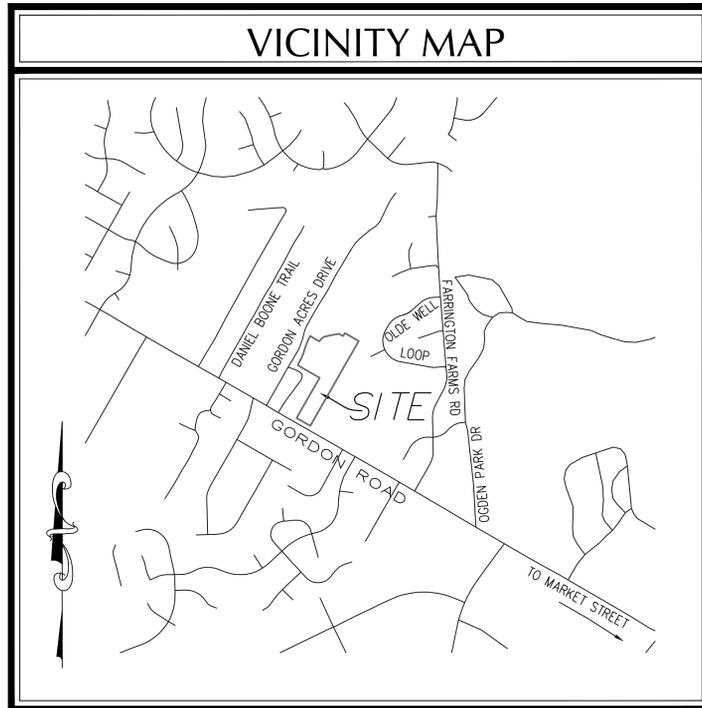
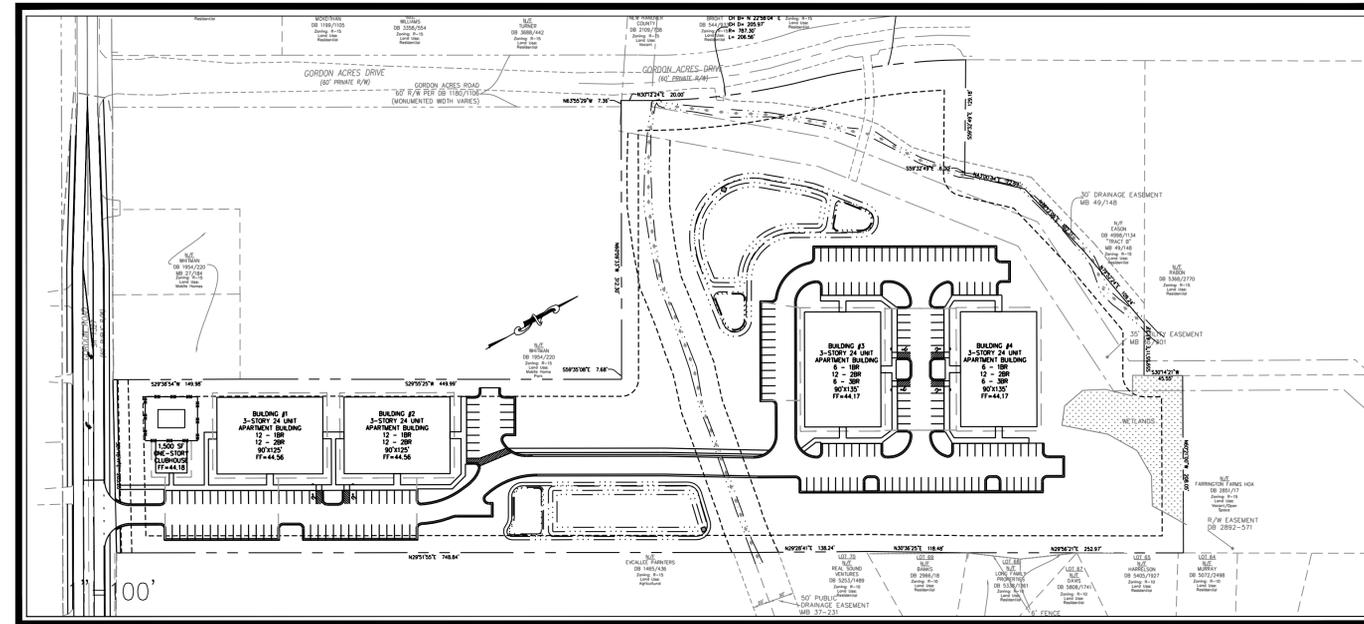


SITE DEVELOPMENT PLAN FOR ELLINGTON FARMS WILMINGTON, NORTH CAROLINA JUNE 2014



VICINITY MAP
(NTS)



DESCRIPTION	EXISTING	PROPOSED
1' CONTOUR INTERVAL	-----	-----
5' CONTOUR INTERVAL	-----	-----
PROPERTY LINE	-----	-----
ROADWAY CENTERLINE	-----	-----
RIGHT OF WAY LIMITS	-----	-----
EASEMENT LINE	-----	-----
CURB & GUTTER	-----	-----
SANITARY SEWER FACILITIES	-----	-----
STORM SEWER FACILITIES	-----	-----
WATERLINE	-----	-----
FIRE HYDRANT ASSEMBLY	-----	-----
WATERWAYS	-----	N/A
PROPOSED		
PROPOSED LOT AND S.F.	x 5,000 s.f.	(A)
OPEN SPACE LABEL	(A)	(A)
OPEN SPACE	[Hatched Box]	[Hatched Box]
BUILDING SET BACKS	-----	-----
PRIVATE SANITARY SET BACKS	-----	-----
SKIMMER	[Square]	[Square]
	STREET SIGN	[Sign]
	404 WETLANDS	[Wetland]
	FLOW DIRECTION	[Arrow]

DEVELOPER/OWNER

ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
PHONE: (910) 799-3006

PREPARED BY:

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road, Unit C, Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659 License # P-0718

INDEX OF SHEETS	
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WILMINGTON NORTH CAROLINA Public Services • Engineering Division APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____
Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____

SITE DATA TABLE
GENERAL NOTES:
1. NEW HANOVER COUNTY PARCEL NOS: PIN# 315917.01.2353 SITE ADDRESS: 6469 GORDON ROAD, WILMINGTON, NC 28411
2. TOTAL AREA: 9.99 AC.±
3. EXISTING ZONING: MF-L (CD) PROPOSED REZONE TO MF-L (CD) SETBACKS REQUIRED PROPOSED 35' FRONT 48' FRONT 25' REAR 93' REAR 20' SIDE 21' SIDE
4. THIS PROPERTY IS NOT WITHIN A SPECIAL FLOOD HAZARD ZONE PER FEMA FLOOD INSURANCE RATE MAP #3720315900J, EFFECTIVE DATE APRIL 3, 2006.
5. CAMA LAND CLASSIFICATION: URBAN
DEVELOPMENT DATA:
Total Tract Area = 435,098 SF = 9.99 ac
Permitted Density (@ 10 units/ac) = 100 units Proposed Density 96 units = 9.6 units/ac
Building Coverage - 50,100 sf (11.5%) (4) @ 90' X 135' = 48,600 sf + Clubhouse = 1,500 sf
Total Gross Floor Area - 147,300 sf CFA (12) Floors @ 12,150 sf = 145,800 sf + Clubhouse = 1,500 sf
4 APARTMENT BUILDINGS & CLUBHOUSE
Total Bedrooms - 168 36 X 1 BR = 36 BR 48 X 2 BR = 96 BR 12 X 3 BR = 36 BR
Max. Bldg. Hgts. - 35' Mean Roof Proposed Bldg. hgt. - 35' Mean Roof
Parking - 36 - 1 BR units x 1.5 min sp/unit = 54 48 - 2 BR units x 2.0 min sp/unit = 96 12 - 3 BR units x 2.25 min sp/unit = 27 1,500 sf Clubhouse @ 1 min sp/400 sf = 4 Minimum Total Spaces req'd. = 181 197 total spaces provided (6 H/C) Bike Racks to be provided @ 1/12 units 96 units/12 = 8 Bike Racks required ***8 Bike Racks Provided***
IMPERVIOUS SURFACES - PROPOSED BUA - ROOFTOPS - 48,600 S.F. PAVEMENT - 77,807 S.F. CONCRETE - 9,307 S.F. POOL FACILITY - 4,500 S.F. TOTAL - 140,214 S.F. (32.2%)
Open Space - (min. 35% req'd.) 9.99 ac. - 0.93 ac. (pond area) - 0.64 ac. (streams) X 35% = 2.95 ac. req'd. ** 4.95 ac. (49.5%) Open Space prov'd. ** [Estimated area prov'd. is total tract area minus interior planting islands (0.18 ac.), Streetyards (0.07 ac.) & Internal Impervious Surfaces (3.22 ac.)]
Recreation Area - (min. 50% Open Space) 1.48 ac. Rec. Space req'd. Active Rec req'd. = 0.74 ac. Active Rec prov'd. = 0.74 ac. Passive Rec Area req'd. = 0.74 ac. Passive Area prov'd. = 0.74 ac.± ** Total Rec Area prov'd. = 1.48 ac. **
Utility Capacity Requests: Existing Sewer Capacity - 23 units @ 360 GPD/Unit = 8,280 GPD Existing Water Capacity - 23 Units @ 400 GPD/Unit = 9,200 GPD Proposed Sewer Capacity - 36 units @ 240 GPD/Unit = 8,640 GPD 48 units @ 240 GPD/Unit = 11,520 GPD 12 units @ 360 GPD/Unit = 4,320 GPD 50 Person Clubhouse @ 10 GPD/Person = 500 GPD TOTAL = 24,980 Proposed Water Capacity - 94 Units @ 400 GPD/Unit = 37,600 GPD ** Add'l. Sewer Capacity Requested = 16,700 GPD ** Add'l. Water Capacity Requested = 28,400 GPD
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.
ALL DESIGN AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, TECHNICAL STANDARDS MANUAL & THE STATE OF NORTH CAROLINA
PROJECT NAME: ELLINGTON FARMS GSP CONSULTING PROJECT #: 2014-0001

COORDINATION NOTES

1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. ALL WORK IS TO BE IN ACCORDANCE WITH CITY OF WILMINGTON, NEW HANOVER COUNTY, THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) AND THE STATE OF NORTH CAROLINA.
3. THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THE PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR TO PERFORM SITE IMPROVEMENT STAKEOUT(S).
4. ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.

GENERAL NOTES:

1. EXISTING TOPOGRAPHY, BOUNDARY AND UTILITIES, HAVE BEEN PREPARED BY FIELD SURVEY BY ATLANTIC COAST SURVEY, PLLC., PREVIOUSLY APPROVED PLANS AND OTHER AVAILABLE INFORMATION.
2. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF ALL EXISTING UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF DITCHING OPERATIONS BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES. IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF TRENCHING OPERATIONS SO AS TO ELIMINATE OR MINIMIZE DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING LOSS OF UTILITY REVENUES. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC....
3. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAGMEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE DOT.
5. ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.
6. ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.
7. CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 1 (800) 632-4949 AND ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
8. CONTRACTOR SHALL REMOVE ASPHALT, AGGREGATE BASE COURSE, AND CONCRETE CURB & GUTTER WITHIN LIMITS OF DEMOLITION AS SHOWN ON PLAN.

DEMOLITION NOTES

1. CONTRACTOR TO COORDINATE WITH THE OWNER TO PROPERLY MAINTAIN OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY.
2. CONTRACTOR IS TO WALK THE SITE AND BECOME FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND WILL BE UNCLASSIFIED EXCAVATION.
3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE PADS, CONCRETE DITCHES, FOUNDATIONS, SLABS, STEPS, AND STRUCTURES; ABANDONED UTILITIES, BUILDINGS, PAVEMENTS AND ALL MATERIALS CLEARED AND STRIPPED TO THE EXTENT NECESSARY AS DIRECTED BY THE SOILS ENGINEER FOR THE INSTALLATION OF THE NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING AND AS SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO OWNER.
5. ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS BY THE CONTRACTOR.
6. EXISTING UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION.
7. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.
8. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVER HEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.
9. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
10. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
11. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL NOTES:

1. CLEAR AND REMOVE FROM SITE ALL TREES, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN DESIGNATED CLEARING LIMITS.
2. PLANT GRASS OVER ALL GRADED AREAS AS SHOWN IN THE TABLE ON THIS SHEET OF CEASE OF ANY GRADING ACTIVITY.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION MEASURES.
4. DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED, CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY.
5. WATER, FERTILIZE, MOW AND MAINTAIN SPRIGGED, SODDED AND PLANTED AREAS UNTIL FINAL APPROVAL BY NEW HANOVER COUNTY.
6. ANY BORROW MATERIAL BROUGHT ONTO SITE MUST BE FROM A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.
7. ANY EXCESS MATERIAL REMOVED FROM SITE MUST BE HAULED TO A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.

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. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. ANY SEDIMENT THAT IS TRACKED INTO THE STREET WILL BE IMMEDIATELY REMOVED.
3. SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. SILT FENCE STAKES WILL BE SPACED 6 FEET APART UNLESS A WIRE BACKING IS USED WITH 8 FOOT STAKE SPACING.
4. INSPECT INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.
5. INSPECT SILT SACKS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE SILT SACK OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE THE SILT SACK DURING SEDIMENT REMOVAL. REPLACE AS NEEDED.
5. ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
6. INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

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

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

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

FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.
7. INSPECT EXCELSIOR MATTING AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT REPAIR IMMEDIATELY. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE MATTING. ANY AREAS OF THE MATTING THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED. MONITOR AND REPAIR THE MATTING AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

STABILIZATION NOTES

1. ALL DISTURBED AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS OF CEASE OF ANY PHASE OF ACTIVITY AND SLOPES WITHIN 21 CALENDAR DAYS.

PERMANENT SEEDING SCHEDULE – MIXTURE 5CP

SPECIES	RATE (LB/ACRE)
CENTPEDE GRASS	10-20

Seeding Dates
MARCH – JUNE

Soil Amendments
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 300 LB/ACRE 10-10-10 FERTILIZER.

Mulch
DO NOT MULCH.

Maintenance
FERTILIZE VERY SPARINGLY LB/ACRE NITROGEN IN SPRING WITH NO PHOSPHORUS. CENTPEDE GRASS CANNOT TOLERATE HIGH PH OR EXCESS FERTILIZER.

TEMPORARY SEEDING—LATE WINTER/EARLY SPRING

WINTER AND EARLY SPRING

SPECIES	RATE (LB/ACRE)
Rye (GRAIN)	120
*ANNUAL LESPEDEZA (KOBÉ IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50

*OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.

SUMMER

SPECIES	RATE (LB/ACRE)
GERMAN MILLET	40

FALL

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120

Seeding dates
COASTAL PLAIN – DEC.1-APR. 15 – LATE WINTER AND EARLY SPRING
APRIL 15 – AUG. 15 – SUMMER
AUG. 15 – DEC. 30 – FALL

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.

