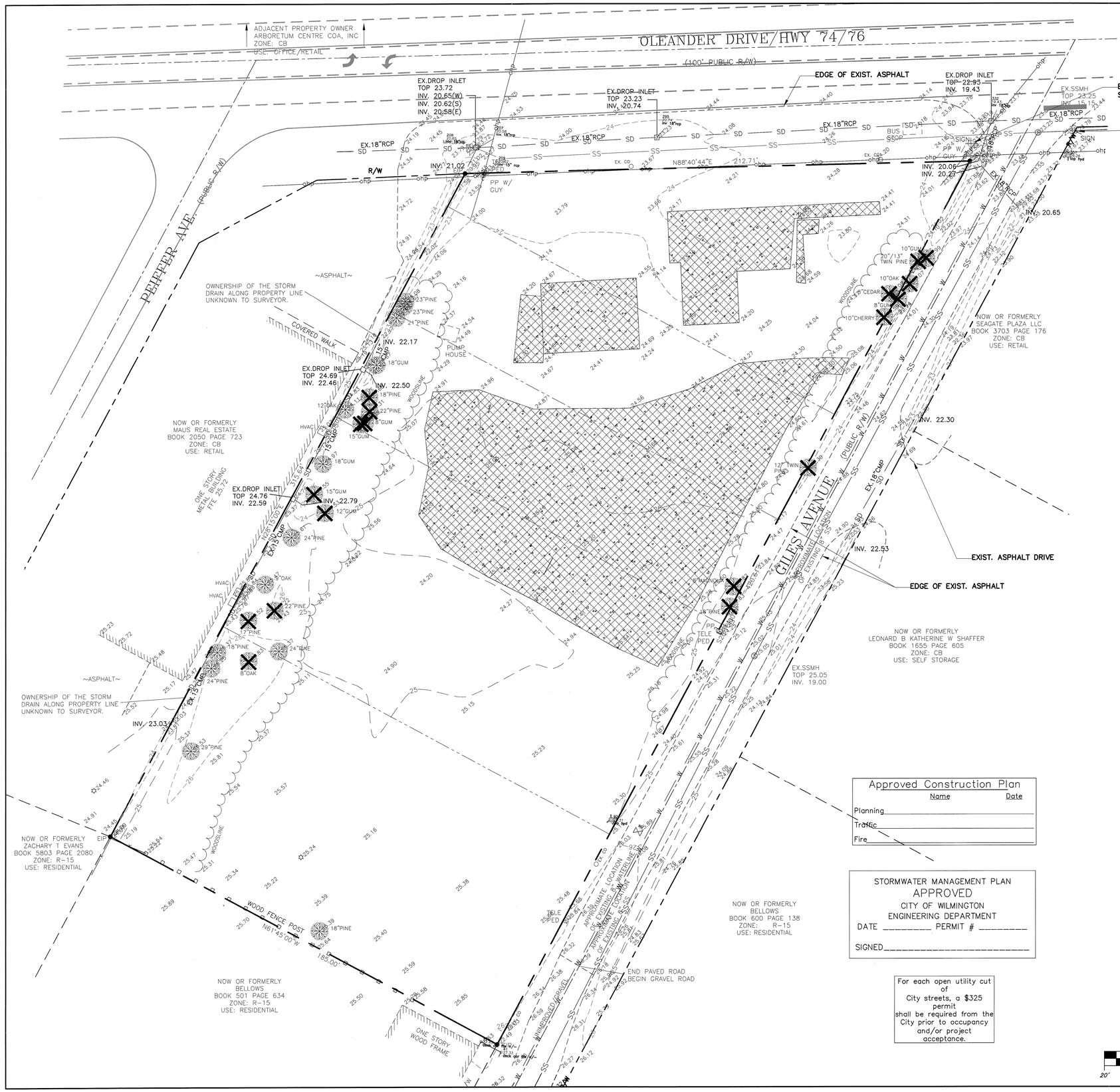

Approved Construction Plan	
	Name / Date
Planning	
Traffic	
Fire	

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

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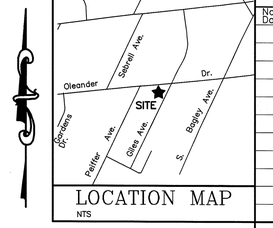
SITE PLAN

BAR SCALE 1"=20'

20' 10' 0' 20' 40' 60'



LOCATION MAP
NTS

SITE INVENTORY NOTES:

1. PREPARER OF THE PLAN: TRIPP ENGINEERING, P.C.
2. APPLICANT NAME: SMITH ANDERSON LAND HOLDINGS, LLC
3. SITE ADDRESS OF THE DEVELOPMENT: 202 GILES AVENUE
4. PROPERTY OWNER: SAFFO NICHOLAS A STAMATIA ETAL
5. DEVELOPER: SMITH ANDERSON LAND HOLDINGS, LLC
6. PROPERTY BOUNDARY: SEE PLAN
   TAX PARCEL INFORMATION: R06207-013-013-000
   R06207-013-012-000
   R06207-013-011-000
   R06207-013-010-000
   R06207-013-009-000
7. PROPERTY ZONING: CB-COMMUNITY BUSINESS
8. ADJACENT PROPERTY OWNER INFORMATION: SEE PLAN
9. VICINITY MAP: SEE PLAN
10. TOPOGRAPHY: SEE PLAN
11. 100-YEAR FLOOD BOUNDARY: N/A
12. EXISTING DITCHES, CREEKS AND STREAMS: SEE PLAN
13. SOIL: LE; LEON SAND
14. CAMA AEC: N/A
15. CAMA LAND CLASSIFICATION: WATERSHED RESOURCE PROTECTION
16. CONSERVATION RESOURCES: NONE
    ASSOCIATED SETBACKS: N/A
17. HISTORIC OR ARCHAEOLOGICAL SITE: N/A
18. CEMETERIES, BURIAL SITES/GROUNDS: N/A
19. FORESTED AREAS, HABITAT AND DOMINANT SPECIES: N/A
20. WETLANDS: NONE
21. PROTECTED SPECIES OR HABITAT: N/A
22. EXISTING OR PROPOED THOROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS AND TRANSIT FACILITIES: SEE SITE PLAN.

LEGEND

- PROPERTY BOUNDARY
- SITE DEMO
- 50.45 EXISTING ELEVATION
- TREE TO BE REMOVED

REVISIONS

No./ Date	Description	By

EXISTING CONDITIONS, SITE INVENTORY AND DEMOLITION PLAN

PAWS AND CLAWS

WILMINGTON, NORTH CAROLINA

TRIPP ENGINEERING, P.C.
419 Chestnut Street
Wilmington, North Carolina 28401
Phone 910-763-5100
Fax 910-763-5631

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NORTH CAROLINA PROFESSIONAL SEAL 17374 ENGINEER PHILLIP GREGORY TRIPP

