

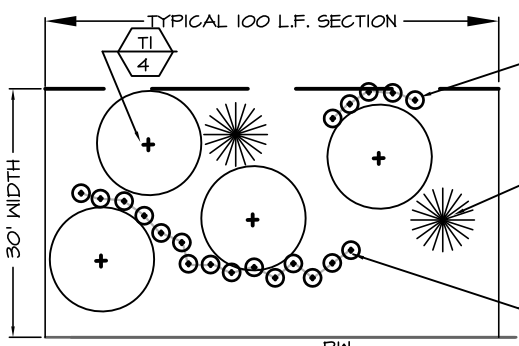
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BUFFER ALONG COLLECTOR ROAD

6 TREES PER EVERY 100 L.F.
20 SHRUBS PER EVERY 100 L.F.
25% OF TREES TO BE EVERGREEN
75% OF SHRUBS TO BE EVERGREEN

(EXISTING TREES AND VEGETATION MAY BE USED TO MEET THE REQUIREMENTS IF THEY ARE OF SUFFICIENT MAINTENANCE TO MEET OR EXCEED THESE REQUIREMENTS.)
COORDINATE WITH URBAN FORESTRY INSPECTOR ON PLANTINGS ALLOWED WITHIN DUKE ENERGY R/W. PLANTINGS WITHIN CUT-WATER SWH EASY IS NOT ALLOWED. PLANTINGS ON 4' HIGH BERM WITH 24" SIDE SLOPES MAINTAIN CLEARANCE UNDER POWERLINE CROSSINGS.



BUFFER NOTES

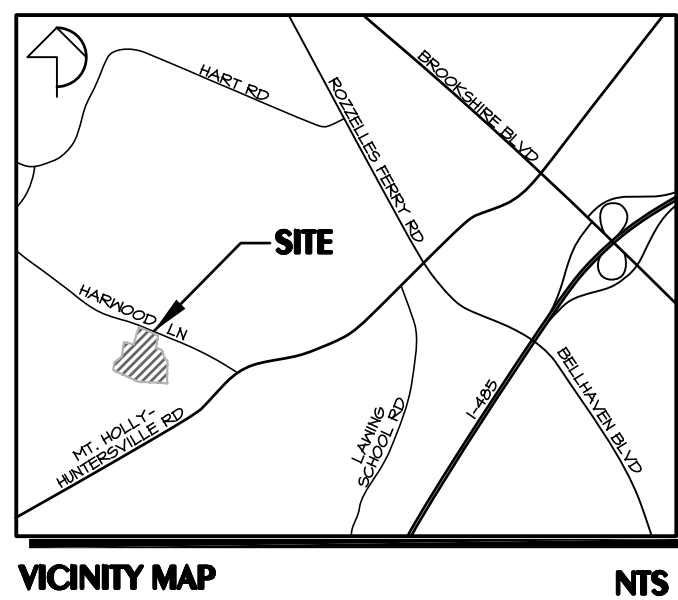
- EXISTING VEGETATION WITHIN THE DESIGNATED BUFFER AREA MAY BE CREDITED TOWARD BUFFER REQUIREMENTS UPON FIELD VERIFICATION/APPROVAL BY THE ZONING INSPECTOR.
- THE PLANT LIST (BELOW) MAY BE MODIFIED PROVIDED THE SIZE AND PLANTS ARE ALLOWED PER THE LIST OF ACCEPTABLE PLANT SPECIES IN THE ZONING ORDINANCE.
- FIELD ADJUST EXACT PLACEMENT OF PROPOSED PLANTINGS TO AVOID CONFLICT WITH EXISTING SITE CONDITIONS, I.E. UTILITIES, UTILITIES, OVERHEAD POWER LINES.

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE
TREES			
11	CORNUS FLORIDA	FLOWERING DOGWOOD	2" CAL/18" MIN HT.
12	ILEX X ATTENUATA FOSTERI	FOSTER HOLLY	2" CAL/18" MIN HT.
13			
SHRUBS			
51	LOROPETALUM CHINENSE	LOROPETALUM	24" MIN. HT. - 5' MAX.
52	ILEX CORNUTA BURFORDI	BURFORD HOLLY	30" MIN. HT. - 5' MAX.

