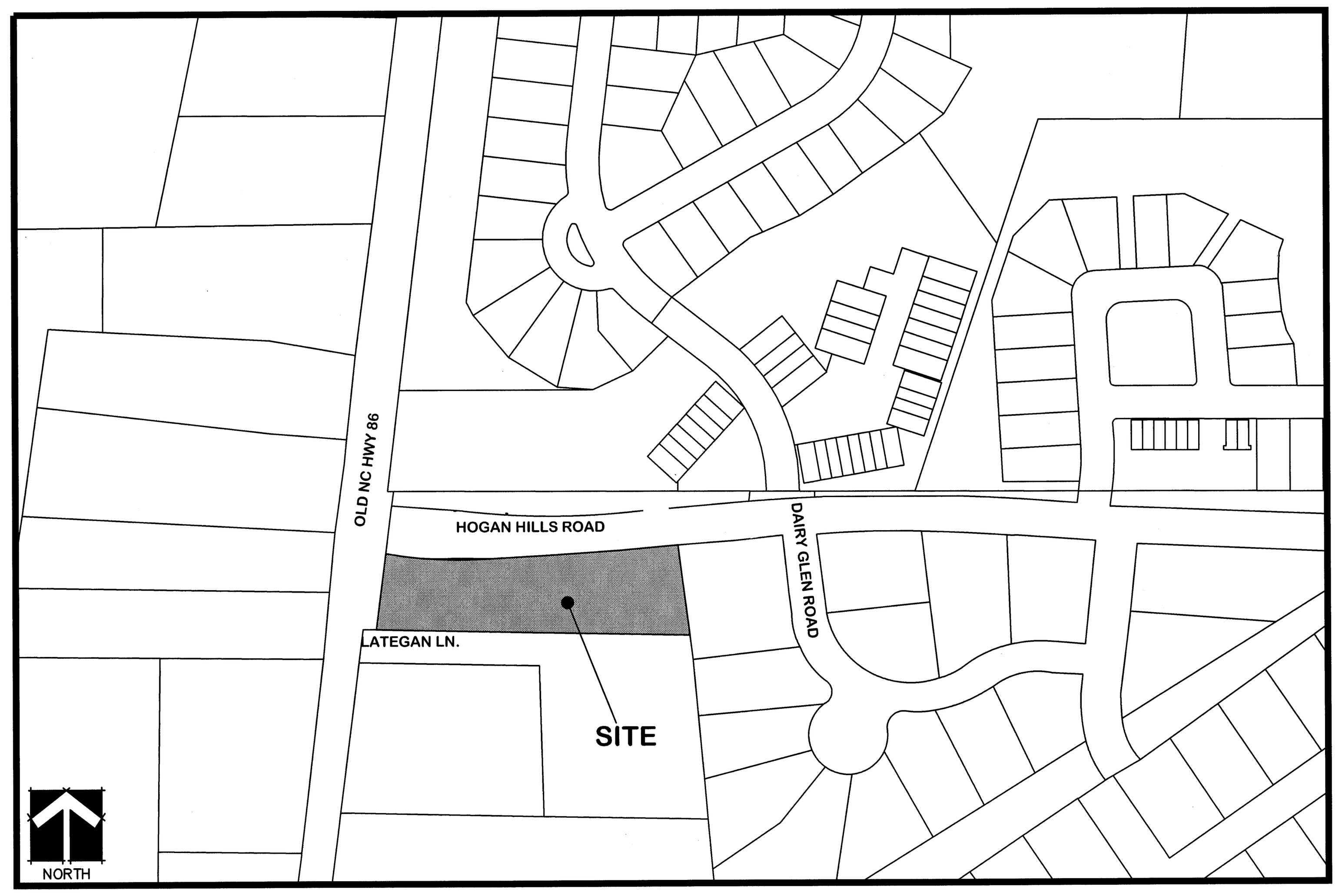
LAKE HOGAN FARM CUP, MINOR MODIFICATION

CONVERSION OF RESERVED LOT TO ALLOW RESIDENTIAL USE

303 HOGAN HILLS RD, CHAPEL HILL, NORTH CAROLINA

SITE DATA TABLE	
GENERAL:	
PIN(s):	9860-82-2266
DEED/PAGE:	5333/478
TRACT AREA :	1.2 ACRES
EXISTING ZONING:	R-20
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	SINGLE-FAMILY RESIDENTIAL
BUILDING:	
MAXIMUM ALLOWED BUILDING HEIGHT	35'
PROPOSED MAX. BUILDING HEIGHT	35'
PROPOSED MAX. STORIES	2
WATERSHED OVERLAY:	JORDAN LAKE UNPROTECTED
RIVER BASIN:	CAPE FEAR RIVER BASIN
FLOODPLAIN DATA:	NOT IN FLOODPLAIN
IMPERVIOUS SURFACE AREAS:	
EXISTING IMPERVIOUS	0 SF
PROPOSED MAX IMPERVIOUS ON SITE	5,000 SF
PROPOSED SETBACKS:	
R/W/FRONT SETBACK	25'
SIDE SETBACK	10'
REAR SETBACK	20'



VICINITY MAP
1"=200'

INDEX TO PLANS

GENERAL NOTES

1. SURVEY PROVIDED BY HAROLD "TODD" SMITH LAND SURVEYING.
2. THE PURPOSE OF THE PLANS IS TO SEEK AUTHORIZATION FOR THE RESIDENTIAL USE OF THE EXISTING VACANT LOT IDENTIFIED BY ORANGE COUNTY PIN 9860822266; IN ORDER TO DO SO, PERMISSION AND APPROVAL IS REQUIRED BY BOTH THE LAKE HOGAN FARMS HOMEOWNER'S ASSOCIATION AND THE TOWN OF CARRBORO BOARD OF ALDERMAN.
3. DEVELOPER SHALL COORDINATE A PRE-CONSTRUCTION CONFERENCE PRIOR TO ANY SITE DISTURBANCES WITH ALL APPROPRIATE PERMIT-ISSUING AUTHORITIES. THE CONFERENCE WILL BE ATTENDED BY A REPRESENTATIVE FROM THE DEVELOPER'S ENGINEER, CONTRACTOR, ZONING DIVISION, PUBLIC WORKS, ORANGE COUNTY EROSION CONTROL, OWASA AND THE TOWN ENGINEER.
4. PRIVATE EASEMENTS SHALL BE MAINTAINED BY THE LAKE HOGAN FARMS HOMEOWNER'S ASSOCIATION. PRIVATE STORM WATER EASEMENT, PRIVATE DRAINAGE MAINTENANCE AREAS, AND/OR SYSTEM AND ITS WATER QUALITY FACILITIES ARE NOT TOWN MAINTAINED AND ARE THE RESPONSIBILITY OF THE HOA OR PRIVATE PROPERTY OWNER. NO OBSTRUCTIONS, OR PLANTINGS THAT EXCEED 24" IN HEIGHT AT MATURE GROWTH, BRIDGES, SHEDS, FENCES, OR OTHER OBSTRUCTIONS OR ALTERATIONS OF THE EASEMENT OR SYSTEM ARE ALLOWED WITHOUT THE EXPRESSED APPROVAL OF THE TOWN OF CARRBORO ZONING ADMINISTRATOR.
5. MAINTAIN APPROPRIATE AND REQUIRED TRAFFIC CONTROL DEVICES AT ALL PUBLIC ROADWAY CONNECTIONS. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "NCDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
6. ALL SOIL FILL MATERIAL SHALL BE SUITABLE, STABLE SOILS THAT ARE FREE OF ORGANIC MATERIAL AND CONTAIN NO ROCKS LARGER THAN 6" IN DIAMETER. SOIL SHALL BE PLACED IN APPROXIMATELY 8" LIFTS AND COMPACTED ALL FILL AREAS TO 95% OF MAXIMUM DENSITY OR PRE GEOTECHNICAL RECOMMENDATION . DEVELOPER SHALL FURNISH A SOILS ENGINEERING AND TESTING FIRM TO OBSERVE AND PERIODICALLY TEST FILL MATERIAL FOR OPTIMUM PLACEMENT AND COMPACTION. COPIES OF ALL REPORTS, CONFIRMING OBSERVATION AND DENSITY TEST RESULTS, SHALL BE FORWARDED TO THE DIRECTOR OF PUBLIC WORKS.
7. IMPERVIOUS SURFACE CALCULATION FOR LOT 12 IS BASED ON 5000 SF MAXIMUM IMPERVIOUS .
8. PER SECTION 15-299 OF THE CARRBORO LAND USE ORDINANCE, HOMEOWNER'S ASSOCIATION MAINTENANCE IS REQUIRED FOR ALL OPEN SPACE NOT DEDICATED TO THE TOWN OF CARRBORO. THE TOWN IS NOT REQUIRED TO ACCEPT OFFERS OF DEDICATION.
9. HOMEOWNERS'S ASSOCIATION RESERVES THE RIGHT TO ACCESS AND MAINTAIN FACILITIES CONTAINED WITHIN PRIVATE DRAINAGE MAINTENANCE AREAS, WHETHER THEY LIE IN OPEN SPACE OR ON PRIVATE LOTS.
10. MULCH PILES CREATED DURING CONSTRUCTION SHALL NOT EXCEED 8 FEET IN HEIGHT, 20 FEET IN WIDTH, AND 20 FEET IN LENGTH. PILES SHALL BE SEPARATED FROM ADJACENT PILES AND OTHER EXPOSURES BY 50 FEET AND FIRE APPARATUS ACCESS ROAD APPROVED BY THE FIRE DEPARTMENT SHALL BE PROVIDED WITHIN THE 50-FOOT SEPARATION.
11. BUILDING HEIGHT IS LIMITED TO 35' PER SECTION 15-1852 OF THE TOWN OF CARRBORO LUO.
12. THE APPLICANT SHALL PROVIDE TO THE ZONING DIVISION, PRIOR TO THE RECORDATION OF THE FINAL PLAT FOR THE PROJECT OR BEFORE THE RELEASE OF A BOND IF SOME FEATURES ARE NOT YET IN PLACE AT THE TIME OF THE RECORDING OF THE FINAL PLAT, MYLAR AND DIGITAL AS-BUILTS FOR THE STORM WATER FEATURES OF THE PROJECT. DIGITAL AS-BUILTS SHALL BE IN DXF FORMAT AND SHALL INCLUDE A BASE MAP OF THE PROJECT AND ALL SEPARATE PLAN SHEETS. AS-BUILT DXF FILES SHALL INCLUDE ALL LAYERS OR TABLES CONTAINING STORM DRAINAGE FEATURES. STORM DRAINAGE FEATURES SHALL BE CLEARLY DELINEATED IN A DATA TABLE. THE DATA WILL BE TIED TO HORIZONTAL CONTROLS.

