

# INDEPENDENT SENIOR HOUSING CHAPEL HILL

217 HOMESTEAD ROAD CHAPEL HILL, NC 27516

TOWN OF CHAPEL HILL
SPECIAL USE PERMIT SUBMITTAL

SUBMITTED ON SEPTEMBER 27, 2017

	SITE DATA
PROJECT NAME:	GREYSTAR OVERTURE CHAPEL HILL
SITE ADDRESS:	2217 HOMESTEAD ROAD CHAPEL HILL NC 27516
COUNTY:	ORANGE COUNTY
PARCEL PIN #:	9870907548
PARCEL OWNER:	WILLIAM BAINSTER WOOD & VIRGINIA WOOD
PARCEL AREA:	15.73 ACRES
TOTAL DISTURBED/ PROJECT AREA:	387,684 SQUARE FEET (8.90 ACRES)
CURRENT ZONING:	R2
EXISTING LAND USE:	RESIDENTIAL
PROPOSED USE:	AGE RESTRICTED RENTAL APARTMENTS
FLOODPLAIN:	NONE
JORDAN RIPARIAN BUFFER ZONE:	NO
WETLANDS:	NONE
WATER SHED:	JORDAN LAKE
RIVER BASIN:	CAPE FEAR RIVER BASIN
STREAMS:	NONE
CONSTRUCTION TYPE:	NEW CONSTRUCTION
MIN. REQUIRED STREET SETBACK	20
MIN. REQUIRED INTERIOR SET BACK (NEIGHBORING PROPERTY LINE)	6
MIN. REQUIRED SOLAR SETBACK (NORTHERN PROPERTY LINE)	8
MAX BUILDING HEIGHT:	
PROPOSED BUILDING HEIGHT:	
EXISTING IMPERVIOUS AREA:	13,140 S.F.
PROPOSED IMPERVIOUS AREA:	194,940 S.F.

OVERALL PARKING SUMMARY			
PROVIDED PARKING	SOUTH	NORTH	TOTAL
REGULAR 9'X20' SPACES	-	19	17
REGULAR ACCESSIBLE SPACES	-	1	2
TOTAL VEHICULAR PARKING SPACES	-	20	19
BIKE PARKING	0	4	4
PARKING RATIO: 1 SPACE PER 600 S.F. OF OFFICE SPACE + 1 SPACE PER 3,000 S.F. OF ADDITIONAL INDOOR AREA. COMBINED CAPACITY: 8,683 S.F. OFFICE SPACE (15 SPACES) + 11,820 S.F. ADDITIONAL INDOOR AREA (4 SPACES) = 19 SPACES			

UTILITIES IMPROVEMENTS QTY	
PRIVATE SEWER	
?" SEWER SERVICE	605 LF
PRIVATE WATER	
?" WATER MAIN	LF

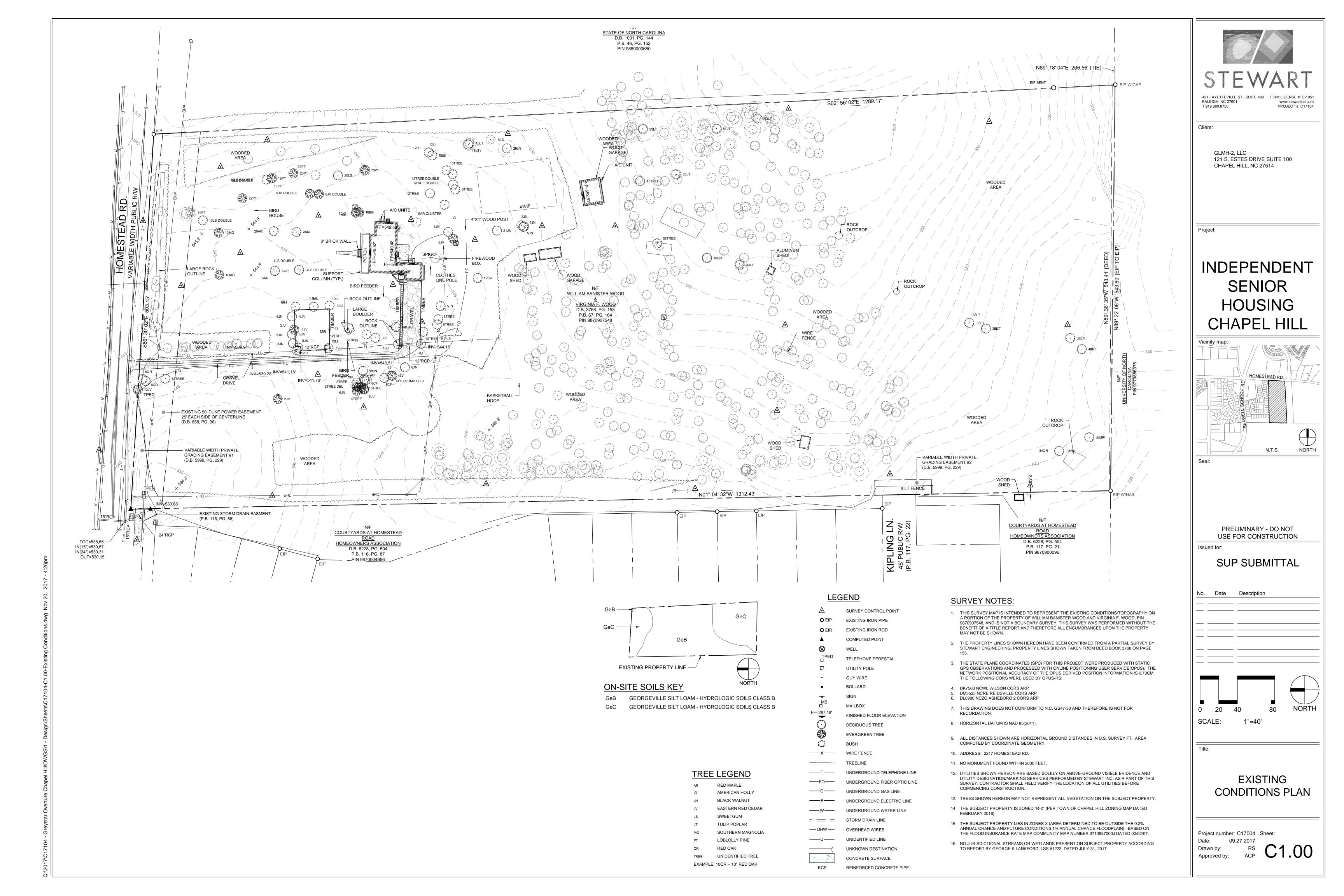
	SHEET INDEX
SHEET#	SHEET NAME
C0.00	COVER SHEET
C1.00	EXISTING CONDITIONS PLAN
C1.01	AREA MAP
C2.00	DEMOLITIONS PLAN
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L1.20	STEEP SLOPE PLAN
L2.00	LANDSCAPE DETAILS
L2.01	LANDSCAPE DETAILS
L2.02	LANDSCAPE DETAILS

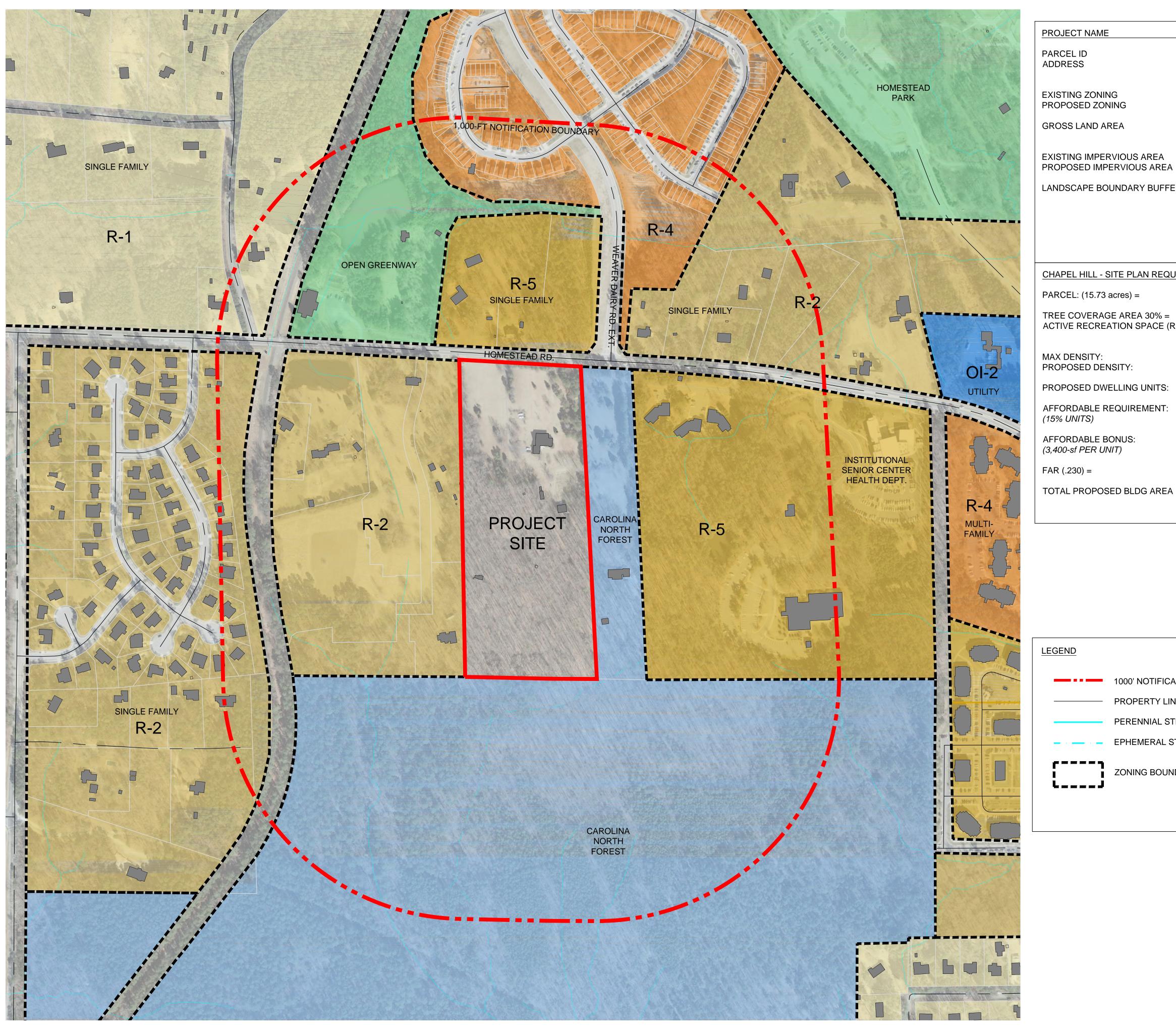
APPLICANT/OWNER

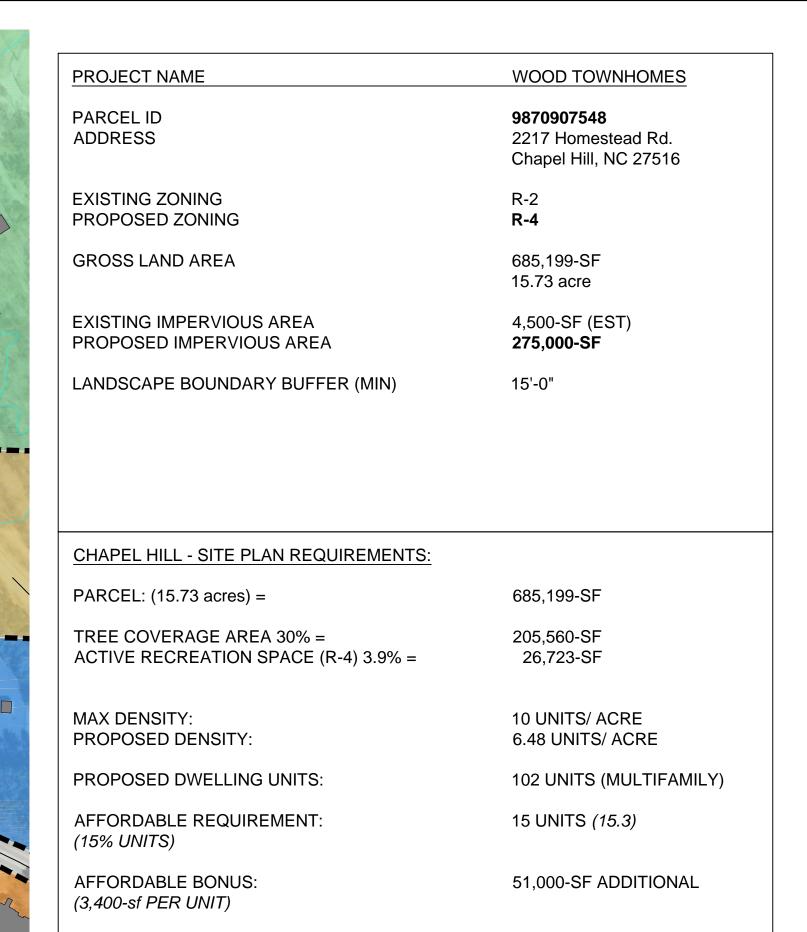
CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE - GEOMATICS - GEOTECHNICAL

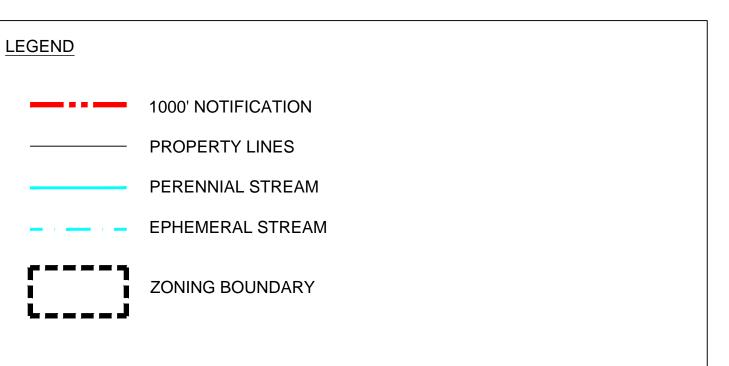
ARCHITECTS











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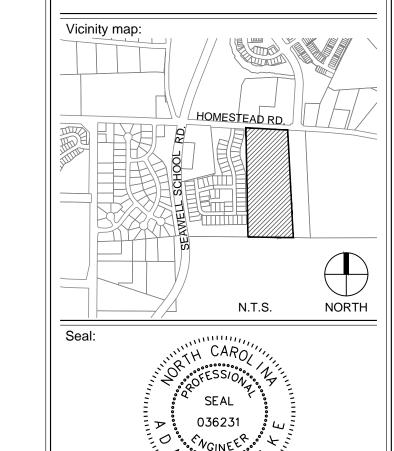
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Client:

GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

# INDEPENDENT SENIOR HOUSING **CHAPEL HILL**



PRELIMINARY - DO NOT USE FOR CONSTRUCTION

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No. Date Description

SCALE: 1"=200'

AREA MAP

Project number: C17004 Sheet:



- 4. CLEANOUTS AND WATER VALVES LOCATED IN AREAS OF DEMOLITION OR SUBSEQUENT CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND RAISED TO BE FLUSH WITH NEW GRADE.
- 5. ANY UTILITY SERVICES SHOWN TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY PROVIDER. CONTRACTOR IS RESPONSIBLE FOR APPROPRIATE SEQUENCING OF UTILITY DEMOLITION WITH THE RESPECTIVE UTILITY AGENCIES.
- 6. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES PRIOR TO BEGINNING DEMOLITION OPERATIONS. NOTIFY "NORTH CAROLINA ONE CALL" (TELEPHONE 1-800-632-4949) AT LEAST 48 HOURS PRIOR TO START OF DEMOLITION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NORTH CAROLINA ONE CALL."
- 7. CLEAN SOILS SHALL BE UTILIZED FOR BACKFILL. COMPACTION OF THESE SOILS SHALL BE PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
- 8. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ALL SUBGRADE MATERIALS DIRECTLY ASSOCIATED WITH ITEMS TO BE REMOVED.
- 9. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF LEGALLY OFF-SITE UNLESS OTHERWISE NOTED ON THIS PLAN.
- 10. REFER TO LANDSCAPE AND EROSION CONTROL DRAWINGS FOR TREE PROTECTION PLAN AND REQUIREMENTS.
- 11. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL
- JURISDICTIONAL CODES OR REQUIREMENTS. 12. TREE PROTECTION FENCING SHALL BE IN PLACE PRIOR TO BEGINNING DEMOLITION
- 13. EROSION CONTROL PERMIT SHALL BE OBTAINED AND ONSITE PRIOR TO BEGINNING DEMOLITION.

- 16. DEMOLITION AND SUBSEQUENT CONSTRUCTION OF STORM DRAINAGE PIPING SHALL BE PERFORMED IN SUCH A MANNER THAT THE OLD PIPE AND STRUCTURES REMOVED DO NOT IMPACT DRAINAGE UPSTREAM OF THE SYSTEM. PROVISIONS SHALL BE MADE TO MAINTAIN STORM WATER DRAINAGE PATTERNS DURING CONSTRUCTION.
- 17. DEMOLITION AND SUBSEQUENT CONSTRUCTION OF UTILITIES (WATER, SEWER, ETC) SHALL BE PERFORMED IN SUCH A MANNER THAT THE OLD PIPE AND STRUCTURES REMOVED DO NOT IMPACT OR MINIMIZE SERVICE INTERRUPTION TO EXISTING FACILITIES TO REMAIN. PROVISIONS SHALL BE MADE TO MAINTAIN SERVICE DURING CONSTRUCTION.
- 18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL DAMAGES TO THE EXISTING DRIVEWAY, PARKING LOT, SIDEWALK AND CURB AND GUTTER AS A RESULT OF CONSTRUCTION ACTIVITY AND TRAFFIC. CONTRACTOR SHALL MAINTAIN A PRE-CONSTRUCTION VIDEO OR PHOTO DOCUMENTATION TO SHOW NO DAMAGES
- 19. ALL MATERIALS, FURNISHINGS, UTILITIES, AND PAVEMENT THAT ARE NOT SCHEDULED TO BE DEMOLISHED AND ARE DAMAGED BY THE CONTRACTOR AS A RESULT OF THE DEMOLITION OR CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 20. WHERE UTILITIES ARE SHOWN TO BE "REMOVED", CONTRACTOR SHALL INCLUDE NECESSARY PLUG OR VALVES TO ENSURE UTILITY LINES TO REMAIN WILL CONTINUE TO BE IN SERVICE. COORDINATE NECESSARY SHUT DOWN AND REMOVAL WITH THE LOCAL JURISDICTION OR UTILITY OWNER.
- 21. CONTRACTOR SHALL PROVIDE PEDESTRIAN INGRESS / EGRESS TO ALL EXISTING BUILDINGS, PARKING LOTS, AND PATHS OF PEDESTRIAN TRAVEL THROUGHOUT THE CONSTRUCTION PERIOD
- 22. ALL MATERIALS, FURNISHINGS, UTILITIES, AND PAVEMENT THAT ARE NOT SCHEDULED TO BE DEMOLISHED AND ARE DAMAGED BY THE CONTRACTOR AS A RESULT OF THE DEMOLITION OR CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

REMOVE CONCRETE REMOVE RIPRAP

REMOVE WATER LINE SS REMOVE SANITARY SEWER LINE

REMOVE STORM DRAINAGE REMOVE FENCE —— TP —— TREE PROTECTION FENCE LIMITS OF DISTURBANCE

REMOVE VEGETATION

COORDINATE LIGHT POLE REMOVAL REMOVE TREE

REMOVE TREELINE

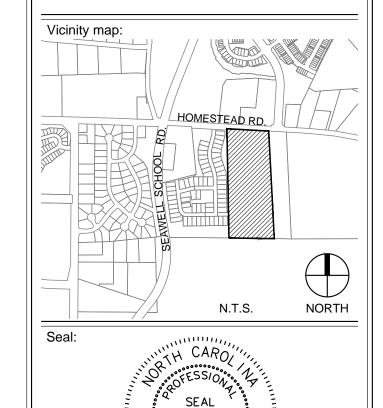
REMOVE WHEEL STOP REMOVE CURB & GUTTER REMOVE SIGN

RALEIGH, NC 27601 T 919.380.8750

GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100

CHAPEL HILL, NC 27514

# INDEPENDENT **SENIOR** HOUSING **CHAPEL HILL**



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No. Date Description

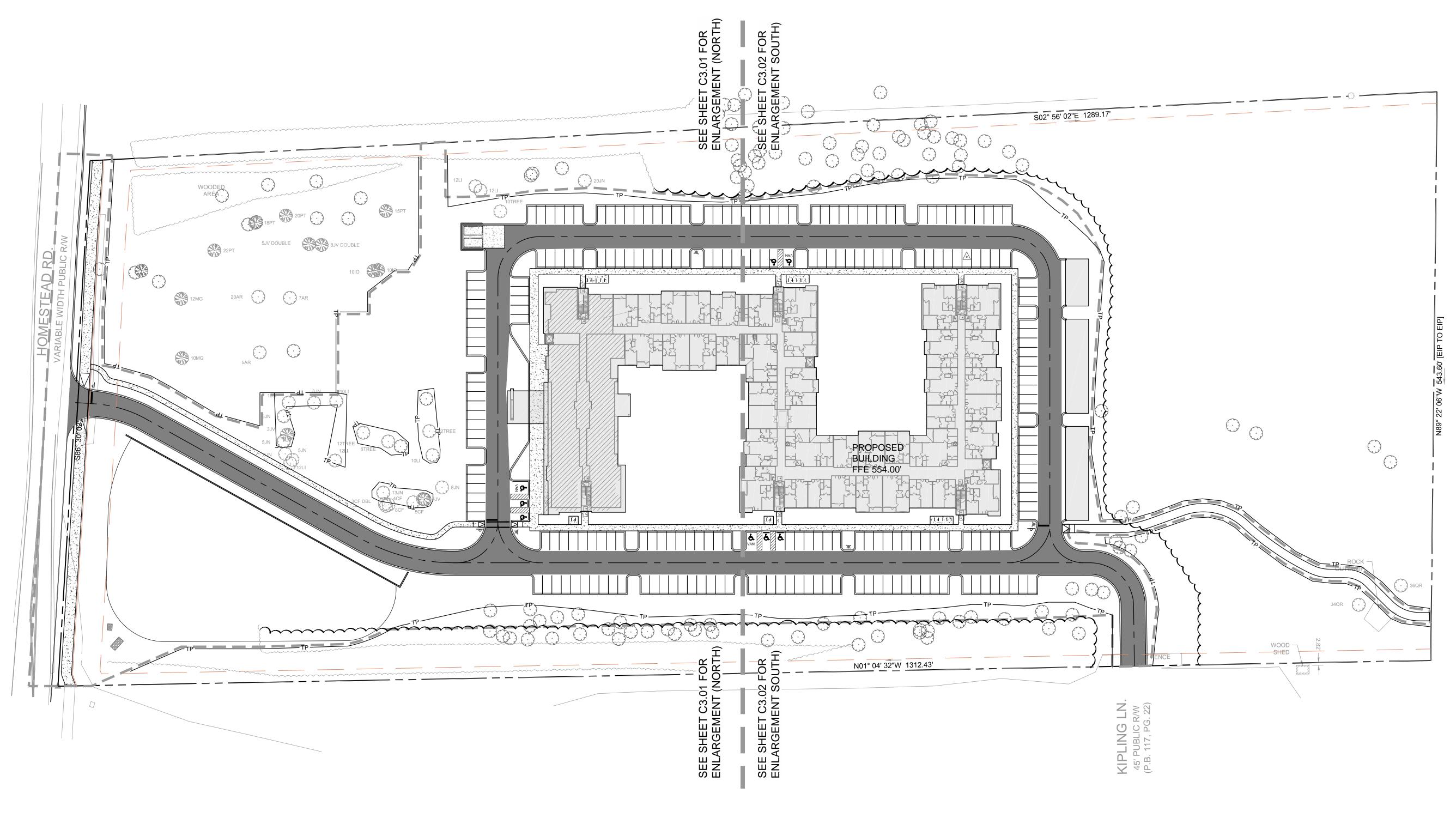
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**DEMOLITIONS PLAN** 

Project number: C17004 Sheet:

Drawn by:



#### GENERAL NOTES:

- 1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE OFFICE OF STATE CONSTRUCTION, DEPARTMENT OF INSURANCE, NCDENR, AND ALL OTHER APPLICABLE LOCAL, STATE AND FEDERAL GUIDELINES. ALL UTILITY CONSTRUCTION SHALL COMPLY WITH APPLICABLE LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS.
- 2. EXISTING SURVEY INFORMATION INCLUDING TOPOGRAPHIC INFORMATION PROVIDED BY STEWART, UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING, COORDINATING AND PAYMENT FOR ALL NECESSARY LOCATING SERVICES INCLUDING INDEPENDENT LOCATING SERVICES. THE CONTRACTOR SHALL PROVIDE NOTICE OF EXCAVATION TO NOTIFICATION CENTER AND FACILITY OWNERS (PER NC STATUTE) NO LESS THAN 3 BUSINESS DAYS AND NO MORE THAN 12 WORKING DAYS PRIOR TO BEGINNING DEMOLITION, EXCAVATION OR ANY OTHER FORM OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS. NO EXCAVATION OR DEMOLITION SHALL BE STARTED WITHOUT ALL UTILITIES BEING LOCATED.
- 4. ALL SUB-SURFACE UTILITIES IDENTIFIED ON THE CONSTRUCTION DOCUMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON SURVEY INFORMATION GATHERED FROM FIELD INSPECTION AND/OR ANY OTHER APPLICABLE RECORD DRAWINGS WHICH MAY BE AVAILABLE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
- 5. EXISTING IMPROVEMENTS DAMAGED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COORDINATING PERMITS, INSPECTIONS, CERTIFICATIONS AND OTHER REQUIREMENTS WHICH MUST BE MET UNDER THIS CONTRACT.
- 7. THE CONTRACTOR SHALL MAINTAIN "AS-BUILT" DRAWINGS TO RECORD THE ACTUAL LOCATION OF ALL PIPING PRIOR TO CONCEALMENT, VALVE AND MANHOLE CHANGES, AND HARDSCAPE OR LANDSCAPE CHANGES. DRAWINGS SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE AT REGULAR INTERVALS, OR AS REQUESTED THROUGHOUT THE PROJECT FOR RECORD KEEPING.
- 8. IF DEPARTURES FROM THE PROJECT DRAWINGS OR SPECIFICATIONS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THERE OF SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY EXISTING UTILITY LINES REQUIRED TO COMPLETE ANY PORTION OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE COORDINATION AND COSTS OF THE RELOCATION AND ASSOCIATED WORK.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS AND RUBBISH CAUSED BY THE CONTRACTOR. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.
- 11. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND/OR METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
- 12. ROADWAYS (TEMPORARY OR PERMANENT) MUST BE CAPABLE OF SUPPORTING FIRE FIGHTING APPARATUS (85,000 LBS) DURING ALL PHASES OF CONSTRUCTION ONCE VERTICAL CONSTRUCTION HAS BEGUN.

#### SITE NOTES:

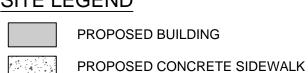
- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF THE CONSTRUCTION LAYDOWN AREA, PERIMETER FENCE, AND ASSOCIATED GATES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE REMOVAL OF THE CONSTRUCTION LAYDOWN AREA PERIMETER FENCE AND ASSOCIATED GATES AT THE COMPLETION OF THE PROJECT.
- 2. THE CONTRACTOR SHALL REFERENCE THE DESIGN PLANS FOR DIMENSIONS, JOINT LOCATIONS, AND INLAY SPECIFICATIONS NEAR BUILDINGS AND IN COURTYARDS. CONTRACTOR SHALL PROVIDE JOINTS IN WALKWAYS AND HARDSCAPE PER DETAILS OR AS INDICATED ON LANDSCAPE/HARDSCAPE PLAN SHEETS.
- 3. ALL CONSTRUCTION TRAFFIC SHALL ENTER SITE FROM \_\_\_\_\_\_ UNLESS OTHERWISE APPROVED IN WRITING FROM THE OWNER'S REPRESENTATIVE FOR AN ALTERNATE POINT OF ACCESS.
- 4. REFER TO ARCHITECTURAL PLANS FOR BUILDING INFORMATION.
- 5. ALL DIMENSIONS ARE IN DECIMAL FEET TO OUTSIDE FACE OF BUILDINGS, TO CENTERLINES, AND/OR FACE OF CURB UNLESS OTHERWISE NOTED.

6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND

- COORDINATES AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO ANY CONSTRUCTION.
- 7. ALL WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE FROM DRAWINGS.
- 8. ALL UTILITIES WITH SURFACE ACCESS SHALL BE LOCATED WITHIN THE PAVING PATTERN AND SHALL BE COORDINATED WITH LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. REFER TO LAYOUT DRAWINGS.
- 9. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED.
- 10. ALIGN ALL JOINTS, CORNERS, AND EDGES AS SHOWN

- 11. CONTRACTOR SHALL REFER TO AND COORDINATE WITH ARCHITECTURAL, STRUCTURAL, AND MEP DRAWINGS AT ALL TIMES PRIOR TO AND DURING CONSTRUCTION.
- 12. ALL CURB TAPERS ARE SIX (6') FEET LONG UNLESS OTHERWISE SHOWN ON PLAN.
- 13. WHERE NEW SIDEWALK ADJOINS EXISTING WALK, PROVIDE EXPANSION JOINT BY DRILLING INTO THE FACE OF THE EXISTING WALK FOR PLACEMENT OF DOWELS. TIE NEW SIDEWALKS INTO NEAREST EXISTING PAVEMENT JOINT; MATCH WIDTH OF EXISTING WALKWAY.
- 14. WHERE SIDEWALK OR WALKWAYS ARE ADJACENT TO PARKING SPACES THE WALKWAY SHALL BE A MINIMUM 6.5' WIDE AS MEASURED FROM THE FACE OF CURB.
- 15. MAXIMUM RUNNING SLOPE FOR WALKING SURFACES CANNOT BE GREATER THAN 1:20 AND CROSS SLOPES CANNOT BE GREATER THAN 1:48. HANDICAP SPACES SURFACE SLOPES SHALL NOT EXCEED 1:48 IN ALL DIRECTIONS.
- 16. SIGHT TRIANGLES NOTHING OVER 30" HIGH SHALL BE ALLOWED WITHIN THE SIGHT DISTANCE TRIANGLES.
- 17. THE SITE SHALL BE FULLY STABILIZED (90% COVERAGE) PRIOR TO ISSUANCE OF A BUILDING CERTIFICATE OF OCCUPANCY OR PROJECT APPROVAL
- 18. HANDICAP RAMPS SHALL BE INSTALLED PER LATEST EDITION OF THE NC BUILDING CODE AND ANSI 117.11 WITH DETECTABLE WARNING DOMES WITH A COLOR CONTRAST OF 70% MINIMUM. SEE DETAILS AND GRADING SPOT ELEVATIONS, IF THE EXISTING CONDITIONS PRECLUDE THE ABILITY TO PROVIDE A MAXIMUM SLOPE 1/12 FOR 6-FEET OR A MAXIMUM CROSS SLOPE OF 1:48 AND A 36" MINIMUM LANDING, THE CONTRACTOR SHALL NOTIFY ENGINEER OR OWNER REPRESENTATIVE PRIOR TO INSTALLATION.
- 19. THE TESTING AGENCY SHALL BE RESPONSIBLE FOR PROVIDING THE ASPHALT AND CONTRACTOR CERTIFICATION MEMO TO NCDOT FOR ALL ROADWAY IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY.

