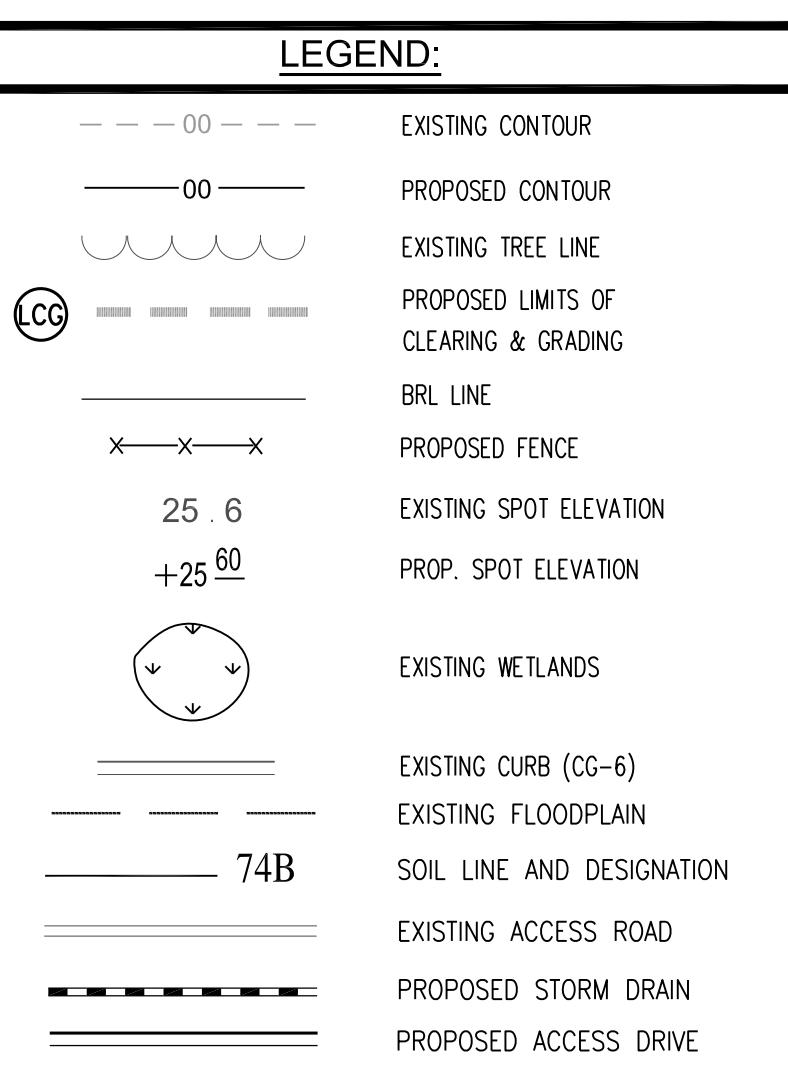


GENERAL NOTES

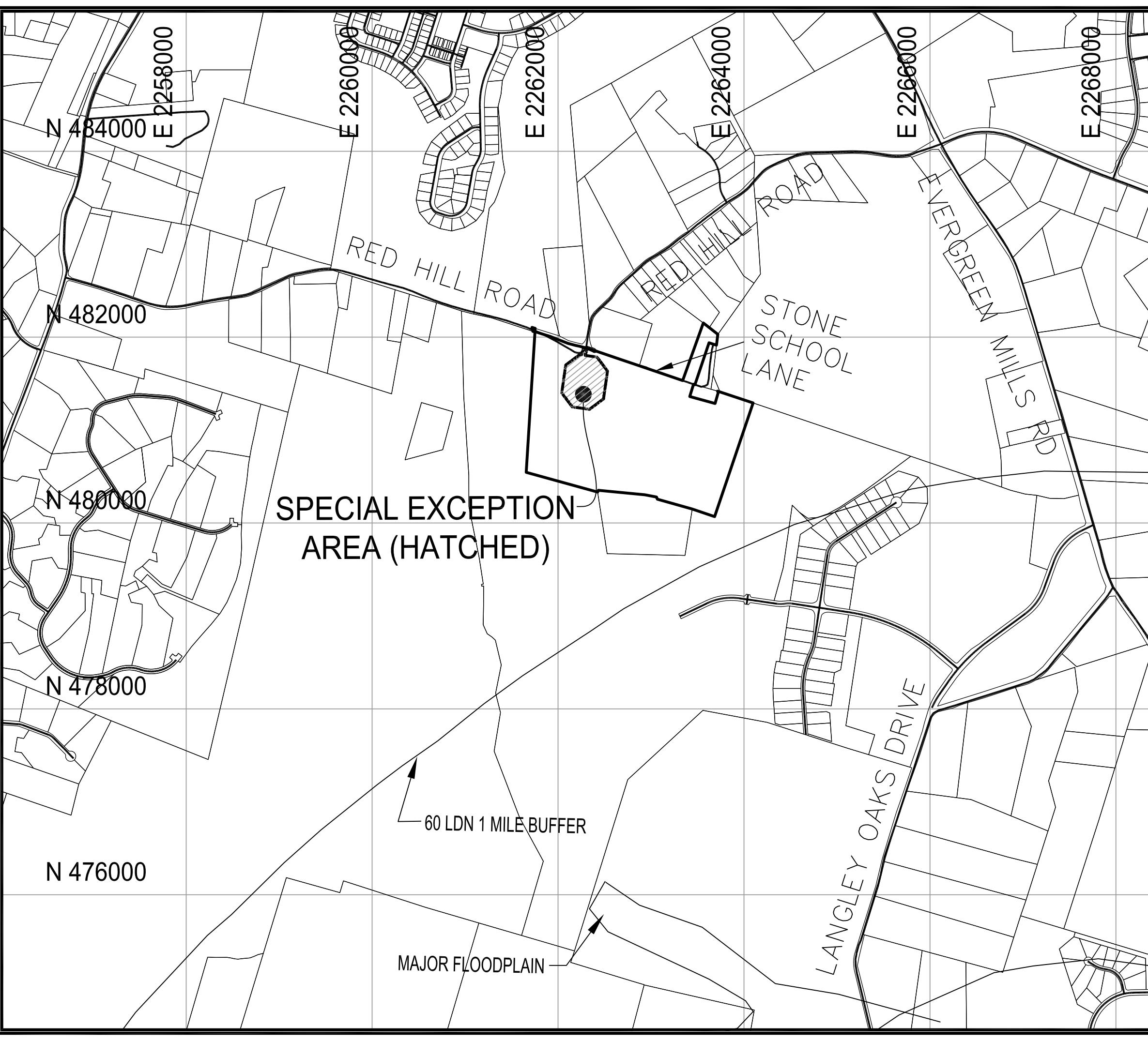
1. THE SUBJECT PROPERTY SHOWN ON THIS PLAN IS:
 MCP# OWNER AREA (AC.) INSTR.# OR DB/PG. ZONING
 243-45-9310 RANDOLPH D ROUSE 72.90 #200303270035411 TR3-UBF
- THE APPLICATION AREA SUBJECT TO THIS SPEX INCLUDES: THE TANK PARCEL (5.1081 AC) AS WELL AS AN ACCESS ROAD TO RED HILL ROAD (0.0688 AC). TOTAL SPEX AREA IS 5.1769 ACRES.
2. THE PROPOSED PARCEL SHALL BE CREATED AS PART OF A SEPARATE SUBDIVISION OR BOUNDARY LINE ADJUSTMENT PROCESS.
3. THE PURPOSE OF THIS SPECIAL EXCEPTION AND COMMISSION PERMIT APPLICATION IS TO OBTAIN APPROVAL OF A WATER STORAGE TANK USE PER SECTION 2-1502 AND 6-1100 OF THE REVISED 1993 LOUDOUN COUNTY ZONING ORDINANCE.
4. THE PURPOSE OF THE MINOR SPECIAL EXCEPTION APPLICATION IS TO OBTAIN APPROVAL FOR A MODIFICATION TO THE TYPE 4 BUFFER YARD FENCE. IN LIEU OF A 6-FOOT HIGH FENCE OR BERM IN THE BUFFER YARDS, THE APPLICANT REQUESTS APPROVAL TO PROVIDE A BLACK VINYL CHAIN LINK FENCE WITH BARB WIRE AT THE TOP, A MAXIMUM OF 10' HIGH. FOR SECURITY REASONS, FENCING WILL HAVE BLACK WEBBING/SLATS TO ACHIEVE 95% OPACITY. THE FENCE WILL BE LOCATED OUTSIDE THE BUFFER BETWEEN BUFFER LANDSCAPING AND THE WATER STORAGE TANKS. FINAL LOCATION TO BE DETERMINED WITH FINAL ENGINEERING.
5. A TYPE 4 BUFFER WILL BE PROVIDED AS REQUIRED BY SECTION 5-621 (B) OF THE ZONING ORDINANCE AND WILL BE PLANTED IN ACCORDANCE WITH SECTION 5-1414(B)(4), WITH THE EXCEPTION OF THE WAIVER REQUESTED IN NOTE #4.
6. BOUNDARY INFORMATION AS SHOWN HEREON WAS OBTAINED FROM URBAN LTD., NOVEMBER 2013. THE BOUNDARY IS IN THE NAD 1983 DATUM AND IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983, NORTH ZONE.
7. TOPOGRAPHIC INFORMATION SHOWN HEREON WAS OBTAINED BY URBAN, LTD. VIA FIELD SURVEY. DATUM: NAVD 1988.
8. SOILS INFORMATION SHOWN HEREON IS TAKEN FROM DIGITAL MAPS PROVIDED BY LOUDOUN COUNTY.
9. DEVELOPMENT OF THE SUBJECT SITE SHALL CONFORM TO ALL COUNTY AND VDOT STANDARDS INCLUDING THE PERFORMANCE STANDARDS INCLUDED IN ZONING ORDINANCE SECTION 5-1500.
10. ALL STRUCTURES WITHIN 500 FEET OF THE SUBJECT PROPERTY HAVE BEEN SHOWN ON THE EXISTING CONDITIONS MAP.
11. THE PROPOSED IMPROVEMENTS GENERATE A MINIMAL INCREASE IN TRAFFIC. THEREFORE, A VDOT 527 STUDY IS NOT WARRANTED. THE APPLICANT HAS REQUESTED A MODIFICATION OF THE COUNTY TRAFFIC STUDY REQUIREMENT.
12. THERE ARE NO ARCHEOLOGICAL SITES WITHIN THE SPECIAL EXCEPTION AREA PER A STUDY BY THUNDERBIRD ARCHEOLOGY, A DIVISION OF WETLAND STUDIES AND SOLUTIONS, DATED DECEMBER, 2013. CONTACT: BOYD SIPE, MA, RPA.
13. ENDANGERED AND THREATENED SPECIES HABITAT EVALUATION AND RARE SPECIES/ COMMUNITY ASSESSMENT WAS PERFORMED BY WETLAND STUDIES AND SOLUTIONS. CONTACT: RICHARD DAVIS, WPIT. THERE ARE NO ETS SPECIES WITHIN THE SPECIAL EXCEPTION AREA.
14. ALL LIGHTING WILL CONFORM TO THE REQUIREMENTS SET FORTH IN SECTION 5-1500 (PERFORMANCE STANDARDS) OF THE REVISED 1993 LOUDOUN COUNTY ZONING ORDINANCE AND CHAPTER 7 OF THE FACILITIES STANDARDS MANUAL. LOCATIONS WILL BE DETERMINED AT THE SITE PLANNING STAGE.
15. THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES ON THE SITE.
16. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED IN ACCORDANCE WITH THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK" AND THE LOUDOUN COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE, CHAPTER 1220 OF THE CODIFIED ORDINANCES OF LOUDOUN COUNTY.