LEGEND

- EXISTING PAVEMENT/CURB
- PROPOSED PAVEMENT/CURB
- ADJOINING PROPERTY LINES
- ADJOINING PROPERTY LINES
- EXISTING BUILDINGS
- PROPOSED 5' SIDEWALK
- TREE PROTECTION FENCE
- PROPOSED STOP SIGN (24" X 24" 24" H) & 24" STOP BAR
- PROPOSED TREE SAVE AREA
- NATURAL AREA PER PCO (UNDISTURBED/REVEGETATED)
- PROPOSED BMP
- AREA OF 30' BUFFER OUTSIDE OF OTHER EASEMENTS LIMITING REQUIRED PLANTINGS



FINAL APPROVAL

ENGINEERING

PCO / DETENTION / DRAINAGE PLAN

EROSION CONTROL

URBAN FORESTRY

CDOT

NOTE: THIS PLAN APPROVAL DOES NOT INCLUDE COMMERCIAL ZONING. ALL BUILDING PERMITS AND ZONING APPROVALS CAN BE OBTAINED AT MECKLENBURG COUNTY CODE ENFORCEMENT. PLEASE CALL CTAIC AT 704-314-CODE(2633) FOR MORE INFORMATION.

NOTE: SCHEDULE PRE-CONSTRUCTION MEETING AT LEAST 48 HRS. PRIOR TO ANY LAND DISTURBING ACTIVITY USING THE ONLINE FORM AT <http://development.charmeck.org>

SEE SHEET 9 FOR HARWOOD LN. IMPROVEMENTS

APPROVED

By mark chapman at 8:58 am, Oct 09, 2017

APPROVED

By Stan Armstrong at 12:22 pm, Oct 05, 2017

APPROVED

By rgrochoske at 2:13 pm, Oct 12, 2017

APPROVED FOR CONSTRUCTION

CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT
[By: Joshua Weaver 10-18-2017]

as noted on Sheet 4.

As noted on site plan and intersection sight distance

BRINKLEYS TWIN LAKES

CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD	BEARING
C-3	200.04'	50.00'	18.06'	S13°42'06"E
C-4	45.89'	50.00'	23.13'	S60°40'14"E
C-5	6.24'	50.00'	6.24'	S13°79'09"W
C-6	236.98'	50.00'	23.09'	S4°46'54"E
C-7	50.22'	225.00'	25.21'	S66°36'05"E

SINGLE FAMILY LOT SIZE (SF)	MAX. BLDG COVERAGE
UP TO 4,000	50%
4,001 - 6,500	45%
6,501 - 8,500	40%
8,501 - 15,000	35%
15,001 OR GREATER	30%

GENERAL NOTES

THIS PRELIMINARY SUBDIVISION PLAN IS SUBMITTED, AND SHALL BE CONSTRUCTED, IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF CHARLOTTE ZONING AND SUBDIVISION ORDINANCES, AND THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL. BOUNDARY SURVEY INFORMATION PER SURVEY PREPARED BY METROLINA ENGINEERING & SURVEYING. TOPOGRAPHIC INFORMATION TAKEN FROM FIELD SURVEY BY METROLINA ENGINEERING & SURVEYING. CHIEF SUBDIVISION INSPECTOR SHALL BE GIVEN 48 HOURS ADVANCE NOTICE PRIOR TO COMMENCEMENT OF CONSTRUCTION. LOT DIMENSIONS ARE APPROXIMATE; REFERENCE RECORD PLAT FOR EXACT LOT DIMENSIONS. ALL STORM DRAINAGE PIPE SHALL BE CLASS 3 REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE NOTED. PIPE LENGTHS INDICATED ON THE PLANS ARE APPROXIMATE AND ARE SUBJECT TO CHANGE DUE TO FIELD CONDITIONS. REFERENCE SHEETS 4 & 5 FOR EROSION CONTROL PLAN AND NOTES. REFERENCE SHEET 1 FOR EROSION CONTROL DETAILS. CONSTRUCTION OF ALL DEVELOPMENT IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL. REFERENCE SHEET 1 FOR SITE DETAILS. THE FOLLOWING ADDITIONAL DETAILS ARE INCLUDED BY REFERENCE:

ITEM	DESCRIPTION
101	CURB AND GUTTER
102	CURB TRANSITION
103	CATCH BASIN LOCATION
104	(C) BRICK CATCH BASIN
105	(C) DOUBLE CATCH BASIN
106	STREET NAME SIGN
107	CONCRETE MONUMENT
108	SIDEWALK

APPROXIMATE COMPLETION TIME IS SUMMER 2017.

