



REVISIONS		
No./Date	Description	By
08-08-13	SW REVISIONS	BPD
08-20-13	UTILITY AND LIGHTING REVISIONS	BPD



**SITE DATA:**  
 PROPERTY OWNER: CENTER 206, LLC  
 PROJECT ADDRESS: 4329 LAKE AVENUE, WILMINGTON, NC 28411  
 PREVIOUS SITE ADDRESSES: 4317, 4319, 4321, 4329 LAKE AVENUE, WILMINGTON, NC 28411  
 PIN NUMBERS: R06106-006-000-000, R06106-006-005-001, R06106-006-042-000, R06106-006-005-000, R06106-006-043-000  
 NO WETLANDS LOCATED ON-SITE  
 LATITUDE AND LONGITUDE: 34°12'25"N 77°53'24"W  
 AREA NOT IN A FEMA 100-YEAR FLOOD ZONE  
 ZONING DISTRICT: MF-L (CD), MULTI-FAMILY LOW DENSITY (CONDITIONAL DISTRICT)  
 TRACT AREA: 112,171 SF (2.57 AC)

EXISTING CONDITIONS  
**LAKE PARK VILLAGE**  
 4329 LAKE AVENUE  
 WILMINGTON, NORTH CAROLINA

**TRIPP ENGINEERING, P.C.**  
 419 Chestnut Street  
 Wilmington, North Carolina 28401  
 Phone 910-763-5100  
 Fax 910-763-5631  
 © 2013 TRIPP ENGINEERING, P.C.



DATE: 08-01-13  
 DESIGN: PGT  
 DRAWN: EJW

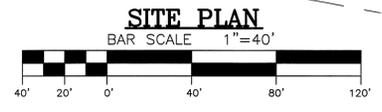
RECEIVED  
 AUG 21 2013  
 PLANNING DIVISION

**C1**  
 SHEET 1 OF 5  
 12034

STORMWATER MANAGEMENT PLAN  
 APPROVED  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE: 8/22/13 PERMIT # 2013026RL  
 SIGNED: [Signature]

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

Approved Construction Plan  
 Name: [Signature] Date: 8/21/2013  
 Planning: [Signature] Date: 8/21/2013  
 Traffic: [Signature] Date: 8/21/2013  
 Fire: [Signature] Date: 8/21/2013

