

# SPECIAL USE PERMIT PLAN FOR

# BROOK ROAD APARTMENTS

2009 BROOK ROAD  
RICHMOND, VIRGINIA

## PROJECT CONTACT LIST

### APPLICANT

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**Kimley»Horn**

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RICHMOND, VA 23220  
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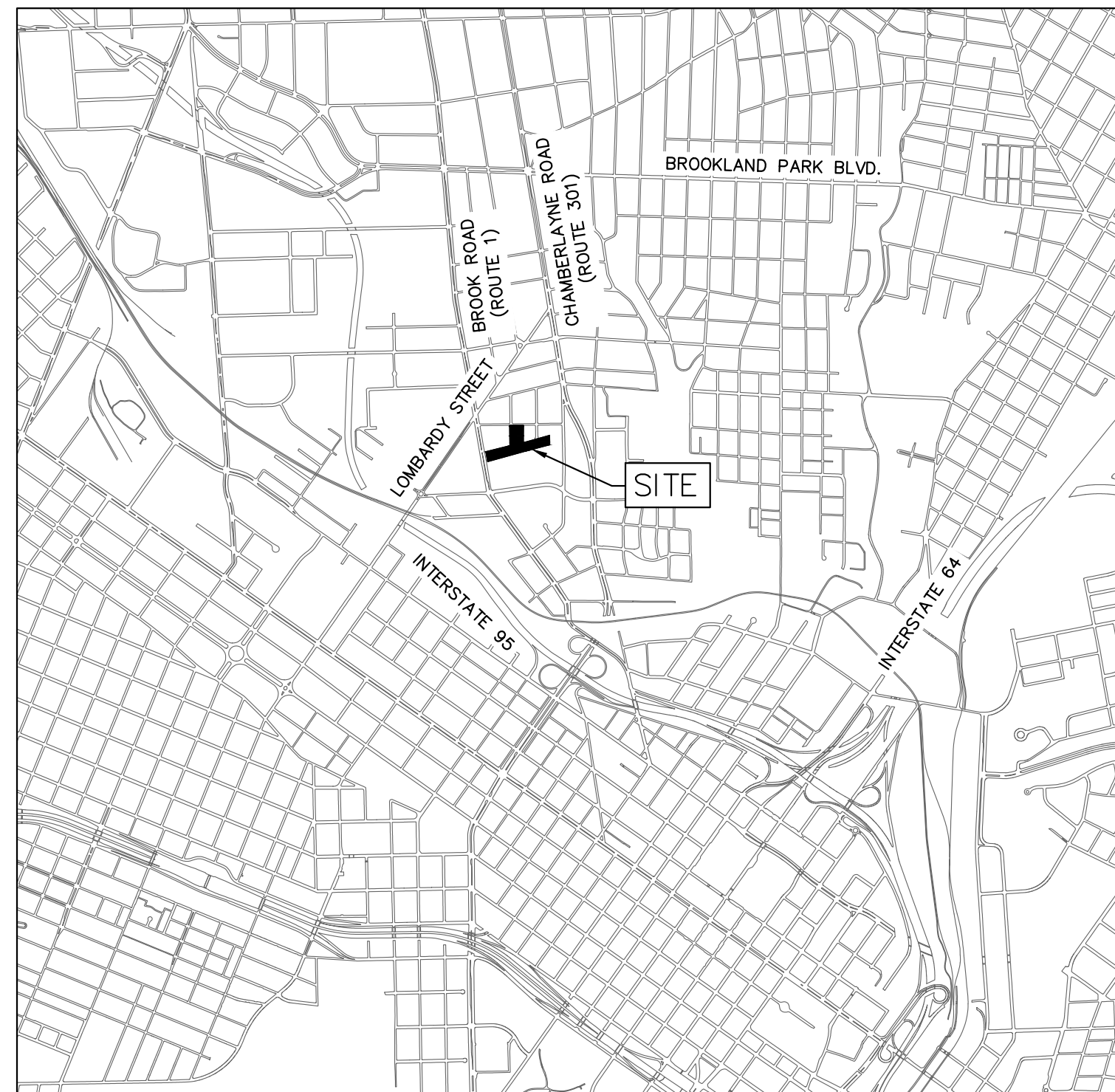
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## VICINITY MAP

APPROX. SCALE: 1" = 2,000'



## PROJECT DATA

SITE AREA	4.45 ACRES
PROPOSED USE	MULTI-FAMILY
UNITS	61 STUDIO UNITS (27.2%) 88 1-BEDROOM UNITS (39.3%) 2 1-BEDROOM + DEN UNITS (0.9%) 73 2-BEDROOM UNITS (32.6%) = 224 APARTMENTS TOTAL
DENSITY	50.3 UNITS PER ACRE
PARKING REQUIREMENTS	1.25 SPACES / 1 BR UNIT 1.5 SPACES / 2 BR UNIT = 299 PARKING SPACES
PARKING TARGET	1.5 SPACES / UNIT = 336 PARKING SPACES
PARKING PROVIDED	210 STANDARD SPACES + 58 COMPACT SPACES = 268 TOTAL PARKING SPACES = 1.2 SPACES / UNIT
PERCENT COMPACT SPACES	21.6% COMPACT SPACES

## CIVIL SHEET INDEX

SHEET NUMBER	SHEET TITLE
CA-001	COVER SHEET
CV-101	EXISTING CONDITIONS
CS-101	SITE PLAN
CP-101	PLANTING PLAN
CP-501	PLANTING NOTES & DETAILS

NOT FOR CONSTRUCTION: ONLY THE COMPLETE AND APPROVED PAPER COPY OF THE PLAN SET INCLUDING ALL SUBSEQUENT REVISIONS WILL SERVE AS THE OFFICIAL CONSTRUCTION PLANS.

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CITY APPROVAL BLOCK

MISS UTILITY OF VIRGINIA



CALL BEFORE YOU DIG  
811

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KHA PROJECT  
113227001  
DATE  
12/08/17  
SCALE AS SHOWN  
DESIGNED BY KRW  
DRAWN BY KRW  
CHECKED BY MRE

COVER SHEET

BROOK ROAD APARTMENTS  
PREPARED FOR  
LOUGHRIDGE CONSTRUCTION  
CITY OF RICHMOND VIRGINIA

SHEET NUMBER  
CA-001

No.	REVISIONS	DATE	BY
2	REVISED PER CITY COMMENTS	6/06/18	KH
1	REVISED PER CITY COMMENTS	4/04/18	KH

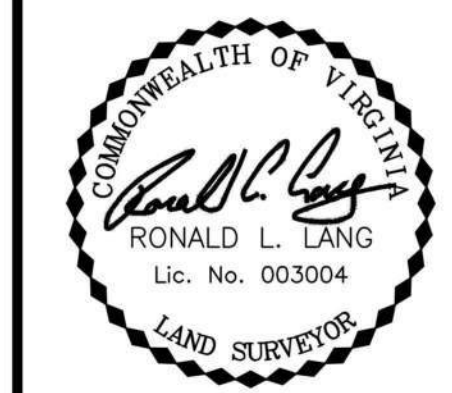




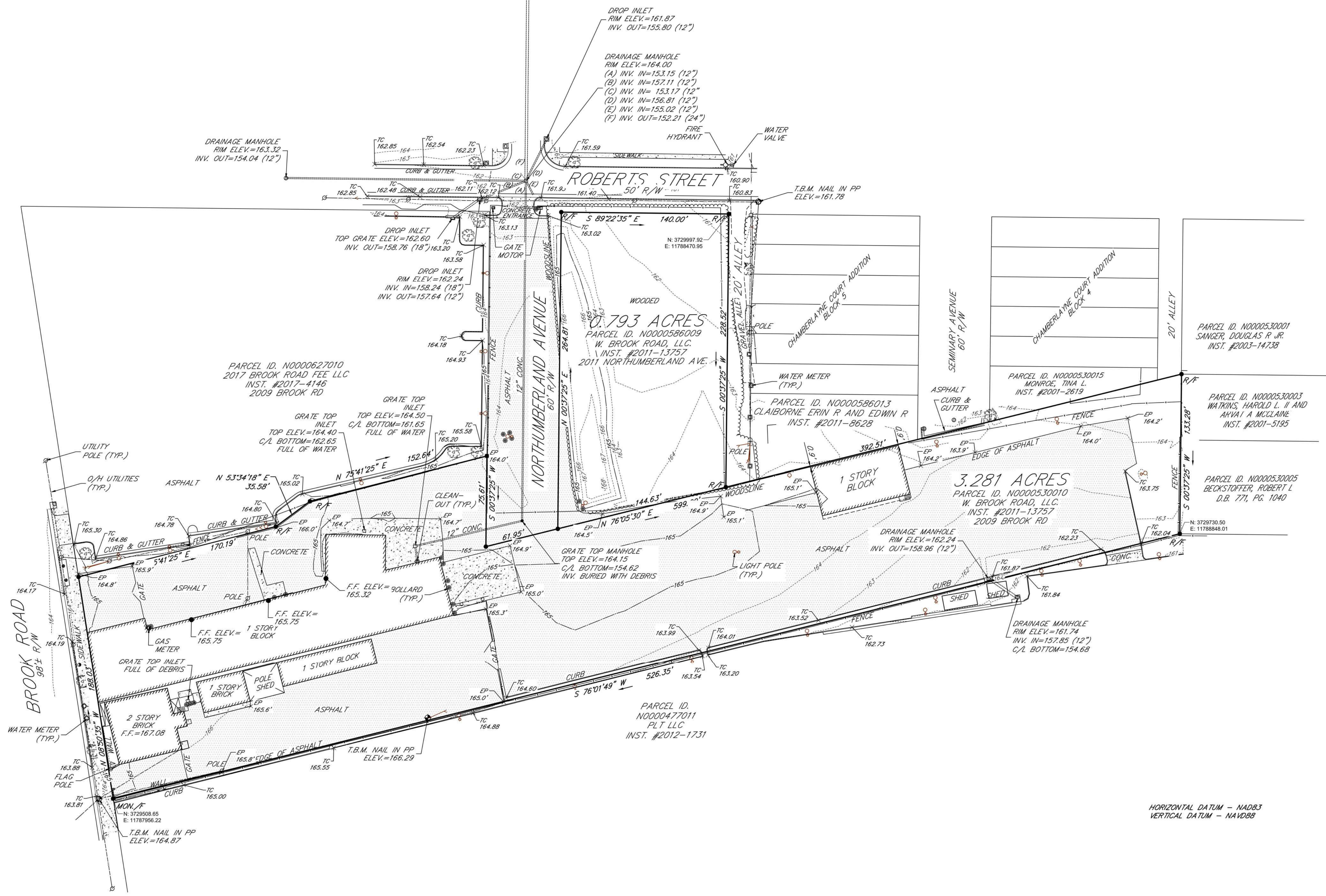
**HALDER SURVEYS, P.C.**  
 10400 CHESTER ROAD  
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 PHONE: 804-748-8707