GENERAL GRADING NOTES

1. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF SUCH UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF THE DITCHING OPERATION BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF THE TRENCHING OPERATIONS SO AS TO AVOID AND PREVENT DAMAGE TO THE EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING BUT NOT LIMITED TO REPAIRS AND LOSS SERVICE REVENUE. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC....
2. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
3. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAG MEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE NCDOT.
4. ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, FENCING, ETC., SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE OR BURNED IF PROPER PERMITS ARE RECEIVED.

SITE NOTES

1. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND R.O.W.'S PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.
3. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
4. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
7. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
8. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
9. IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE GIVEN TO THE OWNER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENT SHALL BE MADE WITHOUT THE PERMISSION OF THE OWNER.
10. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE, OTHER OBSTRUCTIONS OR FROM DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT NORTH CAROLINA ONE CALL TOLL FREE 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NONSUBSCRIBING UTILITIES.
11. ALL PERMITS RELATIVE TO PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION
12. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY, AND LOCAL CODES.
13. FOR BUILDING DIMENSIONS, SEE ARCHITECTURAL DRAWINGS.
14. ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.
15. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
16. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

GENERAL STORM SEWER NOTES

1. ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF WILMINGTON AND THE STATE OF NORTH CAROLINA REQUIREMENTS AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
2. BEDDING FOR ALL STORM SEWER PIPE SHALL BE AS SPECIFIED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND MANUFACTURER SPECIFICATIONS.
3. ALL STORM SEWER PIPES TO BE HDPE ADS N-12 OR EQUIVALENT, UNLESS OTHERWISE SPECIFIED.
4. ALL STORM SEWER PIPES SHOWN AS RCP ON THE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

SITE AREA DESCRIPTION	GROUND STABILIZATION	
	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) 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 HOW ZONES)

EXISTING UTILITY NOTES

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
2. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

UTILITY CONTACTS:

1. CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING AND DIGGING. 1-800-632-4949

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

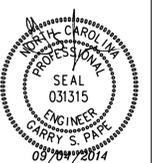
CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO ANY EXCAVATION OR DEMOLITION.

CONTACT "CAROLINA ONE CALL" AT 1-800-632-4949
EMERGENCY DIAL 911 POLICE - FIRE - RESCUE

Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____

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

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



No.	Revision	Date	By

Designer	GSP	Scale	
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

Wilmington **New Hanover County** **North Carolina**

ELLINGTON FARMS

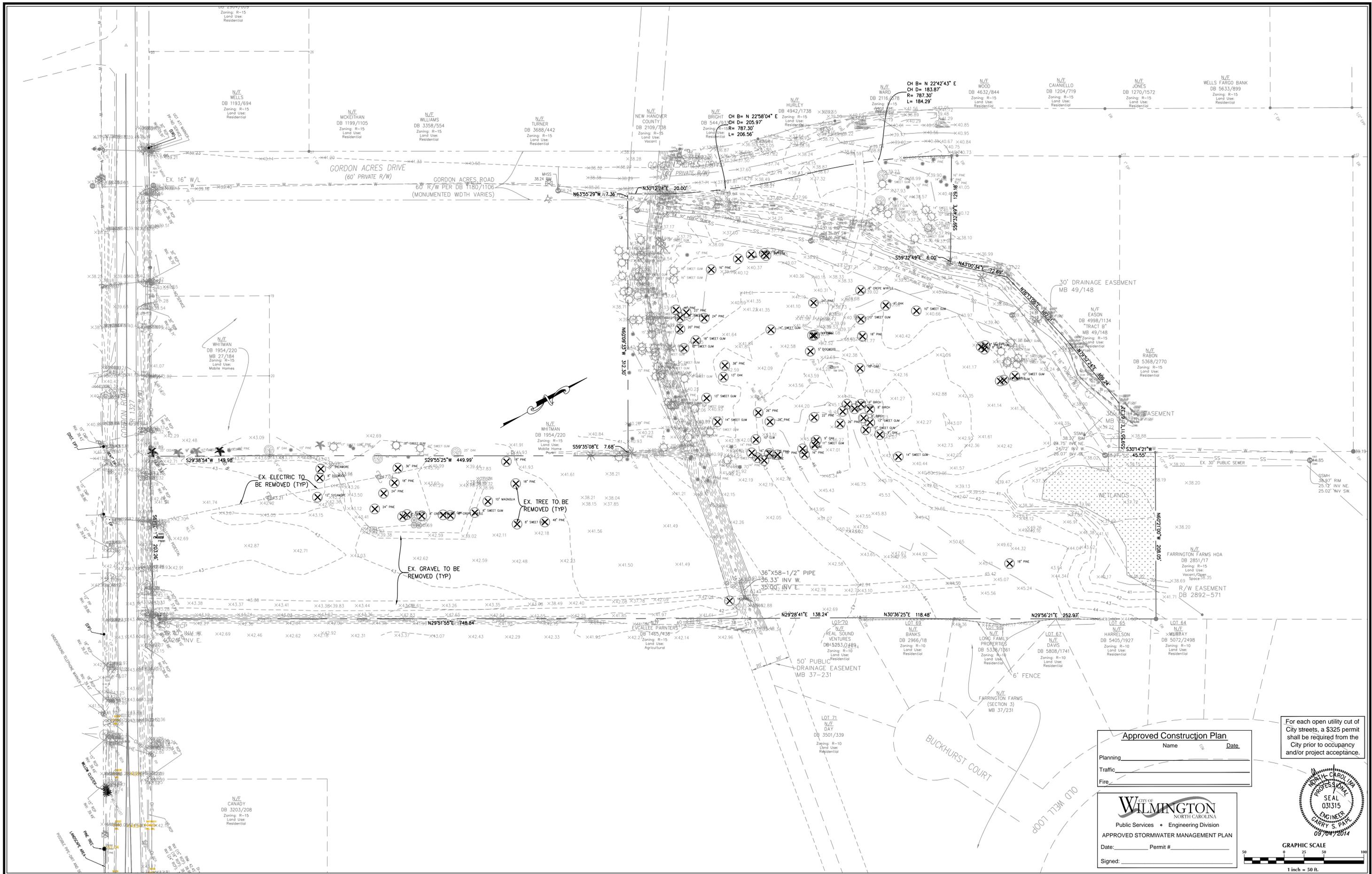
GENERAL NOTES

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING

6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-1



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

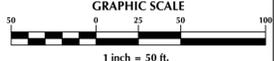
Fire _____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

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.



No.	Revision	Date	By

Designer	GSP	Scale	1" = 50'
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

Wilmington **New Hanover County** **North Carolina**

ELLINGTON FARMS

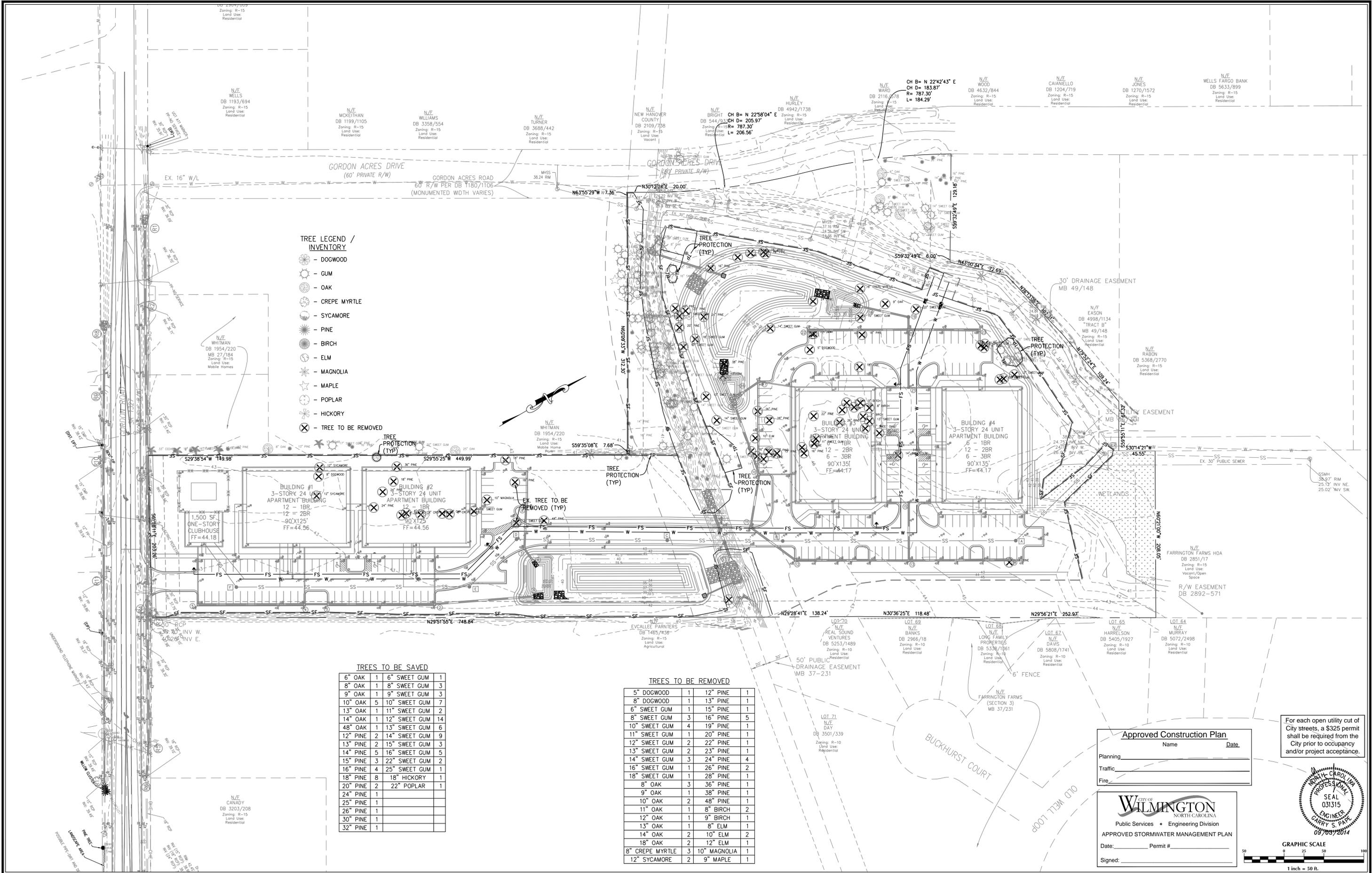
EXISTING CONDITIONS

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING

6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-2



TREE LEGEND / INVENTORY

- ⊗ - DOGWOOD
- ⊙ - GUM
- ⊙ - OAK
- ⊙ - CREPE MYRTLE
- ⊙ - SYCAMORE
- ⊙ - PINE
- ⊙ - BIRCH
- ⊙ - ELM
- ⊙ - MAGNOLIA
- ⊙ - MAPLE
- ⊙ - POPLAR
- ⊙ - HICKORY
- ⊗ - TREE TO BE REMOVED

TREES TO BE SAVED

6" OAK	1	6" SWEET GUM	3
8" OAK	1	8" SWEET GUM	3
9" OAK	1	9" SWEET GUM	3
10" OAK	5	10" SWEET GUM	7
13" OAK	1	11" SWEET GUM	2
14" OAK	1	12" SWEET GUM	14
48" OAK	1	13" SWEET GUM	6
12" PINE	2	14" SWEET GUM	9
13" PINE	2	15" SWEET GUM	3
14" PINE	5	16" SWEET GUM	2
15" PINE	3	22" SWEET GUM	5
16" PINE	4	25" SWEET GUM	1
18" PINE	8	18" HICKORY	1
20" PINE	2	22" POPLAR	1
24" PINE	1		
25" PINE	1		
26" PINE	1		
30" PINE	1		
32" PINE	1		

TREES TO BE REMOVED

5" DOGWOOD	1	12" PINE	1
8" DOGWOOD	1	13" PINE	1
6" SWEET GUM	1	15" PINE	1
8" SWEET GUM	3	16" PINE	5
10" SWEET GUM	4	19" PINE	1
11" SWEET GUM	1	20" PINE	1
12" SWEET GUM	2	22" PINE	1
13" SWEET GUM	2	23" PINE	1
14" SWEET GUM	3	24" PINE	4
16" SWEET GUM	1	26" PINE	2
18" SWEET GUM	1	28" PINE	1
8" OAK	3	36" PINE	1
9" OAK	1	38" PINE	1
10" OAK	2	48" PINE	1
11" OAK	1	8" BIRCH	2
12" OAK	1	9" BIRCH	1
13" OAK	1	8" ELM	1
14" OAK	2	10" ELM	2
18" OAK	2	12" ELM	1
8" CREPE MYRTLE	3	10" MAGNOLIA	1
12" SYCAMORE	2	9" MAPLE	1

No.	Revision	Date	By

Designer	GSP	Scale	1" = 50'
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

ELLINGTON FARMS
Wilmington New Hanover County North Carolina

SITE INVENTORY PLAN

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-2.1

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

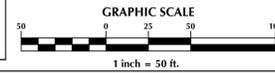
Fire _____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

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.



GORDON ACRES DRIVE
GORDON ACRES ROAD

NOTES: (60' PRIVATE R/W)
 1. DIRECTIONAL LIGHTING TO BE USED SO AS NOT TO AFFECT ADJACENT PROPERTIES
 2. MAXIMUM HEIGHT 10' FOR UNRESTRICTED LIGHTING (AND 15' FOR 90° CUTOFF LIGHTING (PER SECTION 18-213.2 (c) (8) OF CITY OF WILMINGTON LAND DEVELOPMENT CODE)

TYPICAL LIGHT DETAIL OR EQUIVALENT TRANSPORTATION NOTES:

1. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY & FOR DRIVEWAY ARE TO BE THERMOPLASTIC & MEET CITY AND/OR NCDOT STANDARDS.
2. TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
3. CONTACT TRAFFIC ENGINEERING, AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. ADD A NOTE TO CALL TRAFFIC ENGINEERING FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE R/W.
4. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
5. CONTACT KAREN DIXON AT 341-7888 TO DISCUSS SITE LIGHTING OPTIONS. THE LANDSCAPING PLAN WILL BE NEEDED TO DETERMINING SITE LIGHT LOCATIONS.
6. TACTILE WARNING MATS TO BE INSTALLED AT ALL WHEELCHAIR RAMP.
7. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
8. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
9. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CALL 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
10. INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
11. A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.
12. CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.