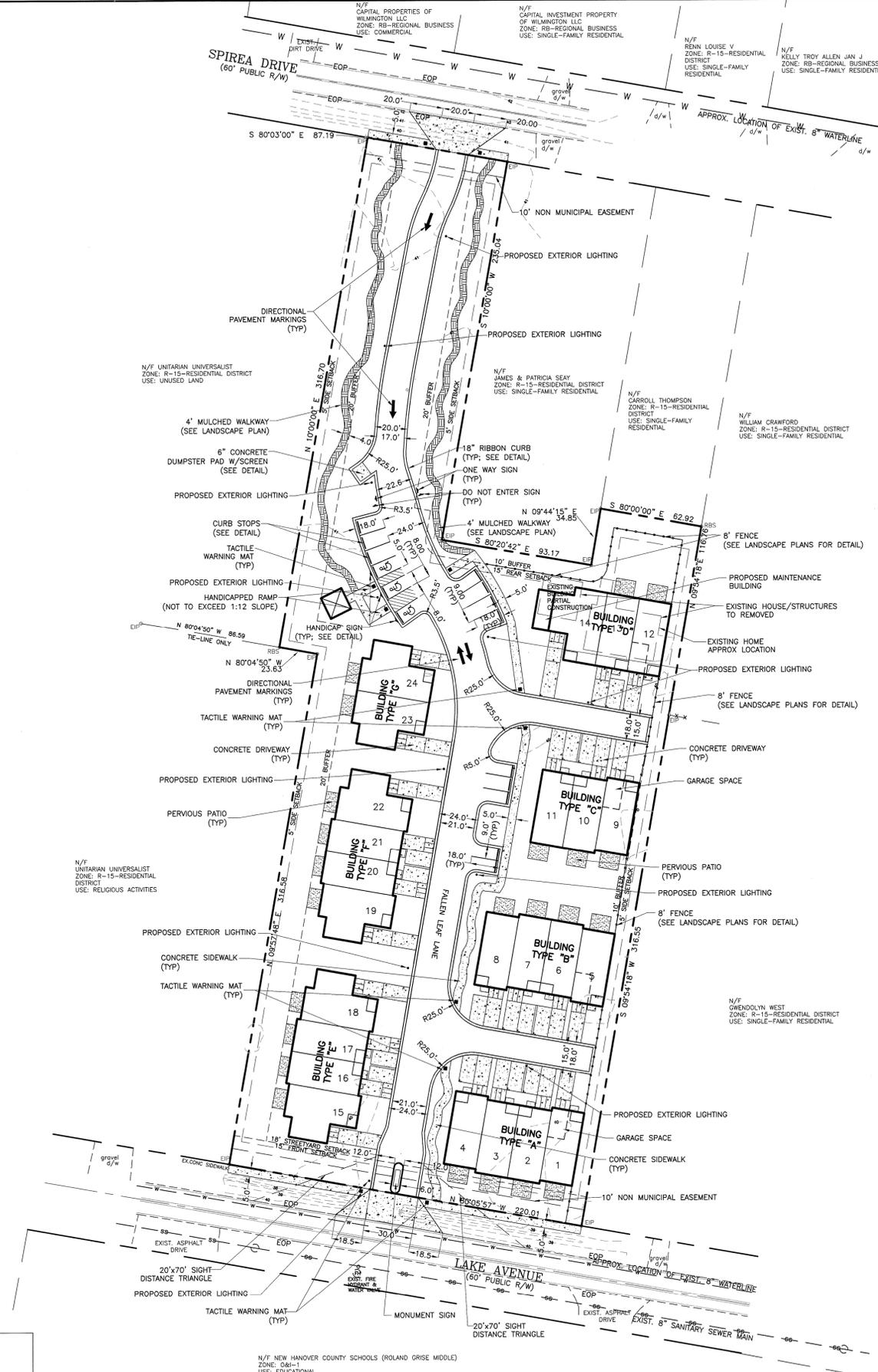


**LEGEND**  
 - - - - - EXIST. SPOT ELEVATION  
 - - - - - PROPERTY LINE (BOUNDARY)  
 - - - - - RIGHT OF WAY

- NOTES:**
- 1) TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
  - 2) ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
  - 3) ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
  - 4) ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
  - 5) ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
  - 6) A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
  - 7) INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
  - 8) CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
  - 9) PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES.
  - 10) NO CONSTRUCTION WORKERS, TOOLS MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
  - 11) NO OBSTRUCTIONS, INCLUDING VEGETATION SHALL BE PERMITTED IN THE SPACE BETWEEN 30" AND 10' ABOVE GROUND LEVEL WITHIN THE SIGHT DISTANCE TRIANGLE.
  - 12) SITE LIGHTING WILL NOT SHINE ONTO ADJACENT RESIDENTIALLY ZONED OR USED PROPERTIES. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
  - 13) SEE LANDSCAPE PLAN AND TREE REMOVAL PLAN FOR TREE PROTECTION LAYOUT.
  - 14) 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 RECORDING OF THE FINAL PLAN.
  - 15) PIPE MANUFACTURING REPRESENTATIVE TO BE ON-SITE AT LEAST 2 DAYS FOR TECHNICAL ASSISTANCE DURING INFILTRATION TRENCH PIPE CONSTRUCTION. CONTRACTOR TO COORDINATE WITH CONTECH ENGINEERED SOLUTIONS PRIOR TO CONSTRUCTION. (CONTACT: PHILIP BYRD, 910-228-8421)
  - 16) ALL PATIOS TO BE PERVIOUS/PERMEABLE MATERIALS. (TYPICAL)
  - 17) CONTRACTOR TO LOCATE DEPTH, MATERIAL, SIZE, AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
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  - 19) ANY BROKEN OR MISSING SIDEWALK PANELS AND CURBING WILL BE REPLACED.
  - 20) THE SUBDIVIDER SHALL INSTALL TRAFFIC SIGNALS, TRAFFIC SIGNS, STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION, DEAD-END BARRICADES AND MARKINGS, AND OTHER REQUIRED TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CITY'S TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL.
  - 21) ALL IMPROVEMENTS IN THE RIGHT-OF-WAY INVOLVING STORMWATER MANAGEMENT SHALL COMPLY WITH THE CITY OF WILMINGTON CONSTRUCTION/INSTALLATION STANDARDS (SECTION V-J PER THE CITY OF WILMINGTON TECHNICAL STANDARDS)
  - 22) ALL R/W WORK WILL BE COMPLETED PRIOR TO ANY RAIN EVENT OR WILL NEED SEDIMENT TRAP IN DITCH WITH DETAIL, MAINTENANCE AND CALCULATIONS.

**APPROVED CONDITIONAL DISTRICT ZONING CONDITIONS:**

- 1) THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHALL COMPLY WITH ALL REGULATIONS AND REQUIREMENTS IMPOSED BY THE LAND DEVELOPMENT CODE, THE CITY OF WILMINGTON TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL AND ANY OTHER APPLICABLE FEDERAL, STATE OR LOCAL LAW, ORDINANCE OR REGULATION, AS WELL AS ANY CONDITION STATED BELOW. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT REQUIREMENT OR HIGHER STANDARD SHALL APPLY.
- 2) APPROVAL OF THIS REZONING REQUEST DOES NOT CONSTITUTE TECHNICAL APPROVAL OF THE SITE PLAN. FINAL APPROVAL BY THE TECHNICAL REVIEW COMMITTEE AND THE ISSUANCE OF ALL REQUIRED PERMITS MUST OCCUR PRIOR TO RELEASE OF THE PROJECT FOR CONSTRUCTION.
- 3) IF, FOR ANY REASON, ANY CONDITION FOR APPROVAL IS FOUND TO BE ILLEGAL OR INVALID OR IF THE APPLICANT SHOULD FAIL TO ACCEPT ANY CONDITION FOLLOWING APPROVAL, THE APPROVAL OF THE SITE PLAN FOR THE DISTRICT SHALL BE NULL AND VOID AND OF NO EFFECT AND PROCEEDINGS SHALL BE INSTITUTED TO REZONE THE PROPERTY TO ITS PREVIOUS ZONING CLASSIFICATION.
- 4) THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHALL BE IN ACCORDANCE WITH THE PLAN AS SUBMITTED OCTOBER 25, 2012 AND APPROVED. THE PERMITTED USE SHALL BE RESTRICTED TO A MAXIMUM 24-UNIT MULTI-FAMILY DEVELOPMENT.
- 5) ALL EXISTING PROTECTED TREES NOT IMPACTED BY ESSENTIAL SITE IMPROVEMENTS SHALL BE PRESERVED OR MITIGATED.
- 6) THE DEVELOPMENT MUST COMPLY WITH ALL OPEN SPACE REQUIREMENTS.
- 7) ACCESS TO THE SITE SHALL BE PROVIDED TO LAKE AVENUE AND SPIREA DRIVE; SPIREA DRIVE WILL BE AN INGRESS ONLY ACCESS.
- 8) SIDEWALKS SHALL BE PROVIDED ON LAKE AVENUE AND SPIREA DRIVE.
- 9) STREETYARDS SHALL BE INSTALLED ON LAKE AVENUE AND SPIREA DRIVE.
- 10) BUFFERYARDS IN ACCORDANCE WITH ARTICLE 8 OF THE LAND DEVELOPMENT CODE SHALL BE INSTALLED ADJACENT TO ALL EXISTING SINGLE-FAMILY DISTRICTS.
- 11) EXTERIOR SITE LIGHTING SHALL BE INSTALLED SO AS NOT TO SHINE DIRECTLY ONTO ADJACENT PARCELS.
- 12) A CONCEPTUAL SITE LIGHTING PLAN SHALL BE SUBMITTED PRIOR TO CONSTRUCTION RELEASE.
- 13) ANY FREESTANDING SIGN(S) ON THE SITE SHALL BE MONUMENT STYLE WITH LANDSCAPING AROUND THE BASE OF THE SIGN; NO POLE SIGNS SHALL BE PERMITTED AND INTERNAL ILLUMINATION SHALL BE PROHIBITED.
- 14) ALL APPLICABLE CITY, STATE AND FEDERAL REGULATIONS SHALL BE FOLLOWED.