**TOPOGRAPHIC SURVEY OF**  
 2011 NORTHUMBERLAND AVE &  
 2009 BROOK ROAD  
 CITY OF RICHMOND  
 VIRGINIA

REVISIONS



DATE: AUGUST 22, 2017  
 DRAWN BY: RLL  
 CHECKED BY: RLL  
 SCALE: 1"=50'  
 JOB NUMBER:  
 SHEET 1 OF 1

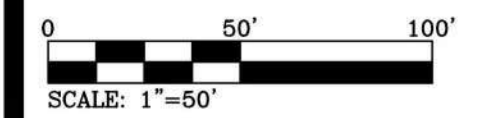


HORIZONTAL DATUM - NAD83  
 VERTICAL DATUM - NAVD83

**TOPOGRAPHIC CERTIFICATION**  
 THIS TOPOGRAPHIC SURVEY OF 2011 NORTHUMBERLAND AVENUE & 2009 BROOK ROAD, CITY OF RICHMOND, VIRGINIA WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF RONALD L. LANG, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE ORIGINAL DATA WAS OBTAINED ON AUGUST 14, 2017; AND THAT THIS PLAN, MAP OR DIGITAL GEOSPATIAL METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

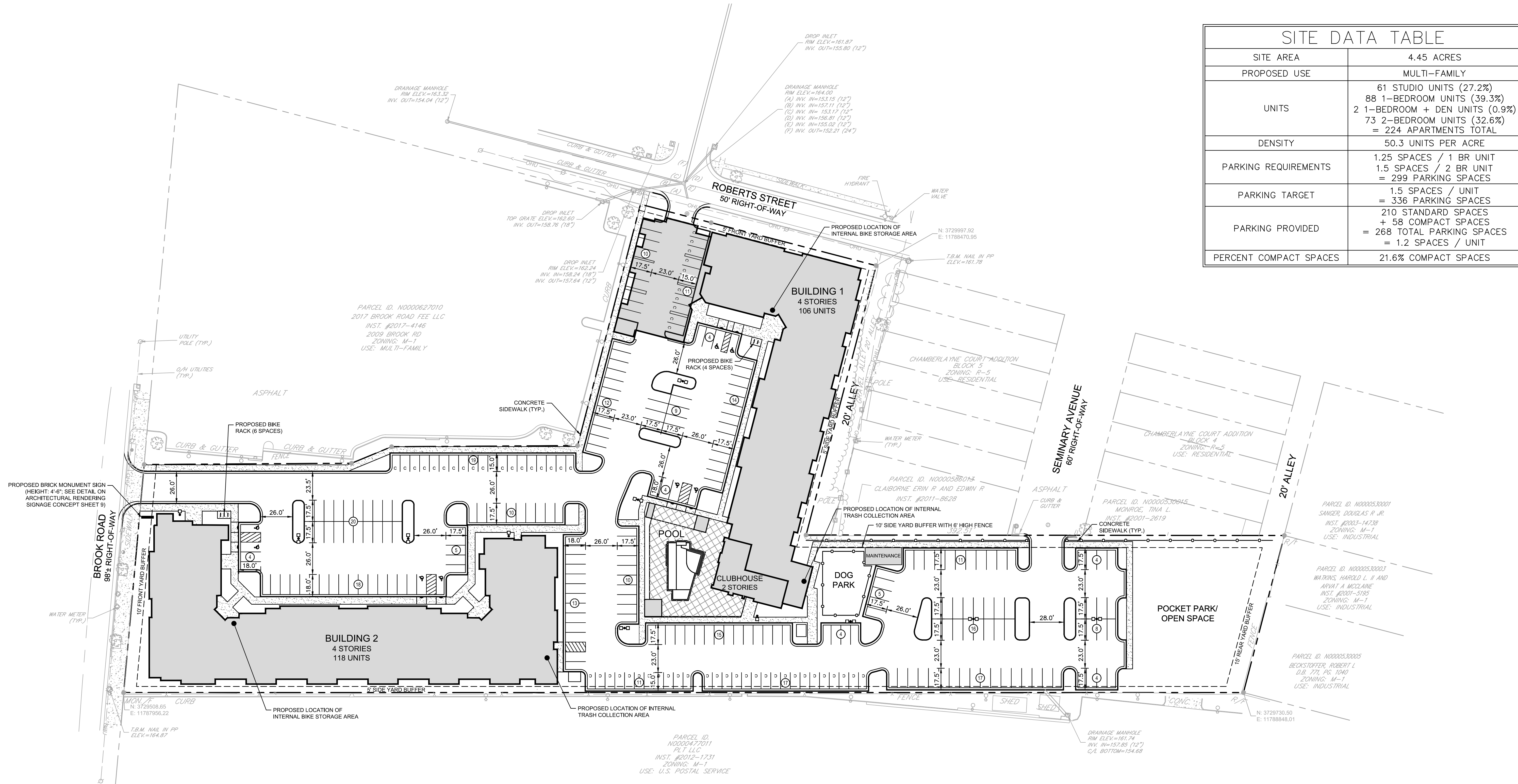
*Ronald L. Lang*  
 RONALD L. LANG  
 Lic. No. 003004

THIS SURVEY IS SUBJECT TO ANY EASEMENTS OF RECORD AND OTHER PERTINENT FACTS WHICH A TITLE SEARCH MIGHT DISCLOSE.



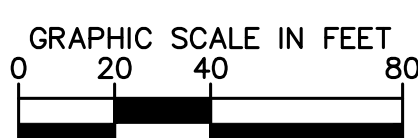
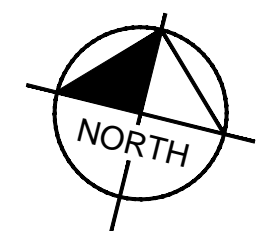


Plotfile: By: Boyd, Mark Sheet: Sht.kha Layout: CS-101 SITE PLAN June 06, 2018 03:22:02pm K:\VIC\_OVA\113227001 - Brook Road Apartments - Richmond, VA\CAD\PlanSheets\CS-101 SITE PLAN.dwg  
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SITE LEGEND	
CONCRETE SIDEWALK	
POOL DECK	
VDOT STD. CG-2 INDEPENDENT CURB	
CURB & GUTTER	
COMPACT SPACE	C

SITE DATA TABLE	
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KHA PROJECT  
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DATE  
12/08/17  
SCALE AS SHOWN  
DESIGNED BY KRW  
DRAWN BY KRW  
CHECKED BY MRE

**SITE PLAN**

**BROOK ROAD APARTMENTS**  
 PREPARED FOR  
**LOUGHRIDGE CONSTRUCTION**  
 VIRGINIA  
 CITY OF RICHMOND

SHEET NUMBER  
**CS-101**

Plotted By: Boyd, Mark Sheet: Sht.kha\_Layout-CP-101 PLANTING PLAN June 05, 2018 03:22:17pm K:\RICHMOND\VA\CAD\PlanSheets\CP-101 PLANTING PLAN.dwg  
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**PLANT SCHEDULE**

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	REMARKS	
CC	3	Cercis canadensis 'Forest Pansy'™	Forest Pansy Redbud	B & B		6' HT MIN.		
LS	19	Liquidambar styraciflua 'Rotundiloba'™	Round-Lobed Sweet Gum	B & B	2.5" Cal		Fruitless, Uniform branching pattern	
MG	6	Magnolia grandiflora 'Little Gem'	Dwarf Southern Magnolia	B & B		6' HT MIN.	Full to Ground, Dense	
PX	9	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	B & B	2.5" Cal		Specimen, Match	
QP	3	Quercus phellos 'Hightower'	Willow Oak	B & B	2.5" Cal			
UP	5	Ulmus parvifolia 'Allee'	Allee Lacebark Elm	B & B	2.5" Cal		Specimen, Match	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	WIDTH	HEIGHT	SPACING	REMARKS
IC	35	Ilex cornuta 'Burfordii Nana'	Dwarf Burford Holly	Cont.	42" Ht. Min.		48" o.c.	
IV	68	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	3 gal	24"	24"	42" o.c.	
PL	140	Prunus laurocerasus 'Schipkaensis'	Schipka Laurel	B & B		42" MIN.	48" o.c.	Full to ground, Dense
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	WIDTH	HEIGHT	SPACING	REMARKS
EP	483	Echinacea purpurea	Purple Coneflower	4" pot			12" o.c.	
HYP	1,495	Hypericum calycinum	Creeping St. John's Wort	1 gal			15" o.c.	
LIR	3,593	Liriope spicata 'Silver Dragon'	Creeping Lily Turf	1 gal			12" o.c.	
PEN	177	Pennisetum alopecuroides 'Hameln'	Hameln Dwarf Fountain Grass	1 gal	12"	12"	18" o.c.	

**LANDSCAPE REQUIREMENTS AND CALCULATIONS PER CITY OF RICHMOND ZONING ORDINANCE**

**REQUIRED TREE CANOPY COVERAGE**

PARKING AREA SERVING A USE OTHER THAN A USE WITH DRIVE-UP FACILITIES OR FACILITIES FOR DISPENSING MOTOR FUELS, OR A PARKING LOT, SHALL HAVE A PROJECTED TREE COVERAGE AREA EQUIVALENT TO NOT LESS THAN 30 SF FOR EACH PARKING SPACE CONTAINED IN THE PARKING AREA OR PARKING LOT.  
 PARKING SPACES PROVIDED = 247; REQUIRED CANOPY COVER = 247 X 30 OR 8,040 S.F.

**TREE CANOPY CALCULATIONS:**

19 - 2.5" CAL. ROUND-LOBED SWEET GUM AT 250 S.F. = 4,750 S.F.  
 9 - 2.5" CAL. BLOODGOOD LONDON PLANETREE AT 250 S.F. = 2,250 S.F.  
 5 - 2.5" CAL. ALLEE LACEBARK ELM AT 250 S.F. = 1,250 S.F.  
**TOTAL 10 YEAR CANOPY COVERAGE = 8,250 S.F.**

**LANDSCAPE ISLANDS REQUIRED**

1 LANDSCAPE ISLAND REQUIRED FOR EACH 15 SPACES FOR THE FIRST 100 PARKING SPACES; PLUS ONE LANDSCAPE ISLAND FOR EVERY 20 ADDITIONAL PARKING SPACES.