N/E
WHITMAN
DB 1954/220
MB 27/184
Zoning: R-15
Land Use:
Mobile Homes

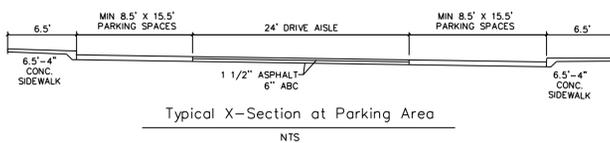
N/E
WHITMAN
DB 1954/220
Zoning: R-15
Land Use:
Mobile Home
Park

BUILDING #3
3-STORY 24 UNIT
APARTMENT BUILDING
6 - 1BR
12 - 2BR
6 - 3BR
90'x135'
FF=44.17

BUILDING #1
3-STORY 24 UNIT
APARTMENT BUILDING
12 - 1BR
12 - 2BR
90'x125'
FF=44.56

BUILDING #2
3-STORY 24 UNIT
APARTMENT BUILDING
12 - 1BR
12 - 2BR
90'x125'
FF=44.56

1,500 SF
ONE-STORY
CLUBHOUSE
FF=44.18



CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____
Signed: _____

Approved Construction Plan

Name _____ Date _____

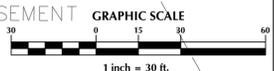
Planning _____
Traffic _____
Fire _____

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



LOT 70
N/E
REAL SOUND VENTURES
DB 5253/1489
Zoning: R-10
Land Use: Residential

50' PUBLIC DRAINAGE EASEMENT
MB 37-231



No.	Revision	Date	By

Designer	GSP	Scale	1" = 30'
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

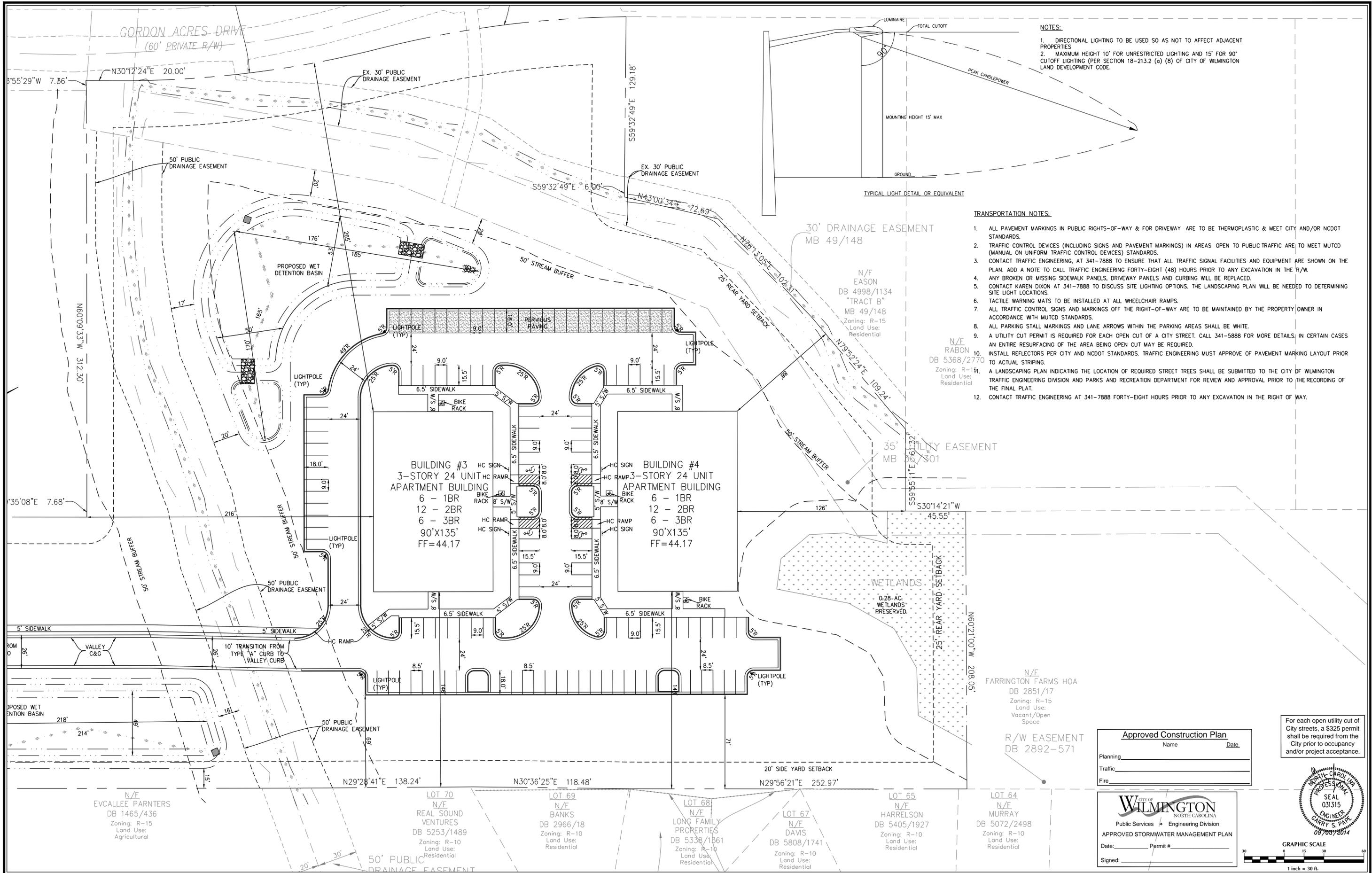
ELLINGTON FARMS
Wilmington New Hanover County North Carolina

SITE PLAN

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-3.2



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

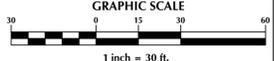
Fire _____

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

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____



No.	Revision	Date	By

Designer	GSP	Scale	1" = 30'
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

Wilmington **New Hanover County** **North Carolina**

ELLINGTON FARMS

SITE PLAN

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING

6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-3.3

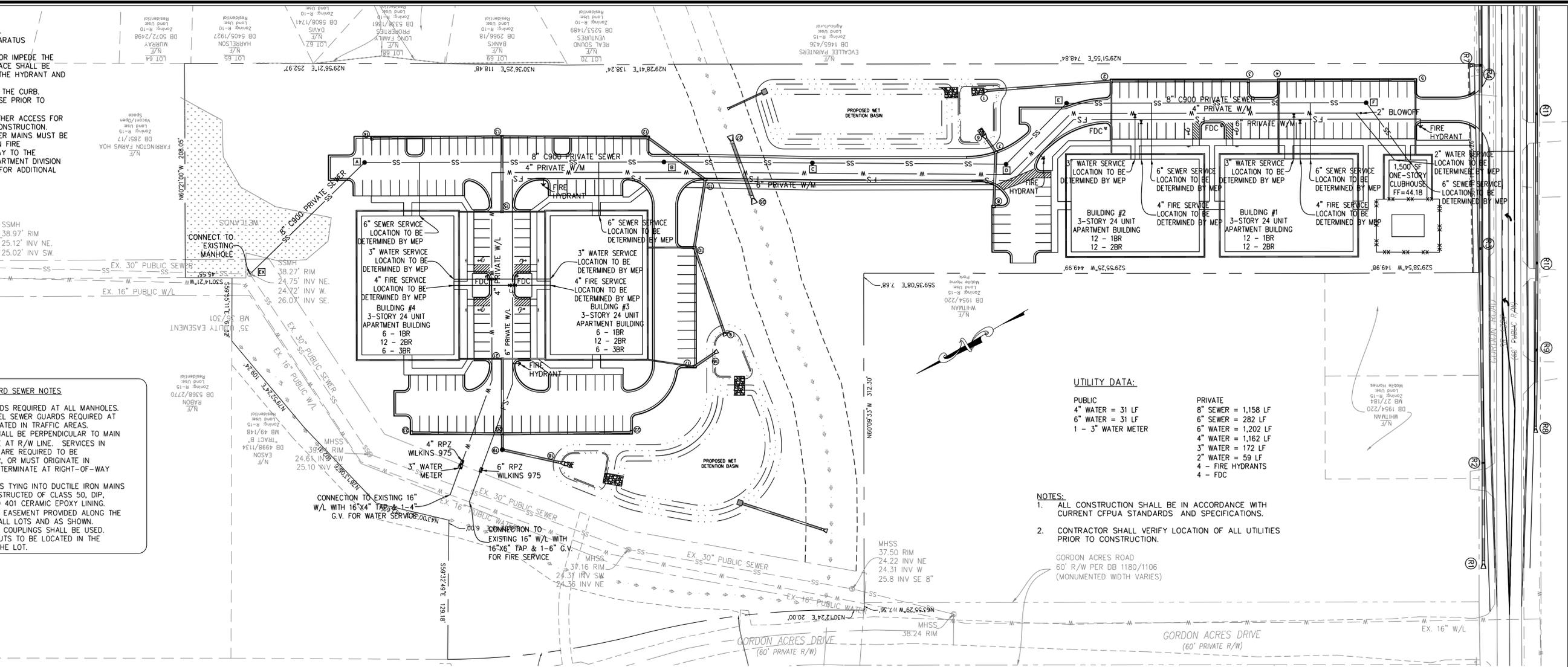
- FIRE DEPARTMENT NOTES:**
1. HYDRANT MUST BE WITHIN 150' OF THE FDC.
 2. THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
 3. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
 4. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
 5. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDING(S).
 6. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
 7. UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PRIVATE RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.

CFPUA STANDARD SEWER NOTES

1. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
2. SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT R/W LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
3. ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
4. 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN.
5. NO FLEXIBLE COUPLINGS SHALL BE USED.
6. ALL CLEANOUTS TO BE LOCATED IN THE CENTER OF THE LOT.

GENERAL UTILITY NOTES:

1. PROJECT SHALL COMPLY WITH CARP FEAR PUBLIC UTILITY AUTHORITY (CFPUA) CROSS CONNECTION REQUIREMENTS. WATER METERS CANNOT BE SET AND ACTIVATED ON NEW MAINS UNTIL ALL REQUIREMENTS ARE MET AND NCDENR HAS ISSUED THEIR "FINAL APPROVAL". CALL 332-6558 FOR INFORMATION.
2. IF THE CONTRACTOR DESIRES CFPUA WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
3. TO USE CFPUA WATER FOR IRRIGATION IT MUST BE METERED SEPARATELY.
4. WHEN PVC WATER MAINS AND/OR POLYETHYLENE SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND STRAPPED TO THE PIPES WITH DUCT TAPE. THE INSULATED WIRE IS TO BE STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES AND FITTINGS. THIS WIRE IS TO BE ACCESSIBLE AT ALL VALVES, FIRE HYDRANTS, AND WATER METER BOXES TO AID IN FUTURE LOCATIONS OF FACILITIES.
5. TREES ARE NOT TO BE PLANTED OVER WATER MAINS OR WITHIN UTILITY EASEMENTS.
6. STATE WATER AND SEWER PERMITS SHALL BE OBTAINED PRIOR TO RELEASE OF THE PROJECT FOR CONSTRUCTION.
7. ALL WATERMANS WITHIN PUBLIC RIGHT OF WAY TO BE PUBLIC AND ALL WATERMANS LOCATED ON PRIVATE PROPERTY TO BE PRIVATE.
8. POOL IS NOT TO DISCHARGE INTO THE CFPUA SEWER SYSTEM. CFPUA WILL CONSIDER THIS DISCHARGE ONLY IF FLOW IS DENIED INTO THE STORM DRAIN SYSTEM.
9. GATE VALVES TO BE LOCATED AT EACH DOMESTIC SERVICE LINE INTO BUILDINGS.
10. ALL WATERLINES TO HAVE MINIMUM 10' SEPARATION FROM ALL SEWER LINES, MANHOLES AND CLEANOUTS & TO HAVE 3' OF COVER AND 18" CLEARANCE WHERE WATER CROSSES OTHER UTILITY LINES.
11. ANY SANITARY SEWER SYSTEM OR ANY PORTION THEREOF, INCLUDING THE PUMP CHAMBER AND SERVICE CONNECTION PIPE TO THE COLLECTION MAIN, SHALL BE LOCATED AT LEAST A MINIMUM OF 10- FEET FROM ANY WATER LINE. SEWER LINES MAY CROSS A WATER LINE IF 18-INCH CLEAR SEPARATION DISTANCE IS MAINTAINED. WITH THE SEWER LINE CROSSING UNDER THE WATER LINE. WHEN CONDITIONS PREVENT AN 18-INCH CLEAR SEPARATION FROM BEING MAINTAINED OR WHENEVER IT IS NECESSARY FOR THE WATER LINE TO CROSS UNDER THE SEWER, THE SEWER LINE SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE OR ITS EQUIVALENT AND THE WATER LINE SHALL BE CONSTRUCTED OF FERROUS MATERIALS EQUIVALENT TO WATER MAIN STANDARDS WITH FOR A DISTANCE OF AT LEAST TEN FEET ON EACH SIDE OF THE POINT OF CROSSING, WITH FULL SECTIONS OF PIPE CENTERED AT THE POINT OF CROSSING.



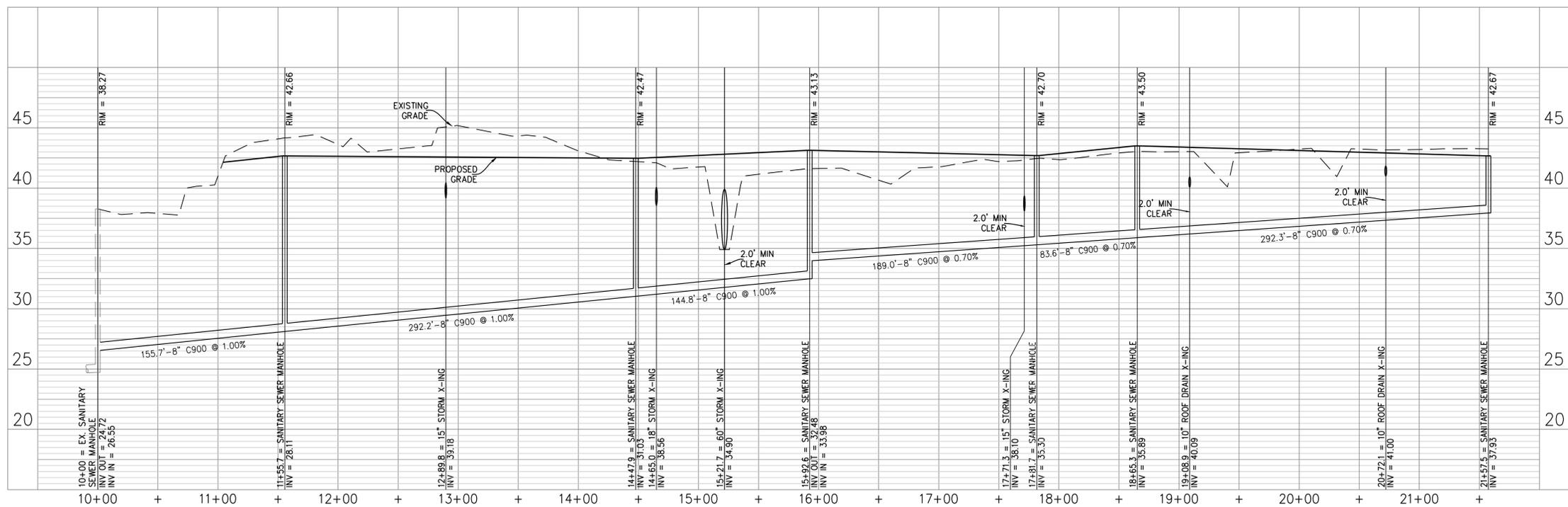
UTILITY DATA:

- PUBLIC**
- 4" WATER = 31 LF
 - 6" WATER = 31 LF
 - 1 - 3" WATER METER
- PRIVATE**
- 8" SEWER = 1,158 LF
 - 6" SEWER = 282 LF
 - 6" WATER = 1,202 LF
 - 4" WATER = 1,162 LF
 - 3" WATER = 172 LF
 - 2" WATER = 59 LF
 - 4 - FIRE HYDRANTS
 - 4 - FDC

NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT CFPUA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

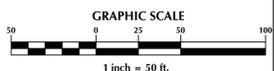
GORDON ACRES ROAD
60' R/W PER DB 1180/1106
(MONUMENTED WIDTH VARIES)



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

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

Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____



No.	Revision	Date	By

Designer	GSP	Scale	1" = 50'
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

ELLINGTON FARMS
New Hanover County
North Carolina

UTILITY PLAN

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-4

GORDON ACRES DRIVE
(60' PRIVATE R/W)
GORDON ACRES ROAD
60' R/W PER DB 1180/1106
(MONUMENTED WIDTH VARIES)

EX. 16" W/L

EROSION CONTROL NOTES

- SEDIMENT BASIN WILL BE PUMPED DOWN BY MECHANICAL MEANS WHEN SEDIMENT REACHES 50% STORAGE ELEVATION AND MUCKED OUT.
- PRIOR TO USE AS AN WET DETENTION BASIN, SEDIMENT BASIN WILL BE MUCKED OUT.
- PRIOR TO THE CREATION OF ANY IMPERVIOUS SURFACES THE FINAL POND DESIGN SHOULD BE BUILT. SEE SHEET C-6 FOR BASIN DETAILS.
- ALL OUTLET STRUCTURE OPENINGS TO BE CLOSED UNTIL SKIMMERS ARE REMOVED.
- ALL DITCH WORK WITHIN ROW TO BE COMPLETED AND EXCELSIOR MAT TO BE INSTALLED PRIOR TO ANY RAIN EVENT.

