HOMESTEAD ROAD TOWNHOMES

CONSULTANT:



APPLICANT:

GS HOMESTEAD, LLC 121 S. ESTES DRIVE, SUITE 100 CHAPEL HILL, NC 2514

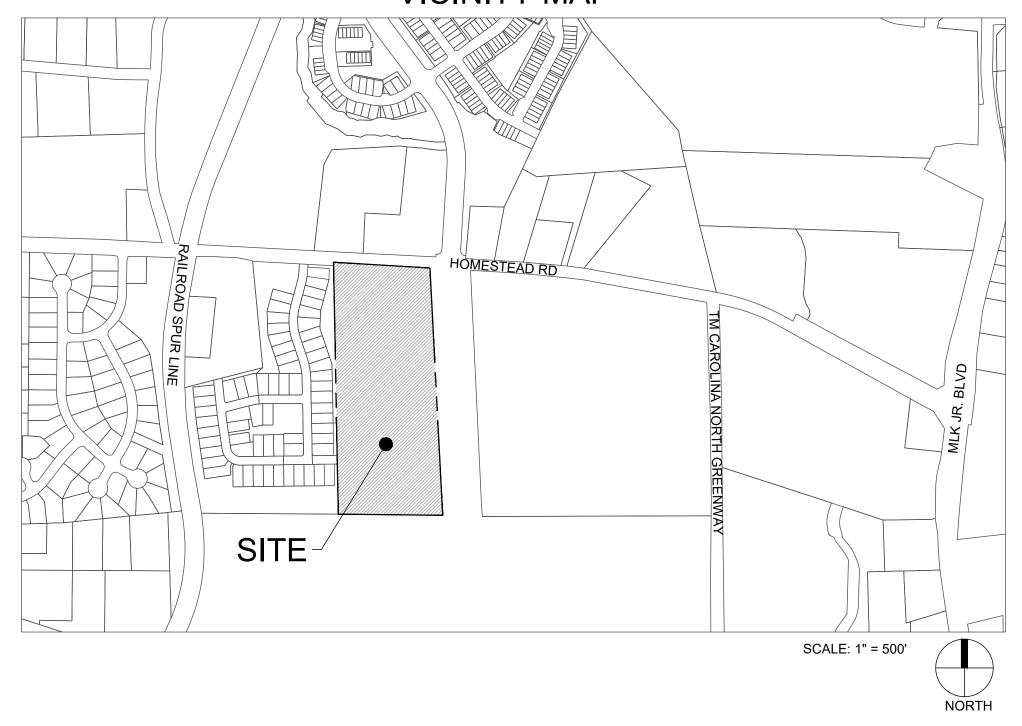
PARCEL INFORMATION:

;	SITE DATA
PROJECT NAME:	HOMESTEAD ROAD TOWNHOMES
SITE ADDRESS:	2217 HOMESTEAD ROAD
COUNTY:	ORANGE
PARCEL PIN #:	9870907642
PARCEL OWNER:	GS HOMESTEAD, LLC
TOTAL PARCEL AREA:	15.65
PROPOSED UNITS:	108 TOWNHOME (16 AFFORDABLE UNITS)
CURRENT ZONING:	R-5-CZD
PROPOSED ZONING:	R-5-CZD
EXISTING LAND USE:	RESIDENTIAL
PROPOSED LAND USE:	TOWNHOUSE DEVELOPMENT
FLOOD PLAIN DATA:	MAP NO. 3710987000K, PANEL EFFECTIVE 11/17/2017
WATERSHED:	JORDAN LAKE
RIVER BASIN	CAPE FEAR
TREE CONSERVATION AREA::	30%
TOTAL LIMITS OF DISTURBANCE::	(13.16 AC/ 573,159 SF
EXISTING IMPERVIOUS AREA:	0.35 AC / 15,438 SF
PROPOSED IMPERVIOUS AREA:	(6.48 AC / 282,274 SF
PARKING DATA:	
MINIMUM REQUIRED:	1.75 SPACE PER 3 BEDROOM = 189 SPACE
MAXIMUM ALLOWED:	2.25 SPACE PER 3 BEDROOM = 243 SPACE
PROVIDED:	2 SPACE PER UNIT = 216 SPACE
PROVIDED.	18 GUEST PARKING (2 ADA & 1 VAN)
	TOTAL: 234 SPACE
BICYCLE PARKING:	101AL. 234 SPACE
REQUIRED:	1 SPACE PER 4 UNITS = 27 SPACE
REQUIRED.	
PROVIDED:	4 SPACE (2 RACKS) IN NEIGHBORHOOD PARF REST PROVIDED IN TOWNHOME UNITS

CONDITIONAL ZONING PERMIT

JUNE 24, 2022
2217 HOMESTEAD ROAD
CHAPEL HILL, NORTH CAROLINA
2ND RESUBMITTAL - OCTOBER 7,2022

VICINITY MAP



	INDEX OF DRAWINGS
Sheet#	SHEET NAME
C0.00	COVER SHEET
C0.10	GENERAL NOTES
C0.20	AREA MAP
C1.00	EXISTING CONDITIONS & DEMOLITION PLAN
C1.10	STEEP SLOPE ANALYSIS
C1.20	CONSTRUCTION MANAGEMENT PLAN
C3.00	SITE PLAN
C3.10	TRASH MANAGEMENT & FIRE APPARATUS PLAN
C3.90	SITE DETAILS
C3.91	SITE DETAILS
C5.00	GRADING & STORM DRAINAGE PLAN
C6.00	UTILITY PLAN
L7.00	CODE PLANTING PLAN
L7.10	LANDSCAPE PROTECTION PLAN
L7.11	LANDSCAPE PROTECTION PLAN - TREE SURVEY
L7.90	PLANTING & SOILS DETAILS
A1.00	EXTERIOR ELEVATION

- 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.

EXISTING CONDITION NOTES:

DEMOLITION NOTES:

OBTAIN A CLEAN EDGE.

ON THIS PLAN.

REQUIREMENTS.

DOCUMENTS

THE RESPECTIVE UTILITY AGENCIES.

ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

DIRECTLY ASSOCIATED WITH ITEMS TO BE REMOVED.

- 1. THIS SURVEY MAP IS INTENDED TO REPRESENT THE EXISTING CONDITIONS/TOPOGRAPHY ON A PORTION OF THE PROPERTY AND ALL ENCUMBRANCES UPON THE PROPERTY MAY NOT BE SHOWN.
- HORIZONTAL DATUM IS NAD 83-2011 AND VERTICAL DATUM IS NAVD88.
- 3. THIS DRAWING DOES NOT CONFORM TO N.C. GS47-30 AND THEREFORE IS NOT FOR RECORDATION.
- 4. UTILITIES SHOWN HEREON ARE BASED ON ABOVE GROUND VISIBLE EVIDENCE AND UTILITY DESIGNATION / MARKING SERVICES PERFORMED BY STEWART INC, AND THE AVAILABLE RECORD INFORMATION. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- 5. SURVEY INFORMATION BASED ON FIELD SURVEY BY STEWART COMPLETED ON AUGUST 1, 2017.
- 6. TREES SHOWN HEREON MAY NOT REPRESENT ALL VEGETATION ON THE SUBJECT PROPERTY
- 7. THE SUBJECT PROPERTY LIES IN ZONES X (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE AND FUTURE CONDITIONS 1% ANNUAL CHANCE FLOODPLAIN). BASED ON THE FLOOD INSURANCE RATE MAP COMMUNITY MAP NUMBER 3710987000J DATED FEBRUARY 2, 2007.

1. THE CONTRACTOR SHALL REMOVE CONCRETE (WHERE REQUIRED) TO THE FIRST COLD JOINT OR SAW CUT TO

3. CLEANOUTS AND WATER VALVES LOCATED IN AREAS OF DEMOLITION OR SUBSEQUENT CONSTRUCTION SHALL BE

4. ANY UTILITY SERVICES SHOWN TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE APPROPRIATE

5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES PRIOR TO BEGINNING DEMOLITION OPERATIONS.

6. CLEAN SOILS SHALL BE UTILIZED FOR BACKFILL. COMPACTION OF THESE SOILS SHALL BE PERFORMED IN

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

7. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ALL SUBGRADE MATERIALS

8. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF LEGALLY OFF-SITE UNLESS OTHERWISE NOTED

10. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL JURISDICTIONAL CODES OR

13. ITEMS DESIGNATED TO BE SALVAGED AND/OR RE-USED SHALL BE REMOVED BY THE CONTRACTOR AND PROVIDED

14. WHERE UTILITIES ("TO BE REMOVED") IMPACT THE FOOTPRINT OF THE NEW BUILDING, THE CONTRACTOR SHALL

SUITABLE SOIL SHALL BE UTILIZED FOR BACKFILL AND COMPACTED IN ACCORDANCE WITH THE CONTRACT

15. DEMOLITION AND SUBSEQUENT CONSTRUCTION OF STORM DRAINAGE PIPING SHALL BE PERFORMED IN SUCH A

PROVISIONS SHALL BE MADE TO MAINTAIN STORM WATER DRAINAGE PATTERNS DURING CONSTRUCTION.

16. 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

EXECUTE AND REMOVE AN ADDITIONAL 2 FEET OF SOILS TO EITHER SIDE OF THE PIPE, AND 1 FOOT BELOW. CLEAN

MANNER THAT THE OLD PIPE AND STRUCTURES REMOVED DO NOT IMPACT DRAINAGE UPSTREAM OF THE SYSTEM.

INTERRUPTION TO EXISTING FACILITIES TO REMAIN. PROVISIONS SHALL BE MADE TO MAINTAIN SERVICE DURING

17. 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 OCCURRED.

18. 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

19. WHERE UTILITIES ARE SHOWN TO BE "REMOVED", CONTRACTOR SHALL INCLUDE NECESSARY PLUG OR VALVES TO

20. CONTRACTOR SHALL PROVIDE PEDESTRIAN INGRESS / EGRESS TO ALL EXISTING BUILDINGS, PARKING LOTS, AND

ENSURE UTILITY LINES TO REMAIN WILL CONTINUE TO BE IN SERVICE. COORDINATE NECESSARY SHUT DOWN AND

9. REFER TO LANDSCAPE AND EROSION CONTROL DRAWINGS FOR TREE PROTECTION PLAN AND REQUIREMENTS.

UTILITY PROVIDER. CONTRACTOR IS RESPONSIBLE FOR APPROPRIATE SEQUENCING OF UTILITY DEMOLITION WITH

2. THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT (WHERE REQUIRED) TO OBTAIN A CLEAN EDGE.

PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NORTH CAROLINA ONE CALL."

11. TREE PROTECTION FENCING SHALL BE IN PLACE PRIOR TO BEGINNING DEMOLITION

REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

PATHS OF PEDESTRIAN TRAVEL THROUGHOUT THE CONSTRUCTION PERIOD

REMOVAL WITH THE LOCAL JURISDICTION OR UTILITY OWNER.

12. EROSION CONTROL PERMIT SHALL BE OBTAINED AND ONSITE PRIOR TO BEGINNING DEMOLITION.

TO THE OWNER. COORDINATE STORAGE LOCATION WITH OWNER'S REPRESENTATIVE.

PROTECTED FROM DAMAGE AND RAISED TO BE FLUSH WITH NEW GRADE.

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. REFER TO ARCHITECTURAL PLANS FOR BUILDING INFORMATION.
- 4. ALL DIMENSIONS ARE IN DECIMAL FEET TO OUTSIDE FACE OF BUILDINGS, TO CENTERLINES, AND/OR FACE OF CURB UNLESS OTHERWISE NOTED.
- 5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATES AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO ANY CONSTRUCTION.
- 6. ALL WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE FROM DRAWINGS.
- 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.
- 8. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED.
- 9. ALIGN ALL JOINTS, CORNERS, AND EDGES AS SHOWN
- 10. CONTRACTOR SHALL REFER TO AND COORDINATE WITH ARCHITECTURAL, STRUCTURAL, AND MEP DRAWINGS AT ALL TIMES PRIOR TO AND DURING CONSTRUCTION.
- 11. ALL CURB TAPERS ARE SIX (6') FEET LONG UNLESS OTHERWISE SHOWN ON PLAN.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. SIGHT TRIANGLES NOTHING OVER 30" HIGH SHALL BE ALLOWED WITHIN THE SIGHT DISTANCE TRIANGLES.
- 16. THE SITE SHALL BE FULLY STABILIZED (90% COVERAGE) PRIOR TO ISSUANCE OF A BUILDING CERTIFICATE OF OCCUPANCY OR PROJECT APPROVAL
- 17. HANDICAP RAMPS SHALL BE INSTALLED PER THE PLANS AND SPECIFICATIONS AND THE NC BUILDING CODE. A MAXIMUM SLOPE OF 1/12 FOR 6-FEET AND A MAXIMUM CROSS SLOPE OF 1:48 SHALL BE PROVIDED. IF EXISTING CONDITIONS PRECLUDE THIS REQUIREMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION
- 18. 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.

GRADING AND STORM DRAINAGE NOTES:

- 1. CONTRACTOR SHALL REPORT ANY GRADE DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
- 2. 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.
- 3. ALL PROPOSED ELEVATIONS SHOWN ARE EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE SPECIFIED.
- 4. 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.
- 5. 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.
- 6. REFER TO THE EROSION CONTROL DETAILS SHEET FOR THE SEQUENCE OF CONSTRUCTION
- 7. 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 WASHOUT.
- 8. INTERIM GRADING SHALL BE PROVIDED TO DIRECT WATER AWAY FROM BUILDINGS AND PREVENT PONDING.
- 9. 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.
- 10. MAXIMUM SLOPE ACROSS ANY HANDICAPPED PARKING SPACE AND AISLE SHALL NOT EXCEED 2% IN ANY
- 11. PROPOSED CONTOURS ARE APPROXIMATE. SPOT ELEVATIONS AND ROADWAY PROFILES SHALL BE USED IN
- 12. 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.
- 13. 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.
- 14. CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF EXISTING MANHOLES, METERS, VALVES, ETC. AS REQUIRED TO MEET NEW FINISHED GRADES.
- 15. CONTRACTOR SHALL SLOPE GRADES TO ASSURE POSITIVE STORMWATER FLOW TO KEEP WATER FROM POOLING ALONG CURBS AND WALLS.
- 16. TOP OF WALL ELEVATIONS INDICATE THE ELEVATION AT THE TOP OF THE CAP, UNLESS OTHERWISE NOTED.
- 17. BOTTOM OF WALL ELEVATIONS INDICATE THE ELEVATION OF THE FINISHED GRADE.

UTILITY NOTES:

- 1. 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.
- 3. THE CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON SITE AND UTILITY PROVIDERS DURING CONSTRUCTION TO ENSURE SMOOTH TRANSITION BETWEEN DISCIPLINES.
- 4. 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 WAY.
- 6. 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.
- 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.
- 8. 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.
- 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.
- 10. 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.

MATERIALS AND FURNISHINGS NOTES:

PAVING PATTERN NOTES:

- 1. ABBREVIATIONS FOR SPECIFIC HARDSCAPE MATERIALS AND FURNISHINGS ARE LISTED IN THE LEGEND AND ARE USED THROUGHOUT THE DRAWING SET'S HARDSCAPE & FURNISHINGS PLANS, PAVING PATTERN PLANS AND SITE DETAILS.
- 2. REFER TO RELATED SPECIFICATION SECTION FOR SPECIFIC SUBMITTALS OF PRODUCT DATA, SAMPLES, SHOP DRAWINGS, QUALITY ASSURANCE REQUIREMENTS, EXECUTION REQUIREMENTS, AND FOR FURTHER PRODUCT INFORMATION NOT INCLUDED IN THIS SCHEDULE
- 3. CONTRACTOR TO SUBMIT COLOR SAMPLES AND PROVIDE MOCK-UPS FOR ALL CAST IN PLACE CONCRETE FOR APPROVAL BY LANDSCAPE ARCHITECT.

1. END ALL UNIT PAVING PATTERNS WITH A FULL OR HALF SIZE PAVER UNLESS OTHERWISE NOTED. USE

DURHAM NC 27701 T 919.380.8750

2. LAYOUT OF UNIT PAVING PATTERNS AND CONCRETE JOINTS AS INDICATED ON THIS PLAN. REFERENCE LAYOUT PLANS FOR FURTHER PAVING LAYOUT INFORMATION.

4. ALIGN ALL TRUNCATED DOME PAVER JOINTS WITH ABUTTING PAVER JOINTS.

3. PAVERS ABUTTING TRUNCATED DOMES SHALL BE A CONTRASTING COLOR.

OVERSIZE PAVERS WHERE PATTERN ENDS ON A UNIT SMALLER THAN HALF SIZE.