WATER AND SANITARY SEWER SERVICE SHALL BE PROVIDED BY EXTENSION OF THE EXISTING MECKLENBURG SANITARY SEWER MAIN. SIDEWALK NOTE: THE CONTRACTOR SHALL COORDINATE WITH THE SUBDIVISION INSPECTOR FOR LATEST REVISION OF HANDICAP RAMP DETAILS) PRIOR TO PLACEMENT OF ANY HIC RAMP AND/OR SIDEWALK. COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR. ALL ROAD IMPROVEMENTS AT HARWOOD LANE ARE TO BE COORDINATED WITH THE CITY OF CHARLOTTE ENG. DEPARTMENT 4. NC DOT PRIOR TO CONSTRUCTION. DEVELOPER WILL PROVIDE STREET SIGNS PER CDOT 50.05 (4" SIGNS ONLY). RIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED. DIRECT VEHICULAR ACCESS TO REA ROAD FROM ANY LOT IS PROHIBITED. IN ROLLING AND HILLY TERRAIN, THE STONE BASE AND/OR APPLICATION OF A TACK COAT MAY BE REQUIRED NEAR INTERSECTIONS. THESE REQUIREMENTS WILL BE ESTABLISHED BY THE INSPECTOR AND BASED ON FIELD CONDITIONS.

APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES, WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.

IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB. SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED NECESSARY BY THE INSPECTOR. CURB AND GUTTER SHOWN ON PLANS ALONG HARWOOD LANE MAY BE ADJUSTED BASED UPON FIELD STAKING BY CITY ENGINEERING. ASSOCIATED STORM DRAINAGE MAY ALSO REQUIRE MODIFICATION BASED UPON FIELD CONDITIONS. THE PURPOSE OF THE STORM DRAINAGE EASEMENT (SDE) IS TO PROVIDE STORM WATER CONVEYANCE. BUILDINGS AND OTHER OBJECTS WHICH IMPED STORM WATER FLOW OR SYSTEM MAINTENANCE ARE ALSO PROHIBITED. HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINAGE PIPE INSTALLED WITHIN EXISTING OR PROPOSED PAVED STREET RIGHT-OF-WAY MUST BE APPROVED BY THE CITY INSPECTOR PRIOR TO ANY BACKFILL BEING PLACED.

BACKFILL MATERIAL MUST BE APPROVED BY THE CITY INSPECTOR PRIOR TO PLACEMENT OF THE MATERIAL WITHIN THE PUBLIC STREET RIGHT-OF-WAY. THE DEVELOPER SHALL MAINTAIN EACH STREAM, CREEK, OR BACKWASH CHANNEL IN AN UNCONSTRUCTED STATE AND SHALL MAINTAIN THE ROADS AND BANKS OF THE STREAM ALL DERRIS, LOGS, TIMBER, JUNK, AND OTHER ACCUMULATIONS.

"AS-BUILT" DRAWINGS AND PLANS OF THE STORM DRAINAGE SYSTEM INCLUDING DESIGNED DITCHES, MUST BE SUBMITTED PRIOR TO SUBDIVISION FINAL INSPECTION TO THE CITY/COUNTY ENGINEERING DEPARTMENT IN ACCORDANCE WITH THE CITY/COUNTY SUBDIVISION ORDINANCE. ANY BUILDING WITHIN WATER ELEVATION LINE IS SUBJECT TO THE RESTRICTIONS OF THE CITY OF CHARLOTTE/MECKLENBURG COUNTY SUBDIVISION ORDINANCE, SECTION 7.200.9. ANY CONSTRUCTION OR USE WITHIN THE FUTURE CONDITIONS FLOOD PRINSE LINE IS SUBJECT TO THE RESTRICTIONS IMPOSED BY THE FLOODWAY REGULATIONS OF THE CITY OF CHARLOTTE AND MECKLENBURG COUNTY.

ALL OPENINGS (E.G., DOORS, WINDOWS, VENTS) IN STRUCTURES BUILT ON LOT 5'S SHOULD BE LOCATED A MINIMUM OF ONE FOOT ABOVE THE ADJACENT FINISHED GROUND SURFACE (APPLIES TO LOTS WHICH MAY EXPERIENCE SIGNIFICANT OVERLAND FLOOD NOT CONSIDERED IN THE 100+1 FLOOD ANALYSIS).

PE SEALED SHOP DRAWINGS FOR RETAINING WALL MUST BE SUBMITTED TO CITY ENGINEER PRIOR TO CONSTRUCTION. PRIOR TO INSTALLATION, PE SEALED SHOP DRAWINGS FOR UNDERGROUND DETENTION SYSTEMS MUST BE FURNISHED TO CITY OF CHARLOTTE ENGINEERING FOR APPROVAL. PRIOR TO GO, SUBMITTER SEALED AS-BUILT DRAWINGS OF ALL WATER QUALITY BMP'S AND DETENTION SYSTEMS MUST BE PROVIDED.