DRAINAGE NOTES

- ALL IMPERVIOUS SURFACES TO DRAIN TO PROPOSED WET DETENTION BASINS.
- ALL STORM INLETS WITHIN DISTURBANCE AREA TO HAVE EITHER INLET PROTECTION OR A SILT SACK INSTALLED SEE DETAILS ON SHEET C-7.
- SEDIMENT LADEN PUMP DISCHARGE IS ONLY ALLOWED IF ITS DISCHARGED AT OR BELOW 50 NTU'S WITHOUT EROSIIVE VELOCITY AT THE POINT OF DISCHARGE, INFILTRATED ONSITE OUTSIDE ANY WETLANDS WITH NO RUNOFF, OR BY USING PUMPS WITH A LIQUID INJECTION SYSTEM DISCHARGING INTO A DIRT BAG PLACED ON A STABLE SURFACE.

GRADING NOTES:

- ALL STORM INLETS WITHIN DISTURBANCE AREA TO HAVE EITHER INLET PROTECTION OR A SILT SACK INSTALLED SEE DETAILS ON SHEET C-7.

PUMPING NOTES:

- SEDIMENT LADEN PUMP DISCHARGE IS ONLY ALLOWED IF ITS DISCHARGED AT OR BELOW 50 NTU'S WITHOUT EROSIIVE VELOCITY AT THE POINT OF DISCHARGE, INFILTRATED ONSITE OUTSIDE ANY WETLANDS WITH NO RUNOFF, OR BY USING PUMPS WITH A LIQUID INJECTION SYSTEM DISCHARGING INTO A DIRT BAG PLACED ON A STABLE SURFACE.

STORM TABLE

FROM	TO	LENGTH (ft)	DIAMETER (in)	SLOPE (%)	INV. DN (ft)	INV. UP (ft)	RIM (ft)	MATERIAL
2	1	124	24	0.30%	38.00	38.37	42.51	HDPE
3	2	134	18	0.30%	38.37	38.77	42.51	HDPE
4	3	29	18	0.30%	38.77	38.86	42.51	HDPE
5	4	134	15	0.30%	38.86	39.26	42.16	HDPE
7	6	20	15	0.30%	38.00	38.06	42.52	HDPE
8	7	53	15	0.30%	38.06	38.22	42.52	HDPE
10	9	91	24	0.30%	38.00	38.27	42.26	HDPE
11	10	67	18	0.30%	38.27	38.47	41.98	HDPE
12	11	69	18	0.30%	38.47	38.68	42.10	HDPE
13	12	143	18	0.30%	38.68	39.11	42.10	HDPE
14	13	127	15	0.30%	39.11	39.49	42.10	HDPE
15	13	73	15	0.30%	39.11	39.33	42.39	HDPE
17	16	23	15	0.30%	38.00	38.07	41.80	HDPE
19	18	62	18	0.30%	38.00	38.19	41.50	HDPE
20	19	15	18	0.30%	38.19	38.23	42.01	HDPE
21	20	73	15	0.30%	38.23	38.45	42.39	HDPE
22	20	126	15	0.30%	38.23	38.61	41.83	HDPE
23	20	89	15	0.30%	38.23	38.50	42.01	HDPE
27	26	70	60	0.71%	34.60	35.10	N/A	RCP
POND #1 OUTLET	37	15	15	2.70%	37.00	38.00	N/A	HDPE
POND #2 OUTLET	87	24	24	4.00%	35.00	38.50	N/A	HDPE

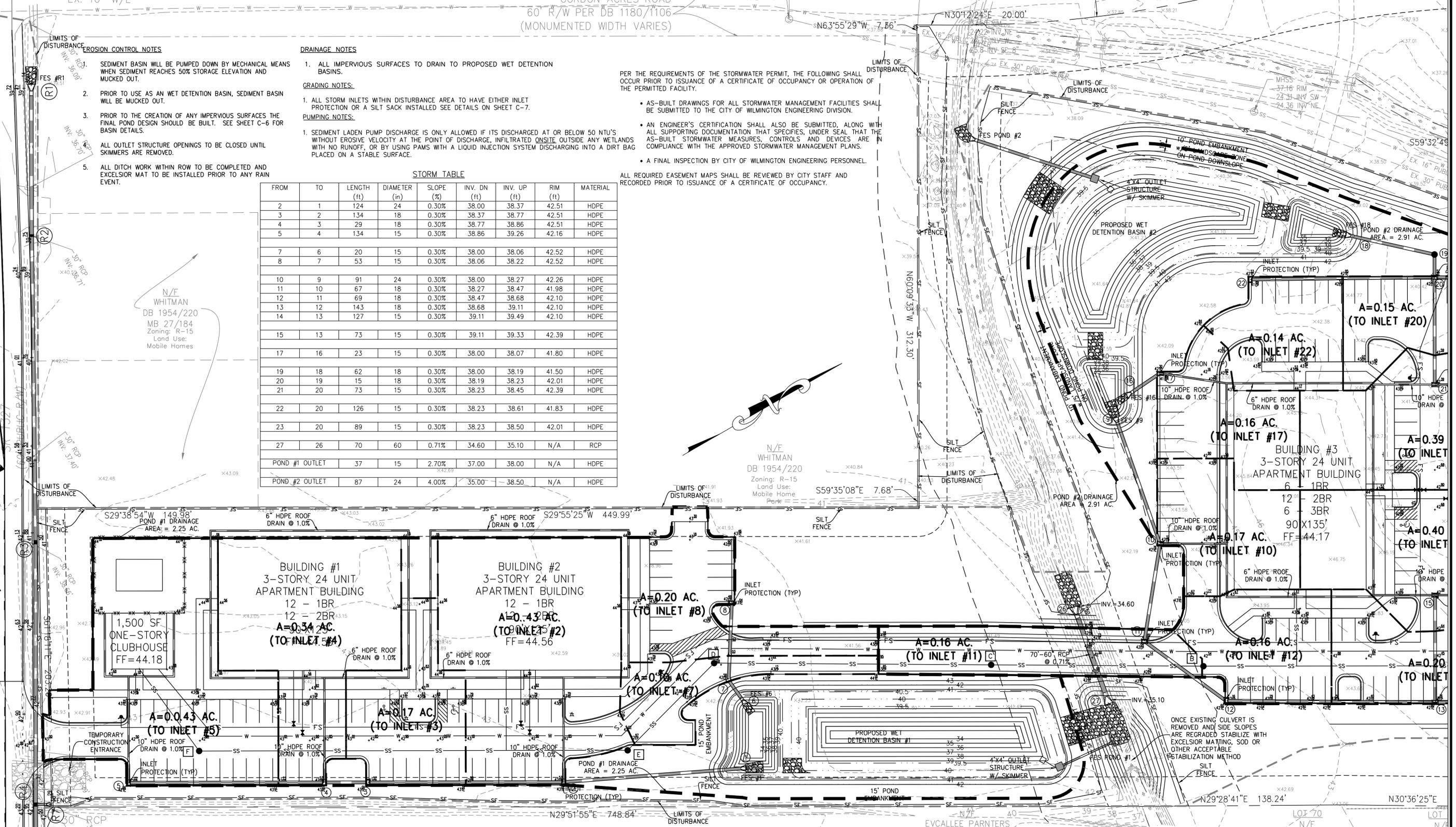
PER THE REQUIREMENTS OF THE STORMWATER PERMIT, THE FOLLOWING SHALL OCCUR PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY OR OPERATION OF THE PERMITTED FACILITY.

- AS-BUILT DRAWINGS FOR ALL STORMWATER MANAGEMENT FACILITIES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON ENGINEERING DIVISION.
- AN ENGINEER'S CERTIFICATION SHALL ALSO BE SUBMITTED, ALONG WITH ALL SUPPORTING DOCUMENTATION THAT SPECIFIES, UNDER SEAL THAT THE AS-BUILT STORMWATER MEASURES, CONTROLS AND DEVICES ARE IN COMPLIANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS.
- A FINAL INSPECTION BY CITY OF WILMINGTON ENGINEERING PERSONNEL.

ALL REQUIRED EASEMENT MAPS SHALL BE REVIEWED BY CITY STAFF AND RECORDED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

N/E WHITMAN
DB 1954/220
MB 27/184
Zoning: R-15
Land Use: Mobile Homes

N/E WHITMAN
DB 1954/220
Zoning: R-15
Land Use: Mobile Home



SEDIMENT BASIN CALCULATIONS

SEDIMENT TRAPPING DEVICE	DRAINAGE AREA (AC)	REQUIRED STORAGE (1,800CF/AC)	PROVIDED STORAGE (CF)	PEAK Q10 FLOW (CFS)	REQUIRED AREA (325 SF/CFS)	PROVIDED AREA (SF)	SKIMMER SIZE (in)
SEDIMENT BASIN #1	2.25	4,049	8,311	4.25	1,382	13,494	1.6

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

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

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____



50' PUBLIC DRAINAGE EASEMENT
MB 37-231

GRAPHIC SCALE
1 inch = 30 ft.

No.	Revision	Date	By

Designer: GSP
Scale: 1" = 30'
Drawn By: GSP
Date: JUNE 2014
License #: P-0718
Job No.: 2014-0001

ELLINGTON FARMS
Wilmington New Hanover County North Carolina

GRADING, DRAINAGE & EROSION & SEDIMENT CONTROL PLAN

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No. **C-5.1**

SEDIMENT BASIN CALCULATIONS

SEDIMENT TRAPPING DEVICE	DRAINAGE AREA (AC)	REQUIRED STORAGE (1,800CF/AC)	PROVIDED STORAGE (CF)	PEAK Q10 FLOW (CFS)	REQUIRED AREA (325 SF/CFS)	PROVIDED AREA (SF)	SKIMMER SIZE (in)
SEDIMENT BASIN #2	2.91	5,245	10,161	5.51	1,790	16,393	1.75

EROSION CONTROL NOTES

- SEDIMENT BASIN WILL BE PUMPED DOWN BY MECHANICAL MEANS WHEN SEDIMENT REACHES 50% STORAGE ELEVATION AND MUCKED OUT.
- PRIOR TO USE AS AN WET DETENTION BASIN, SEDIMENT BASIN WILL BE MUCKED OUT.
- PRIOR TO THE CREATION OF ANY IMPERVIOUS SURFACES THE FINAL POND DESIGN SHOULD BE BUILT. SEE SHEET C-6 FOR BASIN DETAILS.
- ALL OUTLET STRUCTURE OPENINGS TO BE CLOSED UNTIL SKIMMERS ARE REMOVED.
- ALL DITCH WORK WITHIN ROW TO BE COMPLETED AND EXCELSIOR MAT TO BE INSTALLED PRIOR TO ANY RAIN EVENT.

DRAINAGE NOTES

- ALL IMPERVIOUS SURFACES TO DRAIN TO PROPOSED WET DETENTION BASINS.

GRADING NOTES:

- ALL STORM INLETS WITHIN DISTURBANCE AREA TO HAVE EITHER INLET PROTECTION OR A SILT SACK INSTALLED SEE DETAILS ON SHEET C-7.

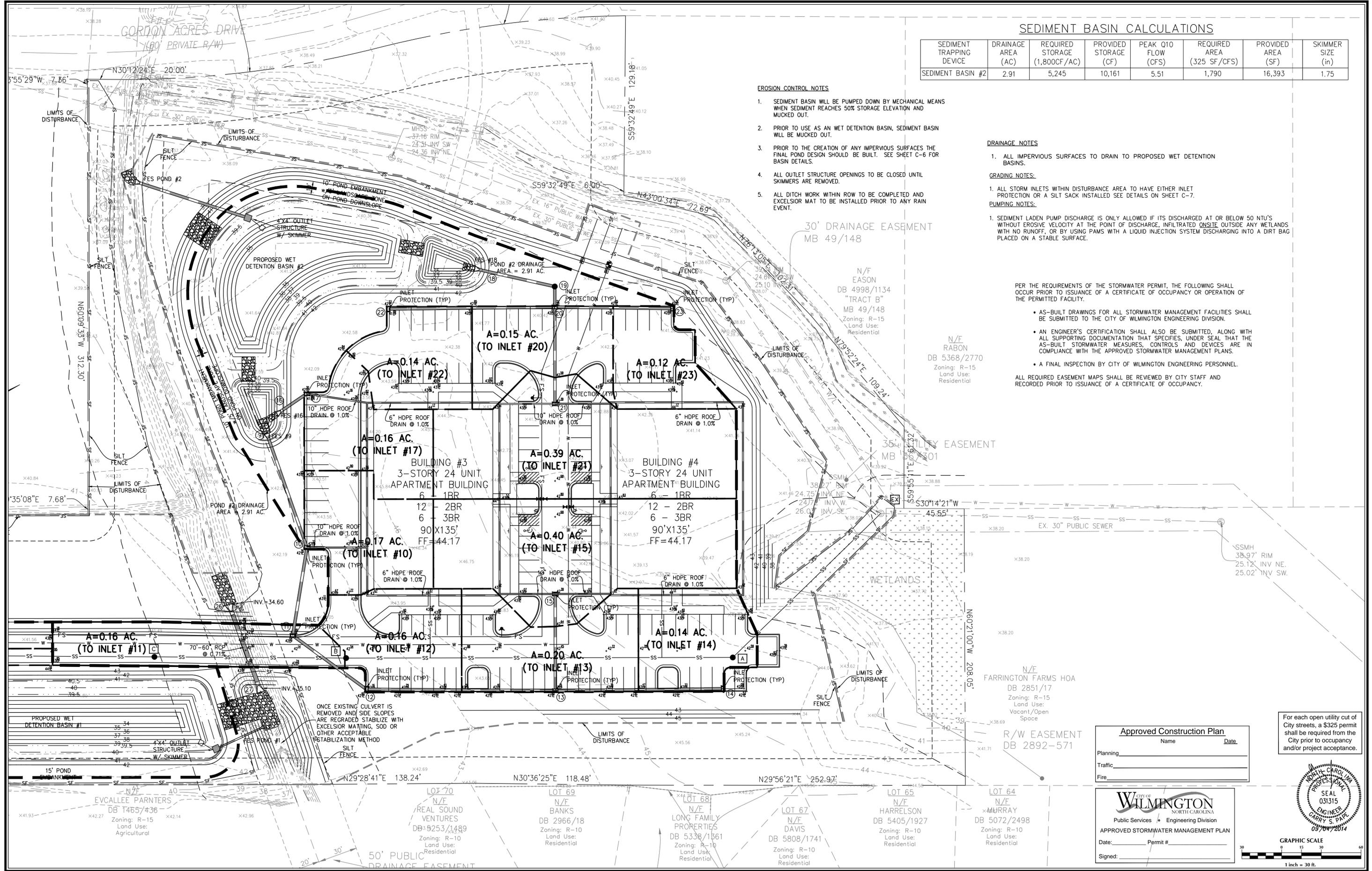
PUMPING NOTES:

- SEDIMENT LADEN PUMP DISCHARGE IS ONLY ALLOWED IF ITS DISCHARGED AT OR BELOW 50 NTU'S WITHOUT ERODIVE VELOCITY AT THE POINT OF DISCHARGE, INFILTRATED ON SITE OUTSIDE ANY WETLANDS WITH NO RUNOFF, OR BY USING PAMS WITH A LIQUID INJECTION SYSTEM DISCHARGING INTO A DIRT BAG PLACED ON A STABLE SURFACE.