- 5. PROVIDE CONTINUOUS EXPANSION JOINTS BETWEEN BACK OF CURB AND ADJOINING PAVEMENT.
- 6. PROVIDE CONTINUOUS EXPANSION JOINT BETWEEN ALL VERTICAL SURFACES AND ADJOINING PAVEMENT.
- 7. ALL DIMENSIONS MEASURED TO CENTERLINE OF JOINTS.
- 8. ALL WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE FROM DRAWINGS
- 9. ALL ANGLES 90 DEGREES UNLESS OTHERWISE NOTED.
- 10. ALIGN ALL JOINTS, CORNERS AND EDGES AS SHOWN.
- 11. FINAL LAYOUTS TO BE APPROVED BY LANDSCAPE ARCHITECT

PROPOSED UTILITY SEPARATION:

- 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
 - 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 SEWER; OR
- 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.
- 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.
- CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
- 4. SEPARATION OF SANITARY SEWERS AND STORM SEWERS:
 - a. A 18" 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
- 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

- UNLESS OTHERWISE NOTED, LOCATE SANITARY SERVICE CLEANOUTS AT ALL HORIZONTAL OR VERTICAL CHANGES IN DIRECTION. MAXIMUM SPACING BETWEEN CLEANOUTS SHALL BE 75 FEET.
- 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 BELOW:
 - 4" SEWER SERVICE SCH 80 6" SEWER SERVICE - SCH 80
 - 8" SEWER SERVICE SDR-35
- 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 AND PLUG PRIOR TO OCCUPANCY.
- 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. 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

5. PAINT VALVE COVERS, FIRE HYDRANTS AND OTHER WATER APPARATUS TO MEET THE LOCAL JURISDICTIONAL REQUIREMENTS.

SIGNAGE, STRIPING AND MARKING NOTES:

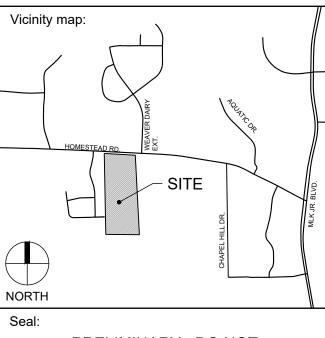
- 1. ALL INTERNAL SIGNAGE SHALL BE COORDINATED WITH OWNER FOR ACTUAL LOCATION AT TIME OF INSTALLATION. SIGNAGE LEADING ONTO PUBLIC THOROUGHFARE SHALL BE INSTALLED AT RIGHT OF WAY PER DOT STANDARDS
- 2. ALL PAVEMENT STRIPING (EXCEPT INDIVIDUAL PARKING BAY STRIPING) SHALL BE THERMOPLASTIC REFLECTIVE PAINT. MATERIALS AND DIMENSIONS SHALL CONFORM TO NCDOT STANDARDS AND SPECIFICATIONS. PARKING BAY STRIPING SHALL BE WHITE REFLECTIVE PAINT.
- CROSSWALKS SHALL BE CONSTRUCTED OF THERMOPLASTIC MATERIALS AND CONSTRUCTED IN ACCORDANCE WITH STATE DOT SPECIFICATIONS. CONTRACTOR TO INSTALL CROSSWALKS IN SUCH A MANNER THAT CROSSWALKS ARE ALIGNED BETWEEN HANDICAP/WALKWAY ACCESS POINTS OR PERPENDICULAR TO THE ROADWAY / DRIVE LANE.
- 4. ADA SYMBOLS SHOWN THESE DRAWINGS ARE FOR LOCATION PURPOSES ONLY AND NOT INTENDED TO BE PAINTED. CONTRACTOR RESPONSIBLE FOR INSTALLING ALL REQUIRED ADA SIGNAGE

LANDSCAPE NOTES:

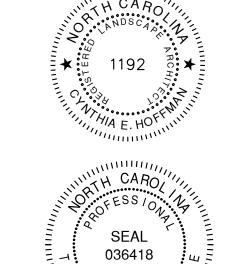
- 1. VERIFY ALL QUANTITIES AND REPORT ANY DISCREPANCIES OR INACCURACIES IN THE PLANS TO THE OWNER'S REPRESENTATIVE PRIOR TO PLANTING.
- 2. LANDSCAPE WORK SHALL INCLUDE THE FURNISHING, INSTALLATION, AND WARRANTY OF ALL PLANTING MATERIALS WITHIN THE PROJECT AREA.
- THE LANDSCAPE CONTRACTOR SHALL ASCERTAIN 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
- 4. LANDSCAPING SHALL REMAIN CLEAR FROM ANY FIRE HYDRANTS ON THE SITE.
- 5. ALL TREES TO BE A MINIMUM OF 2" IN CALIPER AND MUST MEET THE AMERICAN STANDARD FOR NURSERY
- 6. 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."
- 7. 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
- 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 BE REMOVED. ALL LARGE CONCENTRATIONS OF GRAVEL & DEBRIS REGARDLESS OF 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.
- 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
- 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
- 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
- 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
- 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.

PROJECT #: C22033

Client: GS HOMESTEAD, LLC 121 S. ESTES DRIVE. SUITE 100 CHAPEL HILL, NC 27514 PHONE: 919.489.9000 EMAIL: RICHARD@GURLITZARCHITECTS.COM



PRELIMINARY - DO NOT **USE FOR CONSTRUCTION**



Project:

HOMESTEAD

Issued for: **CONDITIONAL ZONING** PERMIT

8/26/2022 1ST RESUBMITTAL

No. Date Description

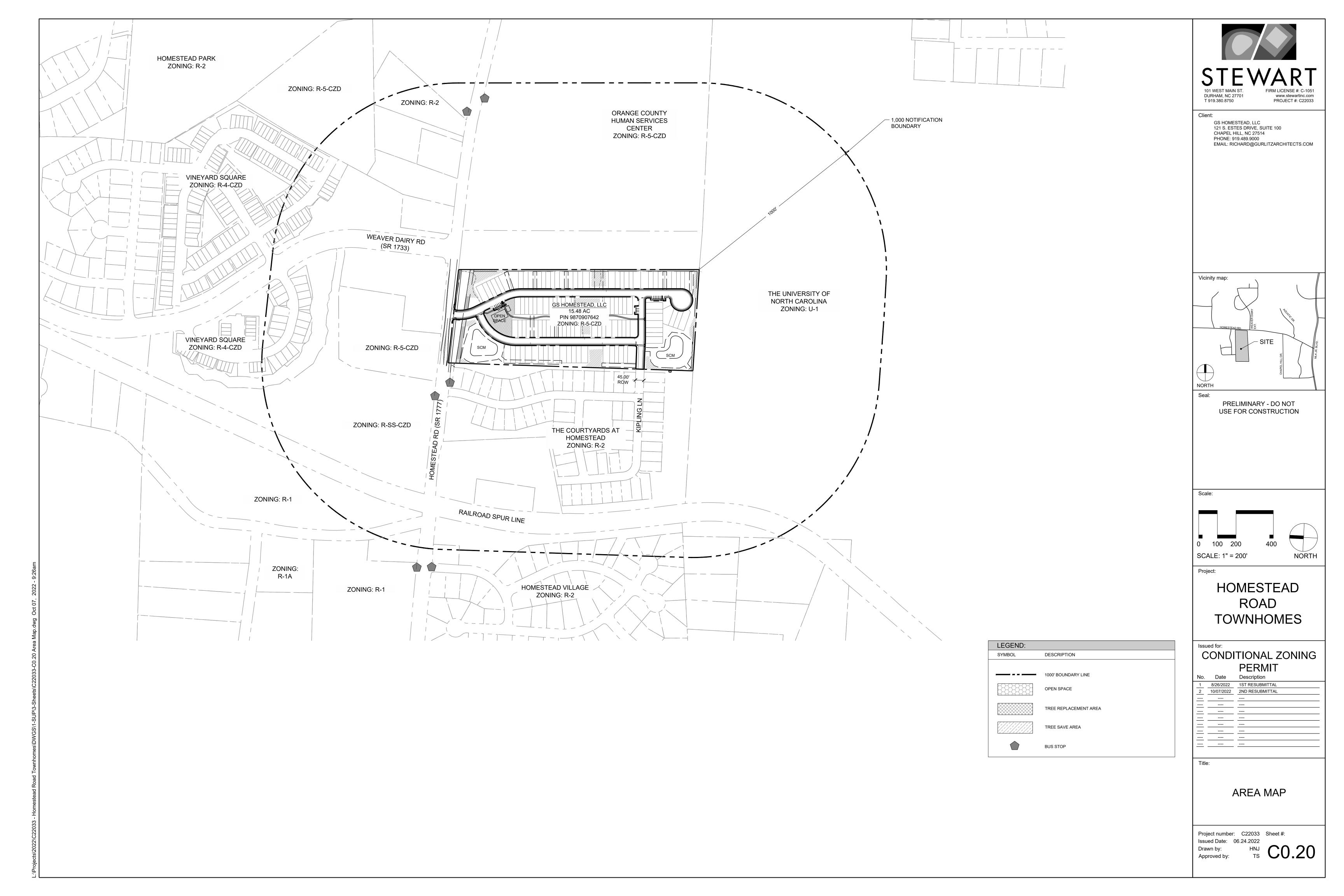
10/07/2022 2ND RESUBMITTAL

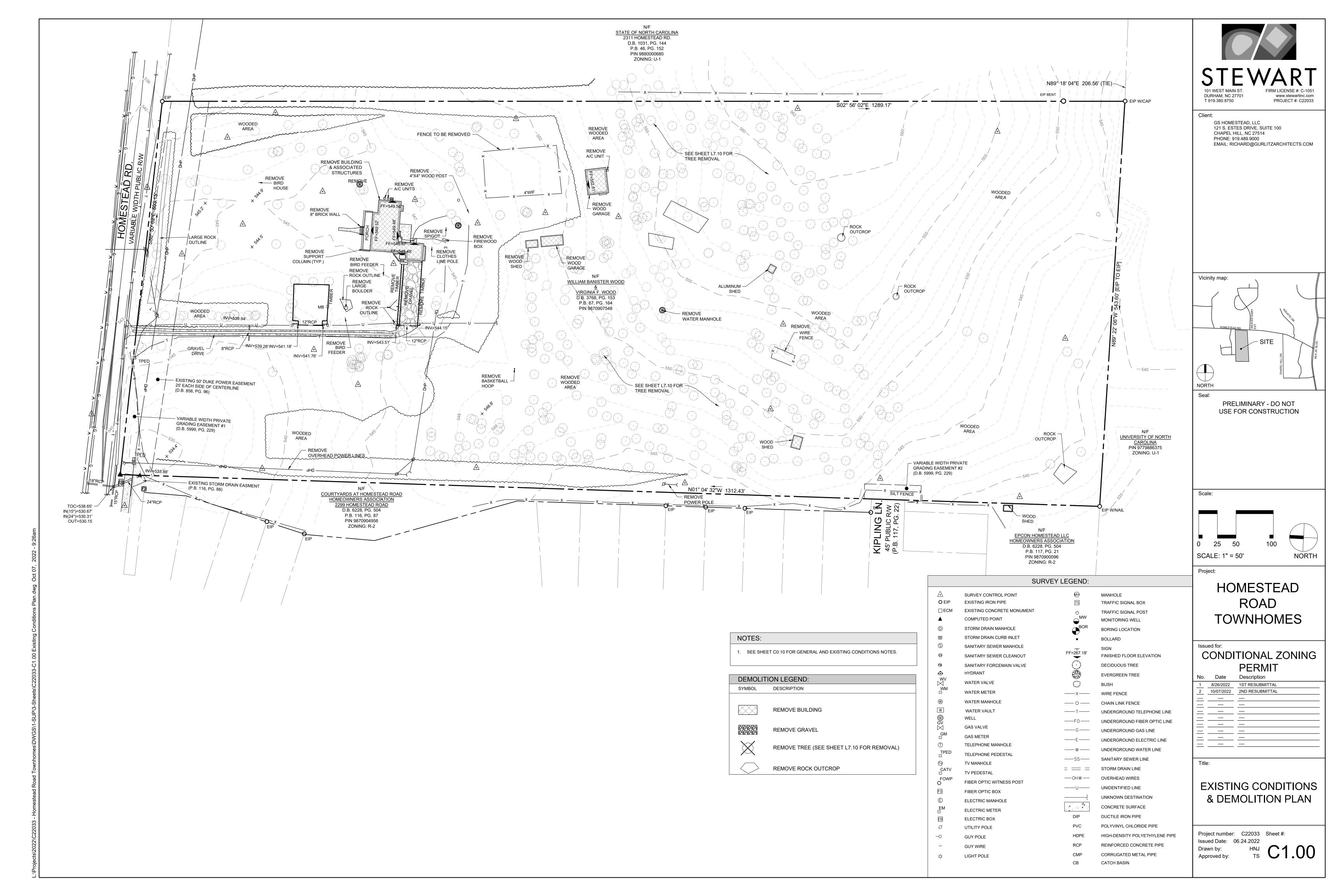
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GENERAL NOTES

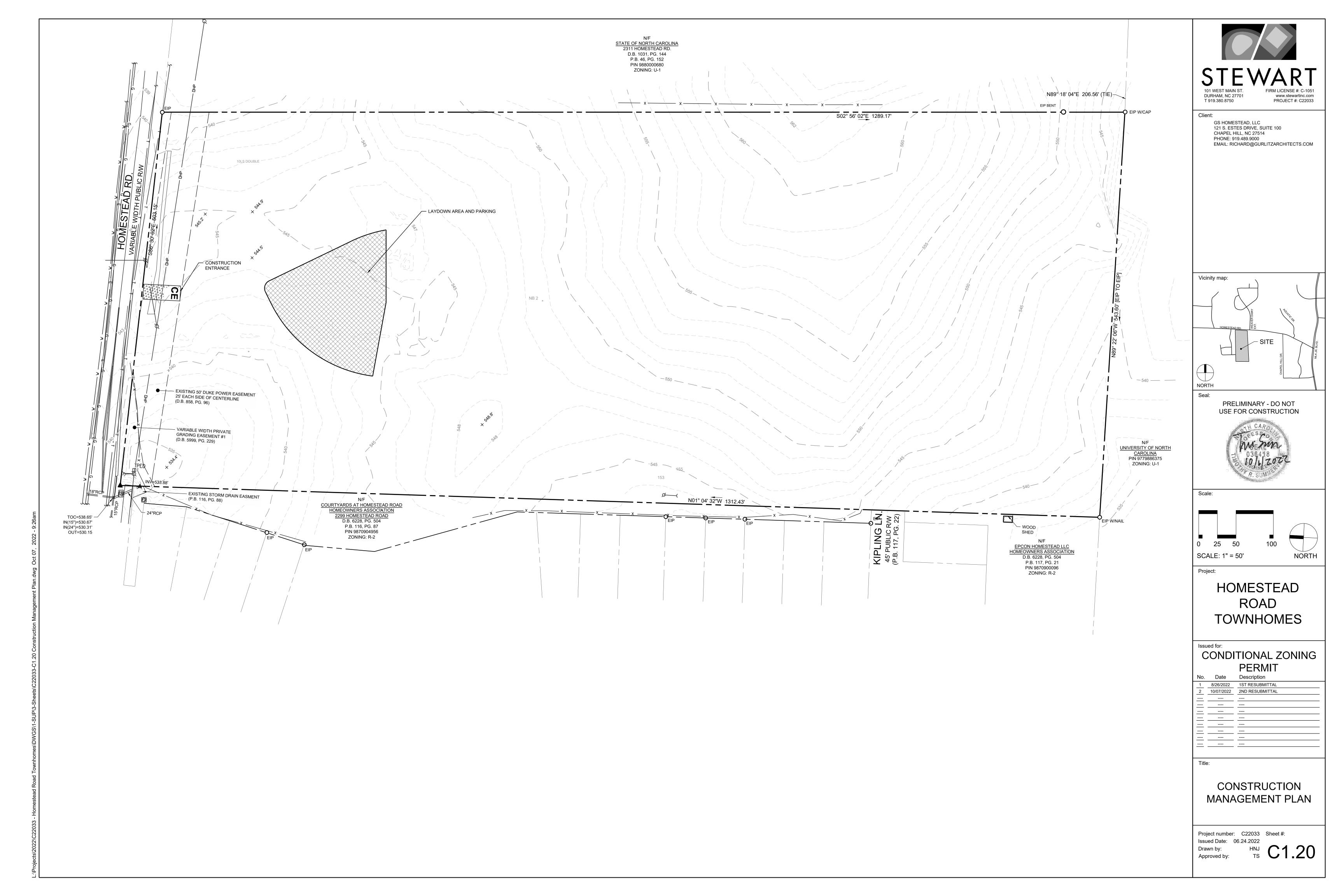
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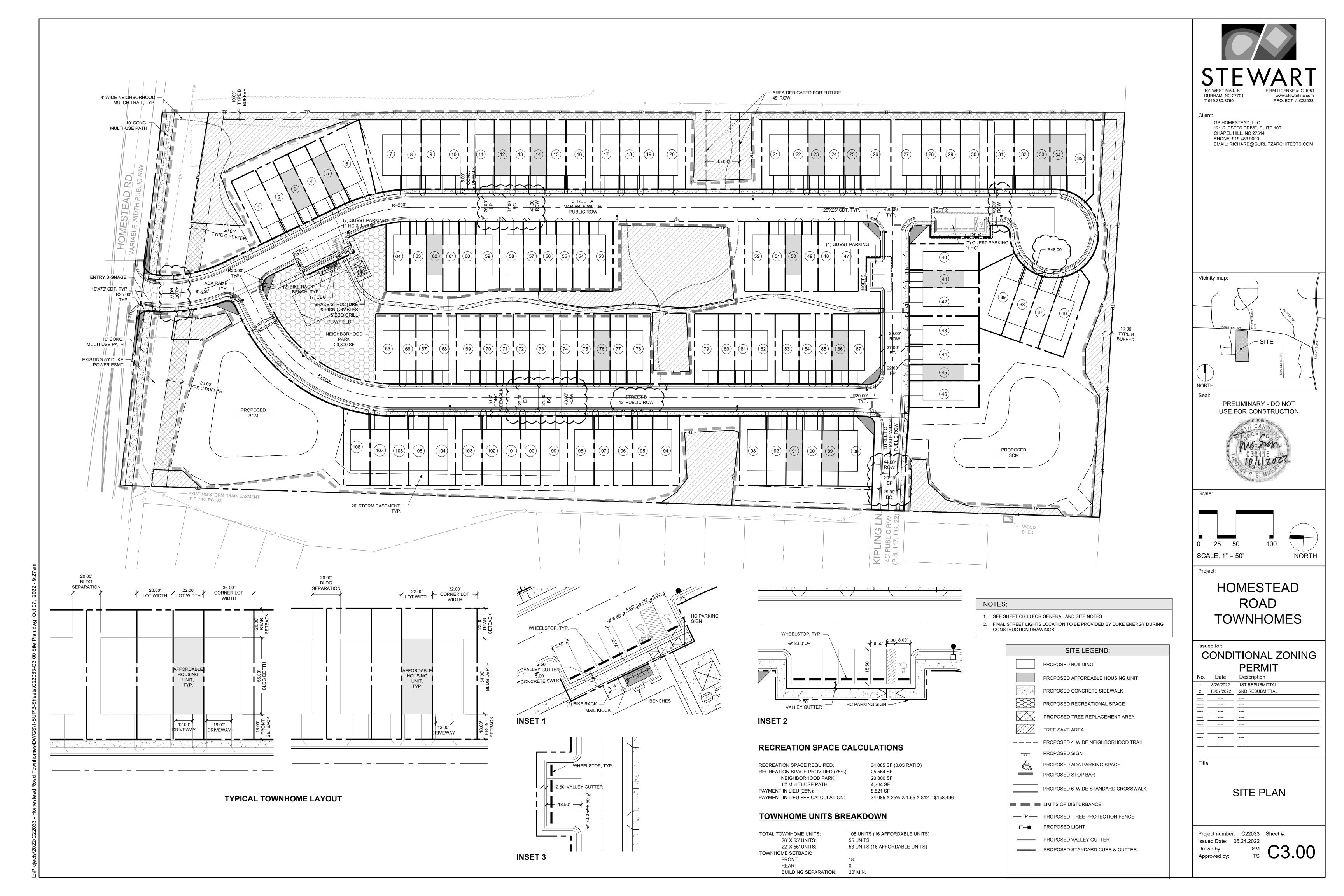
HNJ Approved by:

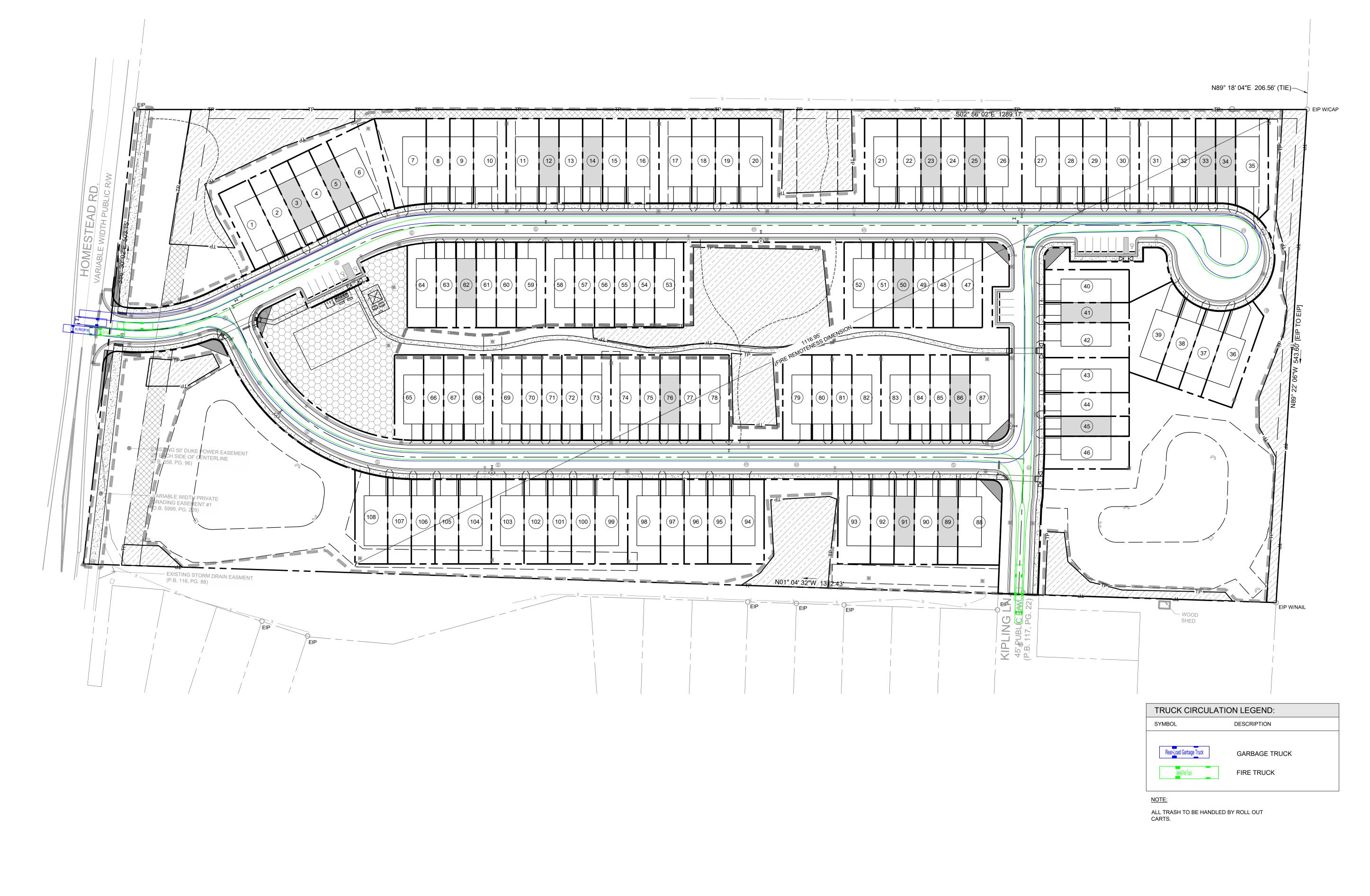














Client:

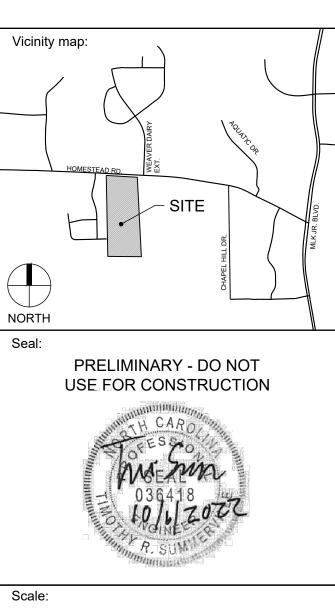
GS HOMESTEAD, LLC

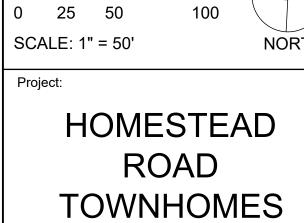
121 S. ESTES DRIVE, SUITE 100

CHAPEL HILL, NC 27514

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EMAIL: RICHARD@GURLITZARCHITECTS.COM





Issued for:

CONDITIONAL ZONING

PERMIT

No.	Date	Description
1	8/26/2022	1ST RESUBMITTAL
2	10/07/2022	2ND RESUBMITTAL

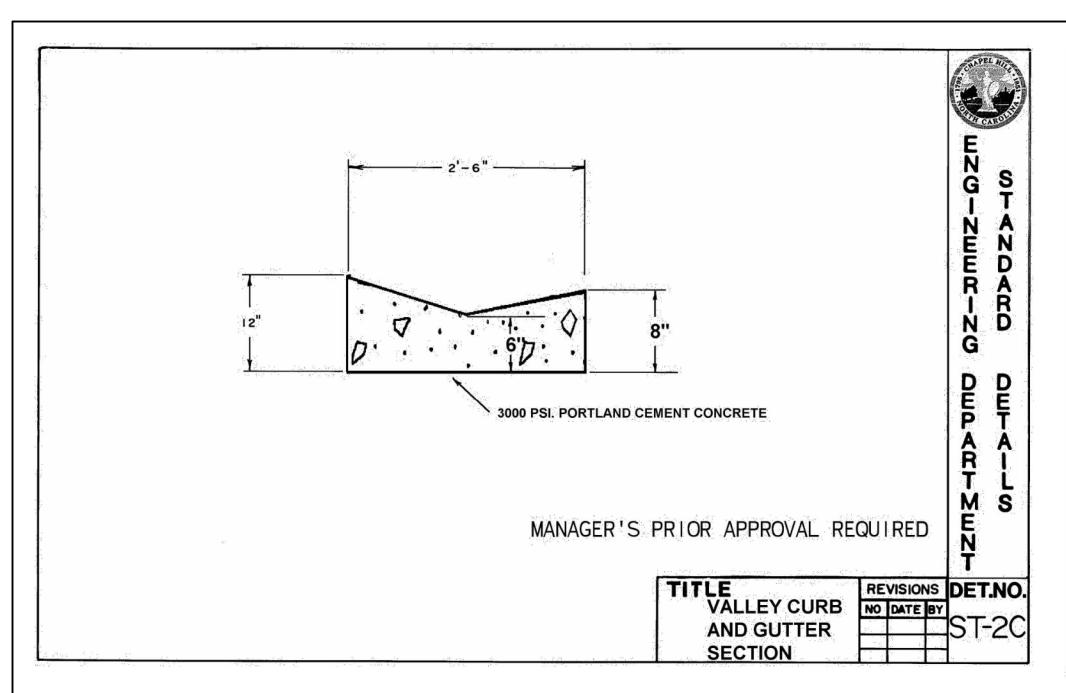
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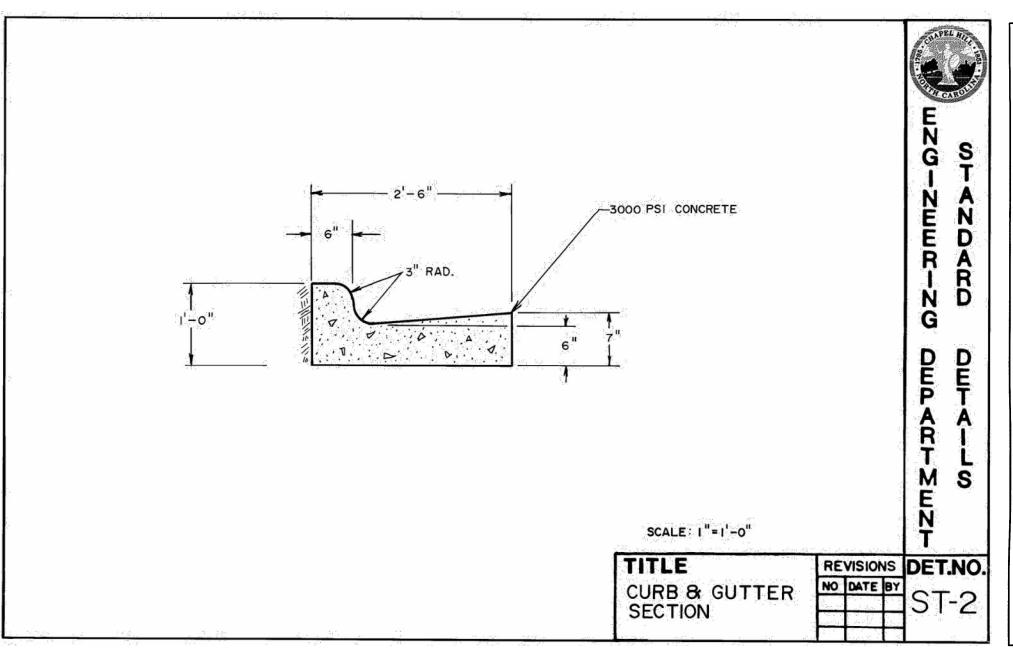
TRASH MANAGEMENT & FIRE APPARATUS PLAN

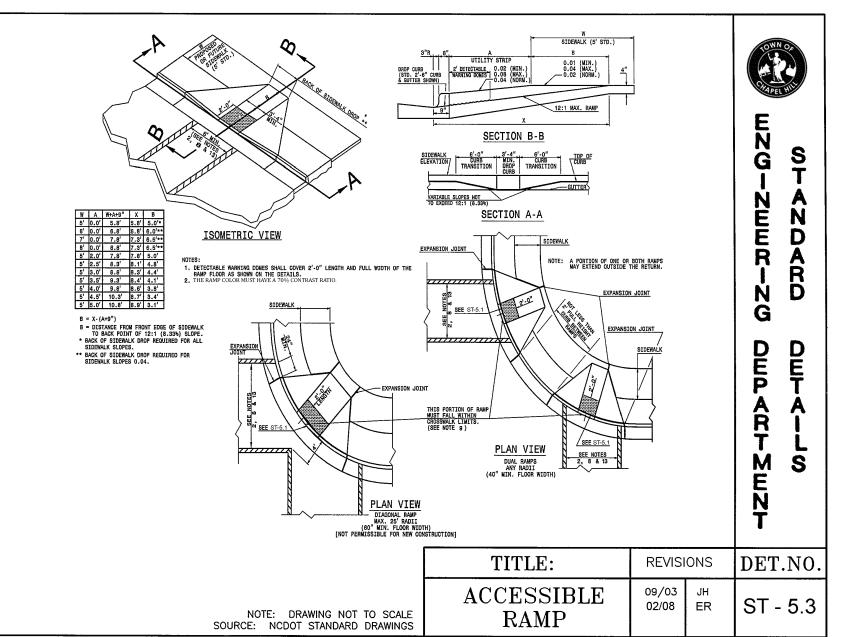
Project number: C22033 Sheet #: Issued Date: 06.24.2022

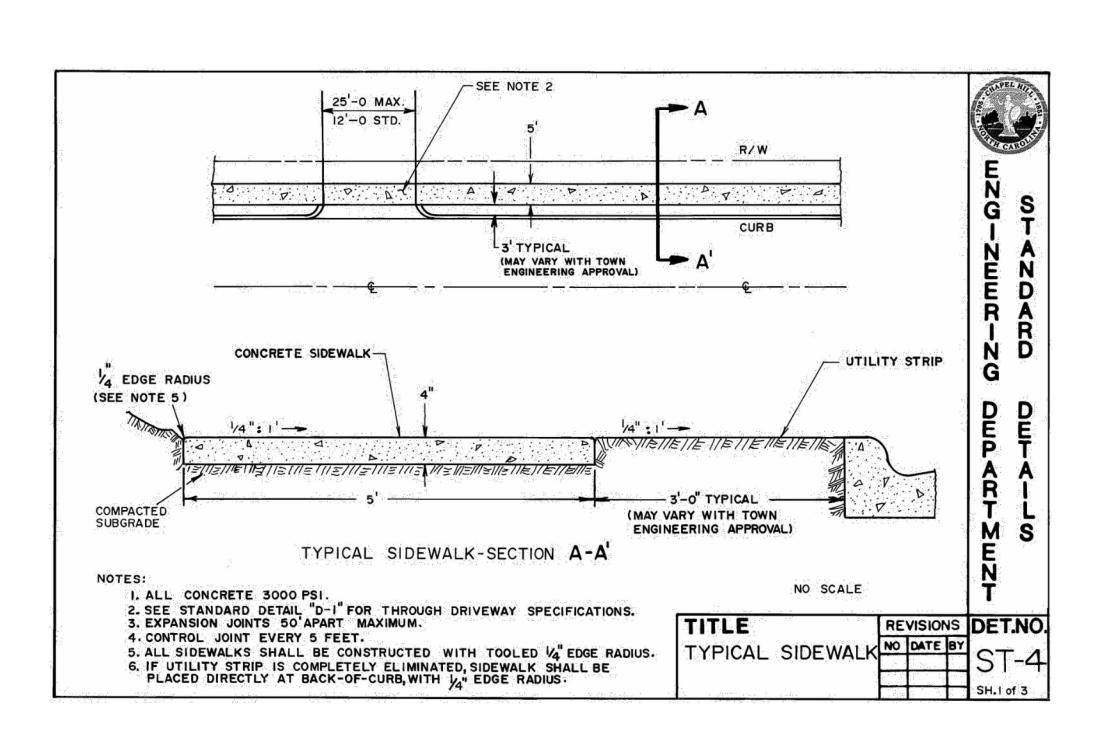
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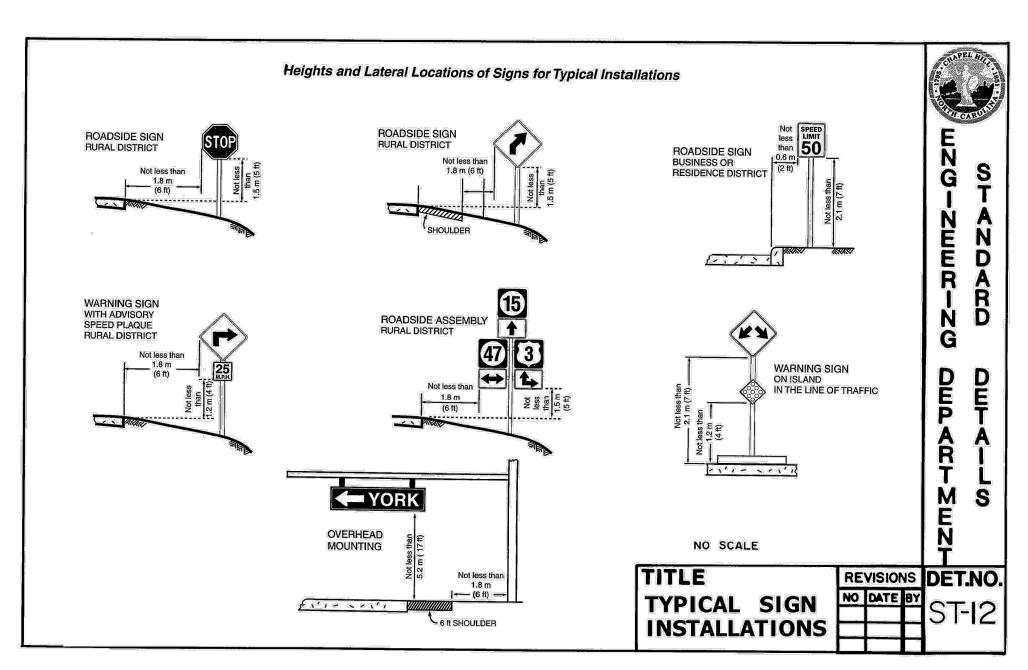
HNJ C3.10