DATE 04-28-16
DESIGN PGT
DRAWN EJW

C1

SHEET 1 OF 5

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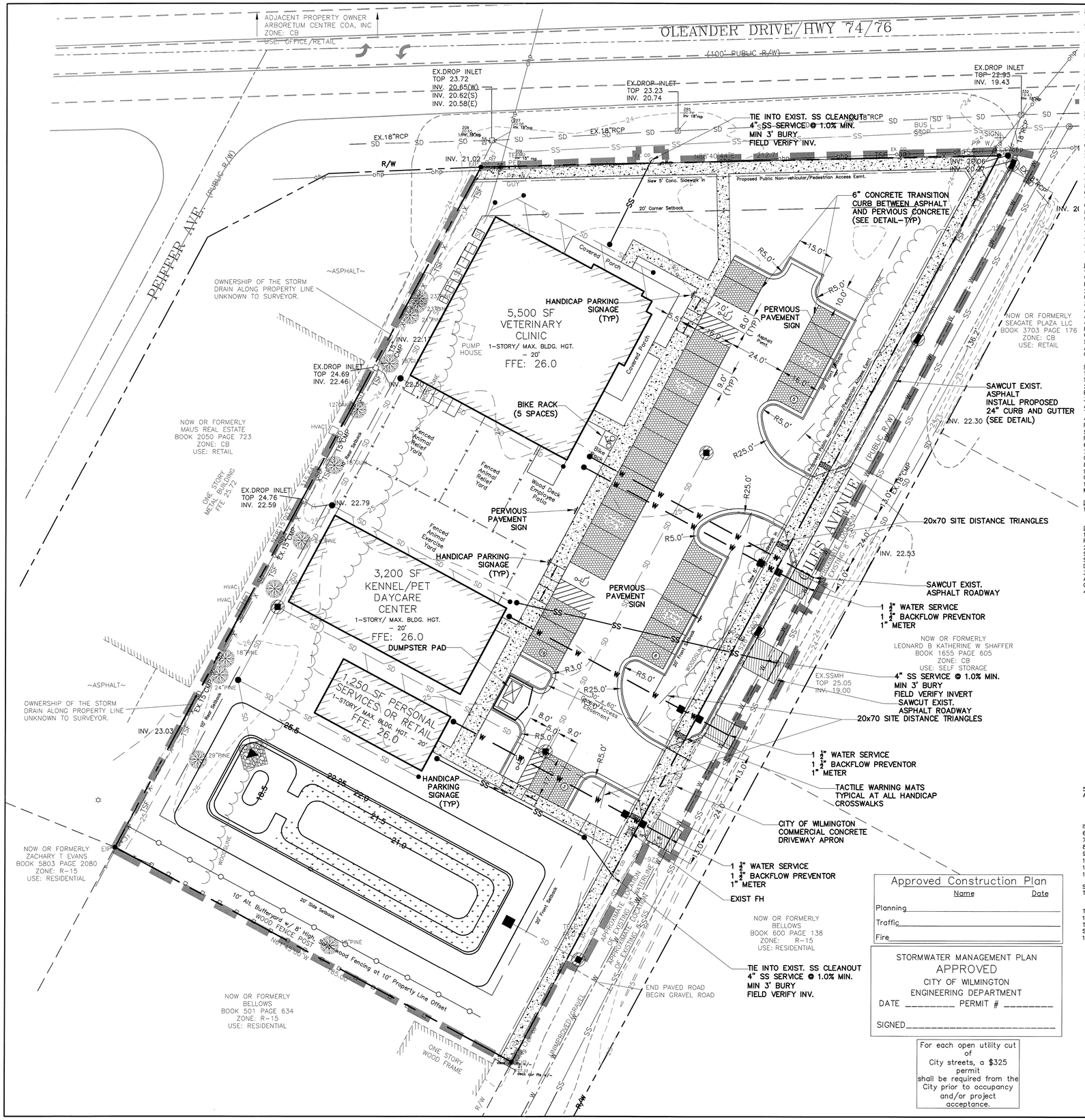

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C. BUSINESS SERVICES
D. CONTRACTOR'S OFFICE
E. GUN SALES, INCLUDING REPAIR
F. OFFICES, PROFESSIONAL
G. OFFICES, MEDICAL
H. PERSONAL SERVICES
I. RETAIL ESTABLISHMENTS
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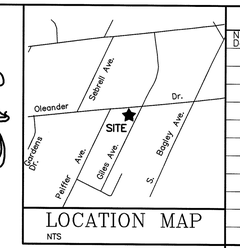
2. ARTS AND CRAFTS SHOPS
3. BICYCLE SHOPS
4. BOAT STORES
5. CANDY STORES
6. CARPET AND RUG DEALERS
7. HARDWARE STORES
8. GIFT, NOVELTY AND SOUVENIR SHOPS
9. DAIRY STORES
10. CLOTHING SHOPS
11. HOBBY, TOY AND GAME SHOPS
12. JEWELRY STORES
13. LIMITED OPTICAL STORES
14. PAINT, GLASS AND WALLPAPER STORES
15. PICTURE FRAME SHOPS
16. RADIO AND TELEVISION STORES
17. SHOE REPAIR SHOPS
18. SHOE STORES
19. SPECIALTY FOOD SHOPS
20. SPORTING GOODS SHOPS
J. KENNELS, COMMERCIAL BOARDERS AND BREEDERS
K. SPAS AND HEALTH CLUBS
5) AS A CONDITION OF THE PROPOSED EXCEPTIONAL DESIGN COMPONENTS AS PROPOSED BY THE APPLICANT, THE APPLICANT SHALL USE A MINIMUM 50% XERIC LANDSCAPING.
A. PLANT SPECIES SPECIFIED FOR XERISCAPING AREAS ARE TO BE DROUGHT TOLERANT.
B. NO PERMANENT IRRIGATION IS PERMITTED IN XERISCAPED AREAS.
C. ALL TREES AND SHRUBS SHALL BE SELECTED FOR COMPATIBILITY WITH THE AREA'S CLIMATE AND SOIL TYPES.
D. AREAS OF XERISCAPING SHALL BE MAINTAINED BY THE OWNER IN PERPETUITY UNTIL AS SUCH TIME THE PROPERTY IS EVER REZONED.
6) THE SITE SHALL MEET THE DESIGN CRITERIA FOR EXCEPTIONALLY DESIGN PROJECTS IN ACCORDANCE WITH THE LDC.
7) THE PARKING AREA SHALL BE CONSTRUCTED WITH PERVIOUS MATERIAL AS SOILS ALLOW.
8) A SIDEWALK EASEMENT WILL BE REQUIRED IF SIDEWALK IS LOCATED ON SITE.
9) ALL REQUIREMENTS OF THE LAND DEVELOPMENT CODE SHALL BE MET.
10) ALL LOCAL, STATE AND FEDERAL REQUIREMENTS SHALL BE MET.
11) ALL TRC REQUIREMENTS AND CONDITIONS SHALL BE MET.
12) CONDITIONS RETAINED FROM 2005 CONDITIONAL DISTRICT (CD-1-705) AS FOLLOWS:
a. NO AUXILIARY SIGNS OR FREESTANDING POLE SIGN SHALL BE PERMITTED ON THIS SITE. ALL FREESTANDING SIGNS SHALL BE MONUMENT SIGNS THAT COMPLY WITH THE CITY CODE. THE SIGN SHALL BE LANDSCAPED AROUND THE BASE AND SHALL NOT EXCEED 6 FEET IN HEIGHT OR 35 SF IN AREA.
b. DRIVEWAY ACCESS TO OLEANDER DRIVE SHALL BE PROHIBITED.
c. GILES AVENUE IS TO BE IMPROVED TO COMMERCIAL STREET STANDARDS, INCLUDING SIDEWALK INSTALLATION ON THE PROPOSED DEVELOPMETN SIDE OF THE CENTERLINE.
13) A PAYMENT-IN-LIEU SHALL BE PROVIDED FOR THE PORTION OF SIDEWALK LOCATED ALONG GILES AVENUE BETWEEN THE SOUTHERN PROPERTY LINE AND THE LOCATION AT WHICH THE SIDEWALK CONNECTS TO THE SITE'S INTERNAL SIDEWALK NETWORK, SOUTH OF THE SECOND DRIVEWAY.
14) ANIMALS MUST BE SUPERVISED AT ALL TIMES IN OUTDOOR AREAS.



LOCATION MAP
NTS

SITE DATA:

PROPERTY OWNER	SAFFO NICHOLAS A STAMATIA ETAL
PROJECT ADDRESS	202 GILES AVE
PIN NUMBER	R06207-013-013-000 R06207-013-012-000 R06207-013-011-000 R06207-013-010-000 R06207-013-009-000
AREA NOT IN A FEMA 100-YEAR FLOOD ZONE.	
ZONING DISTRICT	CB-COMMUNITY BUSINESS
DISTURBED AREA	1.7 Ac.
SETBACKS REQUIRED	FRONT: 20' REAR: 10' SIDE: 0' CORNER LOT SIDE: 20'
PROPOSED BUILDING SETBACKS	FRONT: 20.5' REAR: 87' SIDE: 15' CORNER LOT SIDE: 94.5'
TRACT AREA	68,103 SF (1.56 AC)
BUILDING USE	VETERINARY, KENNEL, RETAIL
BUILDING TYPE	VB
PROPOSED BUILDING AREA (GROSS)	9,950 SF
BUILDING LOT COVERAGE (9,950/68,103)	15%
NUMBER OF UNITS	N/A
NUMBER OF BUILDINGS	3
BUILDING HEIGHT	20'
NUMBER OF STORIES	1
SF PER FLOOR (GROSS)	1st FLOOR 9,950 SF
EXISTING IMPERVIOUS AREAS:	
EXISTING BUILDING	0 SF
EXISTING CONCRETE	16,375 SF
EXISTING CRUSHED STONE	0 SF
EXISTING ASPHALT	0 SF
EXISTING IMPERVIOUS AREA	16,375 SF (24%)
PROPOSED IMPERVIOUS AREAS:	
PROPOSED BUILDING FOOTPRINT	9,950 SF
PROPOSED ASPHALT	12,950 SF
PROPOSED CONCRETE	2,510 SF
EXISTING IMPERVIOUS (TO REMAIN)	0 SF
TOTAL IMPERVIOUS AREA	25,410 SF (37%)
TOTAL PERVIOUS AREA	4,043 SF
PARKING REQUIRED: (RETAIL/OFFICE) 1,250 SF	
MINIMUM: 1/400 SF (1,250/400)	3
MAXIMUM: 1/200 SF (1,250/200)	6
PARKING REQUIRED: (VETERINARY CLINIC) 5,500 SF	
MINIMUM: 1/250 SF (5,500/250)	22
MAXIMUM: 1/170 SF (5,500/170)	32
PARKING REQUIRED: (KENNEL) 3,200 SF	
MINIMUM: 1/400 SF (3,200/400)	8
MAXIMUM: 1/200 SF (3,200/250)	13
TOTAL PARKING REQUIRED (MINIMUM):	33
TOTAL PARKING REQUIRED (MAXIMUM):	51
TOTAL PARKING PROVIDED:	33
CAMA LAND USE:	WATERSHED RESOURCE PROTECTION
PUBLIC WATER AND SEWER BY CFPUA	
EXISTING WATER FLOW:	0 GPD
EXISTING SEWER FLOW:	0 GPD
PROPOSED WATER FLOW: (PROPOSED SEWER FLOW x 110%)	979 GPD
PROPOSED SEWER FLOW: (250 GPD/PRACTITIONER x 2 PRACTITIONERS) (20 GPD/KENNEL x 12 KENNELS) (120 GPD/1000 SF x 1,250 SF)	890 GPD
HANDICAP SPACES REQUIRED (26-50 SPOTS=2 HANDICAP SPACES) 33 SPACES	PROPOSED 2 HANDICAP SPACES
BICYCLE PARKING REQUIRED (33 SPACES) BICYCLE PARKING PROPOSED	5 BICYCLE PARKS 5 BICYCLE PARKS
TOTAL KENNEL AREA: MAXIMUM ANIMALS:	3,200 SF 100 ANIMALS

LEGEND

- 32 — EXISTING CONTOUR
- PROPERTY BOUNDARY
- SS — PROPOSED SEWER
- W — PROPOSED WATER
- SD — PROPOSED STORM WATER
- LIMITS OF DISTURBANCE
- TSF TSF — TEMPORARY SILT FENCE
- PROPOSED CONCRETE AREA
- PROPOSED PERVIOUS CONCRETE

REVISIONS			
No.	Date	Description	By

SITE AND UTILITY PLAN
PAWS AND CLAWS
WILMINGTON, NORTH CAROLINA

TRIPP ENGINEERING, P.C.
419 Chestnut Street
Wilmington, North Carolina 28401
Phone 910-763-5100
Fax 910-763-5631
© 2015 TRIPP ENGINEERING, P.C.
LICENSE No. C-2427

NORTH CAROLINA PROFESSIONAL SEAL 17374 ENGINEER PHILIP GREGORY TRIPP

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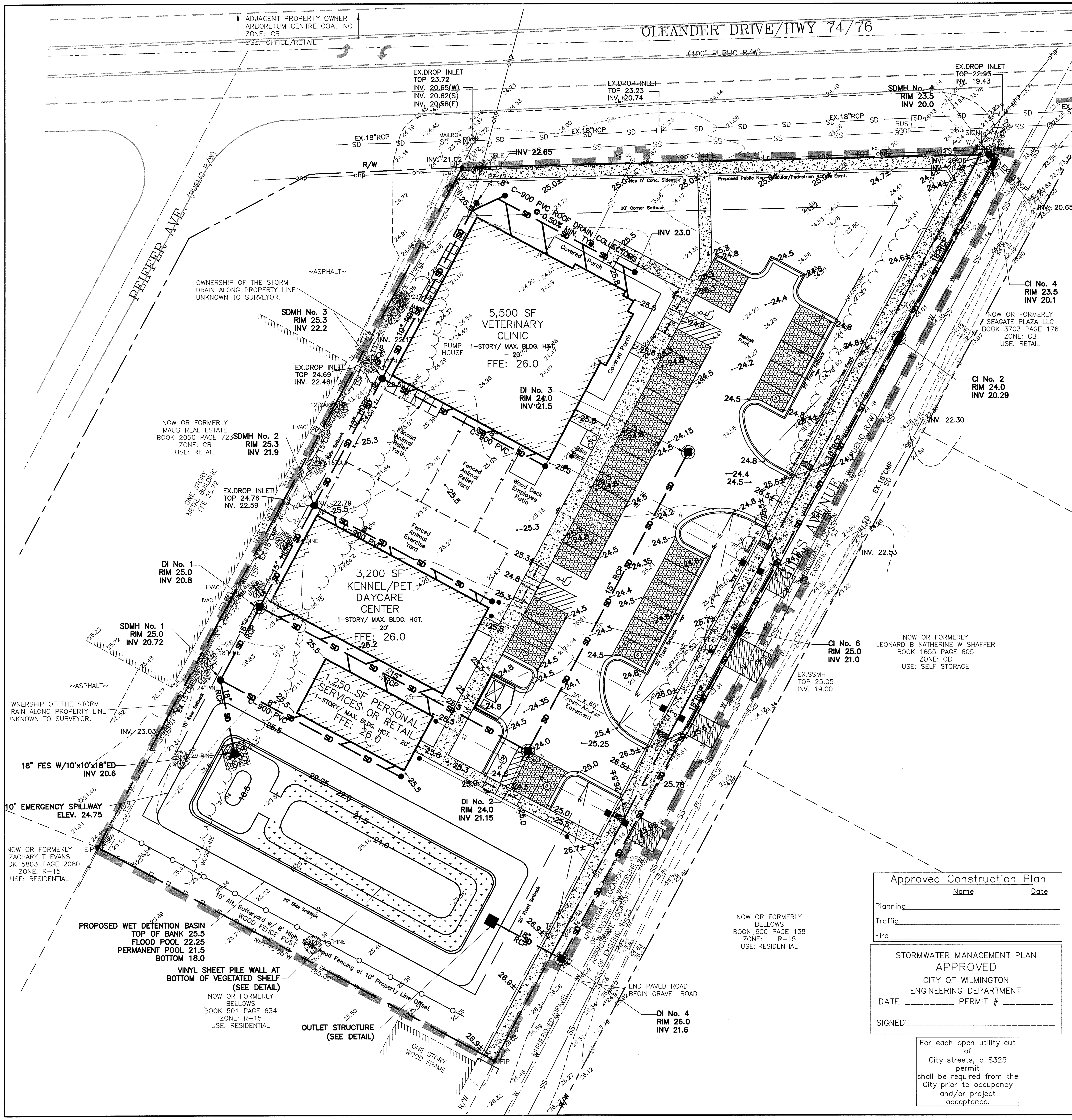