PER THE REQUIREMENTS OF THE STORMWATER PERMIT, THE FOLLOWING SHALL OCCUR PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY OR OPERATION OF THE PERMITTED FACILITY.

- AS-BUILT DRAWINGS FOR ALL STORMWATER MANAGEMENT FACILITIES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON ENGINEERING DIVISION.
- AN ENGINEER'S CERTIFICATION SHALL ALSO BE SUBMITTED, ALONG WITH ALL SUPPORTING DOCUMENTATION THAT SPECIFIES, UNDER SEAL THAT THE AS-BUILT STORMWATER MEASURES, CONTROLS AND DEVICES ARE IN COMPLIANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS.
- A FINAL INSPECTION BY CITY OF WILMINGTON ENGINEERING PERSONNEL.

ALL REQUIRED EASEMENT MAPS SHALL BE REVIEWED BY CITY STAFF AND RECORDED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

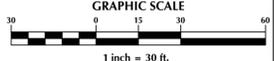
Fire _____

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

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____



No.	Revision	Date	By

Designer	GSP	Scale	1" = 30'
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

Wilmington **New Hanover County** **North Carolina**

ELLINGTON FARMS

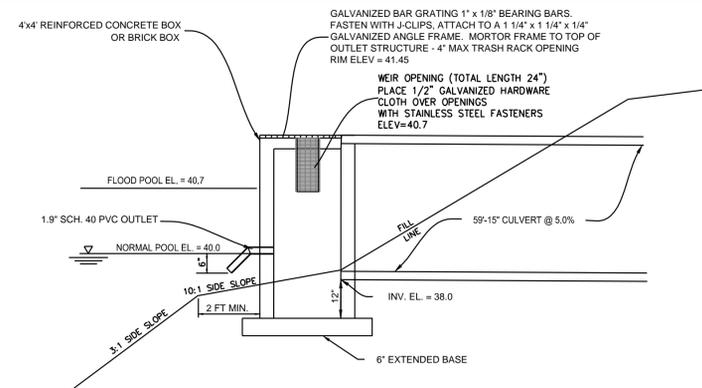
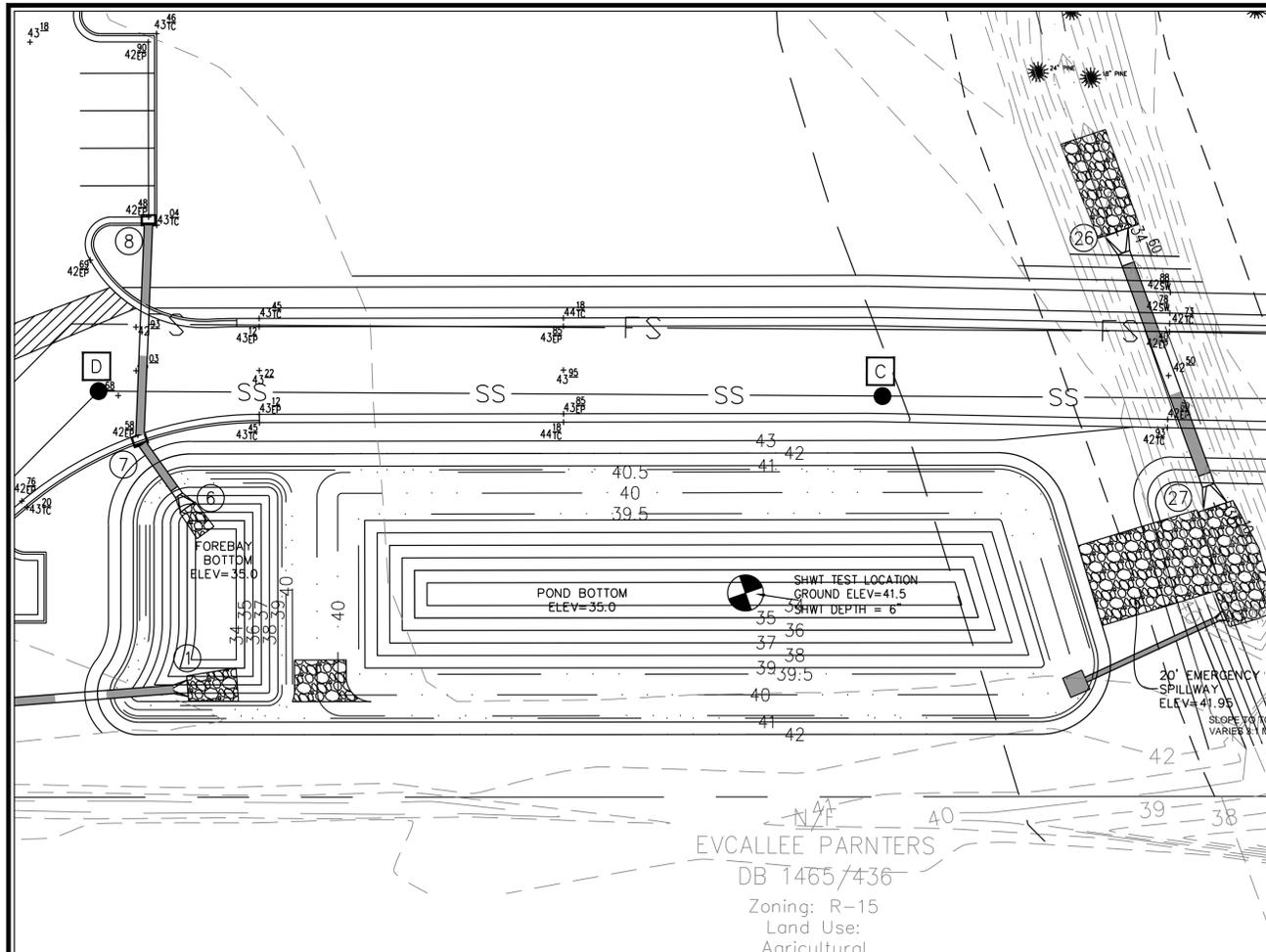
GRADING, DRAINAGE & EROSION & SEDIMENT CONTROL PLAN

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

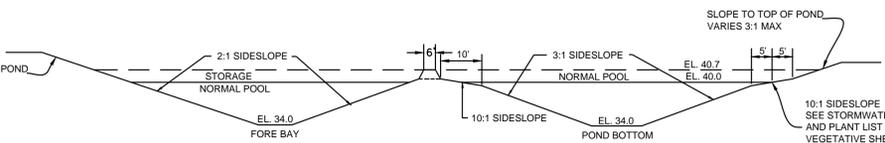
GSP CONSULTING, PLLC
ENGINEERING

6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-5.2

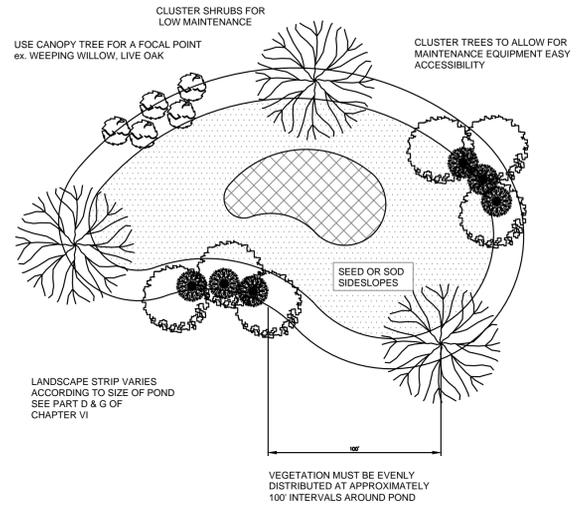


- NOTES:**
- DESIGN ELEVATIONS FOR WET DETENTION BASIN ARE TO AN ELEVATION OF 35.0 IN THE MAIN POND AND 35.0 IN THE FOREBAY WITH SEDIMENT STORAGE DOWN TO 34.0 IN THE MAIN POND AND 34.0 IN THE FOREBAY.
 - SEASON HIGH WATER TABLE WAS TAKEN AT A GROUND ELEVATION OF 41.5 AND ESTIMATED TO BE 6 INCHES FOR AN ELEVATION OF 41.0.
 - ALL IMPERVIOUS SITE AREA TO BE DRAINED TO PROPOSED STORM SEWER SYSTEM AND DISCHARGED TO THE WET DETENTION POND.
 - POND WILL BE PUMPED DOWN BY MECHANICAL MEANS IN CASE OF EMERGENCY.
 - PRIOR TO USE AS A WET DETENTION BASIN, SEDIMENT BASIN WILL BE MUCKED OUT.
 - POND SIDE SLOPES TO BE SODDED WITH CENTIPEDE GRASS OR EQUIVALENT.
 - ALL SLOPES ABOVE PERMANENT POOL TO BE 3:1 MAX.



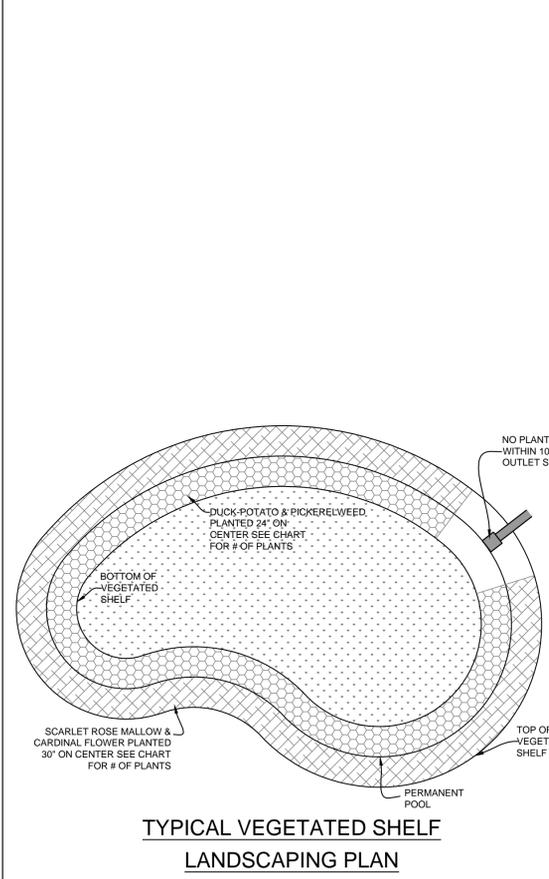
NORMAL POOL ELEVATION	SHELF BOTTOM ELEVATION	POND DEPTH (FT)	SHELF BOTTOM AREA (SF)	POND BOTTOM AREA (SF)	SURFACE AREA PROVIDED (SF)	SURFACE AREA REQUIRED (SF)	AVERAGE POND DEPTH (FT)
40.0	39.5	4.5	8,019	1,659	10,251	7,141	3.0

POND CROSS-SECTION
N.T.S.



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

TYPICAL STORM WATER FACILITY LANDSCAPING PLAN
SD 15-16
*LANDSCAPING TO BE DONE PER APPROVED LANDSCAPE PLAN



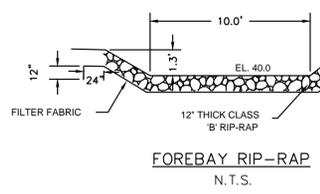
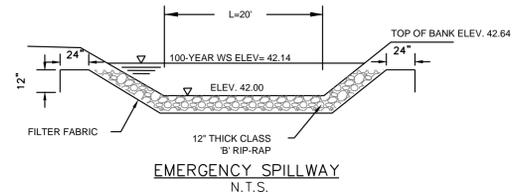
SHALLOW WATER COMMUNITY (NORMAL POOL TO SHELF BOTTOM) = 1,973 S.F.
@ 1 PLANT PER 4 SF (24" O.C.) - 494 PLANTS

PLANT TYPE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER	HEIGHT	NOTES
HERBACEOUS	247	Sagittaria latifolia	Duck Potato	CONT.	4" Pot	24" O.C.	
HERBACEOUS	247	Pontederia cordata	Pickerelweed	CONT.	4" Pot	24" O.C.	

SHALLOW LAND COMMUNITY (NORMAL POOL TO SHELF TOP) = 2,083 S.F.
@ 1 PLANT PER 6.25 SF (30" O.C.) - 334 PLANTS

PLANT TYPE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER	HEIGHT	NOTES
HERBACEOUS	167	Hibiscus coccineus	Scarlet Rose Mallow	CONT.	4" Pot	30" O.C.	
HERBACEOUS	167	Lobelia cardinalis	Cardinal Flower	CONT.	4" Pot	30" O.C.	

- NOTES:**
- NO PLANTINGS WITHIN 10' OF OUTLET STRUCTURE.
 - BECAUSE MOST STORMWATER BASINS ARE EXCAVATED TO DEEP SUB-SOILS, THEY OFTEN LACK THE NUTRIENTS AND ORGANIC MATTER NEEDED TO SUPPORT VIGOROUS GROWTH OF PLANTS. ALL LANDSCAPE MATERIAL, INCLUDING GRASS, SHOULD BE PLANTED IN GOOD TOPSOIL. NATIVE UNDERLYING SOILS MAY BE SUITABLE FOR PLANTING IF AMENDED WITH 4 INCHES OF WELL-AGED COMPOST TILLED INTO THE SUBGRADE. COMPOST SHOULD MEET SPECIFICATIONS FOR GRADE A COMPOST QUALITY.
 - A MINIMUM TWO-YEAR WARRANTY PERIOD STIPULATING REQUIREMENTS FOR PLANT SURVIVAL/REPLACEMENT.