OWNER:
YOGESHBHAI & AMISHA PATEL
100-A CULBERTH ROAD
CHAPEL HILL, NC 27516

DEVELOPER:
SOLARC DESIGN BUILD, INC.
1309 VICKERS AVE
DURHAM, NC 27707
CONTACT: MICHAEL ISOLA
TEL: 919.210.7962

CIVIL ENGINEER:
PABST & HILBURN, PA
911 PAVERSTONE DRIVE, SUITE E
RALEIGH, NC 27615
TEL: 919.848.4399
FAX: 919.848.4395

SURVEYOR:
HAROLD "TODD" SMITH
LAND SURVEYING
P.O. BOX 14142
RALEIGH, NC
TEL: 919.605.6953

ARCHITECT:
DOUGLAS JANES
1309 VICKERS AVENUE
TEL: 919.308.2984

CONSTRUCTION WASTE NOTES:

1. BY ORANGE COUNTY ORDINANCE,ALL PRESENT CONSTRUCTION WASTE, TO INCLUDE CLEAN WOOD WASTE, SCRAP METAL AND CORRUGATED CARDBOARD, MUST BE RECYCLED.
2. BY ORANGE COUNTY ORDINANCE, ALL HAULERS OF CONSTRUCTION WASTE MUST BE PROPERLY LICENSED.
3. THE APPLICANT MUST HOLD A RE-DEMOLITION/PRE-CONSTRUCTION CONFERENCE WITH THE COUNTY'S SOLID WASTE STAFF PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITY ON THE SITE. THIS MAY BE THE SAME MEETING HELD WITH OTHER DEVELOPMENT OFFICIALS.

RECREATIONAL POINTS

TYPE OF FACILITY	POINTS/SF	SF	TOTAL POINTS	PH. 1,2,3,4	PH. 5B	PH. 6	PH. 7
CLUBHOUSE	0.508	4,000	2032.0	2032.0			
POOL	0.463	4,200	1945	1945			
POOL PATIO	0.020	12,000	240	240			
TENNIS COURTS (4)	0.025	28,800	720	720			
BASKETBALL COURT	0.058	2,400	139	139			
HIKING/BIKE TRAIL	0.016	30,000	480.0	480.0			
PLAY EQUIPMENT	0.107	4,077.5	436.5	436.5			
GAZEBO/DOCK	0.326	1,500	489.0	489.0			
RECREATION POINTS PROPOSED			6481.5	6481.5	0.0	0.0	0.0

RECREATION POINTS REQUIRED **376** SINGLE FAMILY LOTS x 10.39 = **3,906.64**
30 2-BEDROOM TOWNHOMES x 9.47 = 284.10
30 3-BEDROOM TOWNHOMES x 11.81 = 354.30

TOTAL POINTS REQUIRED = **4,545.04**

NOTE: RECREATION POINTS WILL BE CALCULATED ON A PHASE BY PHASE BASIS, AND WILL BE REQUIRED AND CALCULATED AT FINAL CONSTRUCTION DRAWINGS FOR THAT PHASE. ENOUGH RECREATION POINTS MUST BE PROVIDED TO MEET THE RECREATION POINTS FOR THE TYPE AND NUMBER OF UNITS FOR THAT PHASE.

THE DEVELOPER CURRENTLY HAS ENOUGH RECREATIONAL POINTS TO CONSTRUCT THE PROPOSED PHASE.

ZONING DISTRICT TABULATION

R-R	25.92 AC.	25.92 UNITS ALLOWED
R-20	282.34 AC.	612.6 UNITS ALLOWED
R-15	1.74 AC.	5.05 UNITS ALLOWED

OPEN SPACE REQUIRED	80.83 AC.
OPEN SPACE SHOWN	90.83 AC.
TOTAL ACRES	310.87 AC.
TOTAL NO. OF LOTS:	437 LOTS
PROPOSED DENSITY:	1.41 UNITS/AC.

PHASE	OPEN SPACE REQUIRED (ACRES)	OPEN SPACE RECORDED (ACRES)	DIFFERENTIAL (ACRES)
1	9.35	19.7	+10.35
2	7.17	9.13	+1.96
3	4.63	5.50	+0.87
4	0.00	13.66	+13.66
4	0.00	2.06	+2.06
5A	7.13	0.36	-6.77
5B	0.00	9.49	+9.49
5C	0.00	0.00	0.00
6A	7.45	6.32	-1.13
6B	7.45	4.01	-3.44
7	0.00	2.41	+2.41
8/9	20.47	12.1	-8.64
10	1.41	4.42	+3.01
11	0.00	1.78	+1.78
TOTAL	80.83	90.94 TOTAL	+10.11

OPEN SPACE CALCULATIONS UNDER AIS

310 AC. X .05 = 15.5 AC. OPEN SPACE

78 E-LOTS – NO LOT UNDER 20,000 S.F.

93 H-LOTS – NO LOT UNDER 20,000 S.F.

84 T-LOTS X 20K=1,680,000 (38.56 AC.)
84 T-LOTS ACTUAL AREA = 1,333,165
1,680,000 – 1,333,165 = 346,835 (7.95 AC.)

29 C-LOTS X 20K= 580,000
29 C-LOTS ACTUAL AREA = 267,481
580,000 – 267,481 = 312,519 (7.17 AC.)

91 V-LOTS X 20K = 1,820,000
91 V-LOS ACTUAL AREA = 533,952
1,820,000 – 533,952 = 1,286,048 (29.52 AC.)

60 TH-LOTS X 20K = 1,200,000
60 V-LOS ACTUAL AREA = 298,525
1,200,000 – 298,525 = 901,475 (20.69 AC.)

LOT 379 – NO LOT UNDER 20,000 S.F.

OPEN SPACE REQUIRED: 80.83 AC.