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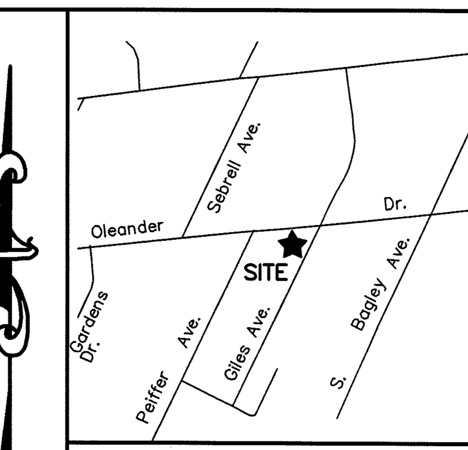
9. DAIRY STORES
10. CLOTHING SHOPS
11. HOBBY, TOY AND GAME SHOPS
12. JEWELRY STORES
13. LIMITED OPTICAL STORES
14. PAINT, GLASS AND WALLPAPER STORES
15. PICTURE FRAME SHOPS
16. RADIO AND TELEVISION STORES
17. SHOE REPAIR SHOPS
18. SHOE STORES
19. SPECIALTY FOOD SHOPS
20. SPORTING GOODS SHOPS
J. KENNELS, COMMERCIAL BOARDERS AND BREEDERS
K. SPAS AND HEALTH CLUBS
5) AS A CONDITION OF THE PROPOSED EXCEPTIONAL DESIGN COMPONENTS AS PROPOSED BY THE APPLICANT, THE APPLICANT SHALL USE A MINIMUM 50% XERIC LANDSCAPING.
A. PLANT SPECIES SPECIFIED FOR XERISCAPING AREAS ARE TO BE DROUGHT TOLERANT.
B. NO PERMANENT IRRIGATION IS PERMITTED IN XERISCAPED AREAS.
C. ALL TREES AND SHRUBS SHALL BE SELECTED FOR COMPATIBILITY WITH THE AREA'S CLIMATE AND SOIL TYPES.
D. AREAS OF XERISCAPING SHALL BE MAINTAINED BY THE OWNER IN PERPETUITY UNTIL AS SUCH TIME THE PROPERTY IS EVER REZONED.
6) THE SITE SHALL MEET THE DESIGN CRITERIA FOR EXCEPTIONALLY DESIGN PROJECTS IN ACCORDANCE WITH THE LDC.
7) THE PARKING AREA SHALL BE CONSTRUCTED WITH PERVIOUS MATERIAL AS SOILS ALLOW.
8) A SIDEWALK EASEMENT WILL BE REQUIRED IF SIDEWALK IS LOCATED ON SITE.
9) ALL REQUIREMENTS OF THE LAND DEVELOPMENT CODE SHALL BE MET.
10) ALL LOCAL, STATE AND FEDERAL REQUIREMENTS SHALL BE MET.
11) ALL TRC REQUIREMENTS AND CONDITIONS SHALL BE MET.
12) CONDITIONS RETAINED FROM 2005 CONDITIONAL DISTRICT (CD-1-705) AS FOLLOWS:
a. NO AUXILIARY SIGNS OR FREESTANDING POLE SIGN SHALL BE PERMITTED ON THIS SITE. ALL FREESTANDING SIGNS SHALL BE MONUMENT SIGNS THAT COMPLY WITH THE CITY CODE. THE SIGN SHALL BE LANDSCAPED AROUND THE BASE AND SHALL NOT EXCEED 6 FEET IN HEIGHT OR 35 SF IN AREA.
b. DRIVEWAY ACCESS TO OLEANDER DRIVE SHALL BE PROHIBITED.
c. GILES AVENUE IS TO BE IMPROVED TO COMMERCIAL STREET STANDARDS, INCLUDING SIDEWALK INSTALLATION ON THE PROPOSED DEVELOPMETN SIDE OF THE CENTERLINE.
13) A PAYMENT-IN-LIEU SHALL BE PROVIDED FOR THE PORTION OF SIDEWALK LOCATED ALONG GILES AVENUE BETWEEN THE SOUTHERN PROPERTY LINE AND THE LOCATION AT WHICH THE SIDEWALK CONNECTS TO THE SITE'S INTERNAL SIDEWALK NETWORK, SOUTH OF THE SECOND DRIVEWAY.
14) ANIMALS MUST BE SUPERVISED AT ALL TIMES IN OUTDOOR AREAS.



LOCATION MAP
NTS

SITE DATA:

PROPERTY OWNER	SAFFO NICHOLAS A STAMATIA ETAL
PROJECT ADDRESS	202 GILES AVE.
PIN NUMBER	R06207-013-013-000 R06207-013-012-000 R06207-013-011-000 R06207-013-010-000 R06207-013-009-000
AREA NOT IN A FEMA 100-YEAR FLOOD ZONE.	
ZONING DISTRICT	CB-COMMUNITY BUSINESS
DISTURBED AREA	1.7 Ac.
SETBACKS REQUIRED	FRONT: 20' REAR: 10' SIDE: 0' CORNER LOT SIDE: 20'
PROPOSED BUILDING SETBACKS	FRONT: 20.5' REAR: 87' SIDE: 15' CORNER LOT SIDE: 94.5'
TRACT AREA	68,103 SF (1.56 AC)
BUILDING USE	VETERINARY, KENNEL, RETAIL
BUILDING TYPE	VB
PROPOSED BUILDING AREA (GROSS)	9,950 SF
BUILDING LOT COVERAGE (9,950/68,103)	15%
NUMBER OF UNITS	N/A
NUMBER OF BUILDINGS	3
BUILDING HEIGHT	20'
NUMBER OF STORIES	1
SF PER FLOOR (GROSS)	1st FLOOR 9,950 SF
EXISTING IMPERVIOUS AREAS:	
EXISTING BUILDING	0 SF
EXISTING CONCRETE	16,375 SF
EXISTING CRUSHED STONE	0 SF
EXISTING ASPHALT	0 SF
EXISTING IMPERVIOUS AREA	16,375 SF (24%)
PROPOSED IMPERVIOUS AREAS:	
PROPOSED BUILDING FOOTPRINT	9,950 SF
PROPOSED ASPHALT	12,950 SF
PROPOSED CONCRETE	2,510 SF
EXISTING IMPERVIOUS (TO REMAIN)	0 SF
TOTAL IMPERVIOUS AREA	25,410 SF (37%)
TOTAL PERVIOUS AREA	4,043 SF
PARKING REQUIRED: (RETAIL/OFFICE) 1,250 SF	
MINIMUM: 1/400 SF (1,250/400)	3
MAXIMUM: 1/200 SF (1,250/200)	6
PARKING REQUIRED: (VETERINARY CLINIC) 5,500 SF	
MINIMUM: 1/250 SF (5,500/250)	22
MAXIMUM: 1/170 SF (5,500/170)	32
PARKING REQUIRED: (KENNEL) 3,200 SF	
MINIMUM: 1/400 SF (3,200/400)	8
MAXIMUM: 1/200 SF (3,200/250)	13
TOTAL PARKING REQUIRED (MINIMUM):	33
TOTAL PARKING REQUIRED (MAXIMUM):	51
TOTAL PARKING PROVIDED:	33
CAMA LAND USE:	WATERSHED RESOURCE PROTECTION
PUBLIC WATER AND SEWER BY CFPUA	
EXISTING WATER FLOW:	0 GPD
EXISTING SEWER FLOW:	0 GPD
PROPOSED WATER FLOW: (PROPOSED SEWER FLOW x 110%)	979 GPD
PROPOSED SEWER FLOW: (250 GPD/PRACTITIONER x 2 PRACTITIONERS) (20 GPD/KENNEL x 12 KENNELS) (120 GPD/1000 SF x 1,250 SF)	890 GPD
HANDICAP SPACES REQUIRED (26-50 SPOTS=2 HANDICAP SPACES) 33 SPACES	PROPOSED 2 HANDICAP SPACES
BICYCLE PARKING REQUIRED (33 SPACES)	5 BICYCLE PARKS
BICYCLE PARKING PROPOSED	5 BICYCLE PARKS
TOTAL KENNEL AREA:	3,200 SF
MAXIMUM ANIMALS:	100 ANIMALS

LEGEND

--- -32- ---	EXISTING CONTOUR
— — —	PROPERTY BOUNDARY
—SS—	PROPOSED SEWER
— W —	PROPOSED WATER
— SD —	PROPOSED STORM WATER
▒▒	LIMITS OF DISTURBANCE
TSF x TSF	TEMPORARY SILT FENCE
░░	PROPOSED CONCRETE AREA
░░	PROPOSED PERVIOUS CONCRETE

SITE PLAN

BAR SCALE 1"=20'

20' 10' 0' 20' 40' 60'

REVISIONS

No./Date	Description	By

GRADING, DRAINAGE, EROSION CONTROL, AND STORMWATER MANAGEMENT PLAN
PAWS AND CLAWS
WILMINGTON, NORTH CAROLINA

TRIPP ENGINEERING, P.C.
419 Chestnut Street
Wilmington, North Carolina 28401
Phone 910-763-5100
Fax 910-763-5631

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LICENSE No. C-1427

NORTH CAROLINA PROFESSIONAL SEAL 17374 ENGINEER PHILLIP GREGORY TRIPP

4.28.16

DATE	04-28-16
DESIGN	PGT
DRAWN	EJW

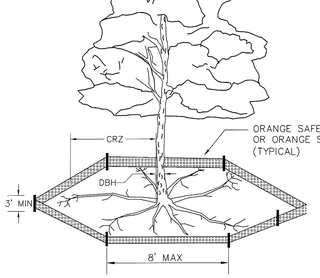
C3

SHEET 3 OF 5

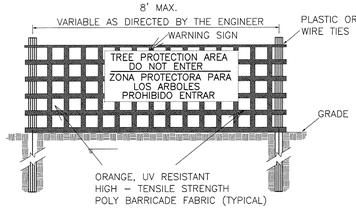
15034

NOTE:
THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

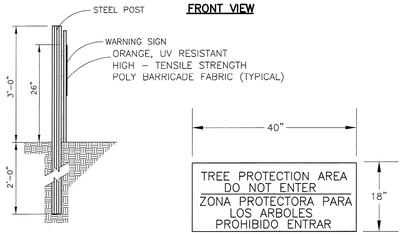
NOTE:
CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.