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

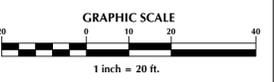
Fire _____

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

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.



No.	Revision	Date	By	Designer	Scale
				GSP	1" = 20'
				GSP	JUNE 2014
				P-0718	2014-0001

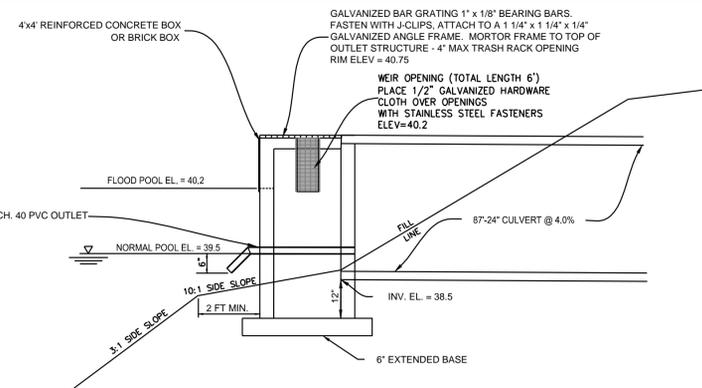
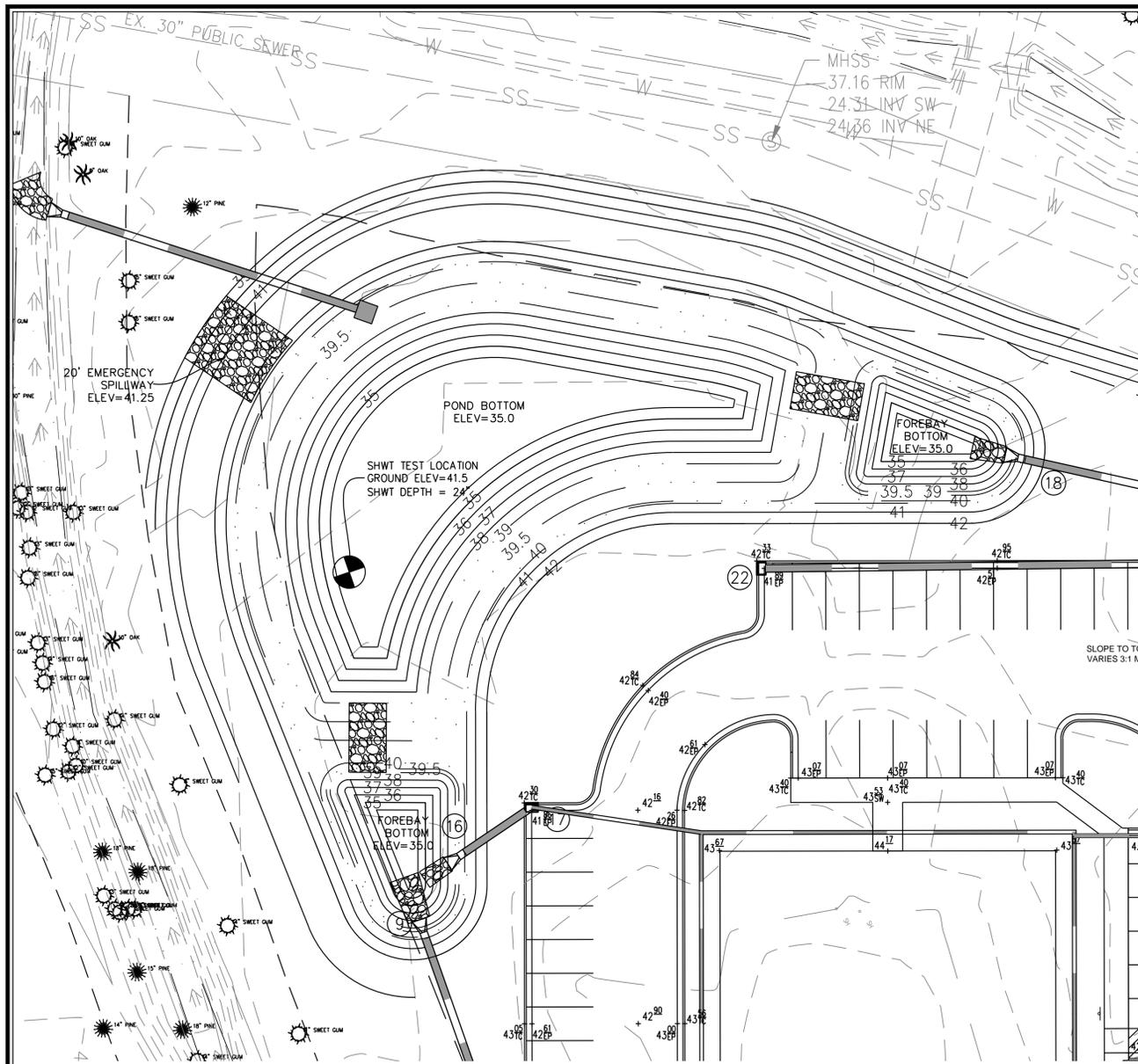
ELLINGTON FARMS
New Hanover County
Wilmington North Carolina

WET DETENTION DETAILS
POND #1

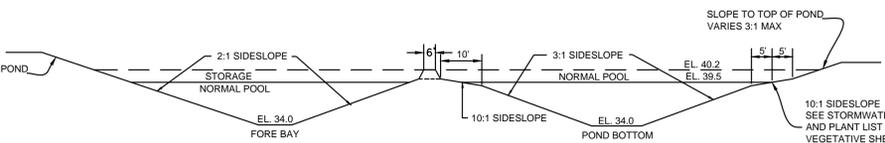
PREPARED FOR:
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GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-6.1

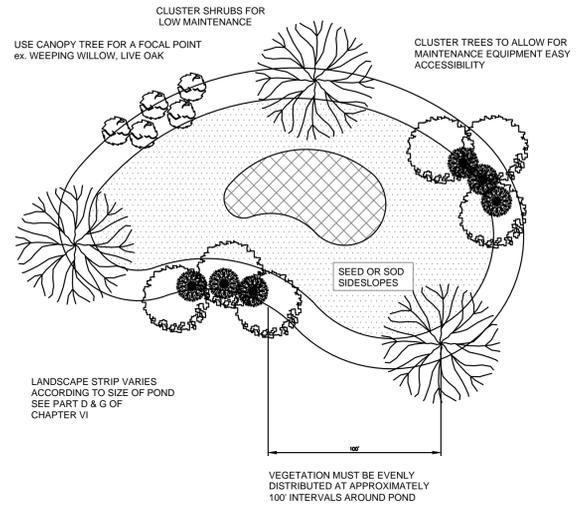


- NOTES:**
- DESIGN ELEVATIONS FOR WET DETENTION BASIN ARE TO AN ELEVATION OF 35.0 IN THE MAIN POND AND 35.0 IN THE FOREBAY WITH SEDIMENT STORAGE DOWN TO 34.0 IN THE MAIN POND AND 34.0 IN THE FOREBAY.
 - SEASON HIGH WATER TABLE WAS TAKEN AT A GROUND ELEVATION OF 41.5 AND ESTIMATED TO BE 24 INCHES FOR AN ELEVATION OF 39.5, WHICH IS WITHIN 6" OF THE PERMANENT POOL ELEVATION OF 39.5.
 - ALL IMPERVIOUS SITE AREA TO BE DRAINED TO PROPOSED STORM SEWER SYSTEM AND DISCHARGED TO THE WET DETENTION POND.
 - POND WILL BE PUMPED DOWN BY MECHANICAL MEANS IN CASE OF EMERGENCY.
 - PRIOR TO USE AS A WET DETENTION BASIN, SEDIMENT BASIN WILL BE MUCKED OUT.
 - POND SIDE SLOPES TO BE SODDED WITH CENTIPEDE GRASS OR EQUIVALENT.
 - ALL SLOPES ABOVE PERMANENT POOL TO BE 3:1 MAX.



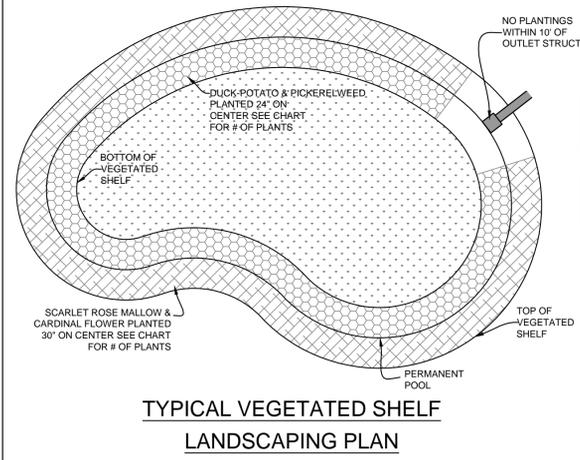
NORMAL POOL ELEVATION	SHELF BOTTOM ELEVATION	POND DEPTH (FT)	SHELF BOTTOM AREA (SF)	POND BOTTOM AREA (SF)	SURFACE AREA PROVIDED (SF)	SURFACE AREA REQUIRED (SF)	AVERAGE POND DEPTH (FT)
39.5	39.0	4.0	10,244	4,202	12,638	8,003	3.5

POND CROSS-SECTION
N.T.S.



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

TYPICAL STORM WATER FACILITY LANDSCAPING PLAN
SD 15-16
LANDSCAPING TO BE DONE PER APPROVED LANDSCAPE PLAN



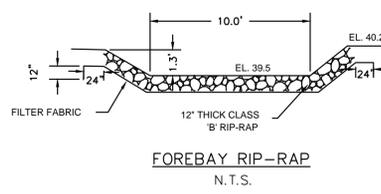
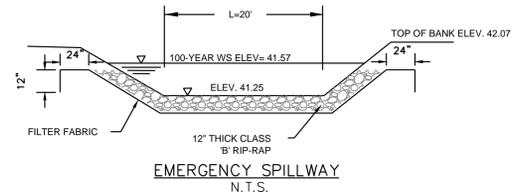
SHALLOW WATER COMMUNITY (NORMAL POOL TO SHELF BOTTOM) = 2,006 S.F.
@ 1 PLANT PER 4 SF (24" O.C.) = 502 PLANTS

PLANT TYPE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER	HEIGHT	NOTES
HERBACEOUS	251	Sagittaria latifolia	Duck Potato	CONT.	4" Pot		24" O.C.
HERBACEOUS	251	Pontederia cordata	Pickerelweed	CONT.	4" Pot		24" O.C.

SHALLOW LAND COMMUNITY (NORMAL POOL TO SHELF TOP) = 2,152 S.F.
@ 1 PLANT PER 6.25 SF (30" O.C.) = 344 PLANTS

PLANT TYPE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER	HEIGHT	NOTES
HERBACEOUS	172	Hibiscus coccineus	Scarlet Rose Mallow	CONT.	4" Pot		30" O.C.
HERBACEOUS	172	Lobelia cardinalis	Cardinal Flower	CONT.	4" Pot		30" O.C.

- NOTES:**
- NO PLANTINGS WITHIN 10' OF OUTLET STRUCTURE.
 - BECAUSE MOST STORMWATER BASINS ARE EXCAVATED TO DEEP SUB-SOILS, THEY OFTEN LACK THE NUTRIENTS AND ORGANIC MATTER NEEDED TO SUPPORT VIGOROUS GROWTH OF PLANTS. ALL LANDSCAPE MATERIAL, INCLUDING GRASS, SHOULD BE PLANTED IN GOOD TOPSOIL. NATIVE UNDERLYING SOILS MAY BE SUITABLE FOR PLANTING IF AMENDED WITH 4 INCHES OF WELL-AGED COMPOST TILLED INTO THE SUBGRADE. COMPOST SHOULD MEET SPECIFICATIONS FOR GRADE A COMPOST QUALITY.
 - A MINIMUM TWO-YEAR WARRANTY PERIOD STIPULATING REQUIREMENTS FOR PLANT SURVIVAL/REPLACEMENT.



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

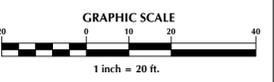
Fire _____

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____

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No.	Revision	Date	By

Designer	GSP	Scale	1" = 20'
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

Wilmington **New Hanover County** **North Carolina**

ELLINGTON FARMS

WET DETENTION DETAILS

POND #2

PREPARED FOR:

ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC

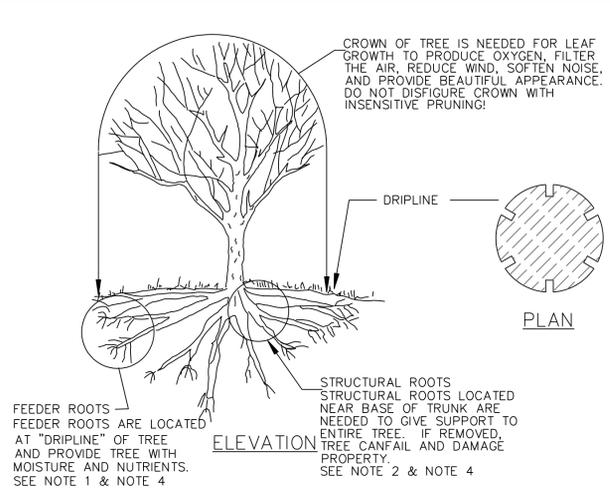
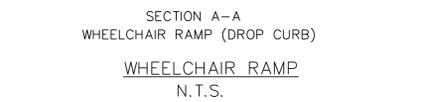
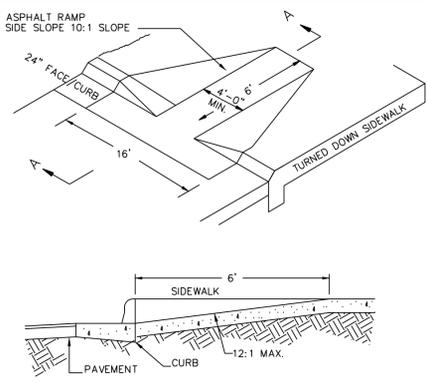
ENGINEERING