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SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032573 PHILLIP D. PABST, JR. 6-9-14

LAKE HOGAN FARM CUP
CONVERSION OF RESERVED LOT TO ALLOW RESIDENTIAL USE
303 HOGAN HILLS ROAD, CHAPEL HILL, NC
MINOR MODIFICATION
COVER SHEET

NO.	REVISION	DATE
1	REVISIONS PER REVIEW COMMENTS	5/13/14

PREPARED FOR :
YOGESHBHAI & AMISHA PATEL
100-A CULBERTH ROAD
CHAPEL HILL, NC 27516

DATE : 3/11/2014

PROJECT ENGINEER:
P. E. HILBURN

PROJECT CADD DESIGNER:
A. Brown/P. E. HILBURN

PROJECT SURVEYOR:
HAROLD "TODD" SMITH LAND SURVEYING

DRAWING SHEET
C-0.0

PROJECT NUMBER
252-14

P:\200-299\252-14 Lot 12 - Lake Hogan Farms (Solarc Design Build)\80-Drawings\86-Design\C-0.0.dwg May 13, 2014 - 10:51am BY:hilburn

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH ALL TOWN OF CARRBORO, NCDOT, AND OWASA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS SET FOR OTHER PERTINENT INFORMATION.
3. THE CARRBORO STREET SUPERINTENDENT, CHAD DUSENBERRY, SHALL BE CONTACTED PRIOR TO THE PLACEMENT OF THE FINAL ASPHALT SURFACE TO INSPECT ALL EXISTING ROADWAY SURFACES FOR DETERMINATION FOR REQUIRING ASPHALT MILLING AND PAVING OF AREAS SCARED OR DAMAGED AS A RESULT OF THE WORK CONDUCTED WITHIN THE STREET RIGHT-OF-WAY.
4. ALL STREET CUTS WITHIN THE PUBLIC RIGHT OF WAY SHALL BE FULLY BACKFILLED BY THE END OF THE WORK DAY AND NOT LEFT OPEN OVERNIGHT.
5. ALL DISTURBANCES WITHIN HOGAN HILLS ROAD AND DAIRY GLEN ROAD RIGHT OF WAY SHALL BE ENTIRELY RESTORED TO THEIR ORIGINAL CONDITION AT NO COST TO THE TOWN AND SHALL BE ENTIRELY COMPLETED AND INSPECTED BY DENNIS FONE, (919) 805-0107, PRIOR TO CO ISSUANCE.
6. APPROVAL BY OWASA IS REQUIRED PRIOR TO INSTALLING THE 8" GRAVITY SEWER EXTENSION. THE SEWER EXTENSION PLANS WILL BE PROVIDED UNDER A SEPARATE SUBMITTAL TO OWASA.
7. NO AREA OUTSIDE OF LIMITS OF DISTURBANCE IS TO BE CLEARED. AREAS ON LOT 12 NOT SHOWN TO BE CLEARED ARE TO REMAIN UNDISTURBED.
8. VERIFY ALL ILLUSTRATED UTILITY CROSSINGS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IF CONFLICTS ARE ENCOUNTERED.
9. COORDINATE WITH LOCAL UTILITY COMPANIES AS REQUIRED.
10. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT DURING GRADING OPERATION. CONTRACTOR SHALL CALL 1-800-632-4949 N.C. "ONE CALL" PRIOR TO CONSTRUCTION.
11. TOWN OF CARRBORO ENCROACHMENT AGREEMENTS ARE REQUIRED FROM THE CARRBORO PUBLIC WORKS DEPARTMENT PRIOR TO ANY STREET CUTS AS SHOWN ON HOGAN HILLS ROAD AND DAIRY GLEN ROAD. CONTACT CHAD DUSENBURY, STREET SUPERINTENDENT AT (919) 918-7432 OR cdusenberry@townofcarrboro.org

HORIZONTAL AND VERTICAL SEPARATION

A. SANITARY SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10-FOOT SEPARATION , THE CITY OF RALEIGH MAY ALLOW DEVIATION ON A CASE-BY-CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION ON MAY ALLOW THE INSTALLATION OF THE SANITARY SEWER CLOSER TO A WATER MAIN, PROVIDED THAT THE WATER MAIN IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SANITARY SEWER AND AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

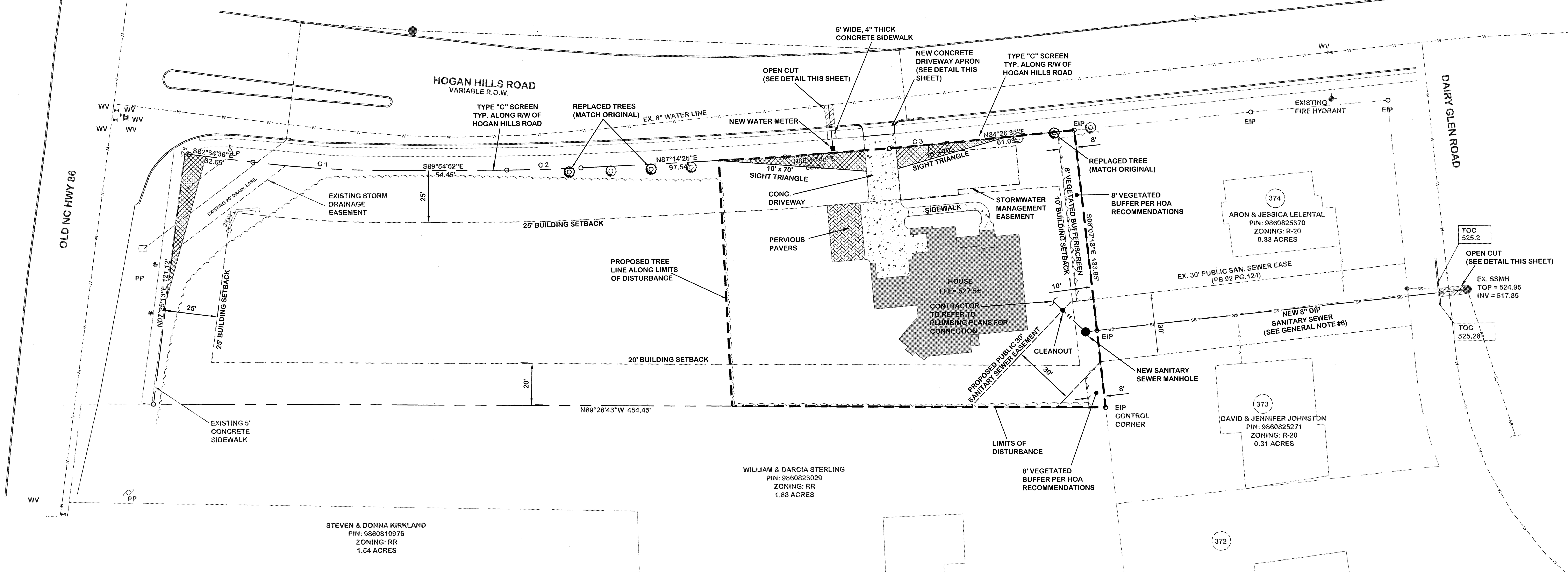
B. IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE OR ANYTIME THE SANITARY SEWER IS OVER THE WATER MAIN, BOTH THE WATER MAIN AND SANITARY SEWER MUST BE CONSTRUCTED OF FERROUS PIPE COMPLYING WITH THE PUBLIC WATER SUPPLY DESIGN STANDARDS AND PRESSURE TESTED TO 150PSI TO ASSURE WATER TIGHTNESS BEFORE BACKFILLING.

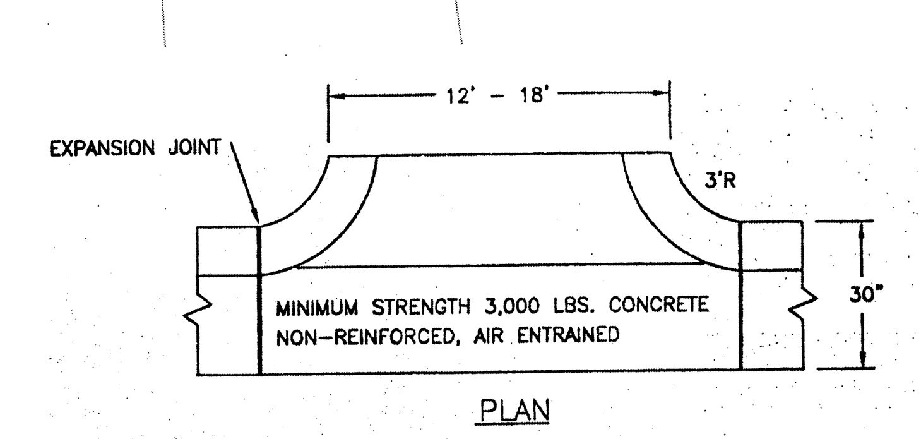
C. 1. 24-INCH VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES. WHEN THE SEPARATION IS LESS THAN 24-INCHES, THE SANITARY SEWER PIPE MATERIAL SHALL BE STANDARD DUCTILE IRON PIPE AND THE VOID SPACE BETWEEN THE PIPE CROSSING SHALL BE BACKFILLED WITH 3,000 PSI CONCRETE. A 12-INCH VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND WATER MAINS.
2. IF A 12-INCH VERTICAL SEPARATION IS NOT MAINTAINED AT A CROSSING BETWEEN STORM SEWER AND WATER MAINS (OR PRESSURE SEWERS). THE WATER MAIN SHALL BE CONSTRUCTED OF FERROUS PIPE AND A CONCRETE COLLAR SHALL BE POURED AROUND WATER MAINS AND STORM SEWER TO IMMOBILIZE THE CROSSING.