17. PER A FIELD STUDY ON NOVEMBER 14, 2013 BY MICHAEL KOPANSKY, WPIT, CAE & RICHARD DAVIS, WPIT OF WETLAND STUDIES & SOLUTIONS, INC. (WSSI), THERE ARE NO WETLANDS OR OTHER WATERS OF THE U.S. (WOWS) WITHIN THE SPECIAL EXCEPTION AREA.
18. THERE ARE NO MODERATELY STEEP SLOPES (15%-25%) OR VERY STEEP SLOPES (>25%) WITHIN THE LIMITS OF THE SPECIAL EXCEPTION ACCORDING TO URBAN'S FIELD SURVEY.
19. ACCESS TO THE WATER TANK SITE IS PROVIDED VIA A PROPOSED GRAVEL SURFACED CATEGORY C PRIVATE ROAD. ACCESS IS FROM RED HILL ROAD, AN EXISTING PUBLIC STREET.
20. THE PLANNED LIMITS OF DISTURBANCE WILL GENERALLY FOLLOW THE LIMITS OF THE SPECIAL EXCEPTION APPLICATION AREA. FINAL LIMITS OF DISTURBANCE WILL BE DETERMINED WITH FINAL SITE PLAN.
21. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ALL REQUIRED LOCAL, STATE, AND FEDERAL PERMITS REQUIRED FOR OPERATION OF WATER STORAGE TANKS AT THIS LOCATION.
22. POTENTIAL ACCESSORY USES WHICH ARE ANTICIPATED INCLUDE A SCADA ANTEENAE.
23. THE SITE WILL BE SERVED BY PUBLIC WATER AND SEWER.
24. THE DEVELOPMENT OF THE SPEX AREA WILL BE IN COMPLIANCE WITH SECTION 5-1507 (NOISE STANDARDS) OF THE REVISED 1993 ZONING ORDINANCE.
25. THE SUBJECT PROPERTY AND THE SPEX AREA LIE OUTSIDE THE LDN60 1-MILE BUFFER NOISE CONTOUR AIRPORT OVERLAY DISTRICT.
26. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER, APPLICANT, OR HIS AGENT OF ANY OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS. ALL REQUIRED PERMITS SUCH AS VPDES SHALL BE OBTAINED FOR THIS SITE.
27. THE APPLICANT RESERVES THE RIGHT TO PHASE THE CONSTRUCTION OF THE TANKS DUE TO DEMAND. A MAXIMUM OF TWO WATER STORAGE TANKS WILL BE CONSTRUCTED ON SITE WITH TIMING OF TANK CONSTRUCTION PHASED ACCORDING TO DEMAND.



SPECIAL EXCEPTION (SPEX 2013-0040) COMMISSION PERMIT (CMPT 2013-0015) MINOR SPECIAL EXCEPTION (SPMI 2013-0010)

LOUDOUN WATER

600 ZONE WATER STORAGE TANKS BLUE RIDGE ELECTION DISTRICT LOUDOUN COUNTY, VIRGINIA



ZONING TABULATIONS

- CURRENT ZONE: TR-UBF (TRANSITIONAL RESIDENTIAL-3 DISTRICT)
- PROPOSED USE: PUBLIC UTILITY, WATER STORAGE TANKS
- MINIMUM PARCEL AREA: 1/2 ACRE (PER SECTION 5-621 (A))
- TOTAL LOT AREA = 5.1081 ACRES (TANK PARCEL ONLY, SEE GENERAL NOTE #1)
- YARDS: (BASED ON ZONING - SEE SHEET #5 FOR TANK SETBACKS AND SHEET #7 FOR HEIGHTS)

FRONT YARD: 12 FEET MIN
REAR YARD: 25 FEET MIN
SIDE YARD: 7 FEET MIN
- OPEN SPACE REQUIRED: 50% (2.59 AC)

OPEN SPACE PROVIDED: 84% (4.78 AC)

- MAXIMUM BUILDING HEIGHT: 40 FEET - (HEIGHT REQUIREMENT DOES NOT APPLY PURSUANT TO SECTION 1-103(D)(2), WATER TANKS ARE SETBACK FROM THE PROPERTY LINE A DISTANCE EQUAL TO THE HEIGHT)
- MAXIMUM HEIGHT OF WATER TANKS: 189 FEET - (WATER TANKS ARE SETBACK AT LEAST 189 FEET FROM THE PROPERTY LINE)
- A MIN. TYPE 4 BUFFER YARD IS REQUIRED PURSUANT TO SECTION 5-621(B). IN LIEU OF A 6-FOOT HIGH FENCE OR BERM IN THE BUFFER YARDS, THE APPLICANT REQUESTS APPROVAL TO PROVIDE A BLACK VINYL CHAIN LINK FENCE WITH BARB WIRE AT THE TOP, A MAXIMUM OF 10' HIGH. FOR SECURITY REASONS, FENCING WILL HAVE BLACK WEBBING/SLATS TO ACHIEVE 95% OPACITY. THE FENCE WILL BE LOCATED OUTSIDE THE BUFFER BETWEEN BUFFER LANDSCAPING AND THE WATER STORAGE TANKS. FINAL LOCATION TO BE DETERMINED WITH FINAL ENGINEERING.