FIRST 100 SPACES = 7 ISLANDS  
 REMAINING 147 SPACES = 8 ISLANDS  
**TOTAL ISLANDS REQUIRED = 15**  
**ISLANDS PROVIDED = 25**

**RESIDENTIAL LOT LINE SCREENING:**

PROVIDE 4' HT. OF SCREENING ALONG PARKING LOT, WITHIN 50' OF R,R,O,H,O, OR I:

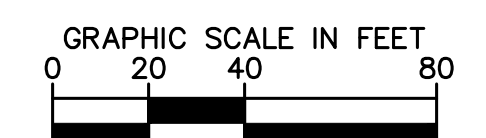
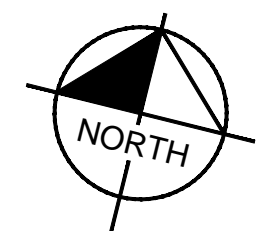
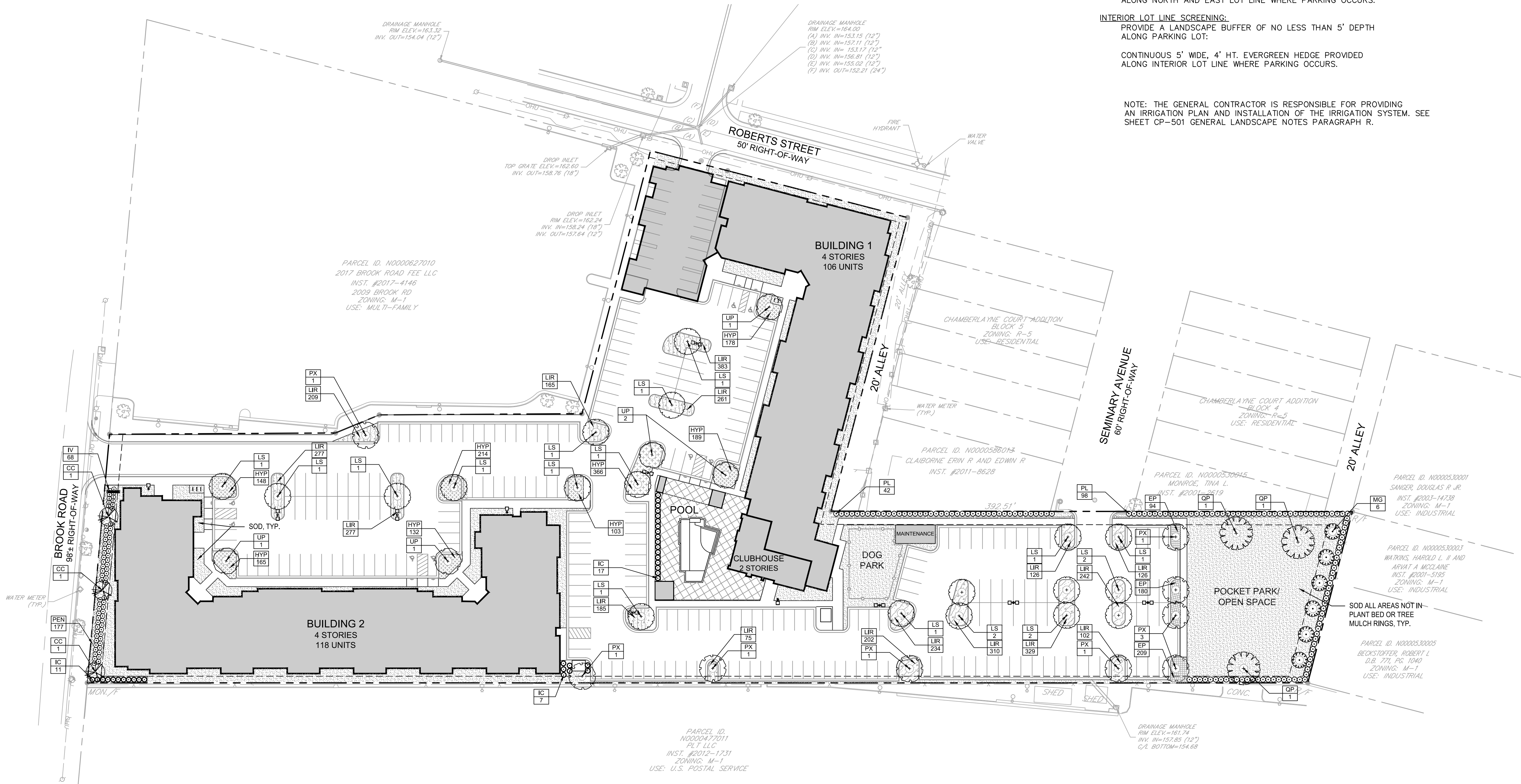
CONTINUOUS 4' HT. EVERGREEN HEDGE PROVIDED ALONG NORTH AND EAST LOT LINE WHERE PARKING OCCURS.

**INTERIOR LOT LINE SCREENING:**

PROVIDE A LANDSCAPE BUFFER OF NO LESS THAN 5' DEPTH ALONG PARKING LOT.

CONTINUOUS 5' WIDE, 4' HT. EVERGREEN HEDGE PROVIDED ALONG INTERIOR LOT LINE WHERE PARKING OCCURS.

NOTE: THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN IRRIGATION PLAN AND INSTALLATION OF THE IRRIGATION SYSTEM. SEE SHEET CP-501 GENERAL LANDSCAPE NOTES PARAGRAPH R.



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KHA PROJECT  
113227001

DATE  
12/08/17

SCALE AS SHOWN

DESIGNED BY RDR

DRAWN BY RDR

CHECKED BY SJM

**PLANTING PLAN**

**BROOK ROAD APARTMENTS**  
 PREPARED FOR  
 LOUGHRIDGE CONSTRUCTION

VIRGINIA  
 CITY OF RICHMOND

SHEET NUMBER  
**CP-101**

REVISIONS

No.	DATE	BY
2	6/06/18	RDR
1	4/04/18	RDR



### GENERAL PLANTING NOTES:

THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, ETC. NECESSARY TO COMPLETE ALL PLANTING AS SHOWN ON THE PLANTING PLANS. AS SPECIFIED HEREIN OR IN SUPPLEMENTAL SPECIFICATIONS, AND/OR AS REQUIRED BY JOB CONDITIONS. THE WORK IN GENERAL INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

- SOIL TESTING AND PREPARATION.
- PROVIDING TOPSOIL AND ALL SOIL AMENDMENTS.
- EXCAVATION OF PLANT PITS.
- PROVIDING ALL PLANT MATERIAL AND MULCH AS INDICATED ON PLANS.
- FERTILIZING.
- STAKING.
- CHEMICAL APPLICATION.
- MAINTENANCE AND GUARANTEE.
- ALL OTHER ITEMS NECESSARY TO MAKE WORK COMPLETE.

THE PLANTING CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK WITH THE OTHER CONTRACTORS. THIS PLAN DOES NOT GUARANTEE THE EXISTING OR NON-EXISTENCE OF ANY UTILITIES. PRIOR TO ANY CONSTRUCTION, EXCAVATION OR ROTOTILLING THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF VERIFYING THE LOCATIONS OF ALL UTILITIES, ABOVE AND/OR BELOW GROUND, PUBLIC AND/OR PRIVATE THAT MAY EXIST AND CROSS THROUGH THE AREAS OF CONSTRUCTION.

(1) SOIL TESTING AND PREPARATION

(1.1) UPON COMPLETION OF GROUND GRADING AND PRIOR TO COMMENCEMENT OF SOILS PREPARATION WORK THE CONTRACTOR SHALL TAKE SOILS SAMPLES AND OBTAIN AGRONOMIC SOILS TESTS FOR ALL PLANTING AREAS, STOCKPILED TOPSOIL AND IMPORTED TOPSOIL. TESTS SHALL BE PERFORMED BY AN APPROVED AGRONOMIC SOILS TESTING LABORATORY AND SHALL INCLUDE A FERTILITY AND SUITABILITY ANALYSIS WITH WRITTEN RECOMMENDATIONS FOR SOIL PREPARATION, PLANTING BACKFILL MIX, AUGER HOLE REQUIREMENTS, AND POST PLANT FERTILIZATION PROGRAM. THE SOILS REPORT RECOMMENDATIONS WILL TAKE PRECEDENCE OVER THE MINIMUM AMENDMENT AND FERTILIZER APPLICATION RATES SPECIFIED HEREIN ONLY IF THE SOILS REPORT RECOMMENDATIONS EXCEED THE SPECIFIED MINIMUMS. SOILS TEST AND RECOMMENDATIONS SHALL BE SUBMITTED TO THE OWNER AND OWNERS REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO BEGINNING SOILS PREPARATION WORK.

(1.2) BECAUSE OF SOIL COMPACTION DURING CONSTRUCTION, ALL PLANTING AREAS SHALL BE ROTOTILLED TO A DEPTH AS SHOWN IN DETAILS OR AS SPECIFIED IN WRITTEN SPECIFICATIONS. A PLANTING AREA IS ANY AREA IN WHICH NEW PLANTING OCCURS. EXCAVATE THE ENTIRE AREA BOUNDED BY WALKS, WALLS, FENCES, ETC. REMOVE SOIL, MATERIAL AS DIRECTED BY OWNER OR THE OWNER'S REPRESENTATIVE.

(1.3) EXCAVATED SOIL SHOULD BE USED AS BACKFILL MATERIAL IN ORDER TO ELIMINATE OR MINIMIZE THE OCCURRENCE OF HYDROLOGIC DISCONTINUITIES, AND/OR SOIL INTERFACE PROBLEMS COMMON TO PLANTING BEDS CONTAINING SOILS OF DIFFERENT TEXTURE, WHERE THE TEXTURE OF THE EXISTING SOIL IS UNDESIRABLE FOR THE PLANT SPECIES BEING PLANTED (i.e. HEAVY, CLAY, PURE SAND) AND WHERE THE pH OF THE EXISTING SOIL IS SUITABLE FOR THE SPECIES BEING PLANTED, THE SOIL SHALL BE BLENDED 66% EXISTING SOIL WITH 33% AMENDED SOIL.

(1.4) WHERE IT IS DETERMINED THAT THE EXISTING SOIL EXCAVATED IS TOTALLY UNSUITABLE FOR USE AS BACKFILL MATERIAL BECAUSE OF IMPROPER pH OR THE PRESENCE OF DEBRIS OR OTHER DELETERIOUS MATTER, THE BACKFILL MATERIAL SHALL BE 100% AMENDED SOIL MIXTURE AS DESCRIBED BELOW WITH THE ADDITION OF 1/2 PART SAND.

AMENDED SOIL: PLANTING SOIL FOR AMENDING BACKFILL SHALL BE 100% TOPSOIL WITH AMENDMENTS ADDED ACCORDING TO THE RECOMMENDATIONS OF THE SOILS TEST REPORT TO BRING THE pH VALUE AND/OR SOIL MIXTURE WITHIN THE RANGES DESCRIBED ABOVE. THE TOPSOIL AND AMENDMENTS SHALL BE MIXED AT AN ON-SITE LOCATION. PLANTING SOIL SHALL NOT BE MIXED AT INDIVIDUAL PLANT LOCATIONS.

(2) TOPSOIL AND ALL SOIL AMENDMENTS

(2.1) NECESSARY QUANTITIES OF TOPSOIL SHALL BE SUPPLIED BY THE CONTRACTOR AND APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THE CONTRACTOR SHALL APPLY TOPSOIL ONLY AFTER SECURING SOIL TEST (P.1), APPLYING RECOMMENDED TREATMENT THEREOF, AND SUBMITTING FOR APPROVAL.

(2.2) ON-SITE TOPSOIL MEETING THE CONDITIONS FOR THESE NOTES MAY BE USED, OR IF INSUFFICIENT QUANTITIES ARE AVAILABLE, OUTSIDE TOPSOIL MEETING THE FOLLOWING CRITERIA SHALL BE PROVIDED:

(2.3) ON-SITE TOPSOIL SHALL BE STOCKPILED TOPSOIL THAT HAS BEEN SALVAGED IN ACCORDANCE WITH SECTION 303.04(A) OF THE V.D.O.T. SPECIFICATIONS. IT SHALL BE FREE FROM REFUSE, OR ANY MATERIAL, TOXIC TO PLANT GROWTH, AND REASONABLY FREE FROM SUBSOIL, STUMPS, ROOTS, BRUSH, STONES, CLAY, LUMPS, OR SIMILAR OBJECTS LARGER THAN 3" IN THEIR GREATEST DIMENSION.