CROSSINGS

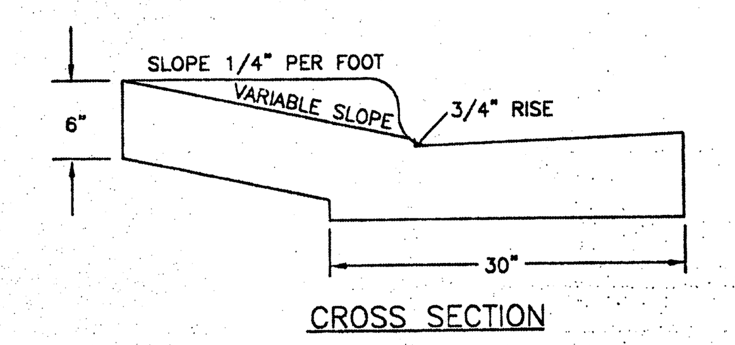
A. SANITARY SEWER CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SANITARY SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SANITARY SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

B. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, ONE OF THE FOLLOWING METHODS MUST BE SPECIFIED.
1. THE SANITARY SEWER SHALL BE DESIGNED AND CONSTRUCTED OF FERROUS PIPE AND/OR SHALL BE PRESSURE TESTED AT 150PSI TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
2. EITHER THE WATER MAIN OR THE SANITARY SEWER LINE MAY BE ENCASED IN WATERTIGHT CARRIER PIPE, WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE TOWN OF CARY FOR USE IN WATER MAIN CONSTRUCTION.

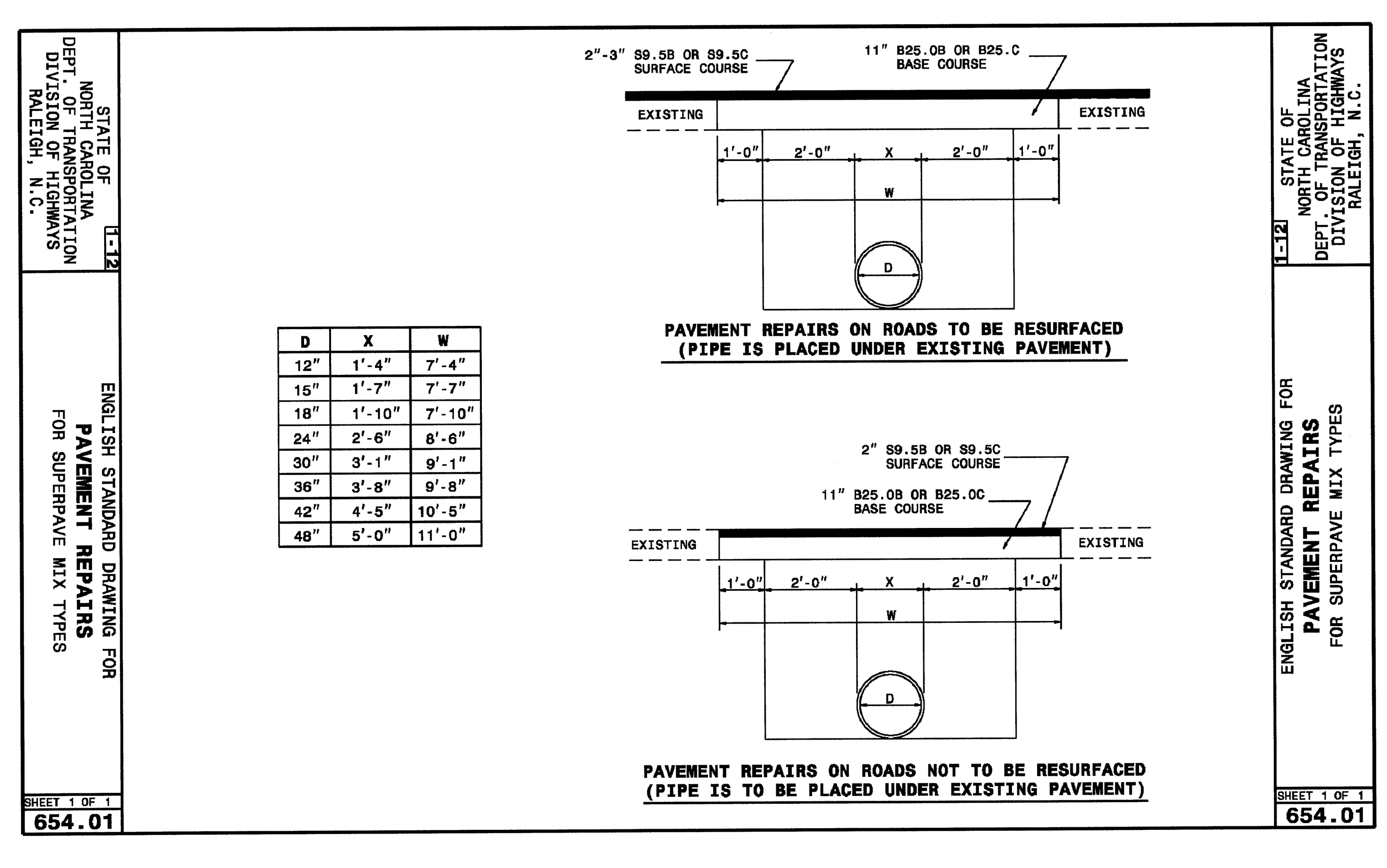




NOTES:
1. PRIOR TO CURB REMOVAL FOR DRIVEWAY CUT, CONTACT DENNIS FONE, CONSTRUCTION INSPECTOR, AT (919) 805-0107.
2. A TOWN OF CARRBORO STREET AND DRIVEWAY ACCESS PERMIT IS REQUIRED TO INSTALL THE DRIVEWAY CUT.



2/SD-2.0 TYPICAL DRIVEWAY APRON



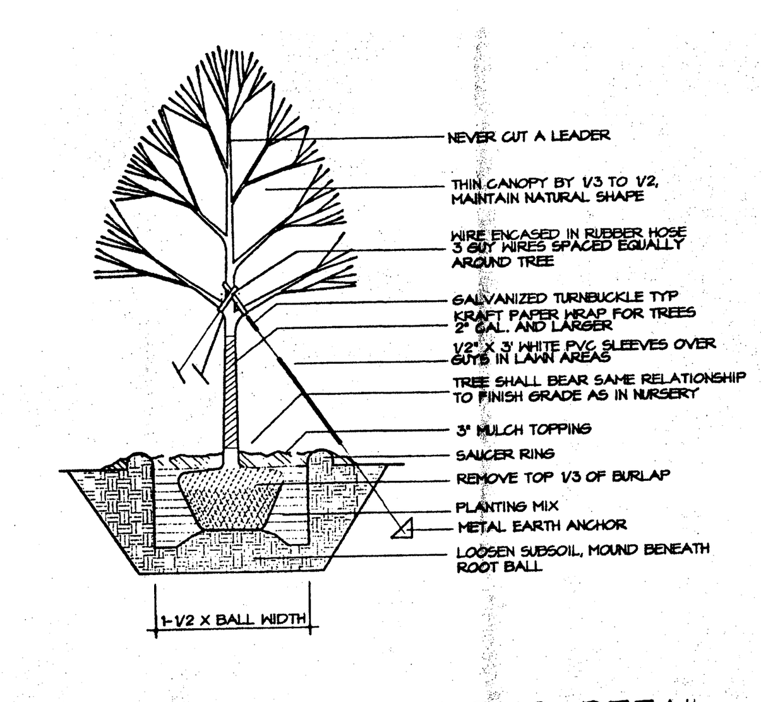
D	X	W
12"	1'-4"	7'-4"
15"	1'-7"	7'-7"
18"	1'-10"	7'-10"
24"	2'-6"	8'-6"
30"	3'-1"	9'-1"
36"	3'-8"	9'-8"
42"	4'-5"	10'-5"
48"	5'-0"	11'-0"

TREE LIST

SYM.	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
QA	2	QUERCUS ALBA	WHITE OAK	2-1/2" CAL.	B+B.FULL.SINGLE LEADER.5' BR. HT.