REVISIONS		
No./Date	Description	By
08-08-13	SM REVISIONS	BPD
08-20-13	UTILITY AND LIGHTING REVISIONS	BPD

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NO WETLANDS LOCATED ON-SITE  
 LATITUDE AND LONGITUDE: 34°12'25"N 77°53'24"W

AREA NOT IN A FEMA 100-YEAR FLOOD ZONE  
 ZONING DISTRICT: MF-L (CD), MULTI-FAMILY LOW DENSITY (CONDITIONAL DISTRICT)

DISTURBED AREA: 2.79 AC (TOTAL), 2.57 AC (ON-SITE), 0.22 AC (OFF-SITE)

SETBACKS REQUIRED: FRONT: 15', REAR: 15', SIDE (INTERIOR): 5', SIDE (CORNER): 10'

SETBACKS PROPOSED: FRONT: 18', REAR: 20', SIDE (INTERIOR): 10' AND 25.5', SIDE (CORNER): N/A

TRACT AREA: 112,171 SF (2.57 AC)  
 BUILDING USE: MULTI-FAMILY  
 PROPOSED # OF UNITS: 24 (2-STORY UNITS)  
 MAXIMUM BUILDING HEIGHT: REQUIRED: 35', PROPOSED: 27'

CAMA LAND USE: URBAN

**EXISTING IMPERVIOUS AREAS (ON-SITE):**

EXISTING BUILDINGS	2,000 SF
EXISTING GRAVEL ROAD	7,100 SF
EXISTING IMPERVIOUS TO BE REMOVED	9,100 SF
EXISTING IMPERVIOUS TO REMAIN	0 SF (0.0%)

**PROPOSED IMPERVIOUS AREAS (ON-SITE):**

PROPOSED BUILDINGS	23,856 SF
PROPOSED SHED	186 SF
TOTAL BUILDING LOT COVERAGE	24,052 SF (21.5%)
PROPOSED ASPHALT/CURB	21,540 SF
PROPOSED CONCRETE (SIDEWALK/PATIO/D.W.)	10,535 SF
PROPOSED FUTURE IMPERVIOUS	2,000 SF
PROPOSED ON-SITE IMPERVIOUS AREA	58,127 SF (52%)
PROPOSED+EXISTING IMPERVIOUS AREA	58,127 SF (52%)

**PROPOSED IMPERVIOUS AREAS (OFF-SITE):**

PROPOSED DRIVEWAY APRON	1,685 SF
PROPOSED OFF-SITE SIDEWALK	973 SF
PROPOSED OFF-SITE IMPERVIOUS AREA	2,660 SF
ON-SITE+OFF-SITE IMPERVIOUS AREA	60,787 SF (50%)

**PARKING INFO:**

MINIMUM: 2.25/3-BED UNIT (24 UNITS)	54 SPACES
MAXIMUM: 2.50/3-BED UNIT (24 UNITS)	60 SPACES
PROPOSED OFF-STREET PARKING	12 SPACES
PROPOSED HANDICAPPED PARKING	3 SPACES
REQUIRED HANDICAPPED PARKING	3 SPACES
PROPOSED DRIVEWAY PARKING	41 SPACES
TOTAL PARKING SPACES PROVIDED	56 SPACES

**PUBLIC WATER AND SEWER BY CFPWA:**

PROPOSED WATER FLOW: (360 GPD/UNIT x 24 UNITS x 110%)	9,504 GPD
PROPOSED SEWER FLOW: (360 GPD/UNIT x 24 UNITS)	8,640 GPD

\*NOTE: 1 UNIT = 3 BEDROOMS

\*NOTE: OPEN SPACE, SETBACKS, AND BUFFERS SHOWN ON LANDSCAPE PLAN.

**LEGEND**

--- (Dashed Line)	PROPERTY LINE (BOUNDARY)
--- (Dotted Line)	RIGHT OF WAY
■ (Hatched)	PROPOSED CONCRETE AREA
■ (Stippled)	PROPOSED MULCHED AREA
■ (Grid Pattern)	PROPOSED PERVIOUS PATIO

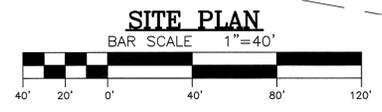
Approved Construction Plan

Name	Date
Planning: Dawn Bratton	8/2/2013
Traffic: Will Anderson	8/2/2013
Fire: [Signature]	8/2/2013

**STORMWATER MANAGEMENT PLAN**  
**APPROVED**  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT

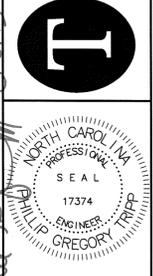
DATE: 8/2/13 PERMIT # 201302621  
 SIGNED: [Signature]

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**SITE PLAN**  
**LAKE PARK VILLAGE**  
 4329 LAKE AVENUE  
 WILMINGTON, NORTH CAROLINA

**TRIPP ENGINEERING, P.C.**  
 419 Chestnut Street  
 Wilmington, North Carolina 28401  
 Phone 910-763-5100  
 Fax 910-763-5631  
 © 2012 Tripp Engineering, P.C.