(2.4) OFF-SITE TOPSOIL, IF NEEDED, SHALL BE TOPSOIL FURNISHED FROM SOURCES OUTSIDE THE PROJECT LIMITS AND SHALL BE THE ORIGINAL TOP LAYER OF A SOIL PROFILE FORMED UNDER NATURAL CONDITIONS. TECHNICALLY DEFINED AS THE "A" HORIZON BY THE SOIL SOCIETY OF AMERICA. IT SHALL CONSIST OF NATURAL, FRIABLE, LOAMY SOIL WITHOUT ADMIXTURES OF SUBSOIL, OR OTHER FOREIGN MATERIALS, AND SHALL BE REASONABLY FREE FROM STUMPS, ROOTS, HARD LUMPS, STIFF CLAY, STONE, NOXIOUS WEEDS, BRUSH, OR OTHER LITTER. IT SHALL HAVE DEMONSTRATED BY EVIDENCE OF HEALTHY VEGETATION GROWING, OR HAVING GROWN ON IT PRIOR TO STRIPPING, THAT IT IS REASONABLY WELL DRAINED AND DOES NOT CONTAIN SUBSTANCES TOXIC TO PLANTS.

(2.4.1) "A" HORIZON: "A" HORIZONS SHALL BE MINERAL. HORIZONS CONSISTING OF (1) HORIZONS OR ORGANIC MATTER ACCUMULATION FORMED OR FORMING AT OR ADJACENT TO THE SURFACE; (2) HORIZONS THAT HAVE LOST CLAY, IRON OR ALUMINUM WITH RESULTANT CONCENTRATIONS OF QUARTZ OR OTHER RESISTANT MINERALS OF SAND OR SILT SIZE; OR (3) HORIZONS DOMINATED BY 1 OR 2 ABOVE BUT TRANSITIONAL TO AN UNDERLYING B OR C.

(2.4.2) "A" HORIZON SUBDIVISIONS: "A" HORIZONS SHALL BE MINERAL. HORIZONS FORMED OR FORMING AT OR ADJACENT TO THE SURFACE, IN WHICH THE FEATURE EMPHASIZED IS AN ACCUMULATION OF HUMIFIED ORGANIC MATTER NATURALLY ASSOCIATED WITH THE MINERAL FRACTION, THE SOIL IS A DARK OR DARKER THAN UNDERLYING HORIZONS BECAUSE OF THE PRESENCE OF ORGANIC MATTER. THE ORGANIC MATERIAL IS ASSUMED TO BE DERIVED FROM PLANT AND ANIMAL REMAINS DEPOSITED ON THE SURFACE OF THE SOIL OR DEPOSITED WITHIN THE HORIZON WITHOUT APPRECIABLE TRANSCLOCATION.

"A2" HORIZONS SHALL BE MINERAL. HORIZONS IN WHICH THE FEATURE EMPHASIZED IS LOSS OF CLAY, IRON OR ALUMINUM, WITH RESULTANT CONCENTRATION OF QUARTZ OR OTHER RESISTANT MINERALS IN SAND AND SILT SIZES.

(2.4.3) "A" HORIZON TOPSOIL CONTENT: "A" HORIZON TOPSOIL SHALL BE IN ACCORDANCE WITH THE FOLLOWING MATERIALS BY PERCENTAGE OF VOLUME:

SILT	42-56%
SAND	15-20%
CLAY	15-20%
ORGANIC MATERIAL	12-16%

(2.5) TOPSOIL SHALL HAVE A pH IN THE RANGE OF 6.0 TO 7.0 PRIOR TO MIXING WITH AMENDMENTS. IF THE pH IS NOT WITHIN THIS RANGE, THE pH SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE OR A DIFFERENT SOURCE OF SUPPLY SHALL BE SELECTED. TOPSOIL SHALL BE SUBJECT TO INSPECTION BY THE OWNER OR THE OWNER'S REPRESENTATIVE AT THE SOURCE OF SUPPLY AND IMMEDIATELY PRIOR TO USE IN THE PLANTING OPERATIONS.

(2.6) PLANTING SOIL AFTER AMENDING FOR DECIDUOUS PLANTS SHALL HAVE A pH VALUE BETWEEN 6.0 AND 7.0, AND FOR EVERGREEN OR SEMI-EVERGREEN PLANTS SHALL HAVE A pH VALUE BETWEEN 5.0 AND 6.0. A REPRESENTATIVE SAMPLE FROM THE EXCAVATED SOIL SHALL BE TESTED FOR pH BY THE SOILS TESTING LABORATORY PERFORMING AGRONOMIC SOILS TESTING. THE pH VALUE OF THE NATURAL SOIL BACKFILL MIXTURE SHALL BE AMENDED PER THE RECOMMENDATIONS OF THE SOILS TESTING AGENCY.

(3) EXCAVATION OF PLANT PITS

(3.1) PRIOR TO EXCAVATION OF TREE PITS, AN AREA EQUAL TO TWO TIMES THE DIAMETER OF THE ROOT BALL SHALL BE ROTOTILLED TO A DEPTH EQUAL TO THE DEPTH OF THE ROOT BALL.

(3.2) IN CONTINUOUS SHRUB AND GROUND COVER BEDS, THE ROTOTILLED PERIMETER SHOULD EXTEND TO A DISTANCE OF ONE FOOT BEYOND THE DIAMETER OF A SINGLE ROOTBALL. THE BED SHALL BE TILLED TO A DEPTH EQUAL TO THE ROOT BALL DEPTH PLUS 6".

(3.3) TREE PITS FOR WELL DRAINED SOILS SHALL BE DUG SO THAT THE BOTTOM OF THE ROOT BALL WILL REST ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL WILL BE FLUSH WITH FINISH GRADE. IN POORLY DRAINED SOILS THE TREE PIT SHALL BE DUG SO THAT THE BOTTOM OF THE ROOT BALL RESTS ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL IS 1" ABOVE FINISH GRADE. PLANT PIT WALLS SHALL BE SCARIFIED PRIOR TO PLANT INSTALLATION.

(3.4) SHRUB BEDS SHALL BE EXCAVATED TO 6" BELOW THE ROOT BALL OF THE SHRUB.

(3.5) ALL AIR POCKETS SHALL BE REMOVED FROM PLANT PIT UPON BACK FILLING WITH PLANTING SOIL BY FILLING APPROXIMATELY 1/2 TO 2/3 OF THE PIT WITH PLANTING BACKFILL MATERIAL, TAMPING BACKFILL MATERIAL, AND THEN APPROXIMATING TO ENSURE SETTLEMENT OF THE MATERIAL. BACKFILL MATERIAL SHALL THEN BE PLACED WITHIN THE REMAINING CAVITIES OF THE PLANT PIT. TAMPING AND WATERED AGAIN TO ENSURE SETTLEMENT OF THE BACKFILL MATERIAL. UNDER NO CIRCUMSTANCES SHALL ANY SOIL OR BACKFILL MATERIAL BE APPLIED ABOVE THE ROOT BALL OF THE PLANTS.

(3.6) GROUND COVERS SHALL BE PLANTED IN BEDS HAVING A MINIMUM DEPTH OF 4" BELOW THE PROPOSED ROOT DEPTH. PLANTS SHALL BE EVENLY SPACED AND SET TO MAINTAIN THE ORIGINAL GROWING DEPTH WHILE ALLOWING FOR A 2" TOP DRESSING OF SOIL.

(4) PLANT MATERIAL AND MULCH

(4.1) THE NAMES OF PLANTS REQUIRED UNDER THIS CONTRACT CONFORM TO THOSE GIVEN IN L.H. BAILEY'S HORTUS THIRD, 1976 EDITION, NAMES OF VARIETIES NOT INCLUDED THEREIN CONFORM GENERALLY WITH NAMES ACCEPTED IN THE NURSERY TRADE. ALL PLANTS SHALL HAVE A HABIT OF GROWTH THAT IS NORMAL FOR THEIR SPECIES AND THEY SHALL BE SOUND, HEALTHY AND VIGOROUS, WITH WELL DEVELOPED ROOT SYSTEMS. ALL PLANT MATERIAL SHALL BE FREE FROM INSECT PESTS, PLANT DISEASES, AND INJURIES. ALL PLANTS SHALL EQUAL OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST, WHICH ARE MINIMUM ACCEPTABLE SIZES. TREES SHALL HAVE SINGLE TRUNKS EXCEPT AS NOTED. ALL SHRUBS SHALL BE HEALTHY, VIGOROUS, AND OF GOOD COLOR. ONLY DAMAGED OR BROKEN BRANCHES OF PLANT MATERIAL MAY BE PRUNED AND ANY NECESSARY PRUNING SHALL BE DONE AT THE TIME OF PLANTING. HOWEVER, UNDER NO CIRCUMSTANCES SHALL THE CENTRAL LEADER OF A PLANT BE PRUNED.

(4.2) ALL TAGS, STRINGS OR ANY OTHER MATERIAL ATTACHED TO THE CODES SHALL BE REMOVED AT THE TIME OF THE PLANTING. BALLING AND BURLAPPING OF PLANTS SHALL FOLLOW THE PLAN OF STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN STANDARD FOR NURSERY STOCK.

(4.3) SUBSTITUTIONS WILL BE PERMITTED ONLY UPON SUBMISSION OF PROOF THAT ANY PLANT IS NOT OBTAINABLE. ALL SUBSTITUTIONS MUST BE AUTHORIZED BY THE OWNER OR THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL FURNISH THE NEAREST EQUIVALENT OBTAINABLE SIZE OR VARIETY OF PLANT HAVING THE SAME ESSENTIAL CHARACTERISTICS AS THE ORIGINAL VARIETY WITH AN EQUIVALENT ADJUSTMENT OF CONTRACT PRICE.

(4.4) BALLED AND BURLAPPED PLANTS (BBP) SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEMS OF THE PLANT. THEREAFTER, PLANTING OPERATIONS SHALL BE FIRMLY WRAPPED WITH BURLAP OR SIMILAR MATERIAL AND BOUND WITH TWINE OR CORD. BURLAP SHALL NOT BE PULLED OUT FROM UNDER BALLS DURING PLANTING OPERATIONS. BBP PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE COVERED WITH MOIST SOIL, MULCH, OR OTHER MATERIAL TO PROVIDE PROTECTION FROM DRYING WINDS AND SUN.

(4.5) PLANTS NOTED "CONTAINER" ON THE PLANT LIST MUST BE CONTAINER GROWN WITH WELL ESTABLISHED ROOT SYSTEMS. LOOSE CONTAINERIZED PLANT MATERIAL WILL NOT BE ACCEPTED. ALL PLANTS INJURED AND PLANTS WITH ROOT BALLS BROKEN DURING TRANSPORT OR PLANTING OPERATIONS WILL BE REJECTED. BARE-ROOTED PLANTS (BRB) SHALL BE PLANTED OR DELIVERED IMMEDIATELY UPON DELIVERY. ALL PLANTS SHALL BE WATERED AS NECESSARY ALL PLANTS.

(4.6) NEW PLANTINGS SHALL BE LOCATED WHERE SHOWN ON THE PLAN EXCEPT WHERE OBSTRUCTIONS BELOW GROUND ARE ENCLOSED OR WHERE CHANGES HAVE BEEN MADE IN THE PROPOSED CONSTRUCTION. NECESSARY ADJUSTMENTS SHALL BE MADE ONLY AFTER APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE. REASONABLE CARE SHALL BE EXERCISED TO HAVE THE PLANTING PITS DUG TO THEIR RESPECTIVE LOCATIONS TO ENSURE THAT THEY WILL NOT BE UNNECESSARILY EXPOSED TO DRYING OR PHYSICAL DAMAGE.

