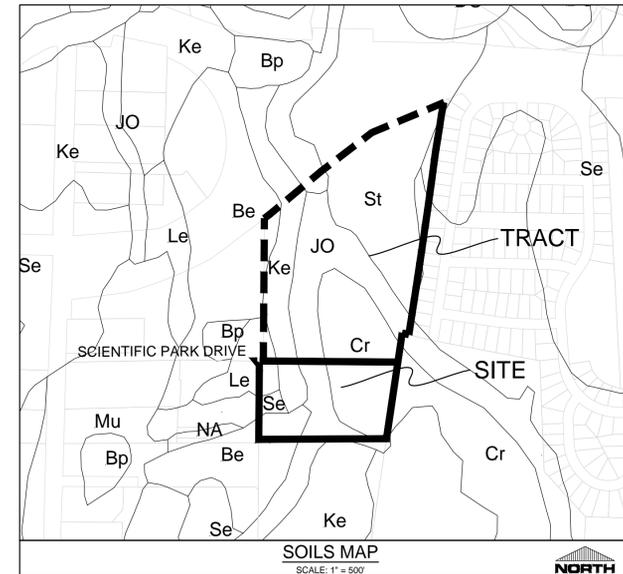
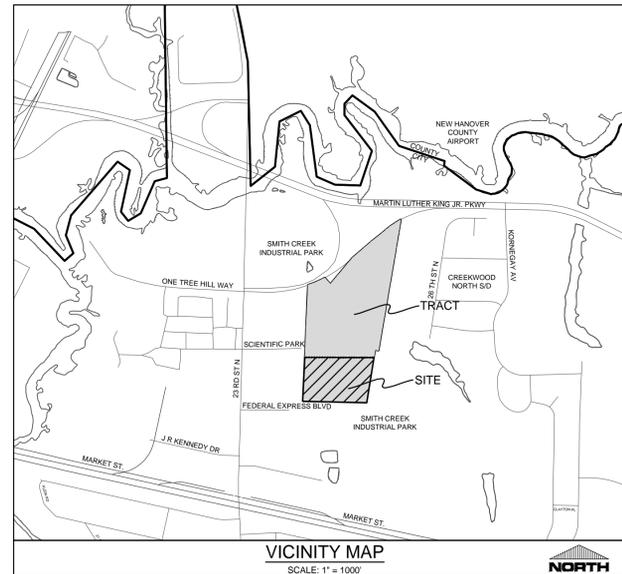


# AAI PHARMA HEADQUARTERS

TBD# PRIVATE STREET  
WILMINGTON, NORTH CAROLINA

## 100% DESIGN DOCUMENTS

FEBRUARY 2016



**OWNER:**

GHK CAPE FEAR DEVELOPMENT  
1051 MILITARY CUTOFF ROAD, SUITE 200  
WILMINGTON, NORTH CAROLINA 28405  
ATTN: MIKE BROWN (910) 344-1010

**SURVEYOR, CIVIL ENGINEER, & LANDSCAPE ARCHITECT:**

PARAMOUNTE ENGINEERING, INC.  
5911 OLEANDER DRIVE, SUITE 201  
WILMINGTON, NORTH CAROLINA 28403  
ATTN: ROB BALLAND, PE OR BRANCH SMITH, PE (910) 791-6707

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C-0.0	COVER SHEET
C-1.0	GENERAL NOTES
C-2.0	SITE PLAN
C-2.1	SITE INVENTORY & TREE REMOVAL PLAN
C-3.0	EROSION CONTROL PLAN
C-3.1	GRADING & DRAINAGE PLAN
C-4.0	UTILITY PLAN
L-1.0	LANDSCAPE PLAN
C-5.0	DETAILS
C-5.1	DETAILS
C-5.2	DETAILS
C-5.3	DETAILS
C-5.4	DETAILS

**NOTICE REQUIRED**

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED 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 COMMENCEMENT OF EXCAVATION OR DEMOLITION.

CONTRACTORS SHALL CONTACT OVERHEAD ELECTRIC PROVIDER TO COMPLY WITH FEDERAL OSHA 1910.333 MINIMUM APPROACH DISTANCE TO ENERGIZED POWERLINES AND OSH 29 CFR 1926.1407-1411 MUST BE FOLLOWED.

**CONTACT THESE UTILITIES**

CITY OF WILMINGTON, DEVELOPMENT SERVICES  
ATTN: JEFF WALTON  
PH: 910-341-3260

PIEDMONT NATURAL GAS  
ATTN: PAUL GONKA  
PH: 910-251-2810

EMERGENCY DIAL 911  
POLICE - FIRE - RESCUE

CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER)  
ENGINEERING/INSPECTIONS  
ATTN: DAVID DAILEY OR KENT HARREL  
PH: 910-332-6560

OPERATIONS/MAINTENANCE  
PH: 910-332-6550

DUKE ENERGY PROGRESS

TRANSMISSION SAFETY  
PH: 1-800-452-2777

TRANSMISSION ROW SPECIALIST - PRECONSTRUCTION MEETING REQUIRED  
ATTN: BILL WILDER  
PH: 910-772-4903

DISTRIBUTION CONSTRUCTION SERVICE  
ATTN: ANDREW PARKS  
PH: 910-256-7258  
DEP CSC PH: 1-800-452-2777

AT&T/BELL SOUTH  
ATTN: CHRISSEY COSTON  
PH: 910-341-7664

TIME WARNER CABLE  
PH: 910-763-4638



1051 MILITARY CUTOFF ROAD, SUITE 200  
WILMINGTON, NORTH CAROLINA 28405



2/9/16  
ISSUED FOR BIDDING

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.



5911 Oleander Drive, Suite 201  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846

PROJECT # 15264.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

COORDINATION NOTES:

- 1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND WITH THE CITY OF WILMINGTON, NEW HANOVER COUNTY, 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.
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.
5. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS BY OTHERS FOR ALL BUILDING DIMENSIONS AND DETAILS.
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 811 AN ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
8. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION.
9. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
10. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
11. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
12. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
13. THE GENERAL CONTRACTOR SHALL CLEAN THE AREA OUTSIDE THE 'CONSTRUCTION LIMITS' BROOM CLEAN AT ALL TIMES.
14. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
15. CONTRACTOR SHALL MAINTAIN AN 'AS-BUILT' SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT.
16. 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.
17. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES.
18. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
19. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
20. ALL LOT STRIPING AND DIRECTIONAL ARROWS TO BE REFLECTIVE MARKINGS AND SHALL CONFORM TO MUTCD.
21. LANDSCAPE PLANTINGS AT ENTRANCE/ EXITS WILL BE INSTALLED AND MAINTAINED SO AS NOT TO INTERFERE WITH SIGHT DISTANCE NEEDS OF DRIVERS IN THE PARKING AREA AND AT ENTRANCE/EXIT LOCATIONS PER LOCAL STANDARDS.
22. ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

- 1. THE EROSION CONTROL PLAN SHALL INCLUDE PROVISIONS FOR GROUND COVER ON ALL EXPOSED PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY.
2. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK.
3. THE CONTRACTOR SHALL NOTIFY PLAN APPROVING AUTHORITY ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO FINAL INSPECTION.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
6. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO NEW HANOVER COUNTY FOR APPROVAL.
7. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY EITHER THE REVIEWING AGENCY OR THE ENGINEER.
8. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
9. ALL AREAS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE IMPROVED SHALL BE SODDERED OR SEEDED AS INDICATED AND STABILIZED.
10. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
11. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT.
12. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER.
13. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA.
14. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE DIVISION OF WATER QUALITY SHALL BE CONTACTED PRIOR TO DISTURBING A CREEK.
15. 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.
16. ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.
17. CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 811 AN ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
18. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION.
19. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
20. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
21. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
22. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
23. THE GENERAL CONTRACTOR SHALL CLEAN THE AREA OUTSIDE THE 'CONSTRUCTION LIMITS' BROOM CLEAN AT ALL TIMES.
24. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
25. CONTRACTOR SHALL MAINTAIN AN 'AS-BUILT' SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT.
26. 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.
27. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES.
28. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
29. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
30. ALL LOT STRIPING AND DIRECTIONAL ARROWS TO BE REFLECTIVE MARKINGS AND SHALL CONFORM TO MUTCD.
31. LANDSCAPE PLANTINGS AT ENTRANCE/ EXITS WILL BE INSTALLED AND MAINTAINED SO AS NOT TO INTERFERE WITH SIGHT DISTANCE NEEDS OF DRIVERS IN THE PARKING AREA AND AT ENTRANCE/EXIT LOCATIONS PER LOCAL STANDARDS.
32. ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.

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.
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 GEOTECHNICAL ENGINEER.
4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED.
5. ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS.
6. THE CONTRACTOR SHALL PRODUCE A PHOTOGRAPHIC RECORD (DIGITAL) OF DEVELOPMENT COMMENCING WITH A RECORD OF THE SITE AS IT APPEARS BEFORE DEMOLITION HAS BEGUN.
7. EXISTING CURB AND GUTTER, LIGHTS, SIDEWALK, AND UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION.
8. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.
9. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.
10. CONTRACTOR SHALL MAINTAIN REQUIRED DISTANCES FROM HIGH VOLTAGE OVERHEAD LINES AND REMOVE TREES SO THEY DO NOT FALL TOWARDS OVERHEAD ELECTRICITY.
11. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
12. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
13. EXISTING FIRE HYDRANTS ON OR NEAR THE SITE ARE TO REMAIN IN SERVICE.
14. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS BY DIGGING TEST PITS.

TRAFFIC NOTES:

- 1. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY & FOR DRIVEWAY(S) ARE TO BE THERMOPLASTIC & MEET CITY OF WILMINGTON 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. ALL TRAFFIC CONTROL SIGNS AND MARKINGS NOT WITHIN THE PUBLIC 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. ANY OPEN CUTTING OF A CITY STREET REQUIRES A UTILITY CUT PERMIT.
6. CONTACT TRAFFIC ENGINEERING, AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
7. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND/OR CURBING SHALL BE REPLACED.
8. TACTILE WARNING MATS TO BE INSTALLED AT ALL WHEELCHAIR RAMPS.

EROSION CONTROL AND SEQUENCE OF CONSTRUCTION NOTES:

- NOTE: THESE EROSION CONTROL AND SEQUENCE OF CONSTRUCTION NOTES ARE INTENDED FOR EACH PHASE OF CONSTRUCTION.
1. CONSTRUCT TEMPORARY GRAVEL CONSTRUCTION ENTRANCE(S), ESTABLISH THE LIMITS OF DISTURBANCE, TREE PROTECTION FENCING, AND TEMPORARY SILT FENCE.
2. CLEAR AND REMOVE FROM SITE TREES AS DESIGNATED, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN THE DESIGNATED CLEARING LIMITS.
3. CONSTRUCT TEMPORARY SEDIMENT BASIN(S) AND ASSOCIATED SKIMMER, OUTLET PIPE, SPILLWAY, ETC.
4. INSTALL REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE PLANS WITHIN THE AREA DISTURBED.
5. PLANT GRASS OVER ALL GRADED AREAS WITHIN 14 WORKING DAYS OF CEASE OF ANY GRADING ACTIVITY.
6. IMMEDIATELY UPON THE INSTALLATION OF ANY STORM DRAINAGE CATCH BASIN, DROP INLET, ETC.
7. THE 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 CONTROL MEASURES.
8. DURING GRADING AND AFTER GRADING HAS BEEN COMPLETE, THE CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL APPROVAL BY ENGINEER OR EROSION CONTROL INSPECTOR.
9. UPON RECEIVING FINAL APPROVAL, THE CONTRACTOR CAN REMOVE TEMPORARY EROSION CONTROL MEASURES.
10. THE CONTRACTOR SHALL CONTINUE TO WATER, FERTILIZE, MOW AND MAINTAIN GRASS & PLANTED AREAS UNTIL ALL CONSTRUCTION IS COMPLETE.

EROSION CONTROL 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.
2. ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF 4 STONE TO MAINTAIN PROPER DEPTH.
3. SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF-FILLED AT THE FENCE.
4. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS ON THESE PLANS AND CONTRACT SPECIFICATIONS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
5. INLET PROTECTION - INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/4 INCH OR GREATER) RAINFALL EVENT.
6. SEDIMENT BASIN/SEDIMENT TRAPS - REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO WITHIN ONE HALF OF THE DESIGN DEPTH.
7. SKIMMER - INSPECT SKIMMER AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL TO MAKE SURE THAT THE BASKET IS CLEAN, OPERATIVE, OR DISCHARGE PIPE IS NOT CLOGGED.
8. OUTLET PROTECTION - INSPECT RIP RAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/4 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE.
9. EMERGENCY SPILLWAY / FOREBAY PROTECTION - AFTER EVERY HIGH-WATER EVENT INSPECT THE INTEGRITY OF THE LINED SPILLWAY AND THE ADJACENT EARTHEN BANKS.
10. GRASS SWALES - INSPECT SWALES WEEKLY AND AFTER EVERY RAINFALL EVENT.
11. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
12. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
13. EXISTING FIRE HYDRANTS ON OR NEAR THE SITE ARE TO REMAIN IN SERVICE.
14. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS BY DIGGING TEST PITS.

PERMANENT SEEDING

Table with 4 columns: GRASS TYPE, LBS/ ACRE, TIME OF SEEDING, FERTILIZER LIMESTONE. Rows include Bermuda, Hulled and Unhulled, Centipede, Tall Fescue, and Slopes >= 2:1 Centipede/ Sericea Lepespedea.

TEMPORARY SEEDING

Table with 4 columns: GRASS TYPE, LBS/ ACRE, TIME OF SEEDING, FERTILIZER LIMESTONE. Rows include Rye Grain, Sweet Sudan Grass, German or Browntop Millet, and Straw Mulch.

STABILIZATION TIME FRAMES: IN THE EVENT THAT THE GOVERNING AGENCIES TIMEFRAME FOR STABILIZATION VARY, CONTRACTOR SHALL MEET THE MORE STRINGENT REQUIREMENT.