NOTE: WATER STORAGE TANKS ARE SUBJECT TO SECTION 5-621, PUBLIC UTILITY STANDARDS

PARKING TABULATIONS

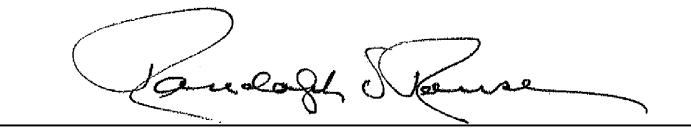
- USE: PUBLIC UTILITY, WATER STORAGE TANKS
PARKING SPACES REQUIRED
 REGULAR PARKING SPACES = MAXIMUM # OF VEHICLES ANTICIPATED ON SITE AT ONE TIME = 1
 LOADING SPACES = 1
PARKING SPACES PROVIDED
 REGULAR PARKING SPACES = 1
 LOADING SPACES = 1

SHEET INDEX

- COVER SHEET
- ADJACENT PROPERTY OWNERS LIST
- EXISTING CONDITIONS PLAN
- OVERVIEW PLAN
- SPECIAL EXCEPTION PLAT
- LANDSCAPE PLAN AND COMPUTATIONS
- ELEVATION DETAIL
- PRELIMINARY BMP COMPUTATIONS

OWNER

RANDOLPH D. ROUSE
 6407 WILSON BLVD
 ARLINGTON, VA 22205-1506


 SIGNATURE: RANDOLPH D. ROUSE

APPLICANT

LOUDOUN COUNTY SANITATION AUTHORITY D.B.A.
LOUDOUN WATER
 44865 LOUDOUN WATER WAY
 BLUE RIDGE ELECTION DISTRICT
 LOUDOUN COUNTY, VIRGINIA
 DATE: DEC. 2013


 SIGNATURE: DALE C. HAMMES, LCSA GENERAL MANAGER

COVER SHEET	LOUDOUN WATER	600 ZONE WATER STORAGE TANKS	DATE: DEC. 2013
600 ZONE WATER STORAGE TANKS		MAILING ADDRESS: P.O. BOX 4000	ASHBURN, VIRGINIA 20146
		ASHBURN, VIRGINIA 20146	(571) 291-7700
SCALE: AS NOTED			C.I.: N/A
SHEET	1	OF	8
SE-12729			

Urban, Ltd. - J:\JOBS\Loudoun Water\Willowford\Rouse Property Studies\SPX\12729-01-Cover.dwg [Cover-1] January 13, 2014 - 10:23am

Urban, Ltd. 4200 Technology Court Chantilly, Virginia 20151 Tel: (703) 624-2306 www.urban-ltd.com

Planners Engineers Landscape Architects and Surveyors

Robert B. Brown, Inc. Professional Engineer, C.P.E. No. 037041 12/2/2015

LEGEND

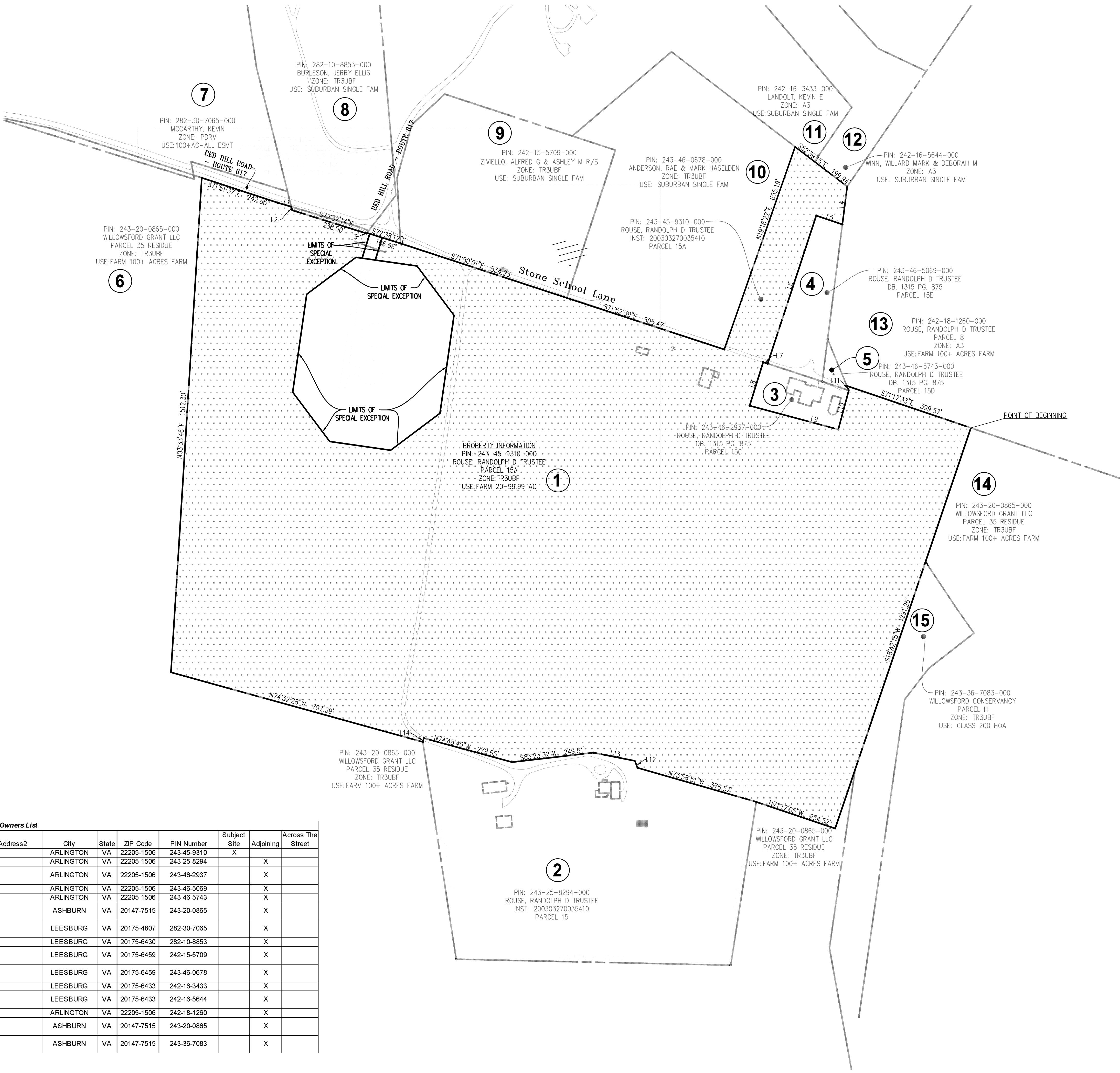
AREA OF PARCEL NOT SUBJECT TO THIS APPLICATION

VA STATE GRID NORTH

0 75 150 300 450
SCALE - 1 inch = 150 ft.

