9	9
#10	MAG S11	11
#11	MAP S24	24
#12	POP S24	24
#13	WATO S25	25

TOTAL 246

LEGEND

- SIGNIFICANT TREES TO BE REMOVED
- POP S24 REGULATED TREES TO BE REMOVED
- POP S26 ON-SITE TREE TO REMAIN

TREE PRESERVATION CALCULATIONS

REGULATED TREES

ALL REGULATED TREES TO BE REMOVED ARE INCIDENTAL TO FUTURE BUILDINGS, PARKING, AND DRIVE AISLES.

SIGNIFICANT TREES

CALIPER INCHES TO BE REMOVED: 246"
CREDITS FOR TREES TO BE PRESERVED: 175

$\frac{(246")(100\%)}{2 \quad 3}$ = 164 TREES

164 TREES - 175 CREDITS= +11 CREDITS

RECEIVED
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PLANNING DIVISION

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120162
Signed:

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

0 40 80 120

RAGAN•SMITH
LAND PLANNERS•LANDSCAPE ARCHITECTS
N.C. CORP. LIC# C-270
RAGAN-SMITH-ASSOCIATES, INC.
315 WOODLAND ST. P.O. BOX 60070 NASHVILLE, TN 37206
(615) 244-8591 FAX (615)244-6739 WWW.RAGANSMITH.COM

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1861 BRETT ALAN SMITH

Amberleigh Shores

City Of Wilmington, New Hanover County, North Carolina

Tree Preservation Plan

2 08/07/12-(DRS) PER SITE / WETLAND REV.

REVISIONS

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SHEET NO.
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REGULATED TREES TO BE REMOVED

ASH S7 S10/TWIN
ASH S8
ASH S8
ASH S8/TWIN
ASH S9
ASH S9
ASH S11
ASH S12
ASH S12
ASH S12
ASH S14
ASH S17
ASH S18
ASH S18
ASH S19

BAY S8
BAY S8
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BJO S9
BJO S11
BJO S12
BJO S13
BJO S15 S7/TWIN

BLKWAL S12
BLKWAL S13
BLKWAL S20

CHR S8
CHR S8
CHR S8/CLSTR
CHR S9
CHR S10
CHR S10
CHR S12
CHR S15

CYP S8
CYP S13
CYP S13
CYP S16
CYP S23

GUM S8
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GUM S9/CLSTR
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GUM S20/TWIN

HOL S4/TWIN
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TREES TO BE PRESERVED

TREES	CALIPER	CREDIT
GUM S13	13	3
HOL S6/CLSTR	6	2
HOL S6/TWIN	6	2
HOL S7 S6/TWIN	7	2
LAO S10	10	2
LAO S12	12	3
LAO S13	13	3
LAO S8	8	2
LAO S8 S8/TWIN	8	2
LAO S9	9	2
LO S28	28	6
LO S33	33	6
LO S44	44	6
MAP S11	11	2
OAK S10	10	2
OAK S10	10	2
OAK S11/TWIN	11	2
OAK S12	12	3
OAK S12	12	3
OAK S20	20	4
OAK S8	8	2
OAK S8	8	2
OAK S8	8	2
OAK S8	8	2
OAK S8	8	2
OAK S9	9	2
OAK S9	9	2
OAK S9	9	2
OAK S9	9	2
PN S12	12	3
PN S12	12	3
PN S13	13	3
PN S13	13	3
PN S13	13	3
PN S13	13	3
PN S13	13	3
PN S14	14	3
PN S14	14	3
PN S15	15	3
PN S15	15	3
PN S16	16	3
PN S16	16	3
PN S18	18	3
PN S18	18	4
PN S20	20	4
PN S21	21	4
PN S28	28	6
WATO S10	10	2
WATO S11	11	2
WATO S11	11	2
WATO S12	12	3
WATO S12	12	3
WATO S13	13	3
WATO S13	13	3
WATO S14	14	3
WATO S15	15	3
WATO S15	15	3
WATO S8	8	2
WATO S8	8	2
WATO S9	9	2
WATO S9/TWIN	9	2
WILO S12	12	3

TOTAL CREDIT: 175

SIGNIFICANT TREES TO BE REMOVED

No.	tree	caliper
#1	ASH S24	24
#2	GUM S30	30
#3	HOL S8	8
#4	HOL S8	8
#5	HOL S9	9
#6	HOL S10TWIN	10
#7	LO S56	56
#8	MAG S8	8
#9	MAG S9	9
#10	MAG S11	11
#11	MAP S24	24
#12	POP S24	24
#13	WATO S25	25

TOTAL 246

(246") x (2) / 3= 164 (trees to be mitigated)

164-175 (tree credits)= +11 credits

RECEIVED
DEC 1 1 2012
PLANNING DIVISION

Approved Construction Plan

	Name	Date
Planning	[signature]	12/12/12
Public Utilities		
Traffic	BMA	12/12/12
Fire	[signature]	12/13/12

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016R2
Signed: [signature]

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RAGAN-SMITH-ASSOCIATES, INC.
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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1361 BRETT ALAN SMITH

Amberleigh Shores
City Of Wilmington, New Hanover County, North Carolina
Tree Calculations

2 08/07/12-(DRS) PER SITE / WETLAND REV.
REVISIONS

DESIGNED BY: M. Kahnle
DRAWN BY: M. Kahnle
APPROVED BY: B. Smith
SCALE: N.T.S
DATE: June 6, 201
JOB NO. 11-053
WK. ORDER 9399
SHEET NO. L0.1C

3/7/2012 12:33:25 PM C:\EQUORUM\LR-QUEUES\localfullbond.qcf D:\LOCAL\FULL\BOND\70465.10059_9205_00_9205_L0.1A_TREE_CALCULATION-Layout1_drs2.PLT

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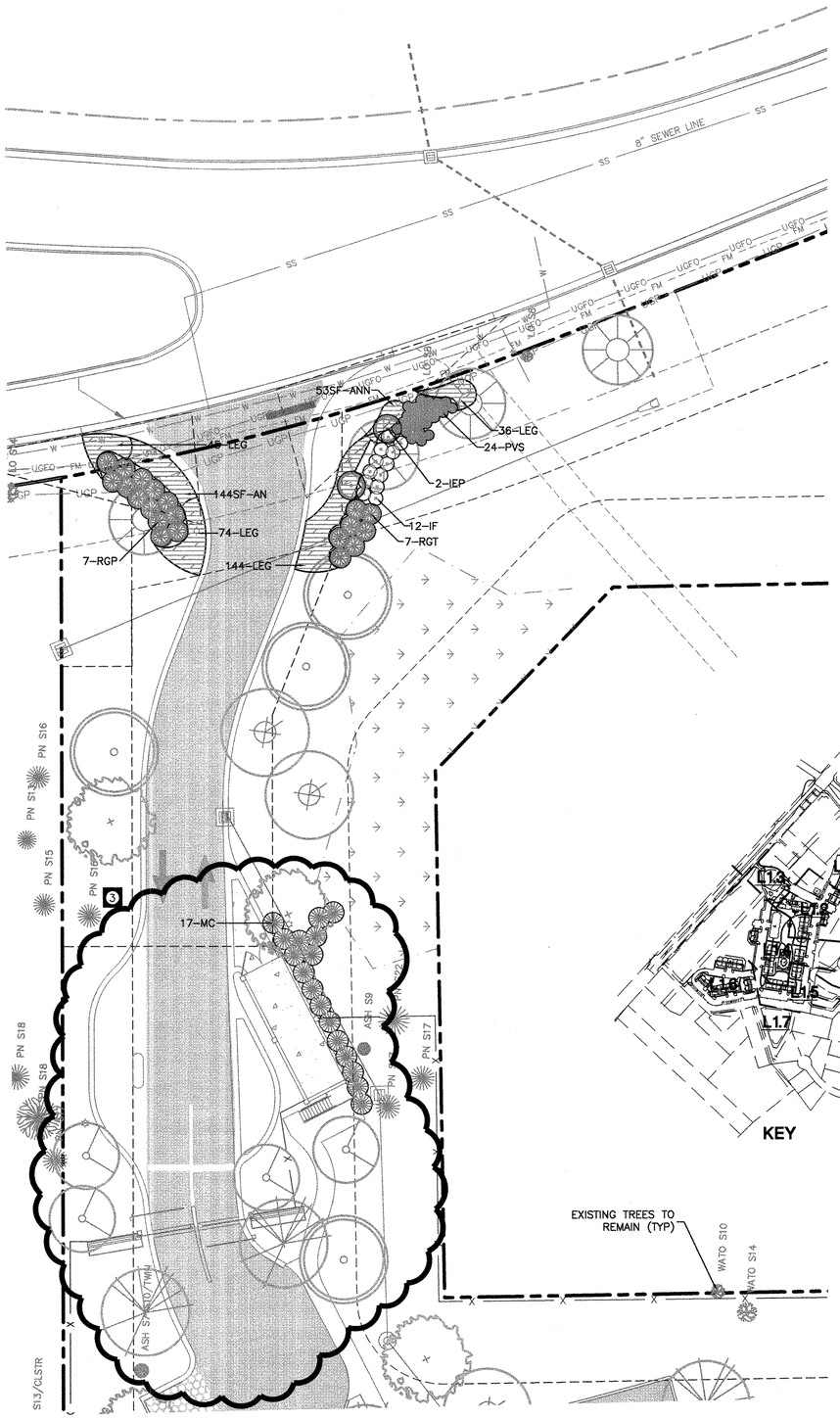
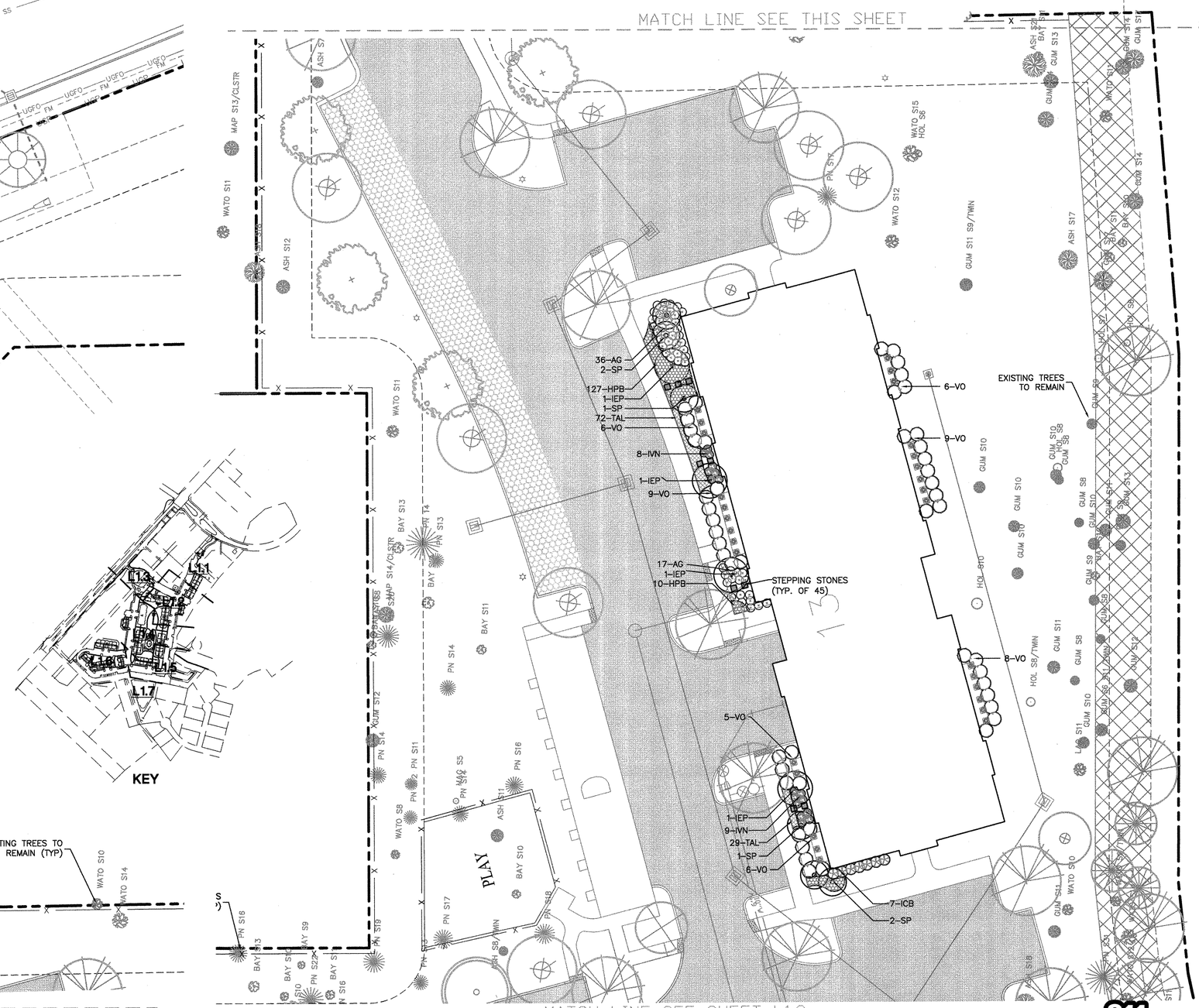
DEC 11 2012
PLANNING DIVISION





SEE SHEET L1.8 FOR PLANT LIST

Approved Construction Plan

	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TGM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120162
Signed:

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

0 20 40 60

RAGAN•SMITH
LAND PLANNERS/LANDSCAPE ARCHITECTS
N.C. CORP. LIC# C-270
RAGAN–SMITH–ASSOCIATES, INC.
315 WOODLAND ST. P.O. BOX 60270 NASHVILLE, TN. 37206
(615) 244-8591 FAX (615)244-6699 WWW.RAGANSMITH.COM

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1707 MICHAEL KENNEDY KAHLE 12-6-12

Amberleigh Shores

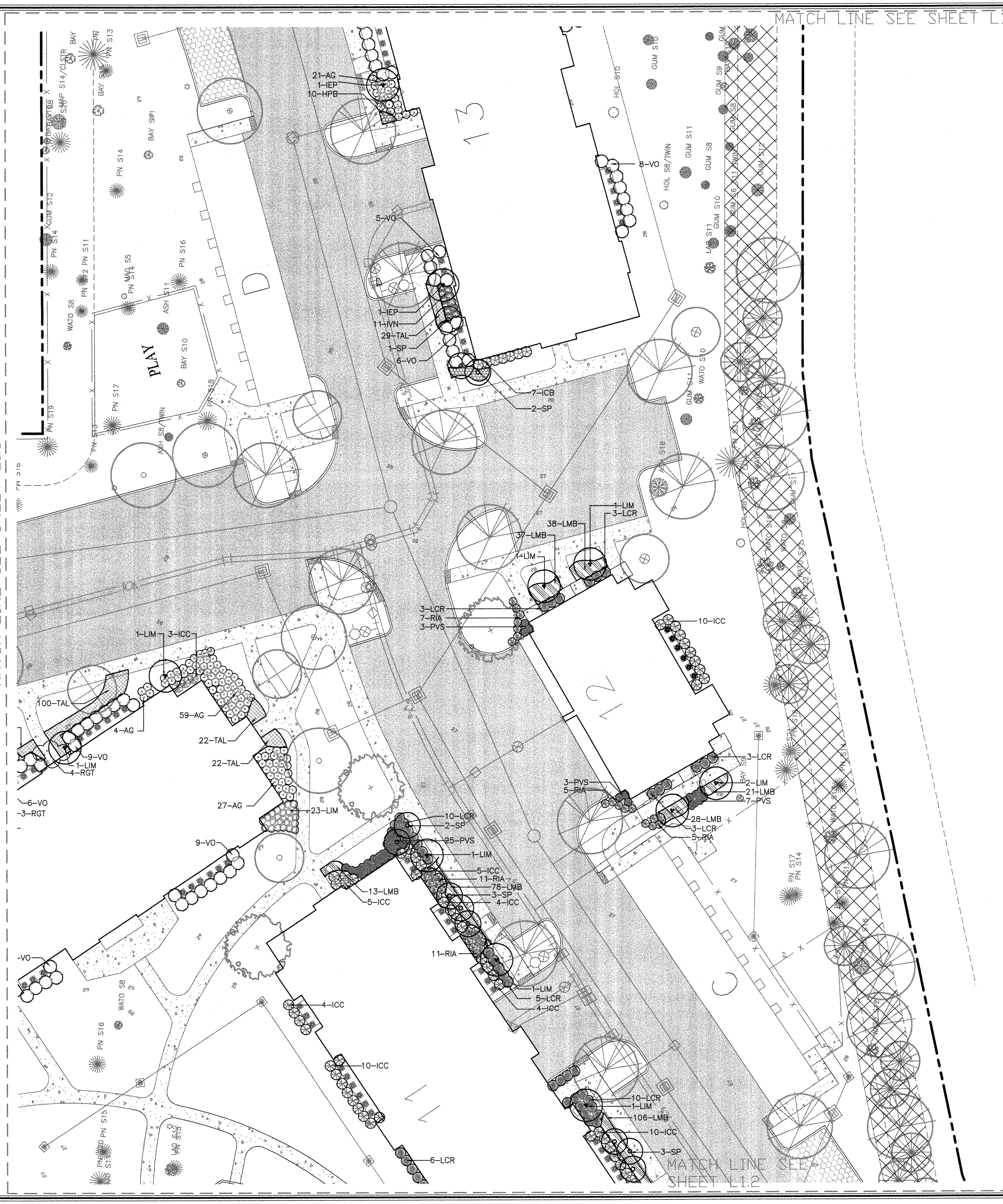
City Of Wilmington, New Hanover County, North Carolina