NEW HANOVER COUNTY LAND QUALITY STABILIZATION TIME FRAME NOTE: DENIED AREAS MUST BE STABILIZED WITH FIFTEEN (15) WORKING DAYS OF CEASE OF ANY PHASE OF ACTIVITY.

NPDES WATER QUALITY STABILIZATION TIME FRAMES table with columns for Site Area Description and Stabilization Timeframe Exceptions.

NC ACCESSIBILITY NOTES:

- GENERAL NOTES: SPECIAL ATTENTION SHALL BE GIVEN TO COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NORTH CAROLINA BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
2. IT IS ESSENTIAL THAT CONTRACTORS ARE AWARE OF THE SITE ACCESSIBILITY REQUIREMENTS.
3. PARAMOUNT ENGINEERING HAS DEVELOPED THESE NOTES AND DETAILS TO ASSURE THAT CONTRACTORS ARE AWARE OF THE REQUIREMENTS AT THE POINT IN TIME WHEN THEY ARE BIDDING THE PROJECT.

THE CONTRACTOR SHALL NOTIFY PARAMOUNT ENGINEERING IMMEDIATELY OF ANY CONFLICT BETWEEN THESE NOTES AND DETAILS OF OTHER PROJECT DRAWINGS, WHETHER BY PARAMOUNT ENGINEERING OR OTHERS.

- 4. THESE ACCESSIBILITY NOTES AND DETAILS ARE INTENDED TO DEPICT SLOPE AND DIMENSIONAL REQUIREMENTS ONLY.
5. ACCESSIBILITY ROUTE NOTES: AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES.

- 6. FLOOR SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT.
7. THE MINIMUM CLEAR WIDTH OF EXTERIOR ACCESSIBLE ROUTES SHALL BE FORTY-EIGHT (48) INCHES MINIMUM MEASURED BETWEEN HANDRAILS.
8. WHERE AN ACCESSIBLE ROUTE MAKES A 180 DEGREE TURN AROUND AN OBJECT THAT IS LESS THAN FORTY-EIGHT (48) INCHES IN WIDTH.
9. WALKING SURFACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5.0% AND A MAXIMUM CROSS SLOPE OF 2.0%.

- 10. DOORS, DOORWAYS AND GATES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NORTH CAROLINA BUILDING CODE/ ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
11. DIRECTIONAL SIGNAGE INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE BUILDING ENTRANCE SHALL BE PROVIDED AT INACCESSIBLE BUILDING ENTRANCES.
12. WHERE POSSIBLE, DRAINAGE INLETS SHALL NOT BE LOCATED ON AN ACCESSIBLE ROUTE.
13. AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN SIXTY (60) INCHES SHALL PROVIDE PASSING SPACES AT INTERVALS OF TWO HUNDRED (200) FEET MAXIMUM.

- 14. ACCESSIBLE ENTRANCES SHALL BE PROVIDED AS REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) AND THE NORTH CAROLINA BUILDING CODE, AND APPLICABLE LOCAL LAWS & REGULATIONS.
15. ENTRANCE DOORS, DOORWAYS AND GATES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) AND THE NORTH CAROLINA BUILDING CODE, AND APPLICABLE LOCAL LAWS & REGULATIONS.

- 16. FLOOR SURFACES OF RAMP AND LANDINGS SHALL BE STABLE, FIRM AND SLIP RESISTANT.
17. EDGE PROTECTION COMPLYING WITH AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND ON EACH SIDE OF RAMP LANDINGS.
18. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1 SHALL BE PERMITTED TO OVERLAP THE REQUIRED LANDING AREA.

RAMP NOTES:

- 1. ANY PART OF AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 5% SHALL BE CONSIDERED A RAMP.
2. THE MAXIMUM RUNNING SLOPE FOR A RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.
3. THE CLEAR WIDTH OF AN EXTERIOR RAMP RUN SHALL BE FORTY EIGHT INCHES (NC BUILDING CODE 1104.1), WHERE HANDRAILS ARE PROVIDED ON THE RAMP RUN, THE CLEAR WIDTH SHALL BE MEASURED BETWEEN THE HANDRAILS.

- 4. THE RISE FOR ANY RAMP RUN SHALL BE THIRTY (30) INCHES MAXIMUM.
5. LANDINGS SHALL BE PROVIDED AT THE TOP AND BOTTOM OF RAMPS.
6. RAMP RUNS WITH A RISE GREATER THAN SIX (6) INCHES SHALL HAVE HANDRAILS ON BOTH SIDES COMPLYING WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
7. FLOOR SURFACES OF RAMPS AND LANDINGS SHALL BE STABLE, FIRM AND SLIP RESISTANT.

- 8. EDGE PROTECTION COMPLYING WITH AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND ON EACH SIDE OF RAMP LANDINGS.
9. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1 SHALL BE PERMITTED TO OVERLAP THE REQUIRED LANDING AREA.
10. CURB RAMP NOTES: THE MAXIMUM RUNNING SLOPE OF A CURB RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.

- 11. IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES.
12. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT EXCEED 10%.
13. CURB RAMPS AND THE FLARED SIDES OF CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES.
14. LANDINGS SHALL BE PROVIDED AT THE TOP OF CURB RAMPS.
15. IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES.

- 16. FLOOR SURFACES OF CURB RAMPS SHALL BE DEEP GROOVED, 1/2 INCH WIDE BY 1/2 INCH DEEP, ONE (1) INCH CENTERS TRANSVERSE TO THE RAMP.
17. WHERE PROVIDED, STOP LINES SHALL BE LOCATED IN ADVANCE OF CURB RAMP.
18. WHERE PROVIDED, PEDESTRIAN ACTIVATED SIGNALS SHALL BE LOCATED ADJACENT TO THE SIDEWALK AND NOT ON THE SIDEWALK.
19. WHERE PROVIDED, DRAINAGE INLETS SHALL BE LOCATED UPSTREAM OF CURB RAMPS AND NOT IN THE RAMP AREA.

- 20. CURB RAMP TYPE AND LOCATION ARE PER PLAN.
21. FOR EACH OPEN UTILITY CUT OF CITY STREETS, A \$325 PERMIT SHALL BE REQUIRED FROM THE CITY PRIOR TO OCCUPANCY AND/OR PROJECT ACCEPTANCE.

NC ACCESSIBILITY NOTES CONTD.

PARKING SPACE NOTES:

- 1. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTES OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE BUILDING ENTRANCE.
2. ACCESSIBLE PARKING SPACES SHALL BE AT LEAST NINETY-SIX (96) INCHES WIDE.
3. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH PROVISIONS FOR ACCESSIBLE ROUTES.
4. TWO (2) ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE.
5. ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACE THEY SERVE.
6. ACCESS AISLES SHALL BE MARKED SO AS TO DISCOURAGE PARKING IN THEM.
7. ACCESS AISLES SHALL NOT OVERLAP THE VEHICULAR WAY.
8. FLOOR SURFACES OF PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT.
9. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ALL DIRECTIONS.
10. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE REQUIRED CLEAR WIDTH OF AN ACCESSIBLE ROUTE.
11. PARKING SPACES FOR VANS AND ACCESS AISLES AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF NINETY-EIGHT (98) INCHES MINIMUM.
12. EACH ACCESSIBLE PARKING SPACE SHALL BE PROVIDED WITH SIGNAGE DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
13. SIGNAGE AT ACCESSIBLE PARKING SPACES REQUIRED BY THE NC BUILDING CODE SECTION 1108.1 SHALL COMPLY WITH THE REQUIREMENTS OF NORTH CAROLINA GENERAL STATUTES 203-37.6 AND 136-30 AND THE NCDOT UNIFORM MANUAL ON TRAFFIC CONTROL DEVICES.
14. ACCESSIBLE PARKING SPACE, ACCESS AISLE STRIPING, AND INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE PAINTED BLUE (OR ANOTHER COLOR THAT CAN BE DISTINGUISHED FROM PAVEMENT).

PASSENGER LOADING ZONE NOTES:

- 1. PASSENGER LOADING ZONES SHALL PROVIDE VEHICULAR PULL-UP SPACE NINETY-SIX (96) INCHES WIDE MINIMUM AND TWENTY (20) FEET LONG MINIMUM.
2. PASSENGER LOADING ZONES SHALL PROVIDE A CLEARLY MARKED ACCESS AISLE THAT IS SIXTY (60) INCHES WIDE MINIMUM AND EXTENDS THE FULL LENGTH OF THE VEHICLE PULL-UP SPACE THEY SERVE.
3. ACCESS AISLE SHALL ADJOIN AN ACCESSIBLE ROUTE AND NOT OVERLAP THE VEHICULAR WAY.
4. VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ALL DIRECTIONS.
5. FLOOR SURFACES OF VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT.
6. VEHICLE PULL-UP SPACES, ACCESS AISLES SERVING THEM AND A VEHICULAR ROUTE FROM AN ENTRANCE TO THE PASSENGER LOADING ZONE AND FROM THE PASSENGER LOADING ZONE TO A VEHICULAR EXIT SERVING THEM, SHALL PROVIDE A VERTICAL CLEARANCE OF ONE HUNDRED FOURTEEN (114) INCHES MINIMUM.

ACCESSIBLE ENTRANCE NOTES:

- 1. ACCESSIBLE ENTRANCES SHALL BE PROVIDED AS REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) AND THE NORTH CAROLINA BUILDING CODE, AND APPLICABLE LOCAL LAWS & REGULATIONS.
2. ENTRANCE DOORS, DOORWAYS AND GATES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) AND THE NC BUILDING CODE/ANSI A117.1 AND SHALL BE ON AN ACCESSIBLE ROUTE.

GENERAL STORM SEWER NOTES:

- 1. ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF WILMINGTON 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.
3. 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.

ROOF DRAIN NOTE:

- 1) PROPOSED BUILDING SHALL DIVERT ROOF DRAINAGE TO STORMWATER COLLECTION SYSTEM.

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.

WETLAND NOTES:

- 1) THERE ARE WETLANDS FLAGGED AND SURVEYED ON THE PROPERTY BY PARAMOUNT ENGINEERING AND LAND MANAGEMENT GROUP. THE USACE JURISDICTIONAL APPROVAL MAP HAS BEEN SIGNED.

City of Wilmington logo and Public Services Engineering Division seal. Includes text: APPROVED STORMWATER MANAGEMENT PLAN, Date: \_\_\_\_\_ Permit #: \_\_\_\_\_, Signed: \_\_\_\_\_

Approved Construction Plan

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

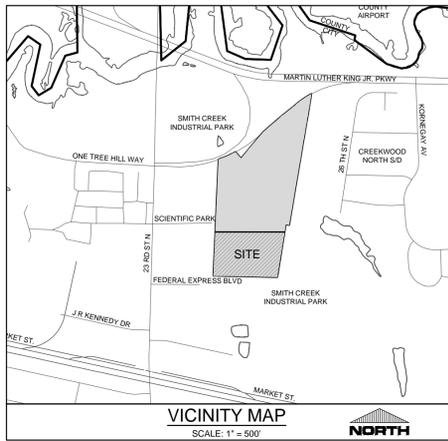
Fire \_\_\_\_\_

Vertical sidebar containing: REVISIONS table, CLIENT INFORMATION (PARAMOUNT ENGINEERING), GENERAL NOTES (ISSUED FOR BIDDING 2/9/16), PROJECT STATUS (PRELIMINARY LAYOUT), DRAWING INFORMATION (DATE: 2/9/16, SCALE: 1"=40', DRAWING: 043454), SEAL (C-1.0), and PEI JOB#: 15264.PE.



Know what's below. Call before you dig.

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)



**SITE DATA**  
 PROJECT NAME: AAI PHARMA HEADQUARTERS  
 SITE ADDRESS: 2350 SCIENTIFIC PARK DRIVE  
 NHC PIN: R04808-011-002-000  
 PROPERTY OWNER: AAI PHARMA SERVICES CORP  
 SOURCE DEED: DEED BOOK 5425, PAGE 2072  
 OVERALL SITE AREA: 1,448,695 SF (33.26 ACRES)  
 PROJECT AREA: 345,093 SF (7.92 ACRES)  
 DRAINAGE AREA: 217,913 SF (5.00 ACRES)  
 ZONING: AI (AIRPORT INDUSTRIAL)  
 PROPOSED USE: PROFESSIONAL OFFICES  
 CAMA LAND USE: URBAN

**DIMENSION REQUIREMENTS**

	REQUIRED	PROVIDED
FRONT SETBACK	50'	360'
SIDE SETBACK	0'	194.9' (R) / 105' (L)
REAR SETBACK	0'	223.4'
MAXIMUM HEIGHT	35'	

**BUILDING INFORMATION**  
 PROPOSED 2-STORY OFFICE BUILDING:  
 20,250 SF FOOTPRINT  
 40,500 SF TOTAL BUILDING AREA

**PARKING INFORMATION**  
 PARKING:  
 MINIMUM REQUIRED: 1 PER 300 SF = 135 SPACES  
 MAXIMUM ALLOWED: 1 PER 200 SF = 203 SPACES  
 PROVIDED: 148 SPACES

HANDICAP SPACES REQUIRED: 6 SPACES  
 HANDICAP SPACES PROVIDED: 6 SPACES

BICYCLE SPACES REQUIRED: MIN. 5 FOR 25-100 AUTO SPACES  
 + 5 PER EA. 100 ADDITIONAL  
 BICYCLE SPACES PROVIDED: 8

**HVAC NOTE:**  
 HVAC WILL BE LOCATED ON THE ROOF SCREENED BY EXTERIOR WALLS.

**FLOOD NOTE:**  
 THIS TRACT LIES WITHIN DESIGNATED FLOOD ZONE X, ACCORDING TO FEMA FIRM COMMUNITY-PANEL NUMBER 372031280J, BEARING AN EFFECTIVE DATE OF APRIL 3, 2006. ZONE "X" INCLUDES AREAS DETERMINED TO BE OUTSIDE THE 0.2% (500-YEAR) ANNUAL CHANCE FLOODPLAIN.