STREET TREES ARE TO BE PLANTED OUT OF THE PUBLIC RIGHT OF WAY TOWARD THE LOT (2 - 20 FEET) FROM THE LOT LINE.
THE DEVELOPER SHALL EITHER PLANT OR RETAIN SUFFICIENT TREES SO THAT BETWEEN THE PAVED PORTION OF THE STREET AND A LINE RUNNING PARALLEL TO AND FIFTY FEET FROM THE CENTER LINE OF THE STREET, THERE IS FOR EVERY THIRTY FEET OF STREET FRONTAGE AT LEAST AN AVERAGE OF ONE DECIDUOUS TREE THAT HAS OR WILL HAVE WHEN FULLY MATURED A TRUNK AT LEAST TWELVE INCHES IN DIAMETER, PER SECTION 15-315 OF THE LUO.

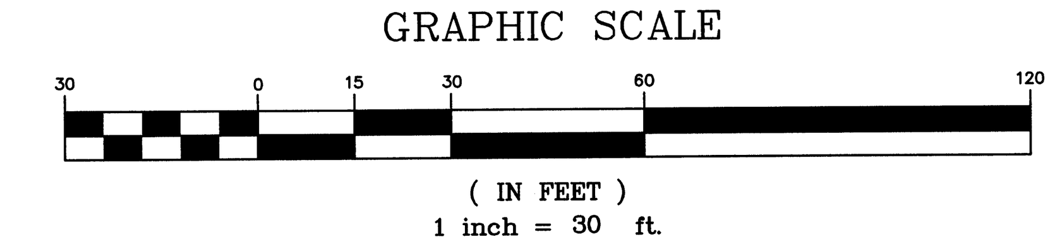
1/SD-2.0 SITE PLAN



TREE GUYING/PLANTING DETAIL

1/SD-2.0 SITE PLAN

PB: 92 PG: 124



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SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032573 PHILLIP D. PABST 6-9-14

LAKE HOGAN FARM CUP
CONVERSION OF RESERVED LOT TO ALLOW RESIDENTIAL USE
303 HOGAN HILLS ROAD, CHAPEL HILL, NC
MINOR MODIFICATION
SITE LAYOUT/UTILITY PLAN

PREPARED FOR :
YOGESHBHAI & AMISHA PATEL
100-A CULBERTH ROAD
CHAPEL HILL, NC 27516

DATE : 3/11/2014

PROJECT ENGINEER:
P. E. HILBURN

PROJECT CADD DESIGNER:
A. Brown/P. E. HILBURN

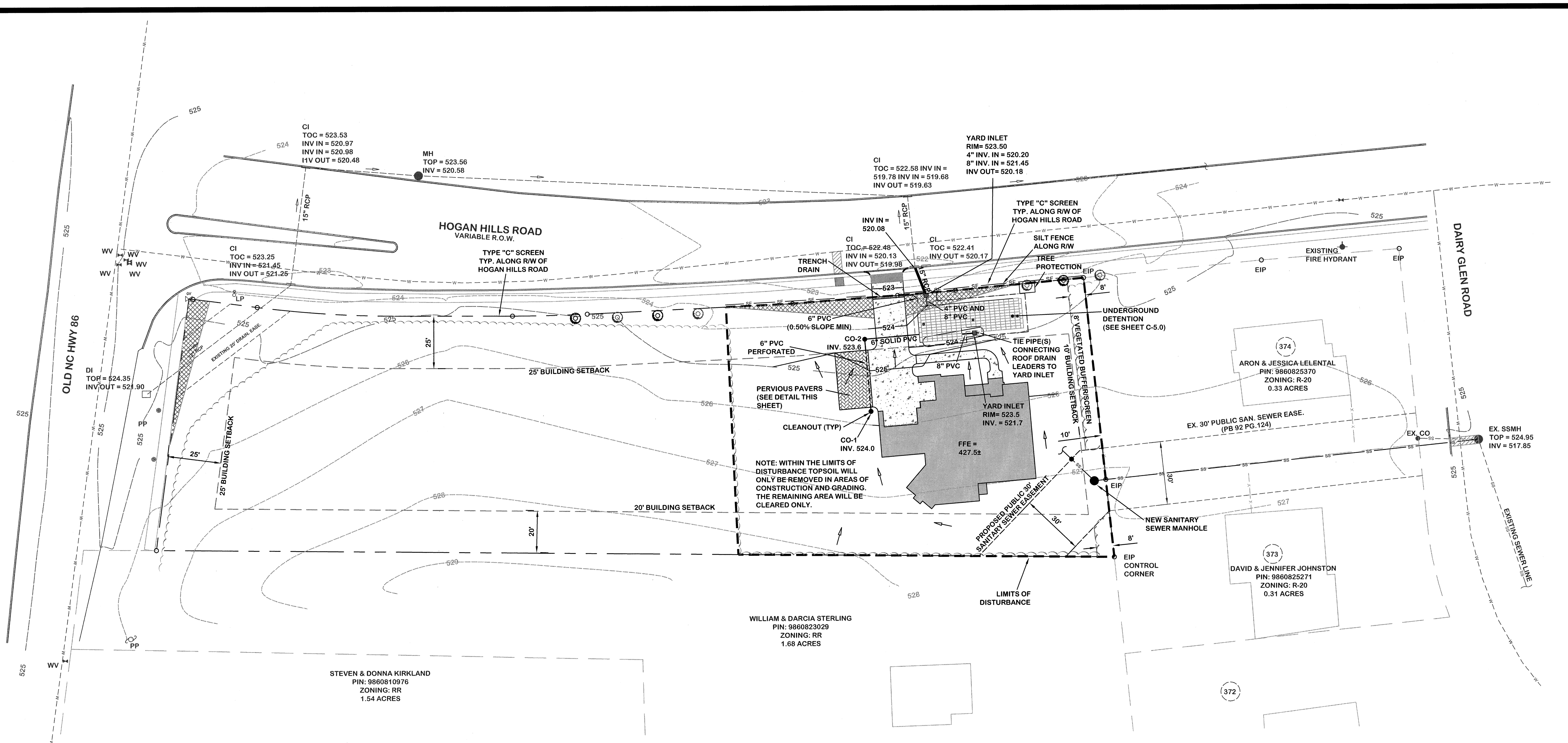
PROJECT SURVEYOR:
HAROLD "TODD" SMITH LAND SURVEYING

NO.	REVISION	DATE
1	REVISIONS PER REVIEW COMMENTS	5/13/14
2	REVISIONS PER REVIEW COMMENTS	6/05/14

DRAWING SHEET
C-3.0

PROJECT NUMBER
252-14

P:\200-299\252-14 Lot 12 - Lake Hogan Farms (Solarc Design Build)\80-Drawings\85-Design\C-3.0.dwg Jun 09, 2014 - 2:20pm BY:hilburn