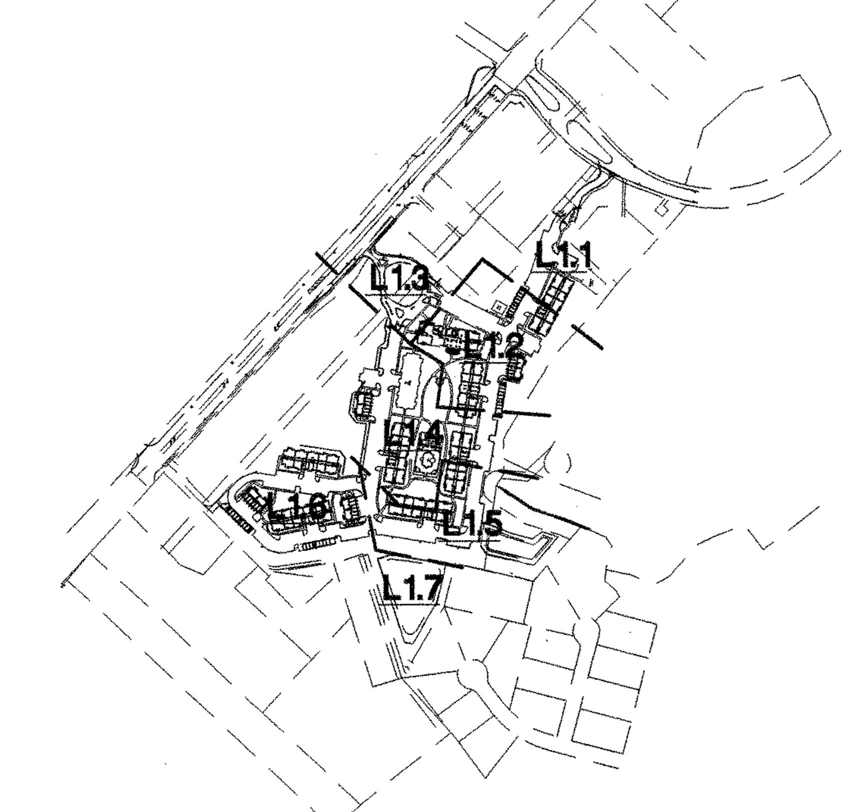
Enlarged Landscape Plan

3 12/06/12–(MKK) PER ENTRY MODIFICATION
2 08/07/12–(DRS) PER SITE / WETLAND REV.
REVISIONS

DESIGNED BY:	B. Smith
DRAWN BY:	D.Sieberg
APPROVED BY:	B. Smith
SCALE:	1"=20'
DATE:	March 30, 2012
JOB NO. 10-059	WK. ORDER 9205

SHEET NO.
L1.1





KEY

SEE SHEET L1.8 FOR PLANT LIST

Approved Construction Plan

	Name	Date
Planning	[signature]	12/12/12
Public Utilities		
Traffic	[signature]	12/12/12
Fire	[signature]	12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
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(615) 244-8591 FAX (615)244-6739 WWW.RAGANSMITH.COM

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1361 BRETT ALAN SMITH

Amberleigh Shores
City Of Wilmington, New Hanover County, North Carolina
Enlarged Landscape Plan

② 08/07/12-(DRS) PER SITE / WETLAND REV.	
REVISIONS	
DESIGNED BY:	B. Smith
DRAWN BY:	D.Sieberg
APPROVED BY:	B. Smith
SCALE:	1"=20'
DATE:	March 30, 2012
JOB NO. 10-059	**WK. ORDER** 9205
SHEET NO.	**L1.2**

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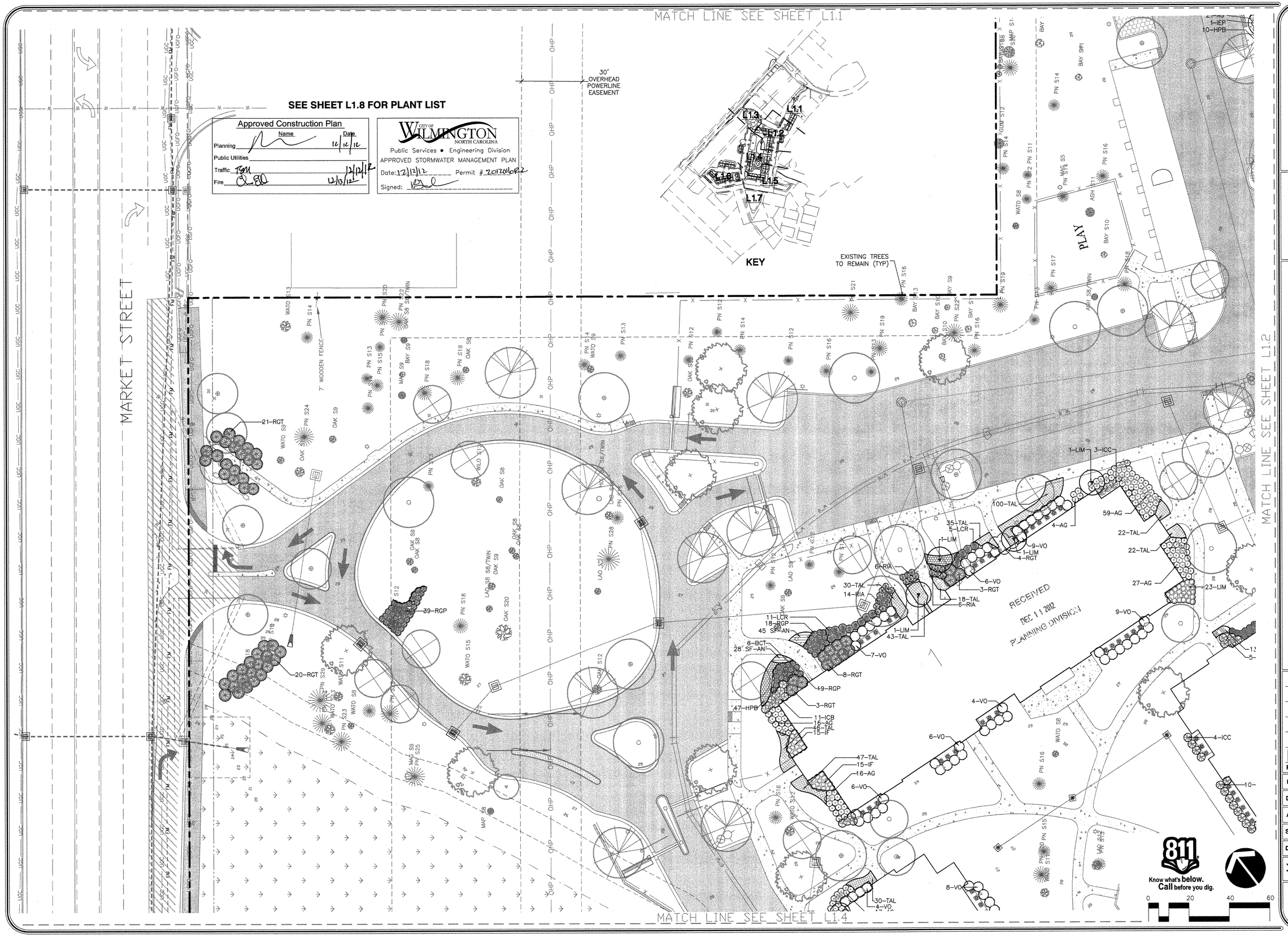

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315 WOODLAND ST. P.O. BOX 3067 NASHVILLE, TN. 37205
(615) 244-8591 FAX (615)244-9739 WWW.RAGANSMITH.COM

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1281 08/07/12 BRETT ALAN SMITH

Amberleigh Shores

City Of Wilmington, New Hanover County, North Carolina

Enlarged Landscape Plan

2 08/07/12-(DRS) PER SITE / WETLAND REV.

REVISIONS

DESIGNED BY:	B. Smith
DRAWN BY:	D.Sieberg
APPROVED BY:	B. Smith
SCALE:	1"=20'
DATE:	March 30, 2012
JOB NO. 10-059	WK. ORDER 9205

SHEET NO.

L1.3

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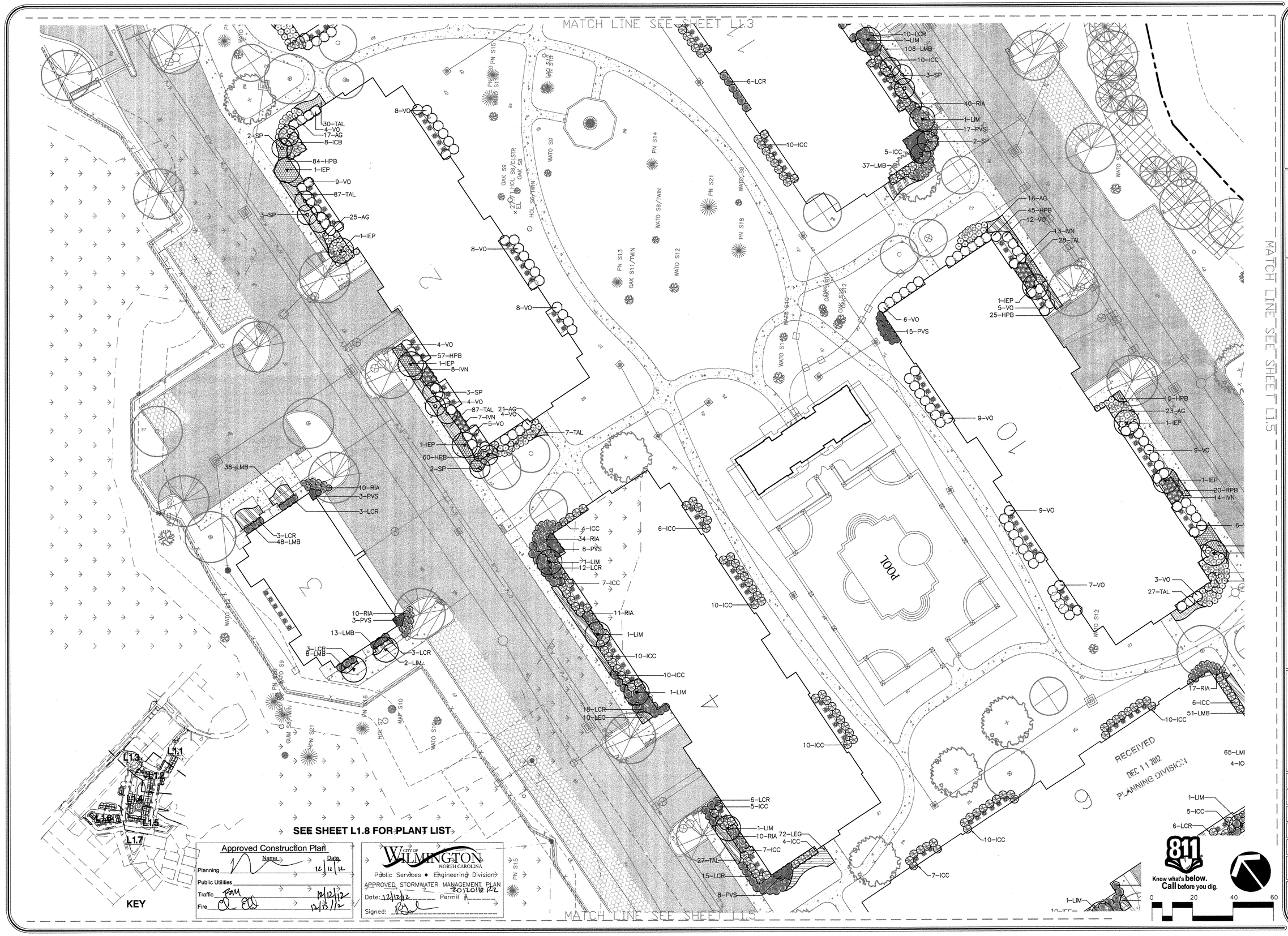

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(615) 244-8591 FAX (615)244-8739 WWW.RAGANSMITH.COM

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT BRETT ALAN SMITH

Amelia Shores

City Of Wilmington, New Hanover County, North Carolina

Enlarged Landscape Plan

2 08/07/12-(DRS) PER SITE / WETLAND REV.

REVISIONS

DESIGNED BY:	B. Smith
DRAWN BY:	D.Sieberg
APPROVED BY:	B. Smith
SCALE:	1"=20'
DATE:	March 30, 2012
JOB NO. 10-059	WK. ORDER 9205

SHEET NO.