PRIOR TO PLAT REVISION, OFF-SITE R/W AND/OR CONSTRUCTION EASEMENTS ARE REQUIRED TO BE OBTAINED ACCORDING TO THE GUIDELINES OF THE "OFFSITE R/W ACQUISITION PROCESS". THESE NEEDED R/W AND CONSTRUCTION LIMITS ARE CLEARLY SHOWN ON THE ROADWAY IMPROVEMENT PLAN. PER SECTION 18-1 AND 18-2 OF THE CITY OF CHARLOTTE'S POST CONSTRUCTION CONTROLS ADMINISTRATIVE MANUAL, ALL REQUIRED NATURAL AREAS AND/OR POST CONSTRUCTION CONTROLS EASEMENTS (PCEES) MUST BE RECORDED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

THE DEVELOPER SHALL CONTACT THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (GUS JORDI, 104-336-1086) TO IDENTIFY ANY CONFLICTS WITH TRAFFIC SIGNALIZATION EQUIPMENT. 60-90 DAYS WILL BE REQUIRED TO COORDINATE RELOCATION. DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELATED RELOCATION COST AND/OR ANY REPAIR COST CAUSED BY THE CONTRACTOR/DEVELOPER. CERTIFICATION AND STREET CLOSURE PERMITS ARE REQUIRED FOR UTILITY CUTS ON CITY STREETS. ALLOW 7 DAYS PROCESSING FOR PERMIT. FOR INFORMATION CONTACT CHARLOTTE DEPARTMENT OF TRANSPORTATION (104-336-4025) OR VISIT [HTTP://WWW.CHARMECK.ORG/DEPARTMENTS/TRANSPORTATION/STREET-MAINTENANCE/HOME.HTM](http://www.charmeck.org/departments/transportation/street-maintenance/home.htm) NON-STANDARD ITEMS (E. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE CHARLOTTE DEPARTMENT OF TRANSPORTATION. ORTH CAROLINA DEPARTMENT OF TRANSPORTATION BEFORE INSTALLATION. FOR CITY OF CHARLOTTE MAINTAINED STREETS, CONTACT CDOT AT (704) 336-3989.

SIDEWALK WITHIN THE CITY'S R/W THAT REQUIRES REPLACEMENT AS PART OF THE DEVELOPMENT AND/OR STREET IMPROVEMENTS SHOULD BE PHASED IN SUCH A WAY AS TO MINIMIZE THE DURATION OF THE SIDEWALK CLOSURE. THE EXTENT FEASIBLE, THE DEVELOPER SHOULD MAKE EVERY ATTEMPT TO HAVE SIDEWALK REPAIRED AND REOPENED FOR PUBLIC USE WITHIN 30 DAYS OF REMOVAL.

ANY WORK WITHIN THE CITY'S CLOSURE OF THE SIDEWALK OR TRAVEL LANE FOR LESS THAN 30 DAYS REQUIRES A R/W USE PERMIT. TRAFFIC CONTROL PLANS FOR ANY SIDEWALK OR TRAVEL LANE CLOSURES MUST BE SUBMITTED AS PART OF THE R/W USE PERMIT REQUEST. TRAFFIC CONTROL PLANS MUST BE IN ACCORDANCE WITH CDOT'S WORK AREA TRAFFIC CONTROL HANDBOOK (MATCH) AND MUST BE REVIEWED AND APPROVED. CONTRACTOR SHALL CONTACT CDOT AT LEAST 5 BUSINESS DAYS IN ADVANCE OF BEGINNING OF WORK AT (704) 452-1562.

RIGHT-OF-WAY CLOSURES LONGER THAN 30 DAYS REQUIRE A R/W LEASE AGREEMENT WHICH WILL INCLUDE THE SUBMITTAL OF A TRAFFIC CONTROL PLAN. TRAFFIC CONTROL PLANS REQUIRED THROUGH A LEASE AGREEMENT MUST BE OBTAINED DURING THE LAND DEVELOPMENT PLAN REVIEW AND ARE SUBJECT TO REVISIONS. THE REVISED TRAFFIC CONTROL PLANS MUST BE SUBMITTED AS PART OF THE LEASE AGREEMENT PROCESS FOR APPROVAL PRIOR TO START OF R/W CLOSURES. CONTRACTOR SHALL CONTACT CDOT AT (704) 336-3949.

CONSTRUCTION STAGING WITHIN CITY R/W LASTING MORE THAN 30 DAYS REQUIRES A R/W LEASE AGREEMENT. CONTRACTOR SHALL CONTACT CDOT AT (704) 336-3949.