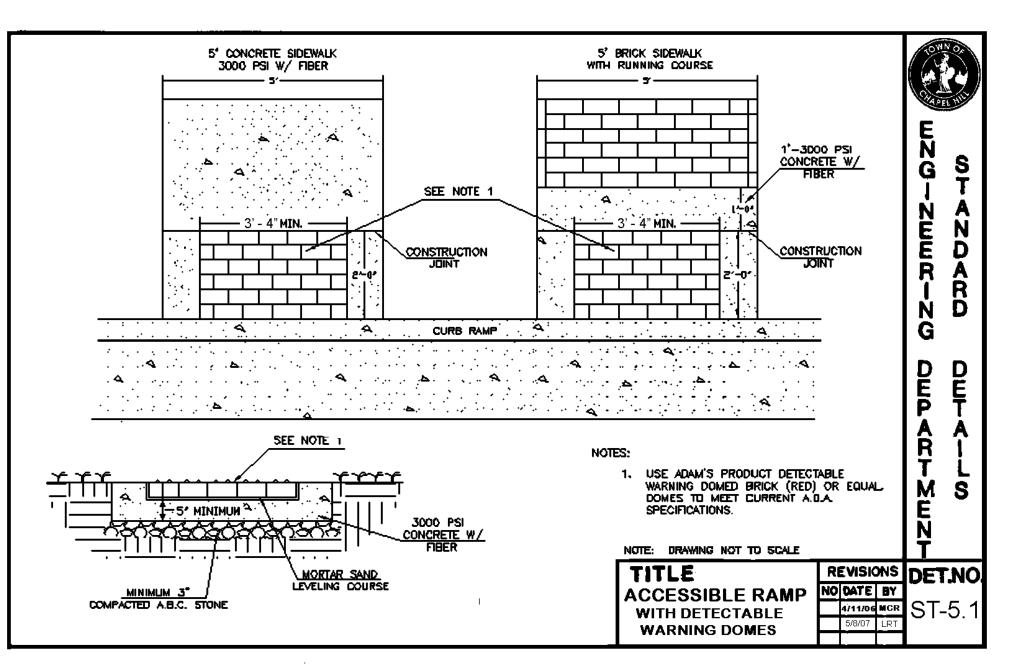














Client:

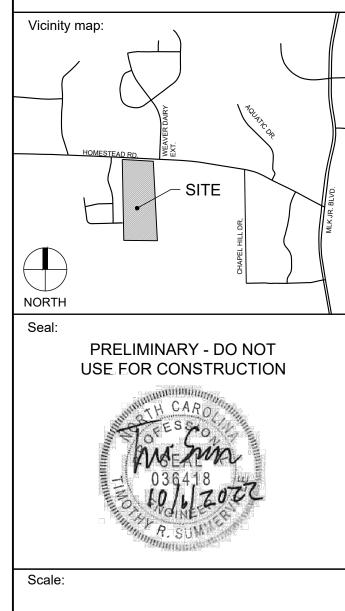
GS HOMESTEAD, LLC

121 S. ESTES DRIVE, SUITE 100

CHAPEL HILL, NC 27514

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EMAIL: RICHARD@GURLITZARCHITECTS.COM



SCALE: AS NOTED

Project:

HOMESTEAD ROAD TOWNHOMES

Issued for:

CONDITIONAL ZONING

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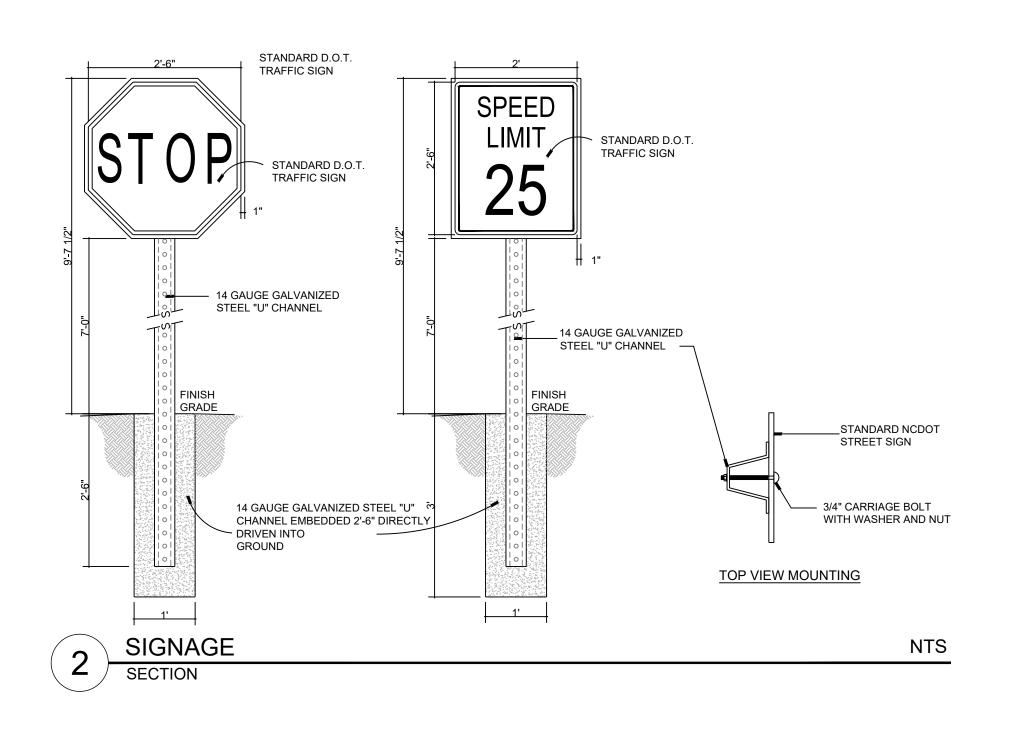
No.	Date	Description
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2	10/07/2022	2ND RESUBMITTAL

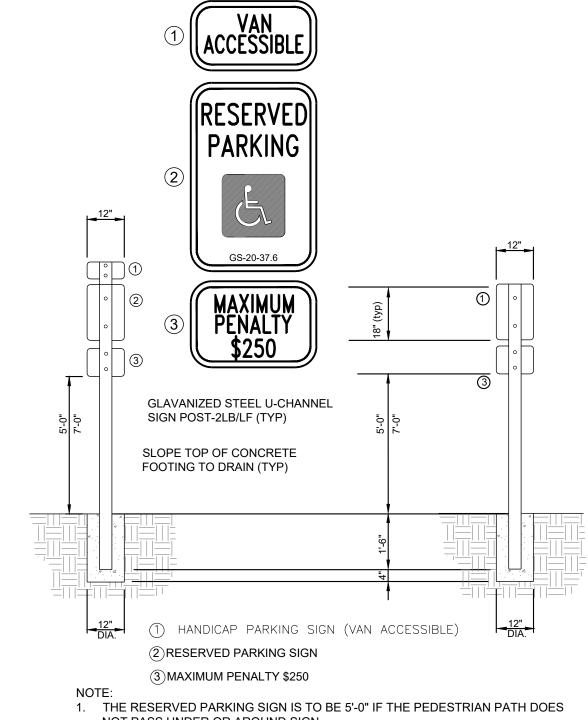
Title:

SITE DETAILS

Project number: C22033 Sheet #:
Issued Date: 06.24.2022

Drawn by: SM C3.90
Approved by: TS

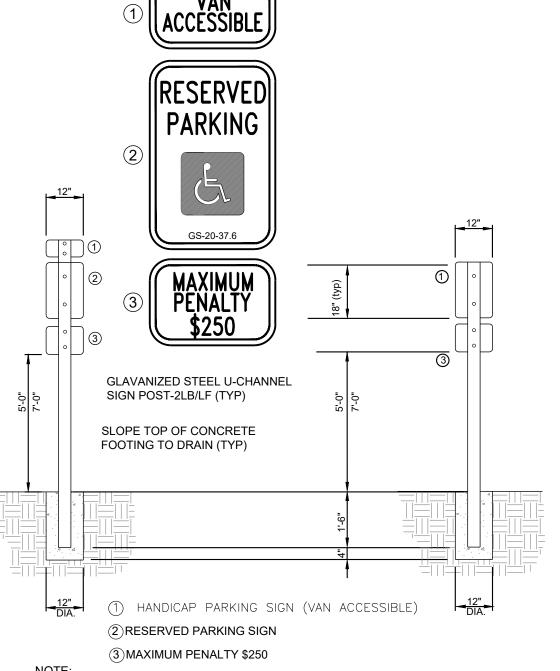




NOT PASS UNDER OR AROUND SIGN.

2. THE RESERVED PARKING SIGN IS TO BE 7'-0" IF THE PEDESTRIAN PATH GOES BY, UNDER, OR AROUND THE SIGN.





NORTH PRELIMINARY - DO NOT USE FOR CONSTRUCTION

101 WEST MAIN ST. DURHAM, NC 27701 T 919.380.8750

GS HOMESTEAD, LLC

121 S. ESTES DRIVE, SUITE 100 CHAPEL HILL, NC 27514 PHONE: 919.489.9000

EMAIL: RICHARD@GURLITZARCHITECTS.COM

Client:

Vicinity map:

NTS

www.stewartinc.com PROJECT #: C22033

SCALE: AS NOTED

HOMESTEAD ROAD TOWNHOMES

Issued for: CONDITIONAL ZONING PERMIT

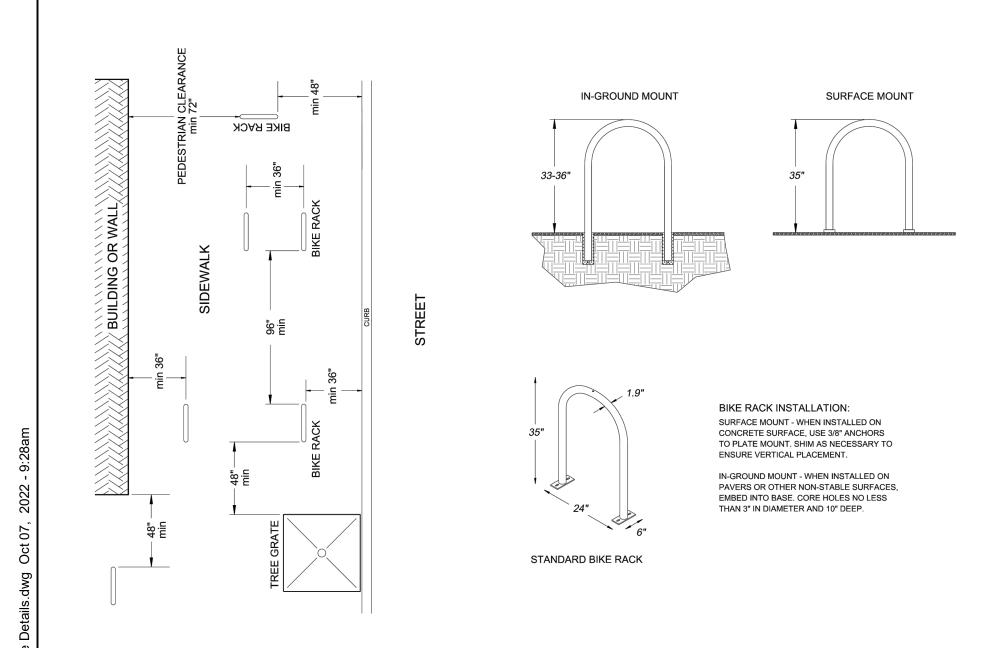
No.	Date	Description
1	8/26/2022	1ST RESUBMITTAL
2	10/07/2022	2ND RESUBMITTAL

SITE DETAILS

Project number: C22033 Sheet #: Issued Date: 06.24.2022 Drawn by:

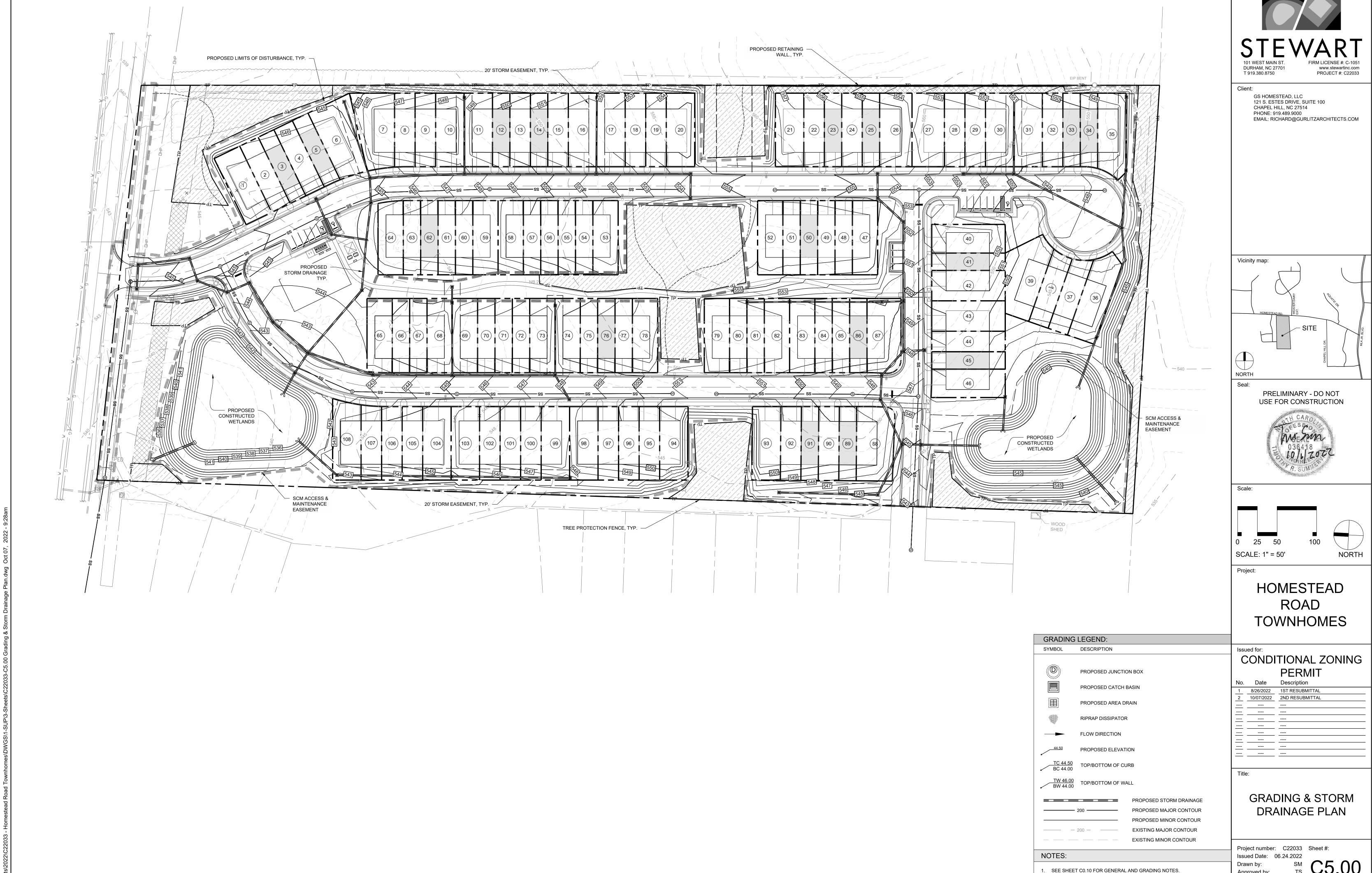
Approved by:

SM C3.91

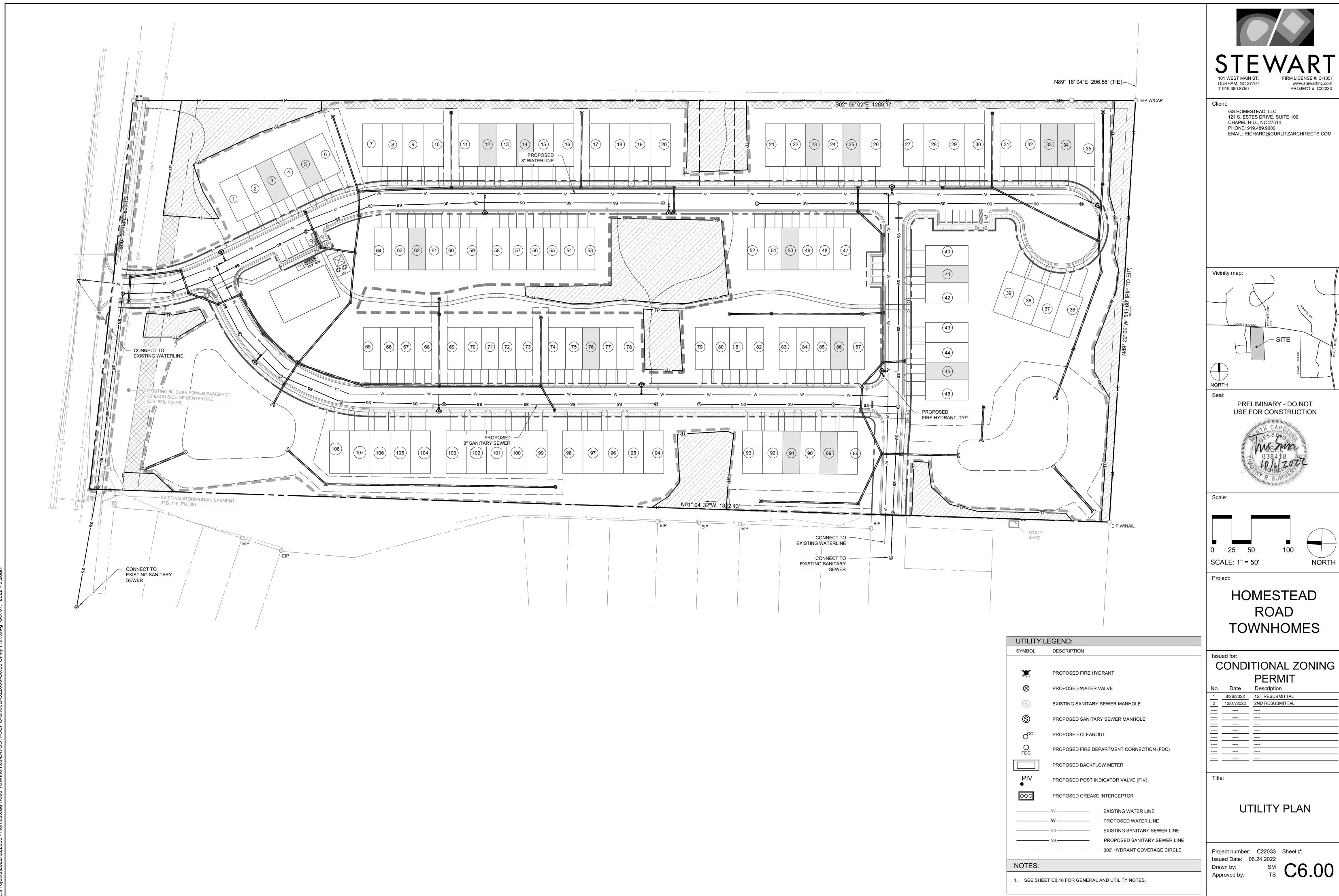


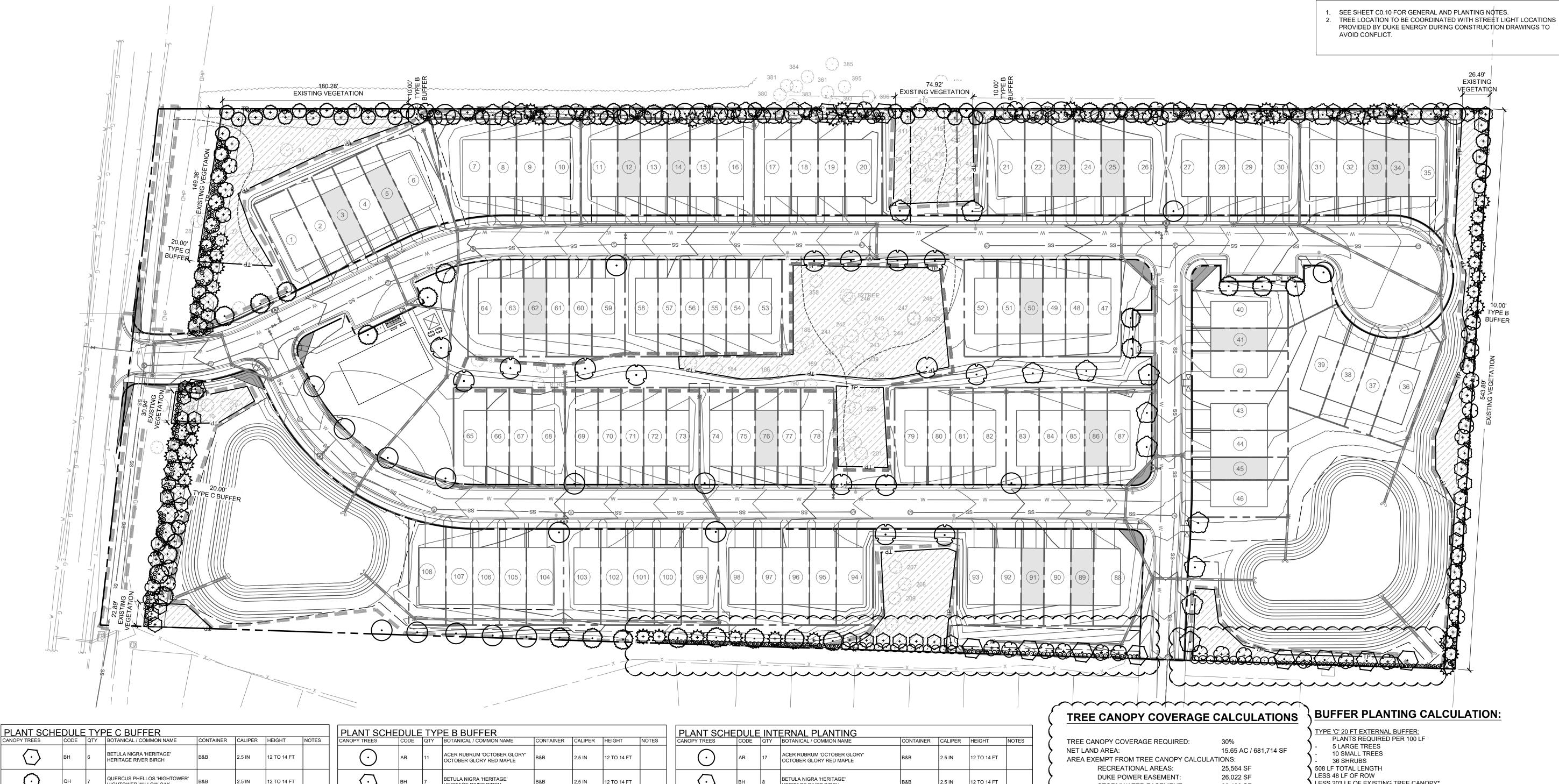
EXTERIOR BYCYCLE PARKING

NTS



Approved by:





CANOPY TREES	CODE	QTY	PE C BUFFER BOTANICAL / COMMON NAME	CONTAINER	CALIPER	HEIGHT	NOTES
CANOPT TREES	CODE	QIT	BOTANICAL / COMMON NAME	CONTAINER	CALIFER	I I I I I I I I I I I I I I I I I I I	INOTES
\bigcirc	ВН	6	BETULA NIGRA 'HERITAGE' HERITAGE RIVER BIRCH	B&B	2.5 IN	12 TO 14 FT	
0	QH	7	QUERCUS PHELLOS 'HIGHTOWER' HIGHTOWER WILLOW OAK	B&B	2.5 IN	12 TO 14 FT	
UNDERSTORY TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	CALIPER	HEIGHT	NOTES
\bigoplus	AA	11	AMELANCHIER ARBOREA DOWNY SERVICEBERRY	B&B	1 IN	8 FT	
\odot	СС	16	CERCIS CANADENSIS EASTERN REDBUD	B&B	1 IN	8 FT	
<u>•</u>	IS	8	ILEX X 'NELLIE R. STEVENS' NELLIE STEVENS HOLLY	B&B	1 IN	8 FT	
3)+¢	MS	12	MAGNOLIA VIRGINIANA SWEETBAY MAGNOLIA	B&B	1 IN	8 FT	
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	-	HEIGHT	NOTES
②	IG	58	ILEX GLABRA INKBERRY HOLLY	CONT.		18 IN	
۵	IN	61	ILEX VOMITORIA 'NANA' DWARF YAUPON HOLLY	CONT.		18 IN	
②	VC	48	VIBURNUM AWABUKI 'CHINDO' CHINDO SWEET VIBURNUM	CONT.		18 IN	

CANOPY TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	CALIPER	HEIGHT	NOTES	CANOPY TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	CALIPER	HEIGHT	NOT
\odot	AR	11	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	B&B	2.5 IN	12 TO 14 FT		\odot	AR	17	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	B&B	2.5 IN	12 TO 14 FT	
\bigcirc	вн	7	BETULA NIGRA 'HERITAGE' HERITAGE RIVER BIRCH	B&B	2.5 IN	12 TO 14 FT		\bigcirc	ВН	8	BETULA NIGRA 'HERITAGE' HERITAGE RIVER BIRCH	B&B	2.5 IN	12 TO 14 FT	
\bigcirc	NS	10	NYSSA SYLVATICA TUPELO	B&B	2.5 IN	12 TO 14 FT		\odot	NS (11	IYSSA SYLVATICA UPELO	B&B	2.5 IN	12 TO 14 FT	
\odot	QH	10	QUERCUS PHELLOS 'HIGHTOWER' HIGHTOWER WILLOW OAK	B&B	2.5 IN	12 TO 14 FT		\bigcirc	QN	15	QUERCUS NUTTALLII NUTTALL OAK	B&B	2.5 IN	12 TO 14 FT	
UNDERSTORY TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	CALIPER	HEIGHT	NOTES				QUERCUS PHELLOS 'HIGHTOWER'				
$\langle \cdot \rangle$	AA	30	AMELANCHIER ARBOREA	B&B	1 IN	8 FT			QH	19	HIGHTOWER WILLOW OAK	B&B	2.5 IN	12 TO 14 FT	
£+,3	I AA	30	DOWNY SERVICEBERRY	ΒαΒ	I IN	0 F1		UNDERSTORY TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	CALIPER	HEIGHT	NC
\odot	СС	29	CERCIS CANADENSIS EASTERN REDBUD	B&B	1 IN	8 FT		$ \bigcirc$	AA	12	AMELANCHIER ARBOREA DOWNY SERVICEBERRY	B&B	1 IN	8 FT	
\odot	IS	37	ILEX X 'NELLIE R. STEVENS' NELLIE STEVENS HOLLY	B&B	1 IN	8 FT		\bigcirc	СС	7	CERCIS CANADENSIS EASTERN REDBUD	B&B	1 IN	8 FT	
****	MS	28	MAGNOLIA VIRGINIANA SWEETBAY MAGNOLIA	B&B	1 IN	8 FT		\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	MS	6	MAGNOLIA VIRGINIANA SWEETBAY MAGNOLIA	B&B	1 IN	8 FT	
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	-	HEIGHT	NOTES	SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	-	HEIGHT	NC
②	IG	60	ILEX GLABRA INKBERRY HOLLY	CONT.		18 IN		0	FL	26	FORSYTHIA X INTERMEDIA 'LYNWOOD GOLD' LYNWOOD GOLD FORSYTHIA	CONT.		2`-2.5`	
۵	IN	63	ILEX VOMITORIA 'NANA' DWARF YAUPON HOLLY	CONT.		18 IN		\bigcirc	IJ	43	ILEX CRENATA 'STEEDS' STEEDS JAPANESE HOLLY	CONT.		18-24"	
②	VC	90	VIBURNUM AWABUKI 'CHINDO' CHINDO SWEET VIBURNUM	CONT.		18 IN		> ⊗	LG	84	LOROPETALUM CHINENSE 'PURPLE DIAMOND' PURPLE DIAMOND LOROPETALUM	CONT.		18-24"	