L1.4

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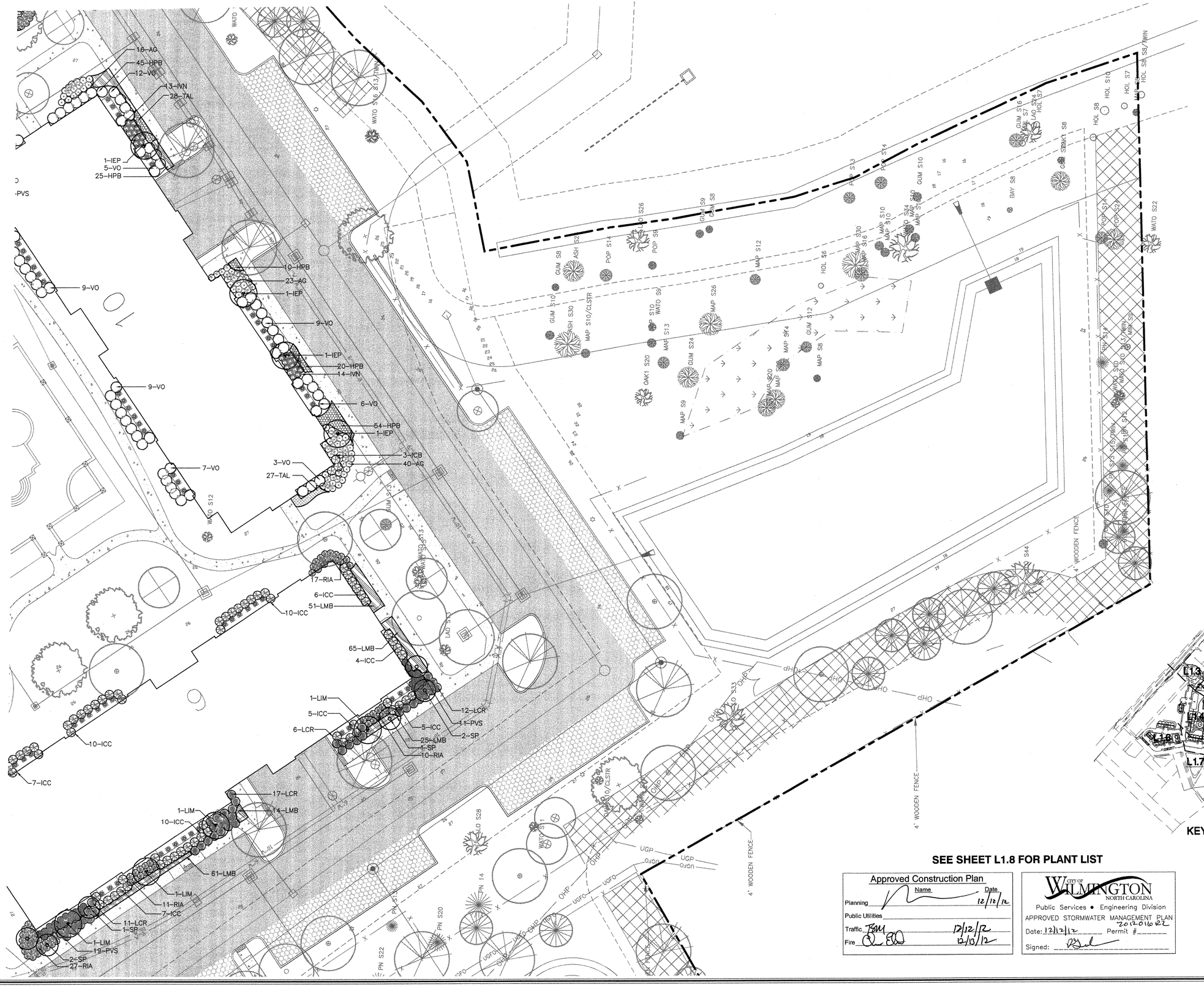
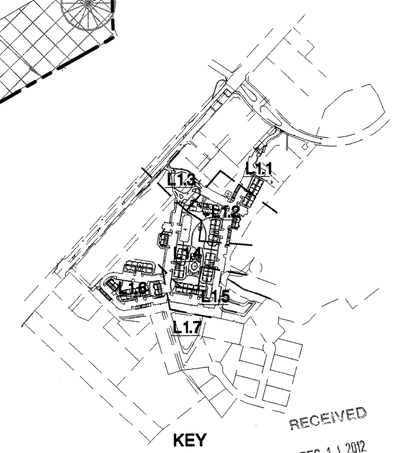
MATCH LINE SEE SHEET L1.4

MATCH LINE SEE SHEET L1.4





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PLANNING DIVISION

SEE SHEET L1.8 FOR PLANT LIST

Approved Construction Plan	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 20120102
Signed:

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

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT BRETT ALAN SMITH

Amberleigh Shores

City Of Wilmington, New Hanover County, North Carolina

Enlarged Landscape Plan

2 08/07/12-(DRS) PER SITE / WETLAND REV.

REVISIONS

DESIGNED BY:	B. Smith
DRAWN BY:	D.Sieberg
APPROVED BY:	B. Smith
SCALE:	1"=20'
DATE:	March 30, 2012
JOB NO. 10-059	WK. ORDER 9205

SHEET NO.

L1.5

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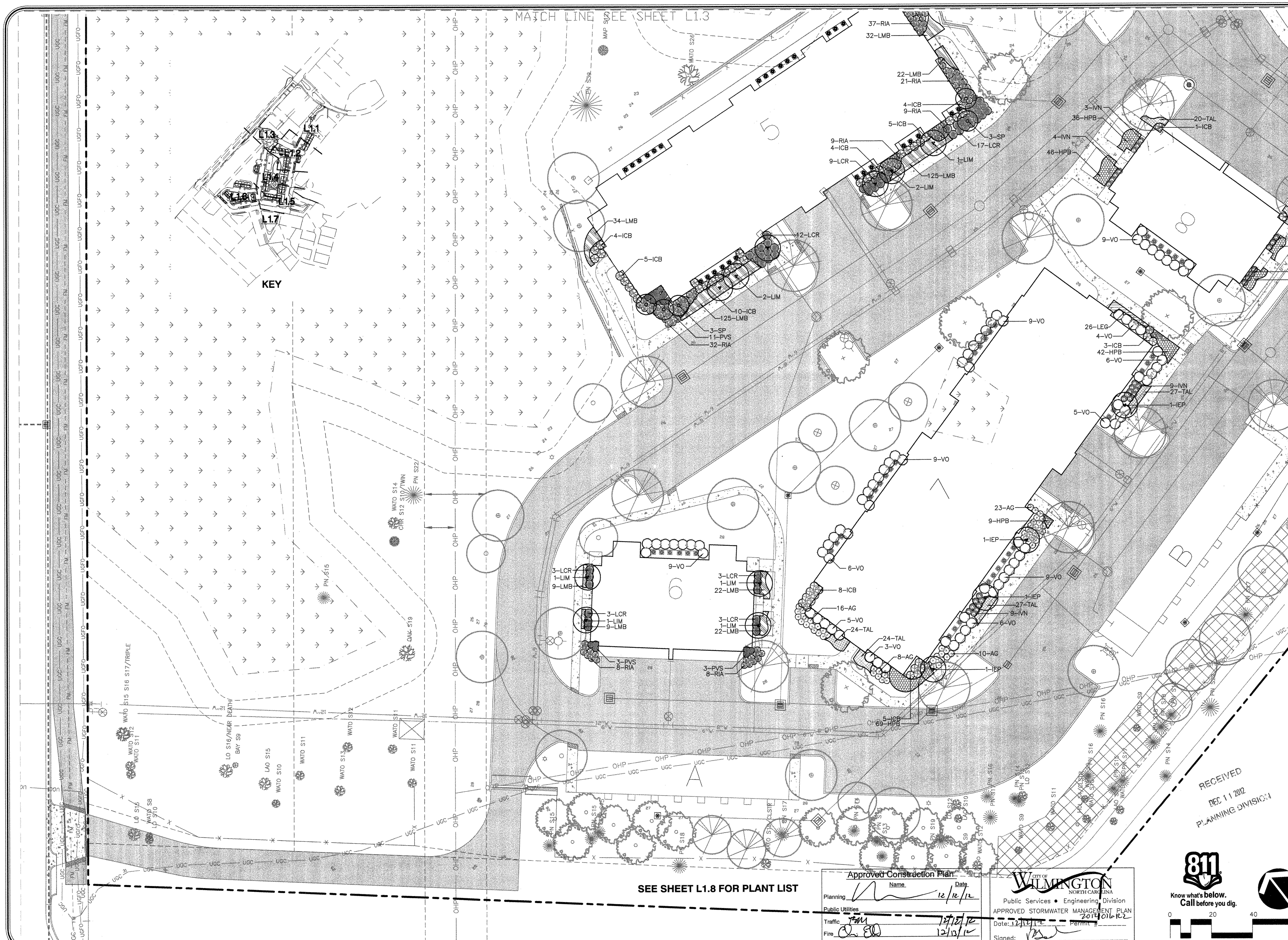

SEE SHEET L1.8 FOR PLANT LIST

Approved Construction Plan

	Name	Date
Planning	[signature]	12/12/12
Public Utilities		
Traffic	[signature]	12/12/12
Fire	[signature]	12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016R2
Signed: [signature]

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1561 BRETT ALAN SMITH

Amberleigh Shores

City Of Wilmington, New Hanover County, North Carolina

Enlarged Landscape Plan

② 08/07/12-(DRS) PER SITE / WETLAND REV.

REVISIONS

DESIGNED BY:	B. Smith
DRAWN BY:	D.Sieberg
APPROVED BY:	B. Smith
SCALE:	1"=20'
DATE:	March 30, 2012
JOB NO. 10-059	WK. ORDER 9205

SHEET NO.

L1.6

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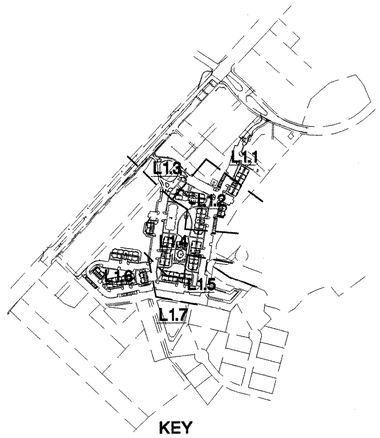
MATCH LINE SEE SHEET L1.5

1–LIM
11–RIA
7–ICC
11–LCR
1–SP
1–LIM
19–PVS
2–SP
27–RIA
20–TAL
1–ICB
1–ICB
20–TAL
3–IVN
20–HPB
4–IVN
28–HPB

MATCH LINE SEE SHEET L1.5



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PLANNING DIVISION

SEE SHEET L1.8 FOR PLANT LIST

Approved Construction Plan	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TAM	12/12/12
Fire		12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016DR
Signed:

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N.C. CORP. LIC• C-270
RAGAN-SMITH-ASSOCIATES, INC.
215 WOODLAND ST. P.O. BOX 6207 WILMINGTON, N.C. 28403
(910) 544-0281 F.A.X. (910)544-0708 WWW.RAGANSMITH.COM

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT BRETT ALAN SMITH

Amberleigh Shores

City Of Wilmington, New Hanover County, North Carolina

Enlarged Landscape Plan

2 08/07/12–(DRS) PER SITE / WETLAND REV.
1 05/27/12–(MKK) PER CITY COMMENTS

REVISIONS

DESIGNED BY:	B. Smith
DRAWN BY:	D.Sieberg
APPROVED BY:	B. Smith
SCALE:	1"=20'
DATE:	March 30, 2012
JOB NO. 10-059	WK. ORDER 9205

SHEET NO.
L1.7

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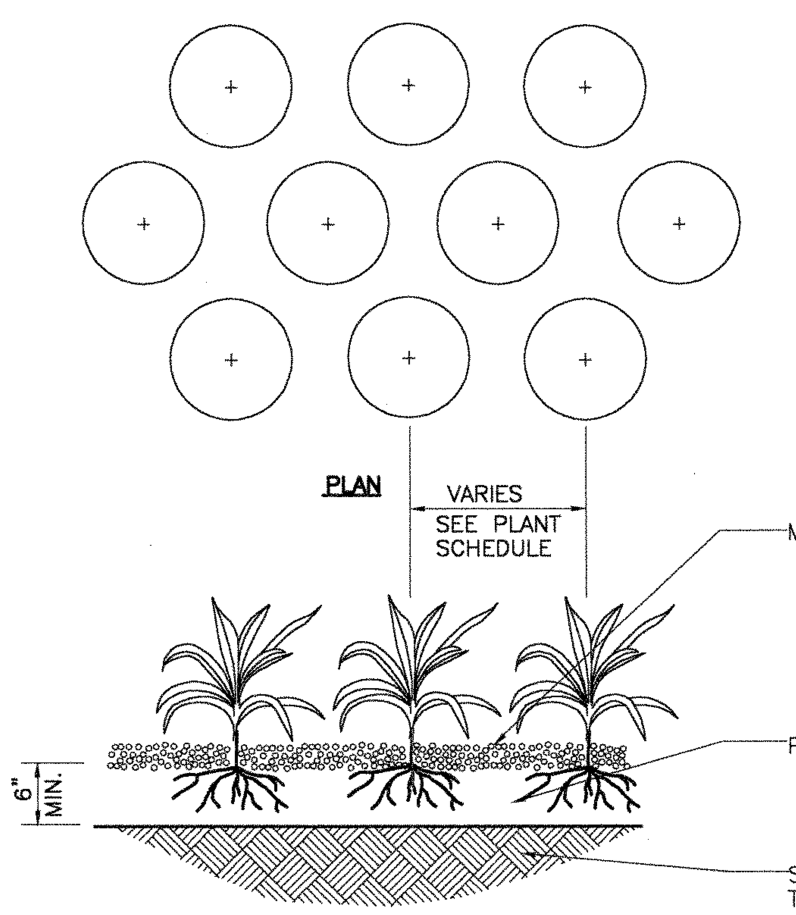
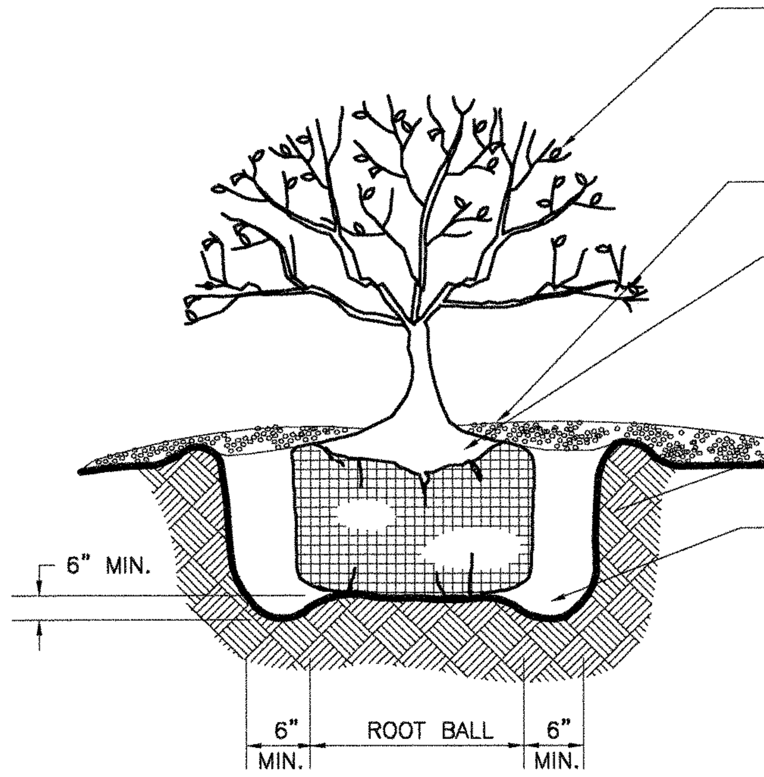
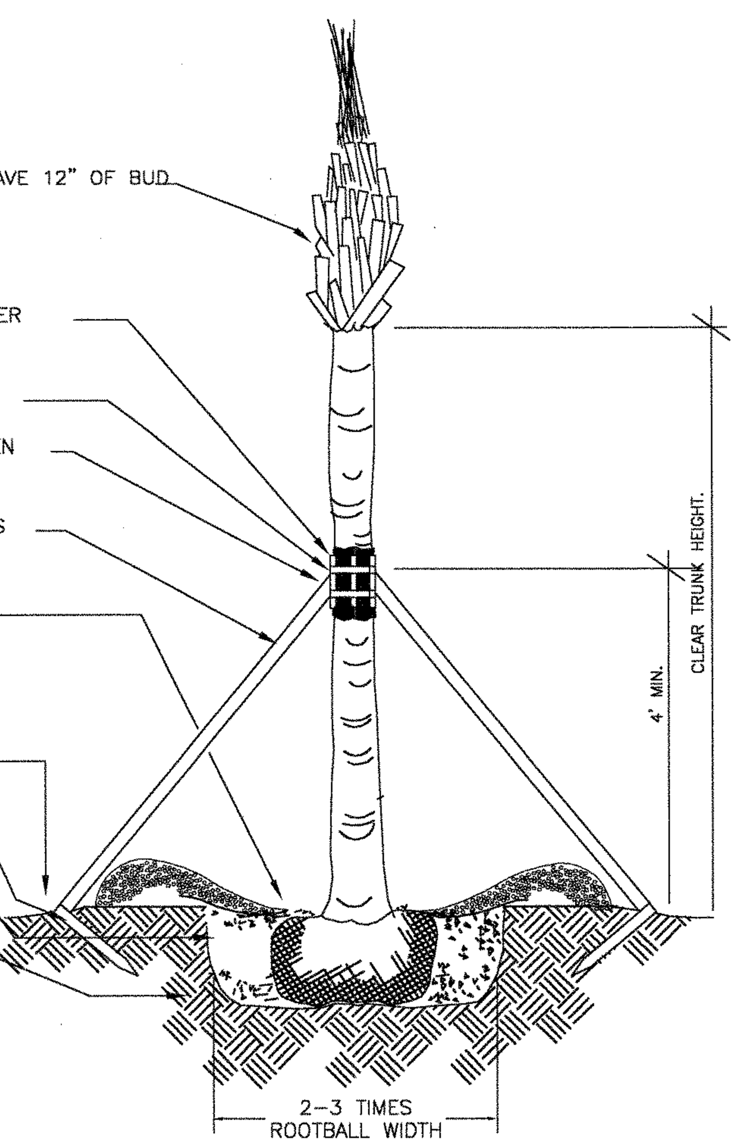