**SWAMP FOREST WETLANDS CONSERVATION RESOURCE IMPACTS**

	42,225	SF
TOTAL AREA OF CITY CONSERVATION RESOURCE 50' SETBACK LINE		
IMPERVIOUS IMPACT IN 100' SETBACK LINE	10,008	SF
PERCENTAGE (IMPERVIOUS/CITY CONSERVATION SETBACK) (SEC. 18-341 (D) (5))	23.70	% << 25%

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	

- GENERAL NOTES:**
- ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE.
  - PROJECT SHALL COMPLY WITH ALL FEDERAL, STATE & NEW HANOVER COUNTY REGULATIONS.
  - GENERAL CONTRACTOR TO COORDINATE THE SIDEWALK CLOSURE AND PEDESTRIAN ACCESS PLAN WITH SKIPPER FUNDERBURG, Skipper.Funderburg@wilmingtonnc.gov. PRIOR TO ANY SIDEWALK CLOSURES.
  - INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS.
  - ALL HVAC EQUIPMENT WILL BE LOCATED ON THE ROOF.
  - ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT WHERE SUCH PLACEMENT IS PROHIBITED OR DEEMED IMPRACTICAL BY THE UTILITY PROVIDER. UNDERGROUND TERMINAL FACILITIES FOR STREET LIGHTING ALONG ALL PUBLIC STREETS ABUTTING THE SUBJECT SITE SHALL BE INSTALLED BY THE DEVELOPER.
  - THE CITY SHALL BE NOTIFIED IMMEDIATELY OF ANY TRAFFIC SIGNAL FACILITIES DAMAGED DURING CONSTRUCTION.
  - DAMAGED FACILITIES SHALL BE REPLACED, AT CONTRACTOR/DEVELOPER EXPENSE.

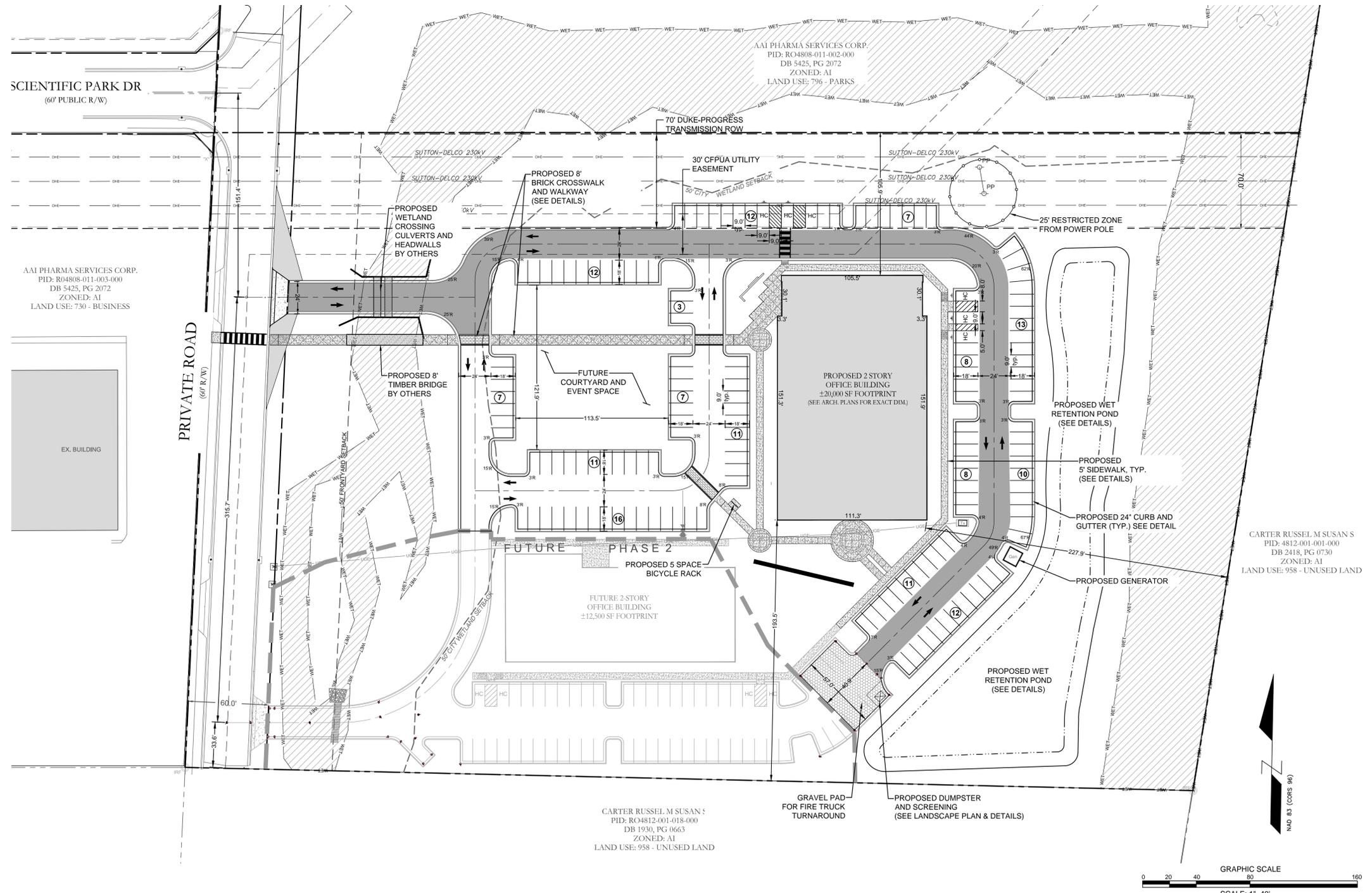
- FIRE & LIFE SAFETY NOTES:**
- NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS AND PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED ON SITE.
  - HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
  - TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALOWS PASSAGE BY VEHICLES.
  - CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION
  - A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
  - UNDERGROUND FIRE LINE & PRIVATE WATER MAINS MUST BE PERMITTED & INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WFD - DIVISION OF FIRE & LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
  - CONSTRUCTION TYPE - IA BUSINESS OCCUPANCY (SPRINKLED).
  - ANY FDC MUST BE WITHIN 150' OF A FIRE HYDRANT & WITHIN 40' OF FIRE APPARATUS PLACEMENT.
  - LANDSCAPING OR PARKING CAN NOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT (3') CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF HYDRANTS AND FDC.

- CITY OF WILMINGTON SITE PLAN NOTES:**
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
  - ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING, OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
  - NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED AND APPROVED. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.
  - ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
  - ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING REGARDING THE INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
  - 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.
  - CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
  - CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
  - TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING PRIOR TO ACTUAL STRIPING.
  - ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
  - ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
  - STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
  - TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
  - 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.
  - ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, AND CURBING WILL BE REPLACED.
  - CONTACT TRAFFIC ENGINEERING AT 901-341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
  - WATER AND SEWER SERVICES SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) DETAILS AND SPECIFICATIONS.

- CITY OF WILMINGTON SITE PLAN NOTES (CONT):**
- PROJECT SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 910.341.3910 FOR INFORMATION.
  - IF 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.
  - ANY IRRIGATION SYSTEM SUPPLIED BY CFPUA WATER SHALL COMPLY WITH THE CFPUA CROSS CONNECTION CONTROL REGULATIONS. CALL 919-343-3910 FOR INFORMATION.
  - ANY IRRIGATION SYSTEM SHALL BE EQUIPPED WITH A RAIN AND FREEZER SENSOR.
  - ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCOCHR OR ASSE. CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.
  - CONTRACTOR SHALL MAINTAIN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
  - UNDERGROUND FIRE LINES(S) MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910.341.0696.
  - NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE TRIANGULAR SIGHT DISTANCE.
  - CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 PRIOR TO DOING ANY DIGGING, CLEARING, OR GRADING.

**LEGEND**

- WET = EXISTING WETLANDS
- = EXISTING PROPERTY LINE
- - - = EXISTING EASEMENT LINE
- OHE = EXISTING OVERHEAD ELECTRIC
- [Pattern] = PROPOSED CONCRETE
- [Pattern] = PROPOSED THICKER PAVEMENT (GARBAGE TRUCK PATH)
- [Pattern] = PROPOSED BUILDING FOOTPRINT
- ← = PROPOSED TRAFFIC ARROW
- ⊙ = PROPOSED SIGN



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)

**REVISIONS:**

NO.	DATE	DESCRIPTION

**CLIENT INFORMATION:**  
**GK Cape Fear**  
 DEVELOPMENT

**PARAMOUNT ENGINEERING**  
 5911 Olander Drive, Suite 201  
 Wilmington, North Carolina 28403  
 (910) 791-6707 (O) (910) 791-6760 (F)  
 NC License #: C-2846

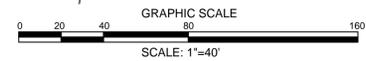
**SITE PLAN**  
 AAI PHARMA HEADQUARTERS  
 CITY OF WILMINGTON  
 NEW HANOVER CO., NORTH CAROLINA

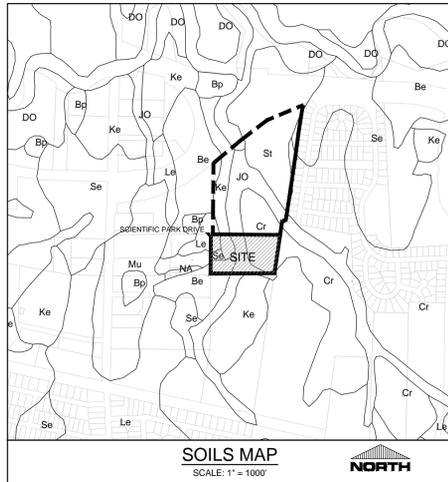
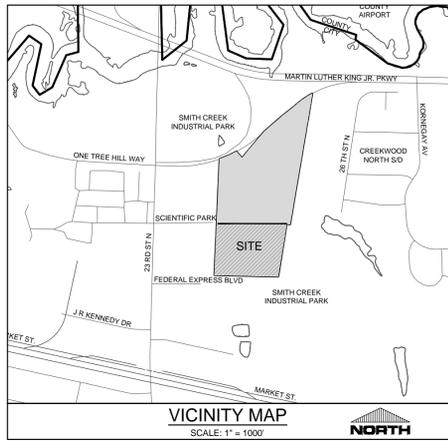
**PROJECT STATUS:**  
 9/19/15 CONCEPTUAL LAYOUT  
 11/19/15 FINAL DESIGN  
 2/9/16 RELEASED FOR CONSTRUCTION

**DRAWING INFORMATION:**  
 DATE: 2/9/16  
 SCALE: 1"=40'  
 DRAWN BY: GAMES  
 CHECKED: BRB



**C-2.0**  
 PEI JOB#: 15264.PE



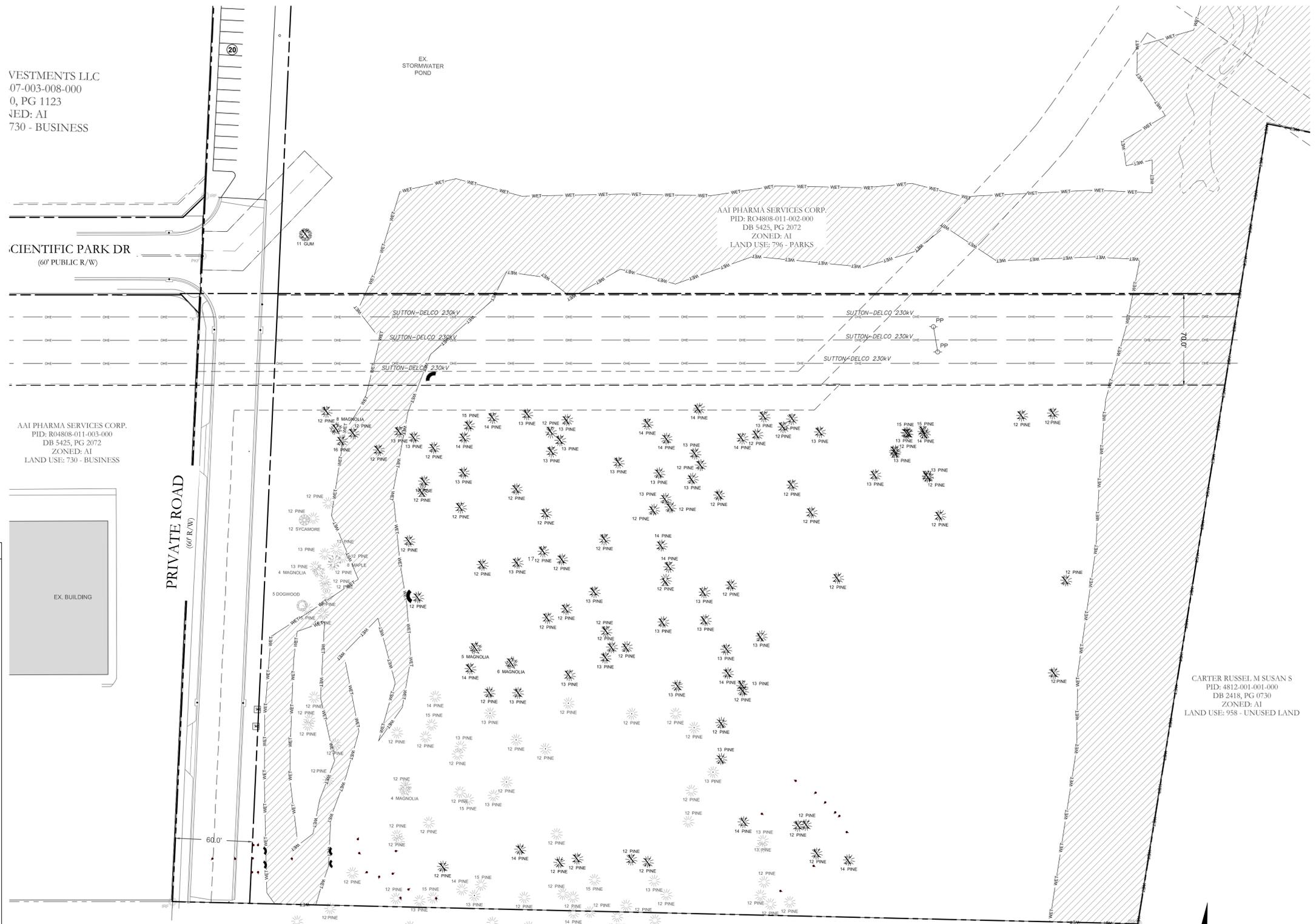


VESTMENTS LLC  
07-003-008-000  
0, PG 1123  
JED: AI  
730 - BUSINESS

SCIENTIFIC PARK DR  
(60' PUBLIC R/W)