Adjoining Property Owners List

Label	First Name	Last Name	Parcel	Company Name	Address1	Address2	City	State	ZIP Code	PIN Number	Subject Site	Adjoining	Across The Street
1	RANDOLPH D	ROUSE	15A		6407 WILSON BLVD		ARLINGTON	VA	22205-1506	243-45-9310	X		
2	RANDOLPH D	ROUSE	15		6407 WILSON BLVD		ARLINGTON	VA	22205-1506	243-25-8294	X		
3	RANDOLPH D	ROUSE	15C		6407 WILSON BLVD		ARLINGTON	VA	22205-1506	243-46-2937	X		
4	RANDOLPH D	ROUSE	15E		6407 WILSON BLVD		ARLINGTON	VA	22205-1506	243-46-5069	X		
5	RANDOLPH D	ROUSE	15D		6407 WILSON BLVD		ARLINGTON	VA	22205-1506	243-46-5743	X		
6			35	WILLOWSFORD LLC	44095 PIPELINE PLAZA STE 140		ASHBURN	VA	20147-7515	243-20-0865	X		
7	KEVIN	MCCARTHY			41181 BLACK BRANCH PKWY		LEESBURG	VA	20175-4807	282-30-7065	X		
8	JERRY	BURLESON			41202 RED HILL RD		LEESBURG	VA	20175-6430	282-10-8853	X		
9	ALFRED & ASHLEY	ZIVIELLO			41250 STONE SCHOOL LN		LEESBURG	VA	20175-6459	242-15-5709	X		
10	RAE & MARK	ANDERSON			41272 STONE SCHOOL LN		LEESBURG	VA	20175-6459	243-46-0678	X		
11	KEVIN	LANDOLT			41329 RED HILL RD		LEESBURG	VA	20175-6433	242-16-3433	X		
12	WILLARD & DEBORAH	WINN			41325 RED HILL RD		LEESBURG	VA	20175-6433	242-16-5644	X		
13	RANDOLPH D	ROUSE	8		6407 WILSON BLVD		ARLINGTON	VA	22205-1506	242-18-1260	X		
14			35	WILLOWSFORD LLC	44095 PIPELINE PLAZA STE 140		ASHBURN	VA	20147-7515	243-20-0865	X		
15			H	WILLOWSFORD LLC	44095 PIPELINE PLAZA STE 140		ASHBURN	VA	20147-7515	243-36-7083	X		



ADJACENT PROPERTY OWNERS LIST

LOUDOUN WATER
600 ZONE WATER STORAGE TANKS
BLUE RIDGE ELECTION DISTRICT
LOUDOUN COUNTY, VIRGINIA

DATE: DEC, 2013

SCALE: 1"=150'

SHEET
2
OF
8

SE-12729

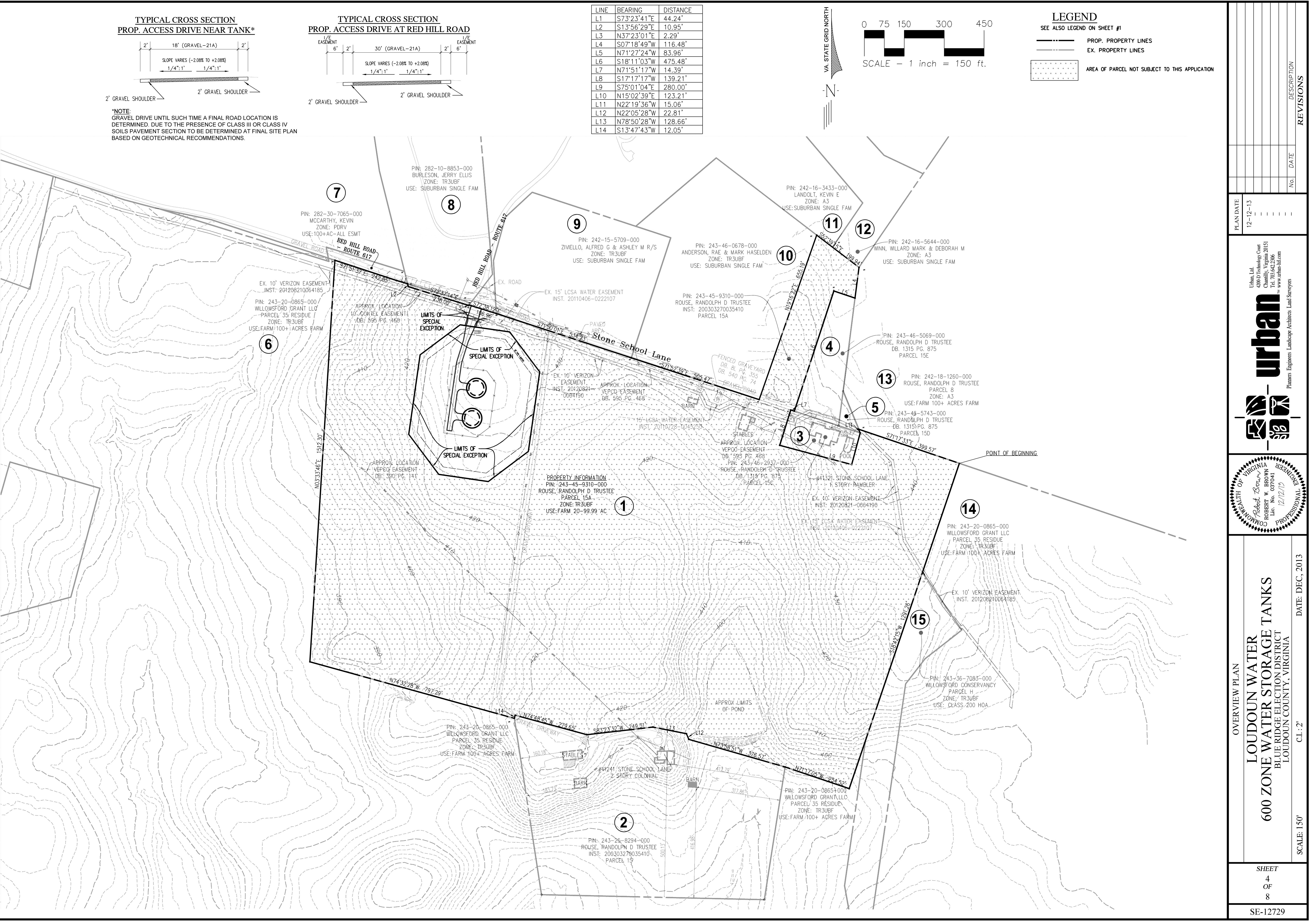
PLAN DATE	12-12-13
URBAN, LTD.	4200D Technology Court Chantilly, Virginia 20151 Tel: 703-642-2306 www.urban-ltd.com
DESCRIPTION	REVISONS
No.	DATE