#### SITE LEGEND



PROPOSED HEAVY DUTY PAVEMENT

PROPOSED CURB & GUTTER

PROPOSED STOP BAR
PROPOSED 6' WIDE STANDARD CROSSWALK

PROPOSED SIGN

H/C PROPOSED ADA PARKING SPACE
PROPOSED CIP WALL

PROPOSED WHEEL STOP
PROPOSED ASPHALT TRAIL

□ PROPOSED LIGHT■ PROPOSED BIKE RACK

LIMITS OF DISTURBANCE

M CROSS SLOPE OF 1:48 AND CTOR SHALL NOTIFY IVE PRIOR TO INSTALLATION. 421 FAYETTEVILLE ST., SUITE 400
RALEIGH, NC 27601
T 919.380.8750

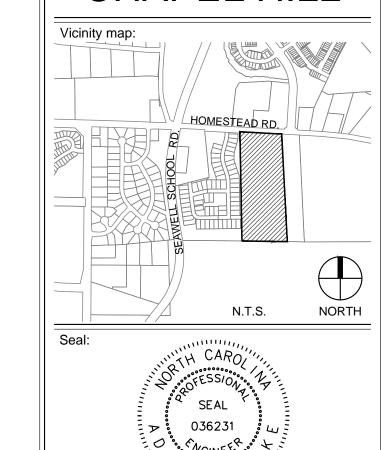
FIRM LICENSE #: C-1
www.stewartinc.c
PROJECT #: C17

Client:

GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

Projec

# INDEPENDENT SENIOR HOUSING CHAPEL HILL



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PRELIMINARY - DO NOT USE FOR CONSTRUCTION

No. Date Description

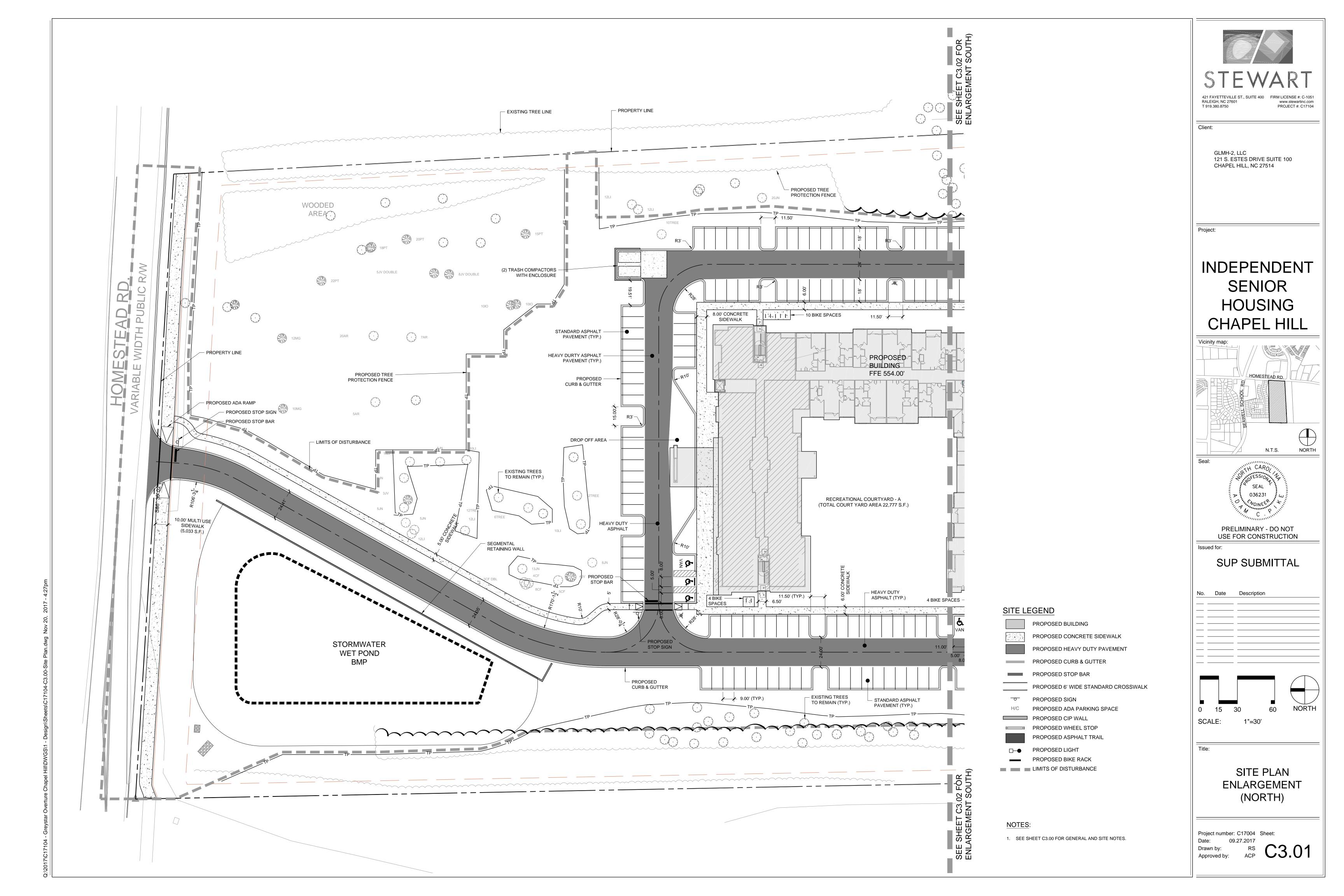
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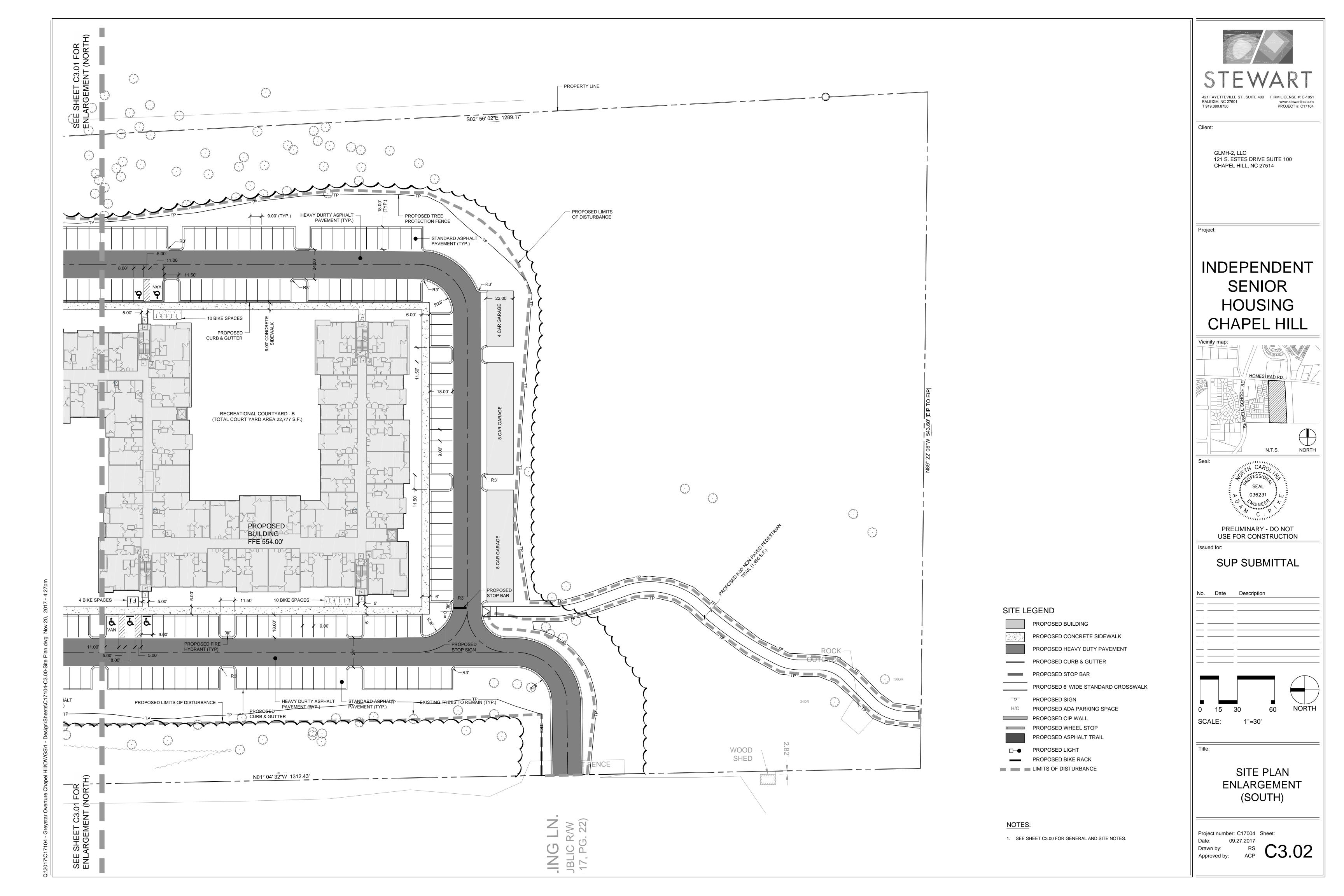
SITE PLAN

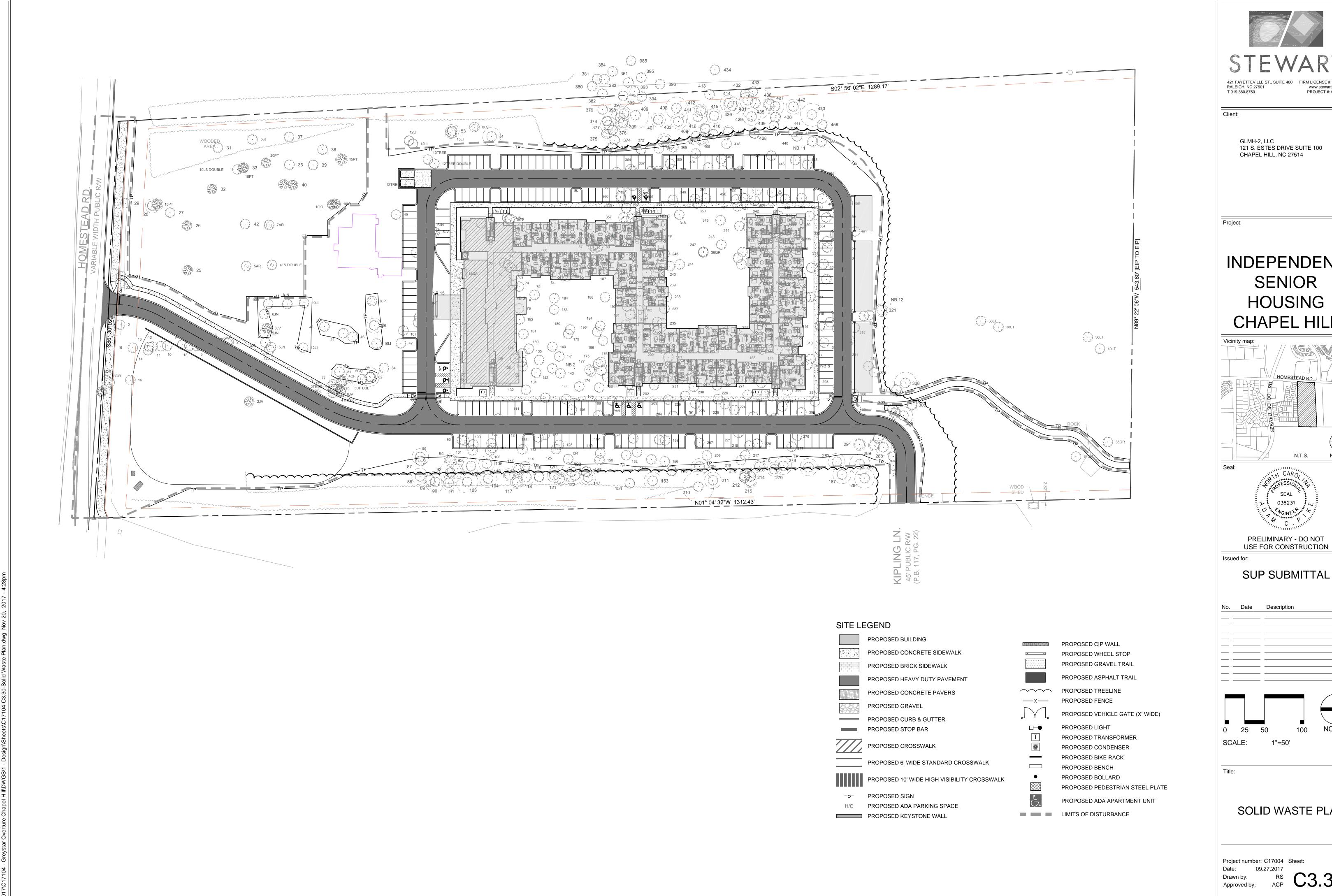
Project number: C17004 Sheet: Date: 09.27.2017

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Approved by:

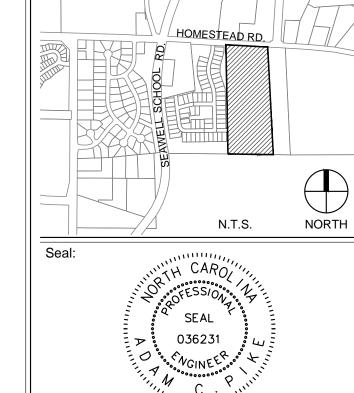
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C3.00



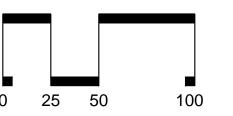




# INDEPENDENT SENIOR HOUSING **CHAPEL HILL**

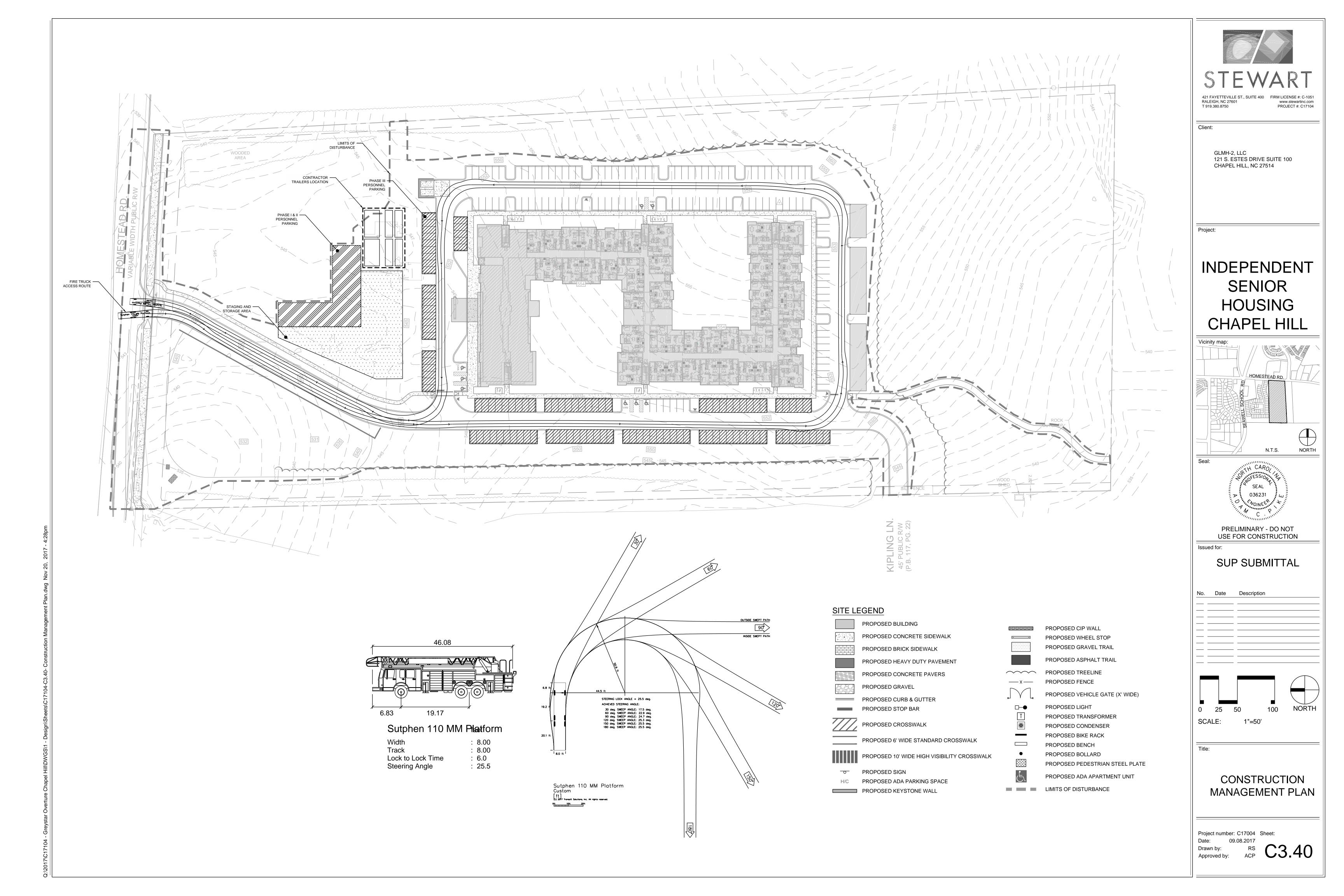


SUP SUBMITTAL



SOLID WASTE PLAN

RS C3.30



#### 1. REFER TO C3.00 FOR GENERAL NOTES.

- 2. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED IN BEST LOCATION BASED ON FIELD CONDITIONS.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONSTRUCTION ENTRANCES AS NECESSARY TO PREVENT THE TRACKING OF SEDIMENT OFF-SITE. THE OWNER IS RESPONSIBLE FOR MAINTENANCE OF ALL PERMANENT EROSION CONTROL METHODS AFTER CONSTRUCTION IS COMPLETE, IF ANY PERMANENT METHODS ARE REQUIRED.
- 5. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- 6. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR AND ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
- 7. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE LIMITS OF DISTURBANCE (L.O.D.) SHALL BE PERMITTED. THE L.O.D. SHALL BE MAINTAINED BY THE ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
- 8. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO
- 9. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE

AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.

- CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G., ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES. ETC.).
- 10. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT. COPIES OF THE WRITTEN INSPECTION REPORTS SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE TWICE PER WEEK AND AFTER RAINS OF GREATER THAN 0.5". RAIN GAUGE REQUIRED ON SITE.
- 11. ANY AREAS OF EXPOSED SOILS THAT WILL NOT BE DISTURBED FOR FOURTEEN DAYS SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
- 12. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN FORTY EIGHT (48) HOURS FOLLOWING A STORM EVENT.
- 13. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER
- 14. STABILIZED CONSTRUCTION ENTRANCES AND ROADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT
- 15. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE A MINIMUM THICKNESS OF 2 TO 3 INCHES.
- 16. INTERIM SLOPES MAY BE GRADED TO A MAXIMUM SLOPE OF 2:1 (HORIZONTAL: VERTICAL); CUT SLOPES SHALL BE LIMITED TO A MAXIMUM
- 17. THE SURFACE OF AREAS SLOPES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL THAT ARE TO RECEIVE INTERIM FILL SHALL BE PLOWED. FURROWED, TILLED OR BROKEN UP PRIOR TO PLACING FILL SO THAT FILL MATERIAL WILL BOND WITH EXISTING . " SURFACE. INTERIM FILL SHALL BE PLACED AS SPECIFIED FOR PERMANENT FILLS AND IN LIFTS NOT GREATER THAN 6".
- 18. PROVIDE DUST CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, WETTING DOWN TO CONTROL DUST ON SITE, IN ORDER TO PREVENT ANNOYANCE/AND OR DAMAGE TO ADJACENT SITES. CALCIUM CHLORIDE OR ANY OTHER CHEMICAL MATERIAL MAY NOT BE USED ON SUBGRADES OF AREAS TO BE SEEDED OR PLANTED.
- 19. SEDIMENT LADEN RUNOFF FROM EXCAVATIONS SHALL NOT BE PUMPED DIRECTLY TO STORM DRAINAGE.
- 20. INSPECTOR REFERS TO LOCAL JURISDICTIONAL (NCDENR OR LOCAL) LAND QUALITY INSPECTOR OR HIS REPRESENTATIVE. FIELD INSPECTIONS MAY REQUIRE ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES AS DEEMED NECESSARY BY THE
- 21. CONSTRUCTION AND MAINTENANCE OF ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES LAND QUALITY SECTION EROSION AND SEDIMENT CONTROL PLANNING LAND DESIGN MANUAL.
- 22. NOTIFICATION OF LAND RESOURCES SEDIMENT AND EROSION CONTROL SELF-INSPECTION PROGRAM: THE PERSON RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES IS REQUIRED TO INSPECT THE PROJECT AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED IN ACCORDANCE WITH NCGS 113A-54.1 AND 15A NCAC 4B.0131 TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS AN EXCEL SPREADSHEET FORM HTTP://WWW.DLR.ENR.STATE.NC.US/PAGES/SEDIMENTATION\_NEW.HTML

#### MAINTENANCE NOTES

STABILIZE PROPERLY.

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
- 2. CONSTRUCTION AND MAINTENANCE OF ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES LAND QUALITY SECTION EROSION AND SEDIMENT CONTROL PLANNING LAND DESIGN MANUAL.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONSTRUCTION ENTRANCES AS NECESSARY TO PREVENT THE TRACKING OF SEDIMENT OFF-SITE. THE OWNER IS RESPONSIBLE FOR MAINTENANCE OF ALL PERMANENT EROSION CONTROL METHODS AFTER CONSTRUCTION IS COMPLETE. IF ANY PERMANENT METHODS ARE REQUIRED.
- 4. THE CONTRACTOR IS ALSO REQUIRED TO MET THE BELOW REQUIREMENTS FOR EACH EROSION CONTROL MEASURE. AS NOTED IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY - EROSION CONTROL MANUAL. THESE REQUIREMENTS ARE
- 4.1. CONSTRUCTION ENTRANCE MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL EVENT, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL MATERIALS SPILLED, WASHED, OR TRACKED OFF THE CONSTRUCTION SITE OR ONTO PUBLIC ROADWAYS.
- 4.2. SILT FENCE INSPECT TEMPORARY SEDIMENT TRAPS AT LEAST WEEEKLY AND AFTER EACH SIGNIFICANT ( INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT, AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT. CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FT BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL AN SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIPRAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY. AFTER ALL SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS, AND
- 4.3. SILT FENCE STONE OUTLET INSPECT OUTLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2) INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE NO. 57 WASHED STONE AS NEEDED.
- 4.4. DROP INLET PROTECTION INSPECT THE BARRIER AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (\frac{1}{2} INCH OR GREATER) RAINFALL AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.
- 4.5. CONCRETE WASHOUT PIT -MAXIMUM WATER AND SEDIMENT DEPTH IS 12". PIT MUST BE EXCAVATED AND RE-LINED WHEN DEPTH OF SEDIMENT REACHES 12" OR COMBINED WATER/SEDIMENT DEPTH EXCEEDS 12" FOLLOWING WASHOUT OF CONCRETE TRUCK. ALLOW WATER TO EVAPORATE COMPLETELY PRIOR TO EXCAVATING PIT. WASHOUT PIT MAY BE LOCATED NO CLOSER THAN 50' TO DRAINS, INLETS, OR SURFACE WATERS. AT COMPLETION OF PROJECT, WASHOUT AREA TO BE BACKFILLED AND GRADED TO BE LEVEL WITH EXISTING GRADE.
- 4.6. TEMPORARY BERM/DIVERSION DITCH DETAIL- INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVED THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT. MACHINE COMPACTION OF ALL FILL IS REQUIRED. ALLOW AT LEAST 10% SETTLEMENT FOR THE TOTAL FILL HEIGHT. DIVERSIONS SUFFICIENT TO DIRECT ALL SEDIMENT- LADEN STORMWATER SEDIMENT CONTROL DEVICE MUST BE INSTALLED PRIOR TO INTO A CLEARING AND GRUBBING OF THE AREA. DIVERSIONS SHOULD BE LOCATED TO MINIMIZE DAMAGE DURING CONSTRUCTION OPERATIONS. DIVERSIONS SHALL BE SEEDED AND MULCHED IF THEY ARE REMAIN TO IN PLACED OVER 30 DAYS.CHECK DEVICE AFTER EACH RAIN, BUT ONCE A WEEK REGARDLESS. REPAIR AS NECESSARY.
- 4.7. INSPECT ROCK PIPE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (\$\frac{1}{2}\$ INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING. CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY. AFTER ALL THE SEDIMENT-PRODUCING ARES HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND COVER.

#### SEQUENCE OF CONSTRUCTION ACTIVITIES

- 1. OBTAIN GRADING PERMIT.
- 2. DETERMINE AND MARK LIMITS OF DISTURBANCE.
- 3. A PRECONSTRUCTION CONFERENCE MUST BE HELD 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. THE EROSION CONTROL INSPECTOR, ARCHITECT, ENGINEER, AND CONTRACTOR SHALL BE PRESENT TO SATISFY REQUIREMENTS.
- 4. INSTALL CONSTRUCTION ENTRANCE, TREE PROTECTION FENCING, SILT FENCE, PERIMETER EROSION CONTROL DEVICES AND ALL REQUIRED BASINS AND TRAPS.
- 5. SCHEDULE SITE INSPECTION.
- 6. UPON APPROVAL TO PROCEED BY THE EROSION CONTROL INSPECTOR, HARVEST ANY TIMBER.
- 7. CONSTRUCT REMAINING EROSION CONTROL MEASURES AS REQUIRED.
- 8. REMOVE AND/OR STORE TOPSOIL.
- 9. BEGIN GRADING OPERATIONS.
- 10. CLEAN SEDIMENT BASINS/TRAPS WHEN ONE-HALF FULL.
- 11. ALL STREETS SURROUNDING THE PROJECT SHALL BE KEPT CLEAN AT ALL TIMES.
- 12. PLACE TEMPORARY SEEDING ON ALL DISTURBED AREAS THAT WILL BE IDLE 14 DAYS OR LONGER.
- 13. PERMANENT SURFACE STABILIZATION SHALL BE INSTALLED FOR ALL AREAS WITHIN 14 DAYS AFTER FINAL GRADE HAS BEEN REACHED. AS NECESSARY, FERTILIZE, WATER AND RESEED AS REQUIRED TO ESTABLISH AND MAINTAIN A VIGOROUS STAND OF
- 14. AFTER COMPLETION OF CONSTRUCTION AND THE SITE IS STABILIZED, REMOVE ALL ACCUMULATED SEDIMENT FROM SEDIMENT TRAPPING MEASURES AND DISPOSE BY MEANS DEEMED ACCEPTABLE BY THE ENGINEER. SCHEDULE SITE INSPECTION. UPON APPROVAL BY THE EROSION CONTROL INSPECTOR, REMOVE TEMPORARY EROSION CONTROL MEASURES, SMOOTH AREA AND
- 15. STORMWATER PERMIT INSPECTION REPORTS SHALL BE PERFORMED BY THE CONTRACTOR UNTIL NOTIFIED OTHERWISE BY THE

APPLY APPROPRIATE STABILIZATION.

- 1. INSPECTOR REFERS TO LOCAL JURISDICTIONAL (NCDENR OR LOCAL) LAND QUALITY INSPECTOR OR HIS REPRESENTATIVE. FIELD INSPECTIONS MAY REQUIRE ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES AS DEEMED NECESSARY BY THE
- 2. CONSTRUCTION AND MAINTENANCE OF ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES LAND QUALITY SECTION EROSION AND SEDIMENT CONTROL PLANNING LAND DESIGN MANUAL.
- 3. NOTIFICATION OF LAND RESOURCES SEDIMENT AND EROSION CONTROL SELF-INSPECTION PROGRAM: THE PERSON RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES IS REQUIRED TO INSPECT THE PROJECT AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED IN ACCORDANCE WITH NCGS 113A-54.1 AND 15A NCAC 4B.0131 TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS AN EXCEL SPREADSHEET FORM HTTP://WWW.DLR.ENR.STATE.NC.US/PAGES/SEDIMENTATION\_NEW.HTML

#### TREE PROTECTION NOTES:

- 1. TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE OR ISSUANCE OF A GRADING PERMIT. OR OBTAIN A GRADING PERMIT THEN TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND
- 2. TREE PROTECTION FENCING SHALL INCLUDE WARNING SIGNS POSTED IN BOTH ENGLISH AND SPANISH, AS FOLLOWS: "NO TRESPASSING/TREE PROTECTION AREA/PROHIBIDO ENTRAR / ZONA PROTECTORA PARA LOS ÁRBOLES."
- PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE ON THE TREE ROOTS OUTSIDE OF THE TREE SAVE AREA. THIS SHALL OCCUR AT THE SAME TIME THAT OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
- 4. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE
- 5. TREE PROTECTION AREA: EQUALS ONE FOOT OF RADIUS FOR EVERY INCH OF DIAMETER OF EXISTING TREES, OR SIX FOOT RADIUS, WHICHEVER IS GREATER. NO DISTURBANCE ALLOWED WITHIN THIS AREA.

#### **ADMIXTURES**

AGRICULTURAL LIMESTONE: 2 TONS/ACRE

FERTILIZER: 1,000 LBS/ACRE - 10-10-10

SUPERPHOSPHATE: 500 LBS/ACRE - 20% ANALYSIS

MULCH: 2 TONS/ACRE - SMALL GRAIN STRAW

ANCHOR: ASPHALT EMULSION AT 300 GALS/ACRE

#### SEEDING SCHEDULE

SHOULDERS, SIDE DITCHES, SLOPES (Max 3:1)

DATE	TYPE	PLANTING RATE
AUG 15 - NOV 1 NOV 1 - MAR 1	TALL FESCUE TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE 300 LBS/ACRE 25 LBS/ACRE
MAR 1 - APR 15 APR 15 - JUN 30 JUL 1 - AUG 15	TALL FESCUE HULLED COMMON BERMUDAGRASS TALL FESCUE AND ***BROWNTOP MILLET ***OR SORGHUM-SUDAN HYBRIDS	300 LBS/ACRE 25 LBS/ACRE 120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE

#### SLOPES (3:1 to 2:1)

DATE	TYPE	PLANTING RATE
MAR 1 - JUN 1	***BROWNTOP MILLET	50 LBS/ACRE
(MAR 1 - APR 15)	ADD TALL FESCUE	120 LBS/ACRE (MAR 1 - JUN 30)
,	OR ADD HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUN 1 - SEP 1	***TALL FESCUE AND	120 LBS/ACRE
	***BROWNTOP MILLET	35 LBS/ACRE
	***OR SORGHUM-SUDAN HYBRIDS	30 LBS/ACRE
SEP 1 - MAR 1	ANNUAL RYE	70 LBS/ACRE
	AND TALL FESCUE	120 LBS/ACRE (NOV 1 - MAR 1)
	ADD ARRITZI RVE	25 LBS/ACRE

CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

\*\*\*TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

#### TEMPORARY SEEDBED PREPARATION

- 1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- 2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
- 3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- 4. APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE ADMIXTURE BELOW).
- 5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP. 6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
- 7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- 8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- 9. CONSULT S&EC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS

#### **SEEDBED PREPARATION:**

- 1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONED, IF AVAILABLE.
- RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
- 3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- 4. APPLY ALL AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW).
- 5. CONTINUE TILLAGE UNTIL A WELL PULVERIZED, FIRM, REASONABLY UNIFORM 4 TO 6 INCHES DEEP SEEDBED IS PREPARED.
- 6. SEED ON A FRESHLY PREPARED SEED BED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER
- 7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- 8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESENDING WITHIN THE PLANTING SEASON, IF POSSIBLE, IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- 9. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESENDING WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 50% DAMAGED , REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES AND LANDSCAPING PLANS
- 10. SEE LANDSCAPING PLANS FOR PERMANENT SEEDING, MULCHING, AND FERTILIZING RATES. ALL AREAS NOT DESIGNATED TO RECEIVE PLANTS SHALL BE SEEDED PER THE LANDSCAPING PLANS.

#### **DIVERSION DITCH INFORMATION**



#### Diversion Channel Dimension Table

			Top Width		Channel	
Channel	Bottom Width (Y	Sideslope (M)	(W)	Lining	Depth (FT)	Velocity
DD-01	0.00 FT	2 :1	5 FT	STRAW SINGLE NET BLANKET	1 FT	6.01 FT/S
DD-02	0.00 FT	2 :1	4 FT	STRAW SINGLE NET BLANKET	0.75 FT	3.19 FT/S

#### SEDIMENT TRAP INFORMATION

Sediment Basin Summary:	Basin ID	=	ST-1	
	<b>Bottom Width</b>	=	77.5	ft
	<b>Bottom Length</b>	=	167	ft
	Surface Width	=	89.5	ft
	Surface Length	=	179	ft
	Top Width	=	98.5	ft
	Top Length	=	188	ft
	Stone Outlet Width	=	15	ft
	Outlet Sideslopes	=	2	:1
	Storage Depth	=	2	ft
	Dam Height	=	3.5	ft
	Sideslopes	=	3	:1
	Skimmer Size	=	4	in
	Head on Skimmer	=	0.333	ft
	Orifice Size	=	2.50	in

the North Carolina Erosion and Sedimentation Planning and Design Manual.

#### STABILIZATION TABLE

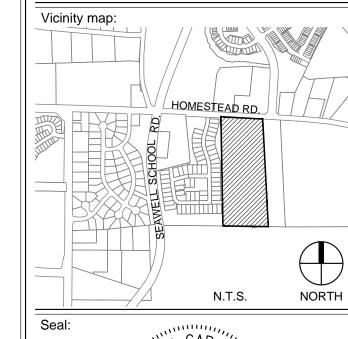
	,		•
Area	SITE AREA	STABILIZATION	STABILIZATION TIME
	DESCRIPTION	TIME FRAME	FRAME EXCEPTION
	Perimeter dikes,		
1	swales, ditches	7 days	None
	and slopes		
			If slopes are 10' or less
2	Slopes Steeper than 3:1	7 days	in length and are not
2			steeper than 2:1, 14
			days are allowed
	Slopes 3:1 or	14 days	7-days for slopes
3	flatter		greater than 50 feet in
			length
	All other area		None (except as
4	with slopes	14 days	shown in chart)
	flatter than 4:1		SHOWH III CHaft)

TOTAL AREA OF DISTURBANCE 8.90 AC



GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

# INDEPENDENT





PRELIMINARY - DO NOT

USE FOR CONSTRUCTION

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No. Date Description

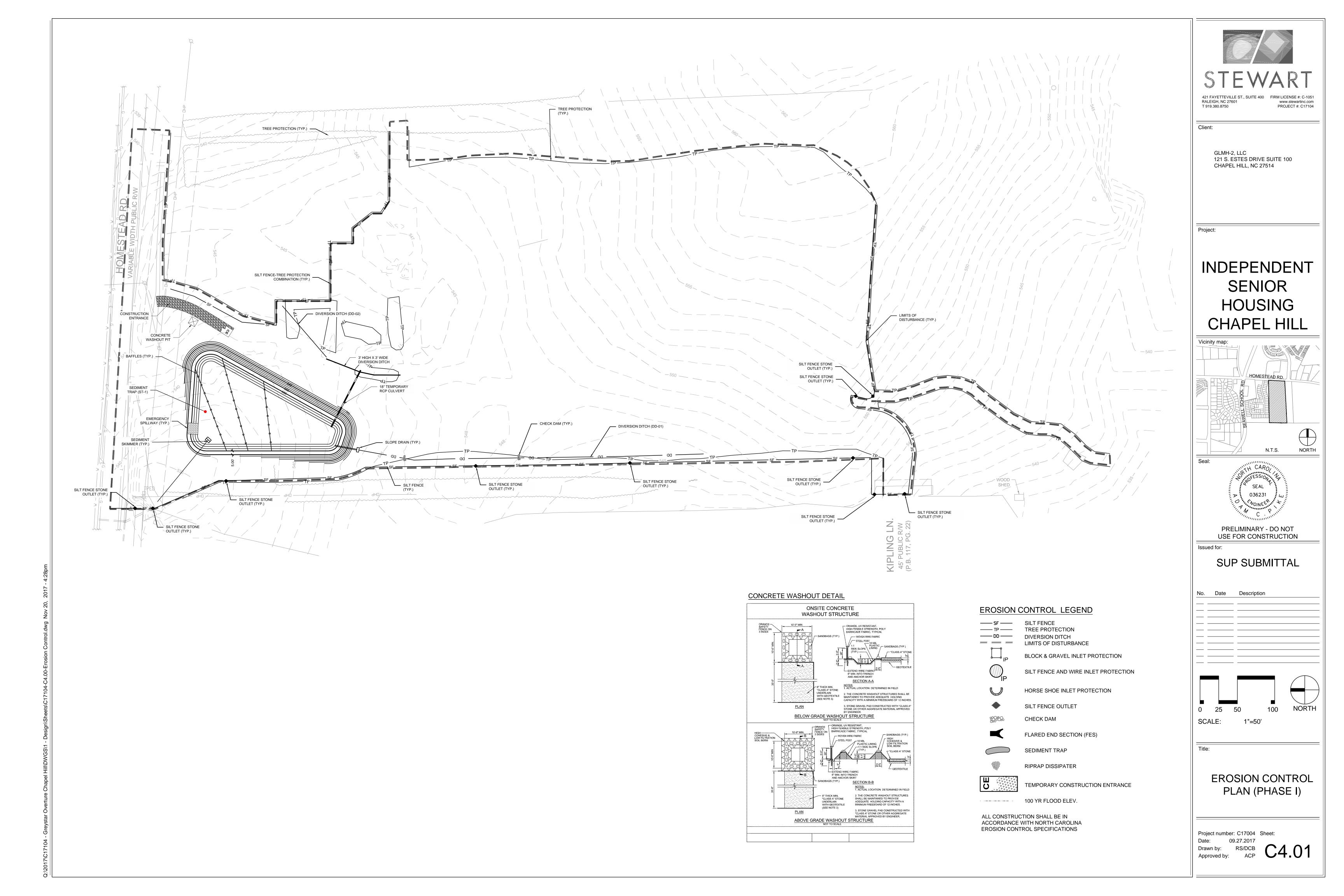
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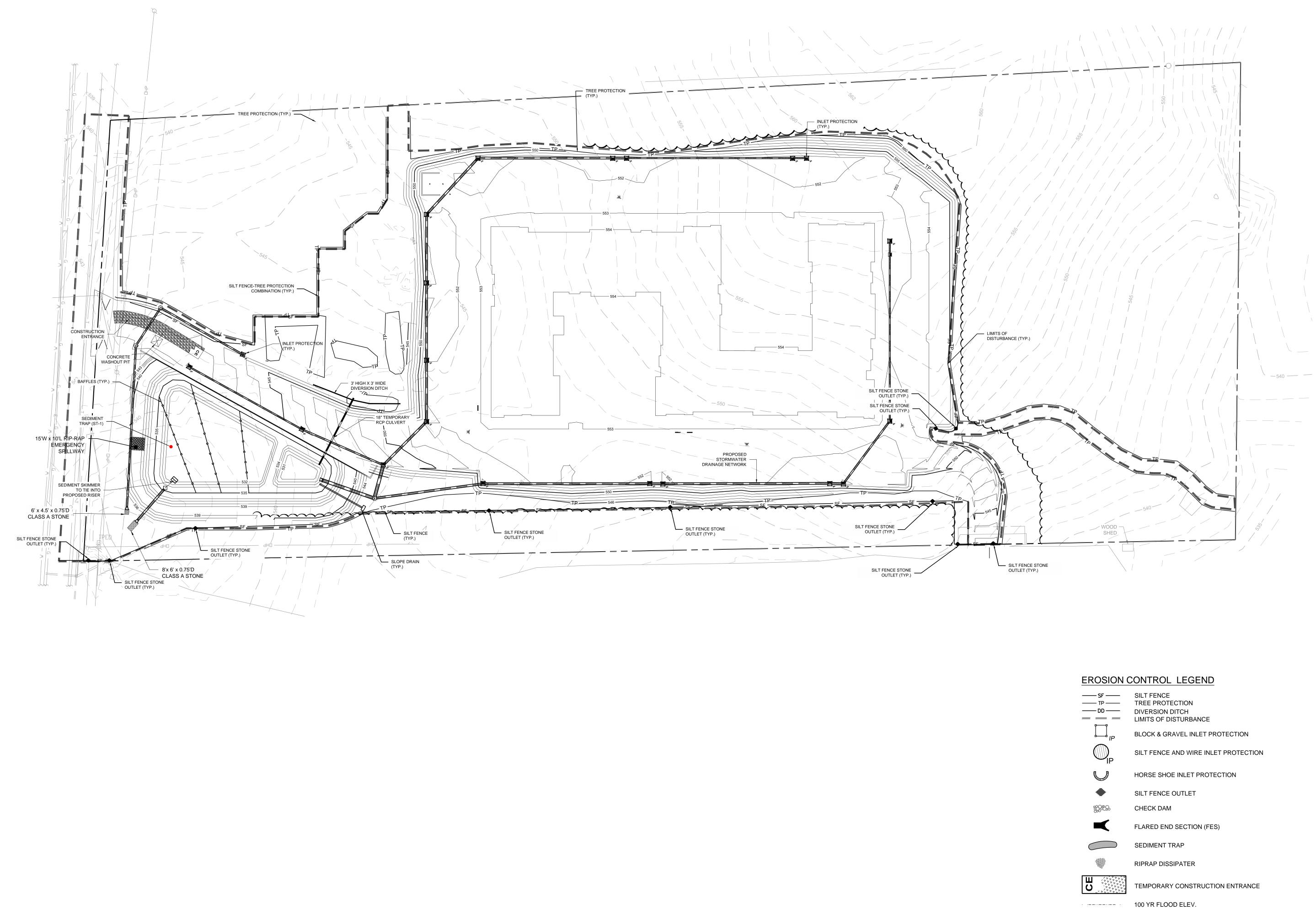
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Drawn by:

**EROSION CONTROL** 

Project number: C17004 Sheet:

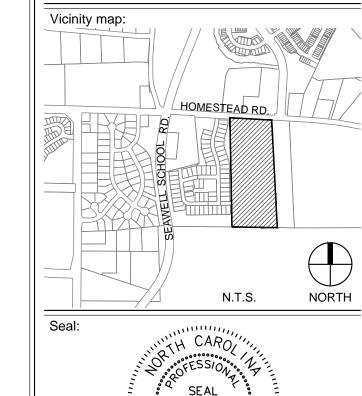






GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

# INDEPENDENT SENIOR HOUSING CHAPEL HILL

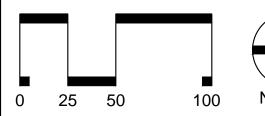


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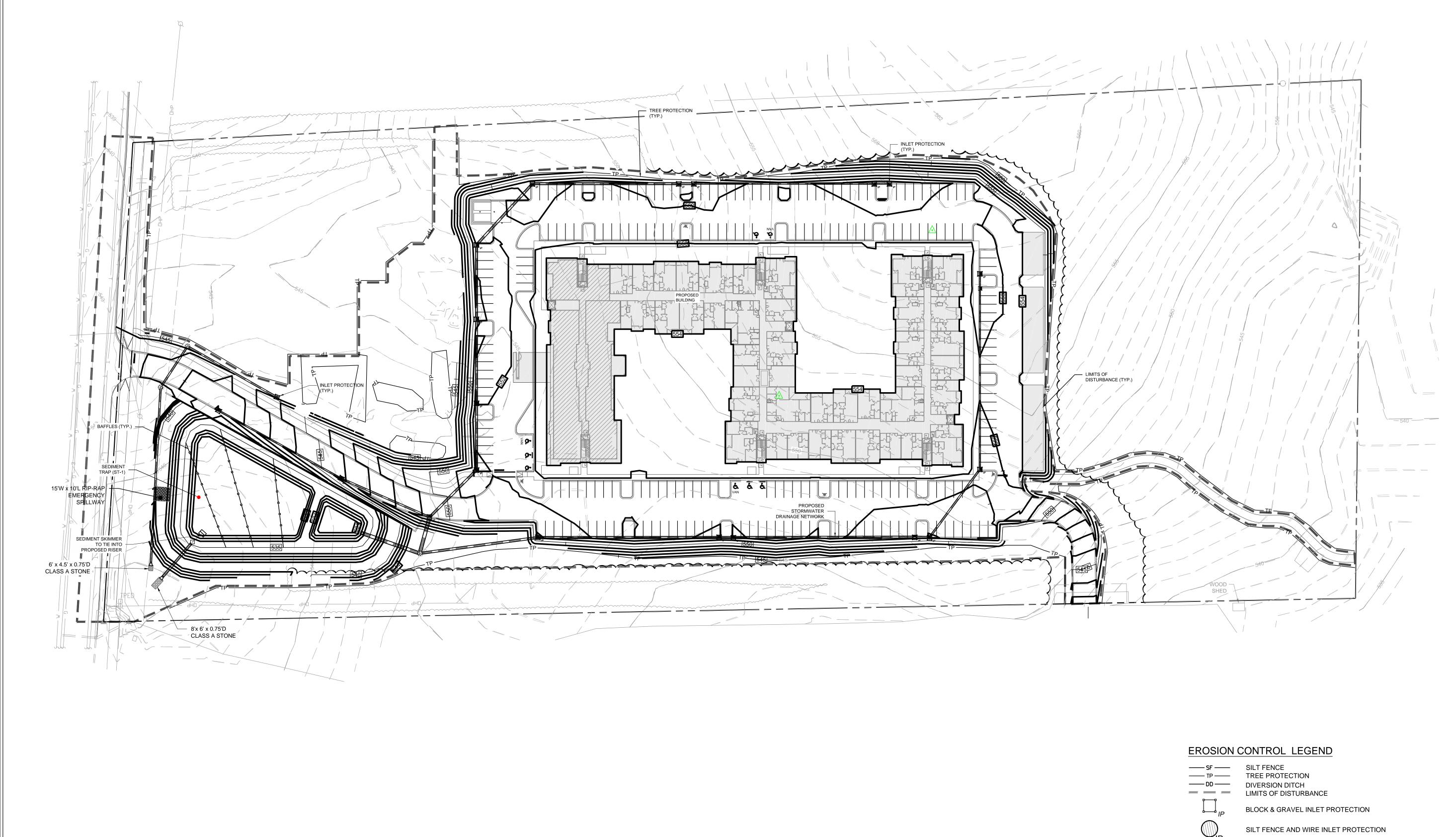
SCALE:

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NORTH CAROLINA EROSION CONTROL SPECIFICATIONS

**EROSION CONTROL** PLAN (PHASE II)

Project number: C17004 Sheet: Date: 09.27.2017

Drawn by: RS/DCB Approved by: ACP C4.02



HORSE SHOE INLET PROTECTION

SILT FENCE OUTLET

CHECK DAM FLARED END SECTION (FES)

SEDIMENT TRAP RIPRAP DISSIPATER

TEMPORARY CONSTRUCTION ENTRANCE

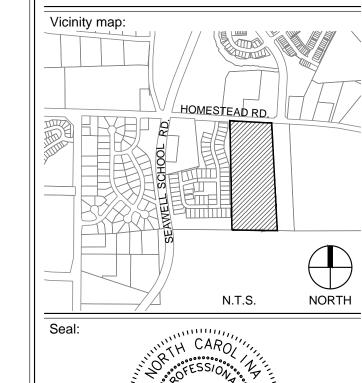
100 YR FLOOD ELEV.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NORTH CAROLINA EROSION CONTROL SPECIFICATIONS



GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

# INDEPENDENT SENIOR HOUSING CHAPEL HILL

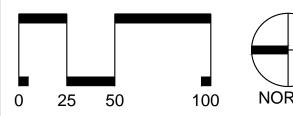


PRELIMINARY - DO NOT USE FOR CONSTRUCTION

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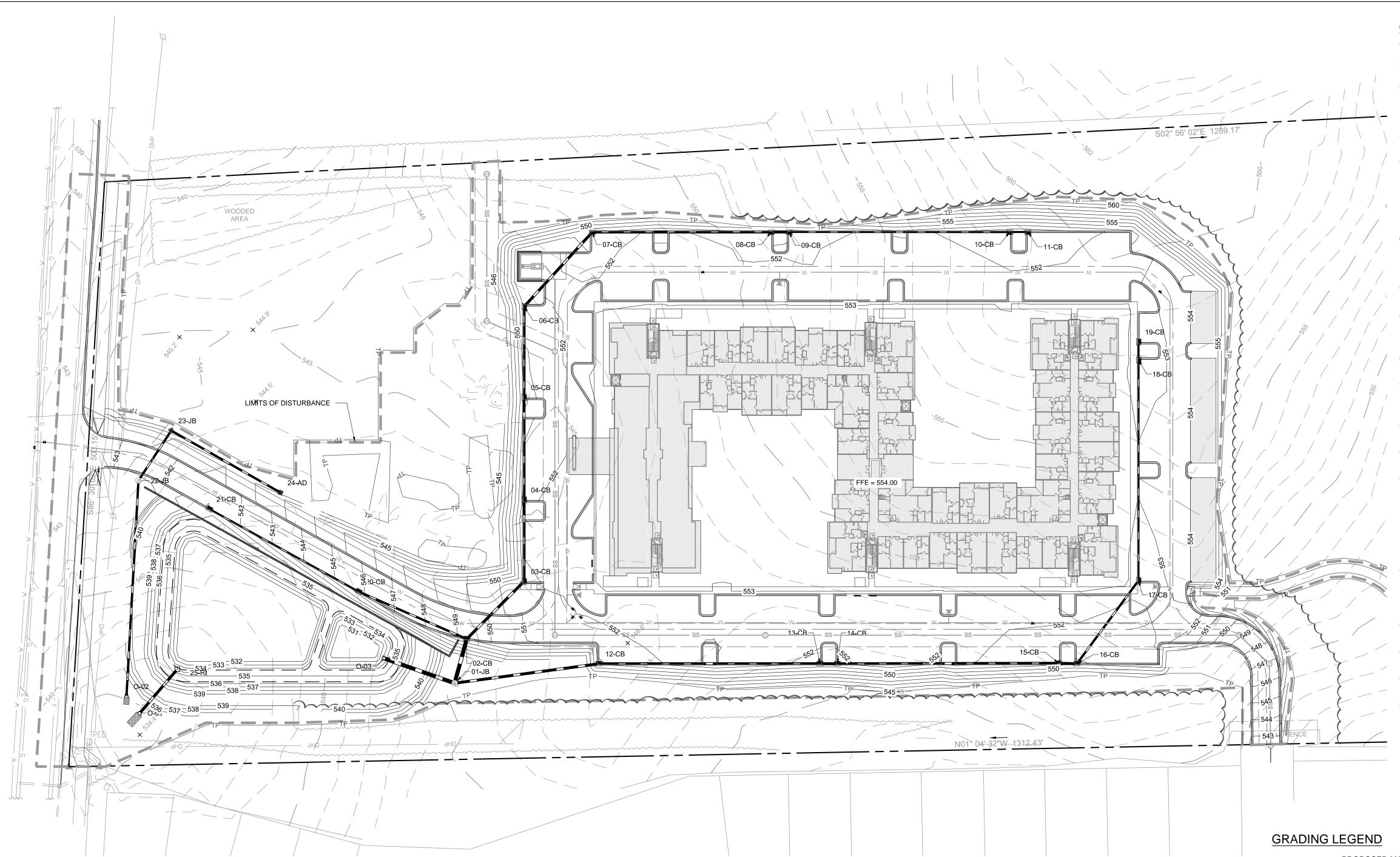



SCALE:

**EROSION CONTROL** PLAN (PHASE III)

Project number: C17004 Sheet: Date: 09.27.2017

Drawn by: RS/DCB Approved by: ACP C4.03



	STF	RUCTURE TABLE	
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
01-JB	RIM = 541.13 INV IN = 535.12 INV IN = 534.22 INV OUT = 534.12	12-SP, 24" RCP INV IN =535.12 02-SP, 36" RCP INV IN =534.22	01-SP, 36" RCP INV OUT =534.12
02-CB	RIM = 549.73 INV IN = 536.11 INV IN = 535.61 INV OUT = 534.61	20-SP, 18" RCP INV IN =536.11 03-SP, 24" RCP INV IN =535.61	02-SP, 36" RCP INV OUT =534.61
03-CB	RIM = 551.72 INV IN = 536.86 INV OUT = 536.76	04-SP, 24" RCP INV IN =536.86	03-SP, 24" RCP INV OUT =536.76
04-CB	RIM = 551.73 INV IN = 537.66 INV OUT = 537.56	05-SP, 24" RCP INV IN =537.66	04-SP, 24" RCP INV OUT =537.56
05-CB	RIM = 550.34 INV IN = 538.64 INV OUT = 538.54	06-SP, 24" RCP INV IN =538.64	05-SP, 24" RCP INV OUT =538.54
06-CB	RIM = 551.49 INV IN = 539.52 INV OUT = 539.42	07-SP, 24" RCP INV IN =539.52	06-SP, 24" RCP INV OUT =539.42
07-CB	RIM = 551.16 INV IN = 540.49 INV OUT = 540.39	08-SP, 24" RCP INV IN =540.49	07-SP, 24" RCP INV OUT =540.39
08-CB	RIM = 551.10 INV IN = 542.12 INV OUT = 542.03	09-SP, 24" RCP INV IN =542.12	08-SP, 24" RCP INV OUT =542.03
09-CB	RIM = 551.30 INV IN = 543.03 INV OUT = 542.28	10-SP, 15" RCP INV IN =543.03	09-SP, 24" RCP INV OUT =542.28
10-CB	RIM = 551.02 INV IN = 545.02 INV OUT = 544.92	11-SP, 15" RCP INV IN =545.02	10-SP, 15" RCP INV OUT =544.92
11-CB	RIM = 551.02 INV OUT = 545.18	N/A	11-SP, 15" RCP INV OUT =545.18
12-CB	RIM = 550.88 INV IN = 539.57 INV OUT = 539.47	13-SP, 24" RCP INV IN =539.57	12-SP, 24" RCP INV OUT =539.47
13-CB	RIM = 551.60 INV IN = 541.57 INV OUT = 541.47	14-SP, 24" RCP INV IN =541.57	13-SP, 24" RCP INV OUT =541.47
14 CB	RIM = 551.67	15-SP 24" RCP INV IN -541.82	14-SP 24" RCP INV OUT -541.72

INV IN = 541.82 INV OUT = 541.72

	STF	RUCTURE TABLE	
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
15-CB	RIM = 551.08 INV IN = 543.82 INV OUT = 543.72	16-SP, 24" RCP INV IN =543.82	15-SP, 24" RCP INV OUT =543.72
16-CB	RIM = 550.88 INV IN = 544.08 INV OUT = 543.97	17-SP, 18" RCP INV IN =544.08	16-SP, 24" RCP INV OUT =543.97
17-CB	RIM = 552.12 INV IN = 545.07 INV OUT = 544.97	18-SP, 15" RCP INV IN =545.07	17-SP, 18" RCP INV OUT =544.97
18-CB	RIM = 552.12 INV IN = 547.06 INV OUT = 546.96	19-SP, 15" RCP INV IN =547.06	18-SP, 15" RCP INV OUT =546.96
19-CB	RIM = 552.12 INV OUT = 547.22	N/A	19-SP, 15" RCP INV OUT =547.22
20-CB	RIM = 545.79 INV IN = 535.82 INV OUT = 537.13	21-SP, 15" RCP INV IN =535.82	20-SP, 18" RCP INV OUT =537.13
21-CB	RIM = 541.03 INV OUT = 537.28	N/A	21-SP, 15" RCP INV OUT =537.28
22-JB	RIM = 543.37 INV IN = 536.70 INV OUT = 536.60	23-SP, 18" RCP INV IN =536.70	22-SP, 18" RCP INV OUT =536.60
23-JB	RIM = 539.79 INV IN = 537.58 INV OUT = 537.48	24-SP, 18" RCP INV IN =537.58	23-SP, 18" RCP INV OUT =537.48
24-AD	RIM = 542.00 INV OUT = 538.66	N/A	24-SP, 18" RCP INV OUT =538.66
25-RI	RIM = 537.55 INV OUT = 534.80	N/A	25-SP, 24" RCP INV OUT =534.80
O-01	RIM = N/A INV IN = 533.99	25-SP, 24" RCP INV IN =533.99	N/A
O-02	RIM = N/A INV IN = 534.74	22-SP, 18" RCP INV IN =534.74	N/A
O-03	RIM = N/A INV IN = 533.50	01-SP, 36" RCP INV IN =533.50	N/A

		PIPE TA	BLE				
START STRUCTURE	END STRUCTURE	START INVERT	END INVERT	SIZE	LENGTH	SLOPE	MATERIAL
02-CB	0 <b>0-2</b> B	534.61	534.22	36"	39.37'	1.00%	RCP
12-CB	0 <b>0√1</b> B	539.47	535.12	24"	124.96'	3.48%	RCP
20-CB	0 <b>2∙3</b> B	537.13	536.11	18"	101.33'	1.00%	RCP
03-CB	02-CB	536.76	535.61	24"	69.77'	1.65%	RCP
04-CB	03-CB	537.56	536.86	24"	69.98'	1.00%	RCP
05-CB	04-CB	538.54	537.66	24"	88.02'	1.00%	RCP
06-CB	05-CB	539.42	538.64	24"	77.95'	1.00%	RCP
07-CB	06-CB	540.39	539.52	24"	86.84'	1.00%	RCP
08-CB	07-CB	542.03	540.49	24"	153.50'	1.00%	RCP
09-CB	08-CB	542.28	542.12	24"	15.48'	1.00%	RCP
10-CB	09-CB	544.92	543.03	15"	189.41'	1.00%	RCP
11-CB	10-CB	545.18	545.02	15"	15.60'	1.00%	RCP
13-CB	12-CB	541.47	539.57	24"	189.91'	1.00%	RCP
14-CB	13-CB	541.72	541.57	24"	15.06'	1.00%	RCP
15-CB	14-CB	543.72	541.82	24"	189.96'	1.00%	RCP
16-CB	15-CB	543.97	543.82	24"	15.55'	1.00%	RCP
17-CB	16-CB	544.97	544.08	18"	88.89'	1.00%	RCP
18-CB	17-CB	546.96	545.07	15"	189.43'	1.00%	RCP
19-CB	18-CB	547.22	547.06	15"	15.54'	1.00%	RCP
21-CB	20-CB	537.28	535.82	15"	146.45'	1.00%	RCP
23-JB	22-JB	537.48	536.70	18"	51.30'	1.53%	RCP
24-AD	23-JB	538.66	537.58	18"	107.81'	1.00%	RCP
25-RI	O-01	534.80	533.99	24"	49.44'	1.63%	RCP
22-JB	O-02	536.60	534.74	18"	185.61'	1.00%	RCP
01-JB	O-03	534.12	533.50	36"	63.99'	0.96%	RCP

#### **GRADING & STORM DRAINAGE NOTES:**

1. REFER TO SHEET C3.00 FOR GENERAL NOTES

- 2. CONTRACTOR SHALL REPORT ANY GRADE DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
- 3. THE MAXIMUM SLOPE ALONG ANY HANDICAP ACCESSIBLE PATHWAY SHALL NOT EXCEED 5.0% AND SHALL NOT EXCEED A 2.0% CROSS SLOPE. HANDICAP RAMPS INDICATED ON PLANS SHALL BE A MAXIMUM OF 1/12 SLOPES WITH A MAXIMUM RISE OF 30" BETWEEN LANDINGS. NON-CURB CUT RAMPS SHALL HAVE HANDRAILS AND GUARDS PER DETAILS WITH 5' LANDINGS AT THE BOTTOM AND TOP OF RAMP.
- 4. ALL PROPOSED ELEVATIONS SHOWN ARE EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE SPECIFIED.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL NEWLY CONSTRUCTED STORM DRAINAGE IMPROVEMENTS AND RECEIVING STORM DRAINAGE SYSTEMS REMAIN CLEAN OF SEDIMENT AND DEBRIS. PRIOR TO OWNER ACCEPTANCE OF SYSTEM, THE CONTRACTOR SHALL COORDINATE AND PROVIDE A VISUAL OBSERVATION VIDEO OF ALL STORM DRAINAGE IMPROVEMENTS 12" AND LARGER. THE VISUAL OBSERVATION SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE TWO (2) DVD COPIES OF THE ENTIRE DRAINAGE VISUAL OBSERVATION.
- 6. PRIOR TO ISSUANCE OF A BUILDING CERTIFICATE OF OCCUPANCY THE CONTRACTOR SHALL PROVIDE THE OWNER WITH THE VIDEO INSPECTION OF THE STORM SEWER SYSTEM. (BOTH PUBLIC AND PRIVATE). THIS SUBMITTAL MAY NEED TO BE REVIEWED AND ACCEPTED BY THE LOCAL JURISDICTION PRIOR TO THE ISSUANCE OF THE BUILDING CO.
- 7. REFER TO THE EROSION CONTROL DETAILS SHEET FOR THE SEQUENCE OF
- 8. INTERIM GRADING SHALL BE PROVIDED THAT ENSURES THE PROTECTION OF STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, AND
- 9. INTERIM GRADING SHALL BE PROVIDED TO DIRECT WATER AWAY FROM BUILDINGS AND PREVENT PONDING.
- 10. TIE ROOF LEADERS WHERE POSSIBLE TO UNDERGROUND STORM SYSTEM. CONTRACTOR TO FIELD VERIFY LOCATE AND INSTALL WHERE POSSIBLE OR AS SHOWN ON PLANS. WHERE ROOF LEADERS DAYLIGHT AT GRADE A SPLASH BLOCK APPROVED BY THE OWNER'S REPRESENTATIVE SHALL BE INSTALLED.
- 11. MAXIMUM SLOPE ACROSS ANY HANDICAPPED PARKING SPACE AND AISLE SHALL NOT EXCEED 2% IN ANY DIRECTION.
- 12. PROPOSED CONTOURS ARE APPROXIMATE. SPOT ELEVATIONS AND ROADWAY PROFILES SHALL BE USED IN CASE OF DISCREPANCY.
- 13. PLACE BACKFILL AND FILL MATERIALS IN LAYER NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. PLACE BACKFILL AND FILL MATERIALS EVENLY ON ALL SIDES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE. COMPACT SOIL TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 FOR EACH LAYER OF BACKFILL OR FILL MATERIAL UP TO TWO FEET OF FINISHED GRADE. COMPACT SOIL TO NOT LESS THAN 98 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 FOR EACH LAYER OF BACKFILL OR FILL MATERIAL FOR THE FINAL TWO FEET.
- 14. SITE GRADING IMMEDIATELY ADJACENT TO FOUNDATION OF BUILDING SHALL SLOPE NOT LESS THAN 1/20 AWAY FOR MINIMUM DISTANCE OF 10 FEET. ALTERNATIVE METHOD SHALL BE PROVIDED TO DIVERT WATER AWAY FROM FOUNDATION VIA SWALES SLOPED AT A MINIMUM OF 2% OR IMPERVIOUS SURFACES SLOPED AWAY A MINIMUM OF 2% AWAY FROM BUILDING.
- 15. CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF EXISTING MANHOLES, METERS, VALVES, ETC. AS REQUIRED TO MEET NEW FINISHED GRADES.
- 16. CONTRACTOR SHALL SLOPE GRADES TO ASSURE POSITIVE STORMWATER FLOW TO KEEP WATER FROM POOLING ALONG CURBS AND WALLS.
- 17. TOP OF WALL ELEVATIONS INDICATE THE ELEVATION AT THE TOP OF THE CAP, UNLESS OTHERWISE NOTED.
- 18. BOTTOM OF WALL ELEVATIONS INDICATE THE ELEVATION OF THE FINISHED GRADE.

#### IMPERVIOUS LEGEND

EXISTING BUILDING IMPERVIOUS = 6,098 SF EXISTING SIDEWALK IMPERVIOUS = 7,405 SF EXISTING PARKING / DRIVEWAY IMPERVIOUS = 436 SF

EXISTING WOODED AREA TO REMAIN UNDISTURBED DRAINAGE AREA

----- 200 ----- PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR —— 200 —— EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR PROPOSED STORM DRAINAGE PROPOSED CATCH BASIN PROPOSED JUNCTION BOX PROPOSED AREA DRAIN PROPOSED ELEVATION TOP/BOTTOM OF CURB TOP/BOTTOM OF WALL RIPRAP DISSIPATOR

EXISTING IMPERVIOUS				
BUILDING	6,098 SF			
SIDEWALK	7,045 SF			
PARKING / DRIVE	436 SF			

PROPOSED IMPERVIOUS				
BUILDING	67.897 SF			
SIDEWALK	32,968 SF			
PARKING / DRIVE	94,075 SF			

#### STORM DRAINAGE NETWORK

FLOW DIRECTION

LIMITS OF DISTURBANCE

TYPE CODE: L-AD = AREA DRAIN  $\overline{AD} = \overline{AREA} DRAIN$ FES = FLARED END L-JB = JUNCTION BOX L-TD = TRENCH DRAIN SECTION JB = JUNCTION BOX L-CO = CLEANOUT RI = RISER YI = YARD INLET CB = CATCH BASIN CI = CURB INLET

SHALL ALL BE TO LOCAL JURISDICTIONAL STANDARDS.

ALL STORM PIPES TO BE CLASS III RCP UNLESS OTHERWISE NOTED.

\_DOWNSTREAM /--UPSTREAM STRC — UPSTREAM — DOWNSTREAM ELEV. FLOW GRD. ELEV. UPSTREAM INVERT DOWNSTREAM INVERT

CO = CLEANOUT TD = TRENCH DRAIN STRUCTURES WITHIN NCDOT RIGHT-OF-WAY SHALL BE TO NCDOT STANDARDS. STRUCTURES NOT WITHIN RIGHT OF WAY SHALL EITHER ALL BE TO NCDOT STANDARDS OR



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RALEIGH, NC 27601

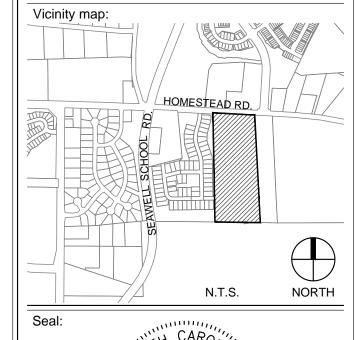
GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

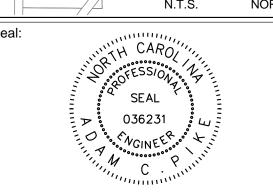
421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE #: C-1051

PROJECT #: C17104

Project:

### INDEPENDENT SENIOR HOUSING **CHAPEL HILL**



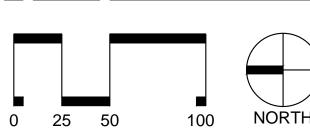


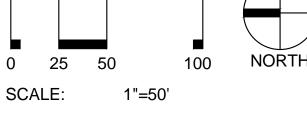
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No.	Date	Description

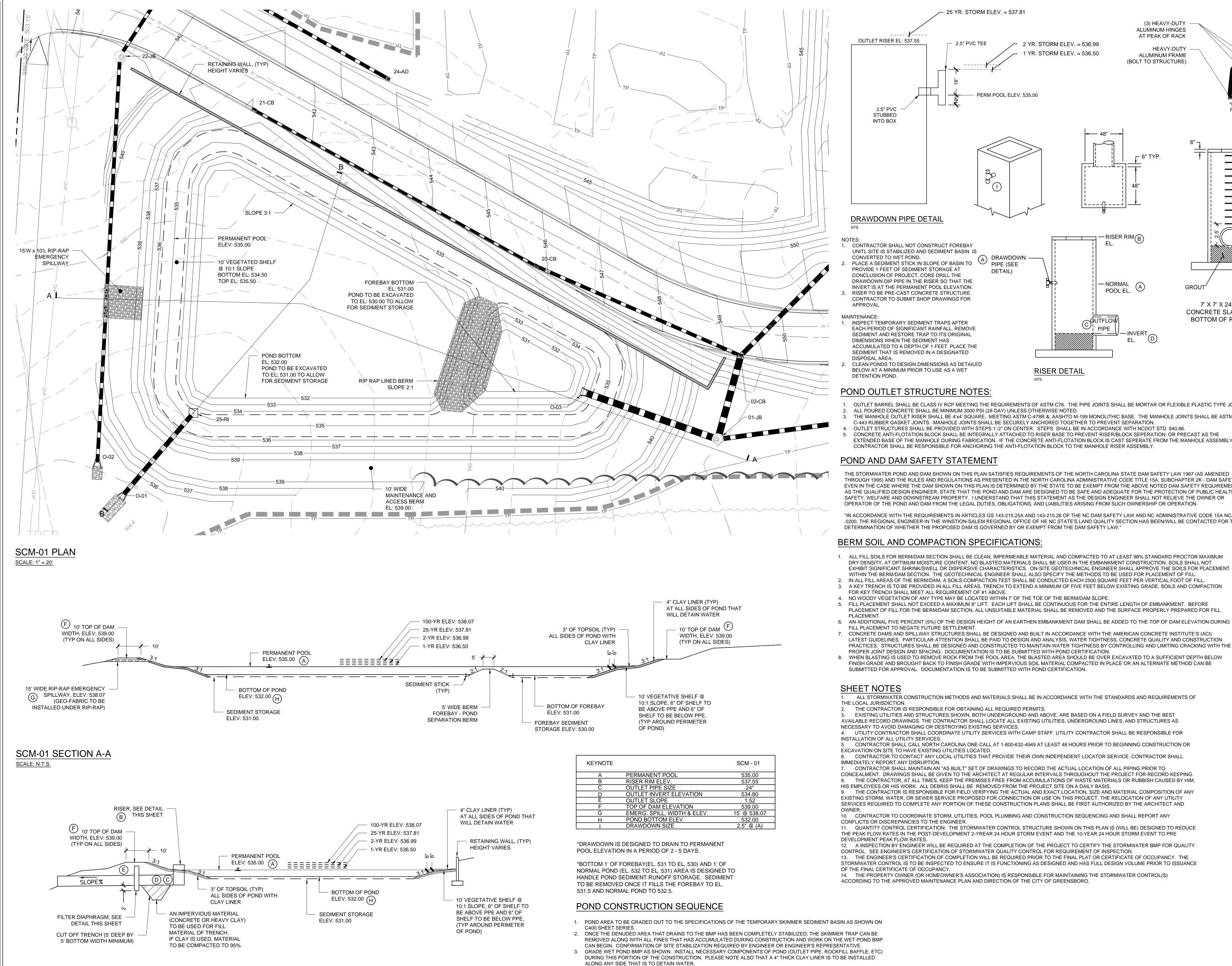




**GRADING PLAN** 

Project number: C17004 Sheet:

Date: 09.27.2017 Drawn by: DCB/RS Approved by: ACP C5.00 Approved by:



SCM-01 SECTION B-B

SCALE: 1" = 20'

25 YR. STORM ELEV. = 537.81 3'X4' ACCESS HATCH (3) HEAVY-DUTY ALUMINUM HINGES AT PEAK OF RACK - 2.5" PVC TEE 2 YR. STORM ELEV. = 536.99 **HEAVY-DUTY** 1 YR. STORM ELEV. = 536.50 ALUMINUM FRAME (BOLT TO STRUCTURE) PERM POOL ELEV. 535.00 ROOF TRASH RACK ACCESS STAIRS 12" 0.C.;STAIRS TO BE INSTALLED ON SIDE OF RISER THAT IS ACCESSIBLE VIA DRY LAND. ACCESS PORT ON TRASH RACK TO ALSO BE ON THIS SIDE -RISER RIMB CONTRACTOR SHALL NOT CONSTRUCT FOREBAY UNITL SITE IS STABILIZED AND SEDIMENT BASIN IS A DRAWDOWN ——
PIPE (SEE PLACE A SEDIMENT STICK IN SLOPE OF BASIN TO DRAWDOWN DIP PIPE IN THE RISER SO THAT THE -NORMAL A INVERT IS AT THE PERMANENT POOL ELEVATION. POOL EL. RISER TO BE PRE-CAST CONCRETE STRUCTURE. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR 7' X 7' X 24" THK CONCRETE SLAB AT **BOTTOM OF RISER** INSPECT TEMPORARY SEDIMENT TRAPS AFTER EACH PERIOD OF SIGNIFICANT RAINFALL. REMOVE SEDIMENT AND RESTORE TRAP TO ITS ORIGINAL ACCUMULATED TO A DEPTH OF 1 FEET. PLACE THE SEDIMENT THAT IS REMOVED IN A DESIGNATED

- OUTLET BARREL SHALL BE CLASS IV RCP MEETING THE REQUIREMENTS OF ASTM C76. THE PIPE JOINTS SHALL BE MORTAR OR FLEXIBLE PLASTIC TYPE JOINT.
- ALL POURED CONCRETE SHALL BE MINIMUM 3000 PSI (28 DAY) UNLESS OTHERWISE NOTED. THE MANHOLE OUTLET RISER SHALL BE 4'x4' SQUARE, MEETING ASTM C-478R &, AASHTO M-199 MONOLITHIC BASE. THE MANHOLE JOINTS SHALL BE ASTM C-443 RUBBER GASKET JOINTS. MANHOLE JOINTS SHALL BE SECURELY ANCHORED TOGETHER TO PREVENT SEPARATION.

RISER DETAIL

OUTLET STRUCTURES SHALL BE PROVIDED WITH STEPS 1'-2" ON CENTER. STEPS SHALL BE IN ACCORDANCE WITH NCDOT STD. 840.66 CONCRETE ANTI-FLOTATION BLOCK SHALL BE INTEGRALLY ATTACHED TO RISER BASE TO PREVENT RISER/BLOCK SEPERATION, OR PRECAST AS THE EXTENDED BASE OF THE MANHOLE DURING FABRICATION. IF THE CONCRETE ANTI-FLOTATION BLOCK IS CAST SEPERATE FROM THE MANHOLE ASSEMBLY THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANCHORING THE ANTI-FLOTATION BLOCK TO THE MANHOLE RISER ASSEMBLY

#### POND AND DAM SAFETY STATEMENT

THE STORMWATER POND AND DAM SHOWN ON THIS PLAN SATISFIES REQUIREMENTS OF THE NORTH CAROLINA STATE DAM SAFETY LAW 1967 (AS AMENDED THROUGH 1995) AND THE RULES AND REGULATIONS AS PRESENTED IN THE NORTH CAROLINA ADMINISTRATIVE CODE TITLE 15A. SUBCHAPTER  $^2$ K - DAM SAFETY EVEN IN THE CASE WHERE THE DAM SHOWN ON THIS PLAN IS DETERMINED BY THE STATE TO BE EXEMPT FROM THE ABOVE NOTED DAM SAFETY REQUIREMENTS, I, AS THE QUALIFIED DESIGN ENGINEER. STATE THAT THE POND AND DAM ARE DESIGNED TO BE SAFE AND ADEQUATE FOR THE PROTECTION OF PUBLIC HEALTH. SAFETY, WELFARE AND DOWNSTREAM PROPERTY. I UNDERSTAND THAT THIS STATEMENT AS THE DESIGN ENGINEER SHALL NOT RELIEVE THE OWNER OR

"IN ACCORDANCE WITH THE REQUIREMENTS IN ARTICLES GS 143-215.25A AND 143-215.26 OF THE NC DAM SAFETY LAW AND NC ADMINISTRATIVE CODE 15A NCAC 2K .0200. THE REGIONAL ENGINEER IN THE WINSTION-SALEM REGIONAL OFFICE OF HE NC STATE'S LAND QUALITY SECTION HAS BEEN/WILL BE CONTACTED FOR THE

#### BERM SOIL AND COMPACTION SPECIFICATIONS:

- 1. ALL FILL SOILS FOR BERM/DAM SECTION SHALL BE CLEAN, IMPERMEABLE MATERIAL AND COMPACTED TO AT LEAST 98% STANDARD PROCTOR MAXIMUM DRY DENSITY, AT OPTIMUM MOISTURE CONTENT. NO BLASTED MATERIALS SHALL BE USED IN THE EMBANKMENT CONSTRUCTION. SOILS SHALL NOT EXHIBIT SIGNIFICANT SHRINK/SWELL OR DISPERSIVE CHARACTERISTICS. ON-SITE GEOTECHNICAL ENGINEER SHALL APPROVE THE SOILS FOR PLACEMENT
- WITHIN THE BERM/DAM SECTION. THE GEOTECHNICAL ENGINEER SHALL ALSO SPECIFY THE METHODS TO BE USED FOR PLACEMENT OF FILL.