TREESAVE AREA MUST HAVE INVASIVE PLANTS INCLUDING ENGLISH IVY REMOVED PRIOR TO THE FIRST CERTIFICATE OF OCCUPANCY BEING ISSUED. ANY GAPS IN THE EXISTING TREESAVE AREA WILL BE REPLANTED WITH 2" CALIBER LARGE MATURING TREES FROM THE APPROVED SPECIES LIST. COORDINATE WITH URBAN FORESTRY SPECIALIST.

COMMON OPEN SPACE / TREESAVE AREA TO REMAIN IN A NATURAL STATE. AREAS TO BE CLEARED OF TRASH AND DEBRIS. NO DEMOLITION LANDFILLS WILL BE LOCATED ON THIS SITE.

TREE PROTECTION BARRICADES MUST MEET OR EXCEED TREE ORD. GUIDELINES STD. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/GRADING/CONSTRUCTION AND NOT REMOVED UNTIL AFTER FINAL INSPECTION BY URBAN FORESTRY STAFF.

NO SOIL DISTURBANCE OR CONSTRUCTION OF ANY TYPE, INCLUDING TRAFFIC, BURIAL, PITS, TRENGING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN TREE SAVE AREA. VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES, AND/OR IMMEDIATE CORRECTIVE ACTION/ENFORCEMENT.

DEVELOPER TO CONTACT CDOT (STEPHEN BOLT, 104-432-3564) DURING SITE PLAN PREPARATION TO DISCUSS STREET LIGHTING REQUIREMENTS. IF ANY, FOR THE PROJECT. COORDINATE WITH CDOT ENERGY AND CDOT AS NECESSARY TO DETERMINE LIGHTING LEVELS, LIGHTING LAYOUT AND REQUIREMENTS FOR INSTALLATION.

SITE BENCHMARK FOR PROJECT IS THE RIM OF AN EXISTING SAN SWR. MH IN REA ROAD. (ELEV. = 541.36 (NAVD 1486))

DEVELOPMENT DATA

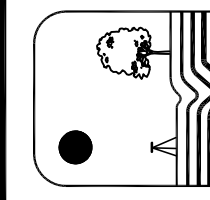
TAX PARCEL NO.: 03H12-12 & 13, 03H11-01
ZONING CLASSIFICATION: R-3 (DEVELOPED AS R-3 CLUSTER)
LAKE HYLIE WATERSHED PA
ZONING JURISDICTION: CITY OF CHARLOTTE
SITE ACREAGE: 16.88 AC
NO. OF UNITS ALLOWED BY ZONING: 16.88 x 3 = 50.6
AREA IN EASEMENTS/R/W: 2.31 AC
NET TOTAL SITE AREA: 14.51 AC
TREE SAVE REQUIRED (PROVIDED): 108 x 14.5 AC = 1,45 AC/50 AC
COMMON OPEN SPACE REQUIRED: 108 x 16.88 AC = 1,64 AC
COMMON OPEN SPACE PROVIDED: 4.51 AC = 26.7%

R-3 CLUSTER LOT DATA:
MIN. LOT SIZE = 8,000 SF
MIN. LOT WIDTH = 60'
MIN. SETBACK = 20'
MIN. SIDE YARD = 6' EXTERNAL, 5' INTERNAL
MIN. REAR YARD = 45' EXTERNAL, 30' INTERNAL

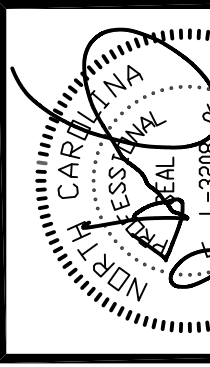
* MIN. GARAGE SETBACK 20' FROM S/W
THE MAXIMUM BUA IS 3,600 SF PER LOT (SEE BMP CALCULATIONS)

KENNEY DESIGN GROUP, PA

C-1986

1216 PARSONS TRAIL
DENVER, NORTH CAROLINA 28037
PH: 704/377-6099
EMAIL: KENNEY@KENNEYDESIGN.COM

Revisions:
1. REVISED PER CITY OF CHARLOTTE 11/15/17
2. REVISED PER CITY OF CHARLOTTE 11/15/17
3. REVISED PER CITY OF CHARLOTTE 11/15/17
4. REVISED PER CITY OF CHARLOTTE 11/15/17
5. REVISED PER CITY OF CHARLOTTE 11/15/17



Scale: 1"=60'
Date: 2/14/17
Drawn By: MK
Designed By: MK
Job No: 1416

Preliminary Subdivision Site Plan

HARWOOD KNOLL

City of Charlotte, Mecklenburg County, North Carolina
Harwood Knoll LLC, 275 Thornburg Rd., Dallas, NC 28034

Sheet No.

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