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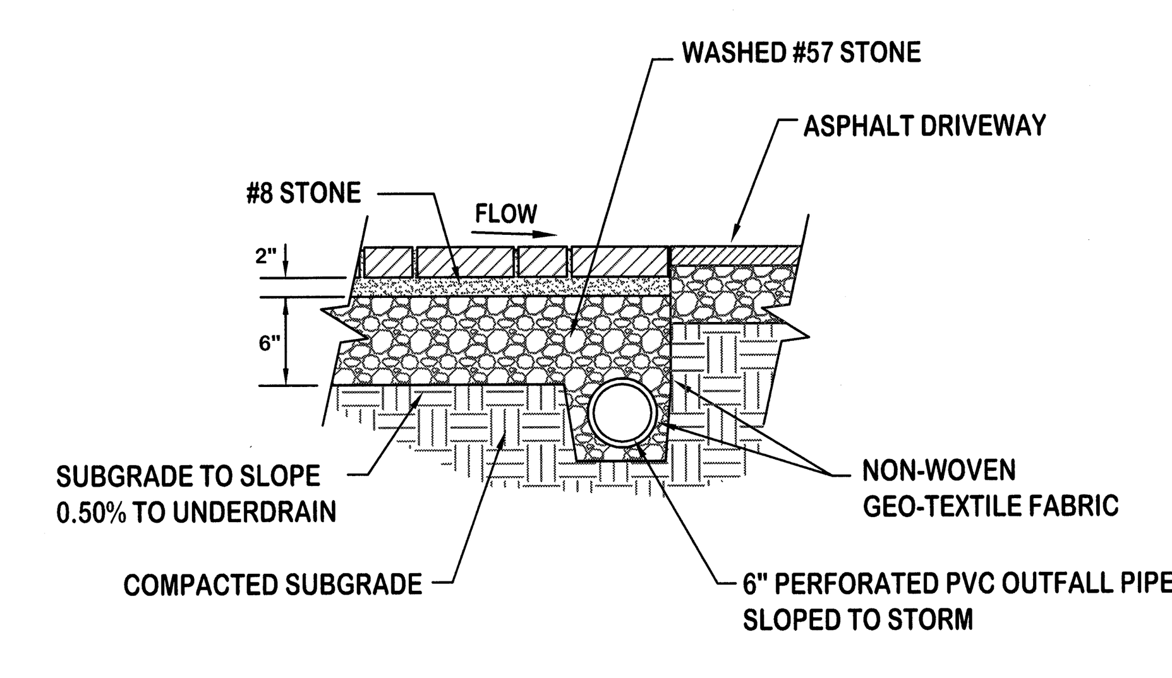
4. NO AREA OUTSIDE OF LIMITS OF DISTURBANCE IS TO BE CLEARED. AREAS ON LOT 12 NOT SHOWN TO BE CLEARED ARE TO REMAIN UNDISTURBED.
5. ALL INSTALLED BMP'S (WATER QUALITY AND DETENTION DEVICES) MUST BE CERTIFIED BY THE ENGINEER OF RECORD AS CONSTRUCTED PER THE APPROVED CONSTRUCTION PLANS PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY AND THAT AS-BUILT CONSTRUCTION PLANS WILL BE SUBMITTED TO THE TOWN.

GRADING NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING TOPOGRAPHY IN RELATION TO THE PROPOSED GRADES TO ENSURE DRAINAGE IN THE DIRECTION INDICATED ON PLANS.
2. STRIP TOPSOIL TO FULL DEPTH IN AREAS TO BE GRADED.
3. MAXIMUM GRADED SLOPE SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
4. AREAS TO BE GRADED SHALL BE CLEARED OF ALL EXISTING VEGETATION.
5. COMPACT ALL FILL AREAS TO 95% OF MAXIMUM DENSITY, OR PER GEOTECHNICAL RECOMMENDATIONS.

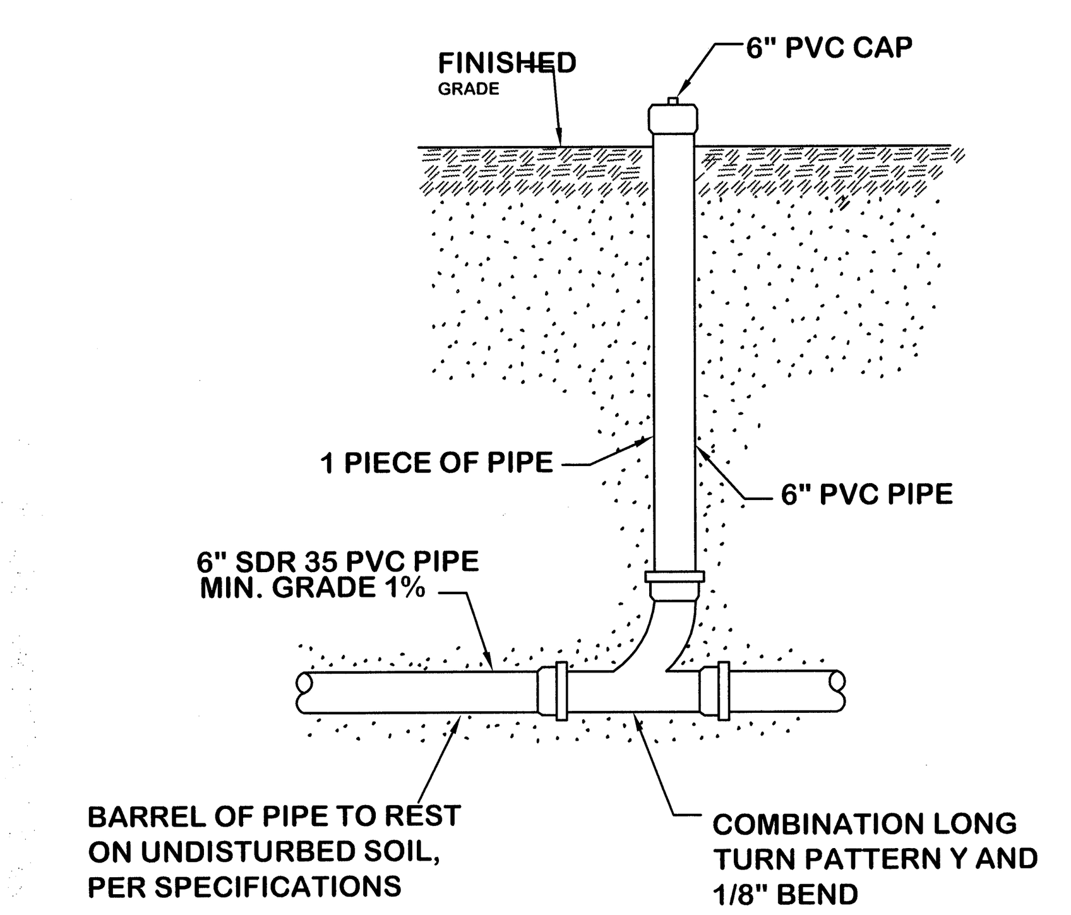
UNDERGROUND DETENTION NOTES

1. SEE SHEET C-5.0 FOR PLAN AND PROFILE OF UNDERGROUND DETENTION DEVICE.
2. SEE SHEET D-1.0 AND D-2.0 FOR UNDERGROUND DETENTION DETAILS



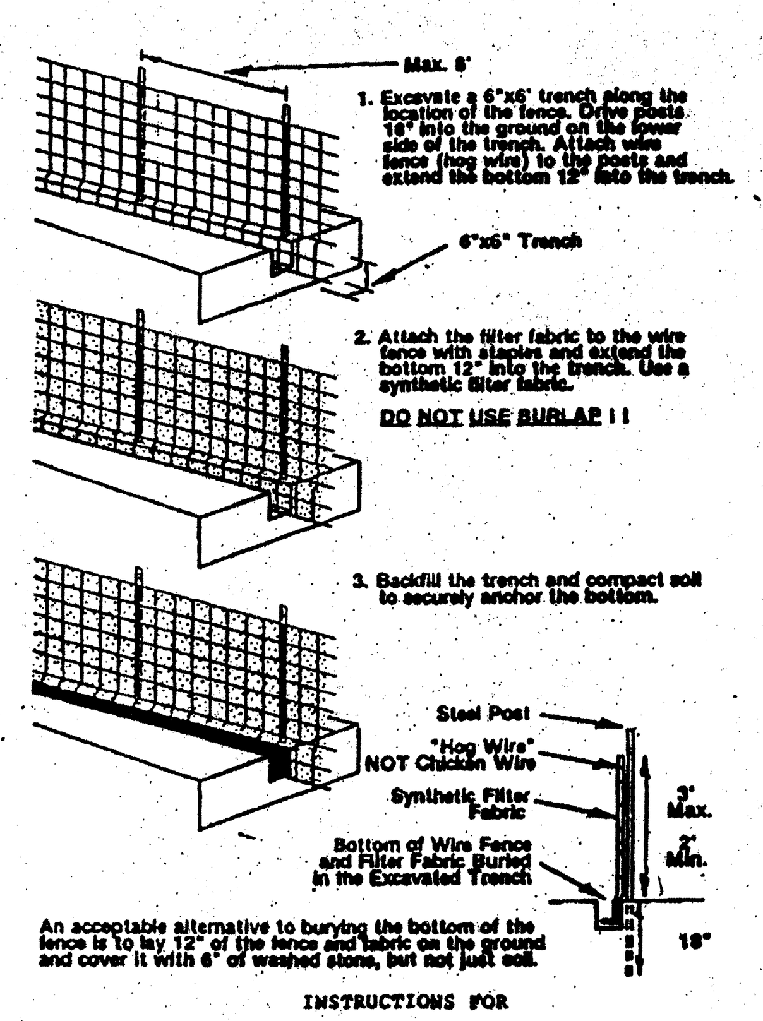
PERVIOUS PAVERS WITH UNDERDRAIN

NTS



UNDERDRAIN CLEAN OUT (TYP)

NTS



INSTRUCTIONS FOR

SILT FENCE

INSTALLATION

1. REFER TO THE PLANS FOR LOCATION, EXTENT, AND SPECIFICATIONS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, OR METHODS OF INSTALLATION, CONTACT THE ENGINEER, ARCHITECT, OR RESPONSIBLE PERSONNEL ON THE SITE FOR ASSISTANCE. EROSION CONTROL PERSONNEL HAVE COPIES OF INSTRUCTIONS AND MAY HAVE PHOTOGRAPHS OF PROPERLY INSTALLED SILT FENCES AS AN AID TO INSTALLATION.