  2. IN ALL FILL AREAS OF THE BERM/DAM, A SOILS COMPACTION TEST SHALL BE CONDUCTED EACH 2500 SQUARE FEET PER VERTICAL FOOT OF FILL. 3. A KEY TRENCH IS TO BE PROVIDED IN ALL FILL AREAS. TRENCH TO EXTEND A MINIMUM OF FIVE FEET BELOW EXISTING GRADE. SOILS AND COMPACTION FOR KEY TRENCH SHALL MEET ALL REQUIREMENT OF #1 ABOVE.
- 4. NO WOODY VEGETATION OF ANY TYPE MAY BE LOCATED WITHIN 7' OF THE TOE OF THE BERM/DAM SLOPE. 5. FILL PLACEMENT SHALL NOT EXCEED A MAXIMUM 8" LIFT. EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF EMBANKMENT. BEFORE PLACEMENT OF FILL FOR THE BERM/DAM SECTION, ALL UNSUITABLE MATERIAL SHALL BE REMOVED AND THE SURFACE PROPERLY PREPARED FOR FILL
- 6. AN ADDITIONAL FIVE PERCENT (5%) OF THE DESIGN HEIGHT OF AN EARTHEN EMBANKMENT DAM SHALL BE ADDED TO THE TOP OF DAM ELEVATION DURING FILL PLACEMENT TO NEGATE FUTURE SETTLEMENT. 7. CONCRETE DAMS AND SPILLWAY STRUCTURES SHALL BE DESIGNED AND BUILT IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE'S (ACI)
- PROPER JOINT DESIGN AND SPACING. DOCUMENTATION IS TO BE SUBMITTED WITH POND CERTIFICATION. 8. WHEN BLASTING IS USED TO REMOVE ROCK FROM THE POOL AREA, THE BLASTED AREA SHOULD BE OVER EXCAVATED TO A SUFFICIENT DEPTH BELOW FINISH GRADE AND BROUGHT BACK TO FINISH GRADE WITH IMPERVIOUS SOIL MATERIAL COMPACTED IN PLACE OR AN ALTERNATE METHOD CAN BE
- ALL STORMWATER CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF
- 2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES, UNDERGROUND LINES, AND STRUCTURES AS
- 4. UTILITY CONTRACTOR SHALL COORDINATE UTILITY SERVICES WITH CAMP STAFF. UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR
- 5. CONTRACTOR SHALL CALL NORTH CAROLINA ONE CALL AT 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION ON SITE TO HAVE EXISTING UTILITIES LOCATED.
- 6. CONTRACTOR TO CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN INDEPENDENT LOCATOR SERVICE. CONTRACTOR SHALL
- 7. CONTRACTOR SHALL MAINTAIN AN "AS BUILT" SET OF DRAWINGS TO RECORD THE ACTUAL LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE ARCHITECT AT REGULAR INTERVALS THROUGHOUT THE PROJECT FOR RECORD KEEPING. 8. THE CONTRACTOR, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY HIM, HIS EMPLOYEES OR HIS WORK. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.
- 9. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE ACTUAL AND EXACT LOCATION, SIZE AND MATERIAL COMPOSITION OF ANY EXISTING STORM, WATER, OR SEWER SERVICE PROPOSED FOR CONNECTION OR USE ON THIS PROJECT. THE RELOCATION OF ANY UTILITY SERVICES REQUIRED TO COMPLETE ANY PORTION OF THESE CONSTRUCTION PLANS SHALL BE FIRST AUTHORIZED BY THE ARCHITECT AND
- 10. CONTRACTOR TO COORDINATE STORM, UTILITIES, POOL PLUMBING AND CONSTRUCTION SEQUENCING AND SHALL REPORT ANY
- 11. QUANTITY CONTROL CERTIFICATION: THE STORMWATER CONTROL STRUCTURE SHOWN ON THIS PLAN IS (WILL BE) DESIGNED TO REDUCE THE PEAK FLOW RATES IN THE POST-DEVELOPMENT 2-YREAR 24 HOUR STORM EVENT AND THE 10-YEAR 24 HOUR STORM EVENT TO PRE
- 12. A INSPECTION BY ENGINEER WILL BE REQUIRED AT THE COMPLETION OF THE PROJECT TO CERTIFY THE STORMWATER BMP FOR QUALITY CONTROL. SEE ENGINEER'S CERTIFICATION OF STORMWATER QUALITY CONTROL FOR REQUIREMENT OF INSPECTION. 13. THE ENGINEER'S CERTIFICATION OF COMPLETION WILL BE REQUIRED PRIOR TO THE FINAL PLAT OR CERTIFICATE OF OCCUPANCY. THE STORMWATER CONTROL IS TO BE INSPECTED TO ENSURE IT IS FUNCTIONING AS DESIGNED AND HAS FULL DESIGN VOLUME PRIOR TO ISSUANCE
- 14. THE PROPERTY OWNER (OR HOMEOWNER'S ASSOCIATION) IS RESPONSIBLE FOR MAINTAINING THE STORMWATER CONTROL(S)
- ACCORDING TO THE APPROVED MAINTENANCE PLAN AND DIRECTION OF THE CITY OF GREENSBORO.

#### SCALE: AS NOTED

No. Date Description

STORMWATER MANAGEMENT PLAN (SCM-01)

STEWART

421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE #: C-1051

121 S. ESTES DRIVE SUITE 100

INDEPENDENT

SENIOR

HOUSING

**CHAPEL HILL** 

HOMESTEAD RD.

036231

PRELIMINARY - DO NOT

SUP SUBMITTAL

Issued for:

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CHAPEL HILL, NC 27514

www.stewartinc.com

PROJECT #: C17104

RALEIGH, NC 27601

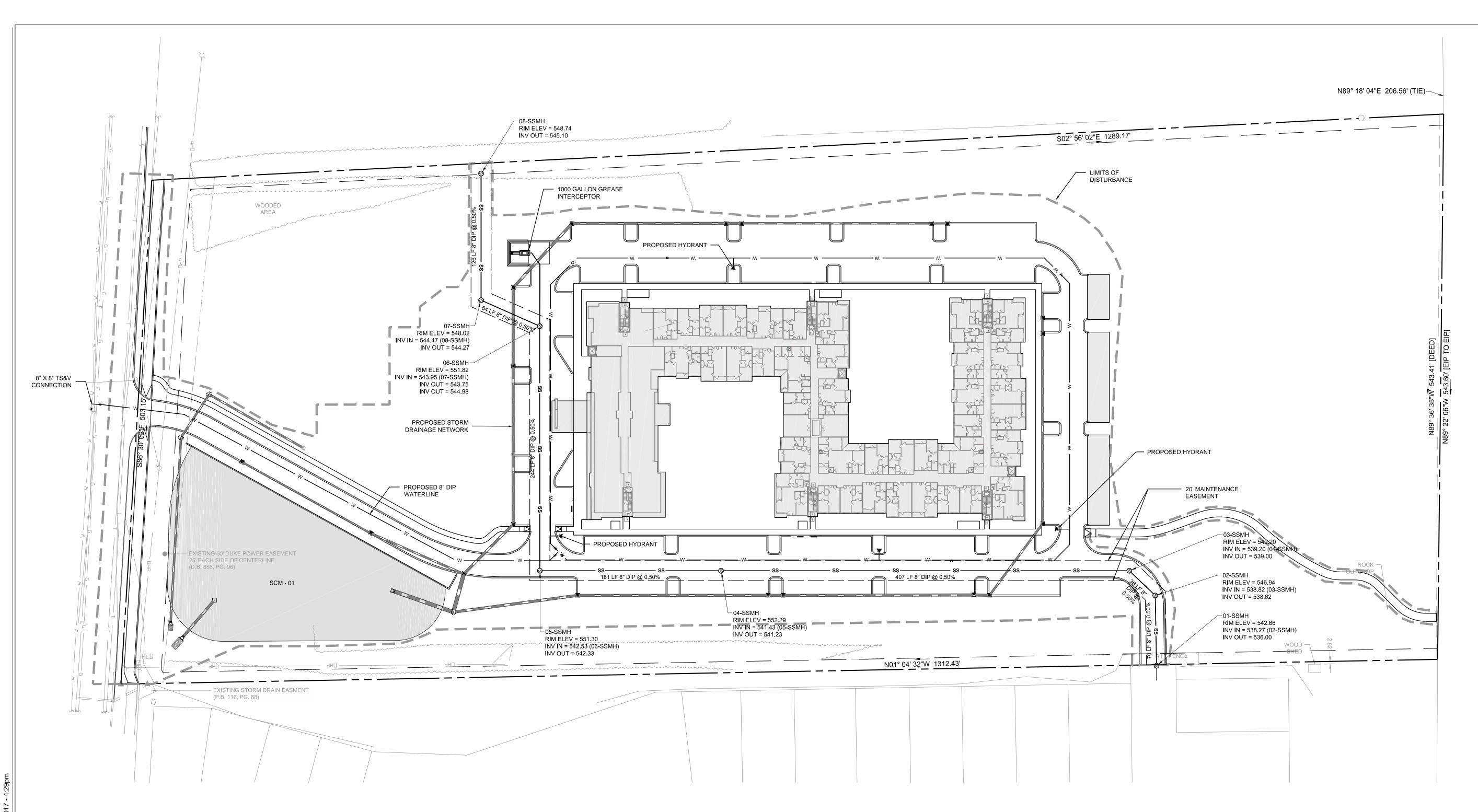
GLMH-2, LLC

T 919.380.8750

Project number: C17004 Sheet:

Drawn by: DCB

- INSTALL OUTLET STRUCTURE AND ANTI FLOATATION SLAB AT ELEVATIONS SHOWN. ONCE THE POND AND OUTLET STRUCTURE HAS BEEN INSTALLED, CONFIRM THAT THE REQUIRED VOLUMES AND CORRECT ELEVATIONS OF THE PIPES/OUTLET STRUCTURE HAVE BEEN INSTALLED. CONFIRMATION REQUIRED BY ENGINEER. AN ELECTRONIC AS BUILT SURVEY WILL BE NECESSARY FOR POND VOLUME CONFIRMATION.
- 6. ONCE ITEMS HAVE BEEN CONFIRMED, POND TO BE PLANTED AND SEEDED AS SPECIFIED ON LANDSCAPE PLAN. AT AREAS OF POND WHERE 4" CLAY LINER IS BE INSTALLED, CONTRACTOR TO INSTALL 3" OF TOPSOIL MATERIAL TO ENSURE



#### **UTILITY NOTES:**

- REFER TO SHEET C3.00 FOR GENERAL NOTES.
- 2. UNLESS OTHERWISE NOTED, ALL MANHOLES SHALL BE PRE-CAST CONCRETE STRUCTURES.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF UNDERGROUND UTILITIES (WATER, SEWER, STORM, ELECTRICAL, GAS, OR OTHER) FOR THIS PROJECT WITH THE BUILDING PLANS. THE UTILITY CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE INSTALLATION OF ALL UTILITY SERVICES TO WITHIN FIVE (5) FEET OF THE BUILDING CONNECTION POINT.
- THE CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON SITE AND UTILITY PROVIDERS DURING CONSTRUCTION TO ENSURE SMOOTH TRANSITION BETWEEN DISCIPLINES.
- THE CONTRACTOR SHALL COORDINATE ALL PEDESTRIAN AND VEHICULAR INTERRUPTIONS WITH OWNER'S REPRESENTATIVE AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INSIDE THE PUBLIC RIGHT OF WAY PRIOR TO RECEIPT AND COMPLIANCE WITH ALL APPLICABLE NCDOT PERMITS. ADDITIONALLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FLAGGERS AND TRAFFIC CONTROL DURING ALL WORK INSIDE THE PUBLIC RIGHTS OF
- THE CONTRACTOR SHALL NOT RE-USE ANY FIRE HYDRANT REMOVED AS PART OF THIS PROJECT. ANY FIRE HYDRANT SHOWN TO BE REMOVED OR RELOCATED SHALL BE REPLACED WITH A NEW FIRE HYDRANT MEETING THE LOCAL JURISDICTIONAL REQUIREMENTS AND STANDARDS.
- 8. ALL EXISTING SUB-SURFACE UTILITIES IDENTIFIED ON THE CONSTRUCTION DOCUMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON SURVEY INFORMATION GATHERED FROM FIELD INSPECTION AND/OR ANY OTHER APPLICABLE RECORD DRAWINGS WHICH MAY BE AVAILABLE. DEPTHS OF EXISTING UTILITIES SHOWN IN PROFILE VIEWS ARE BASED ON STANDARD ASSUMPTIONS. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION, DEPTH, SIZE AND MATERIAL OF ANY AND ALL SUB-SURFACE CONDITIONS REFERENCED IN THESE PLANS PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
- 9. ELEVATIONS OF UTILITIES ARE GIVEN TO THE EXTENT OF INFORMATION AVAILABLE, WHERE ELEVATIONS ARE NOT GIVEN AT POINTS OF EXISTING UTILITY CROSSINGS, SUCH ELEVATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND REPORTED TO THE ENGINEER, WHEN UNKNOWN LINES ARE EXPOSED, THEIR LOCATIONS AND ELEVATIONS SHALL ALSO BE REPORTED TO THE ENGINEER.
- 10. UNDERGROUND UTILITIES SHOWN ON THIS PLAN SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OF PARKING AREA, DRIVES, CURB AND GUTTER OR CONCRETE WALKS / PADS. IF UTILITIES SHOWN ON THIS PLAN CANNOT BE INSTALLED PRIOR TO INSTALLATION OF IMPERVIOUS (ASPHALT / CONCRETE) CONDUIT SHALL BE INSTALLED FOR THE "FUTURE" UTILITY INSTALLATION.
- 11. AS-BUILT DOCUMENTATION REQUIREMENTS: PRIOR TO APPROVAL FROM LOCAL JURISDICTION OR ENGINEER THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS (IN BOTH PAPER AND ELECTRONIC FORMAT (CAD / PDF) PREPARED AND SEALED BY A PROFESSIONAL LAND SURVEYOR SHOWING ALL UTILITY INSTALLATION. HORIZONTAL AND VERTICAL INFORMATION SHALL BE PROVIDED FOR WATER, SEWER, STORM INCLUDING ALL STRUCTURES, VALVES, HYDRANTS, AND OTHER APPURTENANCES.

#### PROPOSED UTILITY SEPARATION:

- 1. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT HORIZONTAL SEPARATION IN WHICH CASE;
- a. THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE
- b. THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE OF A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP TO THE SEWER.
- 2. CROSSING A WATER MAIN OVER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION, IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF 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

#### SEPARATION OF SANITARY SEWERS AND STORM SEWERS:

1. A 24" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR BOTH THE SANITARY AND THE STORM LINES SHALL BE CONSTRUCTED OF FERROUS MATERIALS.

#### **SEWER NOTES:**

- 1. SANITARY SEWER CLEANOUTS LOCATED IN PAVEMENT AREAS SHALL BE HEAVY DUTY TRAFFIC BEARING CASTINGS.
- 2. UNLESS OTHERWISE NOTED, ALL SANITARY SEWER MANHOLES ARE 4' DIA.
- 3. MANHOLES LOCATED IN PAVEMENT, CONCRETE OR OTHER TRAFFIC AREAS SHALL BE SET AT GRADE. MANHOLES LOCATED IN OTHER AREAS (I.E. GRASS OR WOODED AREAS) SHALL HAVE THEIR RIMS RAISED SIX INCHES ABOVE THE SURROUNDING GRADE. MANHOLES SUBJECT TO POSSIBLE WATER INFILTRATION SHALL HAVE WATERTIGHT, BOLTED LIDS.
- 4. MINIMUM REQUIRED SLOPES FOR SEWER SERVICES: 4" SEWER SERVICE - 2.00% SLOPE
- 6" SEWER SERVICE 1.00% SLOPE 8" SEWER SERVICE - 0.50% SLOPE
- 5. UNLESS OTHERWISE NOTED, LOCATE SANITARY SERVICE CLEANOUTS AT ALL HORIZONTAL OR VERTICAL CHANGES IN DIRECTION. MAXIMUM SPACING BETWEEN CLEANOUTS SHALL BE 75 FEET.
- 6. SEWER LINES LESS THAN 3 FEET OF COVER SHALL BE CLASS 50 DUCTILE IRON PIPE. SEWER LINES WITH GREATER THAN 3 FEET OF COVER SHALL BE AS NOTED
- 4" SEWER SERVICE SCH 80 6" SEWER SERVICE - SCH 80 8" SEWER SERVICE - SDR-35

AND PLUG PRIOR TO OCCUPANCY.

- 7. SEWER LINES UNDER CONSTRUCTION SHALL BE PROTECTED FROM DIRT, DEBRIS OR OTHER CONTAMINANTS ENTERING THE NEW SYSTEM. A MECHANICAL PLUG SHALL BE UTILIZED BOTH IMMEDIATELY UPSTREAM OF THE NEW CONSTRUCTION AND AT THE FIRST MANHOLE DOWNSTREAM IN THE EXISTING SYSTEM. EXISTING STRUCTURES, PIPING AND APPURTENANCES SHALL BE PROTECTED FROM ANY INFLOW OF WATER, DIRT OR DEBRIS DUE TO NEW CONSTRUCTION CONNECTING TO OR IN THE VICINITY OF THE EXISTING SYSTEM. CONTRACTOR TO REMOVE DEBRIS
- 8. ALL MANHOLES COVERS SHALL BE PAINTED TO LOCAL JURISDICTIONAL REQUIREMENTS.

#### **WATER NOTES:**

- AS INDICATED, ALL WATERLINES SHALL BE DUCTILE IRON PIPE MEETING THE REQUIREMENTS OF ANSI-AWWA C151 PRESSURE CLASS 350 OR SOFT COPPER TYPE K PIPE PER ASTM B88. IF PVC WATERLINE IS INDICATED ON THE PLANS IT SHALL MEET THE REQUIREMENTS OF AWWA C-900; CLASS 200.
- 2. ALL WATERLINES SHALL HAVE A MINIMUM OF 3.5 FEET OF COVER.
- TESTING NOTES:
- LEAKAGE SHALL NOT EXCEED THE MAXIMUM ALLOWABLE LEAKAGE SPECIFIED IN AWWA C 600. MINIMUM TEST PRESSURE SHALL BE 150 PSI FOR DOMESTIC AND 200 PSI FOR FIRE PROTECTION. BACTERIOLOGICAL: TWO SAMPLES FOR BACTERIOLOGICAL SAMPLING SHALL BE COLLECTED AT LEAST 24 HOURS APART. IF CONTAMINATION IS INDICATED, THEN THE DISINFECTION PROCEDURE AND TESTING SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.
- 4. THE CHLORINE IN HEAVILY CHLORINATED WATER FLUSHED FROM MAINS NEEDS TO BE NEUTRALIZED BEFORE DISCHARGE. CONTRACTORS SHALL NEUTRALIZE HEAVILY CHLORINATED WATER FLUSHED FROM MAINS PRIOR TO DISCHARGE OR TRANSPORT ALL HEAVILY CHLORINATED WATER OFFSITE FOR PROPER DISPOSAL.
- 5. PAINT VALVE COVERS, FIRE HYDRANTS AND OTHER WATER APPARATUS TO MEET THE LOCAL JURISDICTIONAL

#### UTILITY LEGEND

W	EXISTING WATER LINE
—— w ——	PROPOSED WATER LINE
—— SS ——	EXISTING SANITARY SEWER LINE
—— ss ——	PROPOSED SANITARY SEWER LINE
<b>&gt;</b>	PROPOSED FIRE HYDRANT
$\otimes$	PROPOSED WATER VALVE

**EXISTING SANITARY SEWER MANHOLE** PROPOSED SANITARY SEWER MANHOLE

PROPOSED CLEANOUT PROPOSED FDC

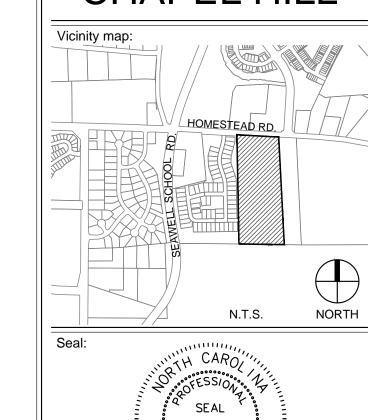
PROPOSED BACKFLOW METER PROPOSED POST INDICATOR VALVE (PIV)

GREASE INTERCEPTOR — — 300' HYDRANT COVERAGE CIRCLE LIMITS OF DISTURBANCE

STEWARI RALEIGH, NC 27601 T 919.380.8750

GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

# INDEPENDENT **SENIOR** HOUSING **CHAPEL HILL**



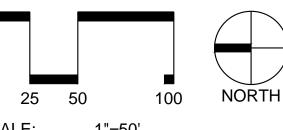
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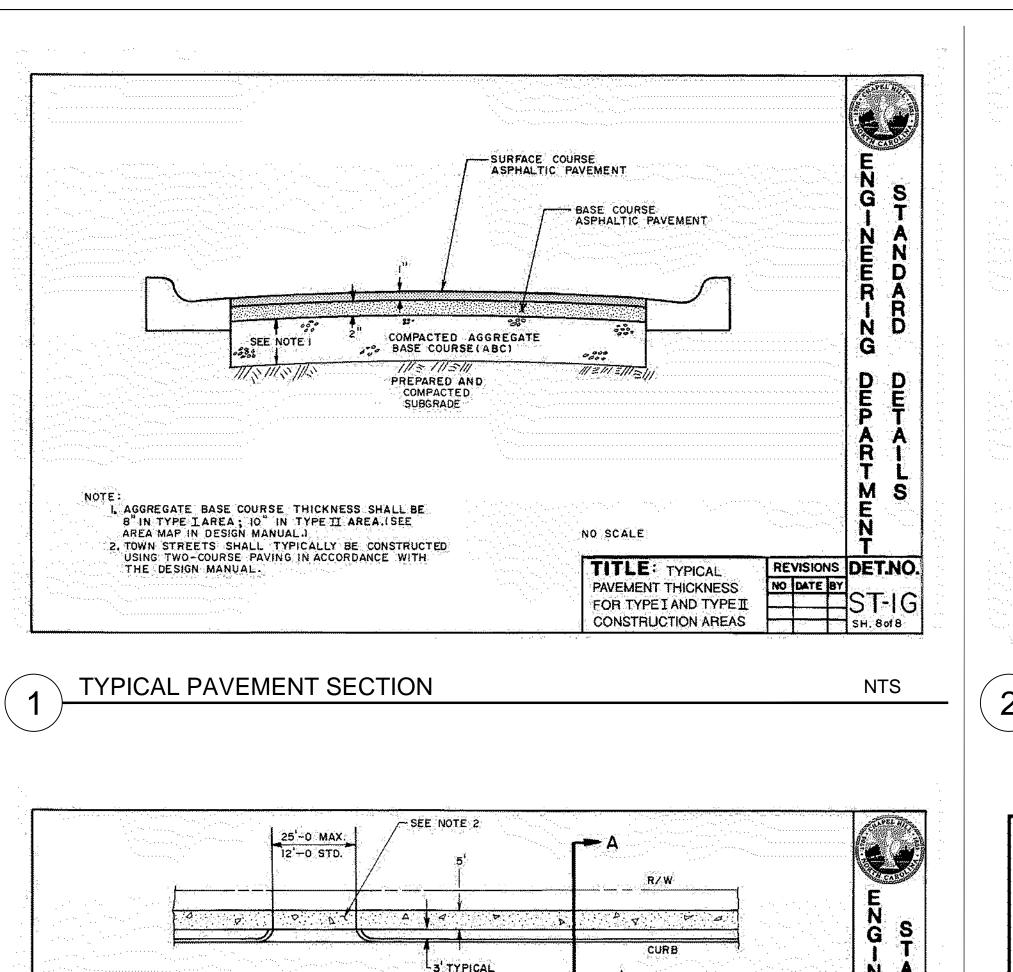


**UTILITIES PLAN** 

Project number: C17004 Sheet: 09.27.2017

DCB/RS Drawn by:



(MAY VARY WITH TOWN ENGINEERING APPROVAL)

/4" : 1 --

(MAY VARY WITH TOWN

ENGINEERING APPROVAL)

CONCRETE SIDEWALK-

4 CONTROL JOINT EVERY 5 FEET.

I. ALL CONCRETE 3000 PSI.
2. SEE STANDARD DETAIL "D-I" FOR THROUGH DRIVEWAY SPECIFICATIONS.
3. EXPANSION JOINTS 50 APART MAXIMUM.

5. ALL SIDEWALKS SHALL BE CONSTRUCTED WITH TOOLED 14" EDGE RADIUS.

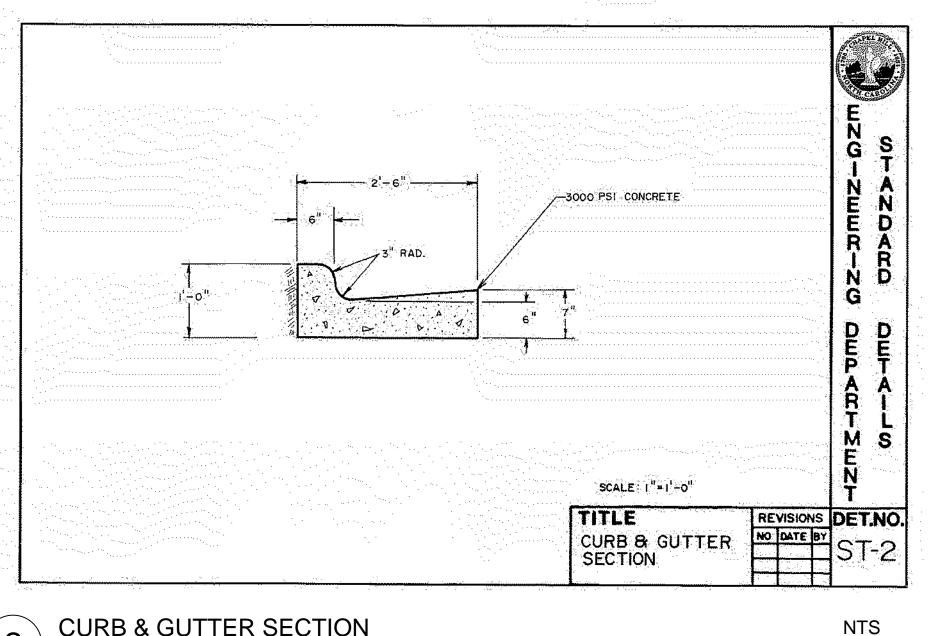
6. IF UTILITY STRIP IS COMPLETELY ELIMINATED, SIDEWALK SHALL BE PLACED DIRECTLY AT BACK-OF-CURB, WITH 1/4" EDGE RADIUS:

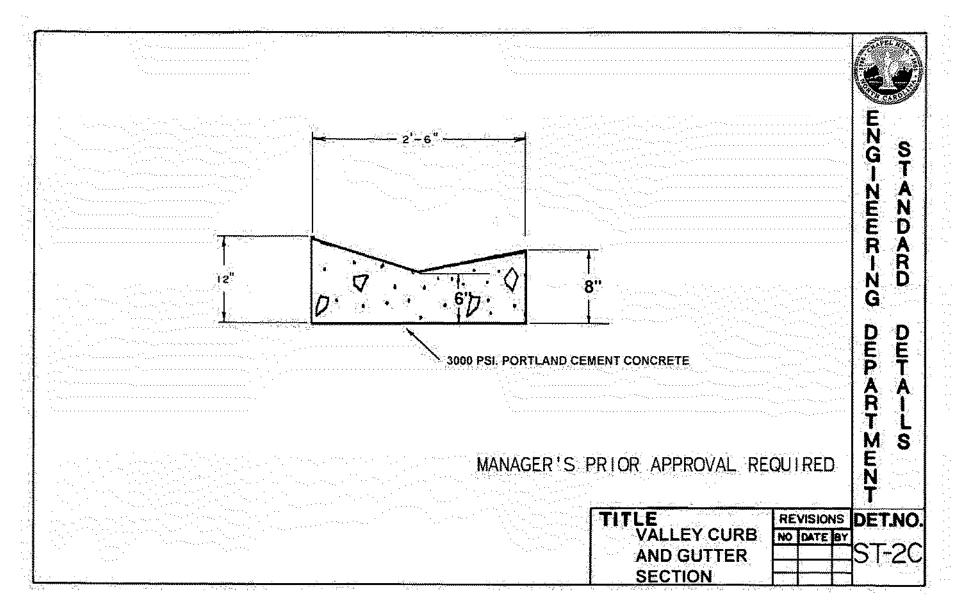
TYPICAL SIDEWALK-SECTION A-A

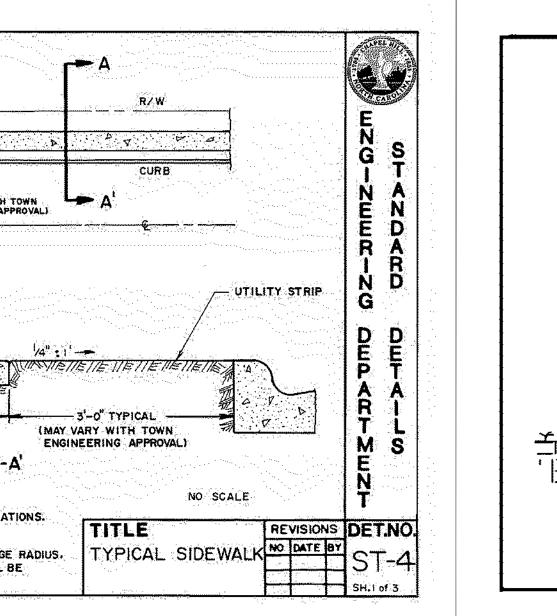
14 EDGE RADIUS (SEE NOTE 5)

SUBGRADE

NOTES:







DET.NO.

ST - 5.3

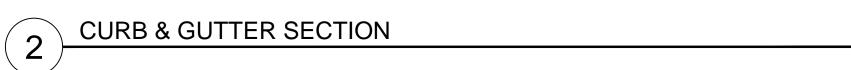
REVISIONS

09/03 JH 02/08 ER

TITLE:

ACCESSIBLE

RAMP



CURB RAMP

5' BRICK SIDEWALK WITH RUNNING COURSI

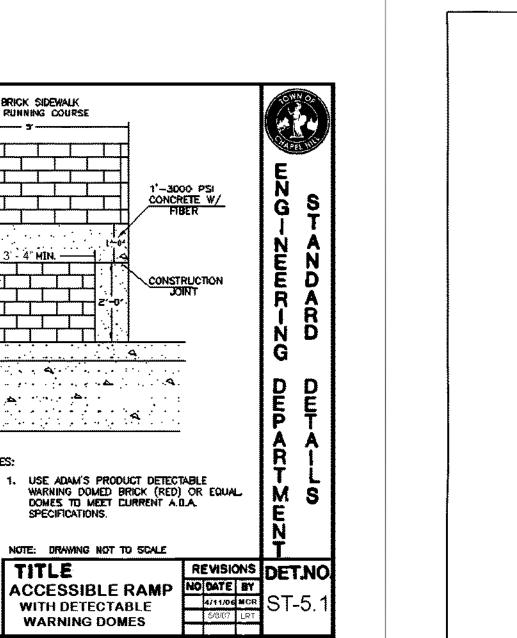
وهاي المراوي والمنطقة في والمنظم والمنافق والمنا

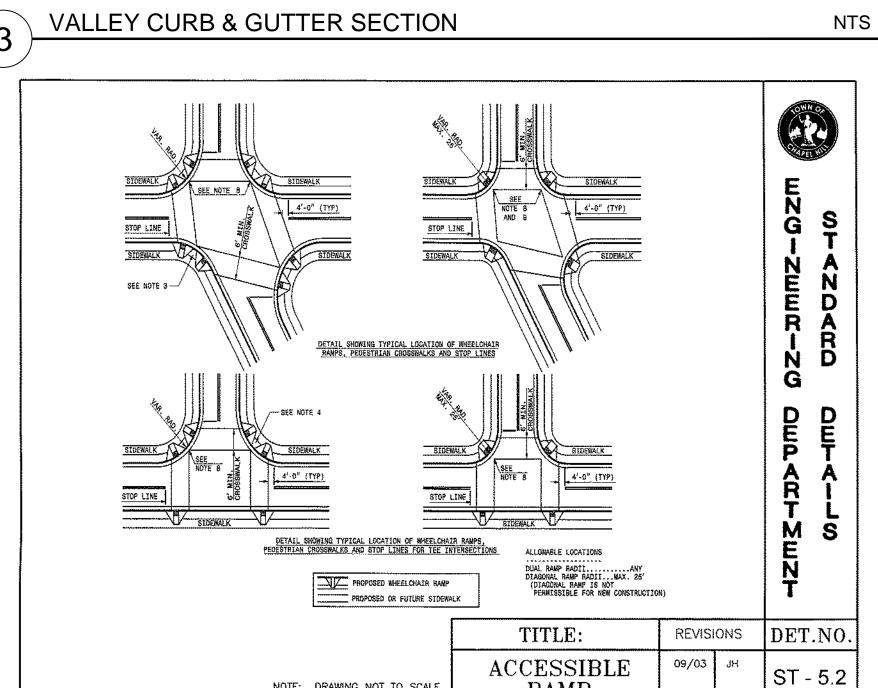
NOTE: DRAWING NOT TO SCALE

WITH DETECTABLE

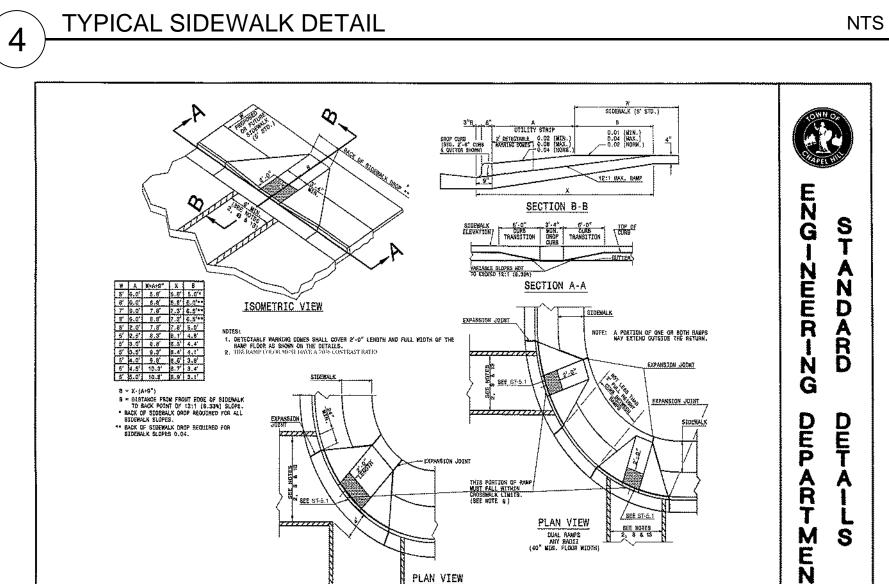
WARNING DOMES

1'-3000 PSI CONCRETE W/





RAMP



NOTE: DRAWING NOT TO SCALE

SOURCE: NCDOT STANDARD DRAWINGS

ACCESSIBLE RAMP DETAIL (PART3)

ACCESSIBLE RAMP DETAIL (PART1)

1-5" MINIMUN "4"

COMPACTED A.B.C. STONE

5' CONCRETE SIDEWALK 3000 PSI W/ FIBER

SEE NOTE 1

1. CONSTRUCT THE WALKING SURFACE WITH SLIP RESISTANCE AND A 70% CONTRASTING COLOR TO THE SIDEWALK.

4. DO NOT EXCEED 0.08 (12:1) SLOPE ON THE WHEELCHAIR RAMP IN RELATIONSHIP TO THE GRADE OF THE STREET.

PROVIDE WHEELCHAIR RAMPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. LOCATE WHEELCHAIR RAMPS AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. WHERE TWO RAMPS ARE INSTALLED, PLACE NOT LESS THAN TWO FEET OF FULL HEIGHT CURB BETWEEN THE RAMPS. PLACE DUAL RAMPS AS PERPENDICULAR TO THE TRAVEL LANE BEING CROSSED AS POSSIBLE.

5. CONSTRUCT WHEELCHAIR RAMPS 40" (3'-4") OR GREATER FOR DUAL RAMPS AND 60" (5'-0") OR GREATER FOR DIAGONAL RAMPS.

7. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AS SHOWN ON DETAIL ST-5A.

8. PLACE THE INSIDE PEDESTRIAN CROSSWALK LINES NO CLOSER IN THE INTERSECTION BY BISECTING THE INTERSECTION RADII,

9. COORDINATE THE CURB CUT AND THE PEDESTRIAN CROSSWALK LINES SO THE FLOOR OF THE WHEELCHAIR RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES. PLACE DIAGONAL RAMPS WITH FLARED SIDES SO 24" OF FULL HEIGHT CURB FALLS WITHIN THE CROSSWALK MARKINGS ON EACH SIDE OF THE FLARES.

WITH ALLOWANCE OF A 4' CLEAR ZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED. (SEE NOTE 13)

10. CONSTRUCT THE PEDESTRIAN CROSSWALK A MINIMUM OF 6 FEET. A CROSSWALK WIDTH OF 8 FEET OR GREATER IS DESIRABLE.

13. PLACE ALL PAVEMENT MARKINGS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL

11. USE STOP LINES, NORMALLY PERPENDICULAR TO THE LANE LINES, WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT. AN UNUSUAL APPROACH SKEW MAY REQUIRE THE PLACEMENT OF THE STOP LINE TO BE PARALLEL TO THE INTERSECTION ROADWAY.

DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION AND THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD.

2. CROSSWALK WIDTHS AND CONFIGURATION MAY VARY BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS.

6. USE CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.

12. TERMINATE PARKING A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.

G

E D

ND

MS

G

ACCESSIBLE RAMP DETAIL (PART2)

NOTE: DRAWING NOT TO SCALE

SOURCE: NCDOT STANDARD DRAWINGS

SUP SUBMITTAL NTS

421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE #: C-1051

121 S. ESTES DRIVE SUITE 100

INDEPENDENT

**SENIOR** 

HOUSING

**CHAPEL HILL** 

HOMESTEAD RD.