(4.7) A LIST OF PLANTS, INCLUDING SIZES, QUANTITIES AND OTHER REQUIREMENTS, IS SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE QUANTITIES AS SHOWN ON THE DRAWINGS. IF DISCREPANCIES OCCUR IN THE QUANTITIES SHOWN, THE PLANTING PLANS SHALL GOVERN.

(4.8) THE PLANTING CONTRACTOR WILL BE NOTIFIED BY THE GENERAL CONTRACTOR WHEN OTHER DIVISIONS OF THE WORK HAVE PROGRESSED SUFFICIENTLY TO COMMENCE WORK ON THE PLANTING OPERATION. THEREAFTER, PLANTING OPERATIONS SHALL BE CONDUCTED UNDER FAVORABLE WEATHER CONDITIONS DURING THE NEXT SEASON OR SEASONS WHICH ARE NORMAL FOR SUCH WORK. REMOVAL OF ROCK OR OTHER UNDERGROUND OBSTRUCTIONS, RELOCATIONS TO AVOID OBSTRUCTIONS, AND PROVISION OF DRAINAGE FOR PLANTING AREAS SHALL BE DONE ONLY AS APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

(4.9) ALL PLANTS SHALL BE PLANTED UPRIGHT AND FACED TO GIVE THE BEST APPEARANCE OR RELATIONSHIP TO ADJACENT STRUCTURES. ROOTS SHALL BE SPREAD IN THEIR NORMAL POSITION. ALL BROWN OR FRAVED ROOTS SHALL BE CUT OFF CLEANLY. PLANTS WITH ROOTS BROKEN OR OTHER OTHER BURLAP TWINE AND OTHER FASTENING MATERIAL SHALL BE CUT AND PUSHED TO THE BOTTOM OF THE PLANT PIT PRIOR TO BACKFILL MATERIAL BEING PLACED. THE PLANT SHALL NOT BE ROCKED BACK AND FORWTH TO ENTIRELY REMOVE THE WRAPPING MATERIAL. NOR SHALL ANY OTHER PRACTICE BE PERFORMED WHICH COULD CAUSE THE ROOT BALL TO BREAK APART. WHEN WIRE BASKETS ARE USED ON THE ROOT BALL OF PLANTS THE WIRE SHALL BE REMOVED TO AT LEAST 12" BELOW THE TOP OF THE ROOT BALL.

### SOODING NOTES:

(1) VEGETATIVELY PROPAGATED SOD ONLY FROM VARIETIES THAT HAVE PROVEN SUCCESSFUL IN THE PROJECT VICINITY SHALL BE SELECTED FROM VARIETIES AS RECOMMENDED IN THE LATEST EDITION OF THE VIRGINIA TURFGRASS VARIETY RECOMMENDATIONS AVAILABLE FROM VIRGINIA COOPERATIVE EXTENSION, VIRGINIA TECH, VIRGINIA STATE UNIVERSITY.

(2) TURF TYPE TALL FESCUE SOD IS THE PREFERRED SOD. SOD VARIETY AND SPECIES SHALL BE APPROVED IN WRITING BY THE OWNER PRIOR TO PURCHASE AND CUTTING OF THE SOD.

(3) SOD SHALL NOT BE INSTALLED DURING PERIODS WHEN THE GROUND IS FROZEN, EXCESSIVELY WET OR MUDDY, OR WHEN THE SOD IS NOT ACTIVELY GROWING AND ABLE TO ESTABLISH ITSELF BEFORE PERIODS OF FREEZING TEMPERATURES OR PERIODS OF DROUGHT SET IN WITHOUT THE WRITTEN APPROVAL OF THE OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE. DURING SUCH TIMES WHEN SOD OR PERMANENT LAWN SEED CANNOT BE ESTABLISHED DUE TO ADVERSE WEATHER CONDITIONS THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A TEMPORARY VEGETATIVE COVER AND GROUND STABILIZATION AS REQUIRED BY 9VAC25-870-54 OF THE VIRGINIA ADMINISTRATIVE CODE.

(4) PRIOR TO LAYING SOD CONTRACTOR SHALL PROVIDE 4 INCHES OF TOPSOIL AS SPECIFIED ON ALL AREAS TO RECEIVE SEED OR SOD LAWN AREAS.

(5) THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.

(6) THE SOD SHALL BE CERTIFIED TO MEET LOCAL STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.

(7) SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS, IMMEDIATELY FOLLOWING SOIL LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE GAPS BETWEEN THE SOD PANELS AND TO EVEN OUT CONSEQUENCES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZER INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.

(8) DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STORED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE. SOD SHALL NOT BE LEFT STACKED OR ROLLED.

(9) LAWN MAINTENANCE

(10) WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE LAWN TO INCLUDE BUT NOT LIMITED TO WATERING, WEEDING, AND FERTILIZING AS NECESSARY AS WELL AS THE REPAIR AND RE-SCODING OF ALL ERODED, SUNKEN OR BARE SPOTS LARGER THAN 12"x12" UNTIL THE SOD RECOVERS TO ACCEPTABILITY BY THE OWNER OR OWNER'S REPRESENTATIVE. REPAIRED SOODING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).

(11) CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SODLAWN FOR A PERIOD OF TWO YEARS UNTIL ACCEPTANCE BY THE OWNER OR OWNERS REPRESENTATIVE.

### GENERAL NOTES:

A. CONTRACTOR SHALL REVIEW ALL DRAWINGS, SPECIFICATIONS, PERMITS, AND REGULATORY REQUIREMENTS PRIOR TO COMMENCEMENT OF WORK.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPING AND IRRIGATION PERMITS.

C. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS PROVIDED BY OTHERS.

D. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. DURING CONSTRUCTION, AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY MISS UTILITY OF VIRGINIA @ 1-800-565-7001 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.

E. FINAL LOCATION OF ALL PLANTINGS SHALL BE DETERMINED IN THE FIELD BY THE OWNER'S CHOSEN REPRESENTATIVE.

F. SUBSTITUTIONS AND/OR MODIFICATIONS TO PLANTING LAYOUT, PLANT MATERIALS, ETC. SHALL NOT BE MADE WITHOUT THE WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

G. CONTRACTOR SHALL INSTALL ALL PLANT MATERIALS AS SHOWN IN THE DETAILS, AND AS INDICATED IN THE LANDSCAPE SPECIFICATIONS.

H. THE PLANTING OF TREES SHALL BE DONE IN ACCORDANCE WITH THE STANDARDIZED LANDSCAPE SPECIFICATIONS JOINTLY ADOPTED BY THE VIRGINIA NURSERYMEN'S ASSOCIATION, THE VIRGINIA SOCIETY OF LANDSCAPE DESIGNERS AND THE VIRGINIA CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.

I. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST ADDITION OF ANSI Z60.1 - AMERICAN STANDARD FOR NURSERY STOCK, BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.

J. ALL PLANT MATERIALS SHALL BE NURSERY GROWN STOCK AND SHALL BE FREE OF ANY DEFORMITIES, DISEASES, OR INSECT DAMAGE. ANY MATERIALS WITH DAMAGED OR DISFIGURED CROOKED LEADERS, BARK ABRASIONS, SUNSCOLD, INSECT DAMAGE, ETC., ARE NOT ACCEPTABLE AND WILL BE REJECTED.

K. TREES NOT EXHIBITING A CENTRAL LEADER WILL BE REJECTED UNLESS CALLED OUT IN THE PLANT LIST AS MULTI-STEM.

L. ALL PLANTING BEDS AND LAWN AREAS SHALL BE SEPARATED BY SHOVEL EDGING. NO EDGE SHALL BE INSTALLED ADJACENT TO SIDEWALKS OR CURBS.

M. PLANTING BEDS SHALL RECEIVE 3" OF DARK, SHREDDED HARDWOOD MULCH THROUGHOUT. ORANGE AND/OR RED MULCH IS NOT ACCEPTABLE.

N. ALL AREAS ON PLANS NOT INDICATED TO RECEIVE SOD PLANTING, PAVEMENT, OR HARDSCAPE WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE SEEDED WITH FESCUE, UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. SEE SEEING NOTES THIS SHEET.

O. PLANT MATERIALS SHOWN ON PLANS ARE A GRAPHIC REPRESENTATION ONLY. CONTRACTOR SHALL PERFORM ALL LANDSCAPE INSTALLATION ON THE SUBJECT PROPERTY, AND NOT ON ADJACENT PROPERTIES, UNLESS OTHERWISE DIRECTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE. ROOTBALLS OF SHRUBS AND TREES SHALL BE PLANTED, IN THEIR ENTIRETY, WITHIN THE BOUNDARIES OF THE SUBJECT PROPERTY.

P. CONTRACTOR SHALL PROVIDE A MINIMUM 2" SLOPE AWAY FROM ALL STRUCTURES, UNLESS OTHERWISE DIRECTED BY THE CIVIL ENGINEER.

Q. QUANTITY TAKE-OFFS INDICATED ON THE PLANTING SCHEDULE ARE FOR CONVENIENCE ONLY. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLANS AND THE SCHEDULE, THE GRAPHIC REPRESENTATION IN THE PLANS SHALL DICTATE.

R. ALL LANDSCAPED AND LAWN AREAS ARE TO BE IRRIGATED.

S. SEE CIVIL DRAWINGS FOR TOPSOIL AND TEMPORARY EROSION AND SEDIMENTATION CONTROL SEEDING.

#### ARBORITIE (OR EQUAL)

#### Tree Tie Detail

##### SECTION (TREES UNDER 3.5" CAL. OR 14' IN HEIGHT) NTS

#### SHOVEL EDGE DETAIL

##### SECTION

1. ARBORITIE OR EQUAL SEE THE DETAIL THIS SHEET (NOTE FOR MULTI-TRUNK TREES, USE SEPARATE GUYS TO STRONGEST TRUNKS AT CENTER OF EACH).

2. 3 1/2" x 8' MIN. SQUARE OR ROUND STRIKED SPACE EVERY 6' IN A RADIAL PATTERN AROUND TREE.

3. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL EXTEND APPROX. 6" BEYOND EARTH SAUCER/BERM UNLESS INDICATED OTHERWISE BY OWNERS REPRESENTATIVE.

4. SOIL BERM TO HOLD WATER. (NOTE REQUIRED FOR TREES IN SIDEWALK TREE PLANTERS).

5. FINISHED GRADE (SEE GRADING PLAN).

6. TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE.

7. B & B OR CONTAINERIZED (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).

8. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES).

9. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOIST UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH.

10. FLAG ALL TREE TIES WITH BRIGHTLY COLORED FLAGGING.

NOTES:

A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

C. TREE SAVER ANCHORING SYSTEM MAY BE SUBSTITUTED FOR WOOD STAKING SYSTEM UPON APPROVAL BY OWNER OR OWNER'S REPRESENTATIVE AND MUNICIPALITY.

#### Small Tree Planting

##### SECTION (TREES UNDER 3.5" CAL. OR 14' IN HEIGHT) NTS

- INSTALL CONTINUOUS MULCH BED ADJACENT TO PARKING SPACES AS SHOWN. MULCH SHALL BE MIN. 3" DEEP. NO POP-UP IRRIGATION HEADS SHALL BE LOCATED WITHIN 24" OF A PARKING SPACE ON ANY SIDE.
- CURB / PARKING LOT EDGE.

#### PARKING SPACE/CURB PLANTING

##### SECTION NTS

1. TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.

2. PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.

3. 3" MINIMUM MULCH AS SPECIFIED.

4. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.

5. FINISHED GRADE (SEE GRADING PLAN).

6. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES).

7. SCARIFY ROOTBALL SIDES AND BOTTOM.

NOTES:

A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

B. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

#### Shrub/Groundcover Planting on a Slope

##### SECTION

A. MULCH WITH ANY OF THE MATERIALS LISTED BELOW AND AT THE RATE INDICATED. SPREADING SHOULD BE UNIFORM AND AT A RATE THAT PERMITS NO MORE THAN 25-50% OF THE GROUND SHOWING THROUGH THE MULCH.

B. MULCHING IS SPECIFICALLY REQUIRED ON ALL SOILS EXCEEDING 25% SLOPE.

- STRAW - 1 TO 2 TONS/ACRE DEPENDING ON SEASON AND METHOD OF APPLICATION.
- WOOD FIBER MATERIALS - 1,000 LBS. PER ACRE.

(10.6) MAINTENANCE

A. IRRIGATION - IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS AND PLANTINGS WITH ADEQUATE WATER FOR PLANT GROWTH UNTIL THEY ARE FIRMLY ESTABLISHED.

B. REPAIR - INSURE ALL PLANTING PATTERNS ARE MAINTAINED THROUGH REPAIRS, REPLACEMENTS, AND RESEEDING WITH THE PLANTING SEASON IF POSSIBLE.

C. LIME AND FERTILIZER - SHALL BE APPLIED UNDER A REGULAR PROGRAM THAT IS BASED ON SOIL FERTILITY TESTS AND ON THE USE AND GENERAL APPEARANCE OF THE VEGETATIVE COVER DURING SUBSEQUENT GROWING SEASONS.

SEEDING NOTES:

ALL AREAS WITHIN THE LIMITS OF CONSTRUCTION THAT ARE NOT OTHERWISE COVERED BY BUILDINGS, PAVEMENT, SIDEWALKS, WOODED AREAS AND PLANTING / MULCHED BEDS OR OTHERWISE CALLED OUT AS SOD LAWN AREAS SHALL BE SEED PER THE PERMANENT SEEDING SPECIFICATIONS IN THE PRECEDING PARAGRAPH.

SEEDED AREAS WILL NOT BE ACCEPTED AFTER DISTURBED AREAS ARE COMPLETELY COVERED IN A DENSE LAWN CONSISTING OF THE SPECIFIED PERMANENT GRASS.

A. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

#### SHRUB/GROUNDCOVER PLANTING

##### PLAN/SECTION NTS

NOTES:

A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

B. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

KIMLEY HORN

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 WWW.KIMLEY-HORN.COM

APARTMENTS  
 LOUHRIDGE CONSTRUCTION

VIRGINIA

KHA PROJECT  
 113227001

DATE  
 12/08/17

SCALE  
 AS SHOWN

DESIGNED BY  
 RDR

DRAWN BY  
 RDR

CHECKED BY  
 SJM

PLANTING NOTES & DETAILS

PREPARED FOR  
 LOUHRIDGE CONSTRUCTION

BROOK ROAD APARTMENTS

SHEET NUMBER  
 CP-501



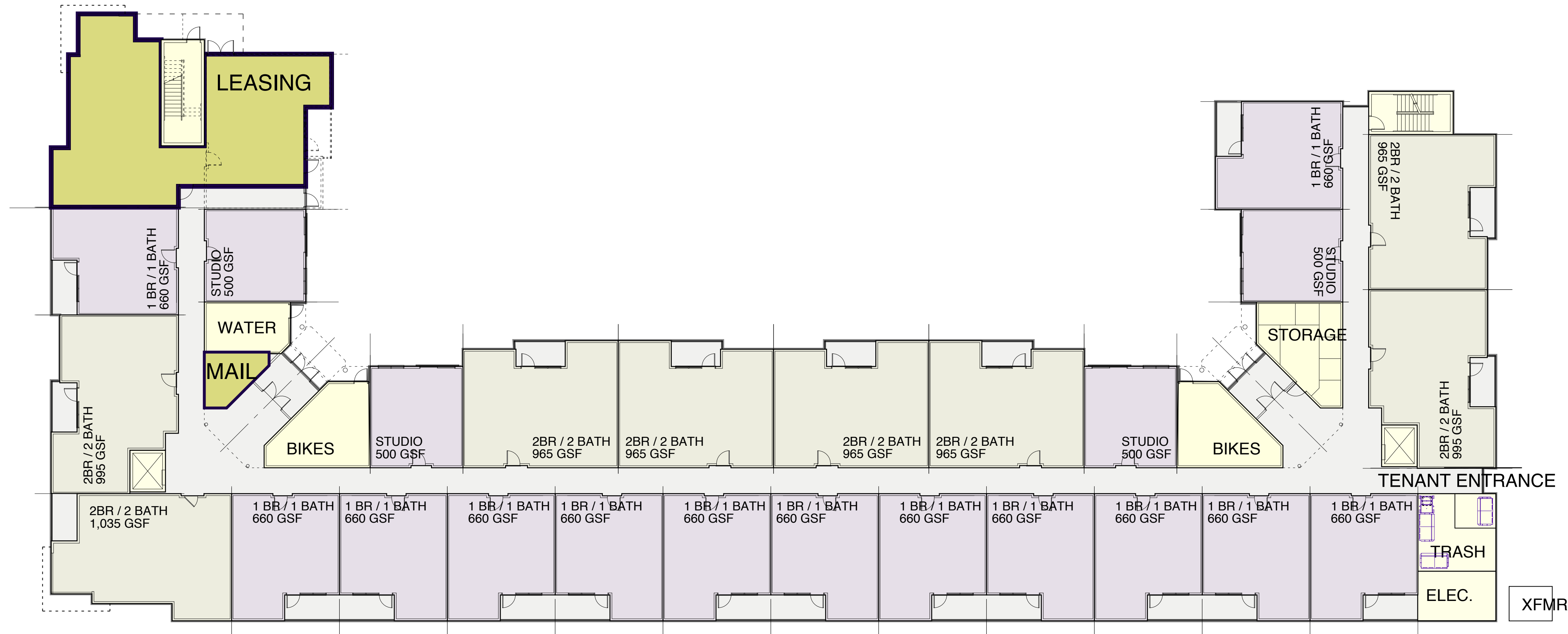




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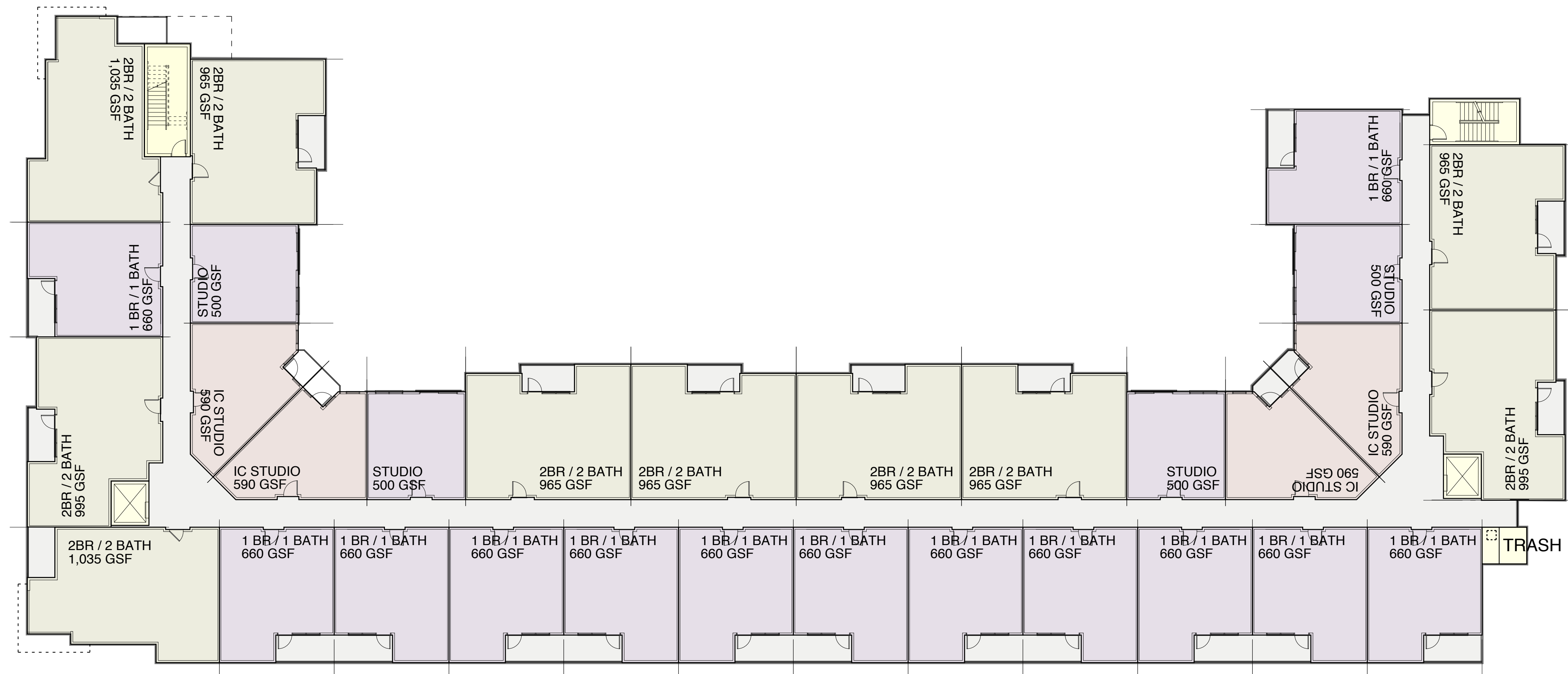
**BUILDING 2**  
4 STORIES / 118 UNITS

- GROUND FLOOR: 25 UNITS
- 4 - STUDIO UNITS
  - 13 - 1 BR UNITS
  - 8 - 2 BR UNITS
- 2ND - 4TH FLOOR: 31 UNITS
- 8 - STUDIO UNITS
  - 13 - 1 BR UNITS
  - 10 - 2 BR UNITS



**BUILDING 2 - GROUND FLOOR PLAN**

SCALE: 1/16" = 1' - 0"



**BUILDING 2 - TYPICAL UPPER LEVEL FLOOR PLAN**

SCALE: 1/16" = 1' - 0"