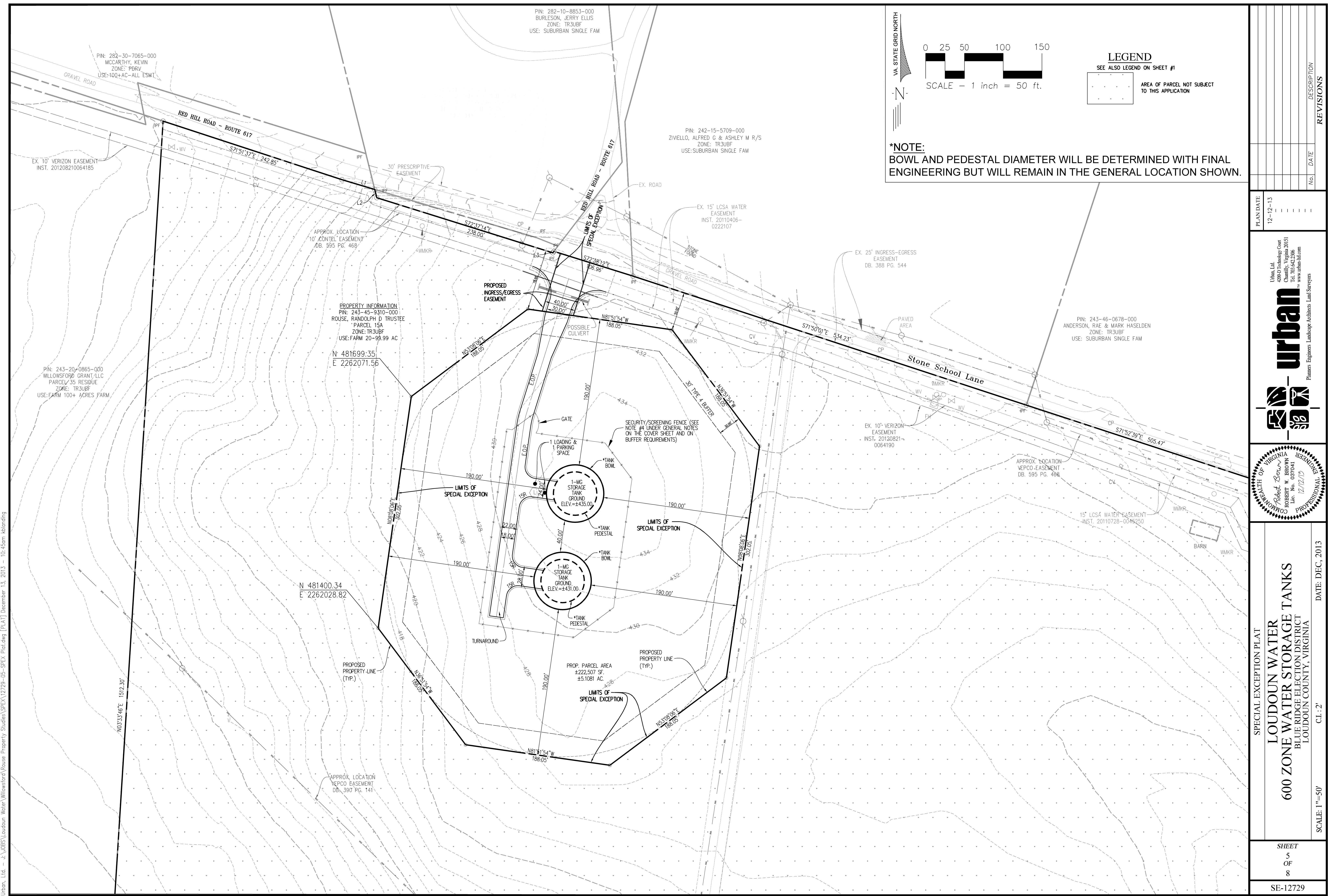


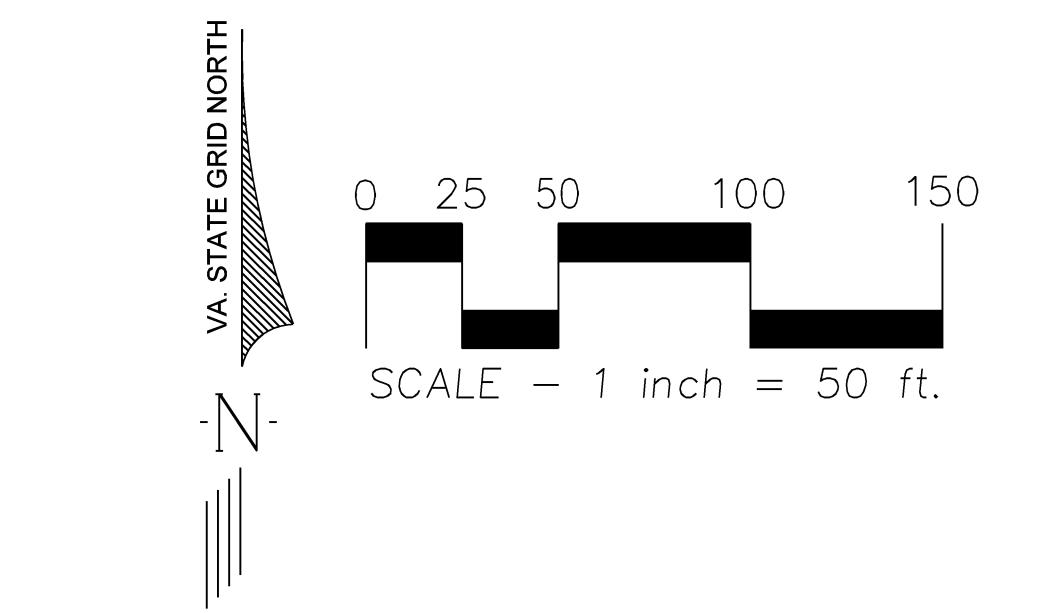
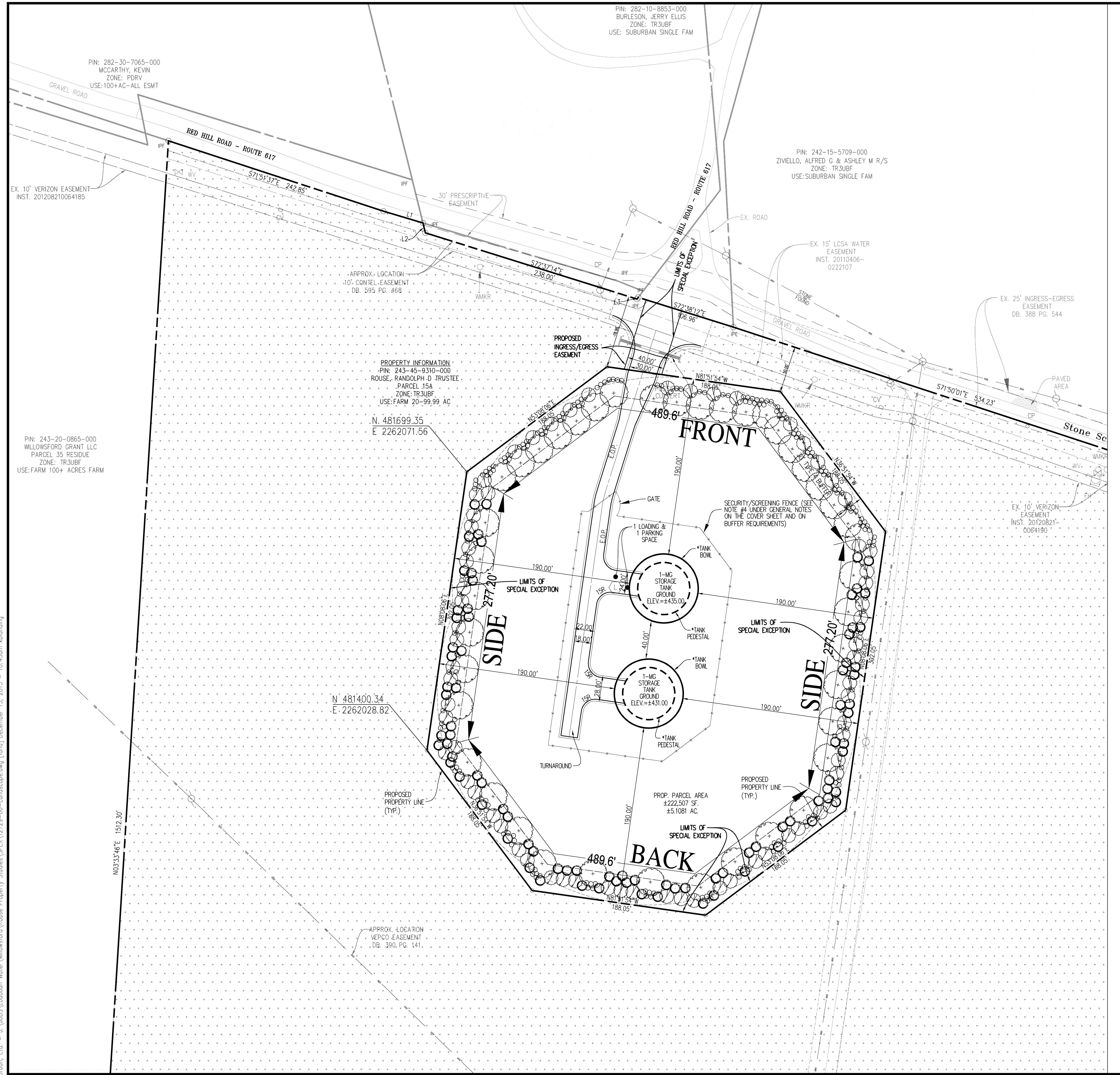
PROFESSIONAL ENGINEERS
12/12/13