6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

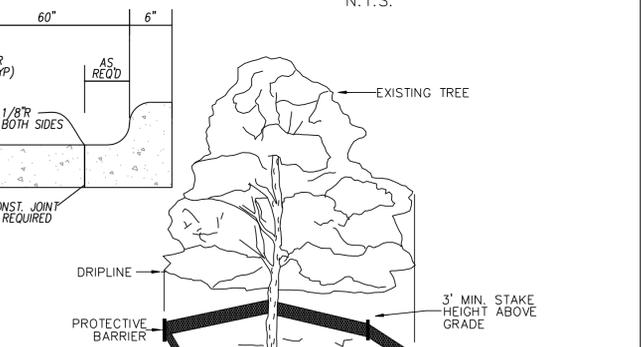
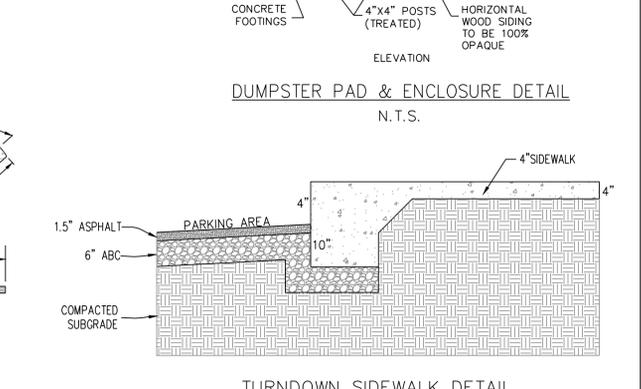
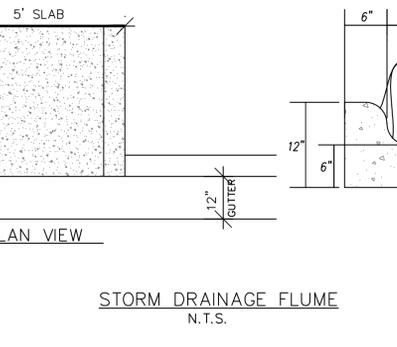
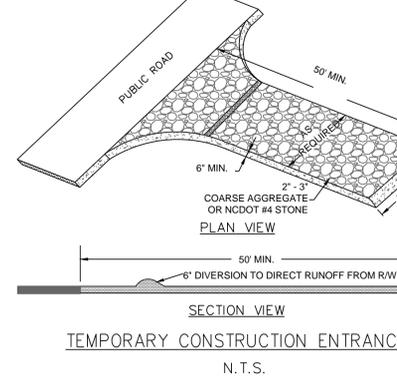
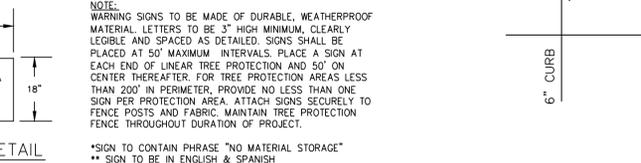
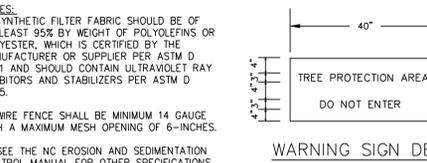
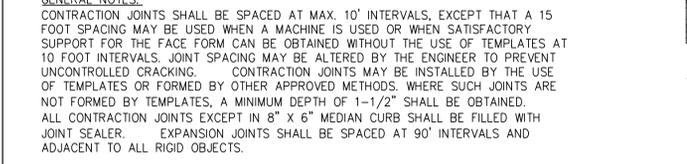
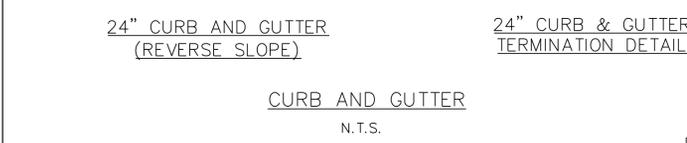
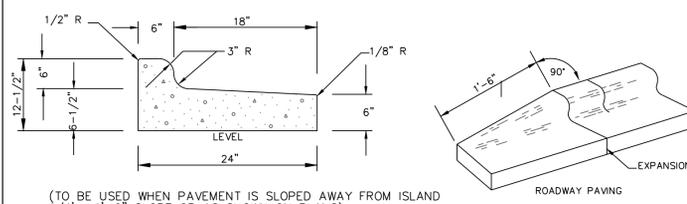
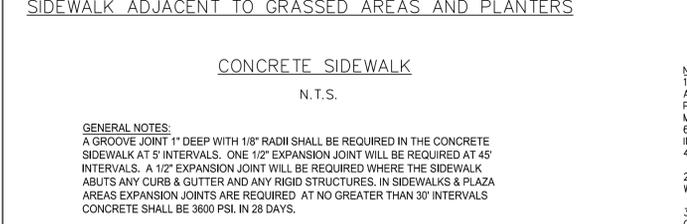
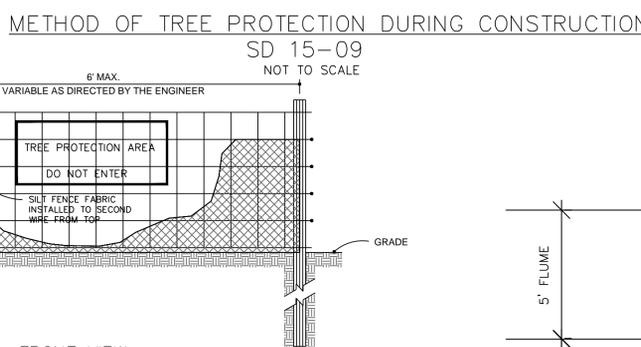
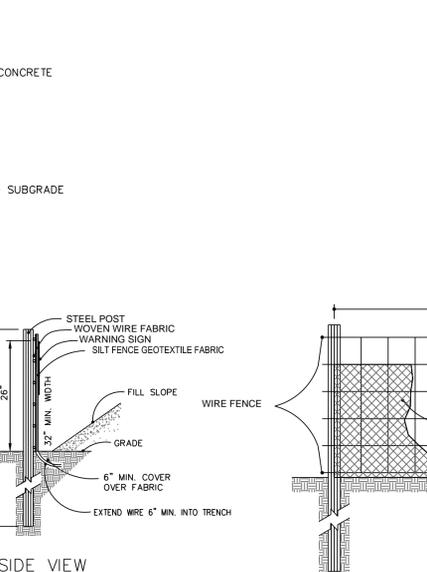
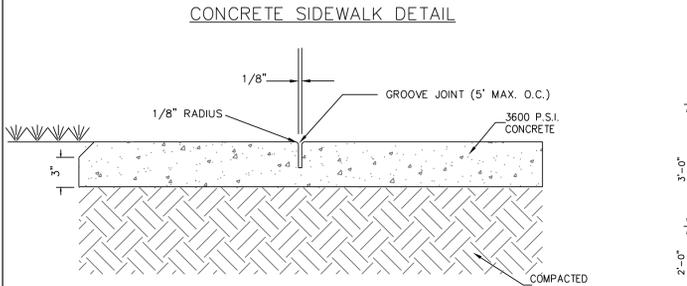
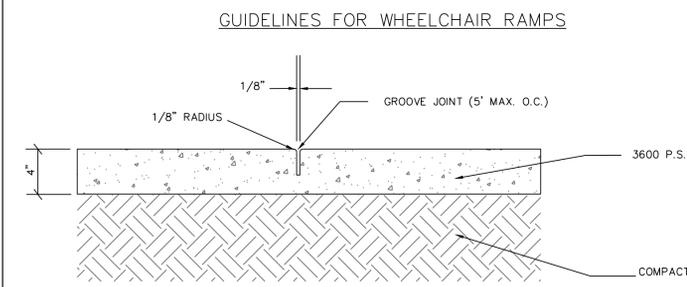
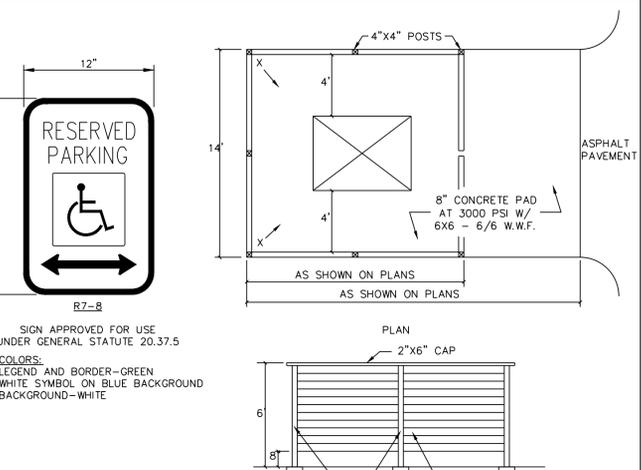
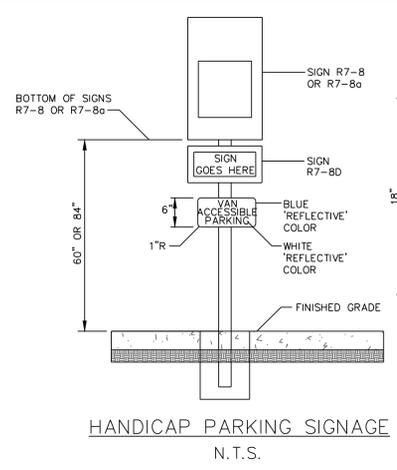
Sheet No.

C-6.2

- GENERAL NOTES**
- I. LOCATION OF WHEELCHAIR RAMPS:**
- IN ACCORDANCE WITH THE RATIFIED HOUSE BILL 1296, ALL STREET CURBS IN NORTH CAROLINA BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY HANDICAPPED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTERS AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
 - WHEELCHAIR RAMPS SHOULD BE LOCATED AS INDICATED IN DETAIL DRAWINGS, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
- II. CONSTRUCTION NOTES:**
- NO SLOPE SHALL EXCEED 1"-1" (12:1) ON THE RAMP OR SIDEWALK.
 - IN NO CASE SHALL THE WIDTH OF WHEELCHAIR RAMPS BE LESS THAN 40" (3'-4"), WIDTHS MAY EXCEED 40" IF NECESSARY.
 - USE CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
 - 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
 - CONSTRUCTION METHODS SHALL CONFORM WITH THOSE OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.
- III. ADDITIONAL NOTES:**
- THE INSIDE PEDESTRIAN CROSSWALK LINES SHALL BE ESTABLISHED BY BISECTING THE INTERSECTION RADII WHERE MARKED (SEE NOTE 6).
 - THE WHEELCHAIR RAMP SHALL BE LOCATED SO THAT THE BEGINNING OF THE WHEEL CHAIR RAMP WILL BE TWO FEET FROM THE INSIDE PEDESTRIAN CROSSWALK LINE.
 - THE WIDTH OF THE PEDESTRIAN CROSSWALK SHALL BE 10 FEET UNLESS A GREATER WIDTH IS REQUIRED TO ACCOMMODATE THE PEDESTRIAN TRAFFIC.
 - STOP BARS SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN, OR OTHER LEGAL REQUIREMENTS.
 - PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
 - ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. THIS IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402.



- METHOD OF TREE PROTECTION DURING CONSTRUCTION**
- SD 15-09
NOT TO SCALE
- 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. A PROTECTIVE BARRIER SHOULD PREVENT DAMAGE FROM OCCURING DURING CONSTRUCTION.
 - 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.
 - AVOID CUT AND FILL WITHIN DIAMETER OF TREE CROWN DURING EXCAVATION.



No.	Revision	Date	By

ELLINGTON FARMS
New Hanover County
North Carolina

STANDARD DETAILS

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-7

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

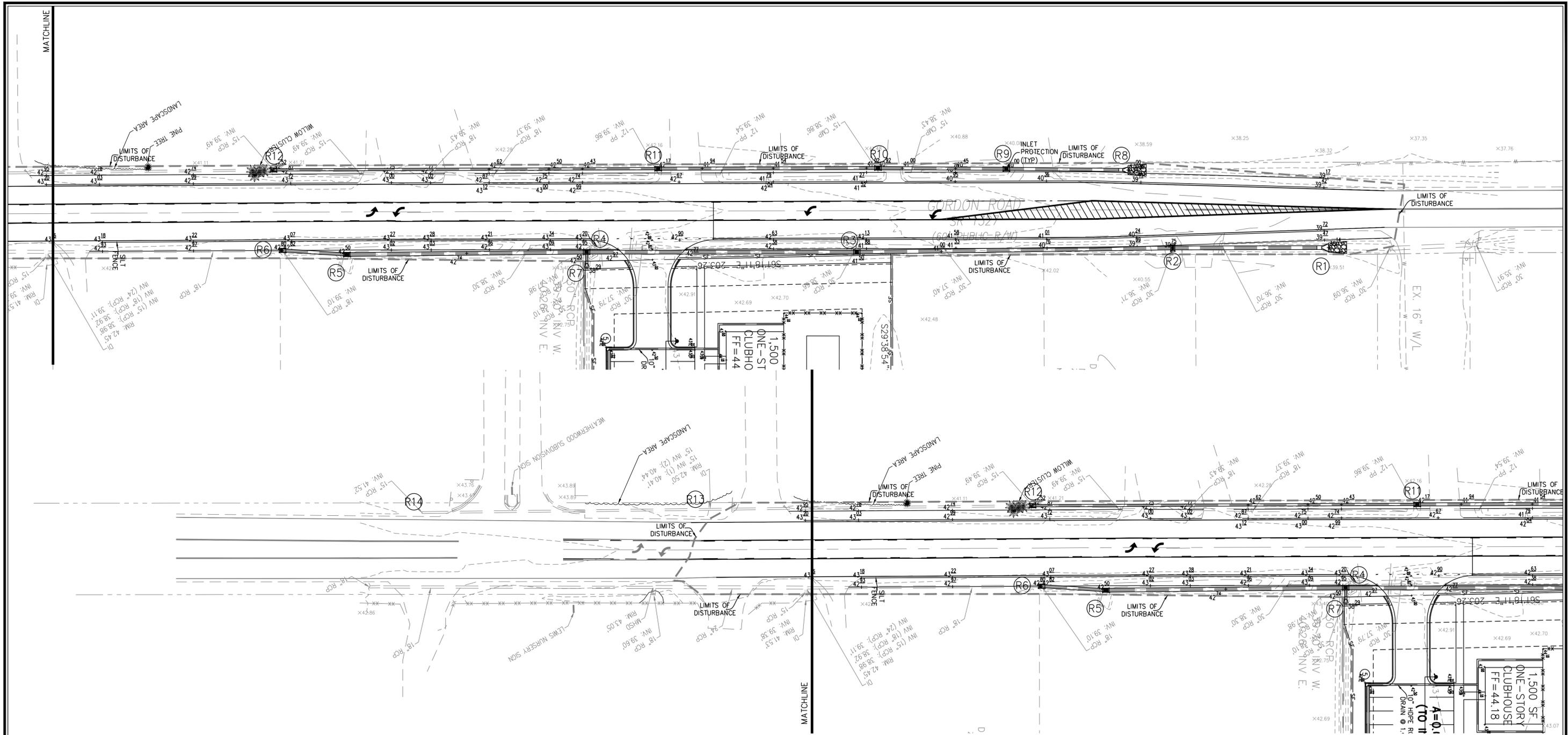
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

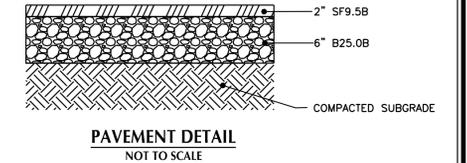
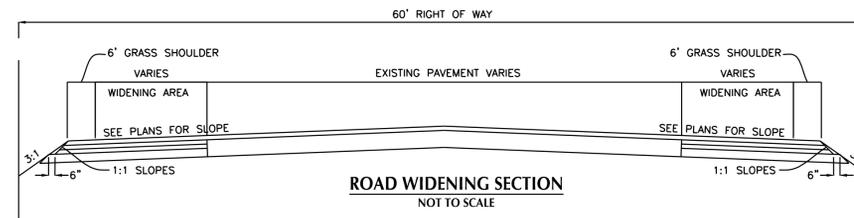
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON
NORTH CAROLINA
Professional Engineer
SEAL
031315
CARY S. PARK
09/04/2014