TREE CANOPY COVERAGE REQUIRED:	30%
NET LAND AREA:	15.65 AC / 681,714 SF
AREA EXEMPT FROM TREE CANOPY CALCULA	TIONS:
RECREATIONAL AREAS:	25,564 SF
DUKE POWER EASEMENT:	26,022 SF
STORMWATER EASEMENT:	90,430 SF
RIGHT-OF-WAY:	123,839 SF
TOTAL LAND ARE EXEMPTED:	265,855 SF
APPLICABLE LAND AREA:	415,859 SF
TREE CANOPY REQUIRED:	124,757 SF (30%)
EXISTING TREE CANOPY TO REMAIN:	64,193 SF
ADDITIONAL TREE CANOPY REQUIRED:	60,564 SF
REQUIRED REPLACEMENT TREES (1 PER 500 S	SF): 121
PROPOSED REPLACEMENT TREES:	121
BUFFER CANOPY TREES:	51
INTERNAL CANOPY TREES:	70
~~~~~~~~	~~~~

LESS 203 LF OF EXISTING TREE CANOPY* APPLICABLE LENGTH = 257 LF REQUIRED: PROPOSED: 13 LG TREES 13 LG TREES 26 SM TREES 26 SM TREES 94 SHRUBS 94 SHRUBS SUPPLEMENTAL PLANTING IN BUFFER WITH EXISTING VEGETATION* - 21 SMALL TREES

NOTES:

TYPE 'B' 10 FT INTERNAL BUFFER: PLANTS REQUIRED PER 100 LF - 4 LARGE TREES 7 SMALL TREES - 12 SHRUBS 1,750 LF TOTAL LENGTH LESS 825 LF OF EXISTING TREE CANOPY*

- 73 SHRUBS

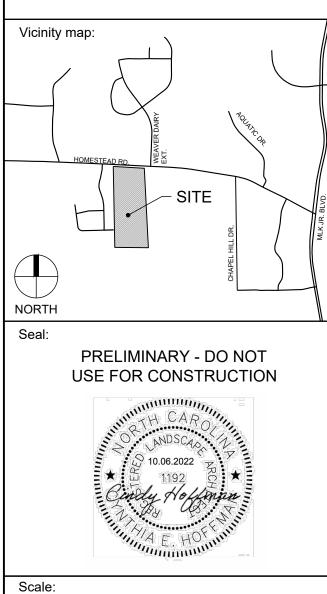
APPLICABLE LENGTH = 925 LF REQUIRED: PROPOSED: 37 LG TREES 37 LG TREES 65 SMALL TREES 65 SMALL TREES 111 SHRUBS 111 SHRUBS

SUPPLEMENTAL PLANTING IN BUFFER WITH EXISTING VEGETATION* - 58 SMALL TREES - 100 SHRUBS

- EXISTING VEGETATION SHALL BE USED TO SATISFY SOME OF THE REQUIRED BUFFER Title: PLANTING. SEE PLAN FOR LOCATION AND LENGTH. - SUPPLEMENTAL PLANTING ARE PROVIDED IN BUFFER AREA WHERE EXISTING VEGETATION ARE USED TO MEET REQUIREMENT. SUPPLEMENTAL PLANTING SHALL INCLUDE UNDERSTORY TREES AND EVERGREEN SHRUBS. SEE PLAN FOR LOCATION AND PLACEMENT.



Client: GS HOMESTEAD, LLC 121 S. ESTES DRIVE, SUITE 100 CHAPEL HILL, NC 27514 PHONE: 919.489.9000 EMAIL: RICHARD@GURLITZARCHITECTS.COM



0 25 50 SCALE: 1" = 50' NORTH Project: HOMESTEAD ROAD

Issued for: CONDITIONAL ZONING PERMIT

TOWNHOMES

No. Date Description 8/26/2022 1ST RESUBMITTAL 10/07/2022 2ND RESUBMITTAL _____

**CODE PLANTING PLAN** 

Project number: C22033 Sheet #: Issued Date: 06.24.2022 Drawn by:

CH Approved by:

SITE LEGEND:

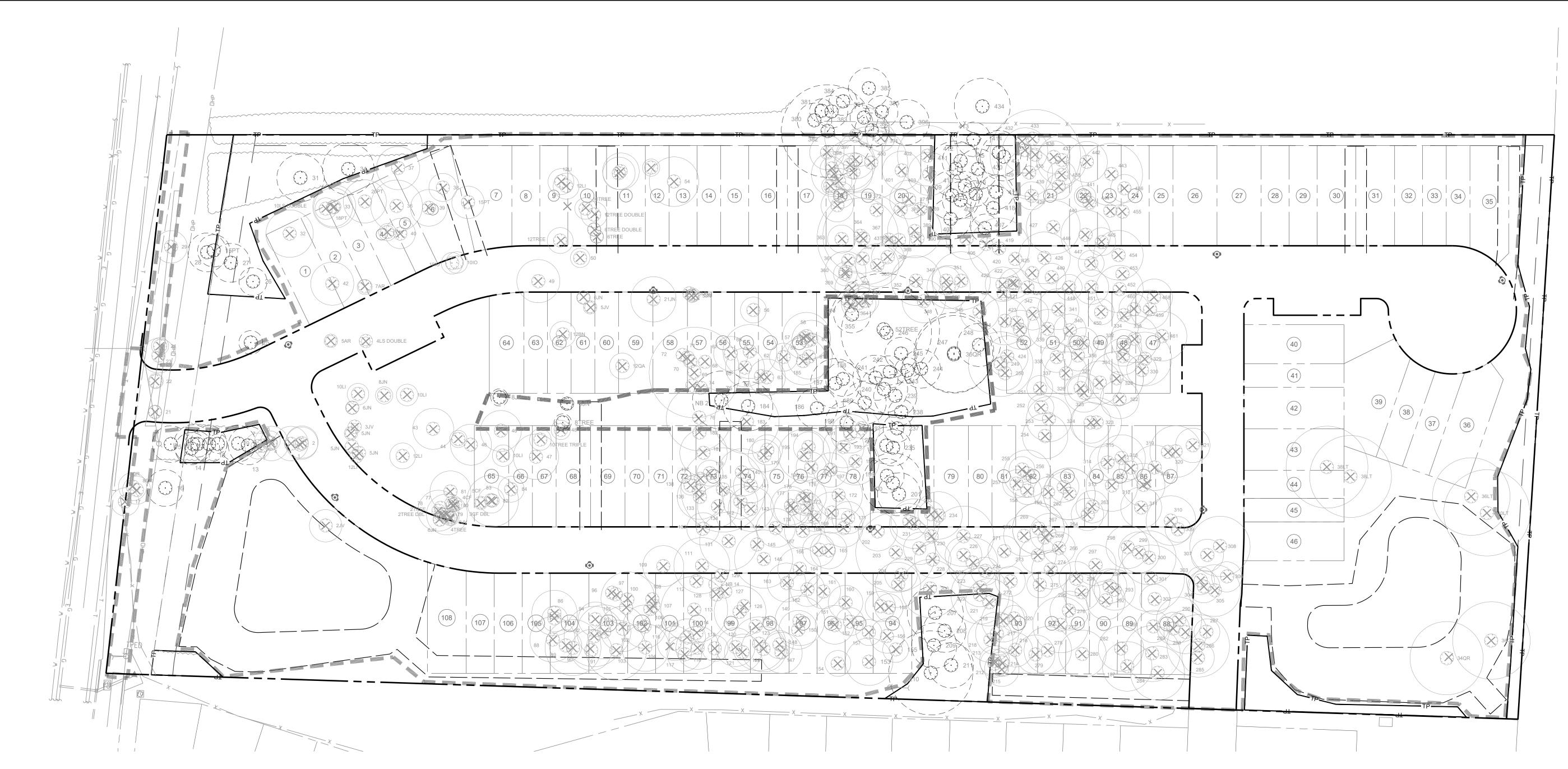
PROPOSED TREE REPLACEMENT AREA

TREE SAVE AREA

— — — PROPOSED 4' WIDE NEIGHBORHOOD TRAIL

LIMITS OF DISTURBANCE

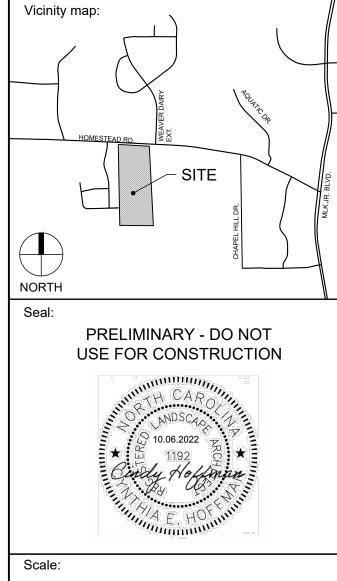
— TP — PROPOSED TREE PROTECTION FENCE



LINETYPE LEG	GEND:
SYMBOL	DESCRIPTION
	LIMITS OF DISTURBANCE
	PROPERTY LINE
	TREE PROTECTION FENCE
	EXISTING TREE TO REMAIN
(3	EXISTING TREE TO BE REMOVE



Client: GS HOMESTEAD, LLC 121 S. ESTES DRIVE, SUITE 100 CHAPEL HILL, NC 27514 PHONE: 919.489.9000 EMAIL: RICHARD@GURLITZARCHITECTS.COM



## HOMESTEAD ROAD TOWNHOMES

0 25 50

SCALE: 1" = 50'

CONDITIONAL ZONING PERMIT

No.	Date	Description
_1_	8/26/2022	1ST RESUBMITTAL
2	10/07/2022	2ND RESUBMITTAL

LANDSCAPE PROTECTION PLAN

Project number: C22033 Sheet #:
Issued Date: 06.24.2022
Drawn by: SM
Approved by: CH

1D# -「	CODE +	Sw eetgum	Scientific Name Liquidambar styraciflua	15	Rare or Spec •	Multistem Nun
3 4	JUVI PRSE LIST	Eastern Red Cedar Black Cherry Sw eetgum	Juniperus virginiana Prunus serratina Liquidambar styraciflua	15 16 16	Rare Specimen Specimen	
5 6 7	PITA COFL LIST	Loblolly Pine Dogw ood Sw eetgum	Pinus taeda Cornus florida Liquidambar styraciflua	19 9 12	Specimen Specimen Specimen	
<del>8</del> 9	JUVI LIST	Eastern Red Cedar Sw eetgum	Juniperus virginiana Liquidambar styraciflua	<del>13</del> 17	Rare Specimen	
10 11 12	JUVI LIST	Eastern Red Cedar Sw eetgum	Prunus serratina Juniperus virginiana Liquidambar styraciflua	9 17 12	NA Rare Specimen	
13 14 15	LITU PYCA	Loblolly Pine Tulip Poplar Callery Pear	Pinus taeda Liriodendron tulipifera Pyrus calleryana	18 15 17	Specimen Specimen NA	
16 17 18	PYCA JUVI CECA	Callery Pear  Eastern Red Cedar  Eastern Redbud	Pyrus calleryana  Juniperus virginiana  Cercis canadensis	17 13 8	NA Rare Specimen	
19 20	ILOP LITU	American Holly Tulip Poplar	llex opaca Liriodendron tulipifera	7 15	Specimen Specimen	
21 22 23	COFL COFL LITU	Dogw ood Dogw ood Tulip Poplar	Cornus florida Cornus florida Liriodendron tulipifera	6 7 16	Specimen Specimen	
24 25 26	COFL MAGR MAGR	Dogw ood Southern Magnolia Southern Magnolia	Cornus florida  Magnolia grandiflora  Magnolia grandiflora	8 11 13	Specimen NA Specimen	
27 28	LIST PITA	Sw eetgum Loblolly Pine	Liquidambar styraciflua Pinus taeda	18 18 15	Specimen Specimen	
30 31	LITU	Tulip Poplar Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera Liriodendron tulipifera	24 22	Specimen Specimen	
32 33 34	PITA LITU PITA	Loblolly Pine Tulip Poplar Loblolly Pine	Pinus taeda Liriodendron tulipifera Pinus taeda	22 20 24	Specimen Specimen Specimen	
35 36 37	LIST PITA PITA	Sw eetgum Loblolly Pine Loblolly Pine	Liquidambar styraciflua Pinus taeda Pinus taeda	14 24 20	Specimen Specimen Specimen	
38 39	LIST LIST	Sw eetgum Sw eetgum	Liquidambar styraciflua Liquidambar styraciflua	13 17 14	Specimen Specimen	
40 41 42	JUVI JUVI ACRU	Eastern Red Cedar Eastern Red Cedar Red Maple	Juniperus virginiana Juniperus virginiana Acer rubrum	8 20	Specimen Specimen	
43 44 45	BENI CRAT LITU	River Birch Haw thorn Tulip Poplar	Betula nigra Crataegus species Liriodendron tulipifera	19 8 19	Specimen Specimen	
46 47 48	BENI BENI COFL	River Birch River Birch	Betula nigra  Betula nigra  Betula nigra  Cornus florida	19 19 21 9	Specimen Specimen	
49 50	Morris PYCA	Dogw ood Mulberry Callery Pear	Morus Sp Pyrus calleryana	20 <del>9</del>	Specimen NA Rare	
<del>51</del> 52 53	LITU LITU	Eastern Redbud Tulip Poplar Tulip Poplar	Cercis canadensis Liriodendron tulipifera Liriodendron tulipifera	16 19 17	Rare Specimen Specimen	
54 55 56	JUNI LITU JUNI	Black Walnut Tulip Poplar Black Walnut	Juglans nigra  Liriodendron tulipifera  Juglans nigra	23 35 12	Specimen  Rare  Specimen	
57 58	ACRU QUAL	Red Maple White Oak	Acer rubrum Quercus alba	12 22	Specimen Specimen	
59 60 61	QUAL LITU LITU	White Oak Tulip Poplar Tulip Poplar	Quercus alba Liriodendron tulipifera Liriodendron tulipifera	22 18 21	Specimen Specimen Specimen	
62 63 64	CARYA CARYA ACRU	Hickory Hickory Red Maple	Carya species Carya species Acer rubrum	13 17 16	Specimen Specimen	_
65 66	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	18 25	Specimen Rare	
67 68 69	CARYA QUVE	Sw eetgum Hickory Black Oak	Liquidambar styraciflua Carya species Quercus velutina	16 17 42	Specimen Specimen Rare	
70 71 72	ULAL JUNI CARYA	Winged Elm Black Walnut Hickory	Ulmus alatus Juglans nigra Carya species	14 17 13	Specimen Specimen Specimen	
73 74 75	LITU LITU	Tulip Poplar Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera Liriodendron tulipifera	21 20 27	Specimen Specimen Rare	
<del>76</del> 77	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	30 15	Rare Specimen	
78 79 80	PRSE DVI	Tulip Poplar Black Cherry Persimmon	Liriodendron tulipifera Prunus serratina Diosporos virginiana	19 19 10	Specimen Specimen	
81 82 83	CAIL LIST LIST	Pecan Sw eetgum Sw eetgum	Carya illinoiensis Liquidambar styraciflua Liquidambar styraciflua	19 12 24	Specimen Specimen Rare	
84 85 86	CAIL CAIL LITU	Pecan Pecan	Carya illinoiensis Carya illinoiensis	12 13 21	Specimen Specimen	
87 88	LITU LIST	Tulip Poplar Tulip Poplar Sw eetgum	Liriodendron tulipifera Liriodendron tulipifera Liquidambar styraciflua	12 21	Specimen Specimen Specimen	
89 90 91	QUAL QUAL LIST	White Oak White Oak Sw eetgum	Quercus alba  Quercus alba  Liquidambar styraciflua	15 26 19	Specimen Rare Specimen	
92 93 94	LIST QUAL LIST	Sw eetgum White Oak Sw eetgum	Liquidambar styraciflua  Quercus alba  Liquidambar styraciflua	28 25 16	Rare Rare Specimen	
95 96	QUPH LIST	Willow Oak Sw eetgum	Quercus phellos Liquidambar styraciflua	12 16	Specimen Specimen	
97 98 99	QUAL PRSE PRSE	White Oak Black Cherry Black Cherry	Quercus alba Prunus serratina Prunus serratina	16 8 6	Specimen NA NA	
00 01 02	LIST LIST QUAL	Sw eetgum Sw eetgum White Oak	Liquidambar styraciflua Liquidambar styraciflua Quercus alba	25 16 21	Rare Specimen Specimen	
03 04 05	QUVE QUAL QUAL	Black Oak White Oak White Oak	Quercus velutina Quercus alba Quercus alba	28 22 20	Rare Specimen Specimen	
06 07	QUAL QUMA	White Oak Blackjack Oak	Quercus alba Quercus marilandica	15 23	Specimen Specimen	
108 109 110	QUAL PITA PITA	White Oak Loblolly Pine Loblolly Pine	Quercus alba Pinus taeda Pinus taeda	17 19 22	Specimen Specimen Specimen	
11 12 13	QUAL LIST QUAL	White Oak Sw eetgum White Oak	Quercus alba Liquidambar styraciflua Quercus alba	26 17 31	Rare Specimen Rare	
14 15	LITU QUAL	Tulip Poplar White Oak	Liriodendron tulipifera Quercus alba	22 17	Specimen Specimen	
16 17 18	QUAL LIST FRAX	White Oak Sw eetgum Ash	Quercus alba Liquidambar styraciflua Fraxinus species	16 16 20	Specimen Specimen	
119 120 121	CATO QUAL QUAL	Mockernut Hickory White Oak White Oak	Carya tomentosa Quercus alba Quercus alba	12 18 17	Specimen Specimen Specimen	
122 123 124	LITU QUAL CATO	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	21 25 13	Specimen  Rare  Specimen	
<del>125</del> 126	QUAL LIST	Mockernut Hickory White Oak Sw eetgum	Carya tomentosa  Quercus alba  Liquidambar styraciflua	<del>24</del> 14	Rare Specimen	
127 128 129	FRAX NYSY NYSY	Ash Blackgum Blackgum	Fraxinus species Nyssa sylvatica Nyssa sylvatica	15 13 12	Specimen Specimen Specimen	
130 131 132	ILOP NYSY LIST	American Holly  Blackgum  Sw eetgum	llex opaca  Nyssa sylvatica  Liquidambar styraciflua	6 27 15	Specimen Rare Specimen	
133 134	LIST LITU	Sw eetgum Tulip Poplar	Liquidambar styraciflua Liriodendron tulipifera	21 19	Specimen Specimen	
1 <del>35</del> 136 137	LITU LIST QUMA	Tulip Poplar Sw eetgum Blackjack Oak	Liriodendron tulipifera Liquidambar styraciflua Quercus marilandica	13 13	Specimen Specimen	
138 139 140	OXAR QUAL CATO	Sourwood White Oak Mockernut Hickory	Oxydendron arboreum Quercus alba Carya tomentosa	9 12 22	Specimen Specimen Specimen	
141 142	NYSY QUVE	Blackgum Black Oak	Nyssa sylvatica Quercus velutina	16 16	Specimen Specimen	
143 144 145	QUAL QUAL LIST	White Oak White Oak Sw eetgum	Quercus alba Quercus alba Liquidambar styraciflua	21 18 15	Specimen Specimen Specimen	
146 147 148	LIST QUAL QUAL	Sw eetgum White Oak White Oak	Liquidambar styraciflua Quercus alba Quercus alba	27 19 13	Specimen Specimen	
149 150	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	23 18	Specimen Specimen	
151 152 153	CATO FRAX	Sw eetgum  Mockernut Hickory  Ash	Liquidambar styraciflua Carya tomentosa Fraxinus species	18 13 22	Specimen Specimen	
154 155 156	CATO LIST CAGL	Mockernut Hickory Sw eetgum Pignut Hickory	Carya tomentosa Liquidambar styraciflua Carya glabra	12 12 16	Specimen Specimen Specimen	
157 158	CAGL LIST	Pignut Hickory Sw eetgum	Carya glabra Liquidambar styraciflua	12 13	Specimen Specimen	
159 160 161	QUAL QUVE CATO	White Oak Black Oak Mockernut Hickory	Quercus alba Quercus velutina Carya tomentosa	14 16 16	Specimen Specimen	
162 163 164	CAGL QUAL QUAL	Pignut Hickory White Oak White Oak	Carya glabra Quercus alba Quercus alba	16 18 20	Specimen Specimen Specimen	
165 166 167	CATO LIST LITU	Mockernut Hickory Sw eetgum Tulip Poplar	Carya tomentosa Liquidambar styraciflua Liriodendron tulipifera	17 15 17	Specimen Specimen Specimen	_
168 169	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	13 19	Specimen Specimen	
70  71  72	QUAL LITU QUAL	White Oak Tulip Poplar White Oak	Quercus alba Liriodendron tulipifera Quercus alba	18 15 22	Specimen Specimen Specimen	
173 174 175	LITU FRAX LITU	Tulip Poplar Ash Tulip Poplar	Liriodendron tulipifera Fraxinus species Liriodendron tulipifera	14 17 18	Specimen Specimen Specimen	
176 177	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	18 18 18	Specimen Specimen	
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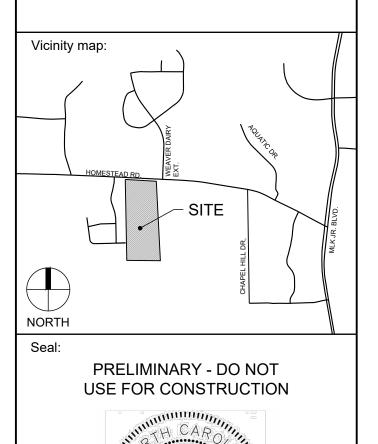
181 182 <del>183</del> 184	LIST LIST LITU LITU	Sw eetgum Sw eetgum Tulip Poplar Tulip Poplar Tulip Poplar	Liquidambar styraciflua Liquidambar styraciflua Liriodendron tulipifera Liriodendron tulipifera	22 12 30 23	Specimen Specimen Specimen Specimen	