SEAL

036231

PRELIMINARY - DO NOT

USE FOR CONSTRUCTION

NORTH

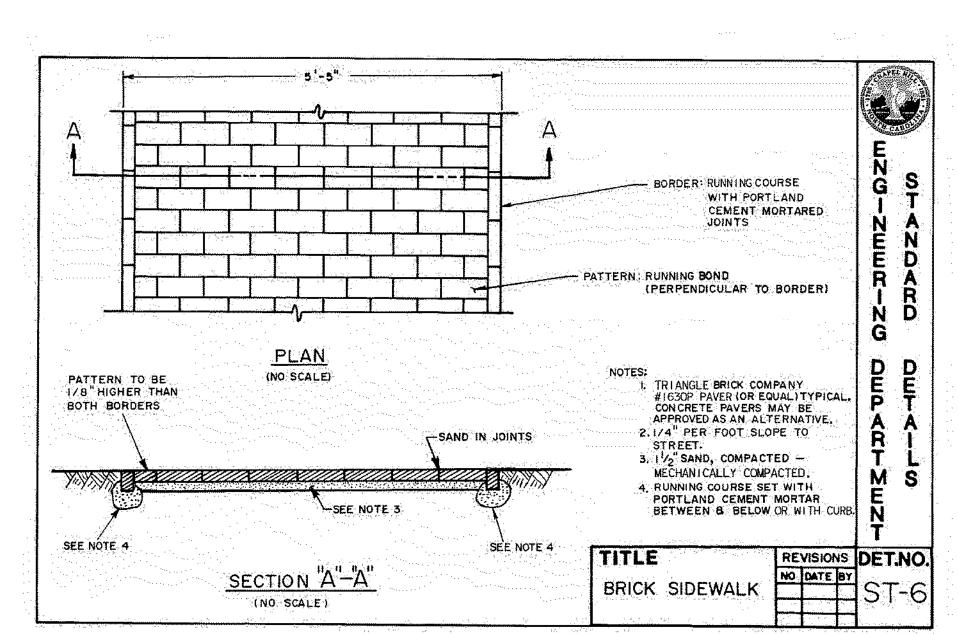
CHAPEL HILL, NC 27514

www.stewartinc.com PROJECT #: C17104

RALEIGH, NC 27601

GLMH-2, LLC

T 919.380.8750



**BRICK SIDEWALK** 

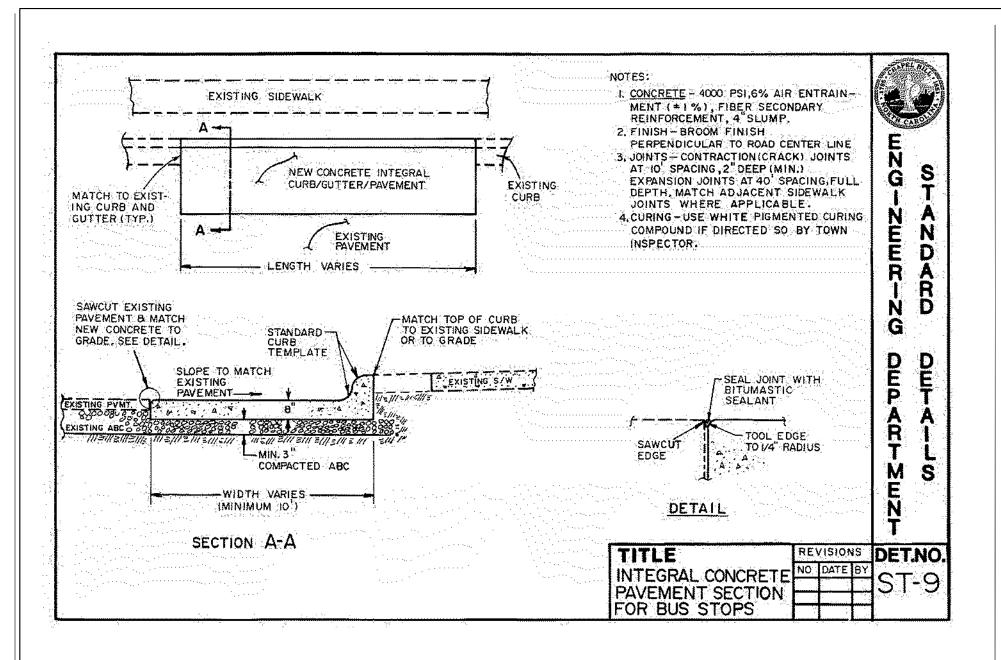
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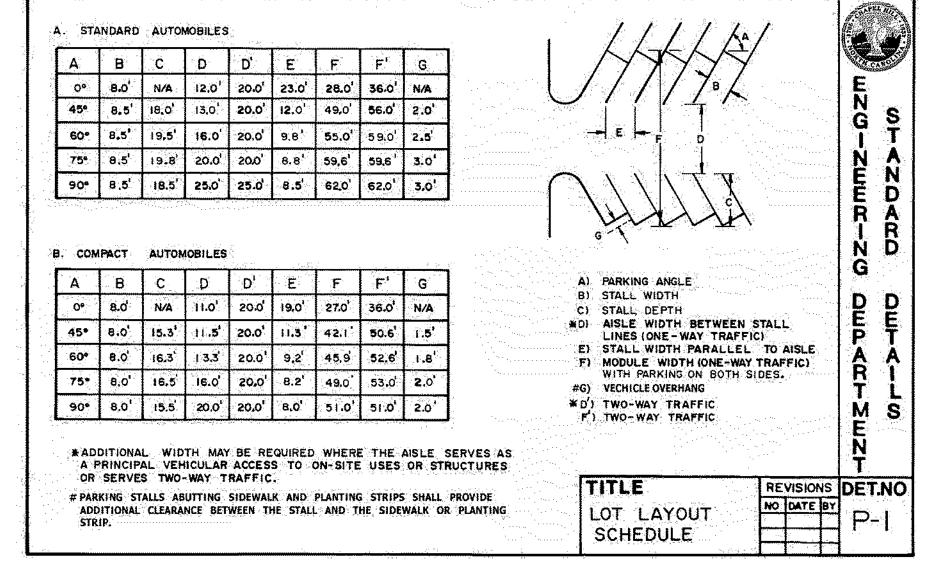
SITE DETAILS

Project number: C17004 Sheet: 09.27.2017 RS Drawn by: ACP Approved by:

DET.NO. TITLE: REVISIONS ACCESSIBLE 09/03 JH ST - 5.4 RAMP SOURCE: NCDOT STANDARD DRAWINGS ACCESSIBLE RAMP DETAIL (PART4)

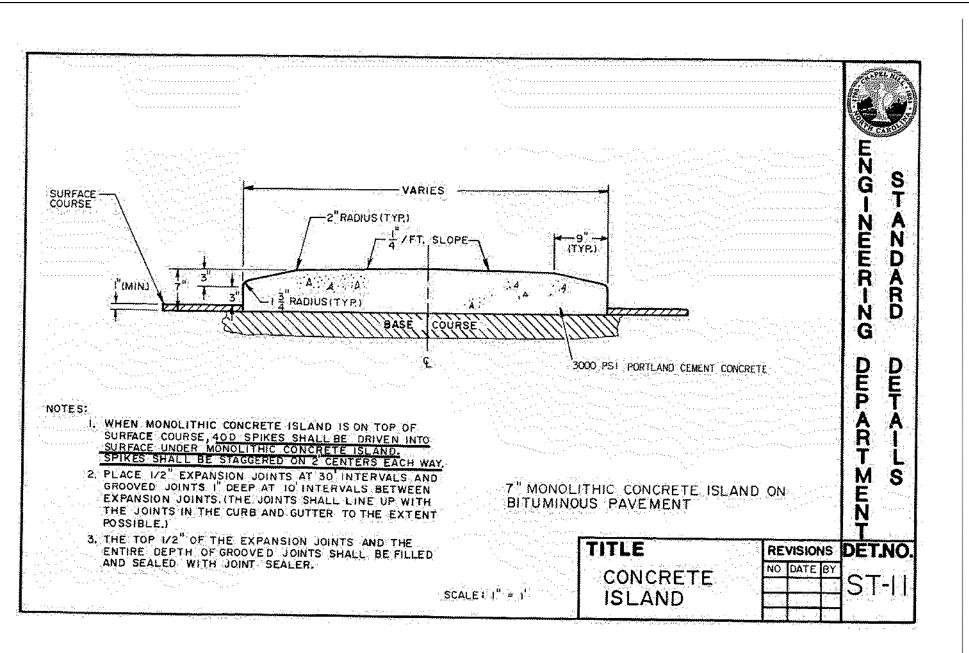






PARKING LOT LAYOUT SCHEDULE

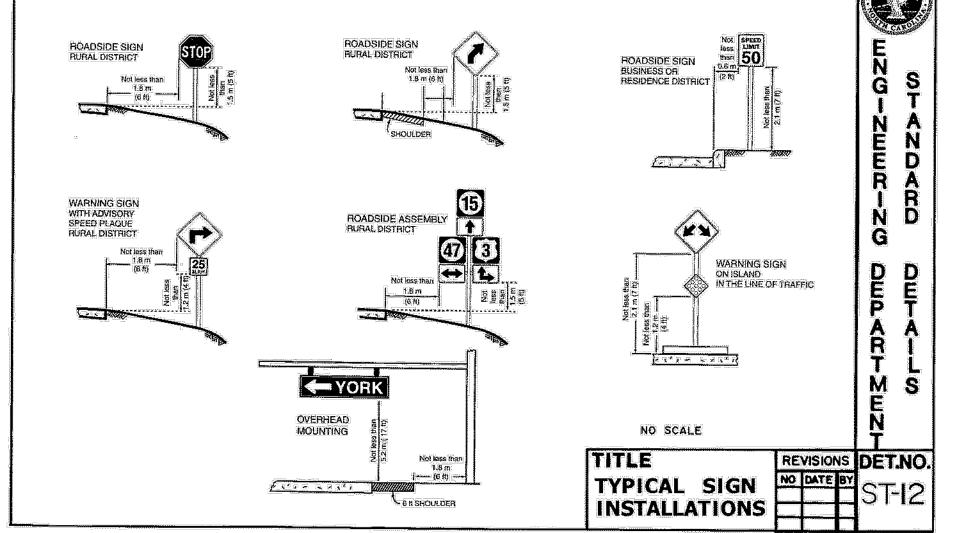
NTS



CONCRETE ISLAND DETAIL

NTS

NTS



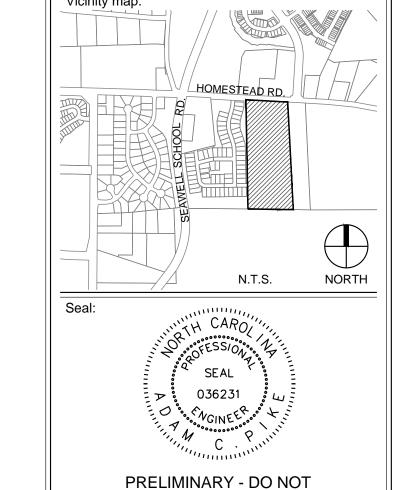
Heights and Lateral Locations of Signs for Typical Installations

TYPICAL SIGN INSTALLATIONS DETAIL

NTS

421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE #: C-1051 RALEIGH, NC 27601 www.stewartinc.com T 919.380.8750 PROJECT #: C17104 GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

> INDEPENDENT SENIOR HOUSING CHAPEL HILL



Issued for: SUP SUBMITTAL

USE FOR CONSTRUCTION

No. Date Description

SCALE: N.T.S.

SITE DETAILS

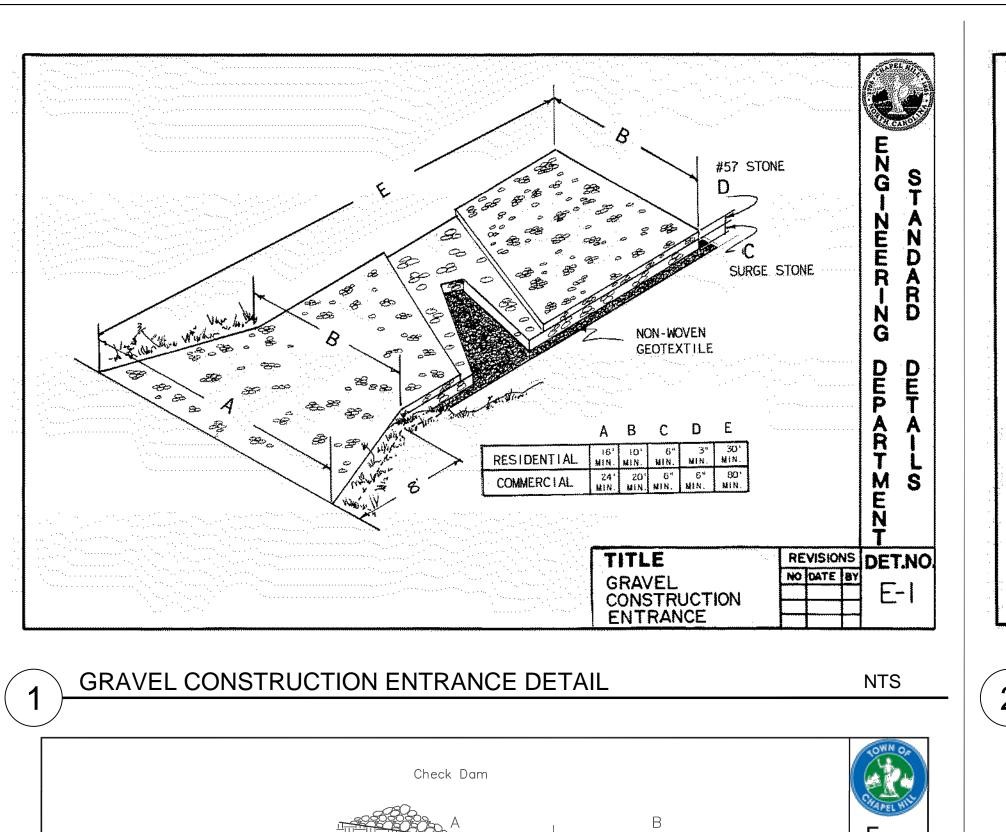
Project number: C17004 Sheet: 09.27.2017 Drawn by:

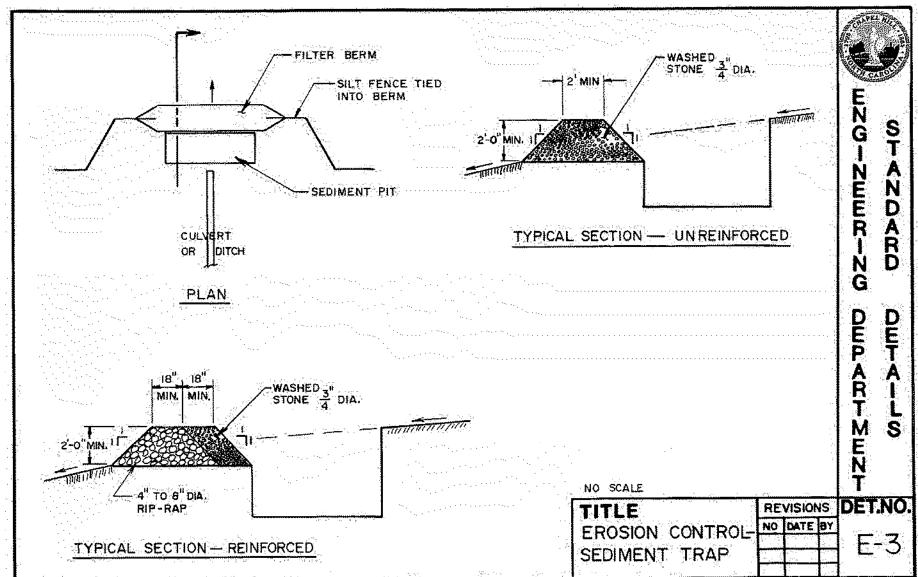
FOR DIMENSIONS SEE DETAIL NO. P-I (LOT LAYOUT SCHEDULE) /- WHEELSTOP NO SCALE TITLE REVISIONS DET.NO. LAYOUT

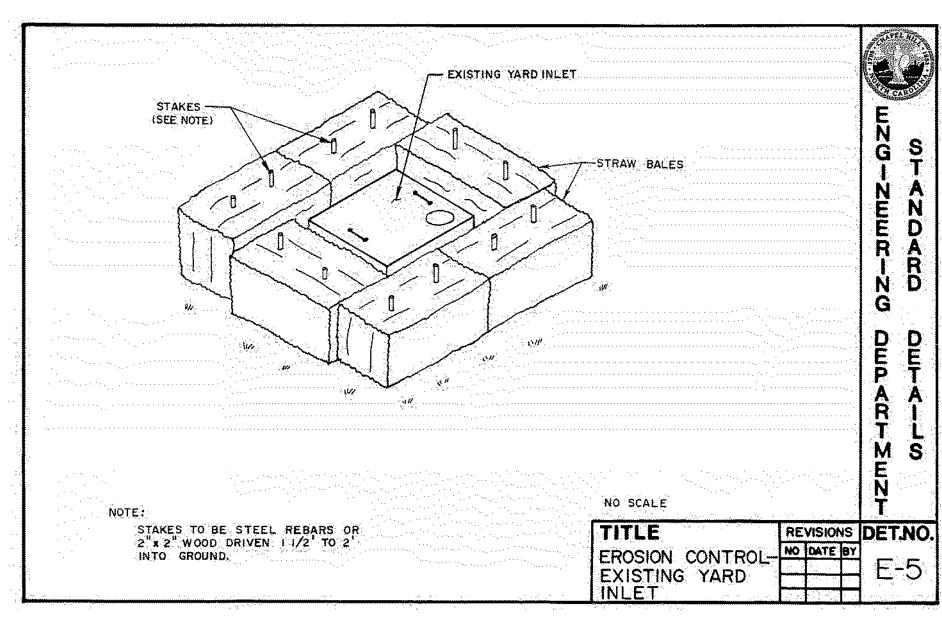
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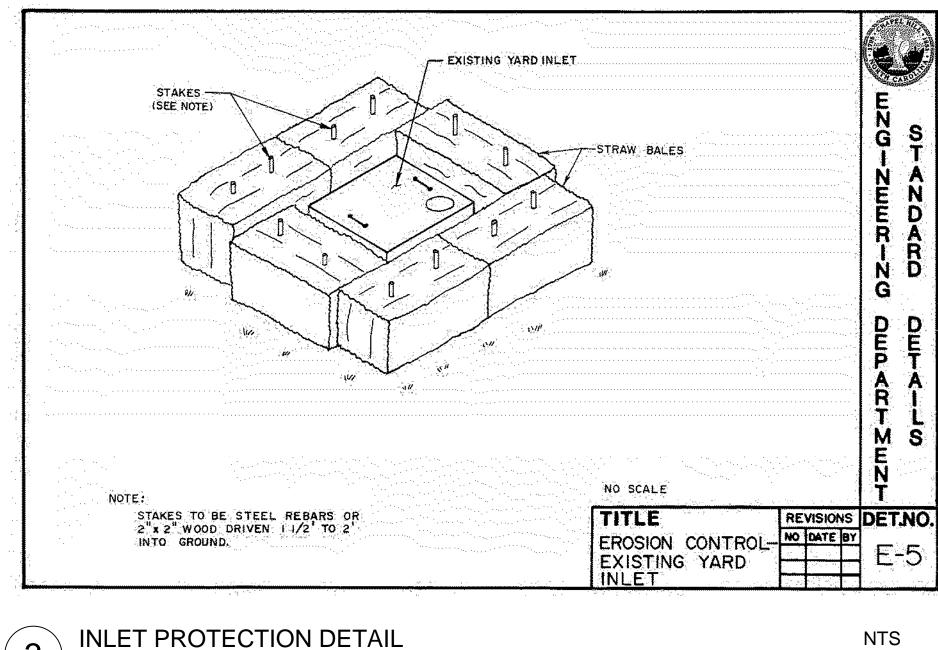
TYPICAL 90° PARKING LOT LAYOUT

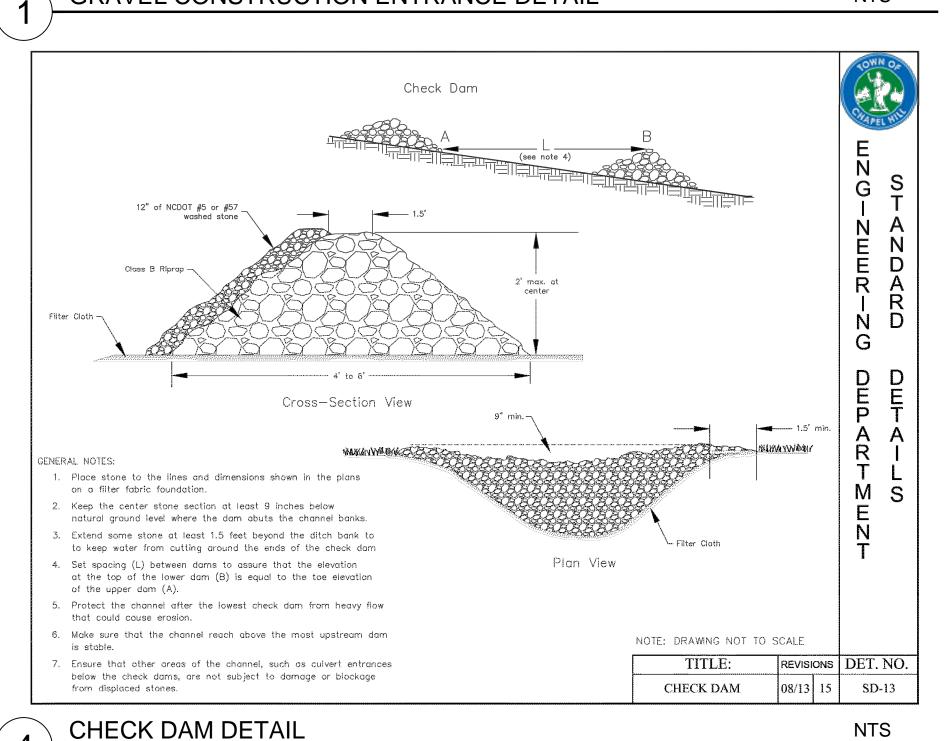
RS C9.01 ACP

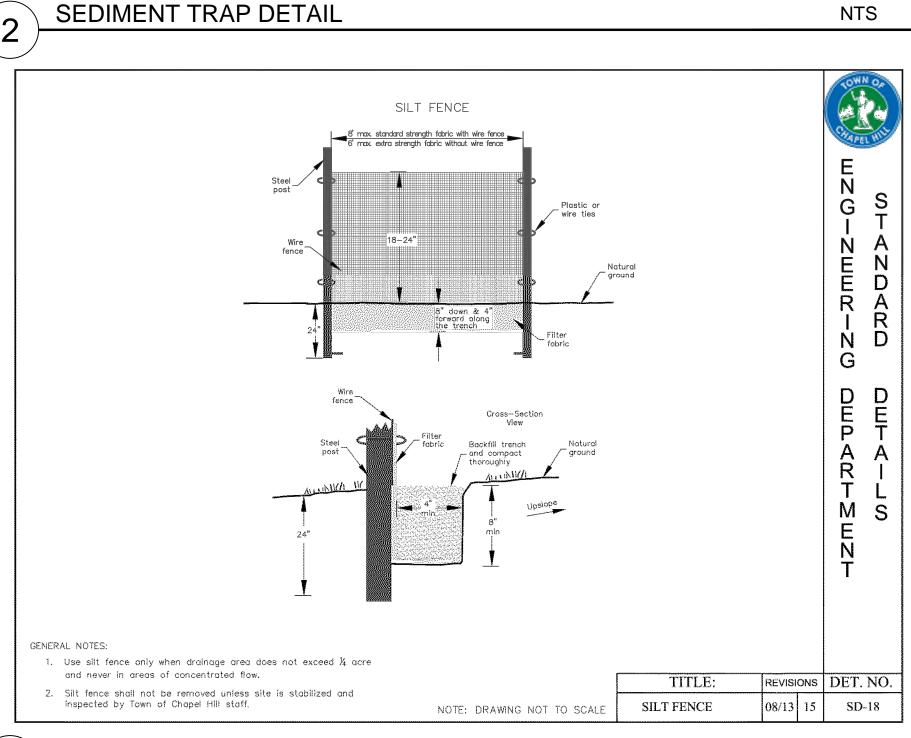


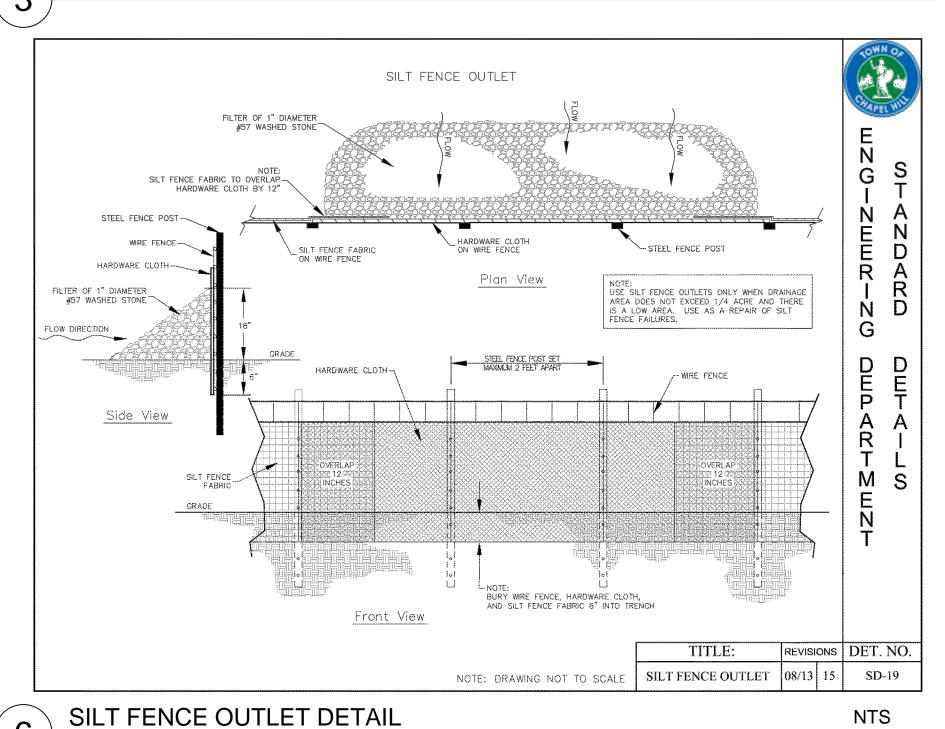


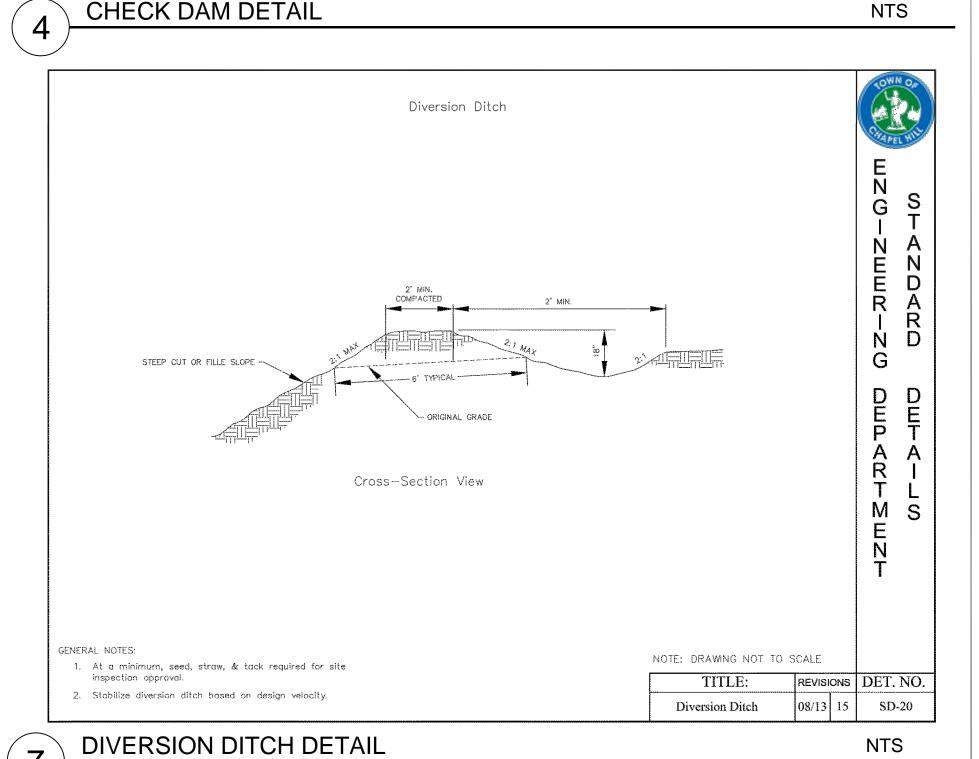


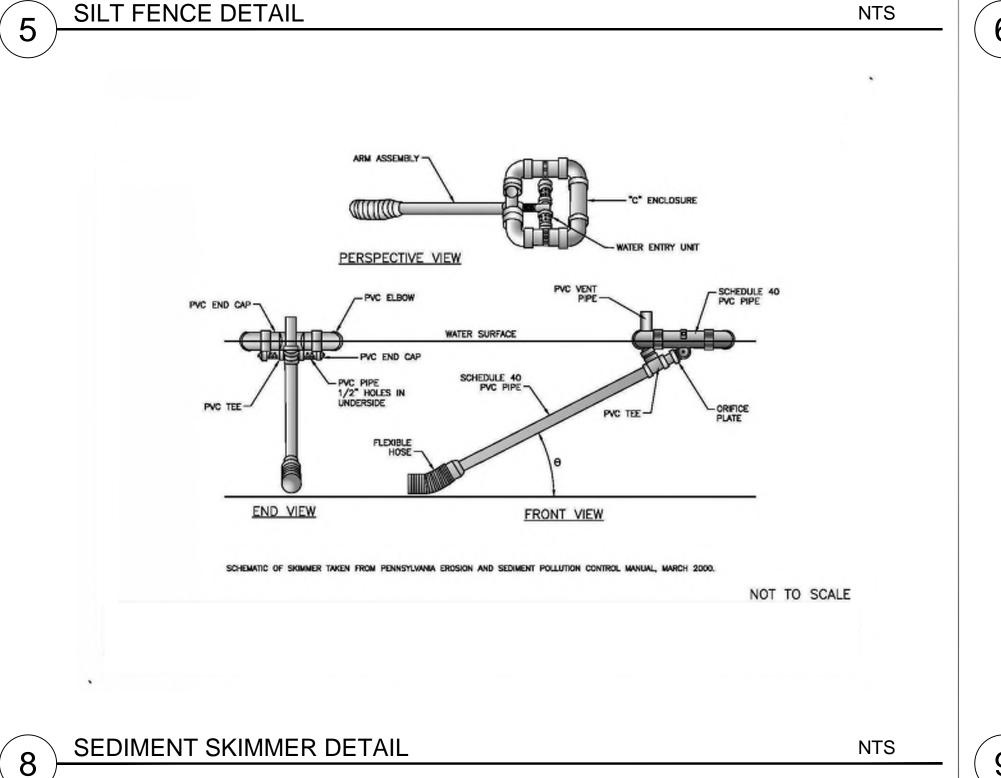


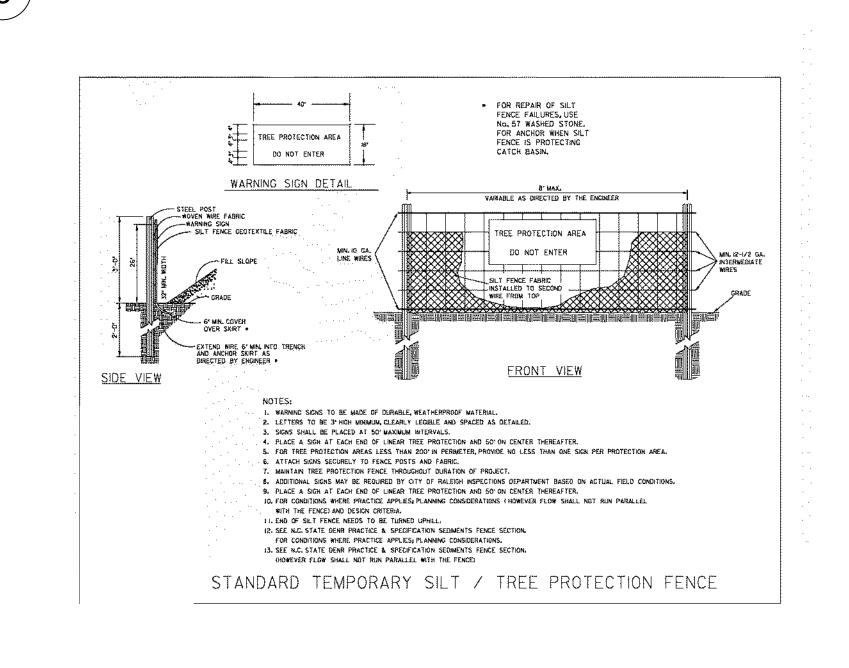












**EROSION CONTROL DETAILS** Project number: C17004 Sheet:

TEMPORARY SILT FENCE/TREE PROTECTION FENCE DETAIL

421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE #: C-1051 RALEIGH, NC 27601 www.stewartinc.com T 919.380.8750 PROJECT #: C17104 GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514 INDEPENDENT NTS **SENIOR** HOUSING **CHAPEL HILL** 

> HOMESTEAD RD. NORTH N.T.S. Seal: PRELIMINARY - DO NOT USE FOR CONSTRUCTION

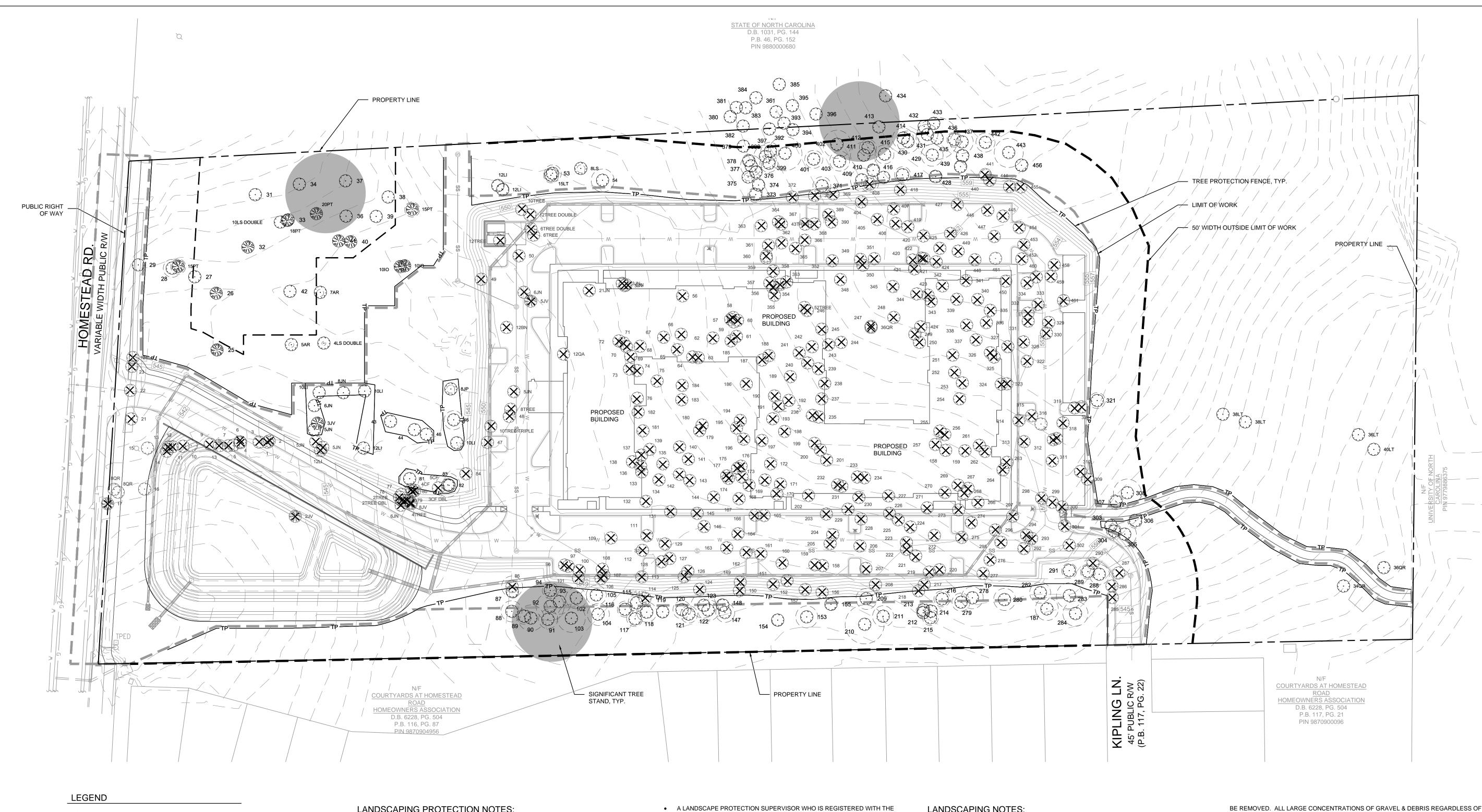
No. Date Description

SUP SUBMITTAL

SCALE: N.T.S.