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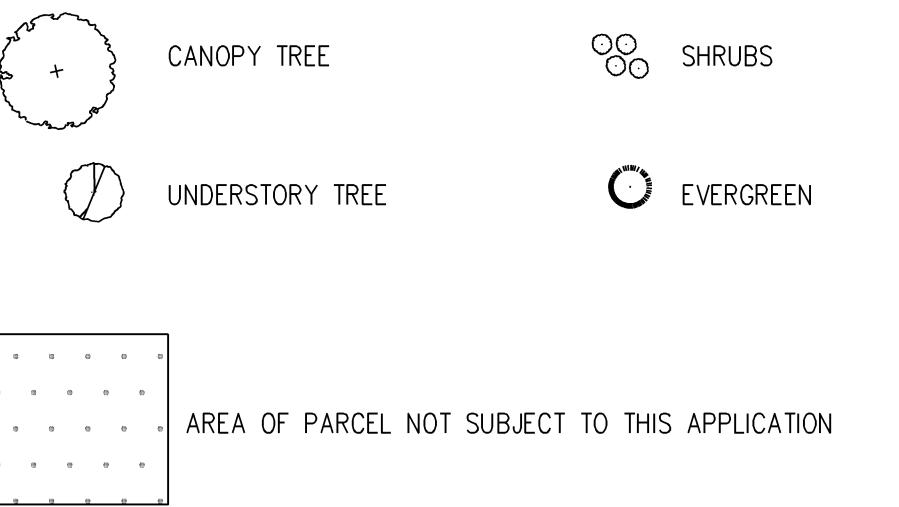






LEGEND:

E ALSO LEGEND ON SHEET #1



TYPE 4 BUFFER YARD REQUIREMENTS

PURSUANT TO SECTION 5-621(B)

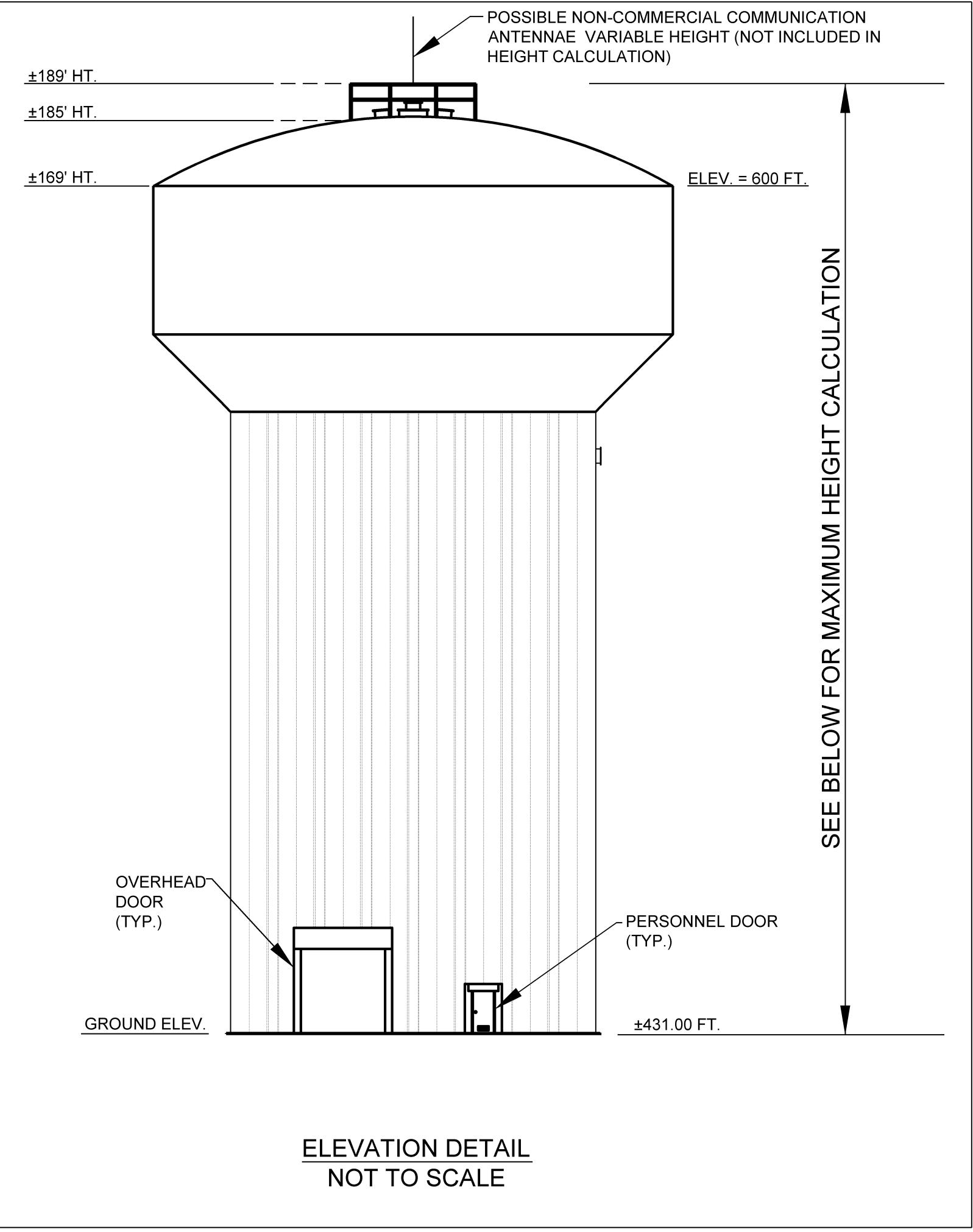
<u>FRONT YARD BUFFER WIDTH NORTH)</u>	<u>REQUIRED PLANT UNITS PER 100 LINEAL FEET</u>	<u>PROVIDED PLANT UNITS PER 489.6 LINEAL FEET</u>
20' MINIMUM 30' MAXIMUM	4 CANOPY TREES 3 UNDERSTORY TREES 20 SHRUBS 0 EVERGREEN TREES	20 CANOPY TREES 15 UNDERSTORY TREES 98 SHRUBS 0 EVERGREEN TREES
<u>SIDE YARD BUFFER WIDTH (EAST)</u>	<u>REQUIRED PLANT UNITS PER 100 LINEAL FEET</u>	<u>PROVIDED PLANT UNITS PER 277.20 LINEAL FEET</u>
25' MINIMUM 30' MAXIMUM	2 CANOPY TREES 5 UNDERSTORY TREES 10 SHRUBS 8 EVERGREEN TREES	6 CANOPY TREES 14 UNDERSTORY TREES 28 SHRUBS 23 EVERGREEN TREES
<u>SIDE YARD BUFFER WIDTH (WEST)</u>	<u>REQUIRED PLANT UNITS PER 100 LINEAL FEET</u>	<u>PROVIDED PLANT UNITS PER 277.20 LINEAL FEET</u>
25' MINIMUM 30' MAXIMUM	2 CANOPY TREES 5 UNDERSTORY TREES 10 SHRUBS 8 EVERGREEN TREES	6 CANOPY TREES 14 UNDERSTORY TREES 28 SHRUBS 23 EVERGREEN TREES
<u>REAR YARD BUFFER WIDTH (SOUTH)</u>	<u>REQUIRED PLANT UNITS PER 100 LINEAL FEET</u>	<u>PROVIDED PLANT UNITS PER 489.6 LINEAL FEET</u>
25' MINIMUM 30' MAXIMUM	2 CANOPY TREES 5 UNDERSTORY TREES 10 SHRUBS 8 EVERGREEN TREES	10 CANOPY TREES 25 UNDERSTORY TREES 49 SHRUBS 40 EVERGREEN TREES

X FOOT HIGH FENCE, WALL, OR BERM PROVIDING A MINIMUM OPACITY 95% IS REQUIRED WITH A TYPE 4 BUFFER YARD. IN LIEU OF A 10 FOOT HIGH FENCE OR BERM IN THE BUFFER YARDS, THE APPLICANT REQUESTS APPROVAL TO PROVIDE A BLACK VINYL CHAIN LINK FENCE WITH BARB WIRE AT THE TOP, A MAXIMUM OF 10' HIGH, FOR SECURITY REASONS. FENCING WILL HAVE BLACK WEBBING/SLATS TO ACHIEVE 95% OPACITY. THE FENCE WILL BE LOCATED OUTSIDE THE BUFFER BETWEEN THE LANDSCAPING AND THE WATER STORAGE TANKS. FINAL LOCATION WILL BE DETERMINED WITH FINAL ENGINEERING.