AAI PHARMA SERVICES CORP.  
PID: R04808-011-003-000  
DB 5425, PG 2072  
ZONED: AI  
LAND USE: 796 - BUSINESS

EX. BUILDING



CARTER RUSSEL M SUSAN S  
PID: 4812-001-001-000  
DB 2418, PG 0730  
ZONED: AI  
LAND USE: 958 - UNUSED LAND

CARTER RUSSEL M SUSAN S  
PID: R04812-001-018-000  
DB 1930, PG 0663  
ZONED: AI  
LAND USE: 958 - UNUSED LAND

**Regulated and Significant Tree Survey**

Quantity of Trees	Caliper Inches/ Tree	Tree Common Name	Tree Type	% Mitigation	Total Cal. Inches	Cal. Inches Req'd for Mitigation
<b>Category II Mitigation (75%)</b>						
1	5	MAGNOLIA	ornamental flowering	75	5	3.75
1	6	MAGNOLIA	ornamental flowering	75	6	4.5
1	8	MAGNOLIA	ornamental flowering	75	8	6
<b>Category III Mitigation (50%)</b>						
45	12	PINE	conifer	50	540	270
29	13	PINE	conifer	50	377	188.5
12	14	PINE	conifer	50	168	84
3	15	PINE	conifer	50	45	22.5
1	16	PINE	conifer	50	16	8
				<b>Total Caliper Inches on Site</b>	<b>1165</b>	
				<b>Total Mitigation Caliper Inches</b>		<b>587.25</b>
				<b>Total Mitigation Req'd (# of 3" cal. Trees)</b>		<b>195.75</b>

Pine = Loblolly & Pond Pine

**SITE INVENTORY DATA**

- PREPARER OF THE PLAN: PARAMOUNTE ENGINEERING, 5911 OLEANDER DRIVE, SUITE 201 WILMINGTON, NC 28403
- APPLICANT NAME: AAI PHARMA SERVICES CORP
- SITE ADDRESS: 2350 SCIENTIFIC PARK DRIVE WILMINGTON, NC
- PROPERTY OWNER: AAI PHARMA SERVICES CORP
- DEVELOPER: AAI PHARMA SERVICES CORP
- PROPERTY BOUNDARY: SEE PLAN
- ZONING: AI
- ADJACENT PROPERTY INFORMATION (OWNER AND ZONING): SEE PLAN
- VICINITY MAP: SEE MAP ABOVE
- TOPOGRAPHY: SEE PLAN
- 100 YEAR FLOOD PLAIN BOUNDARY: SITE IS NOT LOCATED IN THE 100 YEAR FLOOD PLAIN
- LOCATION OF EXISTING DITCHES, CREEKS, AND STREAMS: SEE PLAN
- SOILS: BAYMEADE, CRAVEN, JOHNSTON, KENANSVILLE, ONSLOW, SEAGATE, STALLINGS (SEE SOILS MAP ABOVE)
- CAMA AEC & ASSOCIATED SETBACKS: N/A
- CAMA LAND CLASSIFICATION: URBAN
- CONSERVATION RESOURCES: SWAMP FOREST
- LOCAL, STATE, OR FEDERAL HISTORIC OR ARCHAEOLOGICAL SITE: N/A
- LOCATION OF CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS: N/A
- SQUARE FOOTAGE OF FORESTED AREA, HABITAT, AND DOMINANT SPECIES: N/A
- SECTION 404 WETLANDS AND SECTION 10 WATERS: THERE ARE EXISTING WETLANDS ON THE SITE. SEE MAP.
- PROTECTED SPECIES OR HABITAT: N/A
- THOROUGHFARES, BIKE ROUTES, SIDEWALKS, TRANSIT FACILITIES (EXISTING OR PROPOSED): N/A

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

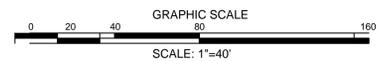
**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)

REVISIONS:

**GK CapeFear**  
DEVELOPMENT

**PARAMOUNTE**  
ENGINEERING INC.  
5911 Oleander Drive, Suite 201  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846

**SITE INVENTORY AND TREE REMOVAL MAP**  
AAI PHARMA HEADQUARTERS  
CITY OF WILMINGTON  
NEW HANOVER CO., NORTH CAROLINA

PROJECT STATUS:  
CONCEPTUAL LAYOUT: 9/19/15  
FINAL DESIGN LAYOUT: 11/19/15  
RELEASED FOR CONSTRUCTION: 2/9/16

DRAWING INFORMATION:  
DATE: 2/9/16  
SCALE: 1" = 40'  
DRAWN BY: JAMES GILMART  
CHECKED BY: \_\_\_\_\_

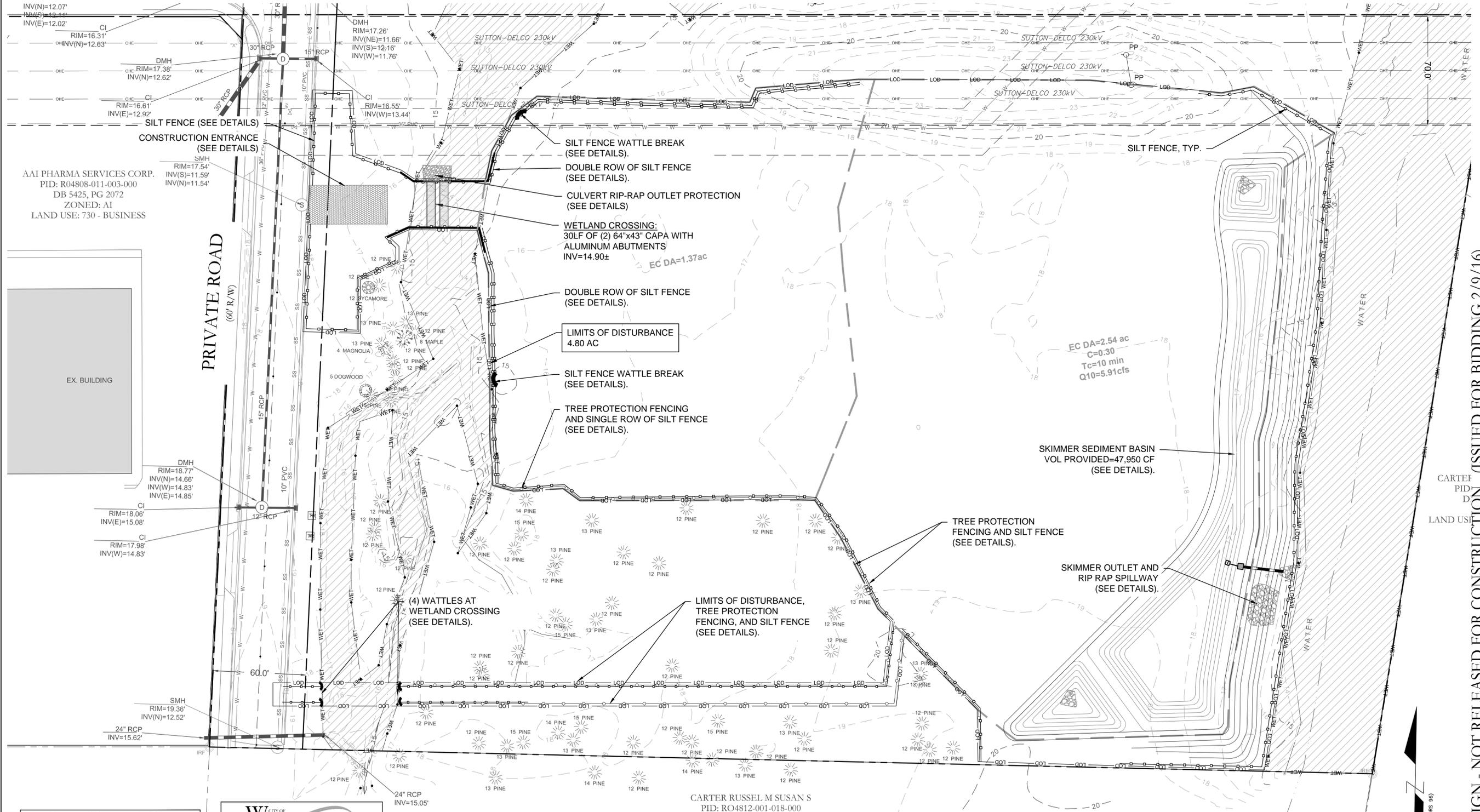
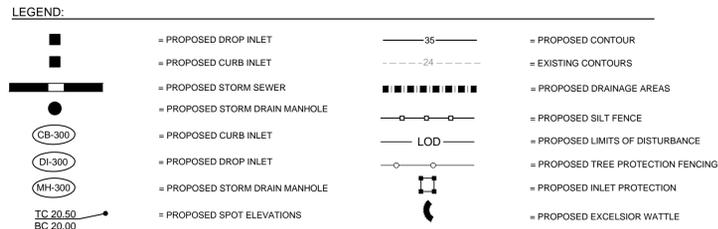


**C-2.1**  
PEI JOB#: 15264.PE

- EROSION CONTROL AND GRADING NOTES:**
- SEE GENERAL NOTES SHEET (C-1.0) FOR GRADING, DRAINAGE, AND EROSION CONTROL NOTES AND DETAIL SHEETS (C-5.0-C-6.0) FOR MORE INSTRUCTION.
  - SEE OVERALL GRADING AND DRAINAGE PLAN (SHEET C-3.2) FOR PROPOSED STORM SCHEDULE.
  - CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.
  - CONTRACTOR SHALL COORDINATE WITH OWNER / OWNER'S REPRESENTATIVE REGARDING THE SITE'S EXISTING GRADE. EARTHWORK ACTIVITIES MAY HAVE TAKEN PLACE AFTER THE TIME THE SURVEY SHOWN WAS COMPLETED.

- ASPHALT AREA AND BUILDING PAD NOTE:**
- SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE IN PAVEMENT AND STRUCTURAL AREAS, IN ACCORDANCE WITH THE ECS CAROLINAS, LLC SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS REPORT DATED SEPT. 30, 2015.

- GRADING NOTATIONS:**
- CB = CATCH BASIN
  - DCB = DOUBLE CATCH BASIN
  - DI = DROP INLET
  - DDI = DOUBLE DROP INLET
  - YI = YARD INLET
  - MH = STORM MANHOLE
  - TC = TOP OF CURB ELEVATION
  - BC = BOTTOM OF CURB (GUTTER) ELEVATION
  - PG = PROPOSED GRADE (PAVEMENT OR GROUND)
  - EP = EDGE OF PAVEMENT
  - HP = HIGH POINT ELEVATION
  - SW = SIDEWALK ELEVATION
  - FLUME = CONCRETE DRAINAGE FLUME FLOWLINE ELEVATION



**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

**CITY OF WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

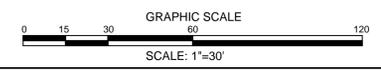
APPROVED STORMWATER MANAGEMENT PLAN

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.