NOTES:
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATTER SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF $500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.



FRONT VIEW



SIDE VIEW

WARNING SIGN DETAIL

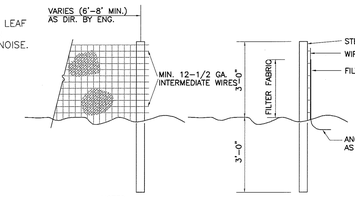
NOTES:
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

TREE PROTECTION DURING CONSTRUCTION SD 15-09
NOT TO SCALE

Approved Construction Plan
Name Date
Planning
Traffic
Fire

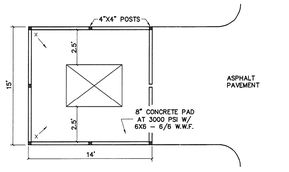
STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED

For each open utility cut of City streets, a $325 permit shall be required from the City prior to occupancy and/or project acceptance.

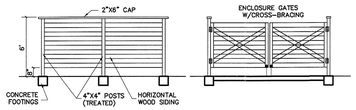


NOTES:
1. FENCE FABRIC SHALL BE A MIN. OF 32" IN WIDTH AND SHALL HAVE A MIN. OF SIX LINE WIRES WITH 12" STAY SPACING.
2. FABRIC SHALL BE FOR EROSION CONTROL AND MIN. OF 36" IN WIDTH. FABRIC SHALL BE FASTENED ADEQUATELY TO THE WIRE FABRIC AS DIRECTED BY THE ENGINEER.
3. STEEL POST SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER STEEL ANGLE TYPE.

TEMPORARY SILT FENCE
NTS

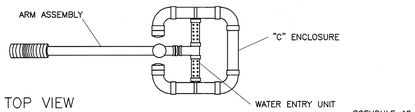


PLAN

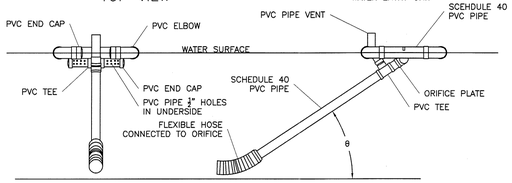


ELEVATIONS

DUMPSTER PAD & ENCLOSURE DETAIL
NTS

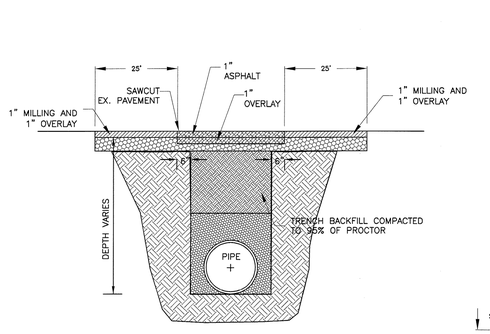


TOP VIEW



END VIEW FRONT VIEW

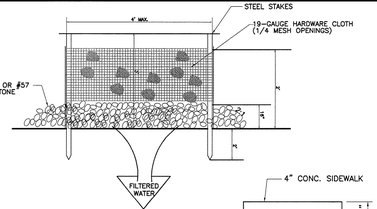
FAIRCLOTH SKIMMER DETAIL
NTS
BASIN #1: 2.5" SKIMMER W/2.3" ORIFICE



PAVEMENT REPAIR DETAIL
NOT TO SCALE

NCDOT #5 OR #57 WASHED STONE

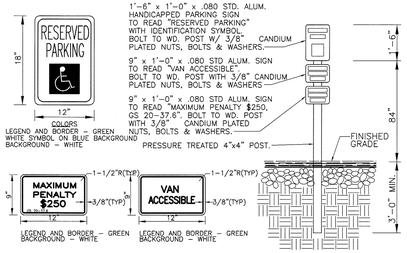
NCDOT #5 OR #57 WASHED STONE



CONSTRUCTION SPECIFICATIONS:
1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 2-POST STEEL POSTS 2 INTO INTO THE GROUND. SPACE POSTS EVENLY AROUND THE INLET OPENING APPROX. THE DIAMETER OF THE HARDWARE CLOTH + 1 FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. WRAP THE WIRE MESH AROUND THE POSTS. THE WIRE MESH AND POSTS SHALL EXTEND TO THE BOTTOM OF THE WIRE MESH CLOSE TO THE GRADE, FOR ANCHORING IS RECOMMENDED.
4. PLACE SOD AROUND THE WIRE MESH AT GROUND LEVEL. CUT SOD 4 INCHES OF 10 BLADES AROUND THE WIRE. LAY 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 STABILIZED IT WITH GROUNDCOVER.

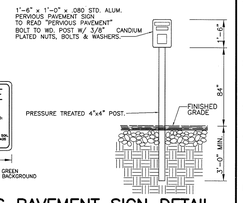
MAINTENANCE:
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 0.5 INCH OR GREATER. REMOVE DEBRIS. CLEAN THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

HARDWARE CLOTH AND GRAVEL INLET PROTECTION
NTS

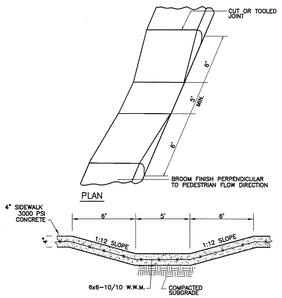


TYPICAL HANDICAPPED SIGN DETAIL
NTS

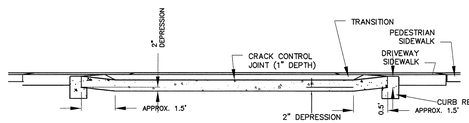
TURN DOWN SIDEWALK
NTS



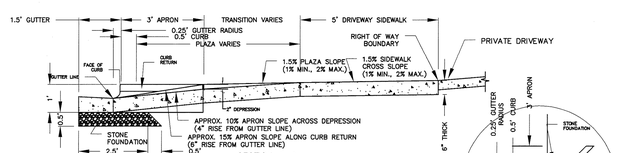
PERVIOUS PAVEMENT SIGN DETAIL
NTS



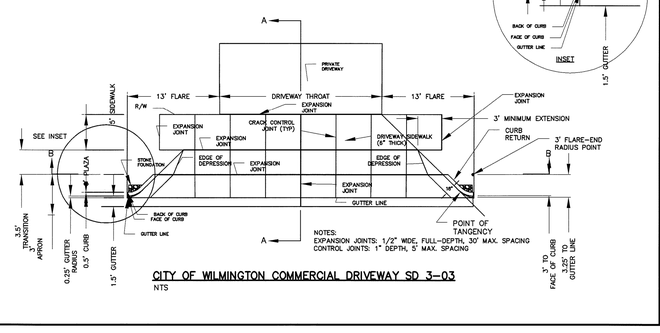
TYPICAL SIDEWALK AND WHEEL CHAIR RAMP DETAIL
NTS



SECTION B-B



SECTION A-A



CITY OF WILMINGTON COMMERCIAL DRIVEWAY SD 3-03
NTS

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

NPDES GROUND STABILIZATION CRITERIA
NTS

SPRING-SUMMER PERMANENT GRASSING DETAIL

SEEDING MIXTURE

SPECIES	RATE (lb/acre)
PENSACOLA BAHIAGRASS	50
SERICEA LESPEDEZA	30
COMMON BERMUDA GRASS	10
BROWN MILLET	10
TALL FESCUE	50

SEEDING NOTES
1. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA.
2. USE COMMON BERMUDA GRASS ONLY ON ISOLATED SITES WHERE IT CANNOT BECOME A PEST. BERMUDA GRASS MAY BE REPLACED WITH 5 lb/acre CENTIPEDE GRASS.