NEW MULTI-FAMILY DEVELOPMENT

**BROOK ROAD APARTMENTS**

**LOUGHRIDGE & COMPANY, LLC**  
BROOK ROAD  
RICHMOND, VIRGINIA

OCTOBER 3, 2017





PRELIMINARY RENDERING - BUILDING 1 NORTH ELEVATION

1

NEW MULTI-FAMILY DEVELOPMENT

**LOUGHRIDGE & COMPANY, LLC**  
BROOK ROAD  
RICHMOND, VIRGINIA

JUNE 6, 2018





PRELIMINARY RENDERING - BUILDING 1 EAST ELEVATION





PRELIMINARY RENDERING - BUILDING 1 SOUTH ELEVATION





PRELIMINARY RENDERING - BUILDING 1 WEST ELEVATION





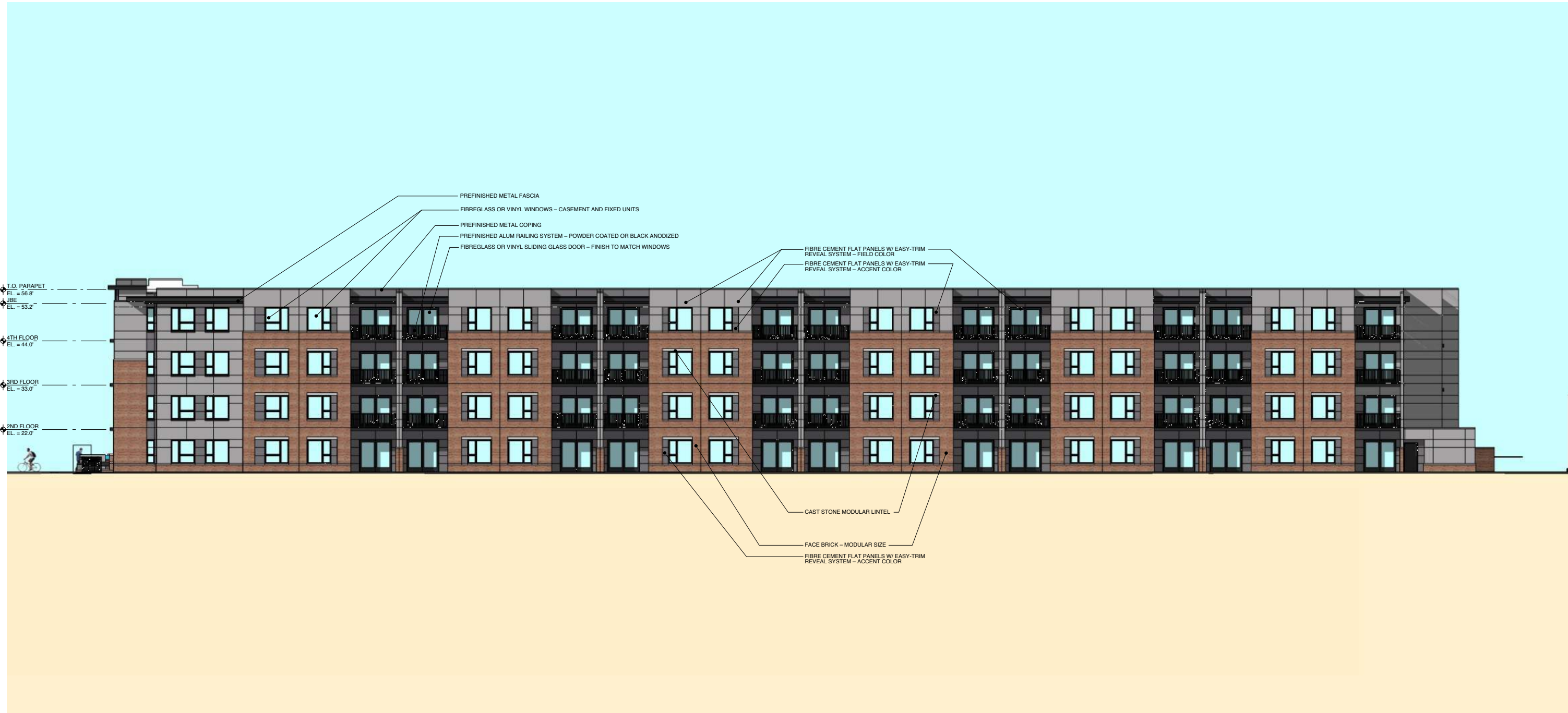
PRELIMINARY RENDERING - BUILDING 2 NORTH ELEVATION





PRELIMINARY RENDERING - BUILDING 2 EAST ELEVATION





PRELIMINARY RENDERING - BUILDING 2 SOUTH ELEVATION





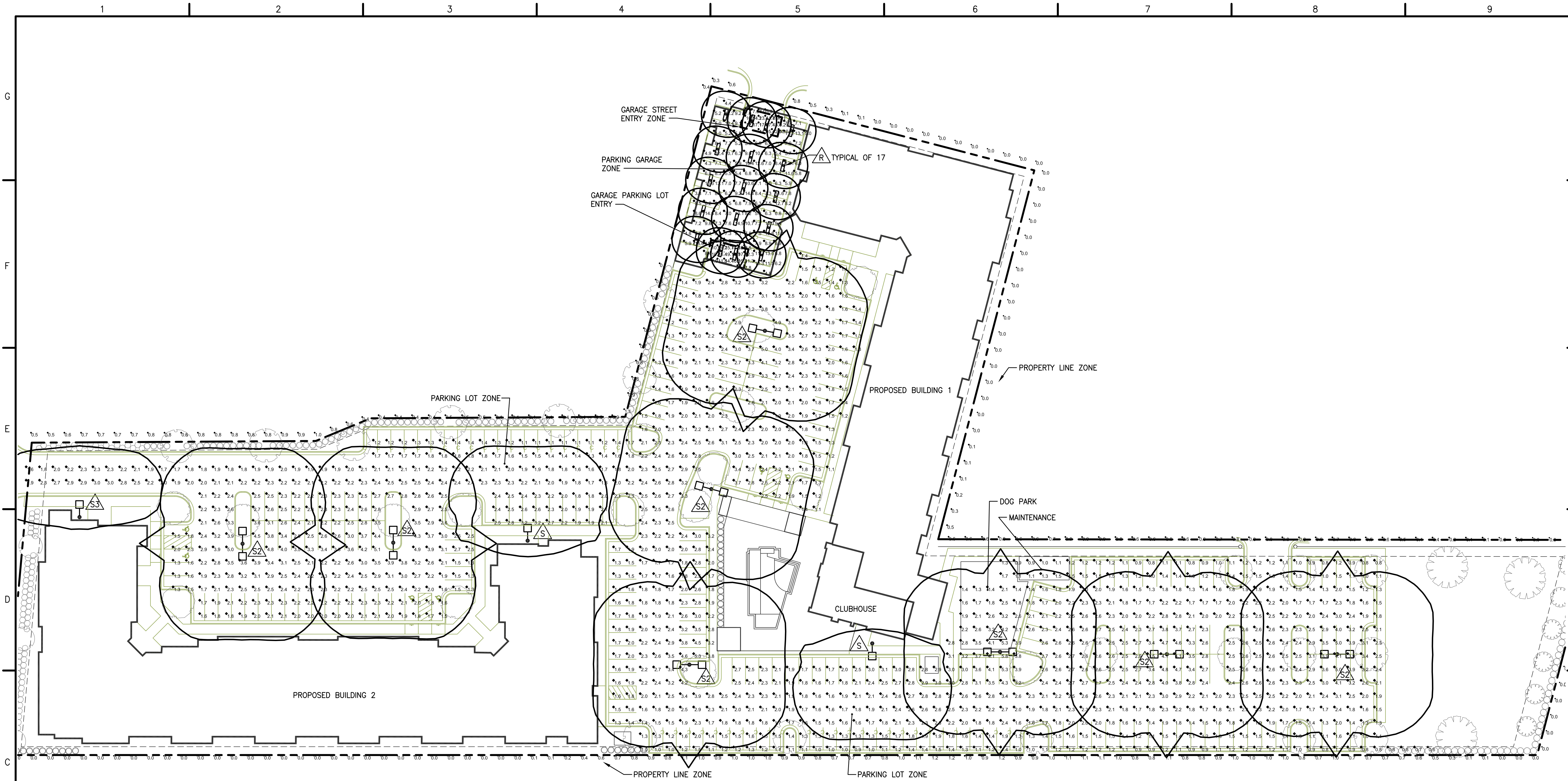
PRELIMINARY RENDERING - BUILDING 2 WEST ELEVATION





BROOK ROAD APARTMENTS  
 BROOK ROAD  
 RICHMOND, VIRGINIA

SITE LIGHTING PHOTOMETRIC CALCULATION PLAN

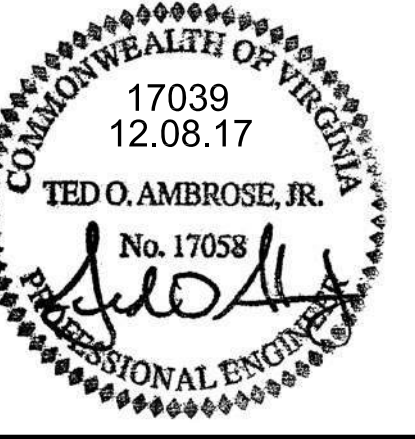


**SITE LIGHTING PHOTOMETRIC CALCULATION PLAN**

1" = 30' - 0"

LUMINAIRE SCHEDULE										
Symbol	Label	Qty	Manufacturer	Catalog Number	Description	Lamp	Light Loss Factor	Lumens	Watts	Mounting Height
	R	17	LITHONIA LIGHTING	FEM4 LED 3L IMAFD	4' ENCLOSED & GASKETED LED LUMINAIRE WITH ACRYLIC FROSTED DEEP LENS, 4100K	LED	0.95	3436.4	38.4	9'-0" A.F.G.
	W	0	LITHONIA LIGHTING	WSQ LED 2 10A700/40K SR4 MVOLT	WSQ LED WITH 2 MODULES, 20 LED'S, 700MA DRIVER, 4000K COLOR TEMPERATURE, TYPE 4 LENS	OUTDOOR WALL PACK LUMINAIRE TO IES LM-79-08, LUMINAIRE OUTPUT: 3869 LMS.	0.9	3859.3	47	10'-0" A.F.G.
	S	2	LITHONIA LIGHTING	DSX1 LED 60C 1000 40K T4M MVOLT HS	DSX1 LED WITH 60 LED'S @ 1000 MA, 4000K, TYPE 4 MEDIUM OPTICS WITH HOUSE-SIDE SHIELD	LED	0.9	17083.7	209	30' A.F.G.
	SA	8	LITHONIA LIGHTING	DSX1 LED 60C 1000 40K T4M MVOLT HS	DSX1 LED WITH 60 LED'S @ 1000 MA, 4000K, TYPE 4 MEDIUM OPTICS WITH HOUSE-SIDE SHIELD	LED	0.9	17083.7	418	30' A.F.G.
	SA2	1	LITHONIA LIGHTING	DSX1 LED 60C 700 40K T2S MVOLT HS	DSX1 LED WITH 60 LED'S @ 700 MA, 4000K, TYPE 2 SHORT OPTICS WITH HOUSE-SIDE SHIELD	LED	0.9	13969	131	30' A.F.G.