CARTER RUSSEL M SUSAN S  
PID: RO4812-001-018-000  
DB 1930, PG 0663  
ZONED: AI  
LAND USE: 958 - UNUSED LAND



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)

REVISIONS:


CLIENT INFORMATION:

**GK CapeFear**  
DEVELOPMENT

**PARAMOUNT ENGINEERING, INC.**  
5911 Olander Drive, Suite 201  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846

EROSION CONTROL PLAN

AAI PHARMA HEADQUARTERS  
CITY OF WILMINGTON  
NEW HANOVER CO., NORTH CAROLINA

PROJECT STATUS:  
CONCEPTUAL LAYOUT: 8/31/15  
PRELIMINARY LAYOUT: 11/10/15  
RELEASED FOR CONST: 2/9/16

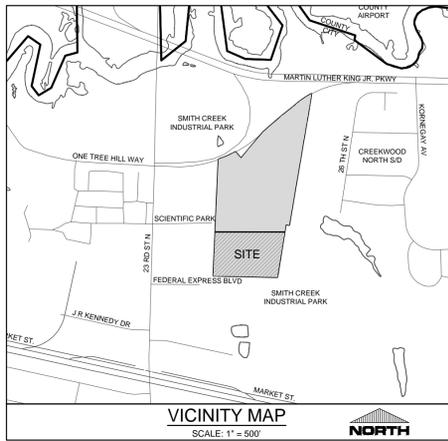
DRAWING INFORMATION:  
SCALE: 1"=30'  
DESIGNED: JMS  
CHECKED: RBS

SEAL  
NORTH CAROLINA  
PROFESSIONAL ENGINEER  
034354  
JAMES BRANCH SMITH

**C-3.0**

PEI JOB#: 15264.PE





**UTILITY NOTES: (NCAC 15A.02T.0305 / T15A.18C.0906)**

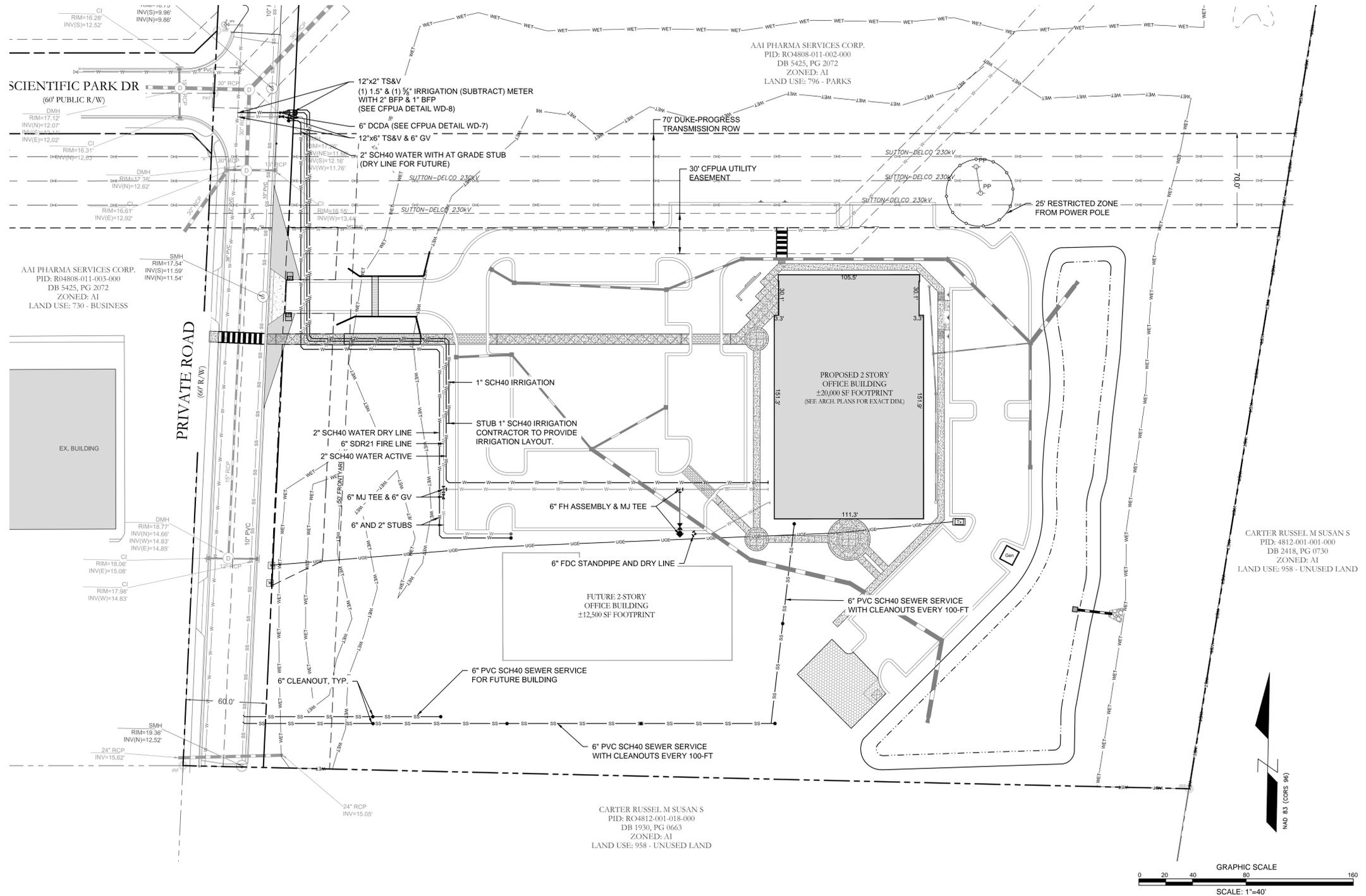
1. WATER MAINS SHALL BE LAID SO AS TO PROVIDE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM SEWERS. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, THE WATER MAIN CAN BE INSTALLED AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, EITHER IN A SEPARATE TRENCH, OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH.
2. WHEN CROSSING A WATER MAIN OVER A SEWER, THE WATER MAIN SHALL BE LAID AT LEAST 18 INCHES ABOVE THE SEWER. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS THAT MEET WATER MAIN STANDARDS. THE DUCTILE IRON PIPE SHALL EXTEND 10 FEET ON EACH SIDE OF THE CROSSING WITH A SECTION OF WATER MAIN PIPE CENTERED ON THE CROSSING.
3. CROSSING A WATER MAIN UNDER A SEWER, WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
4. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.
5. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.

**FIRE & LIFE SAFETY NOTES:**

1. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS WITHIN ANY DEVELOPMENT.
2. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
3. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
4. A MINIMUM OF 4' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
5. UNDERGROUND FIRE LINE & PRIVATE WATER MAINS MUST BE PERMITTED & INSPECTED BY NEW HANOVER COUNTY FIRE SERVICES FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING(S).
6. CONSTRUCTION TYPE -V (DAY CARE, NON-SPRINKLED), (FUTURE OFFICE, TBD).
7. ANY FDC MUST BE WITHIN 150' OF A FIRE HYDRANT & WITHIN 40' OF FIRE APPARATUS PLACEMENT.
8. LANDSCAPING OR PARKING CAN NOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT (3) CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF HYDRANTS AND FDC.

**LEGEND**

	= EXISTING WETLANDS
	= EXISTING PROPERTY LINE
	= EXISTING EASEMENT LINE
	= EXISTING OVERHEAD ELECTRIC
	= PROPOSED WATER LINE
	= PROPOSED FIRE LINE
	= PROPOSED SANITARY SEWER SERVICE
	= PROPOSED SANITARY SEWER CLEANOUT
	= PROPOSED FIRE HYDRANT



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	_____

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)

REVISIONS:

**GK Cape Fear**  
DEVELOPMENT

**PARAMOUNT ENGINEERING**  
5911 Olander Drive, Suite 201  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6766 (F)  
NC License #: C-2846

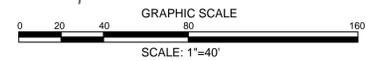
**UTILITY PLAN**  
AAI PHARMA HEADQUARTERS  
CITY OF WILMINGTON  
NEW HANOVER CO., NORTH CAROLINA

**PROJECT STATUS**  
CONCEPTUAL LAYOUT: 9/10/15  
FINAL DESIGN LAYOUT: 11/10/15  
RELEASED FOR CONSTRUCTION: 2/9/16

**DRAWING INFORMATION**  
DATE: 2/9/16  
SCALE: 1"=40'  
DRAWN BY: JAMES GAMBRE  
CHECKED: JAMES GAMBRE

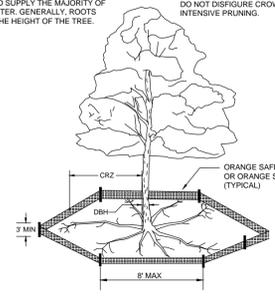
**SEAL**  
NORTH CAROLINA PROFESSIONAL ENGINEER  
JAMES GAMBRE  
034354  
BRANCH 5011

**C-4.0**  
PEI JOB#: 15264.PE





NOTE: THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 20% OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.



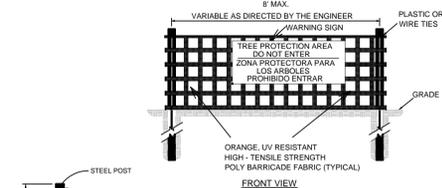
NOTE: CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFOUR CROWN WITH INTENSIVE PRUNING.

- NOTES:
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
  2. CRZ RADIUS IS 1.5 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
  3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
  4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
  5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
  6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YEARS FOR TREE MITIGATION.

STANDARD DETAIL  
DATE: JAN. 2015  
DRAWN BY: JSR  
CHECKED BY: RDG, P.E.  
SCALE: NOT TO SCALE

**TREE PROTECTION DURING CONSTRUCTION**  
SHEET 1 of 2

CITY OF WILMINGTON  
NORTH CAROLINA  
CITY OF WILMINGTON ENGINEERING  
PO BOX 1810  
WILMINGTON, NC 28402  
(910) 341-7807  
SD 15-09

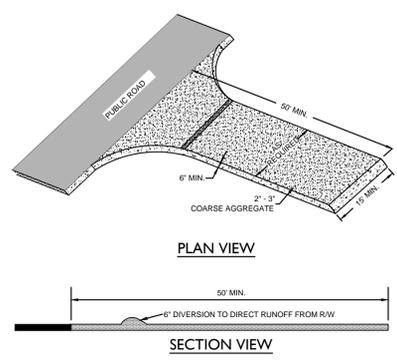


- NOTES:
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
  2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM. CLEARLY LEGIBLE AND SPACED AS DETAILED.
  3. SIGNS SHALL BE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

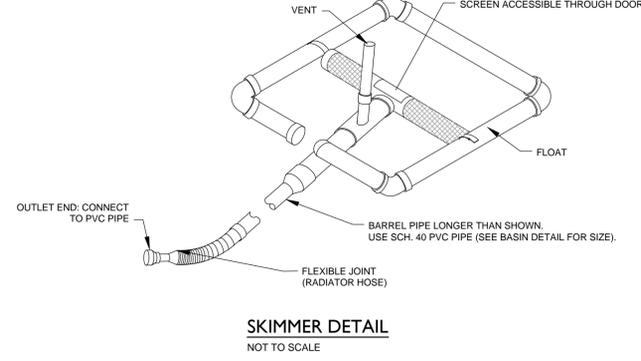
STANDARD DETAIL  
DATE: JAN. 2015  
DRAWN BY: JSR  
CHECKED BY: RDG, P.E.  
SCALE: NOT TO SCALE

**TREE PROTECTION DURING CONSTRUCTION**  
SHEET 2 of 2

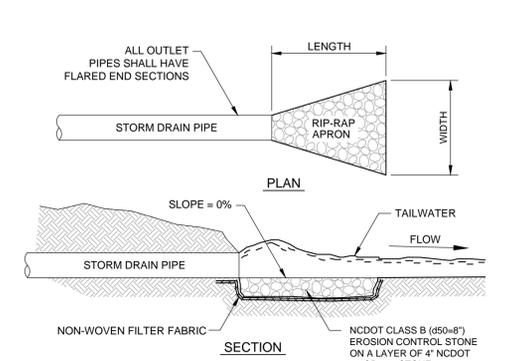
CITY OF WILMINGTON  
NORTH CAROLINA  
CITY OF WILMINGTON ENGINEERING  
PO BOX 1810  
WILMINGTON, NC 28402  
(910) 341-7807  
SD 15-09



TEMPORARY CONSTRUCTION ENTRANCE  
NOT TO SCALE



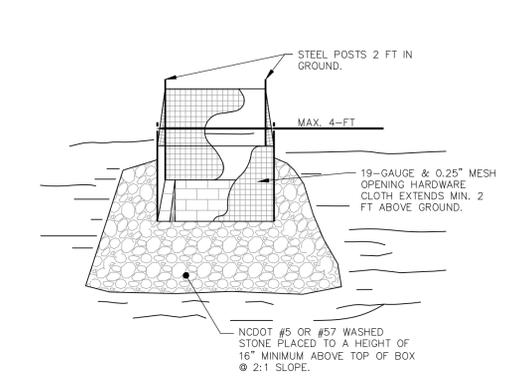
SKIMMER DETAIL  
NOT TO SCALE



RIP-RAP APRON SCHEDULE

RIPRAP LOCATIONS	PIPE DIA. (IN.)	LENGTH, La (FT)	UPSTREAM WIDTH, W (FT.)	DOWNSTREAM WIDTH, W (FT.)	STONE THICKNESS (IN.)
FES 300	36	5.0	9.00	9.00	13.5"
FES 200	36	5.0	9.00	9.00	13.5"
POND OUTFALL	18	8.0	4.5	9.50	13.5"
WETLAND CROSSING	(2) 64"x53"	10	17.0	17.0	13.5"

RIP-RAP APRON DETAIL  
NOT TO SCALE



- NOTES:
1. DRIVE 5-FOOT STEEL POSTS (1.25 LB/FT STEEL) 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
  2. SURROUND THE POSTS WITH AT LEAST 19-GAUGE HARDWARE CLOTH WITH A 1/4-INCH MESH OPENING. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM FOR A MIN. 2 FEET ABOVE THE GROUND. PLACE A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING AND REMOVAL IS RECOMMENDED.
  3. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET. THE TOP ELEVATION OF THE STRUCTURE MUST BE AT LEAST 12-INCHES LOWER THAN THE SURROUNDING GROUND ELEVATION DOWNSLOPE FROM THE INLET TO ENSURE THAT STORM FLOWS GET INTO THE INTENDED INLET; UNLESS OTHER SEDIMENT-CONTROL DEVICES ARE INSTALLED TO PREVENT OFF-SITE SEDIMENT-RUNOFF.

ALTERNATE MEASURE:  
THE USE OF A PYRAMID SHAPED STEEL STRUCTURE OR PID CAN BE USED AS AN ALTERNATE MEASURE DEVICE. CONTACT TRIANGLE STORMWATER SOLUTIONS OR OTHER MANUFACTURERS.

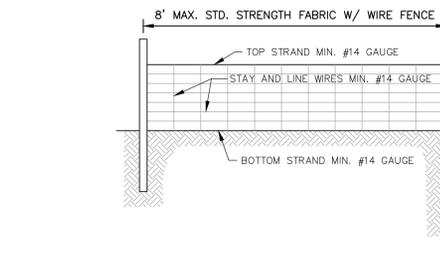
TEMPORARY INLET PROTECTION  
NOT TO SCALE

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 STORMWATER MANAGEMENT PLAN

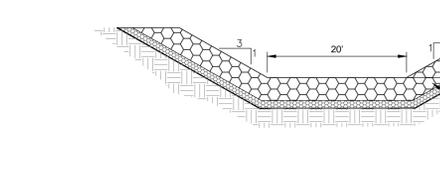
Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

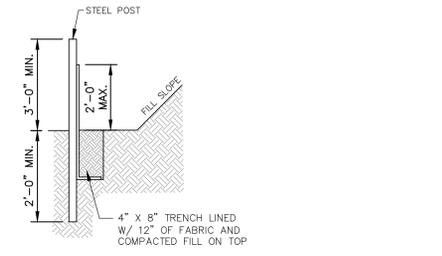


- NOTES:
1. WIRE FENCE (IF USED) SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 8-INCHES.
  2. SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFIN'S OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS ACCORDING TO ASTM D 4355.
  3. SEE THE NC EROSION CONTROL MANUAL FOR SPECIFICATIONS INSTALLING SEDIMENT FENCE USING THE SLICING METHOD MACHINERY.