DATE	08-01-13
DESIGN	PGT
DRAWN	EJW
<b>C2</b>	
SHEET 2 OF 5	
12034	

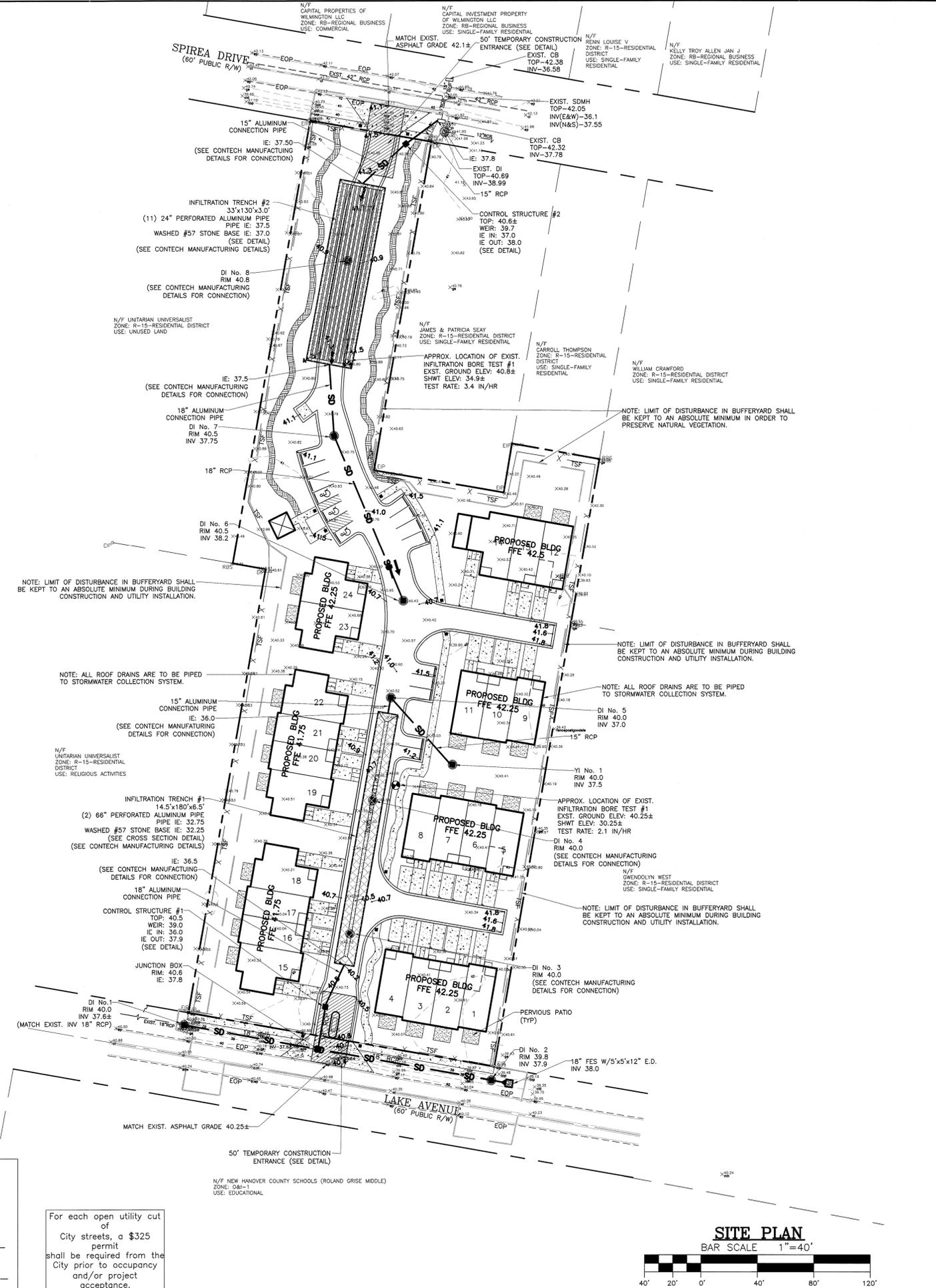
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No./Date	Description	By
08-08-13	SW REVISIONS	BPD
08-20-13	UTILITY AND LIGHTING REVISIONS	BPD



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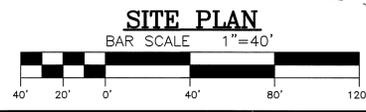
**LEGEND**

+	EXIST. SPOT ELEVATION
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---	PROPERTY LINE (BOUNDARY)
---	RIGHT OF WAY
---	LIMITS OF DISTURBANCE
TSF x TSF	TEMPORARY SILT FENCE
[Pattern]	PROPOSED CONCRETE AREA
[Pattern]	PROPOSED MULCHED AREA
[Pattern]	INFILTRATION TRENCH
[Pattern]	PROPOSED PERVIOUS PATIO
[Pattern]	INLET PROTECTION

Approved Construction Plan  
Name: Dawn M. Drifley  
Date: 8/21/2013  
Traffic: [Signature]  
Fire: [Signature]

STORMWATER MANAGEMENT PLAN  
APPROVED  
CITY OF WILMINGTON  
ENGINEERING DEPARTMENT  
DATE: 08/22/13 PERMIT # 201302681  
SIGNED: [Signature]

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**GRADING, DRAINAGE, EROSION CONTROL, AND STORMWATER MANAGEMENT PLAN**  
**LAKE PARK VILLAGE**  
 4329 LAKE AVENUE  
 WILMINGTON, NORTH CAROLINA  
**TRIPP ENGINEERING, P.C.**  
 419 Chestnut Street  
 Wilmington, North Carolina 28401  
 Phone 910-763-5100  
 Fax 910-763-5631  
 © 2013 TRIPP ENGINEERING, P.C.

8013

DATE: 08-01-13  
DESIGN: PGT  
DRAWN: EJW

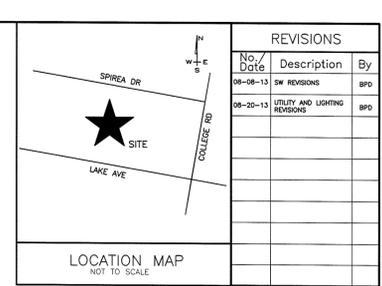
**C3**

SHEET 3 OF 5  
12034

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  - 12) SITE LIGHTING WILL NOT SHINE ONTO ADJACENT RESIDENTIALLY ZONED OR USED PROPERTIES. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
  - 13) SEE LANDSCAPE PLAN AND TREE REMOVAL PLAN FOR TREE PROTECTION LAYOUT.
  - 14) 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 RECORDING OF THE FINAL PLAT.
  - 15) PIPE MANUFACTURING REPRESENTATIVE TO BE ON-SITE AT LEAST 2 DAYS FOR TECHNICAL ASSISTANCE DURING INFILTRATION TRENCH PIPE CONSTRUCTION. CONTRACTOR TO COORDINATE WITH CONTECH ENGINEERED SOLUTIONS PRIOR TO CONSTRUCTION. (CONTACT: PHILIP BYRD, 910-228-8421)
  - 16) ALL PATIOS TO BE PERVIOUS/PERMEABLE MATERIALS. (TYPICAL)
  - 17) CONTRACTOR TO LOCATE DEPTH, MATERIAL, SIZE, AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
  - 18) INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
  - 19) ANY BROKEN OR MISSING SIDEWALK PANELS AND CURBING WILL BE REPLACED.
  - 20) THE SUBDIVIDER SHALL INSTALL TRAFFIC SIGNALS, TRAFFIC SIGNS, STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION, DEAD-END BARRICADES AND MARKINGS, AND OTHER REQUIRED TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CITY'S TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL.
  - 21) ALL IMPROVEMENTS IN THE RIGHT-OF-WAY INVOLVING STORMWATER MANAGEMENT SHALL COMPLY WITH THE CITY OF WILMINGTON CONSTRUCTION/INSTALLATION STANDARDS (SECTION V-J PER THE CITY OF WILMINGTON TECHNICAL STANDARDS)
  - 22) ALL R/W WORK WILL BE COMPLETED PRIOR TO ANY RAIN EVENT OR WILL NEED SEDIMENT TRAP IN DITCH WITH DETAIL, MAINTENANCE AND CALCULATIONS.