185 186	QUAL	Tulip Poplar White Oak	Liriodendron tulipifera Quercus alba	22 19	Specimen Specimen	_
187	QUAL	White Oak White Oak	Quercus alba Quercus alba	23 16	Specimen Specimen	
189 190	QUAL	White Oak Blackjack Oak	Quercus alba Quercus marilandica	20	Specimen Specimen	_
191 192	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	18	Specimen Specimen	_
193 194	QUAL	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	19	Specimen Specimen	_
<del>195</del> 196	QUAL	White Oak White Oak	Quercus alba Quercus alba	14	Rare Specimen	_
197 198	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	16 22	Specimen Specimen	
199 200	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	16 28	Specimen Rare	
201 202	CARYA CATO	Hickory  Mockernut Hickory	Carya species Carya tomentosa	20 18	Specimen Specimen	_
<del>203</del> 204	LITU CARYA	Tulip Poplar Hickory	Liriodendron tulipifera Carya species	37 15	Rare Specimen	_
205 <del>-206</del>	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	21 	Specimen Rare	_
207 208	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera	26 20	Rare Specimen	
209 210	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	21 39	Specimen Rare	
211 212	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera	21 13	Specimen Specimen	
213 214	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera	14 13	Specimen Specimen	
215 216	LITU QUAL	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	16 16	Specimen Specimen	
217	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera	20	Specimen Specimen	
219 220	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	20	Specimen Specimen	
221	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera	22	Specimen Rare	
223	CAGL	Fignut Hickory	Carya glabra	18	Specimen	
224	LITU	Hickory Tulip Poplar	Carya species Liriodendron tulipifera	13 23	Specimen Specimen	_
226 	LITU QUAL	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	17 28	Specimen Rare	
228 229	LITU QUAL	Tulip Poplar White Oak	Liriodendron tulipifera Quercus alba	17 15	Specimen Specimen	
230 231	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	22 23	Specimen Specimen	_
232 233	QUAL CARYA	White Oak Hickory	Quercus alba Carya species	17 12	Specimen Specimen	
234 235	QUAL	White Oak Mockernut Hickory	Quercus alba Carya tomentosa	22 17	Specimen Specimen	_
236 237	QUAL LIST	White Oak Sw eetgum	Quercus alba Liquidambar styraciflua	17	Specimen Specimen	_
238 239	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	12	Specimen Specimen	
240 241	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	22 21	Specimen Specimen	_
241 242 243	LITU	Tulip Poplar Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera Liriodendron tulipifera	15 12	Specimen Specimen	_
243 244 245	LITU	Tulip Poplar Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera Liriodendron tulipifera	12 18 15	Specimen Specimen Specimen	_
245 246 247	LITU	Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera Liriodendron tulipifera	15 42 37	Rare Rare	_
247 248 <del>-249</del>	QUAL	Tulip Poplar White Oak	Quercus alba	20 30	Specimen	_
250	QURU	Northern Red Oak	Liriodendron tulipifera  Quercus rubra  Carva tomentosa	16	Specimen	_
251 252 253	ACRU QUAL	Mockernut Hickory Red Maple White Oak	Carya tomentosa Acer rubrum Quercus alba	12 12 21	Specimen Specimen	_
254	QUAL	White Oak	Quercus alba	21	Specimen Specimen	_
255 256	LIST QUAL	Sw eetgum White Oak	Liquidambar styraciflua Quercus alba	12 22	Specimen Specimen	_
257 258	CATO QUAL	Mockernut Hickory White Oak	Carya tomentosa Quercus alba	13 16	Specimen Specimen	
259 260	CATO	Tulip Poplar Mockernut Hickory	Liriodendron tulipifera Carya tomentosa	15 12	Specimen Specimen	
261 262	CATO	Mockernut Hickory Sw eetgum	Carya tomentosa  Liquidambar styraciflua	14 24	Specimen Rare	
263 264	LIST CATO	Sw eetgum Mockernut Hickory	Liquidambar styraciflua Carya tomentosa	15 15	Specimen Specimen	
<del>-265</del> 266	QUAL LIST	White Oak Sw eetgum	Quereus alba Liquidambar styraciflua	15	Rare Specimen	_
267 268	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	18 18	Specimen Specimen	_
<del>269</del> 270	CAGL	Tulip Poplar Pignut Hickory	Liriodendron tulipifera Carya glabra	24 19	Rare Specimen	
271 272	LIST LIST	Sw eetgum Sw eetgum	Liquidambar styraciflua Liquidambar styraciflua	15 14	Specimen Specimen	_
273 274	FRAX LIST	Ash Sw eetgum	Fraxinus species Liquidambar styraciflua	17 18	Specimen Specimen	_
275 276	CATO FRAX	Mockernut Hickory Ash	Carya tomentosa Fraxinus species	12 18	Specimen Specimen	_
<del>277</del> 278	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	<del>26</del> 22	Rare Specimen	_
279 280	NYSY QUAL	Blackgum White Oak	Nyssa sylvatica Quercus alba	18 22	Specimen Specimen	_
281 282	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	21 21	Specimen Specimen	_
<del>283</del> <del>284</del>	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	26 25	Rare Rare	_
285 286	LITU LIST	Tulip Poplar Sw eetgum	Liriodendron tulipifera Liquidambar styraciflua	15 29	Specimen Rare	
287 288	LITU LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	12 20	Specimen Specimen	
289 290	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	15 21	Specimen Specimen	
291 292	LIST QUAL	Sw eetgum White Oak	Liquidambar styraciflua Quercus alba	15 18	Specimen Specimen	
293 294	QUVE QUFA	Black Oak Southern Red Oak	Quercus velutina Quercus falcata	19 16	Specimen Specimen	
295 296	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	17 16	Specimen Specimen	_
297 298	LITU	Tulip Poplar Northern Red Oak	Liriodendron tulipifera  Quercus rubra	19	Specimen Specimen	_
299 —300	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera  Liriodendron tulipifera	19 25	Specimen Specimen Rare	
<del>301</del> 302	QURU QUAL	Northern Red Oak White Oak	Quercus rubra Quercus alba	31 14	Rare Specimen	
303 304	LIST	Sw eetgum White Oak	Liquidambar styraciflua  Quercus alba	13 15	Specimen Specimen	_
304 -305 306	QUAL QUAL	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	24 14	Rare Specimen	
307 _308	QUVE LITU	Black Oak Tulip Poplar	Quercus velutina  Liriodendron tulipifera	15 28	Specimen Specimen Rare	
308 309 310	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	
311	LITU	Tulip Poplar Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	23 19 20	Specimen Specimen	
312 313	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera Liguidambar styraciflus	20 24	Specimen Rare Specimen	
314 315	LIST	Sw eetgum Tulip Poplar	Liquidambar styraciflua Liriodendron tulipifera	17 22	Specimen Specimen	
316 317	QUAL	Blackgum White Oak	Nyssa sylvatica Quercus alba	11 15	NA Specimen	
318 319	QUVE	Tulip Poplar Black Oak	Liriodendron tulipifera  Quercus velutina	21 16	Specimen Specimen	_
320 321	QUAL	White Oak	Quercus alba	16	Specimen	
322 323	QUAL	White Oak Black Oak	Quercus alba Quercus velutina	18 23	Specimen Specimen	
324 325	PITA	Tulip Poplar Loblolly Pine	Liriodendron tulipifera Pinus taeda	19 18	Specimen Specimen	_
326	QUAL	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	12 20	Specimen Specimen	_
327	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	25 25	Rare Specimen	_
<del>328</del> 329	CARYA	Hickory Tulip Poplar	Carya species Liriodendron tulipifera	14	Specimen Specimen	_
<del>328</del> 329 330 331	QUAL	White Oak White Oak	Quercus alba Quercus alba	17 22	Specimen Specimen	_
-328 329 330 331 332 333	QUAL	White Oak White Oak	Quercus alba Quercus alba	14 14	Specimen Specimen	_
328 329 330 331 332	QUAL QUAL QUAL		Liquidambar styraciflua Quercus alba	14 20	Specimen Specimen	_
329 330 331 332 333 334 335 336 337	QUAL	Sw eetgum White Oak	and the annual		Specimen	_
329 330 331 332 333 334 335 336	QUAL QUAL LIST		Liquidambar styraciflua Quercus alba	14 18	Specimen	_
328 329 330 331 332 333 334 335 336 337 338	QUAL QUAL LIST QUAL LIST	White Oak Sw eetgum	Liquidambar styraciflua			
329 329 330 331 332 333 334 335 336 337 338 339 340	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL	White Oak Sw eetgum White Oak Tulip Poplar White Oak Black Oak	Liquidambar styraciflua Quercus alba Liriodendron tulipifera Quercus alba Quercus velutina	18 15 19 15	Specimen Specimen Specimen Specimen	
328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL QUYE QUAL QUAL	White Oak Sw eetgum White Oak Tulip Poplar White Oak Black Oak White Oak White Oak	Liquidambar styraciflua Quercus alba Liriodendron tulipifera Quercus alba Quercus velutina Quercus alba Quercus alba	18 15 19 15 18 22	Specimen Specimen Specimen Specimen Specimen Specimen Specimen	
328 329 330 331 332 333 334 335 336 337 340 341 342 343 344 345	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL QUAL QUAL QUAL QUAL QUAL	White Oak Sw eetgum White Oak Tulip Poplar White Oak Black Oak White Oak White Oak White Oak White Oak White Oak White Oak	Liquidambar styraciflua Quercus alba Liriodendron tulipifera Quercus alba Quercus velutina Quercus alba Quercus alba Quercus alba Quercus alba Quercus alba	18 15 19 15 18 22 18	Specimen	
- 928 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUA	White Oak Sw eetgum White Oak Tulip Poplar White Oak Black Oak White Oak	Liquidambar styraciflua Quercus alba Liriodendron tulipifera Quercus alba Cuercus alba Cuercus alba	18 15 19 15 18 22 18 12 15 20	Specimen	
329 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUA	White Oak Sw eetgum White Oak Tulip Poplar White Oak Black Oak White Oak Mockernut Hickory White Oak	Liquidambar styraciflua Quercus alba Liriodendron tulipifera Quercus alba Quercus velutina Quercus alba	18 15 19 15 18 22 18 12 15 20 13 20	Specimen	
- 928 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 351	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUA	White Cak Sw eetgum White Oak Tulip Poplar White Oak Black Oak White Oak Mockernut Hickory White Oak Tulip Poplar Northern Red Oak	Liquidambar styracifiua Quercus alba Liriodendron tulipifera Quercus alba Quercus velutina Quercus alba Carya tomentosa Quercus alba Quercus alba Quercus alba Quercus alba Quercus alba Quercus alba	18 15 19 15 18 22 18 12 15 20 13 20 27 23	Specimen	
328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL QUAL QUAL QUAL QUAL QUAL CATO QUAL LITU QUAL LITU QUAL LITU QUAL LITU	White Cak Sw eetgum White Oak Tulip Poplar White Oak Black Oak White Oak Tulip Poplar White Oak Tulip Poplar	Liquidambar styraciflua Quercus alba Liriodendron tulipifera Quercus alba Carya tomentosa Quercus alba Cuercus alba Quercus alba Liriodendron tulipifera Quercus rubra	18 15 19 15 18 22 18 12 15 20 13 20 27 23 12 16	Specimen	
- 928 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUA	White Cak Sw eetgum White Oak Tulip Poplar White Oak Black Oak White Oak Mockernut Hickory White Oak	Liquidambar styraciflua Quercus alba Liriodendron tulipifera Quercus alba Curcus alba Carya tomentosa Quercus alba Quercus rubra Quercus alba	18 15 19 15 18 22 18 12 15 20 13 20 27 23 12	Specimen	
328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 353 354	QUAL QUAL LIST QUAL LIST QUAL LITU QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUA	White Oak Sw eetgum White Oak Tulip Poplar White Oak Black Oak White Oak Thickory White Oak White Oak Mockernut Hickory White Oak Tulip Poplar Northern Red Oak Tulip Poplar Tulip Poplar	Liquidambar styraciflua Quercus alba Liriodendron tulipifera Quercus alba Carya tomentosa Quercus alba Liriodendron tulipifera Quercus alba Liriodendron tulipifera Liriodendron tulipifera	18 15 19 15 18 22 18 12 15 20 13 20 27 23 12 16 17	Specimen	

1	CARYA	Hickory	Carya species	13	Specimen	
2	QUAL	White Oak	Quercus alba	15	Specimen	
3 4	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera	13 	Specimen Rare	
5	LITU	Tulip Poplar	Liriodendron tulipifera	20	Specimen	
6	LITU	Tulip Poplar	Liriodendron tulipifera	15	Specimen	
7 8	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	13 19	Specimen Specimen	
9	QUAL	White Oak	Quercus alba	15	Specimen	
0	QUAL	White Oak	Quercus alba	20	Specimen	
1	QUAL	White Oak	Quercus alba	18	Specimen	