TEMPORARY SILT FENCE  
NOT TO SCALE

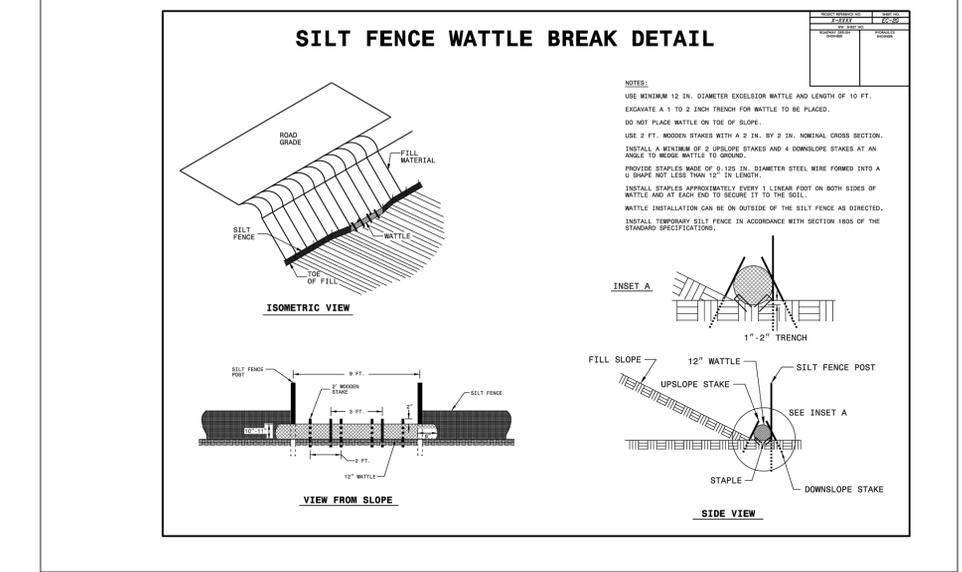


RIP-RAP EMERGENCY SPILLWAY\*  
NOT TO SCALE

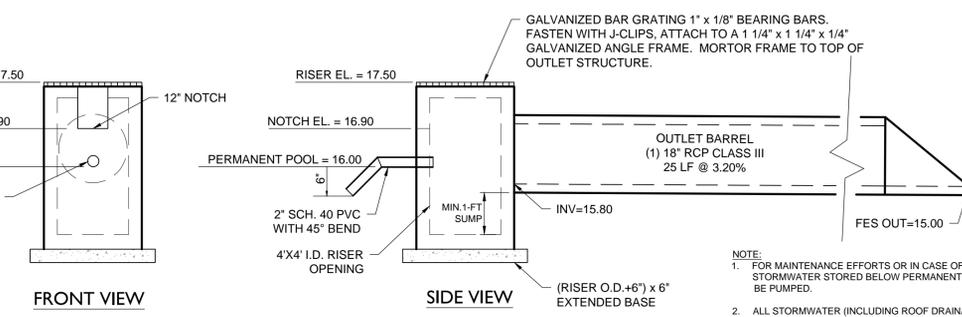


- NOTES:
1. USE MINIMUM 12 IN. DIAMETER EXCLUSION WATTLE AND LENGTH OF 10 FT.
  2. EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED. DO NOT PLACE WATTLE ON TOP OF SLOPE.
  3. USE 2 FT. MODERN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION. INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
  4. PROVIDE STAPLES MADE OF 3/16 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
  5. INSTALL STAPLES APPROXIMATELY EVERY 10 STEAM FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
  6. WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED. INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

WATTLE AND SILT FENCE WATTLE BREAK DETAILS  
NOT TO SCALE



SILT FENCE WATTLE BREAK DETAIL  
NOT TO SCALE



WET RETENTION POND DETAIL (AND SEDIMENT BASIN)  
NOT TO SCALE

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

CONCEPTUAL LAYOUT: PRELIMINARY LAYOUT. RELEASED FOR CONST.

DRAWING INFORMATION: DATE: 8/13/15, 11/10/15. SCALE: 1"=40'. DESIGNED: JAS. CHECKED: JAS.

SEALED: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 034354. JAS. BRANCH 5017.

Approved Construction Plan  
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: \_\_\_\_\_  
Traffic: \_\_\_\_\_  
Fire: \_\_\_\_\_

STORM ELEVATIONS:  
100-YR WSEL = 18.75  
50-YR WSEL = 18.50  
25-YR WSEL = 18.40  
10-YR WSEL = 18.20  
1-YR WSEL = 17.50

ATTACH SKIMMER TO THE LOW LEVEL ORIFICE. CONTRACTOR TO EQUIP LOW LEVEL ORIFICE WITH REDUCER FOR CONNECTION OF 2" SKIMMER TO 1.6" ORIFICE PIPE.

FAIRCLOTH SKIMMER (OR APPROVED EQUAL)  
2.0" SKIMMER WITH A ORIFICE DIAMETER = 1.6"

FOR EACH OPEN UTILITY CUT OF CITY STREETS, A \$325 PERMIT SHALL BE REQUIRED FROM THE CITY PRIOR TO OCCUPANCY AND/OR PROJECT ACCEPTANCE.

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)

REVISIONS:

CLIENT INFORMATION:  
**PARAMOUNT ENGINEERING**  
5911 Olander Drive, Suite 201  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846

DETAILS

PROJECT STATUS:  
8/13/15  
11/10/15  
CONCEPTUAL LAYOUT:  
PRELIMINARY LAYOUT:  
RELEASED FOR CONST.

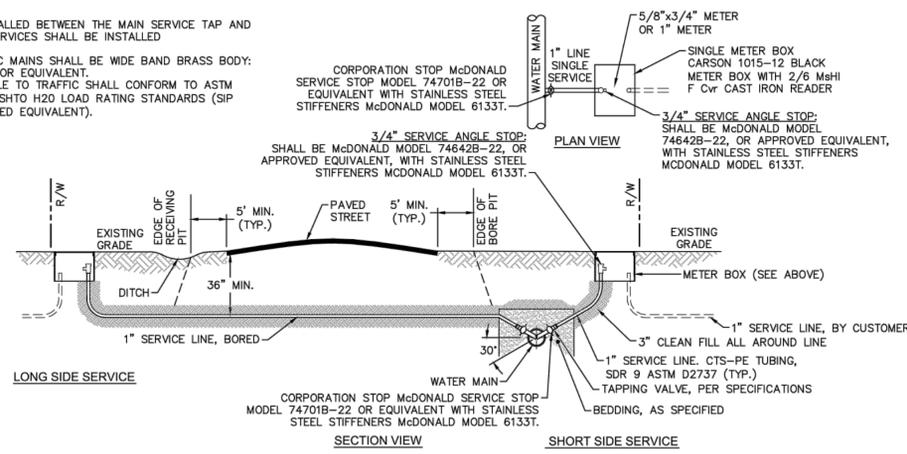
DRAWING INFORMATION:  
DATE: 8/13/15, 11/10/15  
SCALE: 1"=40'  
DESIGNED: JAS.  
CHECKED: JAS.

SEALED: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 034354. JAS. BRANCH 5017.

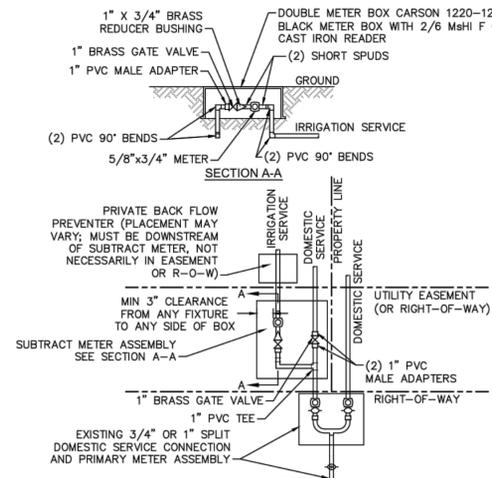
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PEI JOB#: 15264.PE



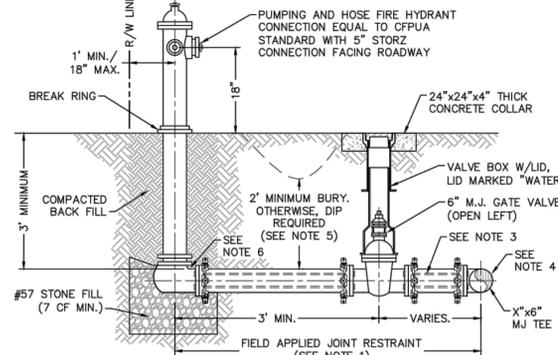
- NOTES:**
- NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
  - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: SADDLE McDONALD 3801 OR EQUIVALENT.
  - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (SIP MODEL 4242, OR APPROVED EQUIVALENT).



**WD-18 SINGLE SERVICE CONNECTION**  
NOT TO SCALE

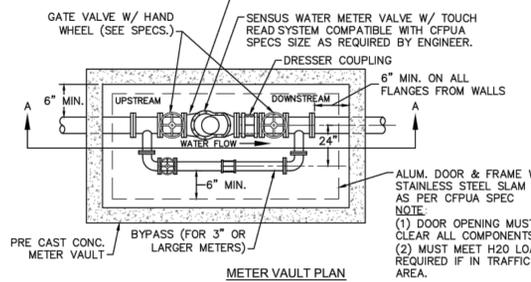
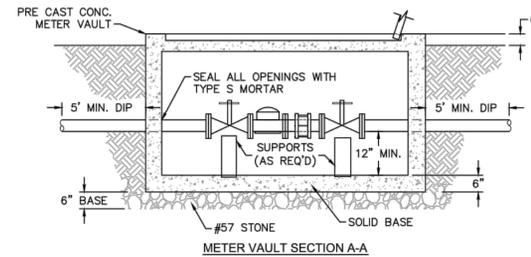


**WD-8 DOUBLE SERVICE CONNECTION USING SUBTRACT METER**  
NOT TO SCALE

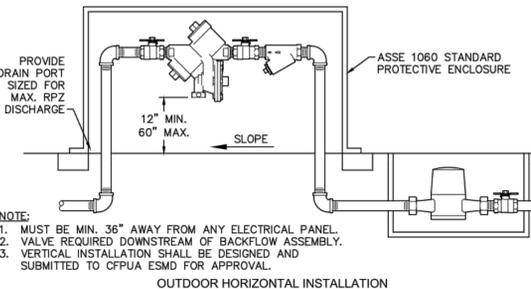
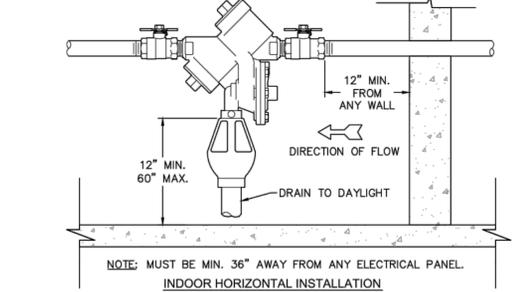


- NOTES:**
- JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI OR C-900 PVC PIPE AS MANUFACTURED BY EBAA IRON, SIGMA, STAR PIPE PRODUCTS OR APPROVED EQUAL.
  - WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.
  - CONTINUOUS 316 STAINLESS STEEL RODS (TEE TO VALVE AND VALVE TO HYDRANT) MAY BE USED WITH COR-BLUE MJ T-BOLT AND GASKET KITS, AS AN ALTERNATIVE.
  - HYDRANT TEE SHALL BE RESTRAINED ON EACH SIDE OF MAIN PLUS ANY VALVE, FITTING, OR JOINT IN MAIN WITHIN 10- FEET OF HYDRANT TEE.
  - HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.
  - WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.

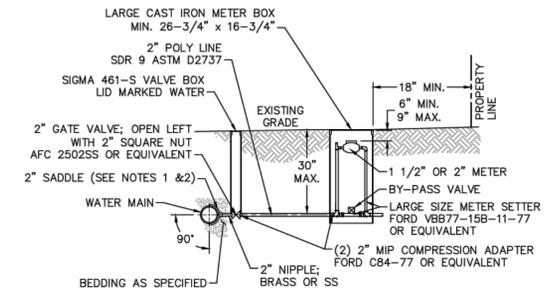
**WD-10 FIRE HYDRANT ASSEMBLY**  
NOT TO SCALE



**WD-1 WATER METER VAULT**  
NOT TO SCALE

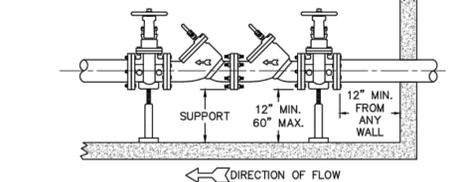
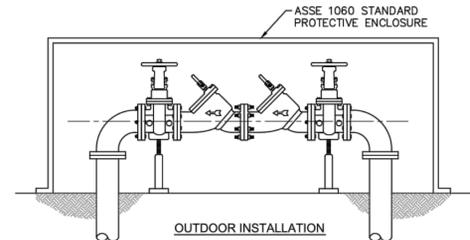


**WD-12 REDUCED PRESSURE PRINCIPLE ASSEMBLY**  
NOT TO SCALE



- NOTES:**
- ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
  - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: McDONALD 3800, FORD S90 (DOUBLE STRAP) OR EQUIVALENT.
  - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (OLDCASTLE PRECAST MODEL B1730 OR APPROVED EQUIVALENT).
  - METER BOXES SUSCEPTIBLE TO INCIDENTAL, NON-DELIBERATE TRAFFIC SHALL CONFORM TO ANSI/SCTE 77 TIER 15 LOAD RATING STANDARDS (STNERTECH MODEL DUO 17x30 OR APPROVED EQUIVALENT).
  - NON-TRAFFIC METER BOXES SHALL BE SIGMA MB2203 OR APPROVED EQUIVALENT.
  - 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.

**WD-11 LARGE METER**  
NOT TO SCALE



- NOTE:**
- MUST BE MIN. 36" AWAY FROM ANY ELECTRICAL PANEL.
  - VALVE REQUIRED DOWNSTREAM OF BACKFLOW ASSEMBLY.
  - VERTICAL INSTALLATION SHALL BE DESIGNED AND SUBMITTED TO CFPUA ESMO FOR APPROVAL.

**WD-7 DOUBLE CHECK VALVE ASSEMBLY**  
NOT TO SCALE

- GENERAL NOTES:**
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
  - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
  - THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
  - THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

**THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**

REV.	DESCRIPTION:	DATE:
1	Single Service Connection, Double Service Connection, and Large Meter Revised	10/28/12
2	Single Service Connection and Fire Hydrant Details Revised	7/23/13
3	Fire Hydrant Detail Revised	01/03/14
4	Revised Fire Hydrant Assembly To Show 5" STORZ Connection	04/10/15

**CFPUA WATER DISTRIBUTION SYSTEM**

**STANDARD DETAILS**

**CAPE FEAR PUBLIC UTILITY AUTHORITY**  
235 GOVERNMENT CENTER DRIVE  
WILMINGTON, NC 28403  
OFFICE: (910)332-6560

**SHEET NO: WSD-1**

DATE: 1/9/12  
SCALE: N/A  
DRAWN BY: CFPUA  
CHECKED BY: CFPUA  
PROJECT NO.:

**PARAMOUNT ENGINEERING**  
5911 Olander Drive, Suite 201  
Wilmington, North Carolina 28403  
(910) 791-0707 (O) (910) 791-6760 (F)  
NC License #: C-2846

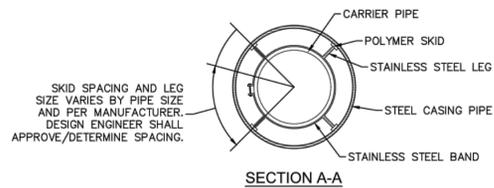
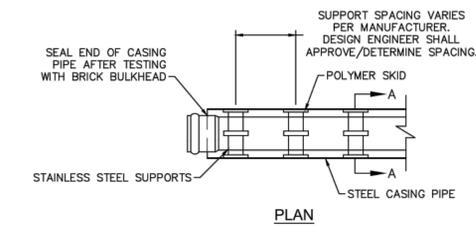
**CFPUA WATER DISTRIBUTION SYSTEM**

**SEAL**  
NORTH CAROLINA PROFESSIONAL ENGINEER  
JAMES BRANCH SMITH  
034354

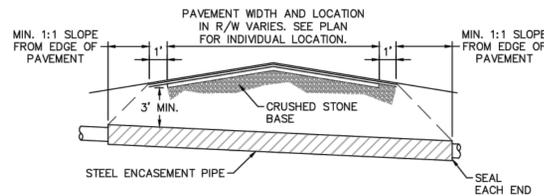
**C-5.3**

PEI JOB#: 15264.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)



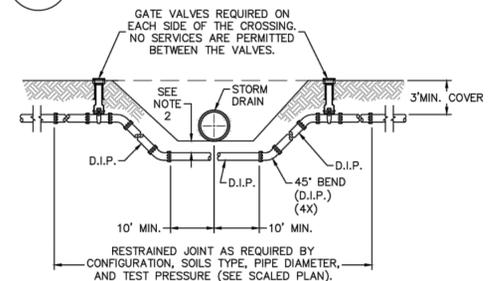
WD-15 PIPE CASING SUPPORT DETAIL  
NOT TO SCALE



WD-4 THRUST BLOCK DETAIL  
NOT TO SCALE

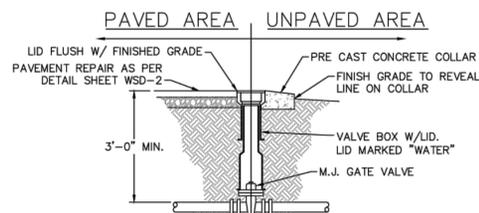
- NOTES:
- CASING WILL BE INSTALLED AT LINE AND GRADE SHOWN ON INDIVIDUAL PROFILE FOR EACH CROSSING. BORING/JACKING TO LINE AND GRADE IS REQUIRED.
  - TRACER WIRE SHALL BE CONTINUED THROUGH CASING.

WD-16 TYPICAL BORING/ JACKING DETAIL  
NOT TO SCALE

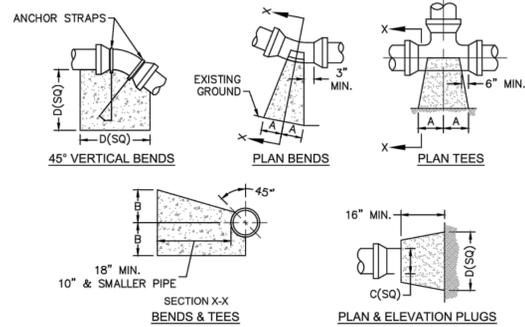


- NOTES:
- USE PRESSURE CLASS 350 DIP, UNLESS SPECIFIED OTHERWISE.
  - MINIMUM DEPTH REQUIRED, UNLESS SPECIFIED OTHERWISE BY CFPUA:
    - IN DOT R/W, 36" MIN. TYPICAL, OR 24" MIN. WHEN CROSSING A DITCH LINE.
    - ALL OTHER LOCATIONS, 30" MIN.
    - WHEN STORM DRAIN INVERT IS BURIED AT OR BELOW ABOVE DEPTHS, 18" MIN. CLEARANCE IS REQUIRED.

WD-2 WATER MAIN DITCH AND STORM DRAIN CROSSING  
NOT TO SCALE



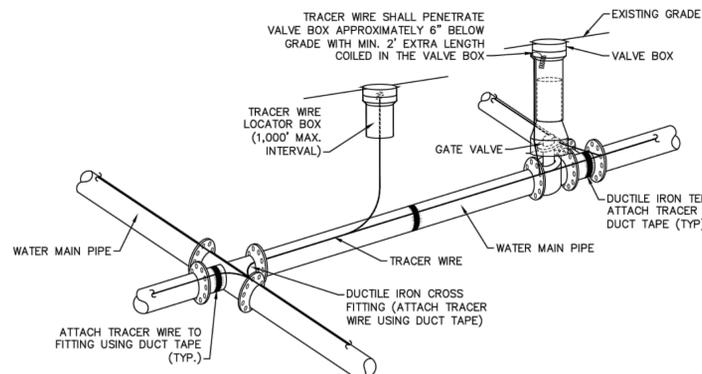
WD-3 VALVE DETAIL  
NOT TO SCALE



SIZE	90° BENDS		45° BENDS		22-1/2° BENDS		TEES/PLUGS		45° VERT. BENDS
	A	B	A	B	A	B	A	B	
3"	6"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

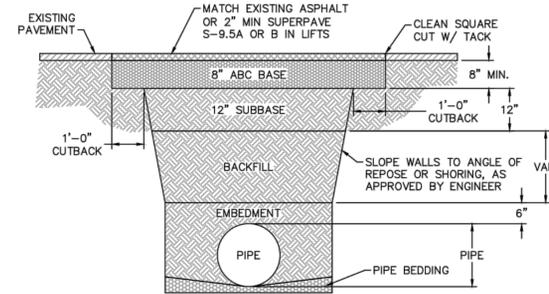
- NOTES:
- BASED ON 160 PSI TEST PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.
  - ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
  - USE MEG-A-LUG (PREFERRED) IN LIEU OF BLOCKING AND RODDING.

WD-17 TRACER WIRE DETAIL  
NOT TO SCALE



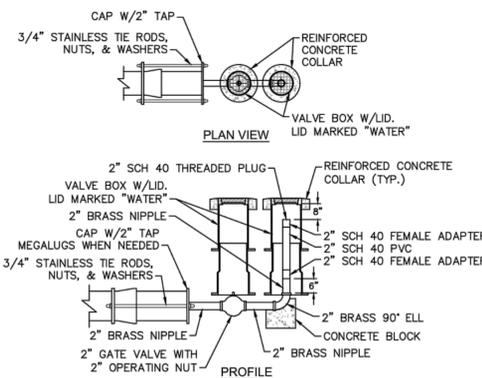
- NOTES:
- TRACER WIRE SHALL BE #10 COPPER SOLID CORE COPPER WIRE WITH GAS AND OIL RESISTANT INSULATION.
  - WIRE SHALL BE STRAPPED TO ALL PVC WATER MAIN PIPING WITH DUCT TAPE AT 12 FOOT INTERVALS ALONG THE PIPE.
  - SECURE WIRE TO ALL TEE AND CROSS FITTINGS WITH DUCT TAPE.
  - ALL SPLICES IN THE WIRE SHALL BE MADE WITH 3M DBR DIRECT BURY SPLICE KIT AN UNDERGROUND RATED, WATERTIGHT, AND APPROVED SPLICE CONNECTOR OR APPROVED EQUAL.

WD-6 SAMPLING STATION  
NOT TO SCALE



- NOTES:
- BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
  - SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION. (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
  - 8-INCH OF ABC BASE MATERIAL SHALL BE USED ON CITY STREETS.
  - BACKFILL AND BASE MATERIALS SHALL BE COMPACTED 12" MINIMUM LIFTS.
  - SOIL SHALL BE COMPACTED BY A MECHANIZED TAMPER (I.E. JUMPING JACK), HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
  - ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
  - ABC BASE AND SUBBASE COMPACTED TO 98% AND BACKFILL AND EMBEDMENT COMPACTED TO 90% AS DETERMINED BY THE MODIFIED PROCTOR AASHTO METHOD T-99.
  - 1-FOOT CUTBACKS OF ASPHALT SHALL BE PREPARED ON UNDISTURBED SOIL. MINIMUM ASPHALT DENSITY IS 90%.

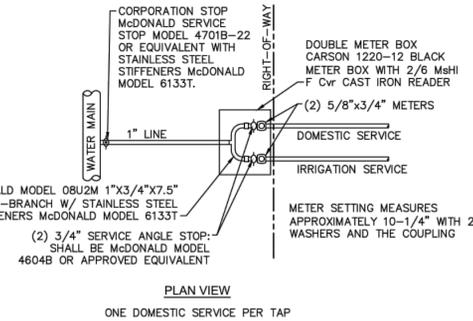
WD-14 PAVEMENT REPAIR WHERE PIPE INSTALLED  
NOT TO SCALE



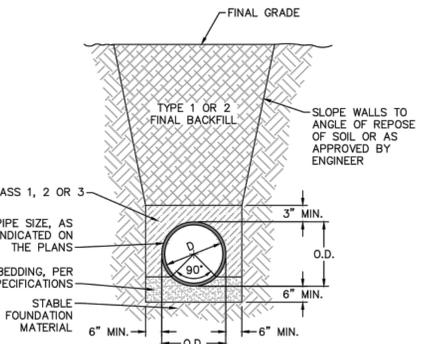
WD-5 2" BLOW-OFF  
NOT TO SCALE

- GENERAL NOTES:
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
  - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
  - THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
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THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04



WD-9 DOUBLE DOMESTIC SERVICE CONNECTION  
NOT TO SCALE



WD-13 TYPICAL TRENCH DETAIL  
NOT TO SCALE

CFPUA WATER DISTRIBUTION SYSTEM

REV.	DESCRIPTION:	DATE:
1	Revised Water Main Ditch and Storm Crossing Detail	11/12/13
2	Revised Water Main Ditch and Storm Crossing Detail	05/06/14
3	Revised Tracer Wire Detail	10/20/15

STANDARD DETAILS

CAPE FEAR PUBLIC UTILITY AUTHORITY  
235 GOVERNMENT CENTER DRIVE  
WILMINGTON, NC 28403  
OFFICE: (910)332-6560

DATE: 1/9/12  
SCALE: N/A  
DRAWN BY: CFPUA  
CHECKED BY: CFPUA  
PROJECT NO.:

SHEET NO:  
WSD-2

REVISIONS:

CLIENT INFORMATION: **GK CapeFear DEVELOPMENT**

PARAMOUNT ENGINEERING INC. 5911 Olander Drive, Suite 201  
Wilmington, North Carolina 28403  
(910) 791-0707 (O) (910) 791-6760 (F)  
NC License #: C-2846

CFPUA DETAILS: **AAI PHARMA HEADQUARTERS CITY OF WILMINGTON NEW HANOVER CO., NORTH CAROLINA**

PROJECT STATUS: 8/13/15 11/10/15  
CONCEPTUAL LAYOUT: PRELIMINARY LAYOUT: RELEASED FOR CONST.  
DRAWING INFORMATION: DATE: 2/9/16 2/9/16 RFB GJM/JSB RFB  
DESIGNED: DRAWN: CHECKED:

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 034354  
JAMES BRANCH SMITH ENGINEER

PEI JOB#: 15264.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)

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**SITE DATA**  
 PROJECT NAME: AAI PHARMA HEADQUARTERS  
 SITE ADDRESS: 2350 SCIENTIFIC PARK DRIVE  
 NHC PIN: R04808-011-002-000  
 PROPERTY OWNER: AAI PHARMA SERVICES CORP  
 SOURCE DEED: DEED BOOK 5425, PAGE 2072  
 OVERALL SITE AREA: 1,448,695 SF (33.26 ACRES)  
 PROJECT AREA: 345,093 SF (7.92 ACRES)  
 ZONING: AI (AIRPORT INDUSTRIAL)  
 PROPOSED USE: PROFESSIONAL OFFICES  
 CAMA LAND USE: URBAN