SEEDING DATES
APRIL 1 - JULY 15

SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 3,000 lb/acre GROUND AGRICULTURE LIMESTONE AND 500 lb/acre 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 lb/acre GRAIN STRAWOR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR BY TACKING WITH ASPHALT, RONING, OR NETTING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REFERTILIZE THE FOLLOWING APRIL WITH 50 lb/acre NITROGEN. REPEAT AS GROWTH REQUIRES. MAY BE MOWED ONLY ONCE A YEAR. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND MOW AS OFTEN AS NEEDED.

FALL-WINTER PERMANENT GRASSING DETAIL

SEEDING MIXTURE

SPECIES	RATE (lb/acre)
TALL FESCUE (BLEND OF TWO OR THREE IMPROVED VARIETIES)	200
RYE (GRAIN)	25

SEEDING DATES
JANUARY - APRIL
AUGUST - DECEMBER

SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 3,000-5,000 lb/acre GROUND AGRICULTURAL LIMESTONE (USE THE LOWER RATE ON SANDY SOILS) AND 1,000 lb/acre 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 lb/acre GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, RONING, OR NETTING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
FERTILIZE ACCORDING TO SOIL TESTS OR APPLY 40 lb/acre NITROGEN IN JANUARY OR FEBRUARY, 40 lb N IN SEPTEMBER AND 40 lb N IN NOVEMBER, FROM A 12-4-8, 10-4-8, OR SIMILAR TURF FERTILIZER. AVOID FERTILIZER APPLICATIONS DURING WARM WEATHER, AS THIS INCREASES STAND LOSSES TO DISEASE. RESEED, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY. MOW TO A HEIGHT OF 2.5-3.5 INCHES AS NEEDED.

LATE WINTER & EARLY SPRING TEMPORARY GRASSING DETAIL

SEEDING MIXTURE

SPECIES	RATE (lb/acre)
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

SEEDING DATES:
Mountains - Above 2500 ft: Feb. 15-May 15
Below 2500 ft: Feb. 1-May 1
Piedmont - Jan. 1-May 1
Coastal Plain - Dec. 1-Apr. 15

SOIL AMENDMENTS
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

MULCH
APPLY 4,000 LB/ACRE STRAW, ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TEMPORARY SUMMER GRASSING DETAIL

SEEDING MIXTURE

SPECIES	RATE (lb/acre)
GERMAN MILLET	40

IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.

SEEDING NOTES
MOUNTAINS - MAY 15-AUG. 15
PIEDMONT - MAY 1-AUG. 15
COASTAL PLAIN - APR. 15-AUG. 15

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW, ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY FALL GRASSING DETAIL

SEEDING MIXTURE

SPECIES	RATE (lb/acre)
Rye (grain)	120

SEEDING NOTES
MOUNTAINS - AUG. 15-DEC. 15
COASTAL PLAIN and PIEDMONT - AUG. 15-DEC 30

SOIL AMENDMENTS
FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW, ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March if it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

SITE WORK NOTES
1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIARIZED WITH EXISTING CONDITIONS BOTH ON AND IMMEDIATELY ADJACENT TO THE SITE.
2. CLEARING: CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN LIMITS OF CONSTRUCTION UNLESS OTHERWISE DESIGNATED TO REMAIN.
3. GRUBBING AND STRIPPING: CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITHIN LIMITS OF CONSTRUCTION.
4. MUCKING: CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY SOFT AREAS.
5. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
6. FILL AND COMPACTION SHOULD COMPLY WITH GEOTECHNICAL REPORT.
7. THE CONTRACTOR SHALL NOTE THAT THE GRADING PLAN MAY NOT REPRESENT A BALANCED EARTHWORK CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT AND FILL QUANTITIES AND COMPLETE INSTALLATION TO SPECIFIED GRADES.
8. THE CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FROM AN OFF-SITE PROPERLY PERMITTED FACILITY AS REQUIRED.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. BEFORE COMMENCING ANY EXCAVATIONS IN OR ALONG ROADWAYS OR RIGHT-OF-WAYS, PUBLIC AREAS OR IN PRIVATE EASEMENTS, THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE PERSONNEL OF THEIR INTENT TO EXCAVATE, IN WRITING, NOT LESS THAN 10 DAYS PRIOR TO EXCAVATING.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE DISCONNECTION/RECONNECTION AND/OR THE RELOCATION OF ALL EXISTING UTILITIES WITH APPROPRIATE PERSONNEL.
11. EXISTING SURVEYING PERFORMED BY MICHAEL UNDERWOOD AND ASSOC., PA AND SUPPLIED BY THE OWNER.
12. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AT THE SITE. FURTHERMORE THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR QUESTIONS TO THE ENGINEER PRIOR TO INSTALLATION.
13. THE CONTRACTOR SHALL PROVIDE ANY AND ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK UNLESS OTHERWISE DIRECTED BY OWNER.
14. ALL PVC UTILITY MAINS SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER AT FINAL GRADE.
15. ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL AND STATE CODES. METERS, TAPS, MATERIALS, WORKMANSHIP AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS.
16. ALL PAVEMENT, BASE AND SUBGRADE SHALL CONFORM TO NCDOT STANDARDS INCLUDING WORKMANSHIP, MATERIALS AND EQUIPMENT. APPROPRIATE BARRICADES, SIGNS, LIGHTS OR OTHER TRAFFIC CONTROL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NCDOT TO MAINTAIN SAFETY AND TWO WAY TRAFFIC.
17. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO INSTALLATION. ALL AREAS SHALL BE SLOPED TO DRAIN AWAY FROM BUILDINGS AT ALL TIMES.
18. CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III WITH RUBBER GASKETED JOINTS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
19. USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYD, FS TT-P-115, TYPE III, FACTORY MIXED, QUICK DRYING, NON BLEEDING, REFLECTIVE MATERIAL MAY BE ADDED AT OWNER'S OPTION FOR NIGHT REFLECTING.
20. DUCTILE IRON SHALL BE CLASS 50.
21. CONCRETE FOR WALKS, CURBS AND DRIVES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS - AIR ENTRAINED.
22. FIELD TESTING SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY PAID FOR BY THE OWNER. FURTHER TESTING REQUIRED DUE TO A FAILED TEST WILL BE PAID FOR BY THE CONTRACTOR.
23. SEE GEOTECHNICAL REPORT NO. _____, DATED _____, BY _____ _____ FOR ADDITIONAL REQUIREMENTS.

CONSTRUCTION SEQUENCE
1. NO CUT SLOPE OR FILL SLOPE SHALL EXCEED A RISE OR FALL OF ONE FOOT FOR EVERY RUN OF 3 FEET (1 VERTICAL TO 3 HORIZONTAL).
2. NO SEDIMENT WILL BE ALLOWED TO EXIT THE SITE. ALL EROSION SHALL BE CONTROLLED INCLUDING SIDE SLOPES DURING AND AFTER CONSTRUCTION.
3. INSTALL PRIMARY EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION INCLUDING BUT NOT LIMITED TO GRAVELED CONSTRUCTION ENTRANCE, SILT FENCE, CHECK DAMS, ETC. INSTALL ALL SECONDARY EROSION CONTROL MEASURES AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION.
4. ALL EROSION CONTROL MEASURES TO BE INSPECTED AFTER EACH RAIN. SILT FENCE AND INLET PROTECTION ARE TO BE CLEANED WHEN 0.5 FEET OF SEDIMENT HAVE ACCUMULATED IN FRONT OF THE DEVICE OR WHEN THEY LEAK OR FAIL. SEDIMENT TRAPS ARE CLEANED OUT AS STATED OR WHEN HALF FULL.
5. IF APPLICABLE, CONSTRUCT PROPOSED RETENTION POND TO ACT AS A SEDIMENT BASIN DURING CONSTRUCTION. REMOVE ACCUMULATION OF SILT AS REQUIRED TO ALLOW PROPER FUNCTIONING. RESTORE POND TO DESIGN LEVELS AT THE COMPLETION OF CONSTRUCTION.
6. IF APPLICABLE, INSTALL DROP INLETS WITH INLET PROTECTION TO ACT AS SILT TRAPS DURING CONSTRUCTION. REMOVE ACCUMULATED SILT AS NEEDED TO PREVENT SILT FROM ENTERING STORM DRAIN PIPING.
7. A 4" LAYER OF TOPSOIL SHALL BE APPLIED TO ALL NEW AREAS TO BE GRASSED.
8. MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PROJECT IS COMPLETE.
9. MORE STRINGENT MEASURES MAY BE REQUIRED TO HALT EROSION IF THOSE ON THIS PLAN PROVE TO BE LESS EFFECTIVE.
10. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF CONSTRUCTION. ALL PERMANENT MEASURES SHALL BE WELL ESTABLISHED PRIOR TO PROJECT COMPLETION.