NOTE:

- . BOWL AND COLUMN DIAMETER WILL BE DETERMINED WITH FINAL ENGINEERING BUT WILL REMAIN IN THE GENERAL LOCATION SHOWN.
 - . BUFFER PLANTINGS MAY BE ADJUSTED AT FINAL DESIGN TO ACCOMMODATE UNDERGROUND UTILITIES.

LANDSCAPE PLAN AND COMPUTATIONS			
LOUDOUN WATER			
600 ZONE WATER STORAGE TANKS			
BLUE RIDGE ELECTION DISTRICT LOUDOUN COUNTY, VIRGINIA			
SCALE: 1"=50'	C.I.: 2'	DATE: DEC, 2013	REVISIONS
SHEET 8 OF 6	PLAN DATE 12-12-13	No. DATE - - - - -	DESCRIPTION Urban, Ltd. 4200-D Technology Court Chantilly, Virginia 20151 Tel. 703.642.2306 ™ www.urban-ltd.com
			
			



NOTE: THIS ELEVATION SHOWN IS ILLUSTRATIVE AND IS INTENDED TO CONVEY THE GENERAL ELEVATION CONCEPT OF THE FACILITY. THOUGH THE DETAILS OF THE ARCHITECTURAL DESIGN MAY BE MODIFIED AS THE PROJECT PROGRESSES THROUGH FINAL DESIGN, THE FINAL DESIGN WILL BE SIMILAR TO THAT SHOWN. THE MAXIMUM HEIGHT WILL NOT EXCEED: 189 FEET.

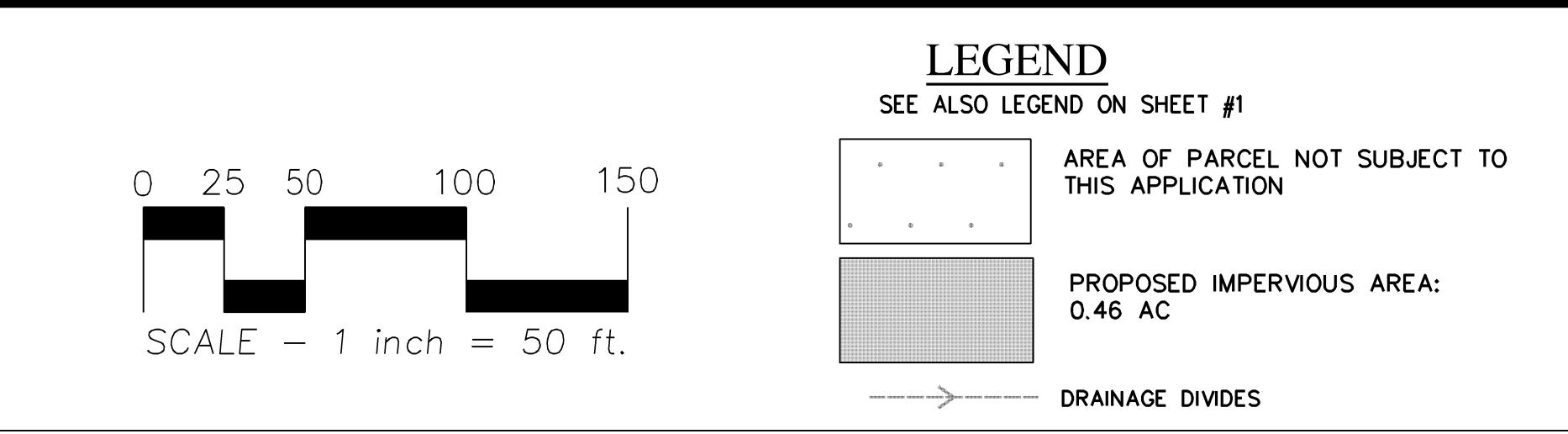
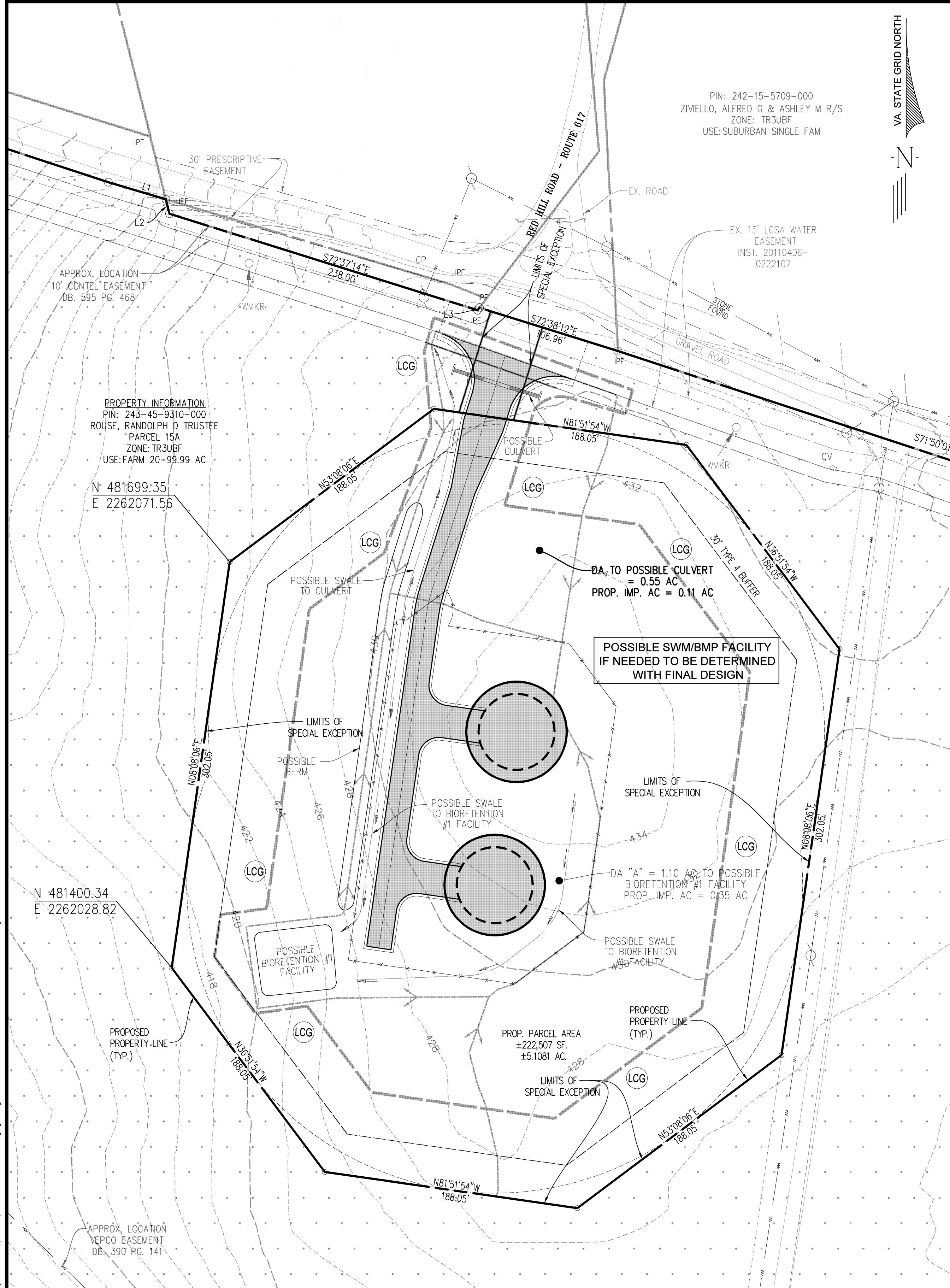
MAXIMUM HEIGHT CALCULATION:
620' TOP OF RAILING - 431' GROUND ELEV. = 189' MAX. HT.