REVISIONS		
No./Date	Description	By
08-08-13	SW REVISIONS	BPD
08-20-13	UTILITY AND LIGHTING REVISIONS	BPD

LOCATION MAP  
NOT TO SCALE



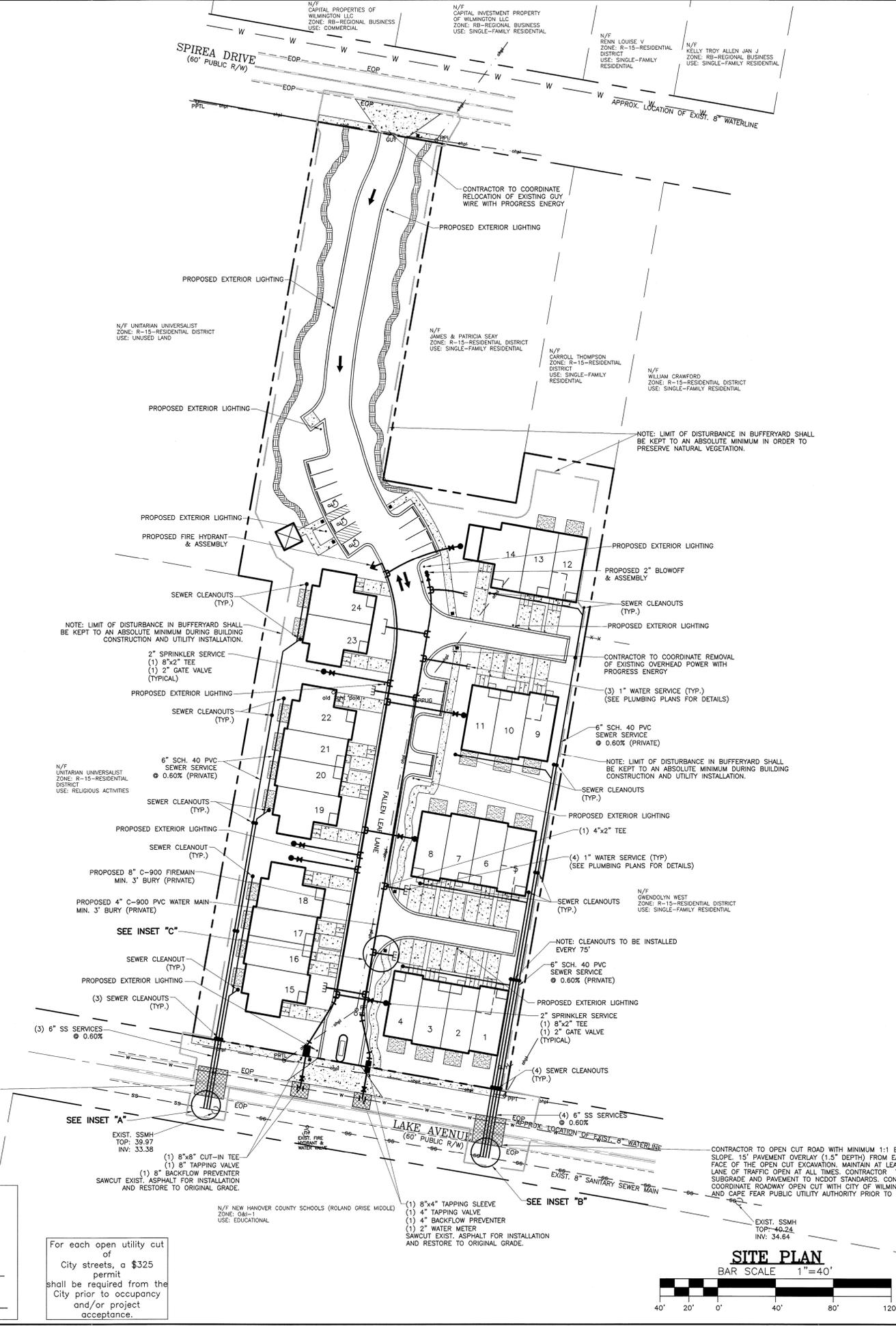
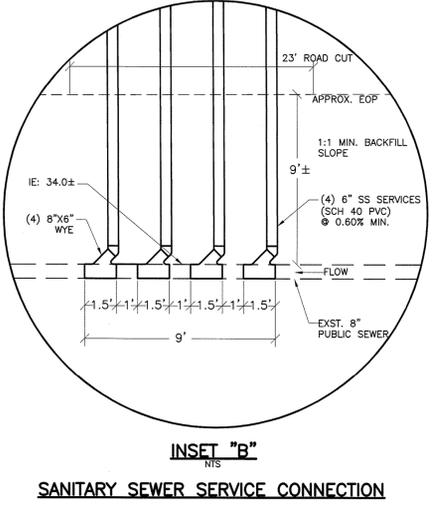
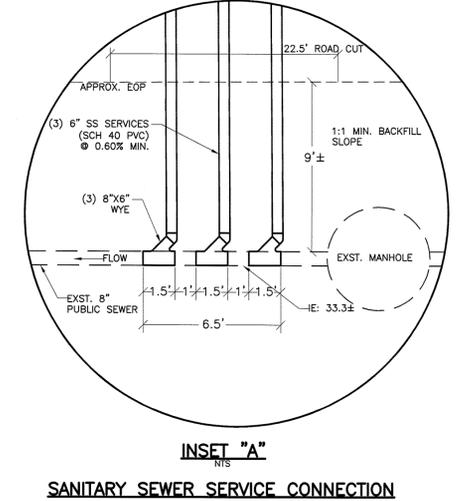
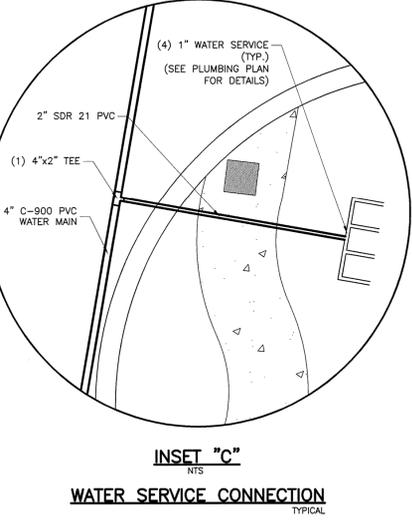
UTILITY PLAN  
**LAKE PARK VILLAGE**  
4329 LAKE AVENUE  
WILMINGTON, NORTH CAROLINA