   IF THE SILT FENCE IS NOT INSTALLED CORRECTLY THE FIRST TIME, IT WILL HAVE TO BE REBUILT.

2. DETERMINE THE LOCATION ON THE GROUND TAKING INTO CONSIDERATION:
   - A SILT BARRIER (PREFABRICATED SILT FENCE) CANNOT BE SUBSTITUTED! ! THE SILT FENCE MUST BE CONSTRUCTED AS DESCRIBED IN THESE INSTRUCTIONS.
   - ALLOW SUFFICIENT SPACE FOR MAINTENANCE, GRADING, FILLING, AND OTHER CONSTRUCTION ACTIVITY BETWEEN THE SILT FENCE AND THE CONSTRUCTION SITE. IF NECESSARY, HAVE SLOPE STAKES, BUILDING CORNERS, STORM DRAINS, ETC. SURVEYED BEFORE CLEARING TO GUIDE INSTALLATION. KNOW WHERE THE TOE OF FILL SLOPES WILL EXTEND SO THAT SUFFICIENT ROOM IS LEFT BETWEEN THE TOE AND SILT FENCE FOR MAINTENANCE, REPAIR, AND REMOVAL.
   - ALLOW AT LEAST:

     15 FEET BETWEEN THE FENCE AND SINGLE-STORY BUILDINGS.

     25 FEET BETWEEN THE FENCE AND MULTIPLE-STORY BUILDINGS.

     10 FEET BETWEEN THE FENCE AND THE TOE OF FILL SLOPES.
   - WHERE POSSIBLE, INSTALL THE SILT FENCE ON THE CONTOUR SO THAT RUNOFF GOES THROUGH THE SILT FENCE AND DOES NOT FLOW ALONG THE SILT FENCE AND POND AT THE LOWEST POINT. WHERE PONDING DOES OCCUR, SILT FENCE OUTLETS MAY BE NECESSARY SO THAT THE FENCE DOES NOT COLLAPSE.
3. CLEAR THE LOCATION OF THE SILT FENCE, CLEARING ONLY WHAT IS NEEDED TO PROVIDE ACCESS TO PERSONNEL AND EQUIPMENT FOR INSTALLATION. IT IS PERMISSIBLE TO PLACE THE SILT FENCE IN THE EDGE OF EXISTING TREES AS LONG AS THE OWNER ALLOWS IT AND CARE IS TAKEN TO PROTECT THESE TREES DURING INSTALLATION, MAINTENANCE, AND REMOVAL IF THE TREES ARE TO REMAIN AFTER CONSTRUCTION. DO NOT ATTACH THE FILTER FABRIC TO THE TREES, AS IT MAKES BURYING THE TOE IMPOSSIBLE.
4. EXCAVATE A 6 X 6-INCH TRENCH ALONG THE LOCATION OF THE FENCE. USING A "DITCH WITCH" IS HELPFUL.
5. ALONG THE LOWER SIDE OF THE TRENCH, PLACE STEEL FENCE POSTS NO MORE THAN 8 FEET APART AND DRIVE THEM 18 INCHES INTO THE GROUND.
6. ATTACH WIRE FENCE ("HOG WIRE" OF MINIMUM 14 GAUGE WITH MAXIMUM MESH OF 6 INCHES) TO THE UPHILL SIDE OF THE POSTS, AND PLACE 12 INCHES OF THE BOTTOM OF THE FENCE INTO THE TRENCH. DO NOT USE "CHICKEN WIRE." USE WIRE TO FASTEN THE FENCE TO THE POSTS. THE COMPLETED FENCE MUST BE AT LEAST 2 FEET HIGH AND NOT MORE THAN 3 FEET HIGH.
7. ATTACH SYNTHETIC FILTER FABRIC TO THE UPHILL SIDE OF THE WIRE FENCE WITH STAPLES A MAXIMUM 12 INCHES APART, AND PLACE 12 INCHES OF THE FABRIC INTO THE TRENCH WITH THE WIRE FENCE. USE ROLLS OF FABRIC AND CUT TO THE NECESSARY LENGTH IN ORDER TO MINIMIZE THE NUMBER OF JOINTS.
8. BACKFILL THE TRENCH AND TAMP THE FILL TO FIRMLY ANCHOR THE BOTTOM OF THE FILTER FABRIC AND WIRE FENCE TO PREVENT WATER FROM FLOWING UNDER THE FENCE; MAKE IT GO THROUGH THE FILTER FABRIC.
9. WHERE IT IS IMPOSSIBLE TO INSTALL THE SILT FENCE ON THE CONTOUR, RUNOFF WILL FLOW ALONG THE FENCE AND POND AT THE LOWEST POINT. WHERE THE TOTAL DRAINAGE AREA TO THE POINT OF PONDING IS GREATER THAN 5,000 SQUARE FEET (FOR EXAMPLE: A SQUARE 70 FEET ON A SIDE), A SILT FENCE OUTLET IS REQUIRED; WHERE THE DRAINAGE AREA IS GREATER THAN 10,000 SQUARE FEET (FOR EXAMPLE: A SQUARE 100 FEET ON A SIDE), A SEDIMENT TRAP IS NECESSARY. THE LOCATION OF THIS OUTLET MAY BE SHOWN ON THE PLAN, BUT CHECK THE INSTALLATION IN THE FIELD WHEN THE WIRE FENCE IS UP TO DETERMINE IF ADDITIONAL OUTLETS ARE NEEDED. SEE THE DETAILS OF THE SILT FENCE OUTLET FOR INSTRUCTIONS.

MAINTENANCE

MATERIALS, EQUIPMENT, AND PERSONNEL MUST BE AVAILABLE FOR MAINTENANCE AT ALL TIMES.

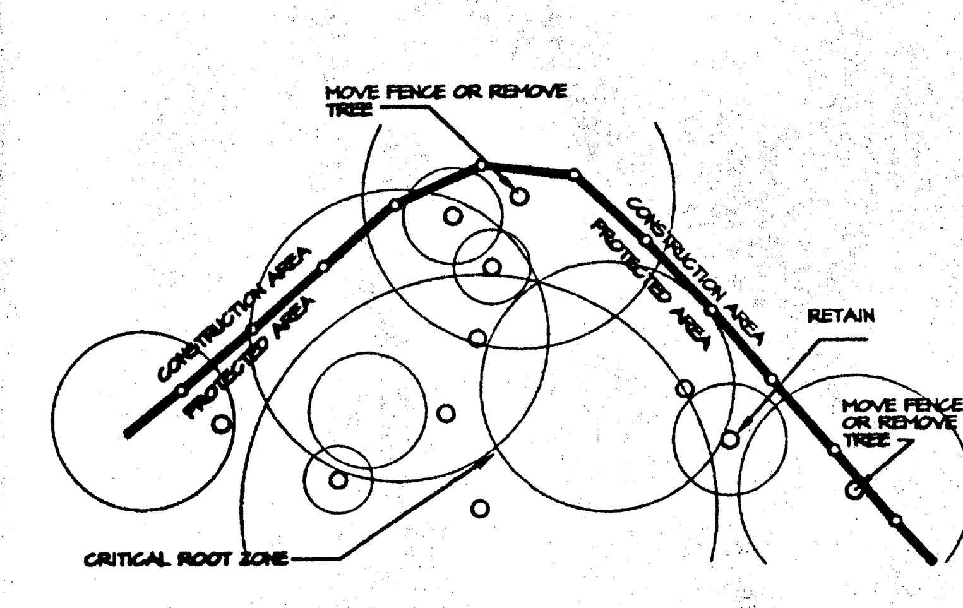
1. INSPECT THE SILT FENCE:
   - DURING CONSTRUCTION: TO SEE IF MACHINERY OR FALLING TREES HAVE DAMAGED THE SILT FENCE; IF DAMAGED, REPAIR IT. TO SEE THAT FILL MATERIAL HAS NOT ACCUMULATED AGAINST THE FENCE; IF IT HAS, REMOVE THE MATERIAL, REPAIR THE FENCE, AND MOVE THE FENCE OR FILL SO THAT IT DOES NOT HAPPEN AGAIN.
   - AFTER EACH RAINFALL: TO SEE THAT RUNOFF IS NOT FLOWING UNDER THE FENCE; IF IT IS, BURY THE BOTTOM OF THE FENCE CORRECTLY. TO SEE THAT RUNOFF HAS NOT TOPPED THE FENCE IN LOW POINTS; IF IT HAS, AN OUTLET MAY BE NEEDED AT THAT POINT TO PREVENT FUTURE FAILURES.
2. CLEAN OUT ACCUMULATED SEDIMENT WHEN IT REACHES A DEPTH OF ONE-HALF THE HEIGHT OF THE FILTER FABRIC. PLACE THE SEDIMENT IN A DISPOSAL AREA OR, IF APPROPRIATE, MIX IT WITH DRY SOIL ON THE SITE.