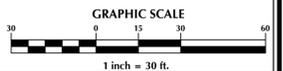
STORM TABLE

FROM	TO	LENGTH	DIAMETER	SLOPE	INV DN	INV UP	RIM	MATERIAL
R2	R1	103	24	0.43%	36.14	36.58	39.75	RCP
R3	R2	208	24	0.43%	36.58	37.47	41.50	RCP
R4	R3	178	24	0.43%	37.47	38.24	42.50	RCP
R5	R4	158	24	0.43%	38.24	38.92	42.50	RCP
R6	R5	42	24	0.43%	38.92	39.10	42.80	RCP
R7	R4	10	24	0.50%	38.24	38.29		RCP
R9	R8	80	18	0.44%	37.00	37.35	40.00	RCP
R10	R9	85	18	0.45%	37.35	37.73	40.92	RCP
R11	R10	145	15	0.44%	37.73	38.37	42.17	RCP
R12	R11	254	15	0.44%	38.37	39.49	42.52	RCP
R13	R12	212	15	0.45%	39.49	40.44	42.50	RCP
R14	R13	190	15	0.57%	40.44	41.52		RCP



NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT NCDOT STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
2. SPEED LIMIT ON GORDON ROAD IS 45 MPH.
3. ALL WORK WITHIN ROW TO BE COMPLETED AND EXCELSIOR MAT TO BE INSTALLED PRIOR TO ANY RAIN EVENT AS NEEDED



No.	Revision	Date	By

Designer	GSP	Scale	1" = 30'
Drawn By	GSP	Date	JUNE 2014
License #	P-0718	Job No.	2014-0001

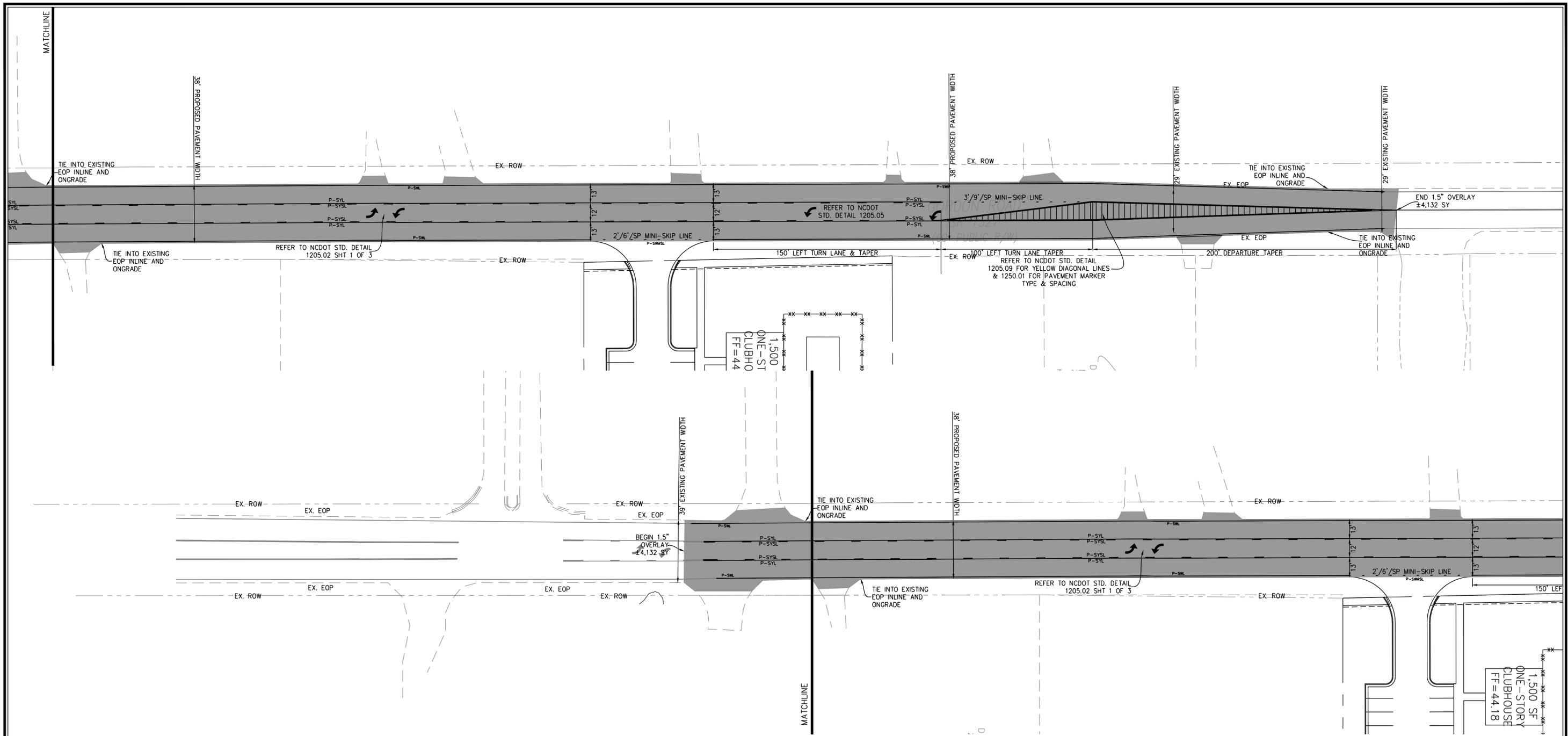
Wilmington **New Hanover County** **North Carolina**

GORDON ROAD (S.R. 1327)
ROADWAY IMPROVEMENTS PLAN

PREPARED FOR:
ELLINGTON FARMS APARTMENTS, LLC
6626-C GORDON ROAD
WILMINGTON, NC 28411
910-799-3006

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

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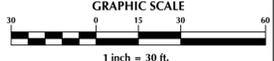


PAVEMENT MARKING LEGEND

- P-DYL = PROPOSED NEW DOUBLE YELLOW LINE
- P-SWL = PROPOSED SINGLE WHITE LINE
- P-SWSL = PROPOSED NEW WHITE SKIP LINE
- P-SWMSL = PROPOSED SINGLE WHITE MINI SKIP LINE
- P-SYL = PROPOSED SINGLE YELLOW LINE
- P-SYSL = PROPOSED NEW YELLOW SKIP LINE
- P-SYMSL = PROPOSED SINGLE YELLOW MINI SKIP LINE

- NOTES:**
1. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
 2. ALL PAVEMENT MARKINGS SHALL BE TIED TO EXISTING MARKINGS.
 3. ALL STRIPING TO BE PREMARKED AND INSPECTED BY TRAFFIC SERVICES.
 4. REFER TO DETAILS ON SHEETS C-17 & C-18 FOR PAVEMENT MARKINGS.

- NOTES:**
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT NCDOT STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
 2. SPEED LIMIT ON GORDON ROAD IS 45 MPH.
 3. ALL WORK WITHIN ROW TO BE COMPLETED AND EXCELSIOR MAT TO BE INSTALLED PRIOR TO ANY RAIN EVENT AS NEEDED



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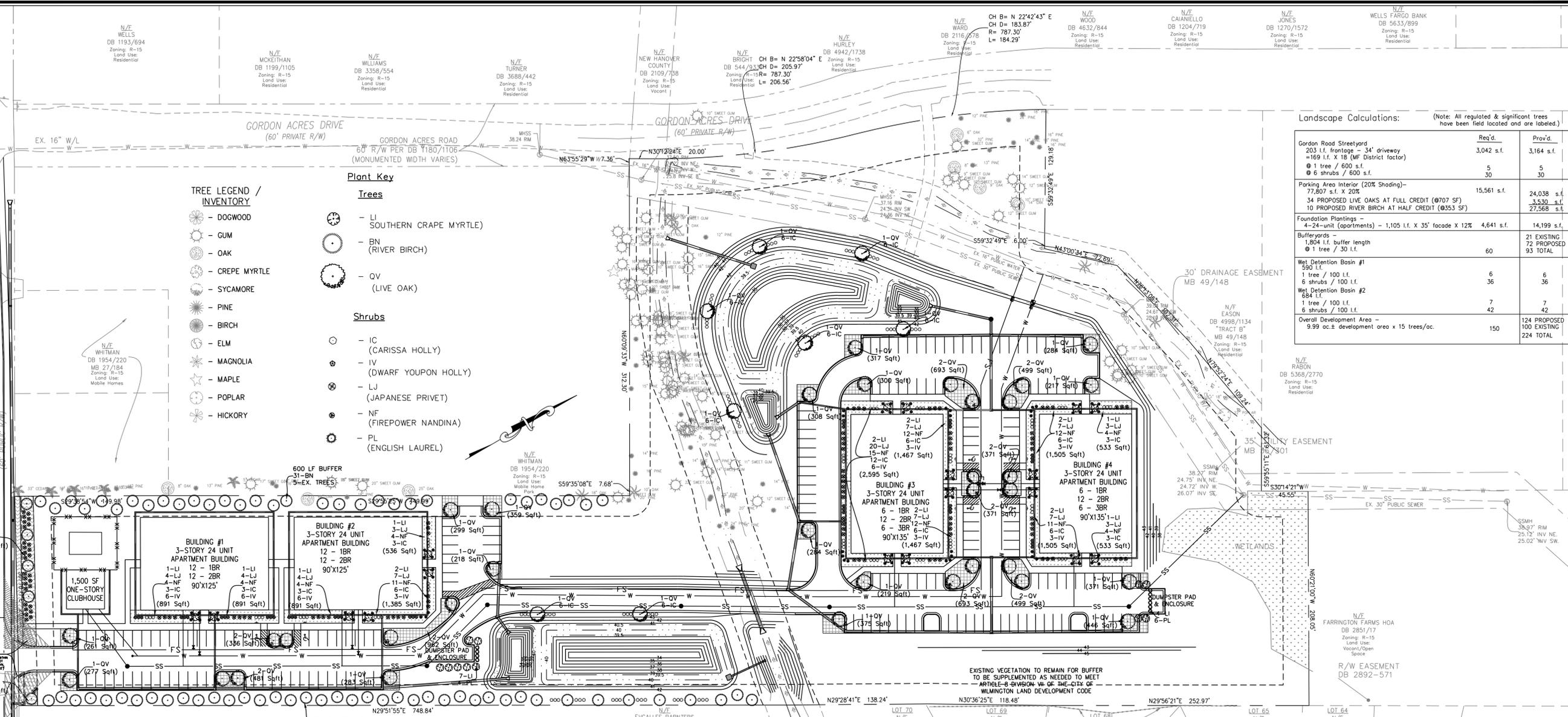
ELLINGTON FARMS
New Hanover County
North Carolina

**GORDON ROAD (S.R. 1327)
ROADWAY IMPROVEMENTS PLAN**

PREPARED FOR:
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6626-C GORDON ROAD
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**GSP CONSULTING, PLLC
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6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-16



- Plant Key**
- Trees**
- LI - SOUTHERN CRAPE MYRTLE
 - BN (RIVER BIRCH)
 - OV (LIVE OAK)
- Shrubs**
- IC - (CARISSA HOLLY)
 - IV - (DWARF YUPOON HOLLY)
 - LJ - (JAPANESE PRIVET)
 - NF - (FIREPOWER NANDINA)
 - PL - (ENGLISH LAUREL)
- TREE LEGEND / INVENTORY**
- DOGWOOD
 - GUM
 - OAK
 - CREPE MYRTLE
 - SYCAMORE
 - PINE
 - BIRCH
 - ELM
 - MAGNOLIA
 - MAPLE
 - POPLAR
 - HICKORY

- LANDSCAPE AREAS**
- STREET YARD LANDSCAPING
 - FOUNDATION LANDSCAPING
 - PARKING INTERIOR PLANTING

PLANT LIST-OR EQUIVALENTS

KEY	NO.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	TYPE (SHRUB, CANOPY TREE OR UNDERSTORY TREE)	SIZE (LARGE OR SMALL)	SHADING SF GIVEN (TREES ONLY)	PLANTING REMARKS
LI	29	LAGERSTROEMIA INDICA 'NATCHEZ'	SOUTHERN CRAPE MYRTLE	10-12' HT. 2.5" CAL.	UNDERSTORY	SMALL	314	SPACING AS SHOWN
BN	77	BETULA NIGRA	RIVER BIRCH	8'-10' HL. 2.5" CAL.	CANOPY	LARGE	707	SPACING AS SHOWN
OV	42	QUERCUS VIRGINIANA	LIVE OAK	8'-10' HL. 2.5" CAL.	CANOPY	LARGE	707	SPACING AS SHOWN
IC	126	ILEX CORNUTA 'CARISSA'	CARISSA HOLLY	3 GAL.	SHRUB			4' O.C.
IV	39	ILEX VOMITORIA 'NANA'	DWARF YUPOON HOLLY	3 GAL.	SHRUB			4' O.C.
LJ	106	LIGUSTRUM JAPONICUM	JAPANESE PRIVET	36"-48"	SHRUB			5' O.C.
NF	96	NANDINA DOMESTICA 'COMPACTA'	FIREPOWER NANDINA	18"-24"	SHRUB			3' O.C.
PL	10	PRUNUS LAUROCERASUS 'SCHIPKAENSIS'	ENGLISH LAUREL	36" HGT.	SHRUB			4' O.C.

O.C. - "ON CENTER" CAL. - "CALIPER AT 6" ABOVE GRADE" GAL. - "GALLON CONTAINER"
 MIN. PLANTING SIZE: SHADE TREES=2-2.5" CAL. MULTI-STEM= 8-10" SHRUBS= 12"

Landscape Calculations: (Note: All regulated & significant trees have been field located and are labeled.)

	Req'd	Prov'd
Gordon Road Streetyard 203 l.f. frontage = 34' driveway =169 l.f. x 18 (NF District factor)	3,042 s.f.	3,164 s.f.
• 1 tree / 600 s.f.	5	5
• 6 shrubs / 600 s.f.	30	30
Parking Area Interior (20% Shading)- 77,807 s.f. x 20%	15,561 s.f.	24,038 s.f.
34 PROPOSED LIVE OAKS AT FULL CREDIT (Ø707 SF)		3,530 s.f.
10 PROPOSED RIVER BIRCH AT HALF CREDIT (Ø353 SF)		27,568 s.f.
Foundation Plantings 4-24-unit (apartments) - 1,105 l.f. x 35' facade x 12%	4,641 s.f.	14,199 s.f.
Bufferyards - 1,804 l.f. buffer length • 1 tree / 30 l.f.	60	21 EXISTING 93 TOTAL
Wet Detention Basin #1 590 l.f. 1 tree / 100 l.f. 6 shrubs / 100 l.f.	6	6 36
Wet Detention Basin #2 684 l.f. 1 tree / 100 l.f. 6 shrubs / 100 l.f.	7	7 42
Overall Development Area - 9.99 ac.± development area x 15 trees/ac.	150	124 PROPOSED 100 EXISTING 224 TOTAL