**TRIPP ENGINEERING, P.C.**  
419 Chestnut Street  
Wilmington, North Carolina 28401  
Phone 910-763-5100  
Fax 910-763-5631  
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DATE 08-01-13  
DESIGN PGT  
DRAWN EJW

**C4**  
SHEET 4 OF 5  
12034



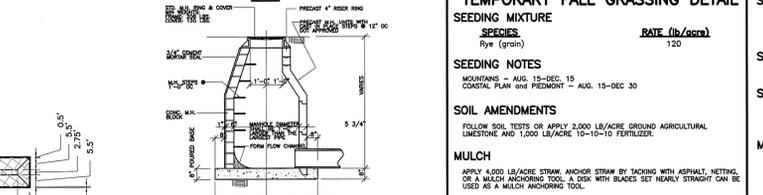
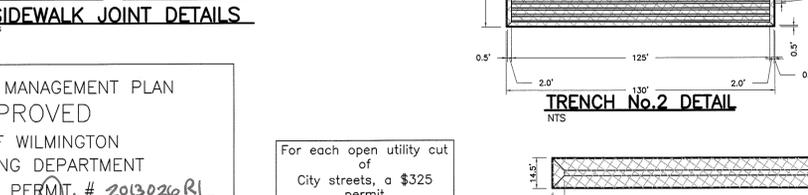
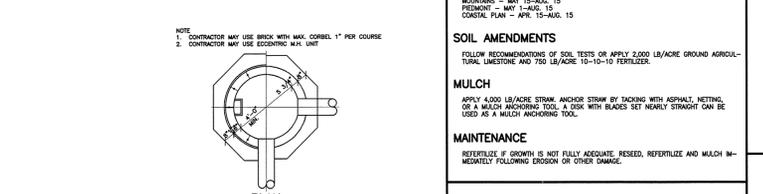
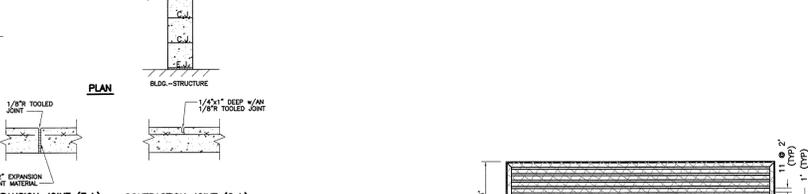
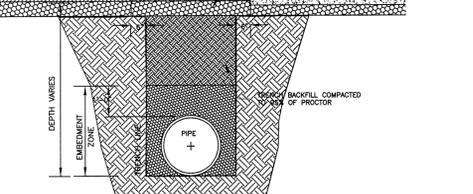
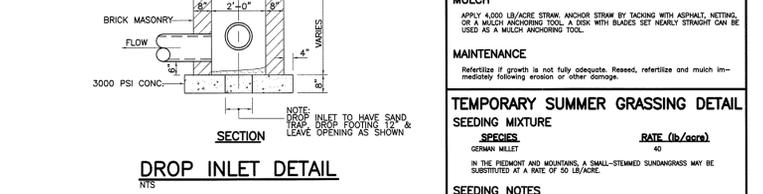
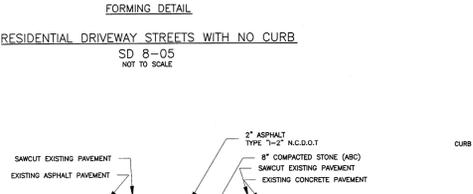
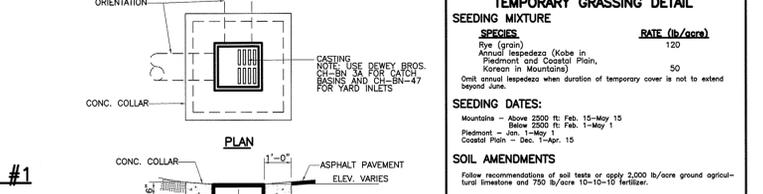