*NON-COMMERCIAL COMMUNICATIONS ANTENNAE ATTACHED TO TOP OF HANDRAIL.
MAX. HEIGHT 11-FEET (NOT INCLUDED IN HEIGHT CALCULATION)

ELEVATION DETAIL		PLAN DATE
		12-12-13
LOUDOUN WATER		Urban, Ltd.
600 ZONE WATER STORAGE TANKS		4200D Technology Court
BLUE RIDGE ELECTION DISTRICT		Charlottesville, Virginia 20151
LOUDOUN COUNTY, VIRGINIA		Tel: 703/642-2306
C.L.: N/A		www.urban-ltd.com
SCALE: N/A	DATE: DEC, 2013	DESCRIPTION
SHEET 7 OF 8	REVISONS	
SE-12729		

Urban
Planners Engineers Landscape Architects Land Surveyors

PROFESSIONAL ENGINEERS
ROBERT W. BROWN, P.E.
LIC. NO. 037041
12/12/13



Virginia Runoff Reduction Method Worksheet -- Revised -- 03/25/2011 - Redevelopment

Site Data

Project Name: 600 Zone Water Storage Tanks Special Exception

Date: 1/25/2013

Post-Development Project & Land Cover Information

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Phosphorus EMC (mg/L)	0.26
Target Phosphorus Target Load (lb/acre/yr)	0.41
Pj	0.90
Nitrogen EMC (mg/L)	1.86

Pre-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) - undisturbed, protected forest/open space or reforested land	0.00	0.11	5.07	0.00	5.18
Managed Turf (acres) - disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	0.00	0.00	0.00
Impervious Cover (acres)	0.00	0.00	0.00	0.00	0.00
Total					5.18

Note: All pre-development conditions assumed to be undisturbed as a conservative measure.

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) - undisturbed, protected forest/open space or reforested land	0.00	0.07	1.95	0.00	2.02
Managed Turf (acres) - disturbed, graded for yards or other turf to be mowed/managed	0.00	0.04	2.66	0.00	2.70
Impervious Cover (acres)	0.00	0.00	0.46	0.00	0.46
Total					5.18

Rv Coefficients

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

Land Cover Summary

Pre-Development

Forest/Open Space Cover (acres)	5.18
Weighted Rv/Forest	0.04
% Forest	100%
Managed Turf Cover (acres)	0.00
Weighted Rv/Turf	0.00
% Managed Turf	0%
Impervious Cover (acres)	0.00
Rv/Impervious	0.95
% Impervious	0%
Total Site Area (acres)	5.18
Site Rv	0.04
Pre-Development Treatment Volume (acre-ft)	0.0172
Pre-Development Treatment Volume (cubic feet)	748
Pre-Development Load (TP) (lb/yr)	0.47

Maximum % Reduction Required Below Pre-Development Load	20%
Total Load (TP) Reduction Required (lb/yr)	0.41
Pre-Development Load (TN) (lb/yr)	3.36
Post-Development Load (TN) (lb/yr)	18.12

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) - undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) - disturbed, graded for yards or other turf to be mowed/managed	0.00	0.01	0.74	0.00	0.75
Impervious Cover (acres)	0.00	0.00	0.35	0.00	0.35
Total					1.10

Apply Runoff Reduction Practices to Reduce Treatment Volume & Post-Development Load in Drainage Area A

Credit	Unit	Description of Credit	Credit	Credit Area (acres)	Volume from Upstream RR Practice (cf)	Runoff Reduction (cf)	Remaining Runoff Volume (cf)	Phosphorus Efficiency (%)	Phosphorus Load from Upstream RR Practices (lbs.)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus Load (lbs.)	Downstream Treatment to be Employed
6. Bioretention													
6.a. Bioretention #1 or Urban Bioretention (Spec #9)	imperious acres draining to bioretention	40% runoff volume reduction	0.40	0.35	0	483	724	25	0.00	0.76	0.42	0.34	
	turf acres draining to bioretention	40% runoff volume reduction	0.40	0.75	0	0	0	25	0.00	0.00	0.00	0.00	

TOTAL PHOSPHOROUS REMOVAL REQUIRED ON SITE (lb/yr) 0.02
TOTAL RUNOFF REDUCTION IN D.A. A (cf) 483
PHOSPHORUS REMOVAL FROM RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.42

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

Site Results

Phosphorous

TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED (LB/YEAR)	0.41
RUNOFF REDUCTION (cf)	483
PHOSPHOROUS LOAD REDUCTION ACHIEVED (LB/YR)	0.42
ADJUSTED POST-DEVELOPMENT PHOSPHOROUS LOAD (TP) (lb/yr)	2.12

REMAINING PHOSPHOROUS LOAD REDUCTION (LB/YR) NEEDED CONGRATULATIONS!! YOU EXCEEDED THE TARGET REDUCTION BY 0 LB/YEAR!!

Nitrogen (for information purposes)

RUNOFF REDUCTION (cf)	483
NITROGEN LOAD REDUCTION ACHIEVED (LB/YR)	3.47
ADJUSTED POST-DEVELOPMENT NITROGEN LOAD (TP) (lb/yr)	14.65

SWM/BMP NARRATIVE

WATER QUALITY AND QUANTITY FOR THE SITE IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA RUNOFF REDUCTION METHOD (VRM). SWM/BMP MEASURES SHOWN ON THIS SHEET ARE SUBJECT TO CHANGE WITH FINAL DESIGN ENGINEERING.

ALMOST HALF OF THE SUBJECT SITE SHEET FLOWS EAST OF THE SITE INTO AN UNNAMED STREAM AND EVENTUALLY INTO A POND. NO TREATMENT IS NECESSARY SINCE THERE IS NO INCREASE IN IMPERVIOUS AREA.

A PORTION OF THE SURFACE RUNOFF (0.55 AC) TRAVELS NORTHWEST OF THE SITE TO A POSSIBLE CULVERT LOCATED AT THE ENTRANCE OF THE SPEX AREA. ANOTHER PORTION OF THE RUNOFF (1.10 AC) TRAVELS SOUTHWEST VIA POSSIBLE SWALES TO A POSSIBLE BIOPRETENTION LEVEL #1 FACILITY. PER VIRGINIA DCR STORMWATER DESIGN SPECIFICATION NO. 9, THE FACILITY PROVIDES A 40 PERCENT ANNUAL RUNOFF VOLUME REDUCTION AND A 25 PERCENT TOTAL PHOSPHOROUS REDUCTION BY BMP TREATMENT PROCESS. DUE TO THE POST DEVELOPMENT CONDITIONS OF THE SPEX AREA, A PHOSPHOROUS LOAD REDUCTION OF 0.02 LB/YR IS REQUIRED. AS A RESULT OF CONSTRUCTING A POSSIBLE BIOPRETENTION FACILITY FOR THE SUBJECT SITE, A PHOSPHOROUS LOAD REDUCTION OF 0.61 LB/YR IS ACHIEVED. THEREFORE, THE FACILITY IS MORE THAN ADEQUATE TO HANDLE THE POST-DEVELOPMENT'S PHOSPHOROUS LOAD FROM THE SPEX AREA.

THE POSSIBLE BMP FACILITY(IES) SHALL BE PRIVATELY MAINTAINED BY THE PROPERTY OWNER. VIRGINIA'S STORMWATER MANAGEMENT REGULATIONS REQUIRE INSPECTIONS TWICE A YEAR, AND AFTER ANY STORM EVENT THAT EXCEEDS THE CAPACITY OF THE FACILITY TO ENSURE THAT THE FACILITIES REMAIN OPERATIONAL. A DETAILED INSPECTION SHALL BE PERFORMED ANNUALLY BY A QUALIFIED PROFESSIONAL IN ORDER TO ENSURE THAT THE FACILITIES ARE OPERATIONAL AS DESIGNED, AND TO PROVIDE AN OPPORTUNITY TO SCHEDULE ANY MAINTENANCE THAT THE FACILITIES MAY REQUIRE.

PLAN DATE		12-12-13
Urban, Ltd.		4200D Technology Court Charlottesville, Virginia 22901 Tel: 703-642-2306 www.urban-ltd.com
PRELIMINARY BMP COMPUTATIONS		
LOUDOUN WATER 600 ZONE WATER STORAGE TANKS BLUE RIDGE ELECTION DISTRICT LOUDOUN COUNTY, VIRGINIA DATE: DEC, 2013 SCALE: 1"=50' C.I.: 2' SHEET 8 OF 8 SE-12729		