MAINTENANCE PLAN
1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.
2. ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED, WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
3. SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET, ROCK DOUGHNUT INLET PROTECTION AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
4. DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.
5. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX. WITH THE USE OF EXTRA STRENGTH FABRIC, WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET MAX. WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE IN THE SEDIMENT FENCE THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED OR IS DAMAGED.
6. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. THE ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
7. SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE DESIGN STORAGE CAPACITY HAS BEEN HAL

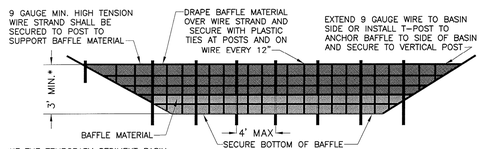
BAFFLE CONSTRUCTION SPECIFICATION:

MATERIALS

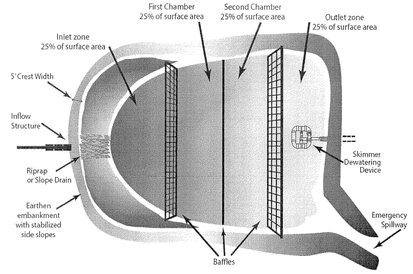
1. USE MATTING MADE OF 100% COCONUT FIBER (COIR) TWINE WOVEN INTO HIGH STRENGTH MATRIX.
2. STAPLES SHOULD BE MADE OF 0.125 INCH DIAMETER NEW STEEL WIRE FORMED INTO A 'U' SHAPE NOT LESS THAN 12 INCHES IN LENGTH WITH A THROAT OF 1 INCH IN WIDTH. THE STAPLES ANCHOR THE POROUS BAFFLES INTO THE SIDES AND BOTTOM OF THE BASIN.
3. ENSURE THE STEEL POSTS FOR POROUS BAFFLES ARE OF A SUFFICIENT HEIGHT TO SUPPORT BAFFLES AT DESIRED HEIGHT. POSTS SHOULD BE APPROXIMATELY 1–3/8" WIDE MEASURED PARALLEL TO THE FENCE, AND HAVE A MINIMUM WGHT OF 1.25 LF/LINEAR FT. THE POSTS MUST BE EQUIPPED WITH AN ANCHOR PLATE HAVING A MINIMUM AREA OF 14.0 SQUARE INCHES AND BE OF THE SELF–FASTENER ANGLE STEEL TYPE TO HAVE A MEANS OF RETAINING WIRE AND COIR FIBER MAT IN THE DESIRED POSITION WITHOUT DISPLACEMENT.
4. USE 9–GAUGE HIGH TENSION WIRE FOR SUPPORT WIRE.

CONSTRUCTION

1. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
2. INSTALL THE COIR FIBER BAFFLES IMMEDIATELY UPON EXCAVATION OF THE BASINS.
3. INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP.
4. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES AND SPACED A MAXIMUM OF 4 FEET APART. 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 EARTHEN EMBANKMENT.
5. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.
6. ATTACH A 9 GAUGE HIGH TENSION WIRE STRAND TO THE STEEL POSTS AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION WITH PLASTIC TIES OR WIRE FASTENERS TO PREVENT SAGGING. IF THE TEMPORARY SEDIMENT BASIN WILL BE CONVERTED TO A PERMANENT STORMWATER BASIN OF A GREATER DEPTH, THE BAFFLE HEIGHT SHOULD BE BASED ON THE POOL DEPTH DURING USE AS A TEMPORARY SEDIMENT BASIN.
7. EXTEND 9 GAUGE MINIMUM HIGH TENSION WIRE STRAND TO SIDE OF BASIN OR INSTALL STEEL T–POSTS TO ANCHOR BAFFLE TO SIDE OF BASIN AND SECURE TO VERTICAL END POSTS.
8. DRAPE THE COIR FIBER MAT OVER THE WIRE STRAND MOUNTED AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION. SECURE THE COIR FIBER MAT TO THE WIRE STRAND WITH PLASTIC TIES OR WIRE FASTENERS. ANCHOR THE MATTING TO THE SIDES AND FLOOR OF THE BASIN WITH 12 INCH WIRE STAPLES, APPROXIMATELY 1 FT APART, ALONG THE BOTTOM AND SIDE SLOPES OF THE BASIN.
9. DO NO SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN.
10. ADJUSTMENTS MAY BE REQUIRED IN THE STAPLING REQUIREMENTS TO FIT INDIVIDUAL SITE CONDITIONS.



CROSS SECTION OF POROUS BAFFLE
NTS



BAFFLE SPACING DETAIL
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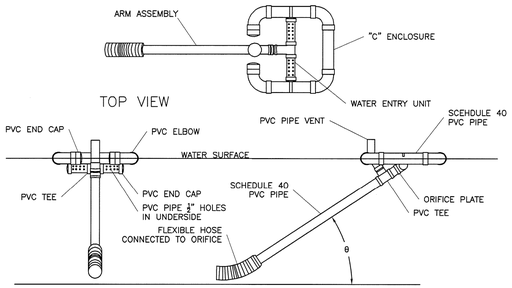

FAIRCLOTH SKIMMER DETAIL
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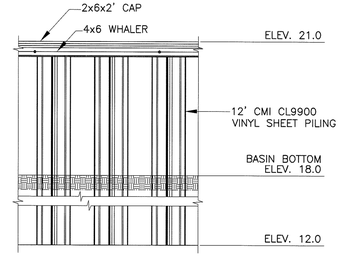
BASIN #1: 2.5" SKIMMER W/2.3" ORIFICE



VINYL WALL ELEVATION
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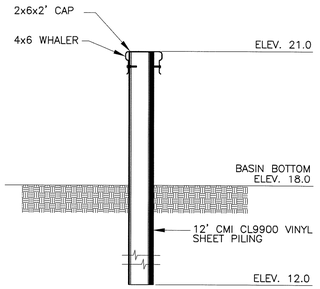

VINYL WALL SECTION
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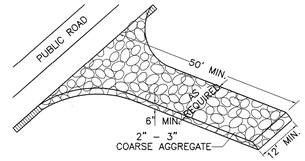
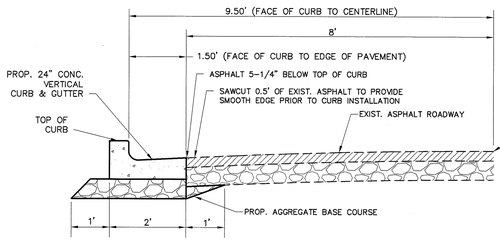
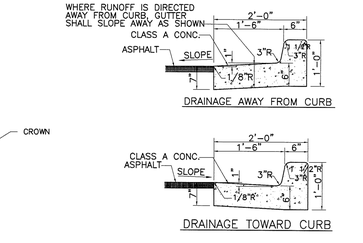


TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE
NTS



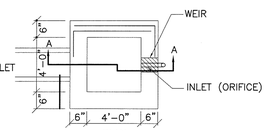
MINOR STREET WITH VERTICAL CURB DETAIL
NTS



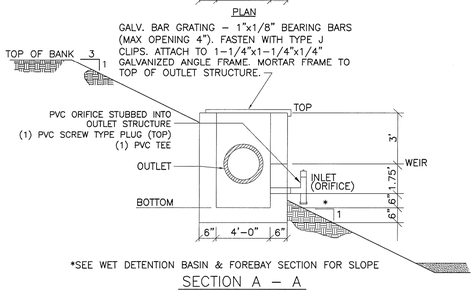
CURB SECTION
NTS

OUTLET STRUCTURE DATA						
BASIN #	TOP ELEV.	BOTTOM ELEV.	INLET (ORIFICE) SIZE/INVERT	WEIR SIZE/INVERT	OUTLET SIZE	OUTLET INV. IN/ INV. OUT
1	23.30	20.80	0.75"/21.50	9"/22.25	18 inch	21.5/20.0

NOTE:
WHILE SKIMMER IS FUNCTIONING, CLOSE ALL OPENINGS OF THE OUTLET STRUCTURE EXCEPT THE TOP AND THE INLET (ORIFICE).