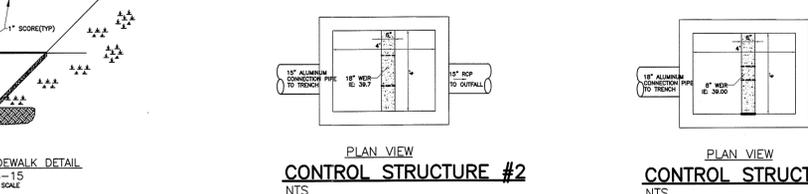
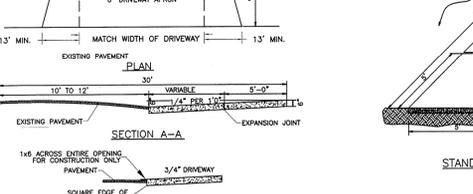
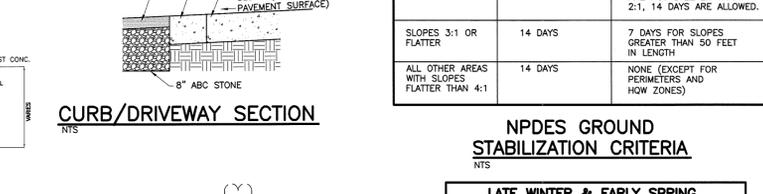
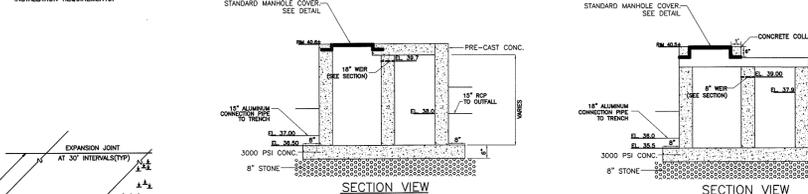
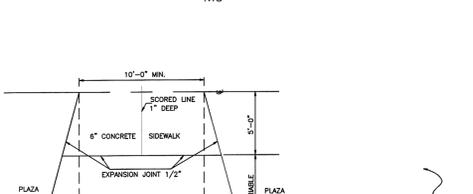
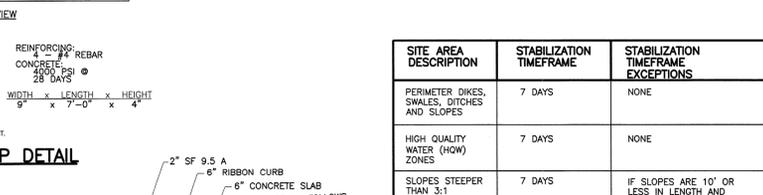
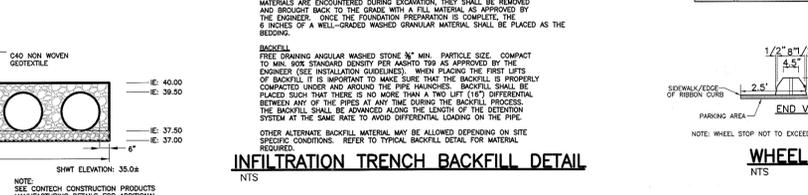
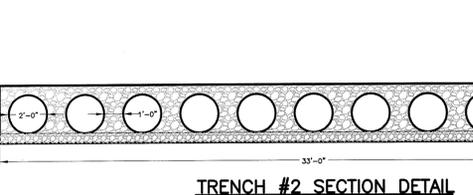
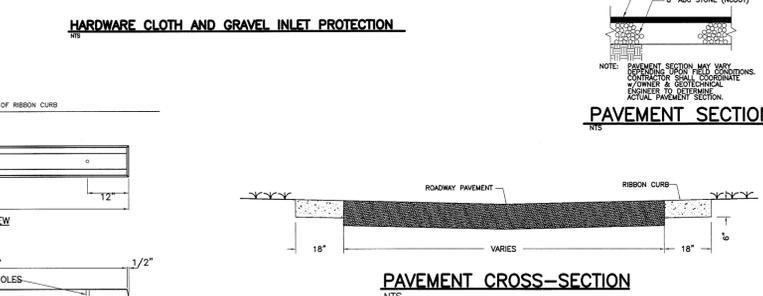
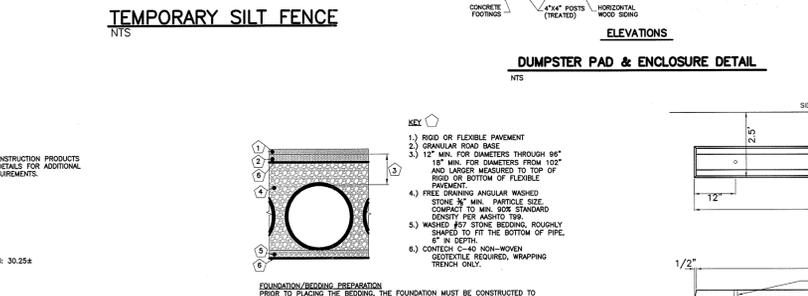
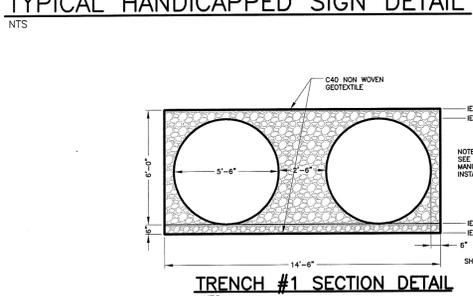
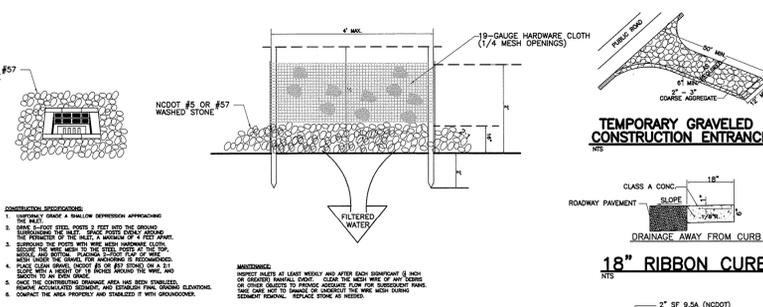
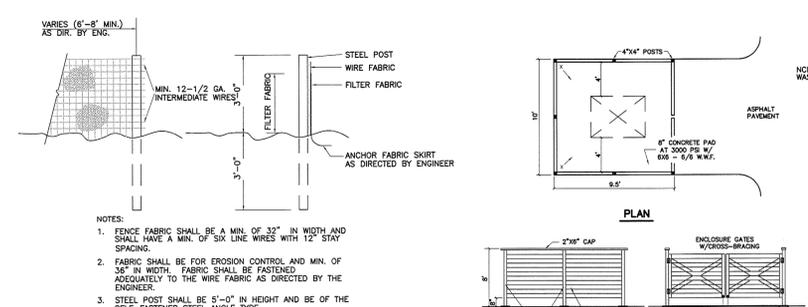
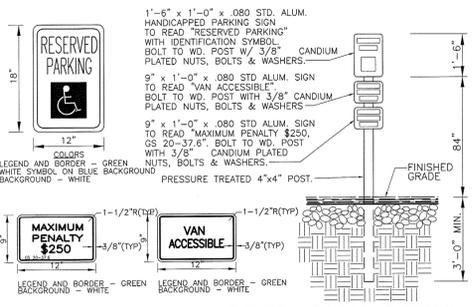
**LEGEND**