Issued for:

09.27.2017 Drawn by: RS/DCB ACP Approved by:





RARE AND SPECIMEN TREES CRITICAL ROOT ZONES

— LIMIT OF WORK

50' WIDTH TREE PROTECTION LIMIT

— TP — TREE PROTECTION FENCE





RARE OR SPECIMEN TREE TO BE PROTECTED

\*\*\* NON-RARE OR SPECIMEN TREE

NOTE: SEE SHEET L1.01 FOR TREE

#### LANDSCAPING PROTECTION NOTES

1. PRE-CONSTRUCTION CONFERENCE. PRIOR TO THE COMMENCEMENT OF ANY ACTIVITIES REQUIRING A ZONING COMPLIANCE PERMIT, A PRE-CONSTRUCTION CONFERENCE WITH THE TOWN'S URBAN FORESTER OR LANDSCAPE ARCHITECT SHALL TAKE PLACE TO REVIEW PROCEDURES FOR PROTECTION AND MANAGEMENT OF ALL PROTECTED LANDSCAPE ELEMENTS IDENTIFIED ON THE LANDSCAPE PROTECTION PLAN.

2. ON-SITE SUPERVISION. FOR ALL DEVELOPMENT OTHER THAN THAT RELATED TO SINGLE-FAMILY AND TWO-FAMILY DWELLINGS ON INDIVIDUAL ZONING LOTS, THE FOLLOWING ON-SITE SUPERVISION IS REQUIRED:

 THE APPLICANT SHALL DESIGNATE AS LANDSCAPE PROTECTION SUPERVISORS ONE OR MORE PERSONS WHO HAVE COMPLETED INSTRUCTION IN LANDSCAPE PROTECTION PROCEDURES WITH THE TOWN. IT SHALL BE THE DUTY OF THE LANDSCAPE PROTECTION SUPERVISOR TO ENSURE THE PROTECTION OF NEW OR EXISTING LANDSCAPE ELEMENTS, AS DEFINED IN THE LANDSCAPE PROTECTION PLAN. THE APPROVED LANDSCAPE PROTECTION SUPERVISOR SHALL SUPERVISE ALL SITE WORK TO ASSURE THAT DEVELOPMENT ACTIVITY CONFORMS TO PROVISIONS OF THE APPROVED LANDSCAPE PROTECTION PLAN. AT LEAST ONE (1) IDENTIFIED LANDSCAPE PROTECTION SUPERVISOR SHALL BE PRESENT ON THE DEVELOPMENT SITE AT ALL TIMES WHEN ACTIVITY THAT COULD DAMAGE OR DISTURB SOIL AND ADJACENT LANDSCAPE ELEMENTS OCCURS SUCH AS: CLEARING AND GRUBBING; ANY EXCAVATION, GRADING, TRENCHING OR MOVING OF SOIL; REMOVAL, INSTALLATION, OR MAINTENANCE OF ALL LANDSCAPE ELEMENTS AND LANDSCAPE PROTECTION DEVICES; OR DELIVERY, TRANSPORTING, AND PLACEMENT OF CONSTRUCTION MATERIALS AND EQUIPMENT ON SITE.

3. TOWN STANDARD TREE PROTECTION NOTES: A PRE-CONSTRUCTION CONFERENCE WILL BE HELD WITH THE TOWN'S URBAN FORESTER PRIOR TO BEGINNING SITE WORK. ANY TREE ROOTS EXPOSED BY CONSTRUCTION WILL BE SEVERED CLEANLY

WITH AN APPROPRIATE PRUNING TOOL. THE SOIL WITHIN THE CRITICAL ROOT ZONES OF EXISTING TREES WILL NOT BE DRIVEN ON OR OTHERWISE DISTURBED DURING THE INSTALLATION OF

(ON DEVELOPMENT APPLICATIONS FOR NON-RESIDENTIAL AND MULTI-FAMILY CONSTRUCTION THE FOLLOWING ADDITIONAL NOTE SHOULD ALSO BE INCLUDED ON THE

TOWN OF CHAPEL HILL WILL BE PRESENT ON SITE AT ALL TIMES WHEN THE FOLLOWING ACTIVITIES ARE TAKING PLACE: CLEARING, GRUBBING, EXCAVATION, GRADING, TRENCHING, MOVING OF SOIL, INSTALLATION AND REMOVAL OF TREE PROTECTION FENCING, AND THE DELIVERY TRANSPORTING AND PLACEMENT OF CONSTRUCTION MATERIALS AND EQUIPMENT.

TREE PROTECTION FENCING: TO PROPERLY PROTECT AND ENSURE THE HEALTH OF EXISTING TREES TO REMAIN,

PROTECTIVE FENCING SHOULD BE INSTALLED TO PROTECT NO LESS THAN 75% OF A TREE'S CRITICAL ROOT ZONE. WHEN ERECTING FENCING NEAR TREES THAT ARE NOT INDIVIDUALLY IDENTIFIED ON THE LANDSCAPE PROTECTION PLAN, THE FENCING LOCATION SHOULD BE

SHIFTED, WHERE POSSIBLE, OR A TREE REMOVED IF ITS CRITICAL ROOT ZONE IS NOT ADEQUATELY PROTECTED. ALL LAND DISTURBING ACTIVITY, STORAGE OF EQUIPMENT, BUILDING MATERIAL, SOIL AND OTHER DEBRIS SHOULD BE KEPT WITHIN

THE AREA OF DEVELOPMENT ACTIVITY AND OUTSIDE OF THE PROTECTIVE FENCING. THE TOWN'S STANDARD FOR TREE PROTECTION FENCING IS ORANGE WOVEN PLASTIC OR FABRIC WITH A HEIGHT OF FOUR FEET INSTALLED ON METAL POSTS SET A MAXIMUM OF TEN (10) FEET APART AS SHOWN IN THE FOLLOWING TYPICAL DETAIL.

#### **EXISTING TREE CANOPY CALCULATIONS:**

TOTAL SITE AREA: 15.58 AC. EXISTING CANOPY COVERAGE: 10.49 AC. (67%)

EXISTING CANOPY AREA TO REMAIN: 6.36 AC. EXISTING CANOPY AREA TO BE REMOVED: 4.13 AC.

#### LANDSCAPING NOTES:

VERIFY ALL QUANTITIES AND REPORT ANY DISCREPANCIES OR INACCURACIES IN THE PLANS TO THE OWNER'S REPRESENTATIVE PRIOR TO PLANTING.

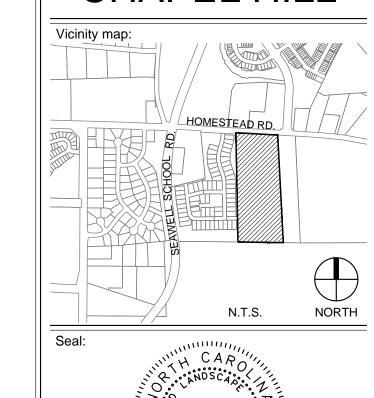
- 2. LANDSCAPE WORK SHALL INCLUDE THE FURNISHING, INSTALLATION, AND WARRANTY OF ALL PLANTING MATERIALS WITHIN THE PROJECT AREA.
- THE LANDSCAPE CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL EXISTING AND NEW UNDERGROUND UTILITIES PRIOR TO EXCAVATION FOR PLANTING. DAMAGES TO UTILITIES CAUSED BY THE LANDSCAPE OPERATION SHALL BE CORRECTED BY THE LANDSCAPE CONTRACTOR AT NO COST TO THE OWNER.
- 4. LANDSCAPING SHALL REMAIN CLEAR FROM ANY FIRE HYDRANTS ON THE SITE.
- ALL TREES TO BE A MINIMUM OF 2" IN CALIPER AND MUST MEET THE AMERICAN STANDARD FOR NURSERY STOCK.
- TREE PROTECTION NOTE: TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE OR ISSUANCE OF A GRADING PERMIT AND SHALL INCLUDE WARNING SIGNS POSTED IN BOTH ENGLISH AND SPANISH, AS FOLLOWS: "NO TRESPASSING/TREE PROTECTION AREA/PROHIBIDO ENTRAR / ZONA PROTECTORA PARA LOS ÁRBOLES."
- PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA.
- ROOT ZONE PROTECTION AREA: VARIES BASED ON LOCAL JURISDICTION HAVING AUTHORITY. CONTRACTOR SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS. NO DISTURBANCE ALLOWED WITHIN THIS AREA. AREA MUST BE PROTECTED WITH BOTH TREE PROTECTION FENCING AND WARNING SIGNS.
- SEED BED PREPARATION: ALL AREAS TO BE SEEDED ARE TO BE RECEIVE A MINIMUM OF 2" OF APPROVED TOPSOIL. ALL DEBRIS, ROCKS, ETC. LARGER THAN .5" ARE TO

SIZE ARE TO BE REMOVED PRIOR TO SEEDING OR PLANTING.

- 10. ALL PLANT BED AREAS ARE TO RECEIVE A MINIMUM OF 6" OF APPROVED TOPSOIL.
- SOIL SHOULD BE TESTED AND AMENDED WITH LIME AND FERTILIZER FOR HARDWOOD TREES ACCORDING TO NCDA PROCEDURES. SCARIFY PLANT PIT WALLS. CONSULT LANDSCAPE ARCHITECT FOR ALTERNATE COMPLIANCE.
- SHREDDED HARDWOOD MULCH 3" DEEP EXCEPT AT CROWN OF PLANT UNLESS OTHERWISE NOTED. FLARE AT CROWN SHOULD BE REVEALED. BACKFILL CONSISTS OF THOROUGHLY BROKEN UP NATIVE SOIL. TOTAL VOLUME OF BACKFILL SHOULD BE AMENDED WITH UP TO ONE THIRD PINE BARK MULCH. PIECES SHOULD BE NO LARGER THAN WHAT PASSES THROUGH A ONE INCH SCREEN. IF ADDITIONAL SOIL IS REQUIRED FOR BACKFILL DUE TO DETRIMENTAL SUBSOIL DRAINAGE CONDITIONS, USE SOIL SIMILAR TO EXISTING NATIVE SOIL. ADDITIONAL SOIL TO BE APPROVED BY LANDSCAPE ARCHITECT. MAXIMUM SAUCER HEIGHT IS 6 INCHES.
- 13. TOP OF ROOTBALL TO BE RAISED 2-3 INCHES ABOVE EXISTING GRADE.
- FOR B&B PLANTS, NATURAL FIBER BURLAP SHOULD BE TURNED DOWN BY 1/3 TOTAL HEIGHT OF ROOT BALL. PLASTIC FIBER BURLAP AND WIRE BASKETS SHOULD BE REMOVED TO 2/3'S OF TOTAL HEIGHT OF ROOT BALL.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING THE TREE UPRIGHT AND PLUMB THROUGHOUT THE WARRANTY PERIOD. IF STABILIZATION IS NECESSARY SEE STAKING IN TREE DETAIL, ORANGE FLAGGING TAPE SHOULD BE ATTACHED TO SUPPORT WIRE. STAKING SHOULD BE REMOVED BY CONTRACTOR AT END OF ONE YEAR WARRANTY PERIOD OR AS DIRECTED BY GROUNDS MANAGEMENT.
- USE STANDARD "GATOR" BAGS FOR WATERING TREES IN AREAS NOT UNDER IRRIGATION. INCORPORATE TERRA-SORB (OR EQUAL) AS PER MANUFACTURERS RECOMMENDATIONS, FOR AREAS NOT UNDER IRRIGATION.
- 17. USE "BIO-BARRIER" OR EQUIVALENT ACCORDING TO MANUFACTURER'S RECOMMENDATION FOR TREES THAT WILL BE PLANTED WITHIN 10' OF PAVEMENT
- 18. LANDSCAPING/C.O. STANDARDS NOTE: ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE.

GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

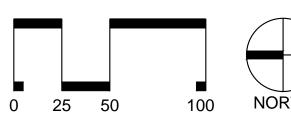
# INDEPENDENT SENIOR HOUSING **CHAPEL HILL**



PRELIMINARY - DO NOT USE FOR CONSTRUCTION

SUP SUBMITTAL

No. Date Description



LANDSCAPE PROTECTION PLAN

Project number: C17004 Sheet:

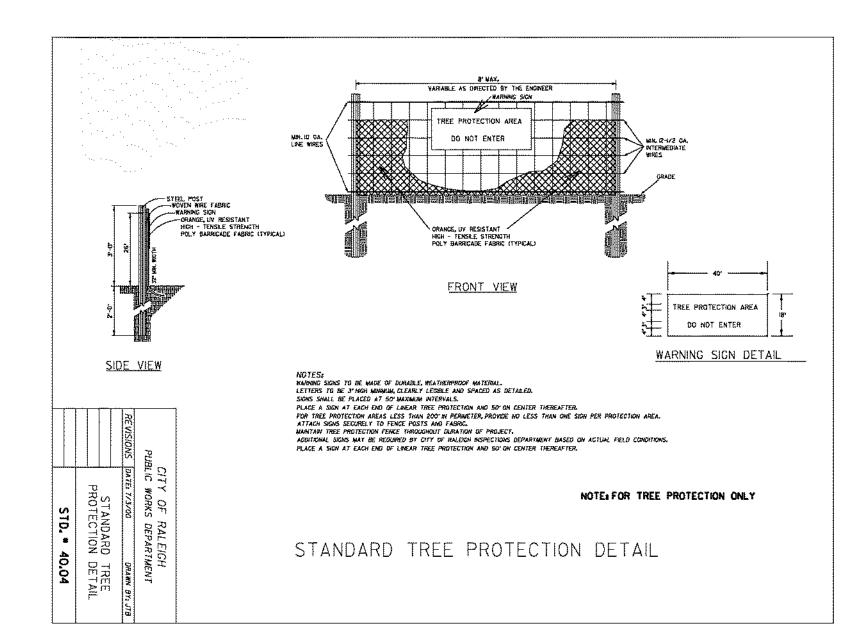
09.27.2017 Drawn by:

1	CODE •	Common Name Sw eetgum	<ul> <li>Scientific Name</li> <li>Liquidambar styraciflua</li> </ul>	ļ	Rare or Spec Specimen	Multistem Numbe
2	JUVI	Eastern Red Cedar	Juniperus virginiana	15	Rare	
<u>3</u>	PRSE LIST	Black Cherry Sw eetgum	Prunus serratina Liquidambar styraciflua	16 16	Specimen Specimen	
5	PITA	Loblolly Pine	Pinus taeda	19	Specimen	
6 7	COFL LIST	Dogw ood Sw eetgum	Cornus florida  Liquidambar styraciflua	9 12	Specimen Specimen	
8	JUVI	Eastern Red Cedar	Juniperus virginiana	13	Rare	
9	LIST	Sw eetgum	Liquidambar styraciflua		Specimen	
10 11	PRSE JUVI	Black Cherry Eastern Red Cedar	Prunus serratina  Juniperus virginiana	9 17	NA Rare	
12	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	
13 14	PITA LITU	Lobiolly Pine Tulip Poplar	Pinus taeda Liriodendron tulipifera	18 15	Specimen Specimen	
15	PYCA	Callery Pear	Pyrus calleryana	17	NA NA	
16	PYCA	Callery Pear	Pyrus calleryana	17	NA .	
17 18	CECA	Eastern Red Cedar Eastern Redbud	Juniperus virginiana Cercis canadensis	13 8	Rare Specimen	
19	ILOP	American Holly	llex opaca	7	Specimen	
20	LITU	Tulip Poplar	Liriodendron tulipifera	15	Specimen	
21 22	COFL	Dogw cod Dogw cod	Cornus florida Cornus florida	6 7	Specimen Specimen	
23	LITU	Tulip Poplar	Liriodendron tulipifera	16	Specimen	
24 25	COFL MAGR	Dogw ood Southern Magnolia	Cornus florida  Magnolia grandiflora	8 11	Specimen NA	
26	MAGR	Southern Magnolia	Magnolia grandiflora	13	Specimen	
27	LIST	Sw eetgum	Liquidambar styraciflua		Specimen	
28 29	PITA LITU	Lobioliy Pine Tulip Poplar	Pinus taeda  Liriodendron tulipifera	18 15	Specimen Specimen	
30	LITU	Tulip Poplar	Liriodendron tulipifera	24	Specimen	
31 32	LITU PITA	Tulip Poplar Loblolly Pine	Liriodendron tulipifera Pinus taeda	22 22	Specimen Specimen	
33	LITU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
34	PITA	Lobiolly Pine	Pnus taeda	24	Specimen	
35 36	LIST PITA	Sweetgum Loblolly Pine	Liquidambar styraciflua Pinus taeda	14 24	Specimen Specimen	
37	PITA	Lobiolly Fine	Pinus taeda	20	Specimen	
38	LIST	Sw eetgum	Liquidambar styraciflua	<del></del>	Specimen Specimen	
39 40	JUVI	Sw eetgum Eastern Red Cedar	Liquidambar styraciflua Juniperus virginiana	17 14	Specimen Rare	
41	JUVI	Eastern Red Cedar	Juniperus virginiana	8	Specimen	
42 43	A CRU BENI	Red Maple River Birch	Acer rubrum  Betula nigra	20 19	Specimen Specimen	
43	CRAT	Haw thorn	Crataegus species	8	Specimen Specimen	
45	LITU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
46 47	BENI	River Birch	Betula nigra  Betula nigra	19 21	Specimen Specimen	
48	COFL	Dogw ood	Cornus florida	9	Specimen	
49 50	Morris PYCA	Mulberry Callery Pear	Morus Sp Pyrus calleryana	20 9	NA Rare	
51	CECA	Eastern Redbud	Cercis canadensis	16	Rare	
52	LITU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
53 54	JUNI	Tulip Poplar Black Walnut	Liriodendron tulipifera Juglans nigra	17 23	Specimen Specimen	
55	LITU	Tulip Poplar	Liriodendron tulipifera	35	Rare	
56	JUNI	Black Walnut	Juglans nigra	12	Specimen	
57 58	ACRU QUAL	Red Maple White Oak	Acer rubrum  Quercus alba	12 22	Specimen Specimen	
59	QUAL	White Oak	Quercus alba	22	Specimen	
60 61	LITU	Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	18 21	Specimen Specimen	
62	CARYA	Tulip Poplar Hickory	Carya species	13	Specimen	
63	CARYA	Hickory	Carya species	17	Specimen	
64 65	ACRU LITU	Red Maple Tulip Poplar	Acer rubrum  Liriodendron tulipifera	16 18	Specimen Specimen	
66	LITU	Tulip Poplar	Liriodendron tulipifera	25	Rare	
67 68	LIST CARYA	Sw eetgum Hickory	Liquidambar styraciflua Carva species	16 17	Specimen Specimen	
69	QUVE	Black Oak	Quercus velutina	42	Rare	
70	ULAL	Winged ⊟m	Ulmus alatus	14	Specimen	
71 72	JUNI CARYA	Black Walnut Hickory	Juglans nigra Carya species	17 13	Specimen Specimen	
73	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
74	LITU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
75 76	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	27 30	Rare Rare	
77	LITU	Tulip Poplar	Liriodendron tulipifera	15	Specimen	
78 79	LITU PRSE	Tulip Poplar Black Cherry	Liriodendron tulipifera Prunus serratina	19 19	Specimen	
80	DIVI	Persimmon	Diosporos virginiana	10	Specimen Specimen	
81	CAIL	Pecan	Carya illinoiensis	19	Specimen	
82 83	LIST	Sw eetgum Sw eetgum	Liquidambar styraciflua Liquidambar styraciflua	<del> </del>	Specimen Rare	
84	CAIL.	Pecan Pecan	Carya illinoiensis	24 12	Specimen	
85	CAIL	Pecan Tulia Pantas	Carya illinoiensis	13	Specimen	
86 87	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	21 12	Specimen Specimen	
88	LIST	Sweetgum	Liquidambar styraciflua	21	Specimen	
89	QUAL	White Oak	Quercus alba	15	Specimen	
90 91	QUAL LIST	White Oak Sw eetgum	Quercus alba Liquidambar styraciflua	26 19	Rare Specimen	
92	LIST	Sw eetgum	Liquidambar styraciflua	28	Rare	
93 94	QUA L LIST	White Oak Swieetgum	Quercus alba Liquidambar styraciflua	25 16	Rare Specimen	
94 95	QUPH	Willow Oak	Quercus phellos	12	Specimen Specimen	
96	LIST	Sw eetgum	Liquidambar styraciflua	<del> </del>	Specimen	
97 98	QUAL PRSE	White Oak Black Cherry	Quercus alba Prunus serratina	16 8	Specimen NA	
99	PRSE	Black Cherry	Prunus serratina	6	NA NA	
100	LIST	Sw eetgum	Liquidambar styraciflua		Rare	
101 102	LIST QUAL	Sw eetgum White Oak	Liquidambar styraciflua Quercus alba	16 21	Specimen Specimen	
103	QUVE	Black Oak	Quercus velutina	28	Rare	
104 105	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	22 20	Specimen Specimen	
106	QUAL	White Oak	Quercus alba	20 15	Specimen Specimen	
107	QUMA	Blackjack Oak	Quercus marilandica	23	Specimen	
108 109	QUA L PITA	White Oak Loblolly Pine	Quercus alba Pinus taeda	17 19	Specimen Specimen	
110	PITA	Lobiolly Pine	Pinus taeda	22	Specimen	
111	QUAL	White Oak	Quercus alba	26	Rare	
112 113	LIST QUAL	Sw eetgum White Oak	Liquidambar styraciflua Quercus alba	17 31	Specimen Rare	
114	LITU	Tulip Poplar	Liriodendron tulipifera	22	Specimen	
115	QUAL	White Oak	Quercus alba	17	Specimen	
116 117	QUAL	White Oak Sw eetgum	Quercus alba Liquidambar styraciflua	16 16	Specimen Specimen	
118	FRAX	Ash	Fraxinus species	20	Specimen	
1 10	CATO	Mockernut Hickory	Carya tomentosa	12	Specimen	
119	A	White Oak	Quercus alba	18	Specimen	ļ
	QUAL QUAL	White Oak	Quercus alba	17	Specimen	
119 120 121 122	QUAL LITU	White Oak Tulip Poplar	Liriodendron tulipifera	21	Specimen	
119 120 121	QUAL	White Oak			f	

126	CODE •	Common Name Sw eetgum	Scientific Name  Liquidambar styraciflua	DB⊢ <b>-</b>	Rare or Spec -	Multistem Number
127	FRAX	Ash	Fraxinus species	15	Specimen	
128 129	NYSY NYSY	Blackgum Blackgum	Nyssa sylvatica Nyssa sylvatica	13 12	Specimen Specimen	
130	LOP	American Holly	llex opaca	6	Specimen	
131 132	NYSY LIST	Blackgum Sw eetgum	Nyssa sylvatica Liquidambar styraciflua	27 15	Rare Specimen	
133 134	LIST LITU	Sw eetgum Tulip Poplar	Liquidambar styraciflua Liriodendron tulipifera	21 19	Specimen Specimen	
135	LMU	Tulip Poplar	Liriodendron tulipifera	39	Rare	
136 137	LIST QUMA	Sw eetgum Blackjack Oak	Liquidambar styraciflua Quercus marilandica	13 13	Specimen Specimen	
138	OXAR	Sourw ood	Oxydendron arboreum	9	Specimen	
139 140	QUAL CATO	White Oak  Mockernut Hickory	Quercus alba Carya tomentosa	12 22	Specimen Specimen	
141 142	NYSY QUVE	Blackgum Black Oak	Nyssa sylvatica Quercus velutina	16 16	Specimen Specimen	
143	QUAL	White Oak	Quercus alba	21	Specimen	
144 145	QUAL LIST	White Oak Sw eetgum	Quercus alba Liquidambar styraciflua	18 15	Specimen Specimen	
146	LIST	Sw eetgum	Liquidambar styraciflua	27	Rare	
147 148	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	19 13	Specimen Specimen	
149 150	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	23 18	Specimen Specimen	
151	LIST	Sw eetgum	Liquidambar styraciflua	18	Specimen	
152 153	CATO FRAX	Mockernut Hickory Ash	Carya tomentosa Fraxinus species	13 22	Specimen Specimen	
154	CATO	Mockernut Hickory	Carya tomentosa	12	Specimen	
155 156	LIST CAGL	Sw eetgum Pignut Hickory	Liquidambar styraciflua Carya glabra	12 16	Specimen Specimen	
157	CAGL	Pignut Hickory	Carya glabra	12	Specimen	
158 159	LIST QUAL	Sw eetgum White Oak	Liquidambar styraciflua Quercus alba	13 14	Specimen Specimen	
160 161	QUVE CATO	Black Oak Mockernut Hickory	Quercus velutina Carya tomentosa	16 16	Specimen Specimen	
162	CAGL	Fignut Hickory	Carya glabra	16	Specimen	
163 164	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	18 20	Specimen Specimen	
165	CATO	Mockernut Hickory	Carya tomentosa	17	Specimen	
166 167	LIST LITU	Sw eetgum Tulip Poplar	Liquidambar styraciflua Liriodendron tulipifera	15 17	Specimen Specimen	
168 169	QUAL LMU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	13 19	Specimen Specimen	
170	QUAL	White Oak	Quercus alba	18	Specimen	
171 172	LITU QUAL	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	15 22	Specimen Specimen	
173	LITU	Tulip Poplar	Liriodendron tulipifera	14	Specimen	
174 175	FRAX LITU	Ash Tulip Poplar	Fraxinus species Liriodendron tulipifera	17 18	Specimen Specimen	
176	QUAL	White Oak	Quercus alba	18	Specimen	
177 178	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	18 17	Specimen Specimen	
179 180	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	15 14	Specimen Specimen	
181	LIST	Sw eetgum	Liquidambar styraciflua	22	Specimen	
182 183	LIST LITU	Sw eetgum Tulip Poplar	Liquidambar styraciflua Liriodendron tulipifera	12 30	Specimen Rare	
184	LITU	Tulip Poplar	Liriodendron tulipifera	23	Specimen	
185 186	LITU QUAL	Tulip Poplar White Oak	Líriodendron tulipifera  Quercus alba	22 19	Specimen Specimen	
187 188	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	23 16	Specimen Specimen	
189	QUAL.	White Oak	Quercus alba	20	Specimen	
190 191	QUMA LITU	Blackjack Oak Tulip Poplar	Quercus marilandica Liriodendron tulipifera	20 18	Specimen Specimen	
192	LITU	Tulip Poplar	Liriodendron tulipifera	17	Specimen	
193 194	QUAL	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	19 14	Specimen Specimen	
195 196	QUAL	White Oak White Oak	Quercus alba Quercus alba	24 14	Rare Specimen	
196	QUAL QUAL	White Oak	Quercus alba	16	Specimen	
198 199	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	22 16	Specimen Specimen	
200	LITU	Tulip Poplar	Liriodendron tulipifera	28	Rare	
201 202	CARYA CATO	Hickory  Mockernut Hickory	Carya species Carya tomentosa	20 18	Specimen Specimen	
203	LITU	Tulip Poplar	Liriodendron tulipifera	37	Rare	
204 205	CARYA QUAL	Hickory White Oak	Carya species Quercus alba	15 21	Specimen Specimen	
206 207	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	27 26	Rare Rare	
208	LITU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
209 210	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	21 39	Specimen Rare	
211	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
212 213	LMU LMU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	13 14	Specimen Specimen	
214 215	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	13 16	Specimen Specimen	
216	QUAL	White Oak	Quercus alba	16	Specimen	
217 218	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	20 21	Specimen Specimen	
219	LITU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
220 221	LMU LMU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	12 22	Specimen Specimen	
222 223	LITU CAGL	Tulip Poplar Pignut Hickory	Lirlodendron tulipifera Carya glabra	27 18	Rare Specimen	
224	CARYA	Hickory	Carya species	13	Specimen	
225 226	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	23 17	Specimen Specimen	
227	QUAL	White Oak	Quercus alba	28	Rare	
228 229	LITU QUAL	Tulip Poplar White Oak	Liriodendron tulipifera Quercus alba	17 15	Specimen Specimen	
230 231	QUAL	White Oak	Quercus alba	22 23	Specimen	
232	LMU QUAL	Tulip Poplar White Oak	Liriodendron tulipifera Quercus alba	17	Specimen Specimen	
233 234	CARYA QUAL	Hickory White Oak	Carya species Quercus alba	12 22	Specimen Specimen	
235	CATO	Mockernut Hickory	Carya tomentosa	17	Specimen	
236 237	QUAL LIST	White Oak Sw eetgum	Quercus alba Liquidambar styraciflua	17 13	Specimen Specimen	
238	LMU	Tulip Poplar	Liriodendron tulipifera	12	Specimen	
239 240	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	20 22	Specimen Specimen	
241	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
242 243	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	15 12	Specimen Specimen	
244 245	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	18 15	Specimen Specimen	
246	LITU	Tulip Poplar	Liriodendron tulipifera	42	Rare	
247	LITU QUAL	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	37 20	Rare Specimen	
248			1		1	