PHOTOMETRIC STATISTICS					
Zone Description	Symbol	Avg	Min	Max	Max/Min
GARAGE PARKING LOT ENTRY	+	12.8 fc	7.8 fc	19.1 fc	2.4:1
GARAGE STREET ENTRY	+	11.8 fc	5.9 fc	17.4 fc	2.9:1
PARKING GARAGE	+	8.1 fc	3.8 fc	14.9 fc	3.9:1
PARKING LOT	+	2.2 fc	0.6 fc	5.8 fc	9.7:1
PROPERTY LINE	+	0.4 fc	0.0 fc	1.2 fc	N/A



DATE: 12-8-17  
 JOB NUMBER: 17039  
 DESIGNED: TDJ  
 DRAWN: RPB  
 CHECKED: TOA

SHEET NO.  
**LC-1**  
 SHEET OF







- 8"H INDIVIDUAL LETTERS, BACK LIT  
LOCATED AT CLUBHOUSE ENTRANCE



SECONDARY SIGNAGE

- 8"H INDIVIDUAL LETTERS, BACK LIT  
LOCATED AT GARAGE ENTRANCE ON ROBERTS



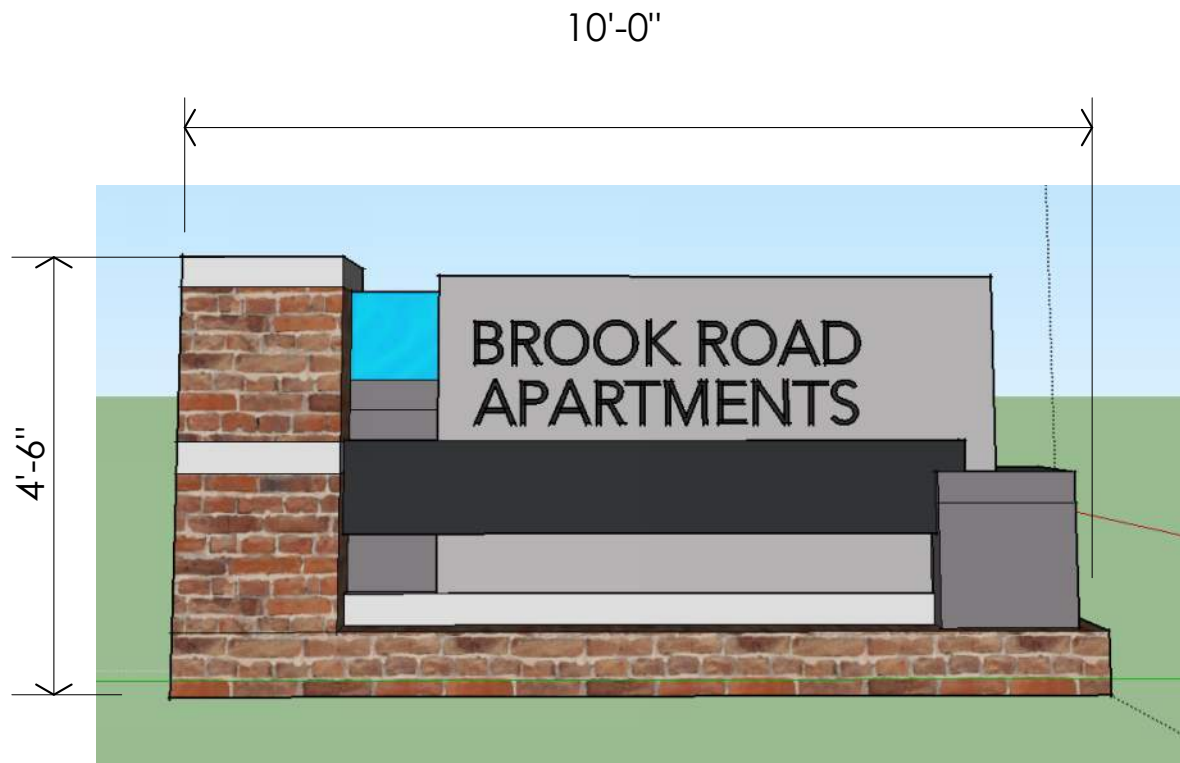
BROOK ROAD ENTRANCE

INDIVIDUAL LETTERS 8" H -  
BACK LIT ADDRESS

INDIVIDUAL LETTERS 16" H -  
LIT FROM BUILDING

BUILDING SIGN - SEE DETAIL BELOW

ENTRANCE SIGN - SEE DETAIL BELOW



PRELIMINARY ENTRANCE SIGN ON BROOK ROAD

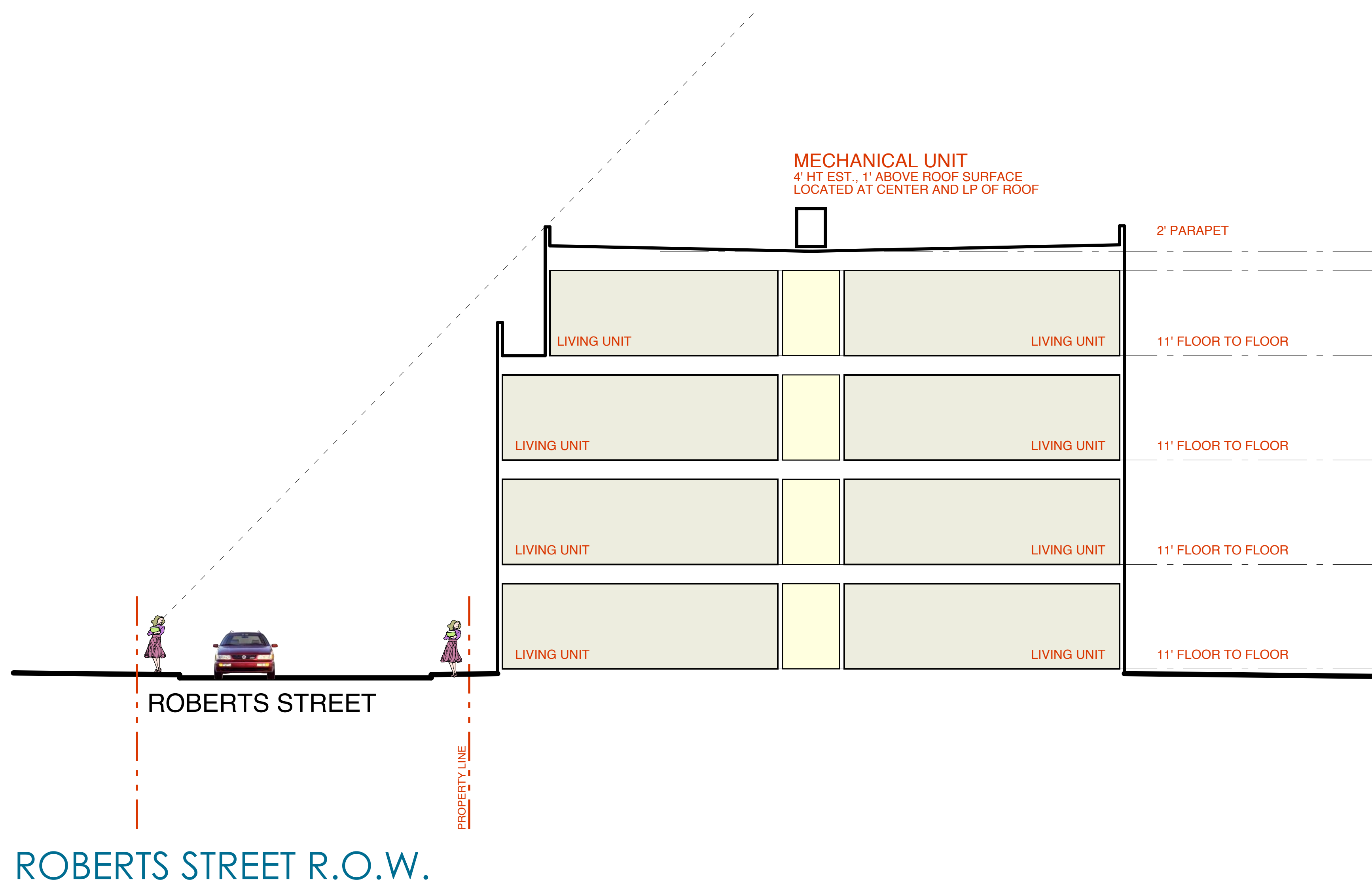
- ENTRANCE SIGN:
- 8"H INDIVIDUAL LETTERS, BACK LIT
  - BRICK, CAST STONE, FIBRE CEMENT PANELS, GLASS

- BUILDING SIGN:
- ILLUMINATED PANEL: 2'W X 13'H
  - 12"H INDIVIDUAL LETTERS
  - BOTTOM @ 13' ABOVE GRADE

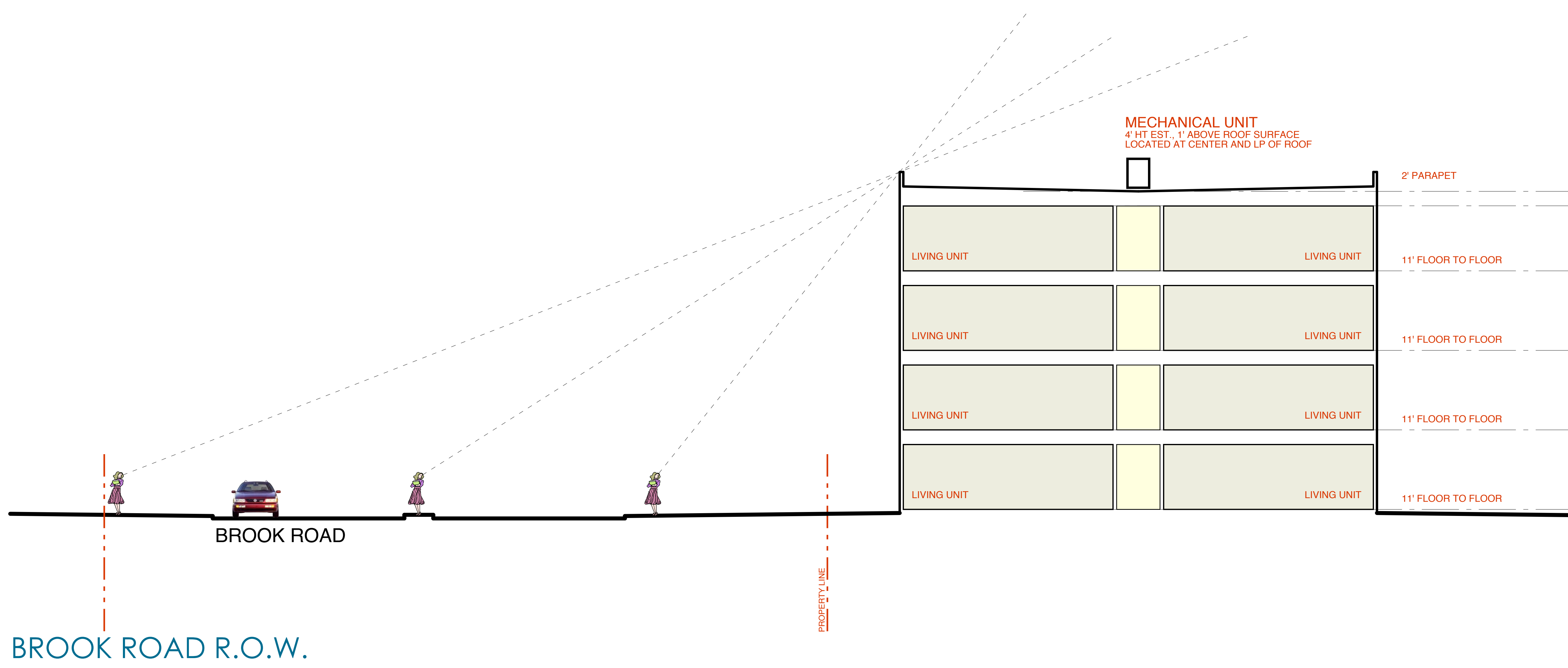


PRELIMINARY BUILDING SIGN





ROBERTS STREET R.O.W.



BROOK ROAD R.O.W.

DIAGRAMATIC SECTIONS @ R.O.W.

NEW MULTI-FAMILY DEVELOPMENT

**BROOK ROAD APARTMENTS**

**LOUGHRIDGE & COMPANY, LLC**

BROOK ROAD  
RICHMOND, VIRGINIA

JUNE 6, 2017