   DO NOT DISPOSE OF SEDIMENT IN A MANNER THAT WILL CREATE AN EROSION HAZARD. DO NOT ERECT A NEW SILT FENCE ON TOP OF ACCUMULATED SEDIMENT BEHIND THE FENCE.
3. IF SILT FENCE OUTLETS ARE USED, REMOVE AND REPLACE THE STONE FILTER WITH CLEAN, WASHED STONE WHEN THE FILTER BECOMES CLOGGED. DISPOSE OF ANY CONTAMINATED STONE PROPERLY.
4. REPAIR ANY BREAKS OR ROTTEN PLACES IN THE FILTER FABRIC.
5. IF THE FENCE IS SAGGING BETWEEN POSTS, INSTALL ADDITIONAL POSTS.
6. WHEN MAKING REPAIRS, ALWAYS RESTORE THE SILT FENCE TO ITS ORIGINAL DESIGN CONFIGURATION.

REMOVAL

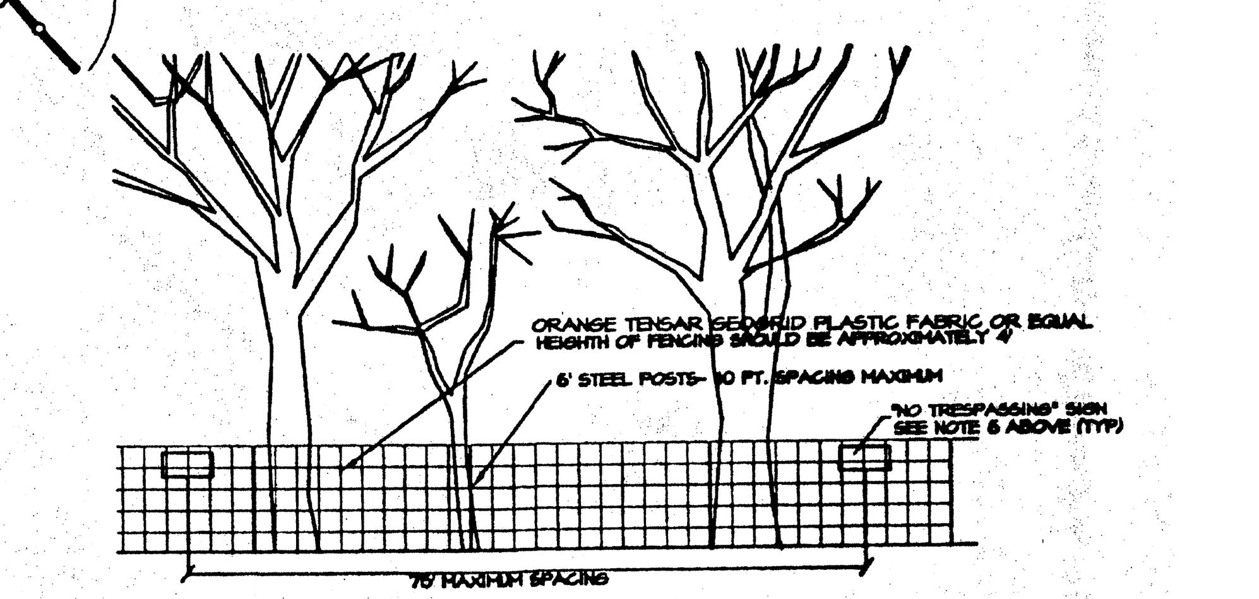
1. WHEN GRADING IN THE DRAINAGE AREA ABOVE THE SILT FENCE HAS BEEN FINISHED AND DISTURBED AREAS SUFFICIENTLY STABILIZED TO RESTRAIN EROSION, THE SILT FENCE AND ANY OUTLETS MUST BE REMOVED.
2. REMOVE ANY ACCUMULATED SEDIMENT AND DISPOSE OF IT PROPERLY.
3. REMOVE POSTS, FENCE, AND FABRIC; DISPOSE OF THEM PROPERLY.
4. STABILIZE THE DISTURBED AREA WHERE THE FENCE WAS LOCATED.

2/SD-3.0
SILT FENCE



NOTES:

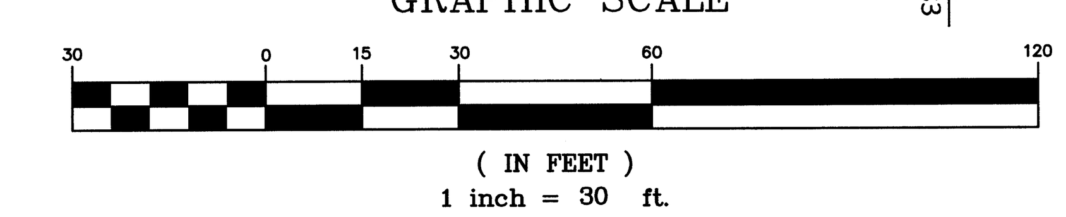
1. MOVE FENCE OR REMOVE TREE IF MORE THAN 20% OF A TREE'S CRITICAL ROOT AREA IS UNPROTECTED.
2. ROOT PRUNE TREES TO REMAIN WHERE CONSTRUCTIONACTIVITIES WILL SEVER ROOTS.
3. ANY TREE ROOTS EXPOSED BY CONSTRUCTION SHALL BE SEVERED CLEANLY WITH A PRUNING TOOL.
4. DO NOT DISPOSE OF ANY CHEMICALS OR REMOVE SOIL OUTSIDE THE LIMITS OF WORK.
5. WHEN INSTALLING NEW LANDSCAPE PLANTS, DO NOT DRIVE EQUIPMENT UPON OR DISTURB THE SOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.
6. SIGNAGE IN BOTH ENGLISH AND SPANISH MUST BE PLACED ON TREE PROTECTION FENCING WITH A MINIMUM SPACING OF 75' O.C. SIGNAGE SHOULD READ "TREE PROTECTION AREA - NO TRESPASSING WITHIN THE FENCE", AND "PROHIBIDO ENTRAR / ZONA PROTECTORA PARA LOS ARBOLES".



3/SD-3.0
TREE PROTECTION FENCE

LEGEND	
——— TPF ———	TREE PROTECTION FENCE
——— SF ———	SILT FENCE
— — — —	LIMITS OF DISTURBANCE
———▷	FLOW ARROW

NAD 83



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LAKE HOGAN FARM CUP
CONVERSION OF RESERVED LOT TO ALLOW RESIDENTIAL USE
303 HOGAN HILLS ROAD, CHAPEL HILL, NC

MINOR MODIFICATION
STORM DRAINAGE/STORMWATER DETENTION

NO.	REVISION	DATE
1	REVISIONS PER REVIEW COMMENTS	5/13/14
2	REVISIONS PER REVIEW COMMENTS	6/05/14

PREPARED FOR :
YOGESHBHAI & AMISHA PATEL
100-A CULBERTH ROAD
CHAPEL HILL, NC 27516

DATE : 3/11/2014

PROJECT ENGINEER:
P. E. HILBURN

PROJECT CADD DESIGNER:
A. Brown/P. E. HILBURN

PROJECT SURVEYOR:
HAROLD "TODD" SMITH LAND SURVEYING

DRAWING SHEET

C-4.0

PROJECT NUMBER

252-14