---	PROPERTY LINE (BOUNDARY)
---	RIGHT OF WAY
---	LIMITS OF DISTURBANCE
-W-	EXISTING WATERLINE
-SS-	PROPOSED WATERLINE
---	EXISTING SEWER MAIN
---	PROPOSED SEWER MAIN

STORMWATER MANAGEMENT PLAN  
**APPROVED**  
CITY OF WILMINGTON  
ENGINEERING DEPARTMENT  
DATE 8/22/13 PERMIT # 2013026RI  
SIGNED [Signature]

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

Approved Construction Plan  
Name: Dawn M. Broffey  
Date: 8/21/2013  
Traffic: [Signature]  
Fire: [Signature]



- SITE WORK NOTES**
- THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS BOTH ON AND IMMEDIATELY ADJACENT TO THE SITE.
  - CLEARING CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN LIMITS OF CONSTRUCTION UNLESS OTHERWISE DESIGNATED TO REMAIN.
  - GRUBBING AND STRIPPING: CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL WITHIN LIMITS OF CONSTRUCTION.
  - MUCKING: CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY SOFT AREAS.
  - DISPOSAL: CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
  - FILL AND COMPACTION SHOULD COMPLY WITH GEOTECHNICAL REPORT.
  - 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.
  - 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.
  - THE CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FROM AN OFF-SITE PROPERLY PERMITTED FACILITY AS REQUIRED.
  - 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 PERMITTED FACILITIES OF THEIR INTENT TO EXCAVATE, IN WRITING, NOT LESS THAN 10 DAYS PRIOR TO EXCAVATING. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE DISCONNECTION/RECONNECTION AND/OR THE RELOCATION OF ALL EXISTING UTILITIES WITH APPROPRIATE PERSONNEL.
  - EXISTING SURVEYING PERFORMED BY GARY W. KEYES AND SUPPLIED BY THE OWNER.
  - 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.
  - THE CONTRACTOR SHALL PROVIDE ANY AND ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK UNLESS OTHERWISE DIRECTED BY OWNER.
  - ALL PVC UTILITY MAINS SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER AT FINAL GRADE.
  - ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL AND STATE CODES. METERS, TAPS, MATERIALS, WORKMANSHIP AND FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS.
  - ALL PAVEMENT, BASE AND SUBGRADE SHALL CONFORM TO NCDOT STANDARDS INCLUDING WORKMANSHIP, MATERIALS, EQUIPMENT. APPROPRIATE BARRICADES, SIGNS, LIGHTS OR OTHER TRAFFIC CONTROL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NCDOT TO MAINTAIN SAFETY AND TWO WAY TRAFFIC.
  - 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.
  - CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III WITH RUBBER GASKETTED JOINTS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S CHECK DATA. CHECK DATA SHALL BE PROVIDED IN ACCORDANCE WITH NCDOT.
  - USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYL, FS TT-115, TYPE III, FACTORY MIXED, QUICK DRYING, NON BLEEDING, REFLECTIVE MATERIAL MAY BE ADDED AT OWNER'S OPTION FOR NIGHT REFLECTING.
  - DUCTILE IRON SHALL BE CLASS 50.
  - CONCRETE FOR WALKS, CURBS AND DRIVES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS AFTER INSTALLATION.
  - 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.

**CONSTRUCTION SEQUENCE**

SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME 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)

- CONSTRUCTION SEQUENCE**
- 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).
  - NO SEDIMENT SHALL BE ALLOWED TO EXIT THE SITE OR TO BE CONTROLLED INCLUDING SIDE SLOPES DURING AND AFTER CONSTRUCTION.
  - INSTALL PRIMARY EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION INCLUDING SLOPE PROTECTION, SILT FENCE, CHECK DAMS, ETC.
  - INSTALL ALL SECONDARY EROSION CONTROL MEASURES AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION.
  - ALL EROSION CONTROL MEASURES TO BE INSPECTED AFTER EACH RAIN.
  - FENCE AND INLET PROTECTION ARE TO BE CLEANED WHEN 0.5 FEET OF SEDIMENT HAS ACCUMULATED IN FRONT OF THE DEVICE OR WHEN THEY LEAK OR FAIL. SEDIMENT TRAPS ARE CLEANED OUT AS STATED OR WHEN HALF FULL.
  - IF APPLICABLE, CONSTRUCT PROPOSED RETENTION POND TO ACT AS A SEDIMENT BASIN DURING CONSTRUCTION. SLOPE ACCUMULATION OF SILT AS REQUIRED TO ALLOW PROPER FUNCTIONING. RESTORE POND TO DESIGN LEVELS AT THE COMPLETION OF CONSTRUCTION.
  - 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.
  - A 4" LAYER OF TOPSOIL SHALL BE APPLIED TO ALL NEW AREAS TO BE GRASSED.
  - ALL DISTURBED AREAS WILL BE STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY. THIS INCLUDES SLOPES, STOCKPILES AND OTHER UNSTABILIZED AREAS.
  - MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PROJECT IS COMPLETE.
  - MORE STRINGENT MEASURES MAY BE REQUIRED TO HALT EROSION IF THOSE ON THIS PLAN PROVE TO BE LESS EFFECTIVE.
  - REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF CONSTRUCTION. ALL PERMANENT MEASURES SHALL BE WELL ESTABLISHED PRIOR TO PROJECT COMPLETION.

**NPDES GROUND STABILIZATION CRITERIA**  
NTS

SEEDING MIXTURE	RATE (lb./acre)
<b>SPECIES:</b> Fescue (grain) Annual ryegrass (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	120
<b>SEEDING DATES:</b> Mountains - Above 2500 ft: Feb. 15-May 15 Piedmont - Jan. 1-May 15 Coastal Plain - Dec. 1-Feb. 15	50

**TEMPORARY SUMMER GRASSING DETAIL**

SEEDING MIXTURE	RATE (lb./acre)
<b>SPECIES:</b> GERMAN MILLET	40

**FALL-WINTER PERMANENT GRASSING DETAIL**

SEEDING MIXTURE	RATE (lb./acre)
<b>SPECIES:</b> fescue (grain)	120

**SPRING-SUMMER PERMANENT GRASSING DETAIL**

SEEDING MIXTURE	RATE (lb./acre)
<b>SPECIES:</b> PENNSYLVANIA BERMUDA GRASS BERMUDA GRASS COMMON BERMUDA GRASS GERMAN MILLET TALL FESCUE	50 50 10 10 10

Approved Construction Plan  
Name: *Dawn Brothey* Date: *8/21/2013*  
Planning: *Dawn Brothey* Date: *8/21/2013*  
Traffic: *Will Shroyer* Date: *8/21/2013*  
Fire: *Will Shroyer* Date: *8/21/2013*

STORMWATER MANAGEMENT PLAN  
APPROVED  
CITY OF WILMINGTON  
ENGINEERING DEPARTMENT  
DATE: *8/21/2013* PERMIT # *2013020R1*  
SIGNED: *[Signature]*

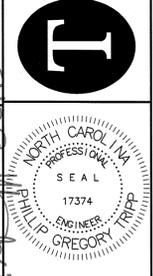
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**REVISIONS**

No./Date	Description	By
09-08-13	SW REVISIONS	BPO
09-20-13	UTILITY AND LIGHTING REVISIONS	BPO

DETAILS AND NOTES  
**LAKE PARK VILLAGE**  
4329 LAKE AVENUE  
WILMINGTON, NORTH CAROLINA

TRIPP ENGINEERING, P.C.  
419 Chestnut Street  
Wilmington, North Carolina 28401  
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DESIGN: PGT  
DRAWN: EJW  
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SHEET 5 OF 5  
12034