2	LITU	Tulip Poplar	Liriodendron tulipifera	23 15	Specimen	
3 4	CAGL	Tulip Poplar Pignut Hickory	Liriodendron tulipifera  Carya glabra	12	Specimen Specimen	
5	SAAL	Sassafrass	Sassafras albidum	8	Specimen	
6	QUAL	White Oak	Quercus alba	12	Specimen	
7	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
8 9	SAAL QUMA	Sassafrass Blackjack Oak	Sassafras albidum  Quercus marilandica	11 16	Specimen Specimen	
0	QUAL	White Oak	Quercus alba	16	Specimen	
1	SAAL	Sassafrass	Sassafras albidum	11	Specimen	
2	QUAL	White Oak	Quercus alba	43	Rare	
3 4	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	15 13	Specimen Specimen	
5	LITU	Tulip Poplar	Liriodendron tulipifera	19	Specimen	
6	LITU	Tulip Poplar	Liriodendron tulipifera	23	Specimen	
7	QUVE	Black Oak	Quercus velutina	20	Specimen	
8 <u> </u>	QURU LITU	Northern Red Oak Tulip Poplar	Quercus rubra Liriodendron tulipifera	28 25	Rare Rare	
0	LITU	Tulip Poplar	Liriodendron tulipifera	13	Specimen	
1	CATO	Mockernut Hickory	Carya tomentosa	14	Specimen	
2	LITU	Tulip Poplar	Liriodendron tulipifera	29	Rare	
3 4	LITU	Tulip Poplar Sw eetgum	Liriodendron tulipifera Liquidambar styraciflua	16 13	Specimen Specimen	
5	LIST	Sw eetgum Sw eetgum	Liquidambar styraciflua	15	Specimen	
6	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
7	LITU	Tulip Poplar	Liriodendron tulipifera	18	Specimen	
8 9	LITU	Tulip Poplar	Liriodendron tulipifera	23 18	Specimen	
<del>9</del> <del>0</del>	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera  Liriodendron tulipifera	34	Specimen Rare	
1	LITU	Tulip Poplar	Liriodendron tulipifera	18	Specimen	
2	LITU	Tulip Poplar	Liriodendron tulipifera	28	Rare	
3 4	LITU	Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	20 19	Specimen	
<del>1</del> 5	QUAL	Tulip Poplar White Oak	Quercus alba	19	Specimen Specimen	
6	QUAL	White Oak	Quercus alba	12	Specimen	
7	QUAL	White Oak	Quercus alba	13	Specimen	
8 9	LITU	Tulip Poplar	Liriodendron tulipifera	17	Specimen Specimen	
<u>9</u> 0	QUAL	Tulip Poplar White Oak	Liriodendron tulipifera  Quercus alba	23 13	Specimen	
1	LITU	Tulip Poplar	Liriodendron tulipifera	26	Rare	
2	LITU	Tulip Poplar	Liriodendron tulipifera	17	Specimen	
3	LIST	Sw eetgum	Liquidambar styraciflua	16	Specimen	
<u>4</u> 5	LITU	Tulip Poplar Tulip Poplar	Liriodendron tulipifera Liriodendron tulipifera	21 19	Specimen Specimen	
6	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	
7	LITU	Tulip Poplar	Liriodendron tulipifera	16	Specimen	
8	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	
<del>9</del> 0	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	28 16	Rare Specimen	
1	QUAL	White Oak	Quercus alba	14	Specimen	
2	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	10 (6,4)
3	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	12 (4,8)
<u>4</u> 5	QUAL QUAL	White Oak White Oak	Quercus alba Quercus alba	19 14	Specimen Specimen	12 (6,6) 12 (8,4)
, -	QUAL	White Oak	Quercus alba	24	Rare	13 (4,4,5)
7	QUAL	White Oak	Quercus alba	25	Rare	15 (10,5)
8	OXAR	Sourw ood	Oxydendron arboreum	13	Specimen	17 (13,4)
9 0	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	22	Specimen Specimen	18 (12,6) 19 (11,8)
1	LITU	Tulip Poplar	Liriodendron tulipifera	21	Specimen	20 (9,11)
_	LITU	Tulip Poplar	Liriodendron tulipifera	25	Rare	21 (10,10)
3	QUVE	Black Oak	Quercus velutina	22	Specimen	22 (12,10)
<del>-</del>	QUAL LITU	White Oak Tulip Poplar	Quercus alba Liriodendron tulipifera	<del>26</del> 42	Rare Rare	22 (12,10) 22 (16,6)
3	CAGL	Pignut Hickory	Carya glabra	15	Specimen	22 (16,6)
7	QURU	Northern Red Oak	Quercus rubra	23	Specimen	23 (9,14)
3	LIST	Sw eetgum	Liquidambar styraciflua	13	Specimen	24 (12,12)
<u>9</u> ∩	LITU	Tulip Poplar Loblolly Pine	Liriodendron tulipifera	12	Specimen NA	24 (12,12)
) 1	OXAR	Sourw ood	Pinus taeda Oxydendron arboreum	15 10	NA Specimen	25 (12,13) 26 (13,13)
2	CATO	Mockernut Hickory	Carya tomentosa	19	Specimen	26 (20,6)
3	QUAL	White Oak	Quereus alba	29	Rare	27 (14,13)
4	LIST	Sw eetgum	Liquidambar styraciflua	14	Specimen Specimen	28 (13,8,7)
5 3	CATO	Sw eetgum  Mockernut Hickory	Liquidambar styraciflua Carya tomentosa	23	Specimen Specimen	28 (14,14) 29 (17,12)
7	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	32 (24,8)
8	LIST	Sw eetgum	Liquidambar styraciflua	12	Specimen	32 (8,12,12)
9	LIST	Sw eetgum	Liquidambar styraciflua	13	Specimen	34 (28,6)
0 1	QUAL PITA	White Oak Loblolly Pine	Quercus alba Pinus taeda	12 16	Specimen NA	36 (18,18) 36 (18,18)
2	QUAL	White Oak	Quercus alba	22	Specimen	42 (21,21)
3	QUAL	White Oak	Quercus alba	22	Specimen	42 (21,21)
4	LITU	Tulip Poplar	Liriodendron tulipifera	23	Specimen	44 (10,34)
5	QUFA	Southern Red Oak	Quercus alba	21	Specimen Specimen	45 (11,12,22) 45 (8 18 10 9)
6 7	QUAL CATO	White Oak Mockernut Hickory	Quercus alba Carya tomentosa	13 19	Specimen Specimen	45 (8,18,10,9) 46 (8,8,10,11,9)
3	CATO	Mockernut Hickory	Carya tomentosa	17	Specimen	52 (26,26)
`-	QUAL	White Oak	Quercus alba	18	Specimen	59 (22,13,24)
9 0	CATO	Mockernut Hickory	Carya tomentosa	14	Specimen	70 (17,22,31)



GS HOMESTEAD, LLC 121 S. ESTES DRIVE, SUITE 100 CHAPEL HILL, NC 27514 PHONE: 919.489.9000 EMAIL: RICHARD@GURLITZARCHITECTS.COM

Client:



Scale:

roject:

## HOMESTEAD ROAD TOWNHOMES

Issued for:

CONDITIONAL ZONING

PERMIT

No. Date Description

_1_	8/26/2022	1ST RESUBMITTAL
2	10/07/2022	2ND RESUBMITTAL

Title:

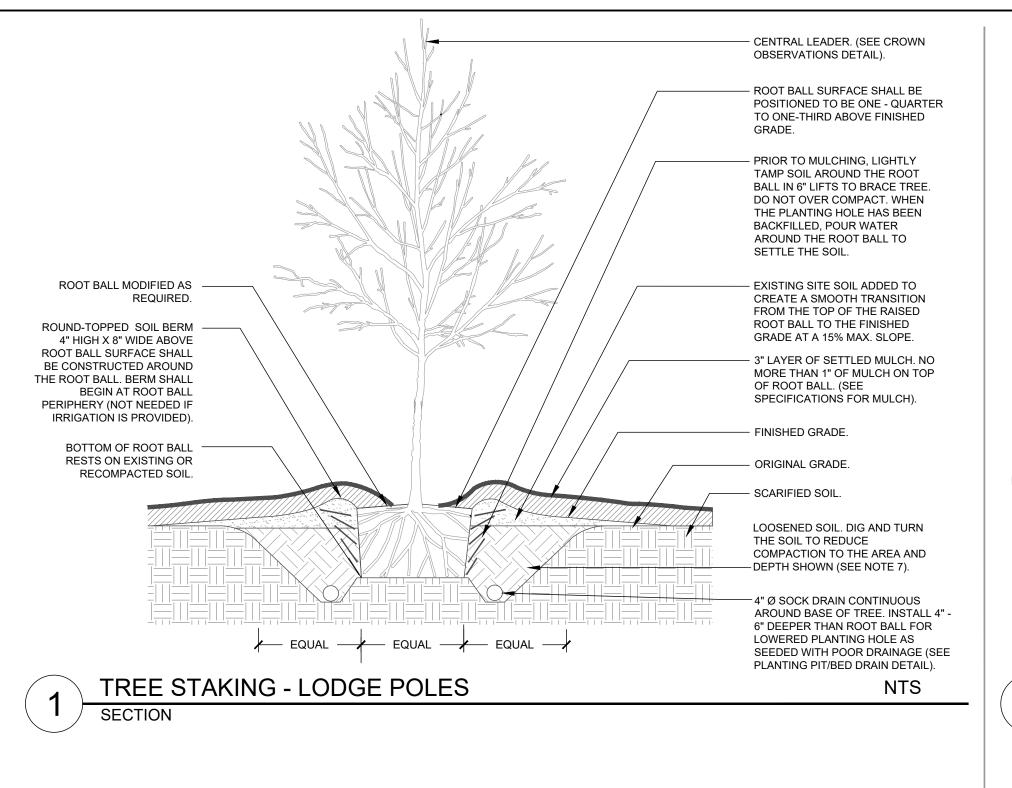
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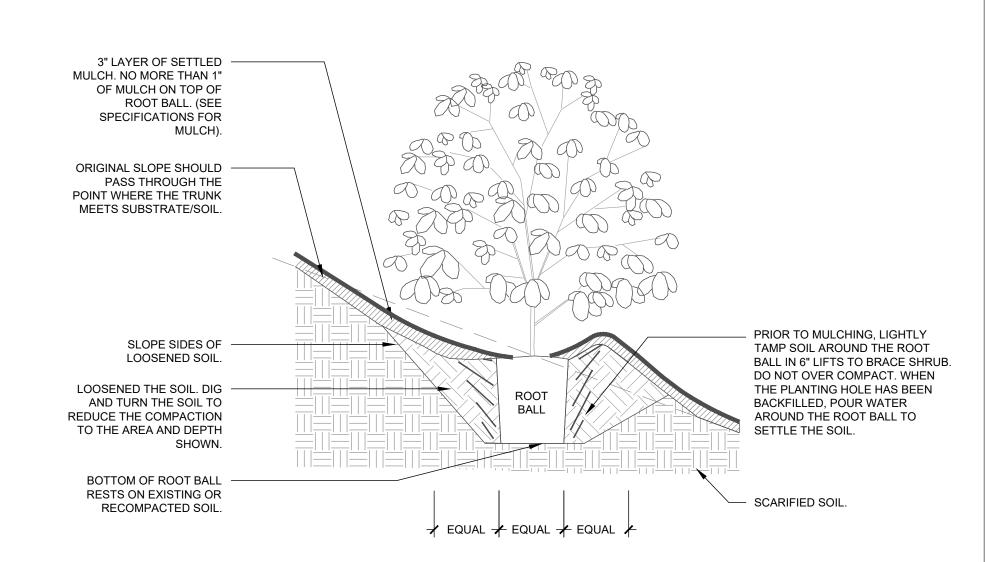
----- RARE TREE REMOVED

LANDSCAPE PROTECTION PLAN -TREE SURVEY

Project number: C22033 Sheet #:
Issued Date: 06.24.2022

Issued Date: 06.24.2022
Drawn by: SM
Approved by: CH





SHRUB ON SLOPE - EXISTING IN-SITU SOIL NTS

PRIOR TO MULCHING, LIGHTLY TAMP SOIL AROUND THE ROOT BALL IN 6" LIFTS TO BRACE TREE. DO NOT OVER COMPACT. WHEN THE PLANTING HOLE HAS BEEN BACKFILLED, POUR WATER AROUND THE ROOT BALL TO SETTLE THE SOIL. LOOSENED SOIL. DIG AND TURN ROOT BALL MODIFIED -THE SOIL TO REDUCE THE AS REQUIRED. COMPACTION TO THE AREA AND DEPTH SHOWN. - FINISHED GRADE. SLOPE SIDES OF LOOSENED 3" LAYER OF SETTLED MULCH. NO MORE THAN 1" OF MULCH ON TOP OF ROOT BALL. (SEE SPECIFICATIONS FOR MULCH). 4" Ø SOCK DRAIN CONTINUOUS AROUND BASE OF TREE. INSTALL 4" -DEEPER THAN ROOT BALL FOR LOWERED PLANTING HOLE AS NEEDED WITH POOR DRAINAGE (SEE PLANTING PIT/BED DRAIN DETAIL). SCARIFIED SOIL EQUAL PEQUAL PEQUAL PEQUAL BOTTOM OF ROOT BALL RESTS ON EXISTING OR RECOMPACTED SOIL. TREE STAKING - ON SLOPE - EXISTING IN-SITU SOIL WARNING SIGNS SHALL BE MADE OF DURABLE WEATHERPROOF MATERIAL NO TRESPASSING 2. LETTERS SHALL BE 3" HIGH MINIMUM, LEARLY LEGIBLE, AND SPACED AS TREE PROTECTION AREA 3. SIGNS ARE TO BE PLACED NO PROHIBIDO ENTRAR GREATER THAN LOO FT. ON CENTER. ZONA PROTECTORA PARA 4. PLACE SIGN AT EACH END OF LINEAR TREE PROTECTION AREAS AND 100 LOS ARBOLES FT. ON-CENTER THEREAFTER. 5. FOR TREE PROTECTION AREAS LESS SIGN DETAIL THAN 100 FT. IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER AREA. NO SCALE 6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. (133 LB/LF STEEL) MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT. WEATHERPROOF SIGN AS 8. ADDITIONAL SIGNS MAY BE REQUIRED SHOWN ABOVE; SEE NOTES FOR CONSTRUCTION AND BASED ON ACTUAL FIELD CONDITIONS. SPACING INFORMATION 8. BOTH ENGLISH AND SPANISH SHALL BE USED FOR THE SIGNS. ORANGE, UV RESISTANT HIGH-TENSILE STRENGTH POLY BARRICADE FABRIC 10'-0" O.C. MAX. Tree Protection Area Do Not Enter

INSTALL TREE PROTECTION FENCE & SIGNAGE PRIOR TO CALLING FOR THE INITIAL

GRADE

NTS

#### TREE PROTECTION FENCE

TREE PROTECTION NOTES:

PRUNING TOOL.

#### 1. A PRE-CONSTRUCTION CONFERENCE MAY BE REQUIRED WITH THE TOWN'S URBAN FORESTER PRIOR TO BEGINNING SITE WORK. PLEASE CONTACT ADAM NICHOLSON AT 919.969.5006.

SUBGRADE

- 2. ANY TREE ROOTS EXPOSED DURING DEMOLITION/CONSTRUCTION WILL BE SEVERED CLEANLY WITH AN APPROPRIATE AND SHARPENED ROOT
- 3. THE SOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES WILL NOT BE DRIVEN ON OR OTHERWISE DISTURBED DURING THE
- INSTALLATION OF LANDSCAPING. 4. (2) LANDSCAPE PROTECTION SUPERVISORS MUST REGISTER WITH THE
- TOWN. CONTACT ADAM NICHOLSON AT 919.969.5006 FOR THAT REVIEW. 5. ONE OR BOTH OF THE LANDSCAPE PROTECTION SUPERVISOR WHO
- ARE REGISTERED WITH THE TOWN OF CHAPEL HILL WILL BE PRESENT ON SITE AT ALL TIMES ANY LAND DISTURBING ACTIVITY IS OCCURING.

CENTRAL LEADER. (SEE CROWN

ORIGINAL SLOPE SHOULD PASS

THROUGH THE POINT WHERE

THE TRUNK BASE MEETS

SUBSTRATE/SOIL.

OBSERVATIONS DETAIL).

CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS

PRIOR TO INSTALLATION. WHEN SHRUBS AND GROUNDCOVER ARE PLANTED IN MASSES, ENTIRE BED SHALL BE EXCAVATED AND TILLED WITH SOIL AMENDMENTS PER

ON EXISTING OR

SHRUB - EXISTING IN-SITU SOIL

RECOMPACTED SOIL.

SPECIFICATIONS. 3" LAYER OF SETTLED MULCH. -NO MORE THAN 1" OF MULCH ON TOP OF ROOT BALL. (SEE SPECIFICATIONS FOR MULCH). FINISHED GRADE. SLOPE SIDES OF ROOT LOOSENED SOIL. BALL LOOSENED SOIL. DIG AND TURN THE SOIL TO REDUCE THE COMPACTION TO THE AREA AND DEPTH SHOWN. ROOT BALL RESTS 2x ROOTBALL

DIAMETER

ROOTBALL. ½ - ⅓ ABOVE GRADE ACCORDING TO SPECIES AND DRAINAGE. CONSULT LANDSCAPE ARCHITECT.

4" HIGH X 8" WIDE ROUND - TOPPED SOIL BERM ABOVE ROOT BALL SURFACE SHALL BE CONSTRUCTED AROUND THE ROOT BALL. BERM SHALL BEGIN AT ROOT BALL

PRIOR TO MULCHING, LIGHTLY TAMP SOIL AROUND THE ROOT BALL IN 6" LIFTS TO BRACE SHRUB. DO NOT OVER COMPACT. WHEN THE PLANTING HOLE HAS BEEN BACKFILLED, POUR WATER AROUND THE ROOT BALL TO SETTLE THE SOIL.

SCARIFIED SOIL.

BOTTOM OF ROOT BALL RESTS ON EXISTING OR RECOMPACTED SOIL.

NTS

Vicinity map: NORTH PRELIMINARY - DO NOT

101 WEST MAIN ST.

T 919.380.8750

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GS HOMESTEAD, LLC

CHAPEL HILL, NC 27514

PHONE: 919.489.9000

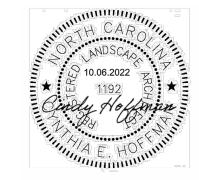
121 S. ESTES DRIVE, SUITE 100

EMAIL: RICHARD@GURLITZARCHITECTS.COM

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PROJECT #: C22033

**USE FOR CONSTRUCTION** 



Scale:

SCALE: AS NOTED

Project:

HOMESTEAD ROAD **TOWNHOMES** 

Issued for: CONDITIONAL ZONING **PERMIT** 

No. Date Description 8/26/2022 1ST RESUBMITTAL 10/07/2022 2ND RESUBMITTAL

Title:

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PLANTING & SOILS **DETAILS** 

Project number: C22033 Sheet #: Issued Date: 06.24.2022

Drawn by: Approved by:

## PLANTING NOTES:

- 1. DO NOT STAKE TREES EXCEPT WHERE SPECIFIED BY LANDSCAPE ARCHITECT. STAKING IS REQUIRED FOR TREES PLANTED ON SLOPES.
- 2. WHERE SEVERAL TREES WILL BE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4-6" OVER THE ENTIRE AREA.
- 3. FOR CONTAINER GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
- 4. FOR FIELD GROWN TREES, CUT BURLAP, ROPE AND WIRE BASKET AWAY FROM TOP AND SIDES OF ROOT BALL.
- 5. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
- 6. THE PLANTING PROCESS IS SIMILAR FOR DECIDUOUS AND EVERGREEN
- 7. DO NOT WRAP TRUNK; MARK NORTH SIDE OF TREE IN THE NURSERY AND LOCATE TO THE NORTH IN THE FIELD.
- 8. WIDTH OF PLANTING HOLE IS 3X ROOT BALL AT THE SURFACE, SLOPING TO 2X THE ROOT BALL DIAMETER AT THE DEPTH OF THE ROOT BALL.
- 9. BEFORE PLANTING, ADD 3-4" OF WELL COMPOSTED LEAVES, RECYCLED YARD WASTE OR OTHER COMPOST AND TILL INTO TOP 6" OF PREPARED SOIL. ADD COMPOST AT 20-35% BY VOLUME TO BACKFILL.

- 10. PERFORM PERCOLATION TEST FOR EACH TREE PIT TO CONFIRM THAT WATER DRAINS OUT OF THE SOIL. PROVIDE GRAVEL SUMP FILTER FABRIC & VENT PIPE IF DRAINAGE DOES NOT OCCUR WITHIN 24 HOURS. INCLUDE ALL SUMPS IN BASE BID. SHOULD SUMPS NOT BE NECESSARY AFTER PERCOLATION TEST, PROVIDE CHANGE ORDER DEDUCT TO
- 11. IF PLANTING HOLES ARE DUG WITH A LARGE AUGER BREAKING DOWN THE SIDES WITH A SHOVEL CAN ELIMINATE GLAZING AND CREATE THE PREFERRED SLOPING SIDE.
- 12. TREES SHALL HAVE SINGLE LEADERS. TREES WITH 2 LEADERS WILL BE REJECTED.
- 13. DO NOT PLACE MULCH IN CONTACT WITH TRUNK.
- 14. PROVIDE GATOR BAGS FOR ALL TREES WHERE IRRIGATION IS NOT PROVIDED.