**DIMENSION REQUIREMENTS**

	REQUIRED	PROVIDED
FRONT SETBACK	50'	360'
SIDE SETBACK	0'	194.9' (R) / 105' (L)
REAR SETBACK	0'	223.4'
BUILDING HEIGHT	35'	

**BUILDING INFORMATION**  
 PROPOSED 2-STORY OFFICE BUILDING:  
 20,250 SF FOOTPRINT  
 40,500 SF TOTAL BUILDING AREA

**BUILDING COVERAGE:** 5.9%

**PARKING INFORMATION**

**PARKING:**  
 MINIMUM REQUIRED: 1 PER 300 SF = 135 SPACES  
 MAXIMUM ALLOWED: 1 PER 200 SF = 203 SPACES  
 PROVIDED: 161 SPACES

**HANDICAP SPACES REQUIRED:** 6 SPACES  
**HANDICAP SPACES PROVIDED:** 6 SPACES

**HVAC NOTE:**  
 HVAC WILL BE LOCATED ON THE ROOF SCREENED BY EXTERIOR WALLS.

**LANDSCAPE NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
- STAKE ALL TREES AS SHOWN IN DETAIL OR AS OTHERWISE DIRECTED BY OWNER OR OWNER'S REPRESENTATIVE.
- ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
- NO EXISTING TREES SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
- SET ALL TREES IN 5' MINIMUM DIAMETER PINE STRAW MULCH BED.
- ALL SHRUB BEDS AND/OR PLANTING AREAS EXCLUDING SEEDED AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
- PLANTING SOIL MIX: MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND FERTILIZERS IN THE QUANTITIES RECOMMENDED BY THE SOIL TESTING LABORATORY, THIRD PARTY RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE OR AS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
- ANY AND ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.
- THE CONTRACTOR SHALL REPLACE DEAD AND UNHEALTHY PLANT MATERIAL WITHIN 12 MONTHS OF ACCEPTANCE OF THE INSTALLED MATERIAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL PREPARE ALL SEEDED AREAS TO ASSURE THAT THE SUBGRADE HAS BEEN RAKED AND ROLLED TO ACCEPT THE SEED. ALL TURF AREAS MUST BE IRRIGATED OR HAND WATERED. ALL TURF AREAS SHOULD PROVIDE A SMOOTH SURFACE FREE OF DIPS AND UNLEVELED GROUND. REFERENCE PLANT SCHEDULE FOR TURF SELECTION.
- IRRIGATION SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA.
- THE CONTRACTOR IS RESPONSIBLE FOR HAND WATERING THE INSTALLED PLANT MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE IF IRRIGATION HAS NOT BEEN INSTALLED. ALL MATERIAL INCLUDING TURF AREAS SHALL BE HAND WATERED ONCE WEEKLY OR AS NEEDED TO ENSURE SURVIVAL OF PLANTS.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY.
- STREET TREES WILL BE PLANTED AS CLOSE TO CITY REGULATIONS AS POSSIBLE; HOWEVER, SITE CONDITIONS INCLUDING THE LOCATIONS OF DRIVEWAYS, SIGNS, ETC. MAY REQUIRE ADJUSTMENT FROM PROPOSED PLAN. PROPOSED POND BANK STABILIZATION WILL INCLUDE ORNAMENTAL GRASSES FROM TOP OF BANK TO WATER LEVEL AND WILL COMPLY WITH CITY STANDARD SD 15-16.
- ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' - 10' IN ACCORDANCE WITH SECTION 18-556 OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE.
- IN CASES WHERE SIGHT DISTANCE TRIANGLES INTERFERE WITH OTHER REQUIRED BUFFER OR PLANTING AREAS, THE SIGHT DISTANCE TRIANGLE WAS MAINTAINED AND PLANTINGS WERE ADJUSTED TO ALLOW FOR PROPER SIGHT LINES.
- AUTOMATIC IRRIGATION SYSTEM TO BE PROVIDED BY OWNER.
- ALL TREE LOCATIONS WILL BE ADJUSTED AS NEEDED WITH LIGHT LOCATIONS.
- TREES SHALL BE PLANTED NO LESS THAN 5' FROM SEWER AND WATER LINES.

**LANDSCAPE TABULATIONS**

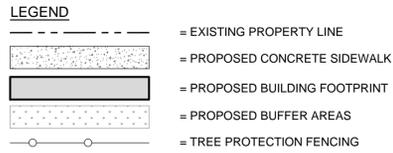
**SHADING REQUIREMENTS:**  
 PROVIDED: 1.78 AC VUA x .20 = .37 AC REQUIRED  
 .37 AC OR 16,261 SF  
 23 LARGE CANOPY @ 707 SF = 16,261 SF OR .37 AC

**FOUNDATION PLANTING:**  
 35' BLDG HT. X 105.52 (NORTH SIDE) = X 12% = 443.18 SF REQ'D; 592.18 SF PROVIDED  
 35' BLDG HT. X 111.33 (SOUTH SIDE) = X 12% = 467.59 SF REQ'D; 824.99 SF PROVIDED  
 35' BLDG HT. X 151.33 (WEST SIDE) = X 12% = 635.59 SF REQ'D; 1842.44 SF PROVIDED  
 35' BLDG HT. X 151.34 (EAST SIDE) = X 12% = 635.63 SF REQ'D; 1524.83 SF PROVIDED

**STREETYARD PLANTING:**  
 PRIVATE ROAD  
 REQ'D: 1 CANOPY TREE (3' CAL.), 6 SHRUBS (12' HGT) 600 SF  
 PHASE 1 CALCULATION: 232.7 LF OF ROADWAY X 25 = 5817.5 SF/ 600 SF = 9.7 (10)  
 10 X 1 CANOPY TREE = 10 REQ'D CANOPY TREE; 11 PROVIDED  
 10 X 6 SHRUBS = 60 REQ'D SHRUBS; 64 PROVIDED

**INTERIOR PARKING PLANTING:**  
 REQUIRED & PROVIDED: 1 CANOPY TREE/ ISLAND AND PLANTED GROUND COVER

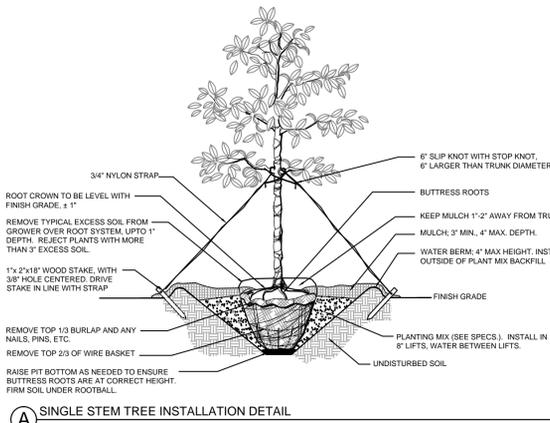
Key	Qty	Common Name	Size & Specs.
<b>Parking Area Trees</b>			
LO	11	Live Oak	3" cal. Min.
JZ	12	Japanese Zelkova	3" cal. Min.
CM	8	Crape Myrtle 'Tonto'	10' ht. multistem
<b>Streetyard Trees</b>			
SY	6	Sycamore	3" cal. Min.
BC	5	Bald Cypress	3" cal. Min.
<b>Shrubs</b>			
CL	25	Coastal Leucothoe	3 gal.
DP	13	Dwarf Palmetto	3 gal.
DYH	165	Dwarf Yaupon Holly	3 gal.
LOR	13	Loropetalum 'Ruby'	3 gal.
PITT	28	Variagated Pittosporum	3 gal.
RH	11	Red Holly	4" hgt.
SP	18	Saw Palmetto	3 gal.
WP	6	Wax Myrtle	4" hgt.
<b>Sod &amp; Mulch</b>			
		'Blackjack' Bermuda Seed	
		Pine Straw Mulch 3" Depth Min.	All plant beds.



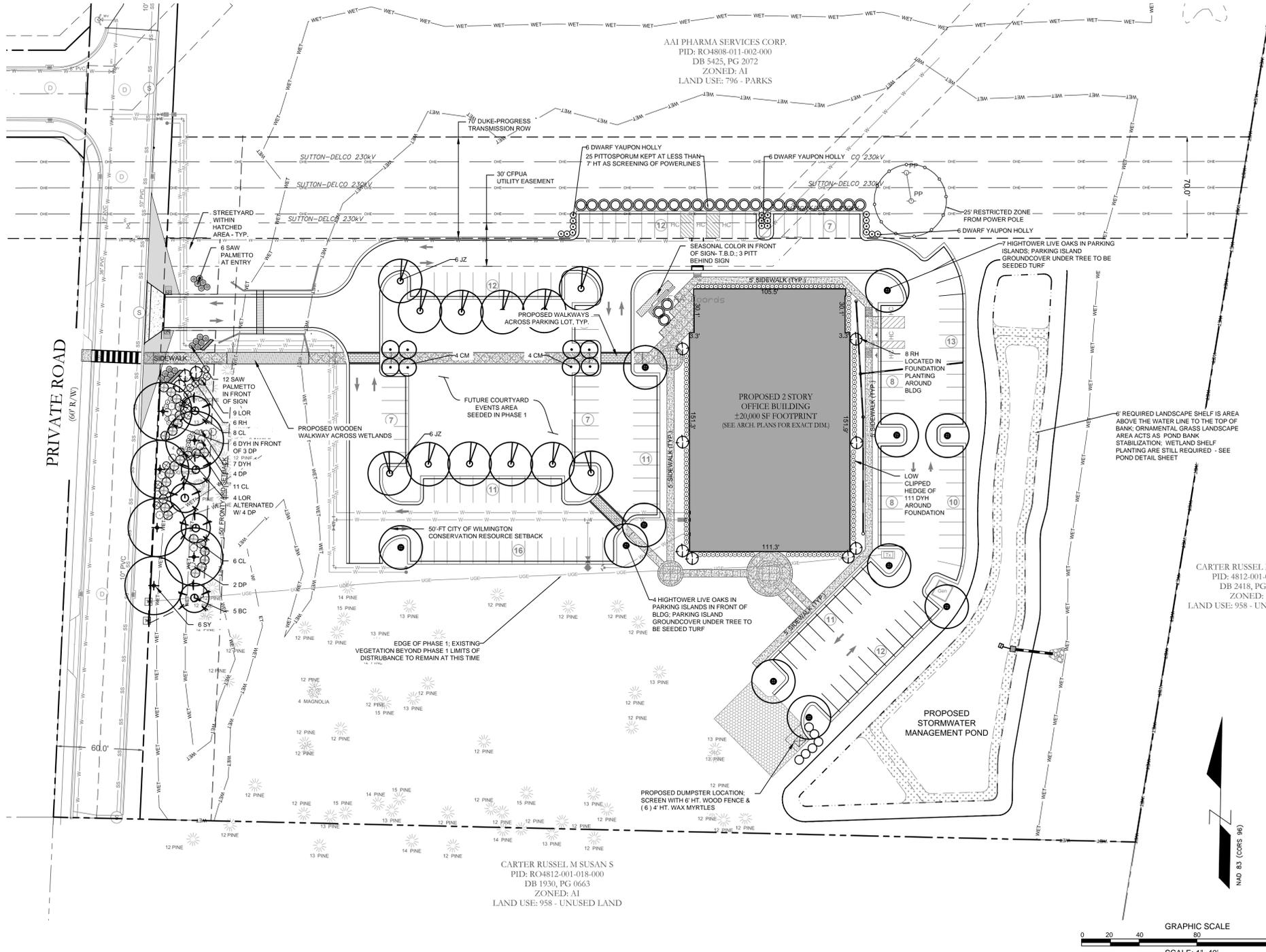
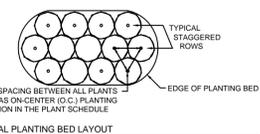
**STORMWATER POND SCHEDULE**

Qty	Common Name	Size & Specs.
		1/3 total quantity of the pond stabilization plantings to be this variety; Size and quantities of all pond bank plantings will be determined upon construction of the ponds to assure the banks will be stabilized in accordance with all applicable rules and regulations
TBD	CROWN GRASS	1/3 total quantity of the pond stabilization plantings to be this variety
TBD	PINK MUHLY GRASS	1/3 total quantity of the pond stabilization plantings to be this variety
TBD	Cord Grass	1/3 total quantity of the pond stabilization plantings to be this variety

Ornamental Grass species may vary at time of installation, but all plantings will comply with City regulation SD 15-16.



- NOTES:**
- OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
  - INSTALL TOP OF PLANT BALL 2" ABOVE ADJACENT GRADE
  - TAMP PLANT SOIL MIX FIRMLY IN 8" LIFTS AROUND PLANT BALL
  - SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



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: \_\_\_\_\_

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION (ISSUED FOR BIDDING 2/9/16)

**REVISIONS:**

**CLIENT INFORMATION:**  
**GK Cape Fear DEVELOPMENT**

**PARAMOUNT ENGINEERING**  
 5911 Olander Drive, Suite 201  
 Wilmington, North Carolina 28403  
 (910) 791-6707 (O) (910) 791-6760 (F)  
 NC License #: C-2846

**LANDSCAPE PLAN**

**AAI PHARMA HEADQUARTERS**  
 CITY OF WILMINGTON  
 NEW HANOVER CO., NORTH CAROLINA

**PROJECT STATUS:**  
 CONCEPTUAL LAYOUT: 9/15/15  
 FINAL DESIGN LAYOUT: 11/10/15  
 RELEASED FOR CONSTRUCTION: 2/9/16

**DRAWING INFORMATION:**  
 DATE: 2/9/16  
 SCALE: 1" = 40'  
 DRAWN: GMS  
 CHECKED: RRE

**SEAL**

**L-1.0**

PEI JOB#: 15264.PE