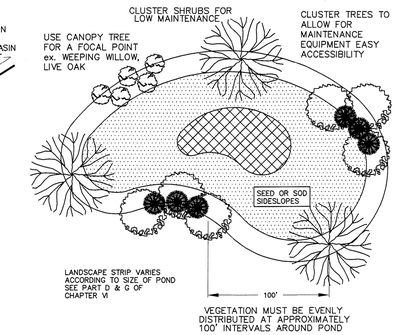
PLAN



*SEE WET DETENTION BASIN & FOREBAY SECTION FOR SLOPE

SECTION A – A

WET DETENTION BASIN OUTLET STRUCTURE
NTS



Notes:
1. If possible, locate pond where vegetation exists.
2. Suggest minimal clearing to conserve visual quality of site and minimize the additional of tree planting. An irregular shape provides a more natural appearance.
3. Landscape strip shall be a maximum slope of 7:1 in order to plant vegetation.
4. Provide a minimum of 3 inches of mulch around all vegetation.

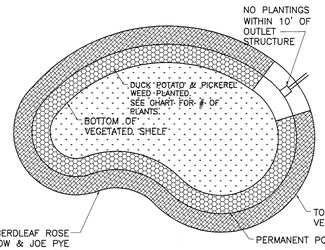
TYPICAL CITY OF WILMINGTON STORMWATER FACILITY LANDSCAPING PLAN
NTS (SD 15–16)

NORMAL POOL TO SHELF BOTTOM = 1000 SF @ 50 PLANTS PER 200 SF = 250 PLANTS

PLANT TYPE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER
HERBACEOUS	125	SAGITTARIA LATIFOLIA	DUCK POTATO	CONT.	4" POT
	125	PONTEDARIA CORDATA	PICKEREL WEED	CONT.	4" POT

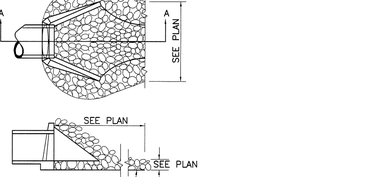
NORMAL POOL TO SHELF TOP = 1,080 SF @ 50 PLNTS PER 200 SF = 270 PLANTS

PLANT TYPE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER
HERBACEOUS	135	HIBISCUS LAEVIS	HALBERDLEAF ROSE MALLOW	CONT.	4" POT
	135	EUPATORIADELPHUS FISTULOSUS	JOE PYE WEED	CONT.	4" POT



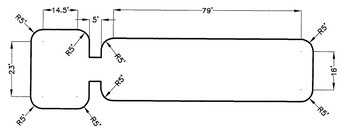
NOTES:
1) NO PLANTINGS WITHIN 10' OF OUTLET STRUCTURE.
2) ALL LANDSCAPE MATERIAL, INCLUDING GRASS, SHOULD BE PLANTED IN GOOD TOPSOIL. NATIVE UNDERLYING SOILS MAY BE SUITABLE FOR PLANTING IF AMENDED WITH 4" OF WELL–AGED COMPOST TILLED INTO THE SUBGRADE. COMPOST SHOULD MEET SPECIFICATIONS FOR GRADE A COMPOST QUALITY.
3) A MINIMUM TWO–YEAR WARRANTY PERIOD STIPULATING REQUIREMENTS FOR PLANT SURVIVAL/REPLACEMENT.
4) PERMANENT VEGETATED STABILIZATION OF THE POND SIDESLOPES WILL BE REQUIRED PRIOR TO FINAL INSPECTION.

TYPICAL VEGETATED SHELF LANDSCAPING DETAIL
NTS

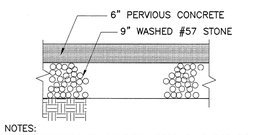


SECTION A – A

ENERGY DISSIPATOR
NTS



WET DETENTION BASIN PERMANENT POOL DIMENSIONS
NTS

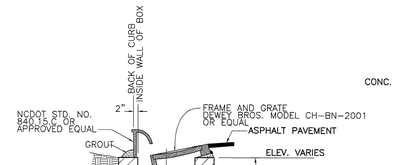


NOTES:
1. CONTRACTOR TO SCARIFY UPPER 6" SUBGRADE JUST PRIOR TO INSTALLATION OF STONE.

PERVIOUS CONCRETE PAVEMENT SECTION
NTS

NOTE: PAVEMENT SECTION MAY VARY DEPENDING UPON FIELD CONDITIONS. CONTRACTOR SHALL COORDINATE W/OWNER & GEOTECHNICAL ENGINEER TO DETERMINE ACTUAL PAVEMENT SECTION.

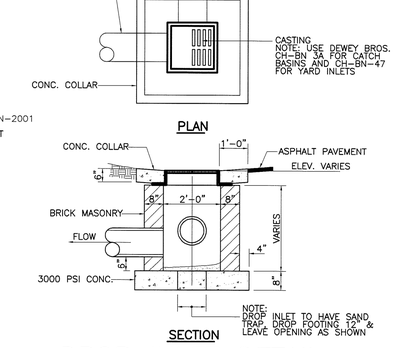
CITY OF WILMINGTON PAVEMENT SECTION
NTS



SEE PLAN FOR PIPE ORIENTATION & SIZES

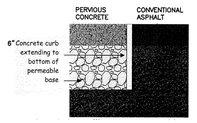
SECTION

CURB INLET DETAIL
NTS

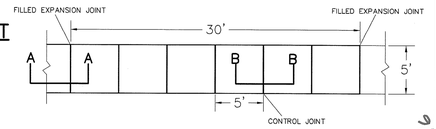


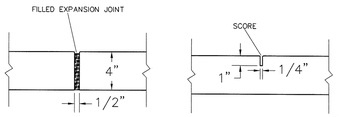
SECTION

DROP INLET DETAIL
NTS



PERVIOUS CONCRETE/ASPHALT TRANSITION DETAIL
NTS

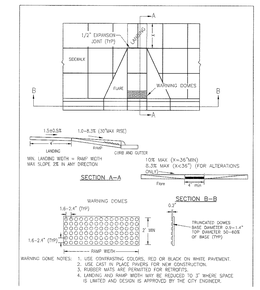




SECTION A–A SECTION B–B

NOTES:
1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEAN–OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "A" – 3,000 PSI.
5. MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL
6. 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
7. MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
8. MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
9. MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

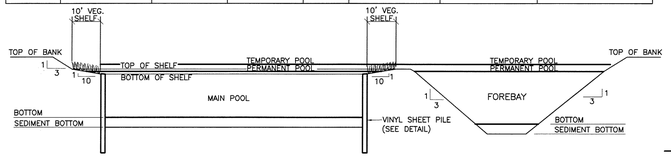
CITY OF WILMINGTON SIDEWALK SD 3–10
NTS



CITY OF WILMINGTON CURB RAMP SD 3–07
NTS

EMERGENCY SPILLWAY DETAIL
NTS

EMERGENCY SPILLWAY DATA			
BASIN #	TOP OF BANK ELEV.	BOTTOM OF SPILLWAY ELEV.	WIDTH (FEET)
1	25.50	24.75	10



* POND SLOPE TO BE SEEDED IN ACCORDANCE TO SEEDING SPECIFICATIONS
* 10:1 VEGETATED SHELF TO BE PLANTED WITH WETLAND SPECIES I.E. PICKEREL WEED, DUCK POTATO, SWAMP ROSE, BLUE FLAG AND CARDINAL FLOWER
* A PUMP WILL BE PROVIDED TO DRAIN THE BASIN FOR MAINTENANCE AND EMERGENCIES

WET DETENTION BASIN & FOREBAY SECTION
NTS

WET DETENTION BASIN DATA							
BASIN #	TOP OF BANK ELEV.	TEMPORARY POOL ELEV.	PERMANENT POOL ELEV.	SHWT	EMERGENCY SPILLWAY EL.	BOTTOM MAIN/FOREBAY	SEDIMENT BOTTOM MAIN/FOREBAY
1	25.50	22.25	21.50	23.92	24.75	18.0/18.5	17.0/17.5

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

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

For each open utility cut of City streets, a $325 permit shall be required from the City prior to occupancy and/or project acceptance.

REVISIONS		
No./ Date	Description	By

DETAILS AND NOTES

PAWS AND CLAWS

WILMINGTON, NORTH CAROLINA

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Wilmington, North Carolina 28401
Phone 910–763–5100
Fax 910–763–5631

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NORTH CAROLINA PROFESSIONAL SEAL 17374 ENGINEER PHILIP GREGORY TRIPP

DATE 04–28–16
DESIGN PGT
DRAWN MLV

C5

SHEET 5 OF 5

15034