GROUNDCOVER PLANTING
NOT TO SCALE

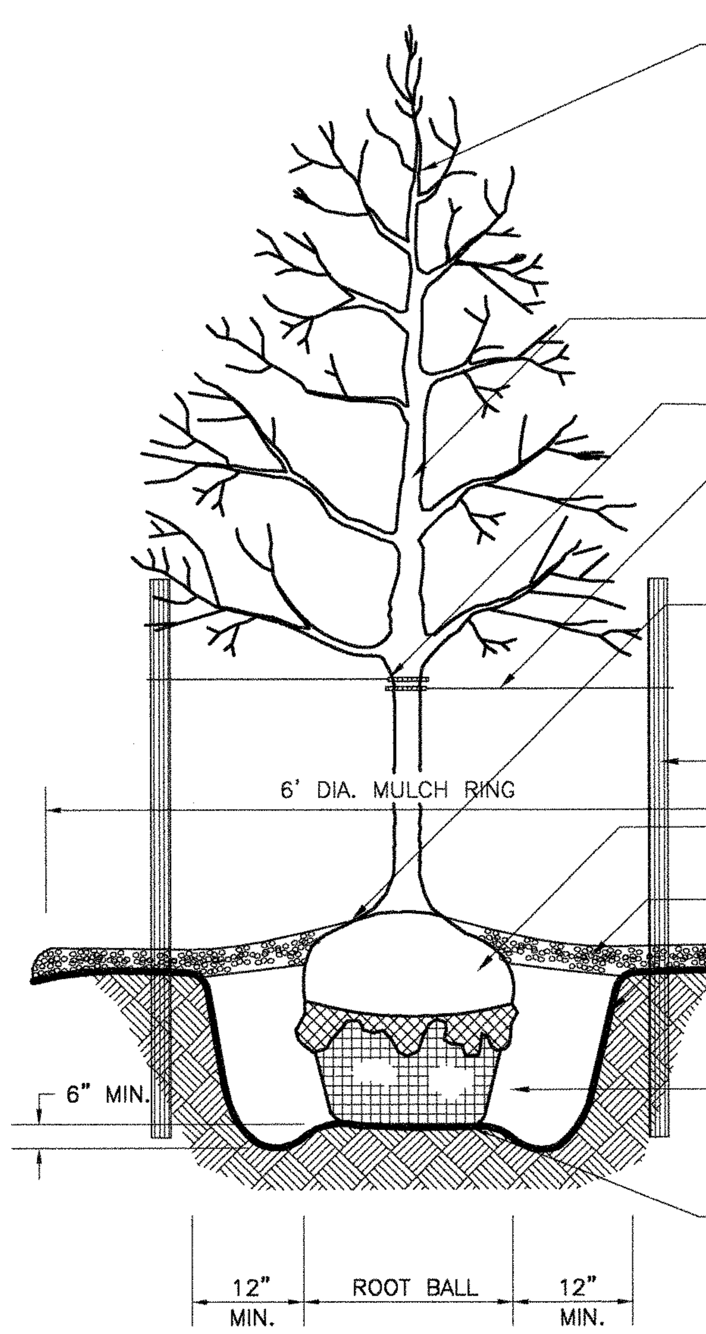


NOTES:
1. WHERE PLANTS ARE SHOWN IN BEDS, MULCH SHALL COVER ENTIRE BED AS DENOTED ON THE PLANS.
2. CONTAINER GROWN PLANT MATERIAL MAY BE SUBSTITUTED FOR BURLAP MATERIAL.

SHRUB PLANTING
NOT TO SCALE

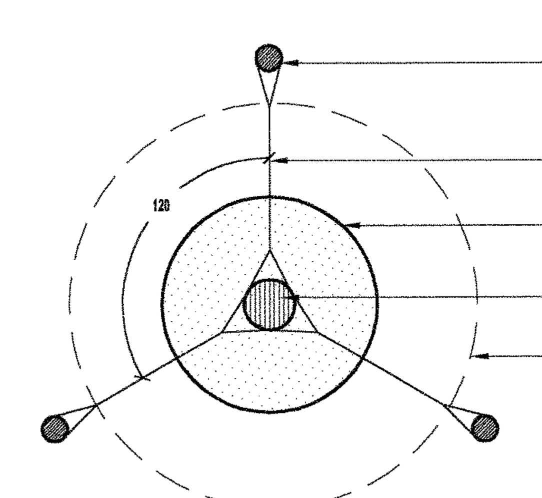


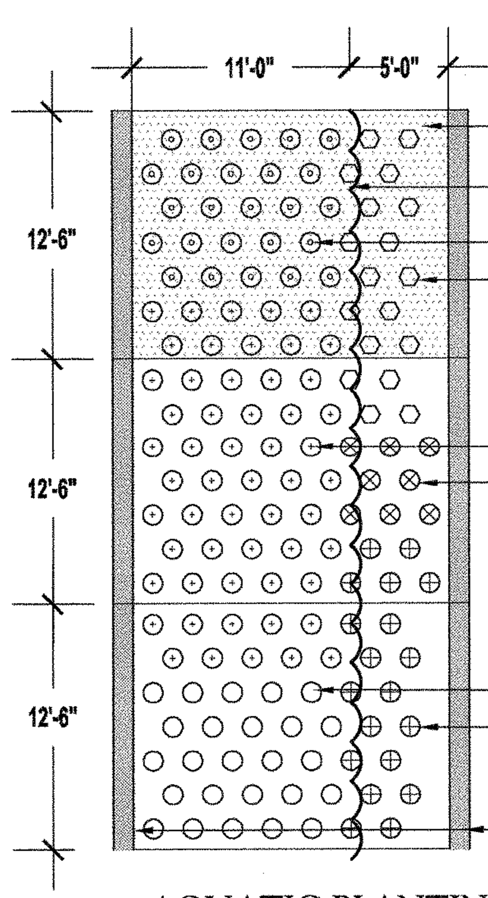
SABAL PALM PLANTING DETAIL
(NOT TO SCALE)



NOTES:
1. REMOVE STAKES AFTER ONE GROWING SEASON.
2. DO NOT WRAP TREE TRUNKS UNLESS APPROVED BY THE LANDSDCAPE ARCHITECT. REMOVE WRAP AFTER PLANTING.
3. NON-BIODEGRADABLE BURLAP TO BE REMOVED OR ROLLED UNDER ROOT BALL AFTER PLANT IS PLACED IN HOLE.

TREE PLANTING
NOT TO SCALE





AQUATIC PLANTING DETAIL
NOT TO SCALE

Approved Construction Plan	Name	Date
Planning	(signature)	12/12/12
Public Utilities		
Traffic	(signature)	12/12/12
Fire	(signature)	12/13/12

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 12/12/12 Permit # 2012016R2
Signed: (signature)

MASTER PLANT LIST

SYM	QTY	BOTANICAL NAME	COMMON NAME	SPECIFICATIONS	SPACING
TREES					
(see symbol)	19	Acer rubrum 'October Glory'	Red Maple	14-15' x 7-8'; 2.5" cal.	AS
(see symbol)	15	Carpinus caroliniana	Musclewood	9'-10' x 4'-5'; 2 1/2" cal.	
(see symbol)	15	Cercis canadensis 'Forest Pansy'	Forest Pansy Redbud	9'-10' x 4'-5'; 2 1/2" cal.	
(see symbol)	16	Juniperus virginiana 'Canartii'	Canarti Red Cedar	8'-10' ht. o.a., 2" cal.	AS
LIM	54	Lagerstroemia indica 'Muskogee'	Muskogee Crape Mrytle	9'-10' x 7'-8'; multi-trunk	AS
IEP	18	Ilex x attenuata "East Palatka'	East Palatka Holly	8'-9' x 3'-3 1/2'; single trunk	AS
(see symbol)	16	Magnolia virginiana	Sweetbay Magnolia	8'-10' x 6-7'; multi-trunk	AS
(see symbol)	74	Pinus taeda	Loblolly Pine	2 1/2" cal.	AS
(see symbol)	32	Quercus phellos	Willow Oak	10-12' x 5-6'; 2.5" cal.	AS
(see symbol)	44	Quercus nutallii	Nutall Oak	10-12' x 5-6'; 2.5" cal.	AS
(see symbol)	85	Quercus virginiana	Live Oak	10-12' x 5-6'; 2.5" cal.	AS
SP	38	Sabal Palmetto	Cabbage Palm	10'-12' clear trunk	AS
(see symbol)	19	Taxodium distictum	Bald Cypress	65 gal; 11'-12' x 5'-6'; 3" cal.	AS
SHRUBS					
AG	426	Abelia x grandiflora 'Sherwoodii'	Dwarf Glossy Abelia	3 gal; 18"x18", full	24" O.C.
BCT	6	Bignonia capreolata 'Tangerine Beauty'	Tangerine Beauty Cross Vine	3 gal; 30" runners	AS
ICC	218	Ilex crenata 'Carissa'	Carissa Holly	3 gal; 15"-18" spd	36" O.C.
ICB	87	Ilex cornuta 'Dwarf Burford'	Dwarf Burford Holly	3 gal; 15"-18" spd	24" O.C.
IVN	93	Ilex vomitoria 'Nana'	Dwarf Yaupon Holly	3 gal; 15"-18" spd	24" O.C.
IF	42	Illicium floridanum	Anise Shrub	3 gal; 24"-30" spd	36" O.C.
RIA	396	Rhaphiolepis indica 'Alba'	Dwarf Indian Hawthorn	3 gal; 15"-18" spd	24" O.C.
LCR	230	Loropetalum chinense 'Ruby'	Dwarf Red Chinese Witch Hazel	3 gal	36" O.C.
MC	20	Myrica cerifera	Wax Myrtle	7 gal; 3'-4' x 2'-3'	AS
PVS	181	Panicum virgatum 'Heavy Metal'	Heavy Metal Switch Grass	3 gal; 15"-18" x 15"-18"	36" O.C.
RGT	87	Rhododendron x 'George L. Taber'	Orchid Pink Azalea	1 gal; 15"-18" x 15"-18"	24" O.C.
RGP	121	Rhododendron 'Gumpo Pink'	Pink Gumpo Azalea	1 gal; 15"-18" spd.	24" O.C.
VO	301	Viburnum odoratissimum 'Awabuki'	Mirror Leaf Viburnum	3 gal; 18"-24" x 18"-24"	36" O.C.
GROUNDCOVER					
HPB	955	Hemerocallis 'Stella d' Oro'	Daylily	1 gal; 2-3 ppp	18" O.C.
LEG	919	Liriope muscari 'Big Blue'	Giant Lilyturf	1 gal; 12" ht.; 5-7 ppp	18" O.C.
LMB	1131	Liriope muscari 'Variegated Giant'	Aztec Grass	1 gal; 12" ht.; 5-7 ppp	18" O.C.
TAL	1055	Trachelospermum asiaticum	Asian Jasmine	1 gal, full	18" O.C.
TURF		Cynodon dactolon'Tifway 419'	Bermuda Sod	Solid sod, free of weeds	
AN	270sf	Annuals	Assorted varieties	4" pots	

NOTE:
1. ALL PLANT MATERIAL TO BE FULL AND MATCHING IN FORM.
2. SOD ALL DISTURBED AREAS, NOT OTHERWISE PLANTED OR HYDRO-SEEDED.
3. ABSOLUTELY NO SUBSTITUTIONS ARE PERMITTED WITHOUT EXPRESS WRITTEN PERMISSION OF LANDSCAPE ARCHITECT. ANY UNAUTHORIZED SUBSTITUTIONS WILL BE REPLACED AT LANDSCAPE CONTRACTOR'S EXPENSE.
4. ALL PLANT MATERIAL TO MEET ANSI STANDARDS.
5. ALL PLANT SIZES ARE MINIMUMS.
6. ALL CANOPY TREES TO BE LIMBED UP TO 6' HEIGHT.
7. IF INSTALLED, IRRIGATION SYSTEM TO HAVE BURIED RAIN SENSOR.

PLANTING NOTES
1. ANY SERIES OF TREES TO BE PLACED IN A PARTICULAR ARRANGEMENT WILL BE FIELD CHECKED FOR ACCURACY. ANY PLANTS MISARRANGED WILL BE RELOCATED.
2. SOIL USED IN BACKFILLING PLANTING PITS SHALL BE TOPSOIL AND MIXED WITH 25 % PEAT BY VOLUME. EXCEPT FOR ERICACEOUS PLANTS, VERY ACID OR SOUR SOIL (SOIL HAVING A pH LESS THAN 6) SHALL BE MIXED WITH SUFFICIENT LIME TO PRODUCE A SLIGHTLY ACID REACTION (A pH OF 6.0 TO 6.5). 10-10-10 COMMERCIAL FERTILIZER AT THE RATE OF 2 POUNDS PER CUBIC YARD SHALL BE ADDED. BOTH FERTILIZER AND PEAT SHALL BE THOROUGHLY MIXED BY HAND OR ROTARY TILLER.
3. SOIL USED IN BACKFILLING ERICACEOUS PLANTS SHALL BE TOPSOIL MIXED WITH 50 % PEAT BY VOLUME. 5-10-5 COMMERCIAL FERTILIZER AT THE RATE OF 5 POUNDS PER CUBIC YARD SHALL BE ADDED. BOTH FERTILIZER AND PEAT SHALL BE THOROUGHLY MIXED BY HAND OR ROTARY TILLER.
4. UPON SECURING PLANT MATERIAL, AND BEFORE INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT FOR A PRE-INSTALLATION INSPECTION IN ORDER TO VERIFY ALL PLANT MATERIAL MEETS SPECIFICATIONS. TREES OF SAME SPECIES TO BE MATCHED IN GROWTH CHARACTER AND UNIFORMITY.
5. HERBICIDE (TREFLAN) SHALL BE APPLIED TO ALL PLANT BEDS PRIOR TO PLANTING FOR NOXIOUS WEED CONTROL AT A RATE OF 2 POUNDS PER 1,000 SQUARE FEET.
6. CONTRACTOR SHALL SUBMIT A 10 OUNCE SAMPLE OF THE TOPSOIL PROPOSED TO A TESTING LABORATORY FOR ANALYSIS. TEST RESULTS, WITH RECOMMENDATIONS FOR SUITABILITY, SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
7. PLANTS SHALL BE ORIENTED FOR BEST APPEARANCE AND VERTICAL. ALL NON-BIODEGRADABLE ROOT CONTAINERS SHALL BE REMOVED.
8. TREE BRANCHES SHALL BE SELECTIVELY TRIMMED BY 25 %, MAINTAINING NATURAL SHAPE. ALL DEAD AND BROKEN BRANCHES IN TREES AND SHRUBS SHALL ALSO BE PRUNED. REMOVE TAGS, TWINE OR OTHER NON-BIODEGRADABLE MATERIAL.
9. SCARIFY SUBSOIL IN PLANTING BEDS TO A DEPTH OF 3 INCHES. ALL PLANTING BEDS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TOPSOIL, FROM ON-SITE STOCKPILE(S).
10. CONTRACTOR SHALL PROVIDE SMOOTH, NEATLY TRENCHED (3 INCH DEEP) BED EDGES.
11. ALL PLANTING BEDS TO HAVE A MINIMUM 4 INCH DEEP PINE STRAW MULCH
12. DIMENSIONS FOR TRUNK CALIPER, HEIGHTS, AND SPREAD SPECIFIED ON THE MATERIAL SCHEDULE ARE A GENERAL GUIDE FOR THE MINIMUM REQUIRED SIZE OF EACH PLANT. QUALITY & SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH A.N.S.I. Z80 "AMERICAN STANDARD FOR NURSERY STOCK" (CURRENT ADDITION) AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
13. THE QUANTITIES INDICATED ON THE MATERIAL SCHEDULE ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR, BUT SHOULD NOT BE ASSUMED TO ALWAYS BE CORRECT. IN THE EVENT OF A DISCREPANCY, THE PLANTING PLAN WILL TAKE PRECEDENCE OVER THE MATERIAL SCHEDULE. THE CONTRACTOR SHALL BE PERTAINING TO THOSE QUANTITIES AND ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS.
14. CONTRACTOR TO WARRANTY ALL MATERIAL FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE.

SOD NOTES
1. AREAS INDICATED FOR SOD SHALL BE TIFWAY 419 BERMUDA. MINIMUM AGE SHALL BE 18 MONTHS, WITH ROOT DEVELOPMENT THAT WILL SUPPORT ITS OWN WEIGHT WITHOUT TEARING WHEN SUSPENDED VERTICALLY BY HOLDING THE UPPER TWO CORNERS.
2. SUBMIT SOD CERTIFICATION FOR GRASS SPECIES AND LOCATION OF SOD SOURCE. INCLUDE CERTIFICATION THAT SOD IS FREE OF DISEASE, NEMATODES, UNDESIRABLE INSECTS, AND QUARANTINE RESTRICTIONS.
3. SOD SHALL BE DELIVERED ON PALLETS. SOD SHALL BE STORED AT A LOCATION THAT IS PROTECTED FROM DAMAGING WINDS.
4. 6-12-12 COMMERCIAL TYPE FERTILIZER, WITH 50 % OF THE ELEMENT DERIVED FROM ORGANIC SOURCES, SHALL BE APPLIED AT RATE RECOMMENDED BY THE MANUFACTURER. APPLY AFTER SMOOTH RAKING OF TOPSOIL AND NO MORE THAN 48 HOURS BEFORE LAYING SOD. MIX THOROUGHLY IN THE UPPER 2 INCHES OF TOPSOIL AND LIGHTLY WATER TO AID BREAKDOWN.
5. AREA TO RECEIVE SOD SHALL BE LIGHTLY MOISTENED IMMEDIATELY PRIOR TO LAYING SOD.
6. LAY SOD TIGHTLY WITH NO OPEN JOINTS VISIBLE AND NOT OVERLAPPING. STAGGER END JOINTS A MINIMUM OF 12 INCHES AND DO NOT STRETCH SOD PIECES.
7. ON SLOPES 6 INCHES PER FOOT AND STEEPER, LAY SOD PERPENDICULAR TO SLOPE AND SECURE EVERY ROW WITH WOODEN PEGS AT A MAXIMUM 2 FEET O.C. DRIVE PEGS FLUSH WITH SOD PORTION OF SOD.
8. PRIOR TO PLACING SOD ON SLOPES OF 8 INCHES PER FOOT AND STEEPER, PLACE JUTE EROSION CONTROL MESH OVER TOPSOIL. SECURELY ANCHOR IN PLACE WITH PEGS SUNK FIRMLY INTO THE GROUND. CONTRACTOR SHALL SUBMIT 12"x12" SAMPLES OF JUTE MESH FOR REVIEW TO LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
9. IMMEDIATELY AFTER INSTALLATION, WATER SODDED AREAS TO A DEPTH OF 4 INCHES.
10. AFTER SOD AND SOIL HAVE DRIED, ROLL SODDED AREAS TO ENSURE A GOOD BOND BETWEEN SOIL AND SOD. ROLLER SHALL NOT EXCEED 150 POUNDS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING (MOWING, TRIMMING, WATERING) THE SOD UNTIL THE INSTALLATION IS INSPECTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE.
12. THE CONTRACTOR SHALL REPLACE SOD AREAS THAT SHOW DETERIORATION FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE INSTALLATION. DETERIORATED MATERIAL SHALL BE REPLACED WITH SOD OF EQUAL QUALITY ORIGINALLY SPECIFIED.

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LAND PLANNERS·LANDSCAPE ARCHITECTS
N.C. CORP. LIC# C-270
RAGAN-SMITH-ASSOCIATES, INC.
315 WOODLAND ST. P.O. BOX 60070 NASHVILLE, TN. 37206
(615) 244-8591 FAX (615)244-6739 WWW.RAGANSMITH.COM

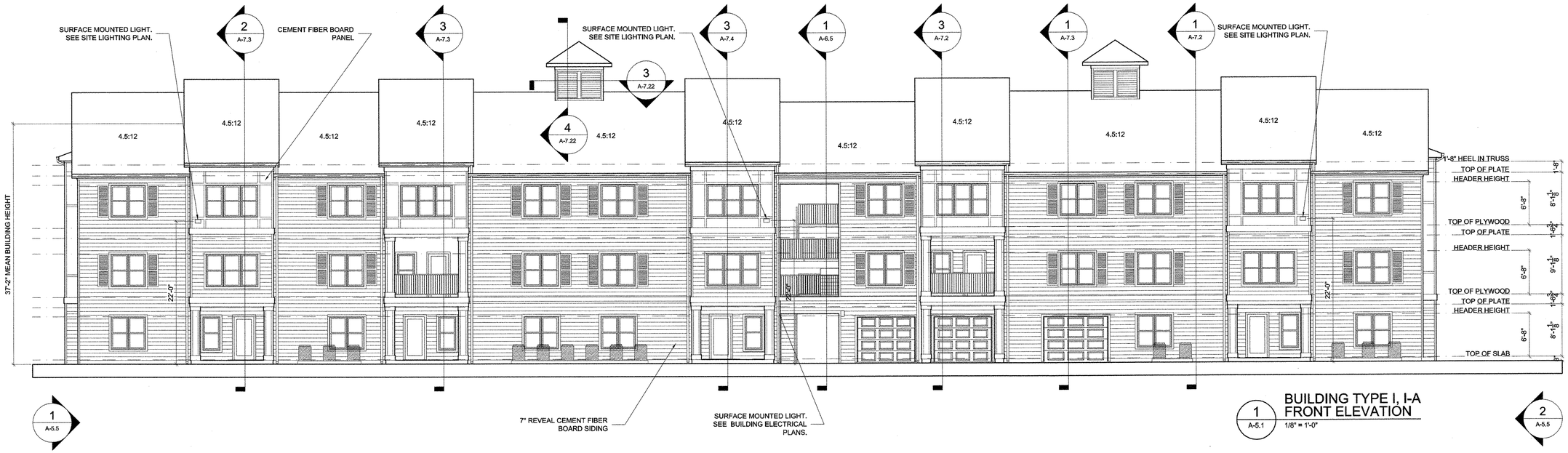
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT * BRETT ALAN SMITH *

Amberleigh Shores
City Of Wilmington, New Hanover County, North Carolina
Landscape Details & Notes

3 08/14/12-(DRS) PER LOBLOLLY CLARIFICATION.
2 08/07/12-(DRS) PER SITE / WETLAND REV.
REVISIONS

DESIGNED BY:	B. Smith
DRAWN BY:	D.Sieberg
APPROVED BY:	B. Smith
SCALE:	
DATE:	March 21, 2012
JOB NO. 10-059	WK. ORDER 9205

SHEET NO.
L1.8



1 A-5.1 **BUILDING TYPE I, I-A FRONT ELEVATION**
1/8" = 1'-0"

2 A-5.1 **BUILDING TYPE I, I-A REAR ELEVATION**
1/8" = 1'-0"

Approved Construction Plan	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TMA	12/12/12
Fire		12/10/12

STORMWATER MANAGEMENT PLAN
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CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
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James Wesseldyk
Architect

2094 La Dawn Lane
Atlanta, GA 30318
Ph. 404.642.8646

PROJECT: 0907
DRAWN BY: J.D.W. / A.S.W.
RELEASE DATES

REV.	DATE	NOTE
	01-25-12	TRC SUBMITTAL

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AMBERLEIGH SHORES
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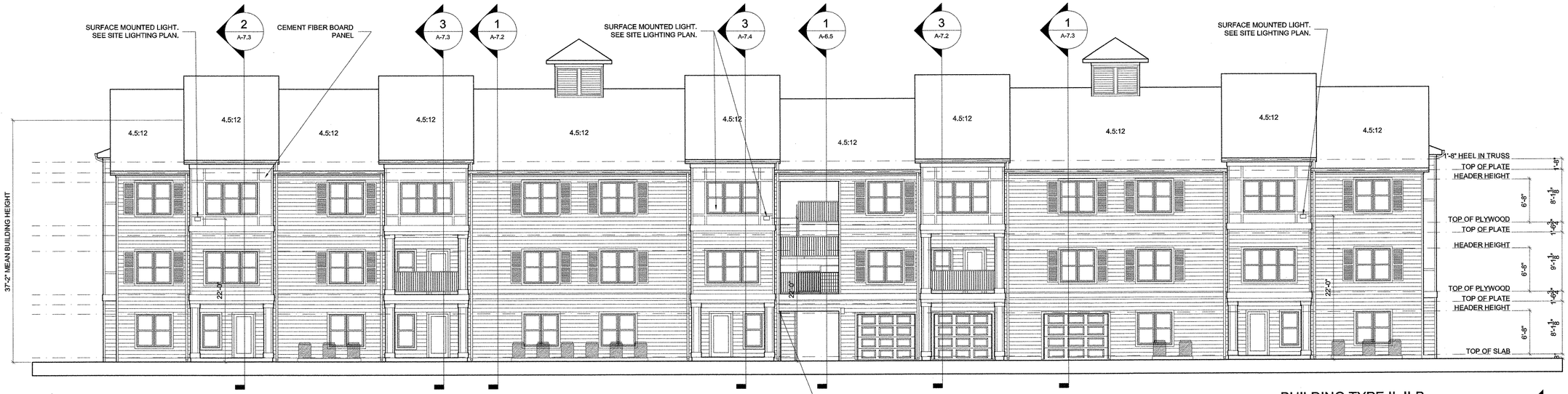
BUILDING TYPE I, I-A ELEVATIONS

A-5.1



*SEE A-5.1 FOR TYPICAL NOTES AND SECTIONS

1 A-5.2 BUILDING TYPE II, II-B FRONT ELEVATION
1/8" = 1'-0"

*SEE A-5.1 FOR TYPICAL NOTES AND SECTIONS

2 A-5.2 BUILDING TYPE II, II-B REAR ELEVATION
1/8" = 1'-0"

Approved Construction Plan	Name	Date
Planning	[signature]	12/12/12
Public Utilities		
Traffic	[signature]	12/12/12
Fire	[signature]	12/13/12

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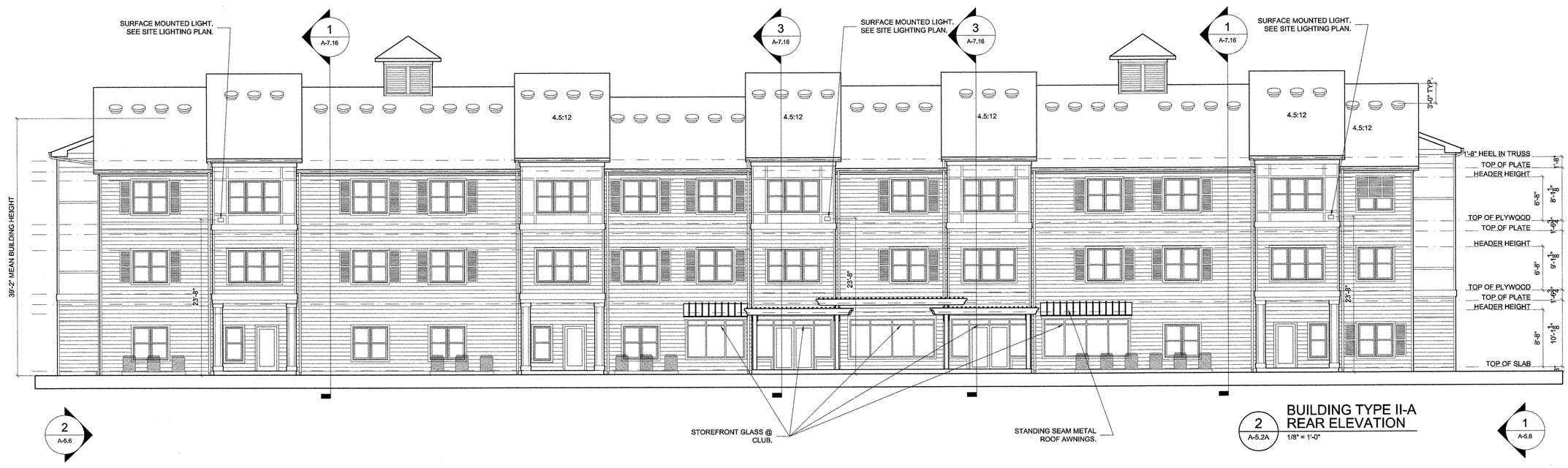
BUILDING TYPE II, II-B ELEVATIONS

A-5.2

1 A-5.2A **BUILDING TYPE II-A FRONT ELEVATION** 1/8" = 1'-0"



2 A-5.2A **BUILDING TYPE II-A REAR ELEVATION** 1/8" = 1'-0"

Approved Construction Plan	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

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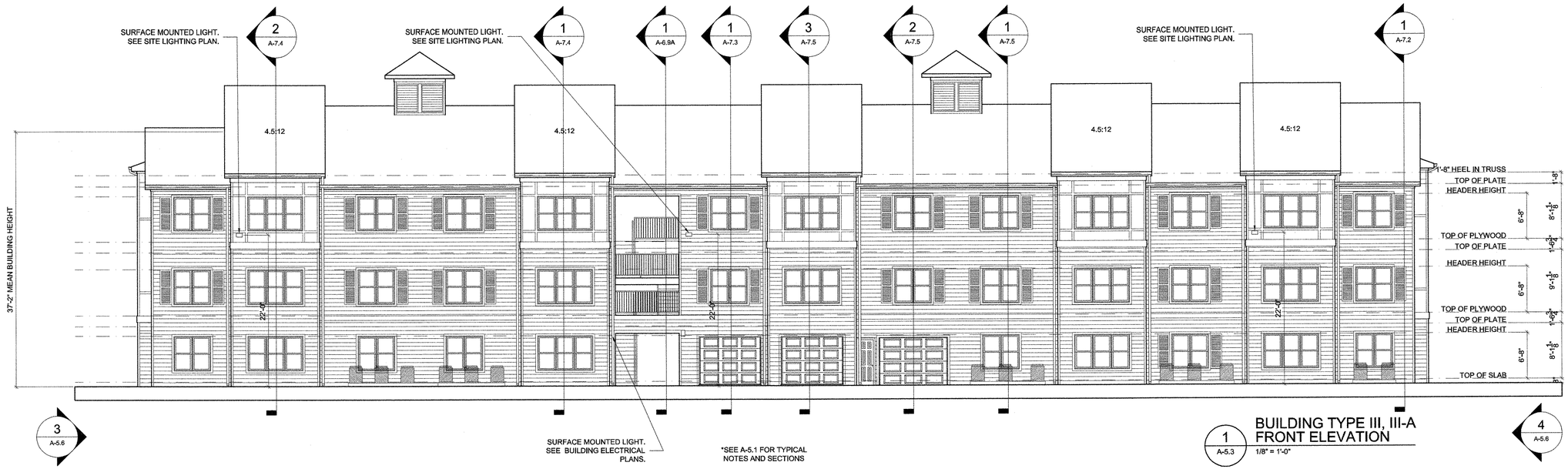
BUILDING TYPE II-A ELEVATIONS

A-5.2A



1 A-5.3 **BUILDING TYPE III, III-A FRONT ELEVATION**
1/8" = 1'-0"

*SEE A-5.1 FOR TYPICAL NOTES AND SECTIONS

2 A-5.3 **BUILDING TYPE III, III-A FRONT ELEVATION**
1/8" = 1'-0"

Approved Construction Plan		
	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/10/12

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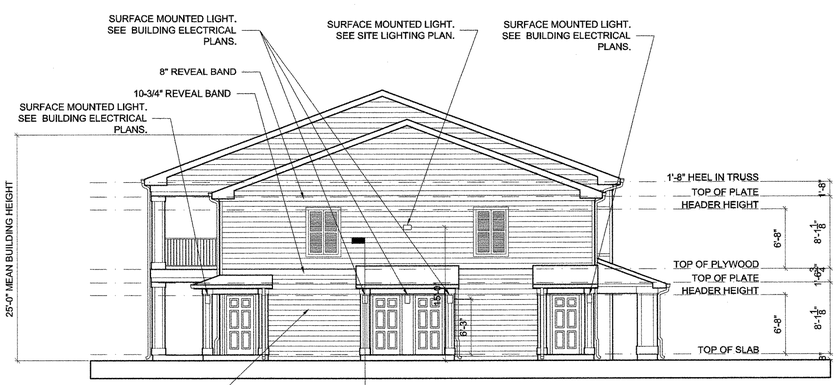
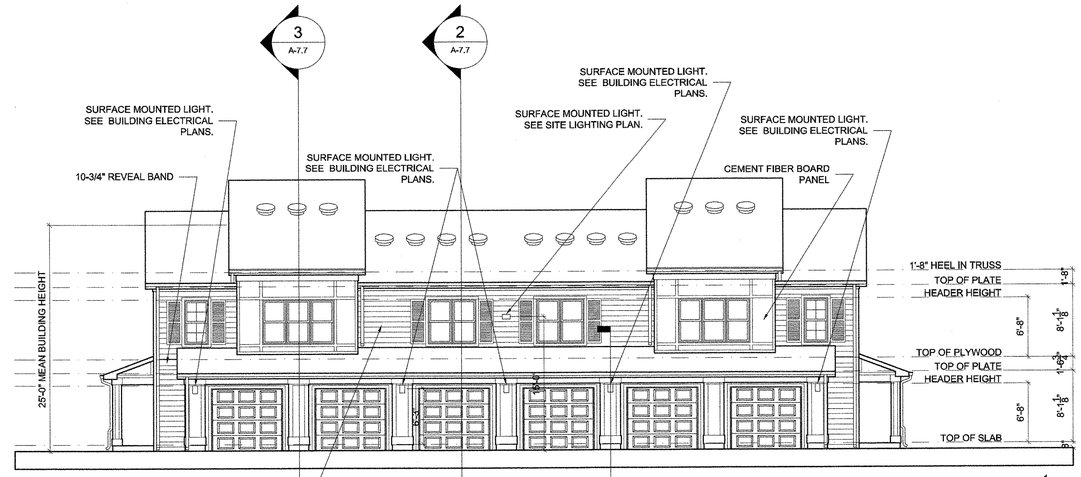
BUILDING TYPE III, III-A ELEVATIONS

A-5.3



1 A-7.21

3 A-5.4 BUILDING TYPE IV LEFT ELEVATION 1/8" = 1'-0"

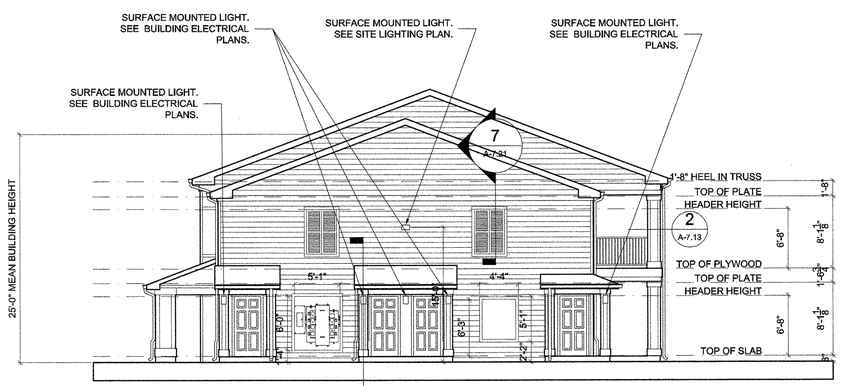


3 A-5.4

2 A-7.21

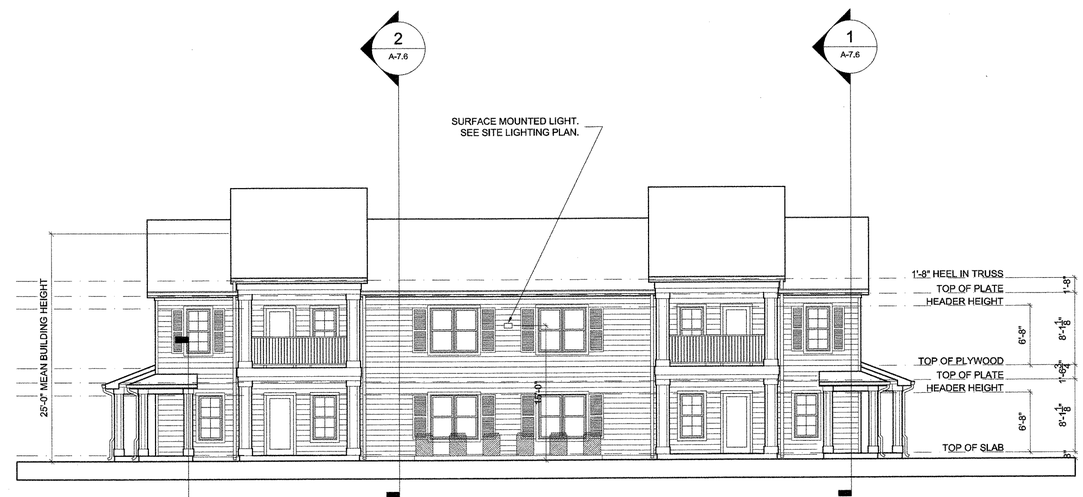
1 A-5.4 BUILDING TYPE IV FRONT ELEVATION 1/8" = 1'-0"

4 A-5.4



1 A-7.21

4 A-5.4 BUILDING TYPE IV RIGHT ELEVATION 1/8" = 1'-0"



4 A-5.4

1 A-7.21

2 A-5.4 BUILDING TYPE IV REAR ELEVATION 1/8" = 1'-0"

3 A-5.4

Approved Construction Plan		
	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TSM	12/12/12
Fire		01/15/13

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Architect

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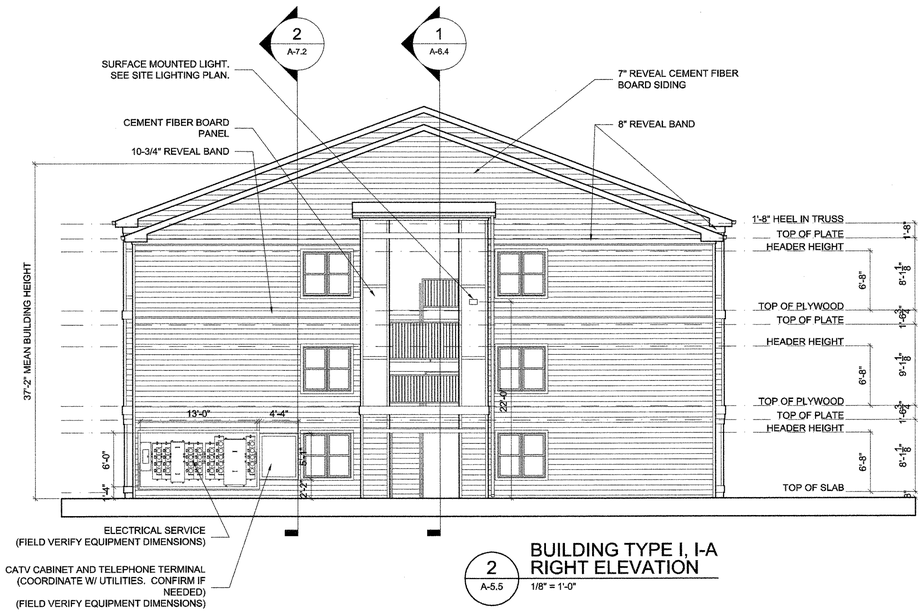
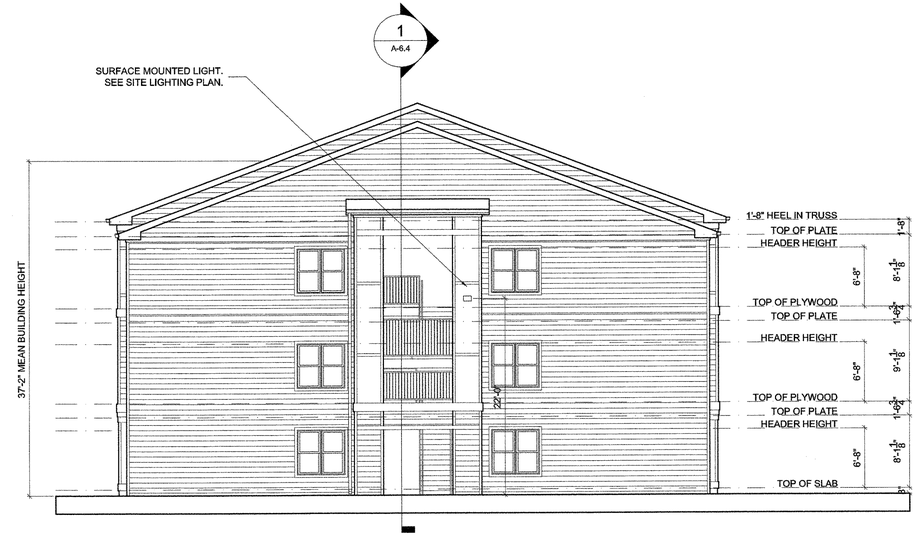
BUILDING TYPE IV ELEVATIONS

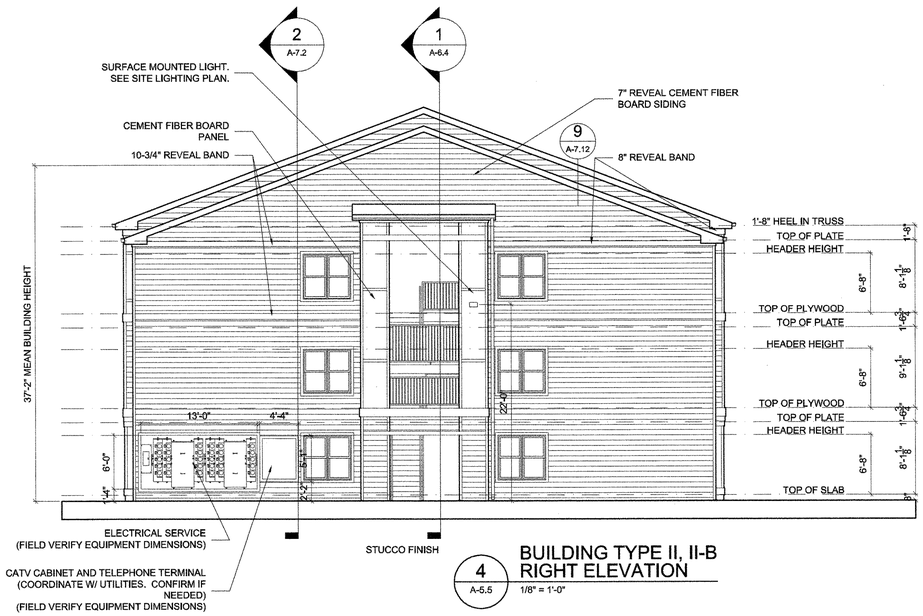
A-5.4



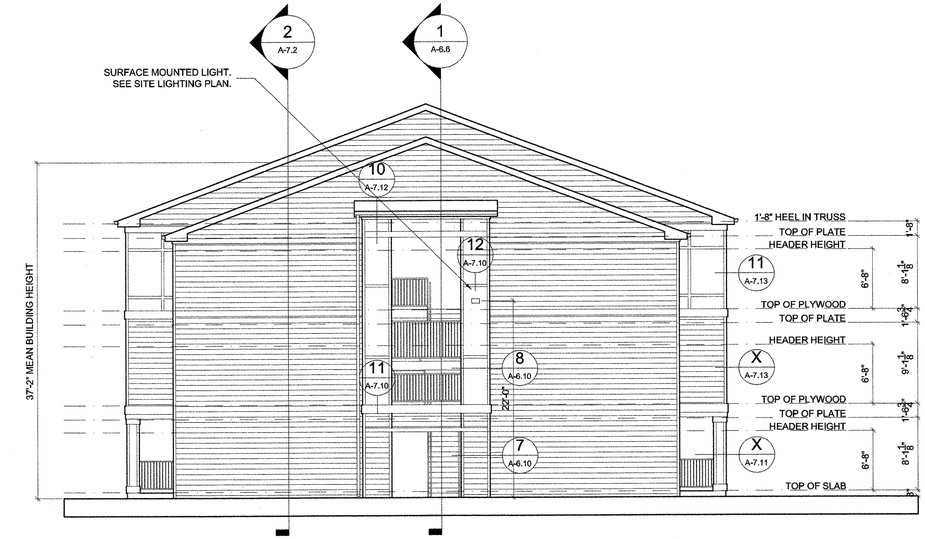
2 A-5.5 BUILDING TYPE I, I-A RIGHT ELEVATION
1/8" = 1'-0"



1 A-5.5 BUILDING TYPE I, I-A LEFT ELEVATION
1/8" = 1'-0"



4 A-5.5 BUILDING TYPE II, II-B RIGHT ELEVATION
1/8" = 1'-0"



3 A-5.5 BUILDING TYPE II, II-B LEFT ELEVATION
1/8" = 1'-0"

Approved Construction Plan		
	Name	Date
Planning		12/12/12
Public Utilities		
Traffic		12/12/12
Fire		12/13/12

STORMWATER MANAGEMENT PLAN
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Architect

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RELEASE DATES

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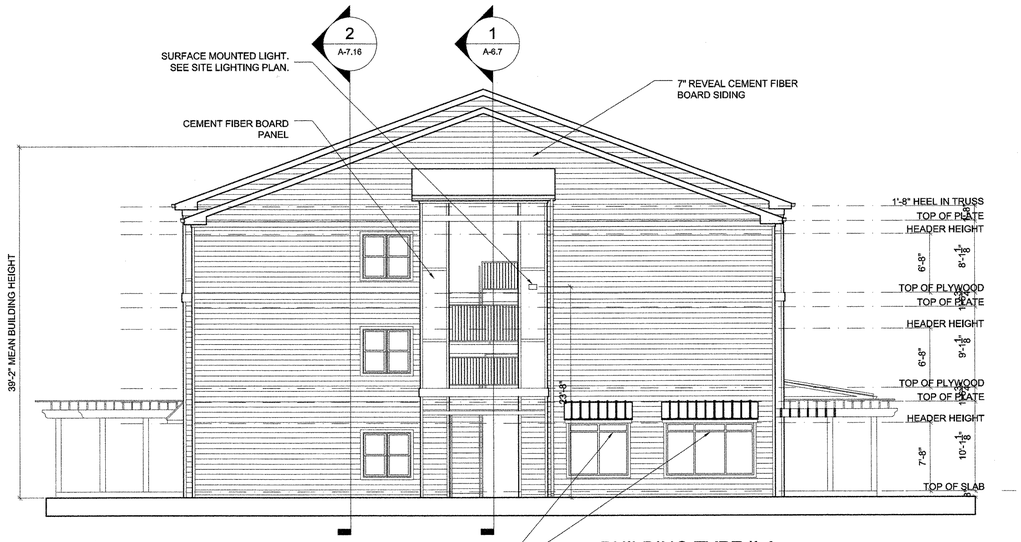
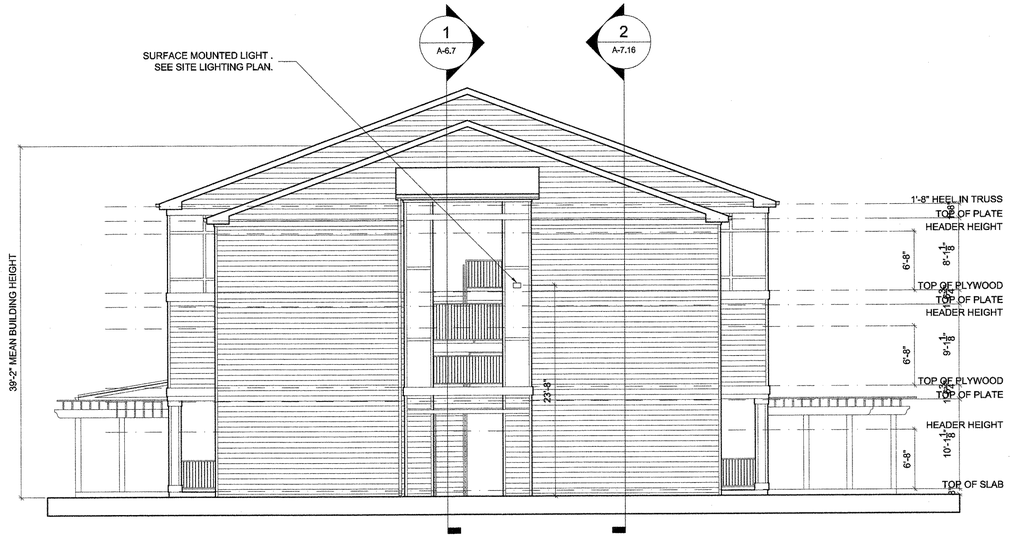
BUILDING TYPE I, I-A, II, II-B END ELEVATIONS

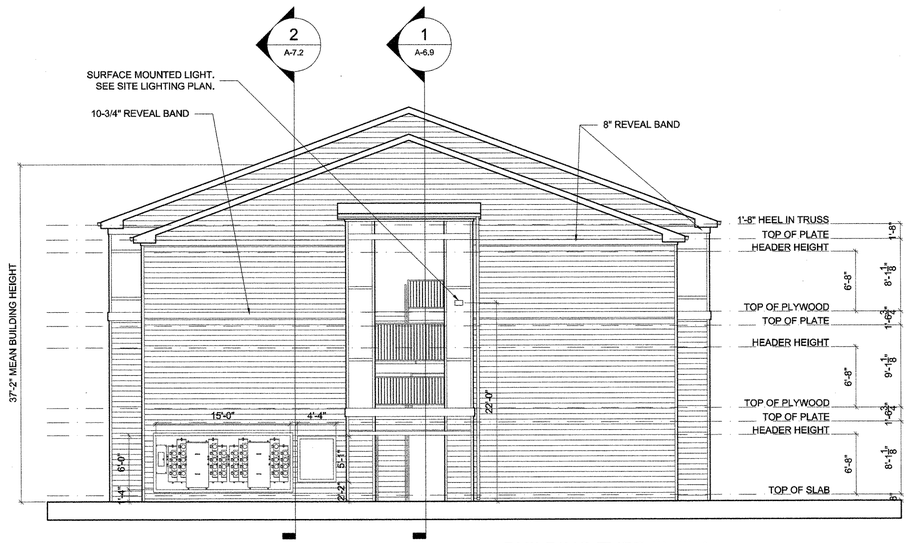
A-5.5



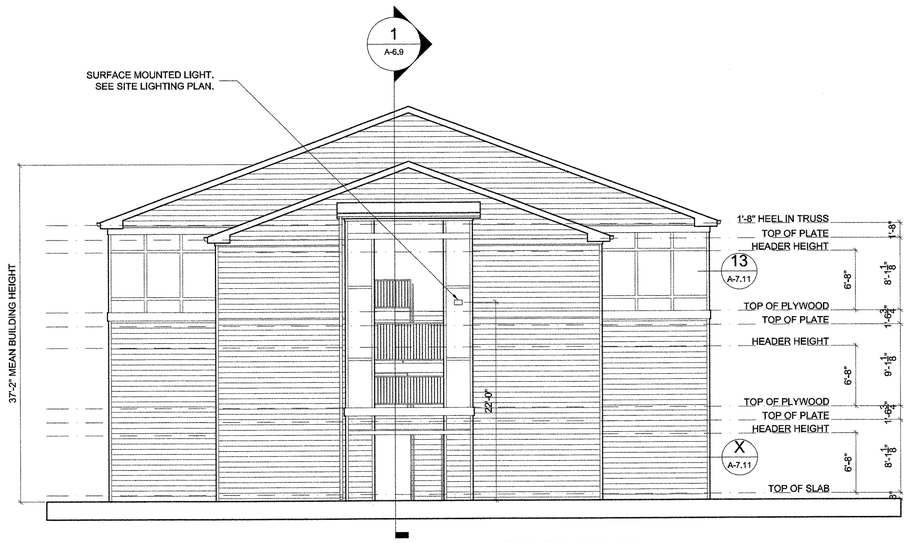
2 A-5.6 BUILDING TYPE II-A RIGHT ELEVATION
1/8" = 1'-0"



3 A-5.6 BUILDING TYPE II-A LEFT ELEVATION
1/8" = 1'-0"



4 A-5.6 BUILDING TYPE III, III-A RIGHT ELEVATION
1/8" = 1'-0"



3 A-5.6 BUILDING TYPE III, III-A LEFT ELEVATION
1/8" = 1'-0"

Approved Construction Plan		
	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TSM	12/12/12
Fire		12/13/12

STORMWATER MANAGEMENT PLAN
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Architect

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RELEASE DATES

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REGISTERED ARCHITECT
11647
NORTH CAROLINA
ATLANTA, GA

AMBERLEIGH SHORES
WILMINGTON, NC

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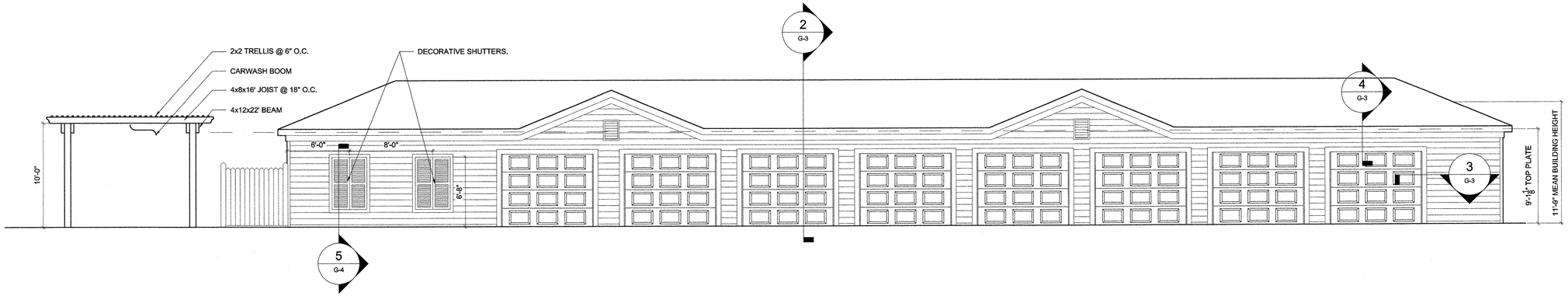
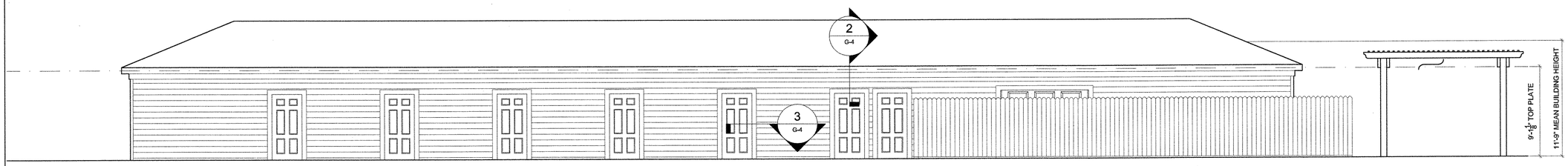
BUILDING TYPE II-A, III, III-A END ELEVATIONS

A-5.6



1 G-2.1 EIGHT BAY GARAGE WITH MAINTENANCE FRONT ELEVATION - A
3/16" = 1'-0"



2 G-2.1 EIGHT BAY GARAGE WITH MAINTENANCE REAR ELEVATION - A
3/16" = 1'-0"

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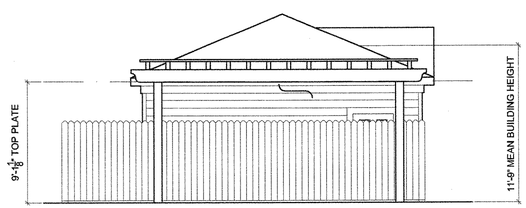
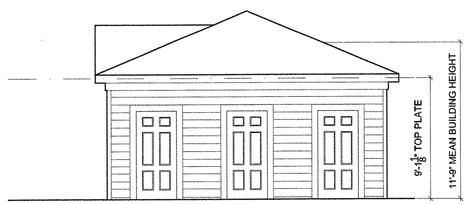


3 G-2.1 EIGHT BAY GARAGE WITH MAINTENANCE SIDE ELEVATION - A
3/16" = 1'-0"



4 G-2.1 EIGHT BAY GARAGE WITH MAINTENANCE SIDE ELEVATION - A
3/16" = 1'-0"

Approved Construction Plan	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	TSM	12/12/12
Fire		12/12/12

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RELEASE DATES

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AMBERLEIGH SHORES
WILMINGTON, NC

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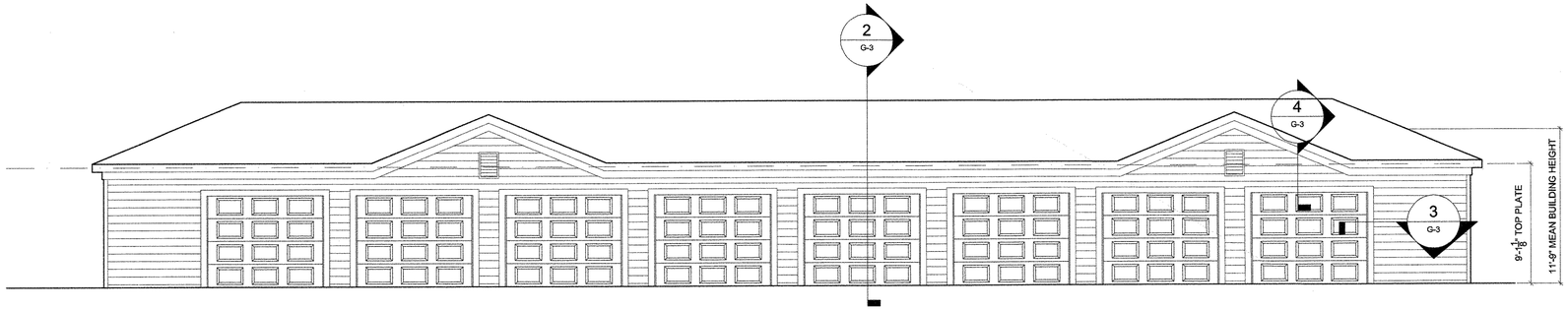
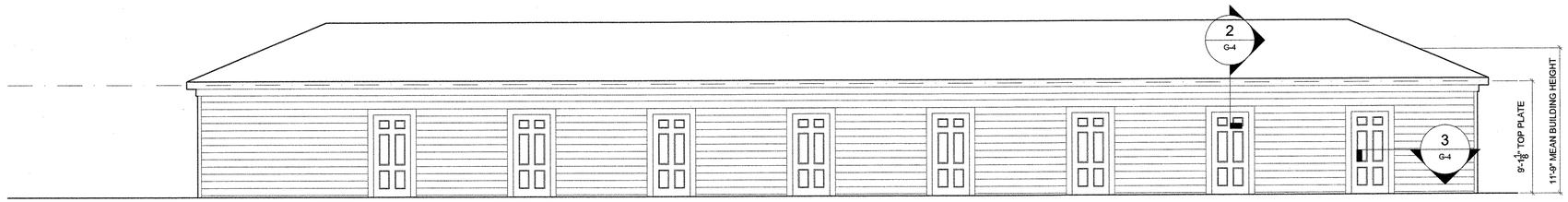
8 BAY DETACHED GARAGE ELEVATIONS

G-2.1



1 G-2.2 EIGHT BAY GARAGE FRONT ELEVATION - B
3/16" = 1'-0"



2 G-2.2 EIGHT BAY GARAGE REAR ELEVATION - B
3/16" = 1'-0"

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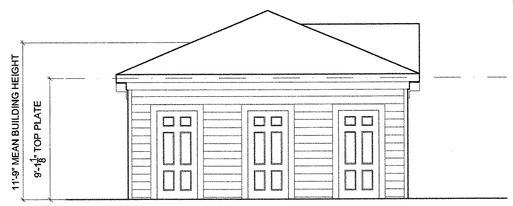
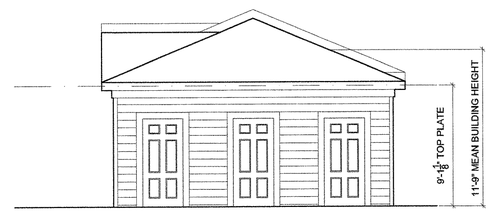


3 G-2.2 EIGHT BAY GARAGE SIDE ELEVATION - B
3/16" = 1'-0"



4 G-2.2 EIGHT BAY GARAGE SIDE ELEVATION - B
3/16" = 1'-0"

Approved Construction Plan

	Name	Date
Planning		12/11/12
Public Utilities		
Traffic	BM	12/12/12
Fire		12/12/12

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AMBERLEIGH SHORES
WILMINGTON, NC

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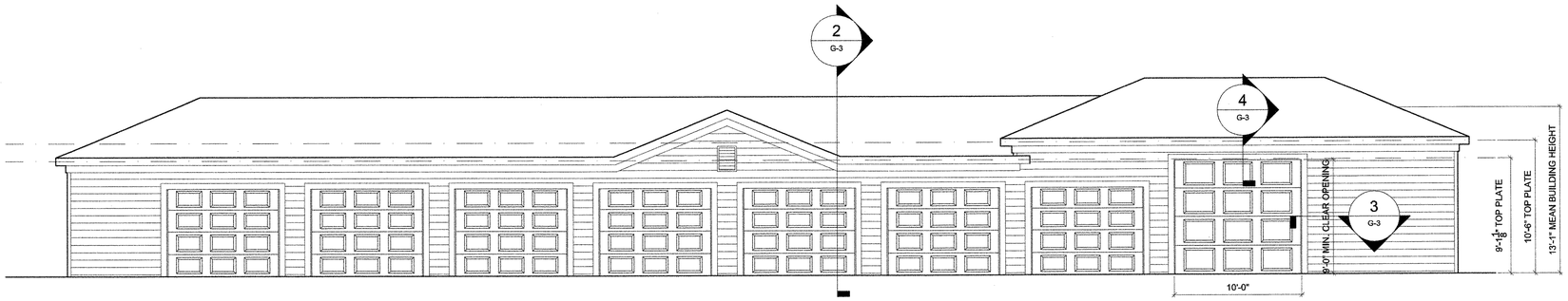
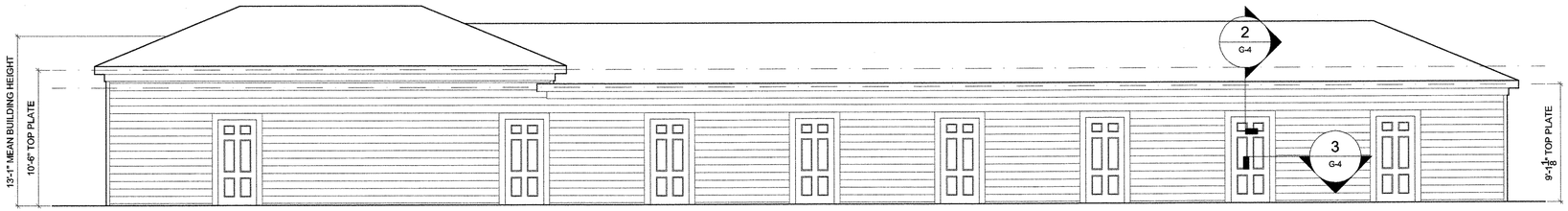
8 BAY DETACHED GARAGE ELEVATIONS

G-2.2



1 G-2.3 EIGHT BAY ACCESSIBLE GARAGE FRONT ELEVATION - C
3/16" = 1'-0"



2 G-2.3 EIGHT BAY ACCESSIBLE GARAGE REAR ELEVATION - C
3/16" = 1'-0"

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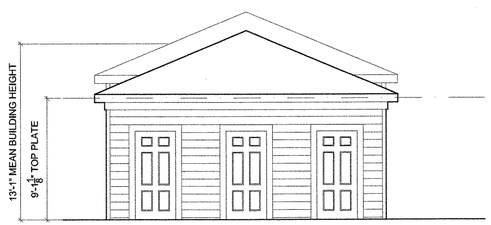
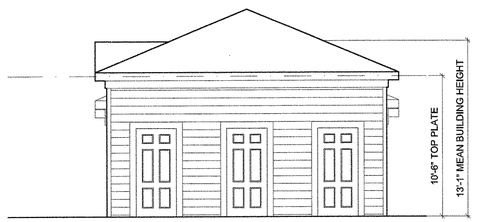


3 G-2.3 EIGHT BAY ACCESSIBLE GARAGE SIDE ELEVATION - C
3/16" = 1'-0"



4 G-2.3 EIGHT BAY ACCESSIBLE GARAGE SIDE ELEVATION - C
3/16" = 1'-0"

Approved Construction Plan	Name	Date
Planning		12/12/12
Public Utilities		
Traffic	FAM	12/12/12
Fire		12/13/12

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED_____

James Wesseldyk
Architect

2094 La Dawn Lane
Atlanta, GA 30318
Ph. 404.642.8646

PROJECT: 0907
DRAWN BY: J.D.W. / A.S.W.
RELEASE DATES

REV.	DATE	NOTE
	01-25-12	TRC SUBMITTAL

JAMES D. WESSELDYK
REGISTERED ARCHITECT
11647
NORTH CAROLINA
ATLANTA, GA

AMBERLEIGH SHORES
WILMINGTON, NC

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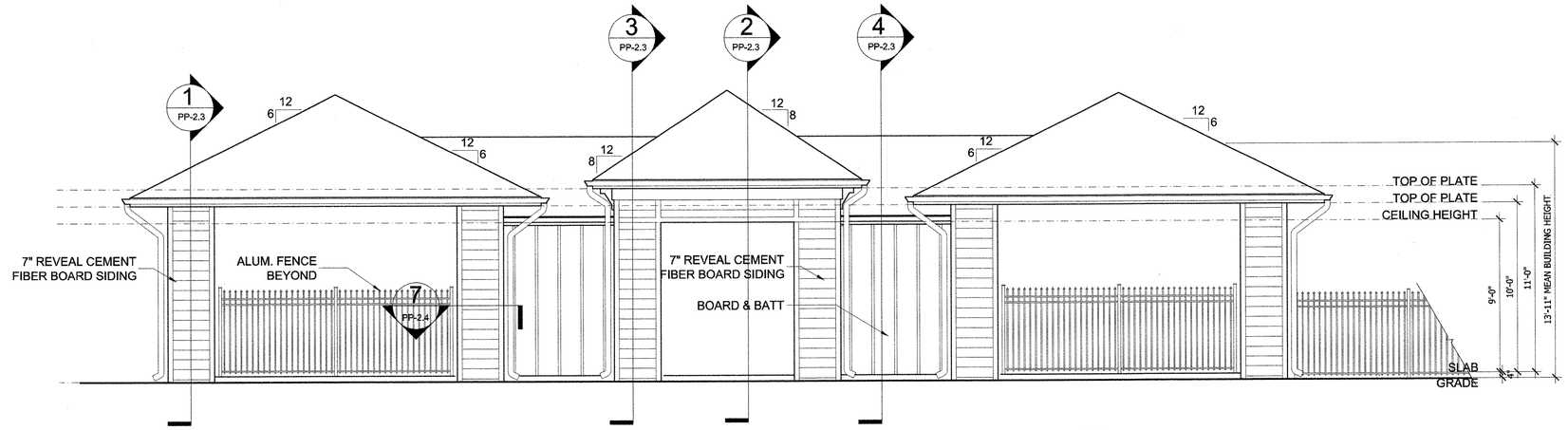
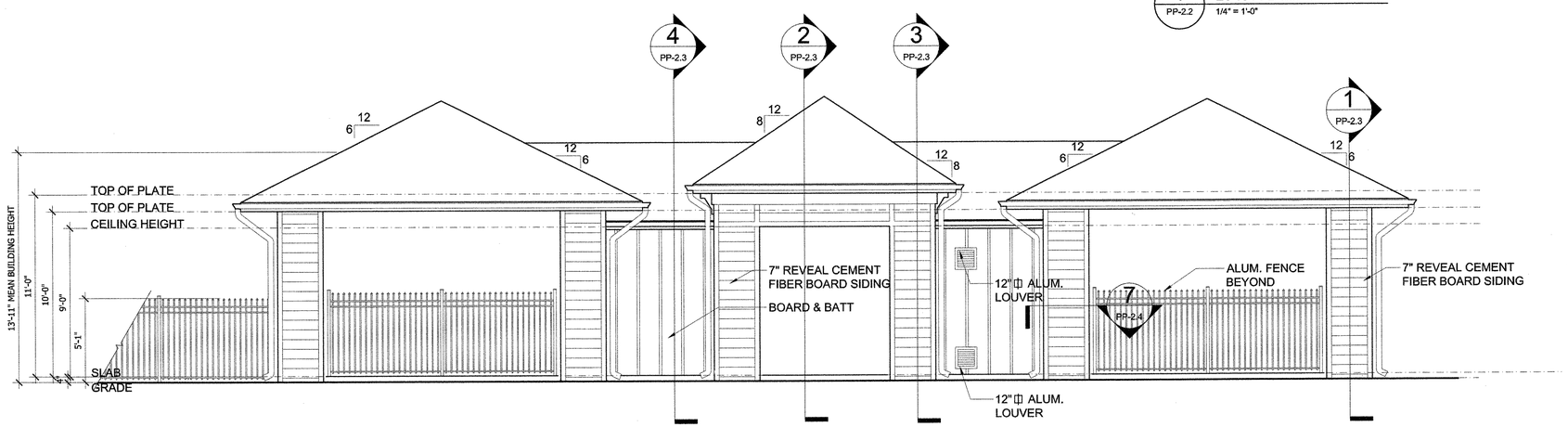
8' BAY ACCESSIBLE DETACHED GARAGE ELEVATIONS

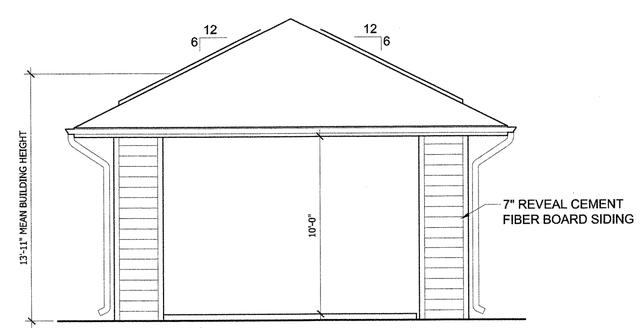
G-2.3



1 PP-2.2 **BACK ELEVATION** 1/4" = 1'-0"



2 PP-2.2 **FRONT ELEVATION** 1/4" = 1'-0"



3 PP-2.2 **SIDE ELEVATIONS** 1/4" = 1'-0"

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Public Utilities		
Traffic		12/12/12
Fire		12/13/12

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JAMES D. WESSELDYK REGISTERED ARCHITECT 11647 NORTH CAROLINA ATLANTA, GA

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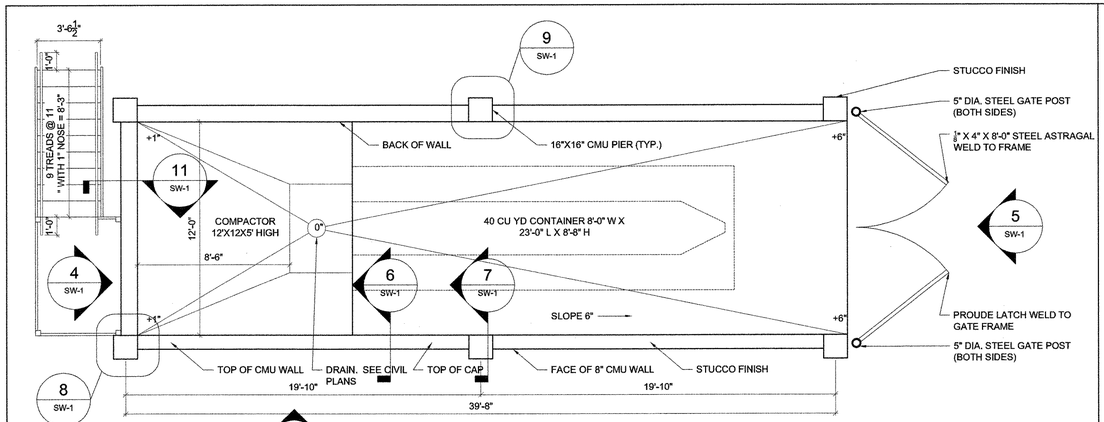
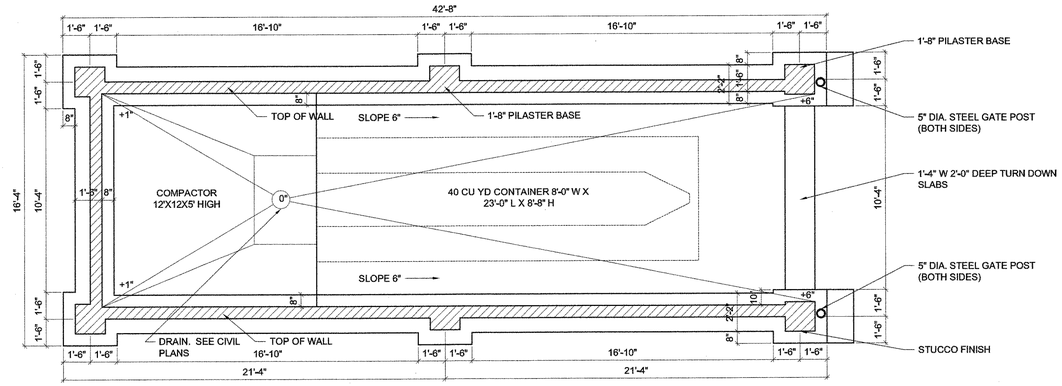
POOL PAVILION ELEVATIONS

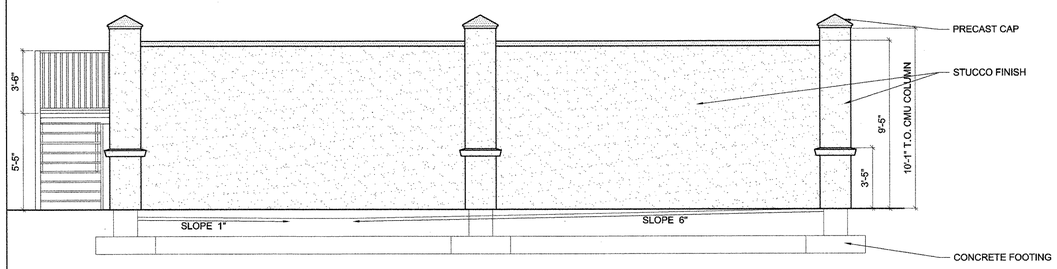
PP-2.2



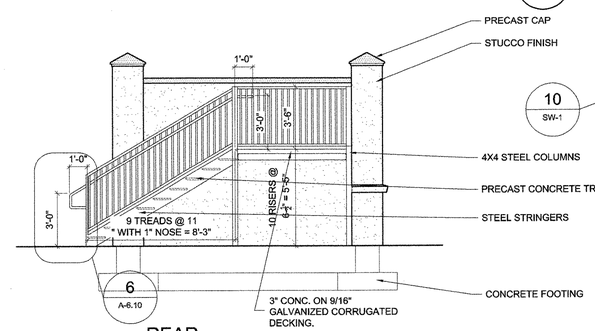
1 SW-1 COMPACTOR PLAN
1/4" = 1'-0"



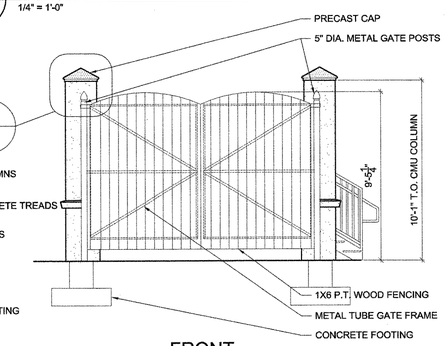
2 SW-1 FOUNDATION PLAN
1/4" = 1'-0"



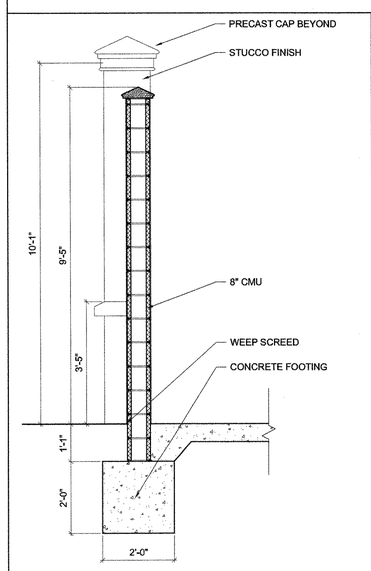
3 SW-1 SIDE COMPACTOR ELEVATION
1/4" = 1'-0"



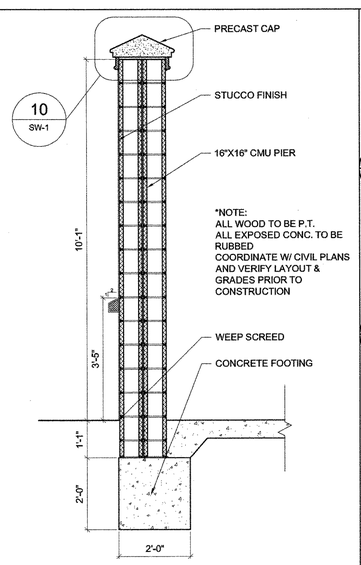
4 SW-1 REAR COMPACTOR ELEVATION
1/4" = 1'-0"



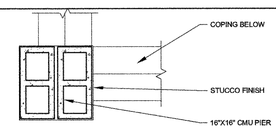
5 SW-1 FRONT COMPACTOR ELEVATION
1/4" = 1'-0"



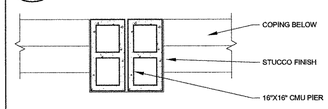
6 SW-1 SECTION @ WALL
1/2" = 1'-0"



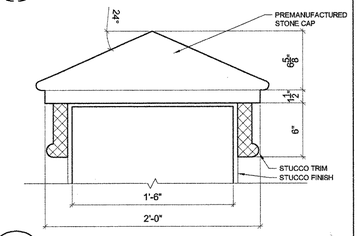
7 SW-1 SECTION @ COLUMN
1/2" = 1'-0"



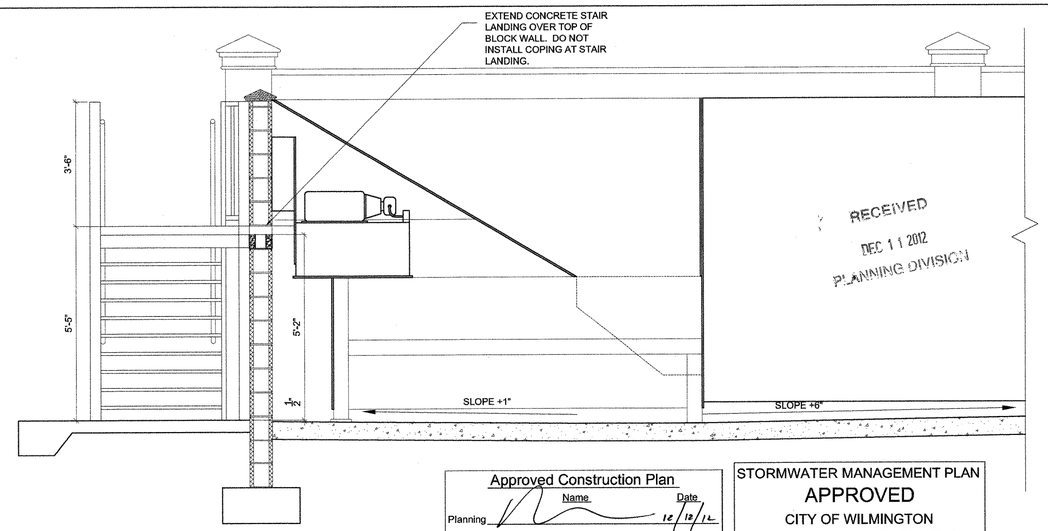
8 SW-1 DETAIL @ CORNER
3/4" = 1'-0"



9 SW-1 DETAIL @ COLUMN
3/4" = 1'-0"



10 SW-1 STONE COLUMN CAP
1-1/2" = 1'-0"



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Approved Construction Plan

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Public Utilities		
Traffic	TGH	12/12/12
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11 SW-1 COMPACTOR REAR WALL SECTION
1/2" = 1'-0"

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TRASH COMPACTOR PLANS

SW-1