07 of 1         COPE of Control Problem         Policy Registry         COPE         Filter of Security         Application (Problem)           250 October         Control Onto         October         Control Onto         October         October           250 October         Control Onto         October         October         October         October           250 October         Control Onto         October         October         October         October           250 October         Control         October         October         October         October           250 October         Control         October         October         October         October           250 October         October         Oc		····					· F
2001		CATO	Mockernut Hickory	Carya tomentosa	12	<del> </del>	Multistem Number
555         LOTT         Swedyn**         Landbart Verbind**         20         Specimen**           257         CAPT         Michanna Herbor         Dryp Momentals         3         Specimen**           258         CAPT         Michanna Herbor         Specimen**         Specimen**           259         CAPTO         Michanna Herbor         Specimen**         Specimen**           250         CAPTO         Michanna Herbor         Specimen**         Specimen**           250         CAPTO         Michanna Herbor         Specimen**         Specimen**           251         LGT         Swedyn**         Light Systems**         Specimen**           262         LGT         Michanna Herbor         Specimen**         Specimen**           263         LGT         Michanna Herbor         Specimen**         Specimen**           267         LGT         Michanna Herbor         Specimen**         Specimen**           267         LGT         Derbard         Linchwort Herbor         Specimen**           267         LGT         Derbard         Linchwort Herbor         Specimen**           267         LGT         Derbard         Linchwort Herbor         Specimen**           272         Harris<			<del>†                                    </del>	-		<del> </del>	
2670							
2001			<del></del>			<u> </u>	
2001   CATO   Mocentum Network   Campaigness   Cato   Ca			White Oak				
Section	260	CATO	Mockernut Hickory	Carya tomentosa	12	Specimen	
265   CAPU   Michaelman Takinay   Septimen   24   Reserve   25   CAPU   Michaelman Takinay   24   Reserve   25   Reserve   25   Reserve   27   Reserve   27   Reserve   28   Reserve   29   Reserve   2	262	LIST	Sw eetgum	Liquidambar styraciflua	24	Rare	
2006	264		Mockernut Hickory	Carya tomentosa	15	Specimen	
1989   17   17   17   17   17   17   17   1							
272			<u> </u>			ļ	
272			<del>                                     </del>	<del> </del>			
1794	271	LIST	Sw eetgum	Liquidambar styraciflua	15	Specimen	
276         CATO         Securine         Copy omnownes         17         Specimen           276         FFRA         Ash         Inconsistant patient         18         Specimen           277         LITU         Tup Repter         Inconscious busines         22         Specimen           278         LITU         Tup Repter         Location and Section         23         Specimen           279         NIN SY         Standagem         Mysica sylvation         18         Specimen           270         CALL         Mode Cold         Carcina and Section         21         Specimen           280         CALL         Mode Cold         Carcina and Section         25         Specimen           280         CALL         Mode Cold         Carcina and Section         25         Specimen           280         CALL         Mode Cold         Carcina and Section         15         Specimen           280         CALL         Mode Cold         Carcina and Section         15         Specimen           280         CALL         Mode Cold         Carcina and Section         25         Specimen           280         CALL         Mode Cold         Carcina and Section         15         Specimen	273	FRAX	Ash	Fraxinus species	17	Specimen	
1772	275	CATO	Mockernut Hickory	Carya tomentosa	12	Specimen	
2006   CALL   White Case	277	LMŲ	Tulip Poplar	Liriodendron tulipifera	26	Rare	
CALL   Marie Cole			·{·····				
2006   Column   Col						<del></del>	
200	······································					<u> </u>	
2009			<del></del>				
200	286	LIST	Sw eetgum	Liquidambar styraciflua	29	Rare	
201	288	LMU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
2009	290	QUAL	White Oak	Quercus alba	21	Specimen	
2006	292	QUAL			18		
296			- <u>-</u>			<del>}</del>	
287		·····	· · · · · · · · · · · · · · · · · · ·			······	
200	297	LITU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
SOLID   OLUPIA   Northern Feet Cale   Cuercus subra   31   Specimen	299	LMU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
1935   LIST   Severegrom   Capitalism's styructure   19   Specimen	301	QURU	Northern Red Oak	Quercus rubra	31	Rare	
305	303		Sw eetgum	Liquidambar styraciflua	13		
307         OLIVE         Beack Ook         Outcross vehation         15         Specimen           308         LIST         Valip Explair         Linddenfor a styrachtus         28         Rare           309         LIST         Six eegipum         Linddenfor a styrachtus         12         Specimen           311         LITU         Tulip Peptar         Linddenfor a styrachtus         12         Specimen           312         LITU         Tulip Peptar         Linddenform stulipferra         18         Specimen           314         LITU         Tulip Peptar         Linddenform stulipferra         24         Rare           314         LITU         Tulip Peptar         Linddenform stulipferra         22         Specimen           316         LITU         Tulip Peptar         Linddenform stulipferra         22         Specimen           316         NYSY         Shadquam         Nysas sylvatica         11         NA           317         CUAL         White Ook         Quercus aba         15         Specimen           318         LITU         Tulip Peptar         Linddenform stulipferra         21         Specimen           220         ACRU         Mercus valua         24         Bare			· <del>[</del> ···································				
1975   LST   Sweeguam   Liquidantiar styrachtus   12   Specimen			····		·		
310			<del>†</del>	<del></del>			
Secure   Specimen		LITU	Tulip Poplar	Liriodendron tulipifera		Specimen	
314         LIST         Sweetgum         Lipularibus syspecifical         17         Specimen           315         LTU         Tulp Poplar         Lindendron hulpfera         22         Specimen           316         NYSY         Backgum         Nyssa sylvatioa         11         NA           317         QUAL         White Oak         Quercus aba         15         Specimen           319         LTU         Tulp Poplar         Lirodendron hulpfera         21         Specimen           319         QUAL         White Oak         Quercus aba         16         Specimen           320         ACRIL         Robit Gold         Quercus aba         16         Specimen           321         QUAL         White Oak         Quercus aba         19         Specimen           322         QUAL         White Oak         Quercus aba         12         Specimen           323         QUAL         White Oak         Quercus aba         12         Specimen           324         LTU         Tulp Explain         Plus Explain         18         Specimen           325         PTA         Limit Golk         Quercus aba         12         Specimen           327         LT	312	LMU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
316	314	LIST	Sw eetgum	Liquidambar styraciflua	17	Specimen	
319	316	NYSY	Blackgum	Nyssa sylvatica	11	NA NA	
320						····	
322 OLIAL White Oak Quercus aba 323 OLIVE Bisck Clax 324 LITU Tulip Poplar Lindendron highfara 19 Specimen 325 PITA Lobbity Fine Phrus taeda 18 Specimen 326 OLIAL White Oak Quercus aba 12 Specimen 327 LITU Tulip Poplar Lindendron highfara 20 Specimen 328 OLIAL White Oak Quercus aba 12 Specimen 328 OLIAL White Clax Quercus aba 25 Rare 329 LITU Tulip Poplar Lindendron highfara 25 Specimen 330 CARYA Hickory Carya species 14 Specimen 331 LITU Tulip Poplar Lindendron highfara 17 Specimen 332 OLIAL White Oak Quercus aba 17 Specimen 333 OLIAL White Oak Quercus aba 17 Specimen 333 OLIAL White Oak Quercus aba 17 Specimen 333 OLIAL White Oak Quercus aba 14 Specimen 333 OLIAL White Oak Quercus aba 14 Specimen 335 OLIAL White Oak Quercus aba 14 Specimen 336 LIST Sweetgum Liquidambra styraciffua 14 Specimen 337 OLIAL White Oak Quercus aba 14 Specimen 338 LIST Sweetgum Liquidambra styraciffua 14 Specimen 339 OLIAL White Oak Quercus aba 20 Specimen 339 OLIAL White Oak Quercus aba 30 Specimen 339 OLIAL White Oak Quercus aba 30 Specimen 339 OLIAL White Oak Quercus aba 30 Specimen 340 LITU Tulip Poplar Lindendron highfara 15 Specimen 341 OLIAL White Oak Quercus aba 30 Specimen 342 OLIAL White Oak Quercus aba 30 Specimen 343 OLIAL White Oak Quercus aba 30 Specimen 344 OLIAL White Oak Quercus aba 30 Specimen 345 OLIAL White Oak Quercus aba 30 Specimen 346 OLIAL White Oak Quercus aba 31 Specimen 347 OLIAL White Oak Quercus aba 31 Specimen 348 OLIAL White Oak Quercus aba 31 Specimen 349 OLIAL White Oak Quercus aba 31 Specimen 340 OLIAL White Oak Quercus aba 31 Specimen 341 OLIAL White Oak Quercus aba 31 Specimen 342 OLIAL White Oak Quercus aba 31 Specimen 343 OLIAL White Oak Quercus aba 31 Specimen 344 OLIAL White Oak Quercus aba 31 Specimen 345 OLIAL White Oak Quercus aba 31 Specimen 346 OLIAL White Oak Quercus aba 31 Specimen 347 OLIAL White Oak Quercus aba 31 Specimen 348 CATO Mockemut Hickory Carya tomentosa 20 Specimen 349 OLIAL White Oak Quercus aba 31 Specimen 340 OLIAL White Oak Quercus aba 31 Specimen 340 OLIAL White Oak Qu		<del></del>				ļ	
225					,		
325			· <del> </del>	<del> </del>			
227	<del></del>	PITA	<del></del>			Specimen	
170	327	LITU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
331	329	LITU	Tulip Poplar	Liriodendron tulipifera	25	Specimen	
333 QUAL White Oak Quercus alba 14 Specimen 335 QUAL White Oak Quercus alba 14 Specimen 336 QUAL White Oak Quercus alba 14 Specimen 337 QUAL White Oak Quercus alba 20 Specimen 338 LIST Sweetgum Liquidambar styracifflua 14 Specimen 338 LIST Sweetgum Liquidambar styracifflua 14 Specimen 339 QUAL White Oak Quercus alba 18 Specimen 340 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 341 QUAL White Oak Quercus alba 19 Specimen 342 QUVE Black Oak Quercus alba 19 Specimen 343 QUAL White Oak Quercus alba 19 Specimen 344 QUAL White Oak Quercus alba 18 Specimen 345 QUAL White Oak Quercus alba 18 Specimen 346 QUAL White Oak Quercus alba 19 Specimen 347 QUAL White Oak Quercus alba 22 Specimen 348 QUAL White Oak Quercus alba 18 Specimen 349 QUAL White Oak Quercus alba 18 Specimen 340 QUAL White Oak Quercus alba 18 Specimen 341 QUAL White Oak Quercus alba 18 Specimen 342 QUAL White Oak Quercus alba 18 Specimen 343 QUAL White Oak Quercus alba 19 Specimen 344 QUAL White Oak Quercus alba 19 Specimen 345 QUAL White Oak Quercus alba 19 Specimen 346 QUAL White Oak Quercus alba 19 Specimen 347 QUAL White Oak Quercus alba 19 Specimen 348 CATO Mockemut Hickory Carys tomentosa 20 Specimen 349 QUAL White Oak Quercus alba 13 Specimen 350 QUAL White Oak Quercus alba 13 Specimen 351 LITU Tulip Poplar Liriodendron tulipifera 27 Rare 352 QURU Northern Red Qak Quercus alba 13 Specimen 353 QUAL White Oak Quercus alba 19 Specimen 354 LITU Tulip Poplar Liriodendron tulipifera 16 Specimen 355 LITU Tulip Poplar Liriodendron tulipifera 17 Specimen 356 QXAR Sourwood Qxystendron arboreum 9 Specimen 357 LITU Tulip Poplar Liriodendron tulipifera 14 Specimen 358 QXAR Sourwood Qxystendron tulipifera 14 Specimen 359 QXAR Sourwood Qxystendron tulipifera 15 Specimen 360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 361 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 362 QYAL White Oak Quercus alba 15 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 365 QXAR Sour	331	LΠU	Tulip Poplar	Liriodendron tulipifera	17	Specimen	
335 QUAL White Oak Quercus alba 14 Specimen 337 QUAL White Oak Quercus alba 20 Specimen 338 LIST Sweetgum Liquidambar styraciflua 14 Specimen 338 LIST Sweetgum Liquidambar styraciflua 14 Specimen 338 LIST Sweetgum Liquidambar styraciflua 14 Specimen 339 QUAL White Oak Quercus alba 18 Specimen 340 LITU Tulip Poplar Liriodendron tulipfera 15 Specimen 341 QUAL White Oak Quercus alba 19 Specimen 341 QUAL White Oak Quercus alba 19 Specimen 342 QUVE Black Oak Quercus alba 19 Specimen 343 QUAL White Oak Quercus alba 18 Specimen 344 QUAL White Oak Quercus alba 18 Specimen 345 QUAL White Oak Quercus alba 18 Specimen 346 QUAL White Oak Quercus alba 12 Specimen 347 QUAL White Oak Quercus alba 12 Specimen 348 QUAL White Oak Quercus alba 15 Specimen 349 QUAL White Oak Quercus alba 15 Specimen 349 QUAL White Oak Quercus alba 15 Specimen 350 QUAL White Oak Quercus alba 15 Specimen 351 LITU Tulip Poplar Liriodendron tulipfera 27 Rare 352 QURU Northern Red Oak Quercus alba 20 Specimen 353 QUAL White Oak Quercus alba 12 Specimen 355 LITU Tulip Poplar Liriodendron tulipfera 17 Specimen 355 LITU Tulip Poplar Liriodendron tulipfera 17 Specimen 356 OXAR Sourv ood Oxydendron arboreum 9 Specimen 357 LITU Tulip Poplar Liriodendron tulipfera 14 Specimen 356 CATO Mockernut Hickory Carya tomentosa 16 Specimen 356 CATO Mockernut Hickory Carya tomentosa 16 Specimen 357 LITU Tulip Poplar Liriodendron tulipfera 17 Specimen 356 CATO Mockernut Hickory Carya species 11 NA 360 LITU Tulip Poplar Liriodendron tulipfera 19 Specimen 361 CARYA Hickory Carya species 13 Specimen 362 QUAL White Oak Quercus alba 15 Specimen 365 LITU Tulip Poplar Liriodendron tulipfera 19 Specimen 366 LITU Tulip Poplar Liriodendron tulipfera 19 Specimen 367 LITU Tulip Poplar Liriodendron tulipfera 19 Specimen 368 LITU Tulip Poplar Liriodendron tulipfera 19 Specimen 368 LITU Tulip Poplar Liriodendron tulipfera 19 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 368 LITU Tulip Poplar Liriodendron tulipfera 15 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 360 LITU	333	QUAL	White Oak	Quercus alba	22	Specimen	
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346 QUAL White Oak Quercus alba 12 Specimen  347 QUAL White Oak Quercus alba 15 Specimen  348 CATO Mockernut Hickory Carya tomentosa 20 Specimen  349 QUAL White Oak Quercus alba 13 Specimen  350 QUAL White Oak Quercus alba 20 Specimen  351 LITU Tulip Poplar Liriodendron tulipifera 27 Rare  352 QURU Northern Red Oak Quercus alba 12 Specimen  353 QUAL White Oak Quercus alba 12 Specimen  353 QUAL White Oak Quercus alba 12 Specimen  354 LITU Tulip Poplar Liriodendron tulipifera 16 Specimen  355 LITU Tulip Poplar Liriodendron tulipifera 17 Specimen  356 OXAR Sourw ood Oxydendron arboreum 9 Specimen  357 LITU Tulip Poplar Liriodendron tulipifera 14 Specimen  358 CATO Mockernut Hickory Carya tomentosa 16 Specimen  359 CARYA Hickory Carya species 11 NA  360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  361 CARYA Hickory Carya species 11 NA  362 QUAL White Oak Quercus alba 15 Specimen  363 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  364 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  365 CARYA Hickory Carya species 13 Specimen  366 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  367 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  368 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen  369 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  360 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen  361 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  362 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  363 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen  364 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen  365 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen  366 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen  367 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen  368 LITU Tulip Poplar Liriodendron tulipifera 49 Specimen  370 QUAL White Oak Quercus alba 15 Specimen  371 QUAL White Oak Quercus alba 15 Specimen  372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen  373 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen	344	QUAL	White Oak	Quercus alba	22	Specimen	
348 CATO Mockernut Hickory Carya tomentosa 20 Specimen 349 QUAL White Oak Quercus alba 13 Specimen 350 QUAL White Oak Quercus alba 20 Specimen 351 LITU Tulip Poplar Liriodendron tulipifera 27 Rare 352 QUAL White Oak Quercus rubra 23 Specimen 353 QUAL White Oak Quercus alba 12 Specimen 354 LITU Tulip Poplar Liriodendron tulipifera 16 Specimen 355 LITU Tulip Poplar Liriodendron tulipifera 17 Specimen 356 CARYA Bickory Carya tomentosa 16 Specimen 357 LITU Tulip Poplar Liriodendron tulipifera 14 Specimen 358 CATO Mockernut Hickory Carya tomentosa 16 Specimen 359 CARYA Hickory Carya species 11 NA 360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 361 CARYA Hickory Carya species 11 NA 362 QUAL White Oak Quercus alba 15 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 366 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 366 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 370 QUAL White Oak Quercus alba 36 Specimen 371 QUAL White Oak Quercus alba 372 LITU Tulip Poplar Liriodendron tulipifera 373 Specimen 374 LITU Tulip Poplar Liriodendron tulipifera 375 Specimen 375 LITU Tulip Poplar Liriodendron tulipifera 375 Specimen 377 LITU Tulip Poplar Liriodendron tulipifera 378 Specimen 379 QUAL White Oak Quercus alba 370 Specimen 379 LITU Tulip Poplar Liriodendron tulipifera 379 Spe	346	QUAL	White Oak	Quercus alba	12	Specimen	
350 QUAL White Oak Quercus aiba 20 Specimen 351 LITU Tulip Poplar Liriodendron tulipifera 27 Rare 352 QURU Northern Red Oak Quercus rubra 23 Specimen 353 QUAL White Oak Quercus aiba 12 Specimen 354 LITU Tulip Poplar Liriodendron tulipifera 16 Specimen 355 LITU Tulip Poplar Liriodendron tulipifera 17 Specimen 356 OXAR Sourw ood Oxydendron arboreum 9 Specimen 357 LITU Tulip Poplar Liriodendron tulipifera 14 Specimen 358 CATO Mockernut Hickory Carya tomentosa 16 Specimen 359 CARYA Hickory Carya species 11 NA 360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 361 CARYA Hickory Carya species 13 Specimen 362 QUAL White Oak Quercus aiba 15 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 366 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 369 QUAL White Oak Quercus aiba 15 Specimen 360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 361 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen 362 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 365 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 366 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 369 QUAL White Oak Quercus aiba 15 Specimen 370 QUAL White Oak Quercus aiba 18 Specimen 371 QUAL White Oak Quercus aiba 18 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen	348	CATO	Mockernut Hickory	Carya tomentosa	20	Specimen	
352 QURU Northern Red Oak Quercus rubra 23 Specimen 353 QUAL White Oak Quercus alba 12 Specimen 354 LITU Tulip Poplar Liriodendron tulipifera 16 Specimen 355 LITU Tulip Poplar Liriodendron tulipifera 17 Specimen 356 OXAR Sourwood Oxydendron arboreum 9 Specimen 357 LITU Tulip Poplar Liriodendron tulipifera 14 Specimen 358 CATO Mockernut Hickory Carya tomentosa 16 Specimen 359 CARYA Hickory Carya species 11 NA 360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 361 CARYA Hickory Carya species 13 Specimen 362 QUAL White Oak Quercus alba 15 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 366 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 369 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 369 QUAL White Oak Quercus alba 16 Specimen 370 QUAL White Oak Quercus alba 16 Specimen 371 QUAL White Oak Quercus alba 20 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 35 Specimen 374 CAGL Pgnut Hickory Carya glabra 12 Specimen	350	QUAL			20		
Specimen			······································				
355 LITU Tulip Poplar Liriodendron tulipifera 17 Specimen 356 OXAR Sourw ood Oxydendron arboreum 9 Specimen 357 LITU Tulip Poplar Liriodendron tulipifera 14 Specimen 358 CATO Mockernut Hickory Carya tomentosa 16 Specimen 359 CARYA Hickory Carya species 11 NA 360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 361 CARYA Hickory Carya species 13 Specimen 362 QUAL White Oak Quercus alba 15 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen 366 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 370 QUAL White Oak Quercus alba 15 Specimen 371 QUAL White Oak Quercus alba 18 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 374 CAGL Pignut Hickory Carya glabra 12 Specimen			<del>[</del>				
357 LITU Tulip Poplar Liriodendron tulipifera 14 Specimen 358 CATO Mockernut Hickory Carya tomentosa 16 Specimen 359 CARYA Hickory Carya species 11 NA 360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 361 CARYA Hickory Carya species 13 Specimen 362 QUAL White Oak Quercus alba 15 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen 366 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 370 QUAL White Oak Quercus alba 20 Specimen 371 QUAL White Oak Quercus alba 20 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 25 Specimen 374 CAGL Pignut Hickory Carya glabra 15 Specimen		LITU	Tulip Poplar	Liriodendron tulipifera		Specimen	
359 CARYA Hickory Carya species 11 NA 360 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 361 CARYA Hickory Carya species 13 Specimen 362 QUAL White Oak Quercus alba 15 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen 366 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 370 QUAL White Oak Quercus alba 20 Specimen 371 QUAL White Oak Quercus alba 18 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 374 CAGL Pignut Hickory Carya glabra 12 Specimen	357	LITU	Tulip Poplar	Liriodendron tulipifera	14	Specimen	
361 CARYA Hickory Carya species 13 Specimen 362 QUAL White Oak Quercus alba 15 Specimen 363 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 364 LITU Tulip Poplar Liriodendron tulipifera 35 Rare 365 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen 366 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 370 QUAL White Oak Quercus alba 20 Specimen 371 QUAL White Oak Quercus alba 18 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 374 CAGL Pignut Hickory Carya glabra 12 Specimen	359	CARYA	Hickory	Carya species	11	NA NA	
363	361	CARYA	Hickory	Carya species	13	Specimen	
365 LITU Tulip Poplar Liriodendron tulipifera 20 Specimen 366 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 367 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 370 QUAL White Oak Quercus alba 20 Specimen 371 QUAL White Oak Quercus alba 18 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 374 CAGL Pignut Hickory Carya glabra 12 Specimen	363	LMU	Tulip Poplar	Liriodendron tulipifera	13	Specimen	
367 LITU Tulip Poplar Liriodendron tulipifera 13 Specimen 368 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 370 QUAL White Oak Quercus alba 20 Specimen 371 QUAL White Oak Quercus alba 18 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 374 CAGL Pignut Hickory Carya glabra 12 Specimen	<u> </u>		<del>                                  </del>	+			
368 LITU Tulip Poplar Liriodendron tulipifera 19 Specimen 369 QUAL White Oak Quercus alba 15 Specimen 370 QUAL White Oak Quercus alba 20 Specimen 371 QUAL White Oak Quercus alba 18 Specimen 372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 374 CAGL Pignut Hickory Carya glabra 12 Specimen		LITU	+	Liriodendron tulipifera	15	····	
370     QUAL     White Oak     Quercus alba     20     Specimen       371     QUAL     White Oak     Quercus alba     18     Specimen       372     LITU     Tulip Poplar     Liriodendron tulipifera     23     Specimen       373     LITU     Tulip Poplar     Liriodendron tulipifera     15     Specimen       374     CAGL     Pignut Hickory     Carya glabra     12     Specimen	368	LITU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
372 LITU Tulip Poplar Liriodendron tulipifera 23 Specimen 373 LITU Tulip Poplar Liriodendron tulipifera 15 Specimen 374 CAGL Pignut Hickory Carya glabra 12 Specimen	370	QUAL	White Oak	Quercus alba	20	Specimen	
374 CAGL Pignut Hickory Carya glabra 12 Specimen	372	LITU	Tulip Poplar	Liriodendron tulipifera	23	Specimen	
375   SAAL   Sassafrass   Sassafras albidum   8   Specimen	374	CAGL	Fignut Hickory	Carya glabra	12	Specimen	
	375	SAAL	Sassafrass	Sassafras albidum	8	Specimen	<u> </u>

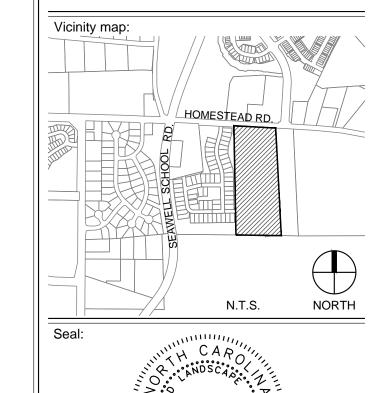
	CODE 🗸	Common Name	Scientific Name	DBF 🕶	Rare or Spec 🗸	Multistem Nu
376	QUAL	White Oak	Quercus alba	12	Specimen	
377	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
378	SAAL	Sassafrass	Sassafras albidum	11	Specimen	
379	QUMA	Blackjack Oak	Quercus marilandica	16	Specimen	
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380	QUAL	White Oak	Quercus alba	16	Specimen	
381	SAAL	Sassafrass	Sassafras albidum	11	Specimen	
382	QUAL	White Oak	Quercus alba	43	Rare	
383	LITU	Tulip Poplar	Liriodendron tulipifera	15	Specimen	
384	LITU	Tulip Poplar	Liriodendron tulipifera	13	Specimen	
385	LITU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
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386	LITU	Tulip Poplar	Liriodendron tulipifera	23	Specimen	
387	QUVE	Black Oak	Quercus velutina	20	Specimen	
388	QURU	Northern Red Oak	Quercus rubra	28	Rare	
389	LMU	Tulip Poplar	Liriodendron tulipifera	25	Rare	
390	LITU	Tulip Poplar	Liriodendron tulipifera	13	Specimen	
391	CATO	Mockernut Hickory	Carya tomentosa	14	Specimen	
392	LITU	Tulio Poplar	Liriodendron tulipifera	29	Rare	
393		<del>- [</del>		16		
$\vdash$	LITU	Tulip Poplar	Liriodendron tulipifera		Specimen	<u> </u>
394	LIST	Sw eetgum	Liquidambar styraciflua	13	Specimen	
395	LIST	Sw eetgum	Liquidambar styraciflua	15	Specimen	
396	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
397	LITU	Tulip Poplar	Liriodendron tulipifera	18	Specimen	
398	LITU	Tulip Poplar	Liriodendron tulipifera	23	Specimen	[
		<del></del>			ļ	
399	LITU	Tulip Poplar	Liriodendron tulipifera	18	Specimen	
400	LITU	Tulip Poplar	Liriodendron tulipifera	34	Rare	
401	LΠU	Tulip Poplar	Liriodendron tulipifera	18	Specimen	
402	LITU	Tulip Poplar	Liriodendron tulipifera	28	Rare	
403	LITU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
404	LITU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
405		White Oak	Quercus alba	19	Specimen	
	QUAL				<del> </del>	
406	QUAL	White Oak	Quercus alba	12	Specimen	
407	QUAL	White Oak	Quercus alba	13	Specimen	
408	LMU	Tulip Poplar	Liriodendron tulipifera	17	Specimen	
409	LITU	Tulip Poplar	Liriodendron tulipifera	23	Specimen	
410	QUAL	White Oak	Quercus alba	13	Specimen	
411	LITU	Tulip Poplar	Liriodendron tulipifera	26	Rare	
ļ					<del></del>	
412	LITU	Tulip Poplar	Liriodendron tulipifera	17	Specimen	
413	LIST	Sw eetgum	Liquidambar styraciflua	16	Specimen	
414	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
415	LITU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
416	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	
417	LΠŲ	Tulip Poplar	Liriodendron tulipifera	16	Specimen	
418	LΠU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
419	QUAL	White Oak	Quercus alba	28	Rare	
420	LITU	Tulip Poplar	Liriodendron tulipifera	16	Specimen	
421	QUAL	White Oak	Quercus alba	14	Specimen	
422	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	10 (6,4)
423	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	12 (4,8)
424	QUAL	White Oak	Quercus alba	19	Specimen	12 (6.6)
425	QUAL	White Oak	Quercus alba	14	Specimen	12 (8.4)
426	QUAL	White Oak	Quercus alba	24	Rare	
		<del></del>	<del></del>	*******	<del></del>	13 (4,4,5
427	QUAL	White Oak	Quercus alba	25	Rare	15 (10,5
428	OXAR	Sourw ood	Oxydendron arboreum	13	Specimen	17 (13,4
429	QUAL	White Oak	Quercus alba	22	Specimen	18 (12,6
430	LITU	Tulip Poplar	Liriodendron tulipifera	22	Specimen	19 (11,8
431	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	20 (9,11
432	LITU	Tulip Poplar	Liriodendron tulipifera	25	Rare	21 (10,10
433		Black Oak	Quercus velutina	22	<del></del>	
<del></del>	QUVE				Specimen	22 (12,10
434	QUAL	White Oak	Quercus alba	26	Rare	22 (12,10
435	LITU	Tulip Poplar	Liriodendron tulipifera	42	Rare	22 (16,6
436	CAGL	Pignut Hickory	Carya glabra	15	Specimen	22 (9,13
437	QURU	Northern Red Oak	Quercus rubra	23	Specimen	23 (9,14
438	LIST	Sw eetgum	Liquidambar styraciflua	13	Specimen	24 (12,12
439	LITU	Tulip Poplar	Liriodendron tulipifera	12	Specimen	24 (12,12
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440	PITA	Lobiolly Pine	Anus taeda	15	NA NA	25 (12,13
441	OXAR	Sourw ood	Oxydendron arboreum	10	Specimen	26 (13,13
442	CATO	Mockernut Hickory	Carya tomentosa	19	Specimen	26 (20,6
	QUAL	White Oak	Quercus alba	29	Rare	27 (14,13
443	LIST	Sw eetgum	Liquidambar styraciflua	14	Specimen	28 (13,8,
443 444		Sw eetgum	Liquidambar styraciflua	13	Specimen	28 (14,14
444	LIST	1	· · · · · · · · · · · · · · · · · · ·	23	<del></del>	29 (17,1)
444 445	LIST	Mackement Michael	( 'arva tomantoen '		Snoriman	
444 445 446	CATO	Mockernut Hickory	Carya tomentosa		Specimen	
444 445 446 447	CATO LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	32 (24,8
444 445 446 447 448	CATO LIST LIST	Sw eetgum Sw eetgum	Liquidambar styraciflua Liquidambar styraciflua	12 12	Specimen Specimen	32 (24,8 32 (8,12,1
444 445 446 447	CATO LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	32 (24,8 32 (8,12,1
444 445 446 447 448	CATO LIST LIST	Sw eetgum Sw eetgum	Liquidambar styraciflua Liquidambar styraciflua	12 12	Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6
444 445 446 447 448 449	CATO LIST LIST LIST	Sw eetgum Sw eetgum Sw eetgum	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua	12 12 13	Specimen Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18
444 445 446 447 448 449 450 451	CATO LIST LIST LIST QUAL PITA	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Quercus alba Finus taeda	12 12 13 12 16	Specimen Specimen Specimen Specimen NA	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18
444 445 446 447 448 449 450 451 452	CATO LIST LIST LIST QUAL PITA QUAL	Sw eetgum Sw eetgum Sw eetgum White Oak Lobkolly Pine White Oak	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Quercus alba Finus taeda Quercus alba	12 12 13 12 16 22	Specimen Specimen Specimen Specimen NA Specimen	32 (24,8 32 (8.12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,2)
444 445 446 447 448 449 450 451 452 453	CATO LIST LIST LIST QUAL PITA QUAL QUAL	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine White Oak White Oak	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Quercus alba Finus taeda Quercus alba Quercus alba Quercus alba	12 12 13 12 16 22 22	Specimen Specimen Specimen Specimen NA Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,2) 42 (21,2)
444 445 446 447 448 449 450 451 452 453 454	CATO LIST LIST LIST QUAL PITA QUAL QUAL LITU	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine White Oak White Oak Tulip Poplar	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Quercus alba Pinus taeda Quercus alba Quercus alba Liriodendron tulipifera	12 12 13 12 16 22 22 23	Specimen Specimen Specimen Specimen NA Specimen Specimen Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,2 42 (21,2 44 (10,34
444 445 446 447 448 449 450 451 452 453	CATO LIST LIST LIST QUAL PITA QUAL QUAL LITU QUFA	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine White Oak White Oak	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Quercus alba Finus taeda Quercus alba Quercus alba Quercus alba	12 12 13 12 16 22 22	Specimen Specimen Specimen Specimen NA Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,2 42 (21,2 44 (10,34
444 445 446 447 448 449 450 451 452 453 454	CATO LIST LIST LIST QUAL PITA QUAL QUAL LITU	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine White Oak White Oak Tulip Poplar	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Quercus alba Pinus taeda Quercus alba Quercus alba Liriodendron tulipifera	12 12 13 12 16 22 22 23	Specimen Specimen Specimen Specimen NA Specimen Specimen Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,2) 42 (21,2) 44 (10,3) 45 (11,12,
444 445 446 447 448 449 450 451 452 453 454 455	CATO LIST LIST LIST QUAL PITA QUAL QUAL LITU QUFA	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine White Oak White Oak Tulip Poplar Southern Red Oak	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Cuercus alba Finus taeda Quercus alba Quercus alba Quercus alba Liriodendron tulipifera Quercus falcata	12 12 13 12 16 22 22 22 23 21	Specimen Specimen Specimen NA Specimen Specimen Specimen Specimen Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,2 42 (21,2 44 (10,32 45 (11,12,
444 445 446 447 448 449 450 451 452 453 454 455 456	CATO LIST LIST QUAL PITA QUAL QUAL LITU QUFA QUAL CATO	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine White Oak White Oak Tulip Poplar Southern Red Oak White Oak	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Ciquidambar styraciflua Quercus alba Pinus taeda Quercus alba Quercus alba Liriodendron tulipifera Quercus falcata Quercus alba	12 12 13 12 16 22 22 23 21 13	Specimen Specimen Specimen NA Specimen Specimen Specimen Specimen Specimen Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,21 42 (21,21 44 (10,34 45 (11,12, 45 (8,18,10,1
444 445 446 447 448 449 450 451 452 453 454 455 456 457 458	CATO LIST LIST QUAL PITA QUAL QUAL LITU QUFA QUAL CATO CATO	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine White Oak White Oak Tulip Poplar Southern Red Oak White Oak Mockernut Hickory	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Quercus alba Pfinus taeda Quercus alba Quercus alba Liriodendron tulipifera Quercus falcata Quercus alba Carya tomentosa Carya tomentosa	12 12 13 12 16 22 22 23 21 13 19	Specimen Specimen Specimen NA Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,21 42 (21,21 44 (10,32 45 (11,12,45) 46 (8,8,10,1 52 (26,26
444 445 446 447 448 449 450 451 452 453 454 455 456 457	CATO LIST LIST QUAL PITA QUAL QUAL LITU QUFA QUAL CATO	Sw eetgum Sw eetgum Sw eetgum White Oak Loblolly Pine White Oak White Oak Tulip Poplar Southern Red Oak White Oak Mockernut Hickory	Liquidambar styraciflua Liquidambar styraciflua Liquidambar styraciflua Quercus alba Pinus taeda Quercus alba Quercus alba Liriodendron tulipifera Quercus falcata Quercus alba Carya tomentosa	12 12 13 12 16 22 22 23 21 13 19	Specimen Specimen Specimen NA Specimen Specimen Specimen Specimen Specimen Specimen Specimen Specimen Specimen	32 (24,8 32 (8,12,1 34 (28,6 36 (18,18 36 (18,18 42 (21,2) 42 (21,2) 44 (10,3) 45 (11,12, 45 (8,18,10,1





GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

# INDEPENDENT SENIOR HOUSING CHAPEL HILL



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No. Date Description

Issued for:

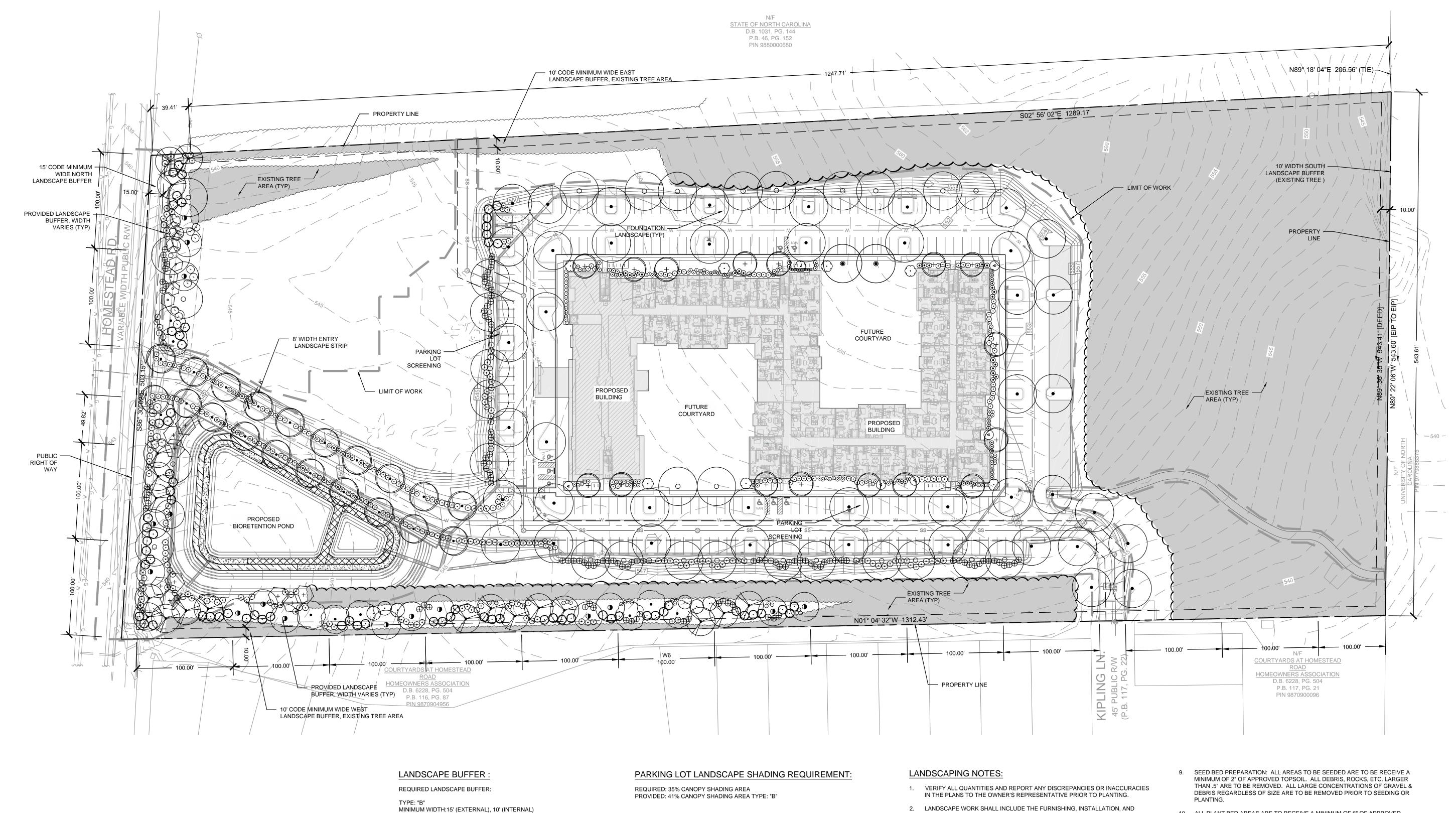
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SCALE:

LANDSCAPE PROTECTION PLAN

Project number: C17004 Sheet: 09.27.2017

DG L1.01 Drawn by:



MINIMUM WIDTH:15' (EXTERNAL), 10' (INTERNAL) PLANTS PER 100 LINEAR FEE:

EXTERNAL: (6) LARGE TREES; (15) SHRUBS (MINIMUM OF 50% SHOULD BE EVERGREEN) EXTERNAL: (4) LARGE TREES;

(7)SMALL TREES; (12) SHRUBS (MINIMUM OF 50% SHOULD BE EVERGREEN)

#### PROVIDED LANDSCAPE BUFFER:

NORTH BUFFER (EXTERNAL) = 450 LINEAR FEET TOTAL (25) LARGE TREES;

> (40) SMALL TREES; (89) SHRUBS (72.5% EVERGREEN)

WEST BUFFER (INTERNAL) = 1300 LINEAR FEET TOTAL (PARTIALLY WITHIN EXISTING TREE AREA)

(28) LARGE TREES; (52) SMALL TREES; (90) SHRUBS (70% EVERGREEN)

EAST BUFFER (INTERNAL) = 1281 LINEAR FEET TOTAL (WITHIN EXISTING TREE AREA)

#### **BMP PLANTING CALCULATIONS:**

SHALLOW WATER PLANTING BMP MANUAL: 50HERBACEOUS PLANTS REQUIRED PER 200 SF REQUIRED: 7457 SF = 1867 PLANTS REQUIRED PROPOSED: 1944 PLANTS PROPOSED

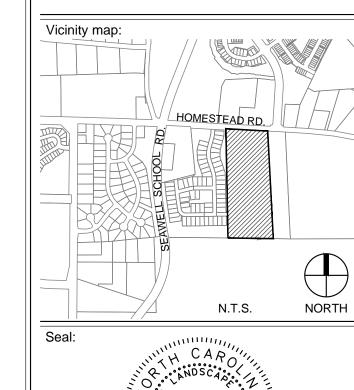
- WARRANTY OF ALL PLANTING MATERIALS WITHIN THE PROJECT AREA.
- 3. THE LANDSCAPE CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL EXISTING AND NEW UNDERGROUND UTILITIES PRIOR TO EXCAVATION FOR PLANTING. DAMAGES TO UTILITIES CAUSED BY THE LANDSCAPE OPERATION SHALL BE CORRECTED BY THE LANDSCAPE CONTRACTOR AT NO COST TO
- 4. LANDSCAPING SHALL REMAIN CLEAR FROM ANY FIRE HYDRANTS ON THE SITE.
- ALL TREES TO BE A MINIMUM OF 2" IN CALIPER AND MUST MEET THE AMERICAN STANDARD FOR NURSERY STOCK.
- TREE PROTECTION NOTE: TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE OR ISSUANCE OF A GRADING PERMIT AND SHALL INCLUDE WARNING SIGNS POSTED IN BOTH ENGLISH AND SPANISH, AS FOLLOWS: "NO TRESPASSING/TREE PROTECTION AREA/PROHIBIDO ENTRAR / ZONA PROTECTORA PARA LOS ÁRBOLES."
- PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA.
- ROOT ZONE PROTECTION AREA: VARIES BASED ON LOCAL JURISDICTION HAVING AUTHORITY. CONTRACTOR SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS. NO DISTURBANCE ALLOWED WITHIN THIS AREA. AREA MUST BE PROTECTED WITH BOTH TREE PROTECTION FENCING AND WARNING SIGNS.

- 10. ALL PLANT BED AREAS ARE TO RECEIVE A MINIMUM OF 6" OF APPROVED
- 11. SOIL SHOULD BE TESTED AND AMENDED WITH LIME AND FERTILIZER FOR HARDWOOD TREES ACCORDING TO NCDA PROCEDURES. SCARIFY PLANT PIT WALLS. CONSULT LANDSCAPE ARCHITECT FOR ALTERNATE COMPLIANCE.
- 12. SHREDDED HARDWOOD MULCH 3" DEEP EXCEPT AT CROWN OF PLANT UNLESS OTHERWISE NOTED. FLARE AT CROWN SHOULD BE REVEALED. BACKFILL CONSISTS OF THOROUGHLY BROKEN UP NATIVE SOIL. TOTAL VOLUME OF BACKFILL SHOULD BE AMENDED WITH UP TO ONE THIRD PINE BARK MULCH. PIECES SHOULD BE NO LARGER THAN WHAT PASSES THROUGH A ONE INCH SCREEN. IF ADDITIONAL SOIL IS REQUIRED FOR BACKFILL DUE TO DETRIMENTAL SUBSOIL DRAINAGE CONDITIONS, USE SOIL SIMILAR TO EXISTING NATIVE SOIL. ADDITIONAL SOIL TO BE APPROVED BY LANDSCAPE ARCHITECT. MAXIMUM SAUCER HEIGHT IS 6 INCHES.
- 13. TOP OF ROOTBALL TO BE RAISED 2-3 INCHES ABOVE EXISTING GRADE.
- 14. FOR B&B PLANTS, NATURAL FIBER BURLAP SHOULD BE TURNED DOWN BY 1/3 TOTAL HEIGHT OF ROOT BALL. PLASTIC FIBER BURLAP AND WIRE BASKETS SHOULD BE REMOVED TO 2/3'S OF TOTAL HEIGHT OF ROOT BALL.
- 15. CONTRACTOR IS RESPONSIBLE FOR KEEPING THE TREE UPRIGHT AND PLUMB THROUGHOUT THE WARRANTY PERIOD. IF STABILIZATION IS NECESSARY SEE STAKING IN TREE DETAIL, ORANGE FLAGGING TAPE SHOULD BE ATTACHED TO SUPPORT WIRE. STAKING SHOULD BE REMOVED BY CONTRACTOR AT END OF ONE YEAR WARRANTY PERIOD OR AS DIRECTED BY GROUNDS MANAGEMENT.
- 16. USE STANDARD "GATOR" BAGS FOR WATERING TREES IN AREAS NOT UNDER IRRIGATION. INCORPORATE TERRA-SORB (OR EQUAL) AS PER
- MANUFACTURERS RECOMMENDATIONS, FOR AREAS NOT UNDER IRRIGATION. 17. USE "BIO-BARRIER" OR EQUIVALENT ACCORDING TO MANUFACTURER'S RECOMMENDATION FOR TREES THAT WILL BE PLANTED WITHIN 10' OF
- 18. LANDSCAPING/C.O. STANDARDS NOTE: ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE.



GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

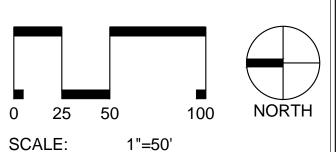
# INDEPENDENT **SENIOR** HOUSING **CHAPEL HILL**



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SUP SUBMITTAL

Date	Description	
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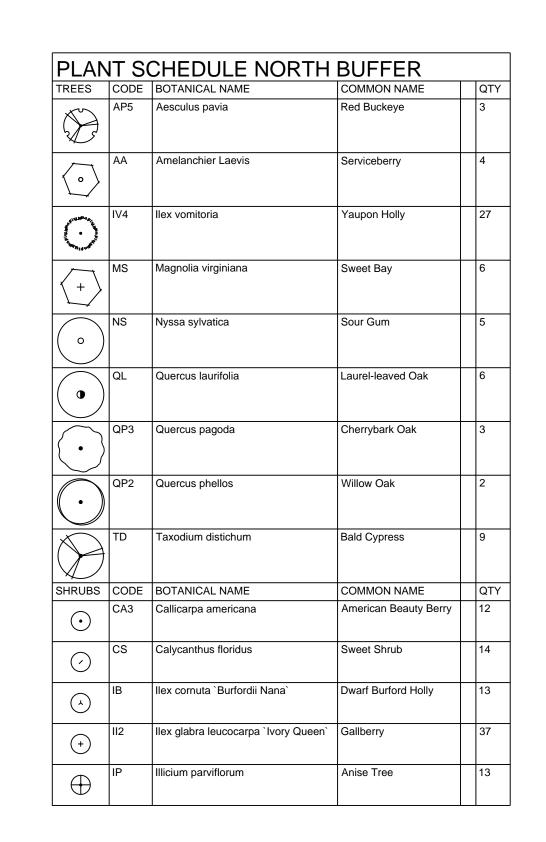
Issued for:

Title:

PLANTING PLAN

Project number: C17004 Sheet: 09.27.2017

DG/RS Drawn by: Approved by:



TREES	CODE	BOTANICAL NAME	COMMON NAME	QTY
<u></u>	ILE AME	llex opaca	American Holly	6
and the same of th	IV4	llex vomitoria	Yaupon Holly	40
+	MS	Magnolia virginiana	Sweet Bay	6
•	QL	Quercus laurifolia	Laurel-leaved Oak	10
$\overline{\bullet}$	QP3	Quercus pagoda	Cherrybark Oak	6
	TD	Taxodium distichum	Bald Cypress	12
SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	QTY
$\odot$	CA3	Callicarpa americana	American Beauty Berry	11
+	II2	llex glabra leucocarpa `Ivory Queen`	Gallberry	39
$\oplus$	IP	Illicium parviflorum	Anise Tree	21
$\odot$	LD	Leucothoe fontanesiana	Drooping Leucothoe	19

TREES	CODE	BOTANICAL NAME	COMMON NAME		QTY	REMARKS
.xv	AP5	Aesculus pavia	Red Buckeye		3	
<i></i>						
	AA	Amelanchier Laevis	Serviceberry		4	
$\langle \cdot \rangle$						
	HC2	Halesia carolina	Snowdrop Tree		16	
	1102	Traiesia Carollila	Showdrop free		'0	
(-)						
	ILE AME	llex opaca	American Holly		6	
$(\cdot)$						
AND VALUE OF THE PARTY OF THE P	IV4	Ilex vomitoria	Yaupon Holly		71	
-4/84-	ML	Magnolia grandiflora `Little Gem`	Dwarf Southern Magnolia		8	
S. F	IVIE	Magnolia grandinora Ettile Gem	Dwan Gouthern Magnolla			
	MS	Magnolia virginiana	Sweet Bay		9	
( + )						
	NS	Nyssa sylvatica	Sour Gum		33	
( ° )						
$\overline{}$		Ouerous levrifelie	Lourel legyed Cali		16	
	QL	Quercus laurifolia	Laurel-leaved Oak		16	
$\overline{}$	QP3	Quercus pagoda	Cherrybark Oak		9	
(•)						
	QP2	Quercus phellos	Willow Oak		20	
( • )						
	QS2	Quercus shumardii	Shumard Red Oak		107	
( • )						
$\overline{}$	TD	Taxodium distichum	Bald Cypress		19	
		raxodidiri disticirani	Baid Oypicss		'	
SHRUBS	CODE	BOTANICAL NAME	COMMON NAME		QTY	REMARKS
	AG2	Abelia grandiflora	Glossy Abelia		29	
(4)						
$\odot$	CA3	Callicarpa americana	American Beauty Berry		40	
$\odot$						
$\overline{(}$	cs	Calycanthus floridus	Sweet Shrub		14	
$\bigcirc$						
$\bigcirc$	GM	1	Miniature Or Trailing Jasmine		10	
$\cup$	Civi	Gardenia jasminoides `Radicans`	Initiature Of Trailing Jasmine	1	10	
$\overline{}$	Givi	Gardenia jasminoides `Radicans`	inimature Or Trailing Jasmine		10	
	HA2	Gardenia jasminoides `Radicans`  Hydrangea arborescens `Annabelle`	Annabelle Smooth Hydrangea		24	
lacktriangle						
<u>•</u>	HA2	Hydrangea arborescens `Annabelle`	Annabelle Smooth Hydrangea		24	
(A)	HA2	Hydrangea arborescens `Annabelle`	Annabelle Smooth Hydrangea		24	PARKING LOT SCREENING,
	HA2	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`	Annabelle Smooth Hydrangea  Dwarf Burford Holly		24	
(A) (+)	HA2	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`	Annabelle Smooth Hydrangea  Dwarf Burford Holly		24	
(A)	HA2	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry		24 141 138	
(A) (+) (D)	HA2	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry		24 141 138	
(A) (+)	HA2 IB II2 IW	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry		141 138 44	PLANTING AT 3 FEET IN HEIGHT
(A) (+) (D)	HA2 IB II2 IW	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree		141 138 44 113	PLANTING AT 3 FEET IN HEIGHT
(A) (+) (D)	HA2 IB II2 IW IP	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry		141 138 44	PLANTING AT 3 FEET IN HEIGHT
(A) (D) (D) (D)	HA2 IB II2 IW IP	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire		141 138 44 113	PLANTING AT 3 FEET IN HEIGHT
(A) (D) (D) (D)	HA2 IB II2 IW IP	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree		141 138 44 113	PLANTING AT 3 FEET IN HEIGHT
<ul><li>♠</li><li>⊕</li><li>⊕</li></ul>	HA2 IB II2 IW IP IV5	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe		141 138 44 113 21	PLANTING AT 3 FEET IN HEIGH
<ul><li>♠</li><li>⊕</li><li>⊕</li></ul>	HA2 IB II2 IW IP	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire		141 138 44 113	PLANTING AT 3 FEET IN HEIGH
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> </ul>	HA2 IB II2 IW IP IV5 LD OF	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana  Osmanthus fragrans	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe  Sweet Olive, Tea Olive		141 138 44 113 21 34	PLANTING AT 3 FEET IN HEIGHT
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> <li>♠</li> </ul>	HA2 IB II2 IW IP IV5	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe		141 138 44 113 21	PLANTING AT 3 FEET IN HEIGHT
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> <li>♠</li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>	HA2  IB  II2  IW  IP  IV5  LD  OF  RO	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana  Osmanthus fragrans  Rosa shrub `RADrazz` TM	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe  Sweet Olive, Tea Olive  Knock Out		24  141  138  44  113  21  34  5	PARKING LOT SCREENING, PLANTING AT 3 FEET IN HEIG
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> <li>♠</li> </ul>	HA2 IB II2 IW IP IV5 LD OF RO CODE	Hydrangea arborescens `Annabelle`  Illex cornuta `Burfordii Nana`  Illex glabra leucocarpa `Ivory Queen`  Illex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana  Osmanthus fragrans  Rosa shrub `RADrazz` TM  BOTANICAL NAME	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe  Sweet Olive, Tea Olive  Knock Out  COMMON NAME	SPACING 24" a.c.	24 141 138 44 113 21 34 5 70 QTY	PLANTING AT 3 FEET IN HEIGHT
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> <li>♠</li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>	HA2  IB  II2  IW  IP  IV5  LD  OF  RO	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana  Osmanthus fragrans  Rosa shrub `RADrazz` TM	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe  Sweet Olive, Tea Olive  Knock Out	SPACING 24" o.c.	24  141  138  44  113  21  34  5	PARKING LOT SCREENING, PLANTING AT 3 FEET IN HEIG
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> <li>♠</li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>	HA2  IB  II2  IW  IP  IV5  LD  OF  RO  CODE	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana  Osmanthus fragrans  Rosa shrub `RADrazz` TM  BOTANICAL NAME  Asclepias incarnata	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe  Sweet Olive, Tea Olive  Knock Out  COMMON NAME  Swamp Milkweed	24" o.c.	24 141 138 44 113 21 34 5 70 QTY 718	PARKING LOT SCREENING, PLANTING AT 3 FEET IN HEIG
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> <li>♠</li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>	HA2 IB II2 IW IP IV5 LD OF RO CODE	Hydrangea arborescens `Annabelle`  Illex cornuta `Burfordii Nana`  Illex glabra leucocarpa `Ivory Queen`  Illex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana  Osmanthus fragrans  Rosa shrub `RADrazz` TM  BOTANICAL NAME	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe  Sweet Olive, Tea Olive  Knock Out  COMMON NAME		24 141 138 44 113 21 34 5 70 QTY	PARKING LOT SCREENING, PLANTING AT 3 FEET IN HEIG
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> <li>♠</li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>	HA2  IB  II2  IW  IP  IV5  LD  OF  RO  CODE  AI	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana  Osmanthus fragrans  Rosa shrub `RADrazz` TM  BOTANICAL NAME  Asclepias incarnata  Carex tenera	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe  Sweet Olive, Tea Olive  Knock Out  COMMON NAME  Swamp Milkweed  Quill Sedge	24" o.c.	24 141 138 44 113 21 34 5 70 QTY 718	PARKING LOT SCREENING, PLANTING AT 3 FEET IN HEIG
<ul> <li>♠</li> <li>⊕</li> <li>⊕</li> <li>⊙</li> <li>♠</li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>	HA2  IB  II2  IW  IP  IV5  LD  OF  RO  CODE	Hydrangea arborescens `Annabelle`  Ilex cornuta `Burfordii Nana`  Ilex glabra leucocarpa `Ivory Queen`  Ilex verticillata  Illicium parviflorum  Itea virginica `Henry`s Garnet`  Leucothoe fontanesiana  Osmanthus fragrans  Rosa shrub `RADrazz` TM  BOTANICAL NAME  Asclepias incarnata	Annabelle Smooth Hydrangea  Dwarf Burford Holly  Gallberry  Winterberry  Anise Tree  Henry's Garnet Sweetspire  Drooping Leucothoe  Sweet Olive, Tea Olive  Knock Out  COMMON NAME  Swamp Milkweed	24" o.c.	24 141 138 44 113 21 34 5 70 QTY 718	PARKING LOT SCREENING, PLANTING AT 3 FEET IN HEIG

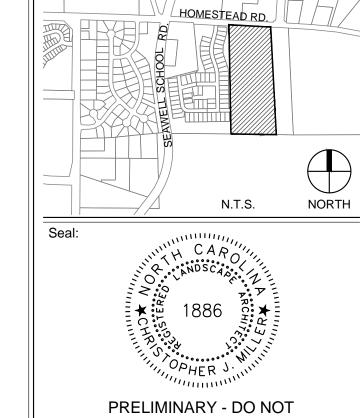
PLANT SCHEDULE



Client:

GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

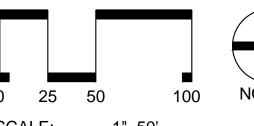
# INDEPENDENT SENIOR HOUSING CHAPEL HILL



SUP SUBMITTAL

USE FOR CONSTRUCTION

No. Date Description



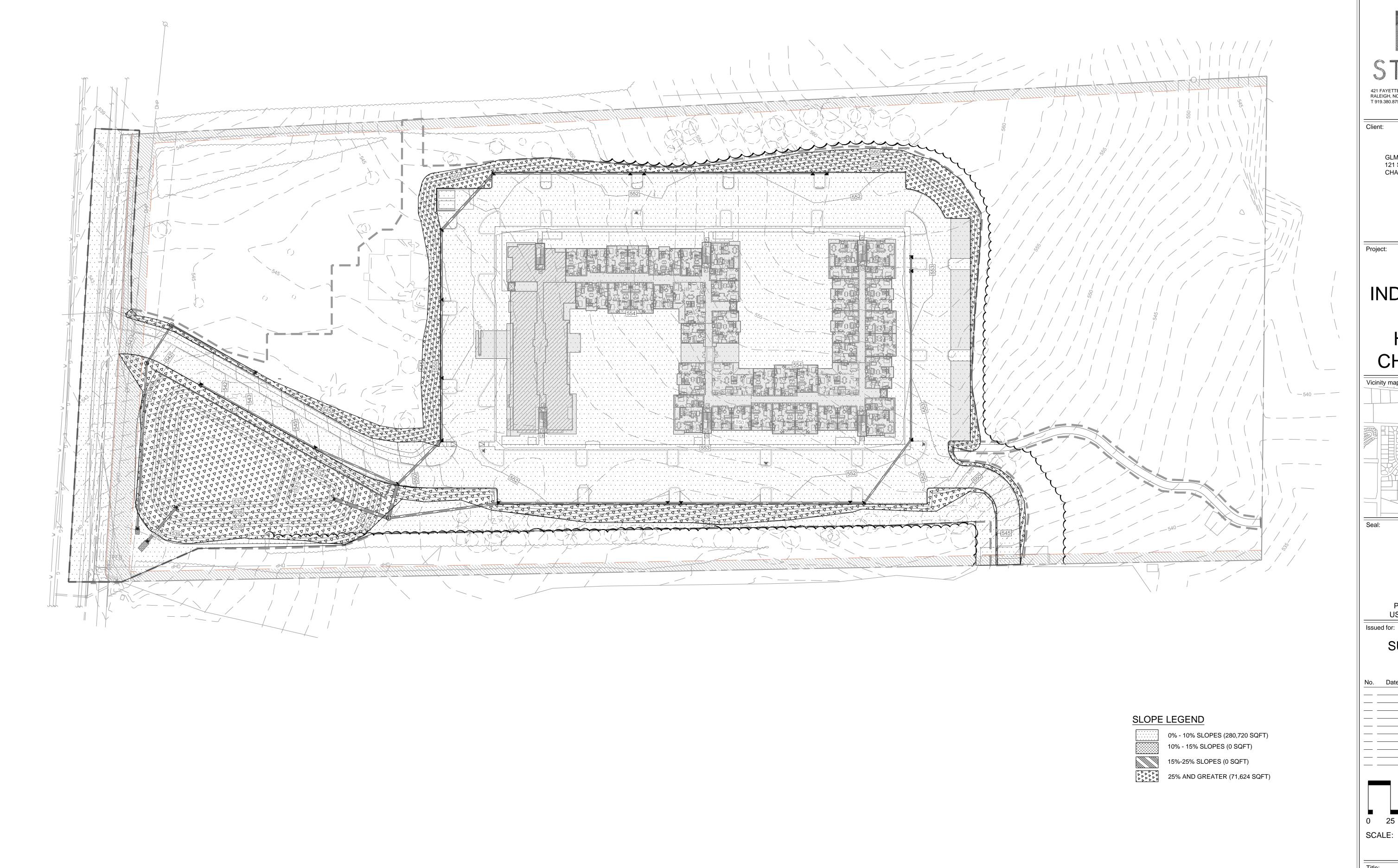
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PLANTING PLAN SCHEDULE

Project number: C17004 Sheet:

Date: 09.27.2017

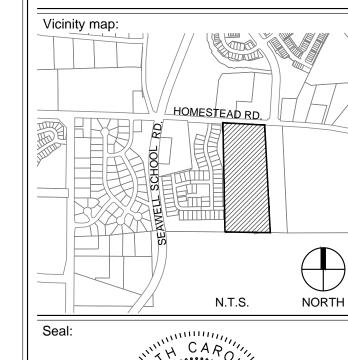
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Approved by: CDM





GLMH-2, LLC 121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

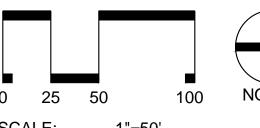
# INDEPENDENT SENIOR HOUSING CHAPEL HILL



PRELIMINARY - DO NOT USE FOR CONSTRUCTION

SUP SUBMITTAL

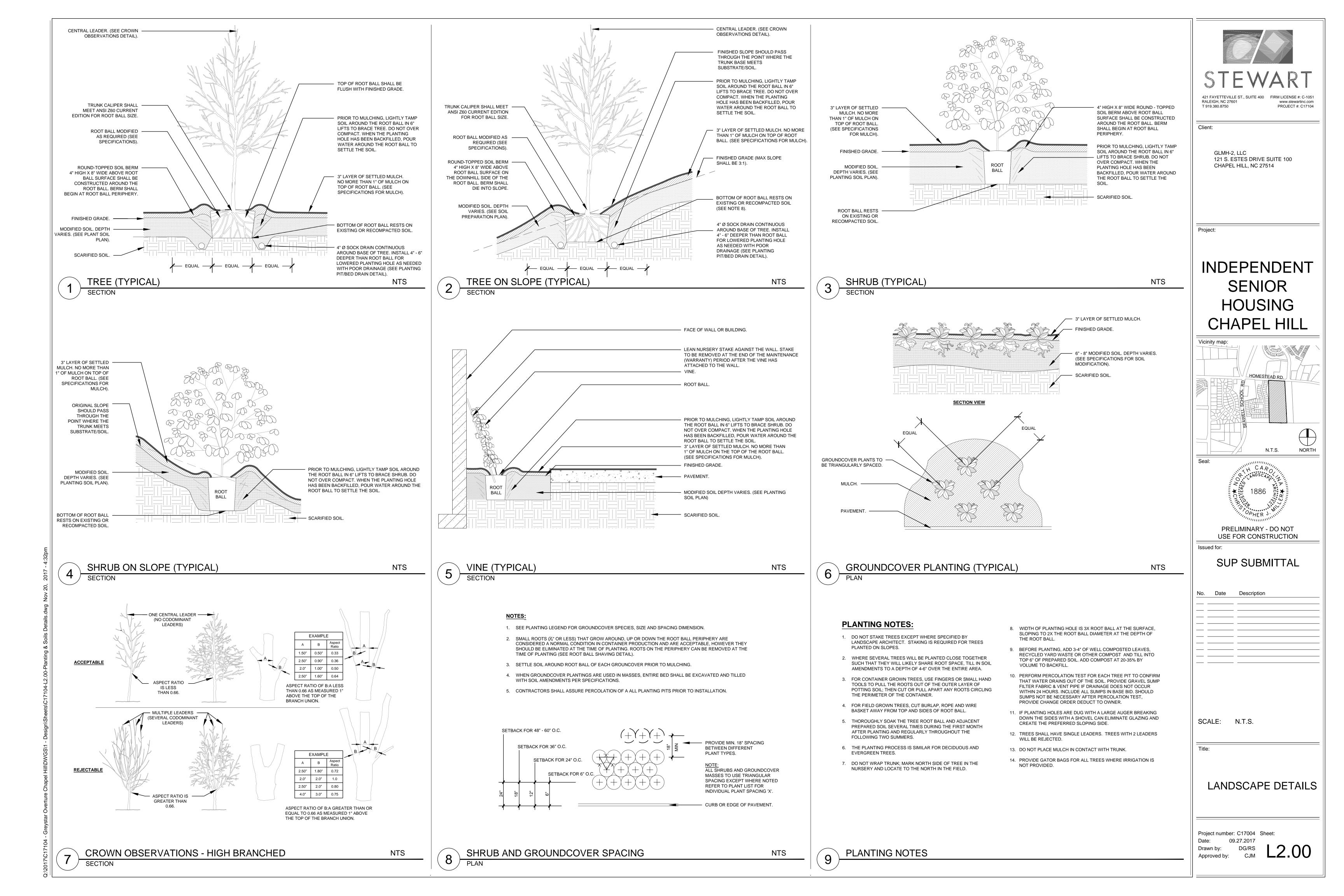
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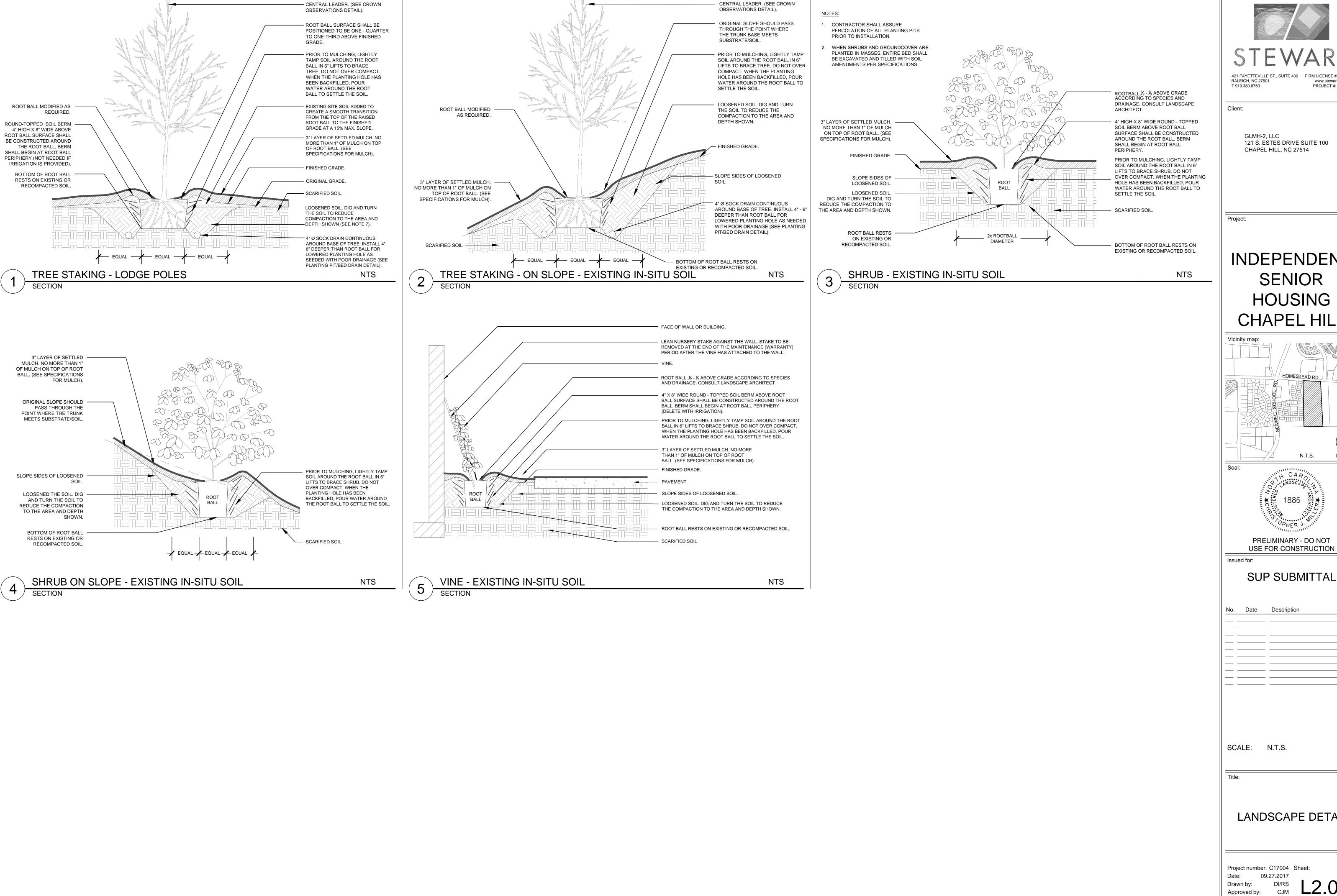


SCALE:

STEEP SLOPE PLAN

Project number: C17004 Sheet:
Date: 09.27.2017
Drawn by: DG/RS
Approved by: CJM





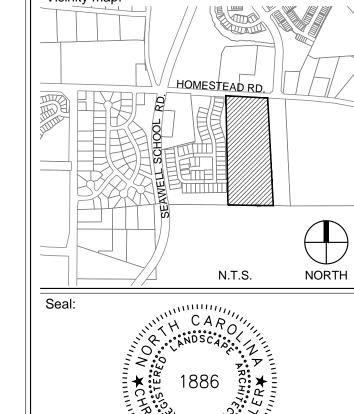
STEWART 421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE #: C-1051

www.stewartinc.com

PROJECT #: C17104

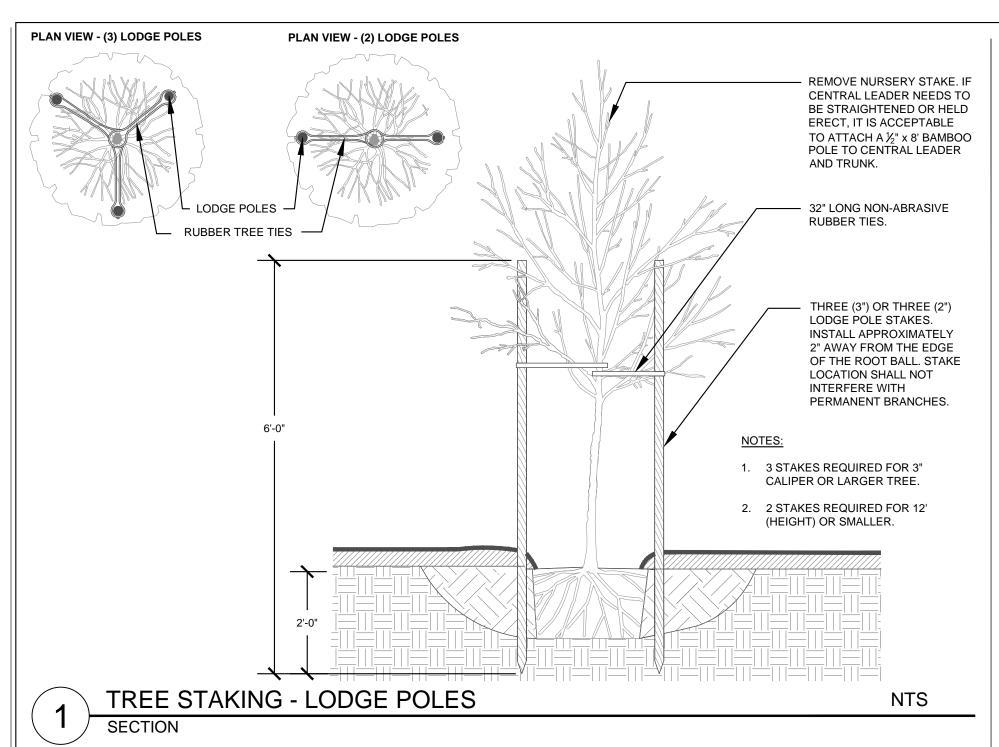
121 S. ESTES DRIVE SUITE 100 CHAPEL HILL, NC 27514

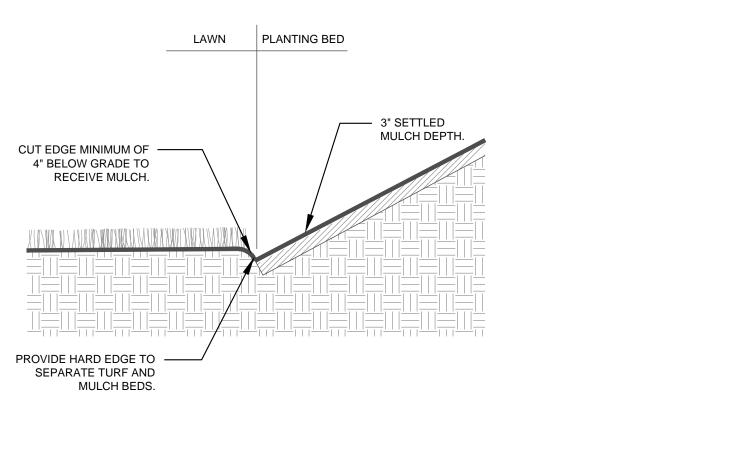
INDEPENDENT SENIOR HOUSING CHAPEL HILL



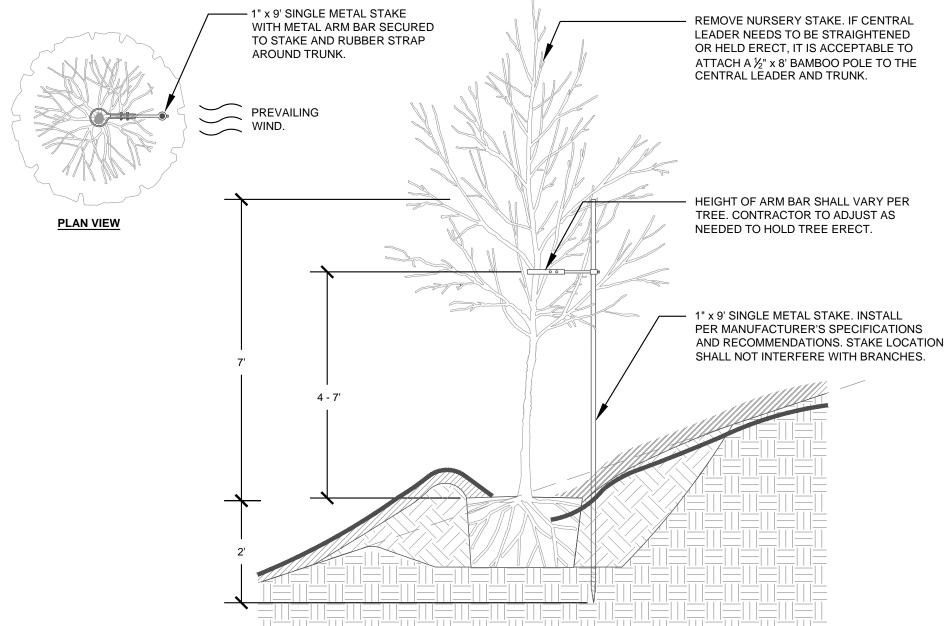
LANDSCAPE DETAILS

Project number: C17004 Sheet:



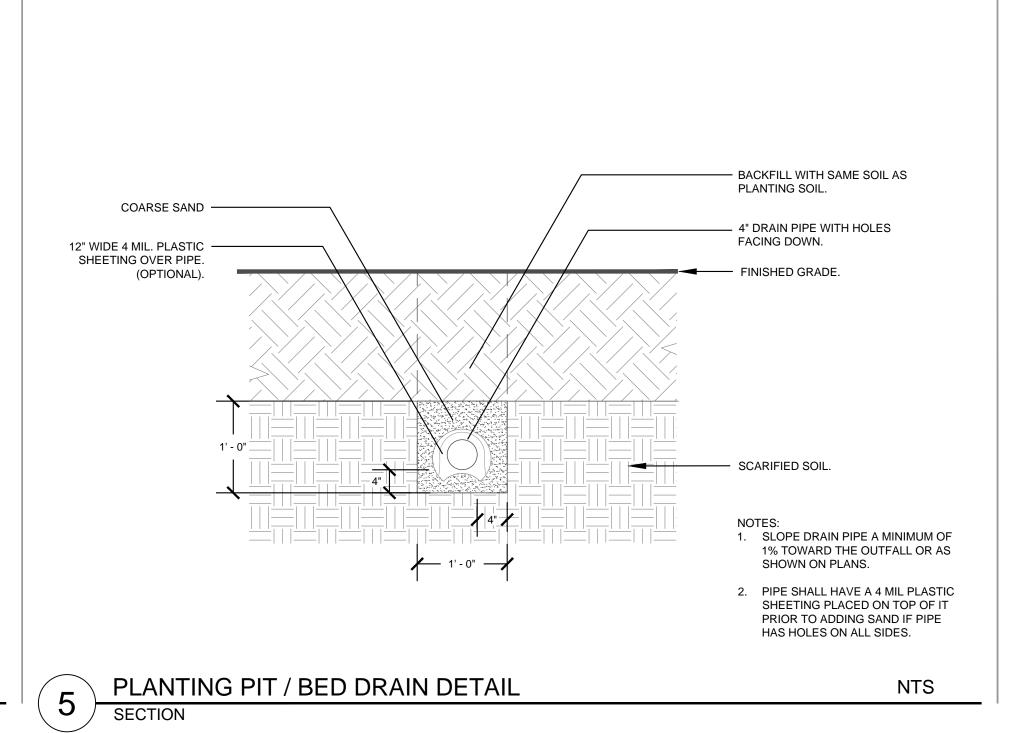


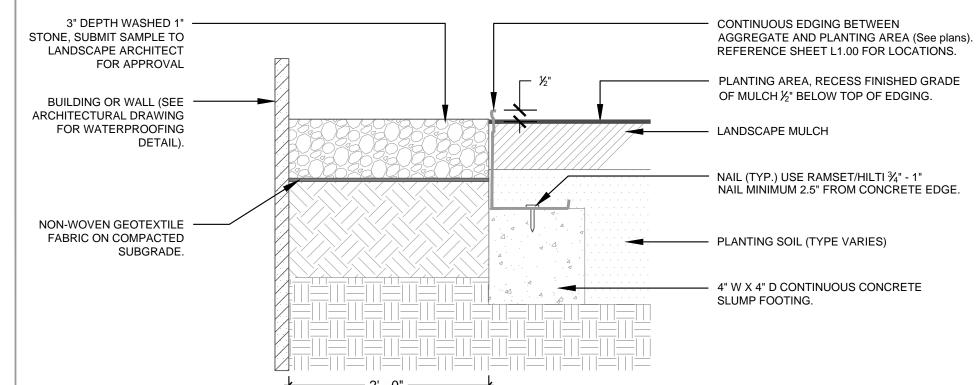
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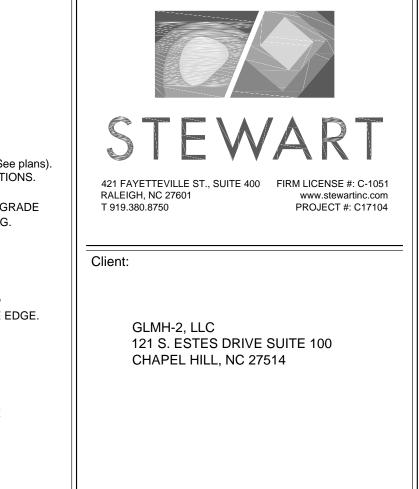
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TREE STAKING - ON SLOPE

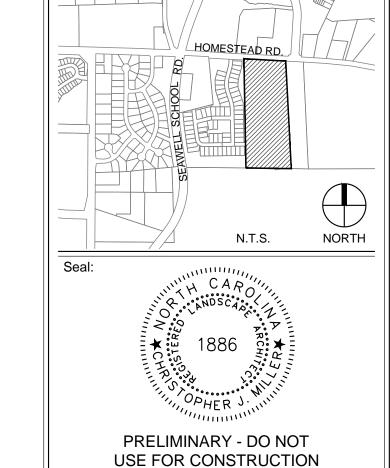




GRAVEL BAND WITH STEEL EDGING NTS



INDEPENDENT SENIOR HOUSING CHAPEL HILL



SUP SUBMITTAL

No. Date Description

SCALE: N.T.S.

Issued for:

LANDSCAPE DETAILS

Project number: C17004 Sheet: Date: 09.27.2017

Drawn by: DG/RS Approved by:

