



TOWN OF OCCOQUAN

Town Hall, 314 Mill Street, Occoquan, VA 22125
www.occoquanva.gov | info@occoquanva.gov | (703) 491-1918

PLANNING COMMISSION MEETING

Tuesday, September 25, 2018

7:00 PM

TOWN HALL - 314 MILL STREET

There will be a Planning Commission Meeting to Discuss the Following:

1. Citizen Comments
2. Approval of Minutes of July 24, 2018
3. Kiely Court Site Plan Revision
4. Town Council and Chair Report

Eliot Perkins
Planning Commission Chair



TOWN OF OCCOQUAN
Town Hall – 314 Mill Street, Occoquan, VA 22125
MEETING DATE: 2018-07-24

MEETING TIME: 7:00 PM

Present: Eliot Perkins, Ryan Somma,

Absent: Ann Kisling

1. Call to Order

The Planning Commission Public Hearing was called to order by Eliot Perkins, on 2018-07-24, at 7:01 p.m.

Secretary for Meeting

Ryan Somma took minutes for the meeting.

2. Approval of Minutes of May 8, 2018 & June 26, 2018

Ryan Somma moved to approve the Planning Commission meeting minutes of May 8, 2018 with the edit that “Staff Present” and “Staff Absent” remove the word “Staff” and approve the minutes of June 26, 2018 as is. Eliot Perkins seconded the motion. The motion carried by poll vote, unanimously.

3. Site Plan, 113 Poplar Lane (Pool) Approval

Ryan Somma noted that the only difference between the corrected site plan and the one previously approved was the absence of a rain garden for which the owner purchased phosphorus credits of equal or better environmental value.

Ryan Somma moved to approve the Site Plan for 113 Poplar Lane Pool. Eliot Perkins seconded the motion. The motion carried by poll vote, unanimously.

4. Recommendation of New Planning Commissioner

Planning Commission members were introduced to Jen Mathis, who brings both the perspective of an Occoquan resident and former business owner to the commission.

Ryan Somma moved to approve Jen Mathis to join the Planning Commission. Eliot Perkins seconded the motion. The motion carried by poll vote, unanimously.

5. Adjournment

The meeting was adjourned at 7:08 p.m.

Eliot Perkins
Chair, Planning Commission

Submitted by Ryan Somma, Planning Commission Secretary



TOWN OF OCCOQUAN

Circa 1734 • Chartered 1804 • Incorporated 1874
314 Mill Street • PO Box 195 • Occoquan, Virginia 22125
(703) 491-1918 • Fax (571) 398-5016 • info@occoquanva.gov
www.occoquanva.gov

TOWN COUNCIL
Earnie W. Porta, Jr., Mayor
Patrick A. Sivigny, Vice Mayor
J. Matthew Dawson
Cindy Fithian
Laurie Holloway
Eliot Perkins

**INTERIM TOWN
MANAGER**
Elizabeth A.C. Quist

STAFF REPORT TOWN OF OCCOQUAN Kiely Court

Applicant: Christopher & Jillian Kiely

Date: September 18, 2018

PART I

A. EXECUTIVE SUMMARY

The applicant proposes a plan revision (1) to change the retaining walls materials (poured in place concrete with stone from the existing onsite walls as the fascade) and retaining wall location within the development of 426 & 430 Mill Street. This staff report evaluates the proposed application as it pertains to town ordinances for conformity.

B. DESCRIPTION OF PETITION

The applicant requests approval of the Final Site Plan revision submission for the above referenced property.

B. APPLICABLE REGULATIONS

1. Chapter 46 - Site Plans
2. Chapter 54 - Subdivisions
3. Chapter 66 - Zoning

PART II

A. ANALYSIS OF EXISTING CONDITIONS

1. Site Area: +/- 5,917 SF
2. Use: Vacant
3. Zone: B-1
4. Location: The referenced property is located below the Rockledge Mansion at the western end of Mill Street.
5. Buildings/Structures: Stone retaining walls associated with adjoining properties encroach onto the site, as does the historic icebox on Mill Street.
6. Access: Topographical limitations and physical impediments (retaining walls) do not currently permit vehicular access onto the site.
7. Additional Overlay Districts: This site falls within the Old & Historic District.

B. ANALYSIS OF PROPOSED FINAL SITE PLAN

1. Use: Residential (SFD)
2. Buildings/Structures: Two single family homes are proposed, along with an entrance driveway/courtyard and retaining walls.
3. Access: Vehicular access is proposed via Mill Street.

The existing stone retaining wall along the western property boundary will be removed and portions of the stone wall along Mill Street will be removed to permit vehicular & pedestrian access. The existing stones will be used as a fascade on the face of the poured in place concrete retaining wall.

PART III

STAFF CONCLUSIONS

The proposed Final Site Plan Revision 1, having been duly reviewed and accepted by Town Staff, has been deemed consistent with the applicable provisions of the Town Code. PWCSA and VDOT have previously approved this project. It is therefore Staff's recommendation to grant **approval of the final site plan revision (1)**.

PREPARED BY: Ned A. Marshall, Zoning Administrator, September 18, 2018 *NAM*
APPROVED BY: Bruce A. Reese, Town Engineer, September 18, 2018 *BGR*

SITE PLAN

KIELY COURT

TOWN OF OCCOQUAN, VIRGINIA

GPIN: 8393-64-2894

OWNER/APPLICANT:

CHRISTOPHER AND JILLIAN KIELY
PSC 559 BOX 5503
FPO, AP 96377

SITE INFORMATION:

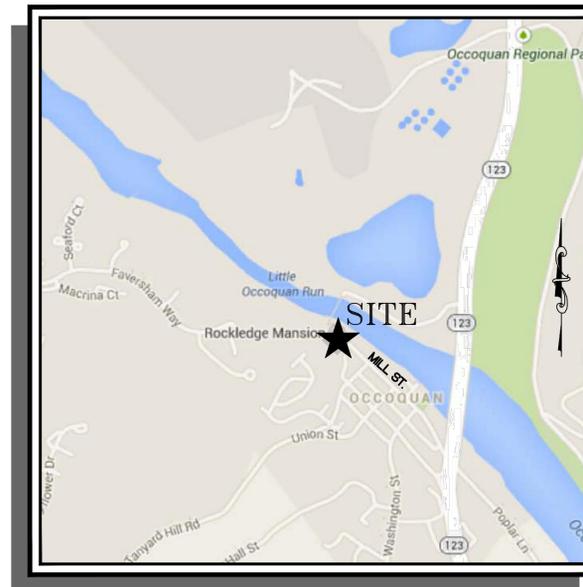
ADDRESS: 426 & 430 MILL STREET
OCCOQUAN, VA 22125

PRELIM SITE PLAN: APPROVED JUNE 3, 2014

ENGINEER:

Freeland Engineering, PC

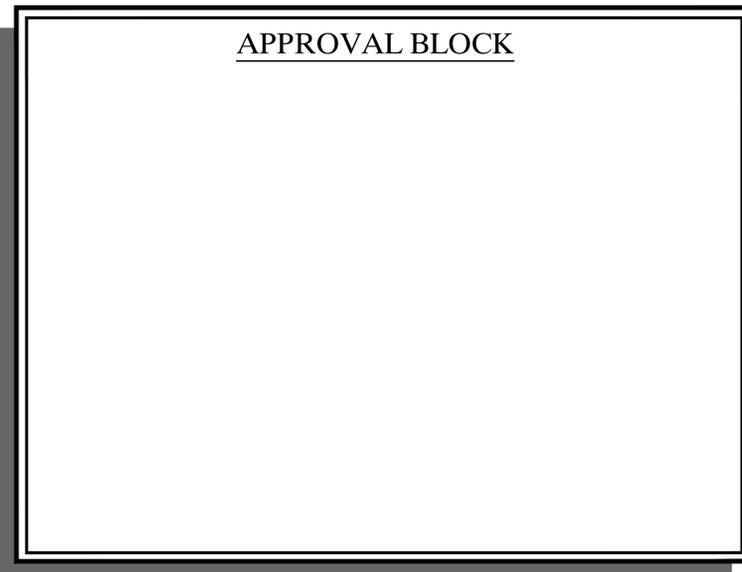
10814 Courthouse Road
Fredericksburg, Virginia 22408
Phone: 540.898.3092 Fax: 877.658.7735
www.FreelandEngineeringPC.com



VICINITY MAP
SCALE: 1"=500'



PLAN DATE: NOVEMBER 20, 2014
REVISED PLAN DATE: SEPTEMBER 12, 2018



SHEET	DESCRIPTION	LATEST REVISION
1	COVER SHEET	09-12-2018
2	DEMOLITION AND EROSION & SEDIMENT CONTROL PLAN	2-26-15
3	SITE PLAN	09-12-2018
4	GRADING PLAN	5-4-2018
5	SWM PLAN: PROFILES & QUANTITY ANALYSIS	5-4-2018
6	SWM PLAN: STORMWATER QUALITY COMPLIANCE	3-17-15
7	LANDSCAPE PLAN	09-12-2018
8	CONSTRUCTION NOTES AND DETAILS	2-26-15
9	PWCSA WATER & SEWER INFORMATION	3-17-15
10	PWCSA INSPECTOR LOG	2-26-15

EROSION & SEDIMENT CONTROL NARRATIVE:

GENERAL:
EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED IN ACCORDANCE WITH CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL LAW AND REGULATIONS (VESCLR) AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, 1992 EDITION (VESCH). IN THE EVENT OF A DISCREPANCY BETWEEN THESE PLANS AND STATE REGULATIONS, THE STATE REGULATIONS SHALL CONTROL.

EROSION WILL BE CONTROLLED ON THE SITE BY MINIMIZING THE TIME THAT THE EARTH IS DENUDE AND SUBJECT TO THE EROSION EFFECTS OF RAINFALL AND RUNOFF. CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE DISTURBANCE WITHIN THE SITE. RUNOFF IS TO BE DIVERTED AROUND THE DISTURBED AREAS AND NO DISTURBED AREA IS TO REMAIN DENUDE FOR MORE THAN 7 DAYS. ALL RUNOFF FROM DISTURBED AREAS SHALL BE DIRECTED TO SEDIMENT FILTERING DEVICES.

PROJECT DESCRIPTION:

THE PURPOSE OF THIS PROJECT IS THE CONSTRUCTION OF TWO NEW, SINGLE-FAMILY RESIDENCES ALONG WITH ASSOCIATED IMPROVEMENTS. THE SITEWORK WILL INCLUDE GRADING AND INSTALLATION OF FOUNDATIONS, RETAINING WALLS AND UTILITIES. THE LIMITS OF DISTURBANCE WILL BE APPROXIMATELY 0.14 ACRES.

EXISTING SITE CONDITIONS:

THE SITE SLOPES FROM SOUTHWEST TO NORTHEAST AND IS MOSTLY OPEN WITH GRASS AND A FEW TREES. ELEVATIONS VARY FROM 24 TO 44 FEET. RUNOFF FLOWS EAST ALONG MILL STREET TO A STORM INLET THAT DRAINS TO THE OCCOQUAN RIVER.

ADJACENT AREAS:

THE SITE IS BORDERED BY MILL STREET TO THE NORTH AND EXISTING MIXED USE BUILDINGS TO THE WEST AND EAST.

OFF-SITE LAND DISTURBANCE:

OFF-SITE LAND DISTURBANCE WILL CONSIST OF INSTALLATION OF DRIVEWAY, UTILITY AND SIDEWALK CONNECTIONS WITHIN MILL STREET R.O.W. SHOULD THE NEED ARISE FOR ADDITIONAL DISTURBANCE NOT PROPOSED WITH THIS PLAN, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY, PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF SITE BORROW OR WASTE AREAS).

SOILS:

THE PROJECT LIES IN AN AREA OF OCCOQUAN SANDY LOAN AND URBAN LAND-UDORTHENTS COMPLEX WITH SLOPES OF APPROXIMATELY 15%-20%.

CRITICAL AREAS:

MINOR AREAS OF SLOPES GREATER THAN 20% (APPROX 230 SF). IMPACT TO SLOPES WILL BE MINIMAL DUE TO FOUNDATION AND RETAINING WALL CONSTRUCTION. THE OCCOQUAN RIVER LIES APPROXIMATELY 200 FEET TO THE NORTH.

SEQUENCE OF OPERATIONS:

THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE E&S CONTROL PLANS ARE INTENDED TO PROVIDE A GENERAL PLAN FOR CONTROLLING EROSION AND SILTATION WITHIN THE PROJECT LIMITS. THE E&S CONTROL PLAN IS BASED ON FIELD CONDITIONS AT THE TIME OF PLAN DEVELOPMENT AND THE ASSUMED SEQUENCE OF CONSTRUCTION. THE CONTRACTOR, IN CONJUNCTION WITH THE PROJECT ENGINEER AND/OR ENVIRONMENTAL MONITOR, SHALL ADJUST THE LOCATION, QUANTITY AND TYPE OF EROSION AND SILTATION CONTROL ITEMS REQUIRED BASED ON THE ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION AND THE SELECTED SEQUENCE OF CONSTRUCTION.

1. PRECONSTRUCTION MEETING WITH TOWN INSPECTOR (703-670-0985) PRIOR TO CLEARING OPERATIONS.
2. INSTALL CONSTRUCTION ENTRANCE AND SILT FENCE AS SHOWN ON E&S PLAN. WIRE SUPPORTED (SUPER) SILT FENCE SHALL BE INSTALLED ALONG MILL STREET FRONTAGE.
3. DEMO EX. FEATURES AND INVESTIGATE LOCATION OF EX. UTILITIES.
4. COMMENCE CONSTRUCTION OF NEW FOUNDATIONS AND RETAINING WALL ALONG WEST PROPERTY LINE. CONSTRUCT GUARDRAIL.
5. COMMENCE BUILDING CONSTRUCTION
6. INSTALL STORM SEWER AND INLET PROTECTION.
7. INSTALL REMAINING RETAINING WALLS
8. INSTALLATION OF BRICK, CONCRETE AND ASPHALT SURFACES.
9. INSTALLATION OF MULCH AND LANDSCAPING
10. REMOVE SEDIMENT CONTROL DEVICES WITHIN 30 DAYS OF FINAL STABILIZATION OF EXPOSED SOILS (OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED) AND APPROVAL BY THE TOWN INSPECTOR.

STRUCTURAL PRACTICES:

1. CONSTRUCTION ENTRANCE - VA ESC STD. 3.02: A STABILIZED STONE PAD WITH A FILTER FABRIC UNDERLINER LOCATED AT POINTS OF VEHICULAR INFRESS AND EGRESS ON A CONSTRUCTION SITE
2. SILT FENCE - VA ESC STD. 3.05: A TEMPORARY SEDIMENT BARRIER CONSISTING OF A SYNTHETIC FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED.
3. SILT FENCE DROP INLET PROTECTION - VA ESC STD. 3.07-1: A SEDIMENT FILTER AROUND A STORM DRAIN DROP INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM PRIOR TO STABILIZATION OF DISTURBED AREAS.
4. ALL EROSION & SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE 1992 3rd EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. FOR DETAILS NOT SHOWN, REFERENCE IS MADE TO THOSE STANDARDS.

EROSION AND SEDIMENT CONTROL MEASURES:

EROSION WILL BE CONTROLLED ON THE SITE BY MINIMIZING THE TIME THAT THE EARTH IS DENUDE AND SUBJECT TO THE EROSION EFFECTS OF RAINFALL AND RUNOFF. CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE DISTURBANCE WITHIN THE SITE. TO THE EXTENT PRACTICAL, RUNOFF IS TO BE DIVERTED AROUND THE DISTURBED AREAS AND NO DISTURBED AREA IS TO REMAIN DENUDE FOR MORE THAN 7 DAYS. ALL RUNOFF FROM DISTURBED AREAS SHALL BE DIRECTED TO SEDIMENT FILTERING DEVICES.

WITHIN THE LIMITS OF CONSTRUCTION, SEDIMENT SHALL BE CONTROLLED BY SILT FENCE AND SILT FENCE INLET PROTECTION.

STOCKPILES:

NO STOCKPILES WILL BE MAINTAINED ON SITE.

PERMANENT STABILIZATION:

ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED WITH MULCH, STONE AND LANDSCAPING.

STORMWATER RUNOFF CONSIDERATIONS:

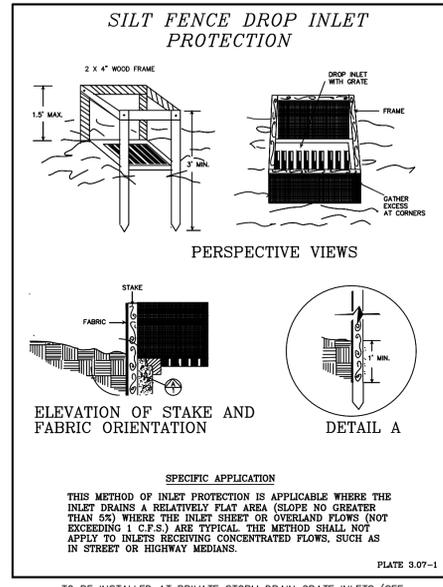
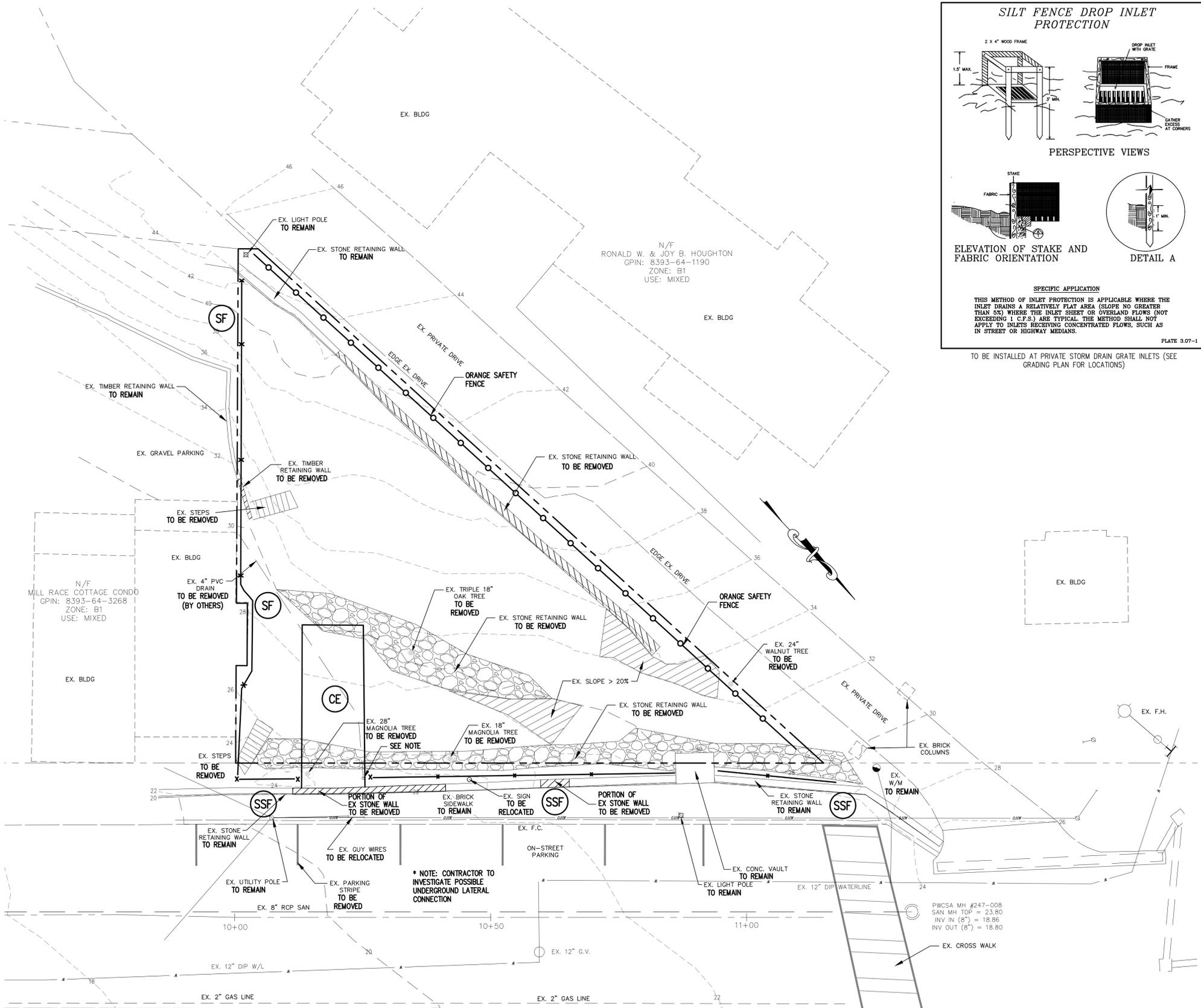
DUE TO THE PROXIMITY TO THE OCCOQUAN RIVER, STORMWATER QUANTITY CONTROL IS NOT REQUIRED. STORMWATER QUALITY CONTROL WILL BE PROVIDED THROUGH THE PURCHASE OF NUTRIENT CREDITS (SEE SHEET 6). BMP CALCULATIONS ARE SHOWN ON SHEET 6.

MAINTENANCE:

ALL MEASURES ARE TO BE INSPECTED DAILY, AND AFTER EACH RAINFALL, BY THE SITE SUPERINTENDENT. ANY DAMAGED MEASURES SHALL BE REPAIRED BY THE CLOSE OF THE DAY. ADDITIONAL MAINTENANCE/CLEANOUT SHALL BE AS FOLLOWS:
SILT FENCE - SEDIMENT SHALL BE REMOVED ONCE DEPTH REACHES HALF OF THE HEIGHT OF BARRIER

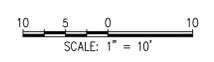
VEGETATIVE PRACTICES

TEMPORARY SEEDING (TS) - VA ESC STD 3.31
WHERE EXPOSED SOIL SURFACES WILL NOT BE FINISH GRADED FOR A PERIOD LONGER THAN 30 DAYS (SEE MS-1 AND MS-2). A PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO AREAS THAT WILL BE LEFT DORMANT FOR A PERIOD OF MORE THAN ONE YEAR. AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION WILL BE RESEDED AS SOON AS SUCH AREAS ARE IDENTIFIED.



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10. REMOVE SEDIMENT CONTROL DEVICES WITHIN 30 DAYS OF FINAL STABILIZATION OF EXPOSED SOILS (OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED) AND APPROVAL BY THE TOWN INSPECTOR.

REVISION	ADDRESS COMMENTS
DATE	2-26-15
<p>Freeland Engineering, PC rfreeland@freelandengineeringPC.com 10814 Courthouse Road Fredericksburg, Virginia 22408 Phone: 540.898.3092 Fax: 877.658.7735 www.FreelandEngineeringPC.com</p>	
<p>DEMOLITION AND EROSION CONTROL PLAN</p> <p>KIELY COURT</p> <p>426 & 430 MILL STREET</p> <p>TOWN OF OCCOQUAN, VIRGINIA</p>	
<p>County Plan Number:</p>	
Drawn By:	SLP
Designed By:	TMP
Checked By:	RPF
Date:	11/20/2014
Scale:	AS NOTED
Sheet:	2 of 10
PROJECT #:	2438



N/F
OBC LLC
GPIN: 8393-65-4100
ZONE: B1
USE: COMMERCIAL

SITE DATA

OWNER/APPLICANT: CHRISTOPHER AND JILLIAN KIELY
 ADDRESS: PSC 559 BOX 5503
 FPO, AP 96377

PLAN PREPARER: FREELAND ENGINEERING, PC
 ADDRESS: 10814 COURTHOUSE ROAD
 FREDERICKSBURG, VA 22408
 PHONE: 540-898-3092

SITE ADDRESS: 426 & 430 MILL STREET, OCCOQUAN, VA

G.P.I.N.: 8393-64-2894
 PARCEL AREA: 0.136 AC = 5,917 SF
 INSTRUMENT NO.: 20130628066599
 ZONING DISTRICT: B1
 SETBACKS: FRONT: 5' SIDE: 0' REAR: 0'
 BUILDING HEIGHT: 35' MAX. (SEE CALCULATIONS ON SHEET 8)
 OVERLAY DISTRICT: CHESAPEAKE BAY PRESERVATION AREA
 CURRENT USE: VACANT
 PROPOSED USE: SINGLE-FAMILY RESIDENTIAL

HOUSE #1: GROUND FLOOR AREA = 939 S.F.
 BEDROOMS: 2
 HOUSE #2: GROUND FLOOR AREA = 931 S.F.
 BEDROOMS: 3

PARKING REQUIRED: 2 SPACES (FIRST BR), PLUS 1 SPACE PER ADD'L BR
 3-BEDROOM DWELLING (HOUSE #2) = 2 + 1 + 1 = 4 PARKING SPACES
 (2 PROVIDED IN GARAGE)
 2-BEDROOM DWELLING (HOUSE #1) = 2 + 1 = 3 PARKING SPACES
 (3 PROVIDED IN GARAGE)

PARKING PROVIDED: 3 SPACES PER 2 BR UNIT AND 4 SPACES PER 3 BR UNIT

FLOODPLAIN ON SITE: N FIRM # 51153C 0217D ZONE: 'X'
 WETLANDS ON SITE: N SOURCE: NMI PERMIT REQUIRED: N
 RPA ON SITE: N

LOT COVERAGE RATIO: STRUCTURE AREA = 1,870 = 31.6%
 LOT AREA 5,917

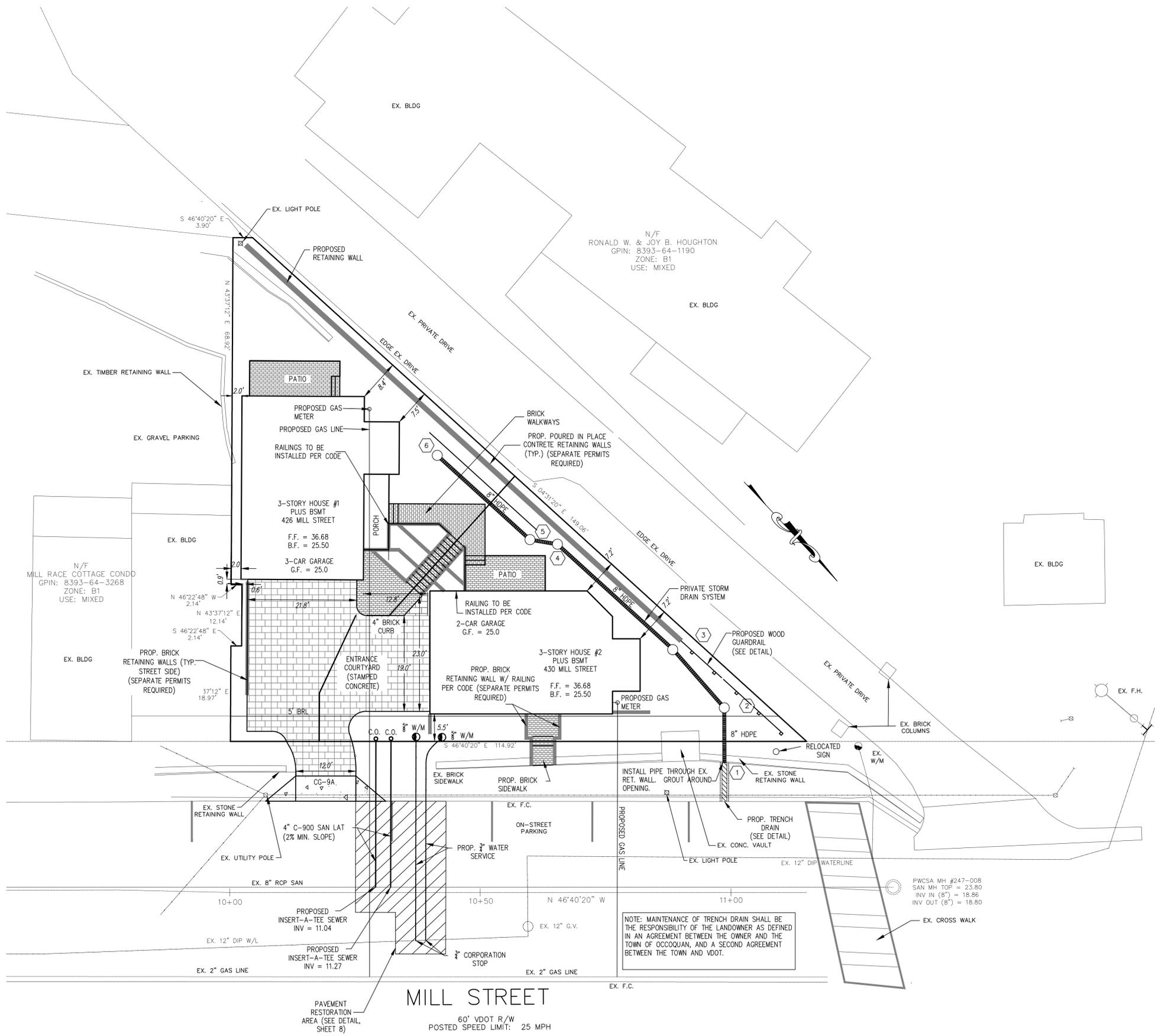
IMPERVIOUS SURFACES: STRUCTURES = 1,870 SF
 DRIVEWAY, S/W, ETC. = 1,395 SF
 TOTAL IMP. AREA = 3,265 SF

IMPERVIOUS SURFACE RATIO: IMPERVIOUS AREA = 3,265 = 55.2%
 SITE AREA 5,917

DISTURBED AREA: 0.14 AC = 5,917 SF

GENERAL NOTES

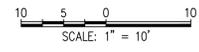
- NO TITLE REPORT FURNISHED
- EASEMENTS NOT SHOWN MAY EXIST
- CONTRACTOR SHALL CONTACT MISS UTILITY AND LOCAL UTILITIES PRIOR TO START OF CONSTRUCTION.
- BOUNDARY DERIVED FROM PLAT BY KEPHART AND COMPANY WHICH IS RECORDED AT DEED BOOK 2882, PAGE 342 OF THE PRINCE WILLIAM COUNTY LAND RECORDS.
- TOPOGRAPHIC DATA BASED ON FIELD SURVEY PERFORMED BY THIS FIRM. DATUM APPROXIMATED FROM FIELD LOCATED SANITARY SEWER MANHOLES. CONTOUR INTERVAL IS TWO FEET.
- CONTRACTOR SHALL ENSURE THAT ALL NECESSARY FEDERAL, STATE AND LOCAL PERMITS HAVE BEEN OBTAINED PRIOR TO START OF CONSTRUCTION.



MILL STREET

60' VDOT R/W
 POSTED SPEED LIMIT: 25 MPH

N/F
 OBC LLC
 G.P.I.N.: 8393-65-4100
 ZONE: B1
 USE: COMMERCIAL



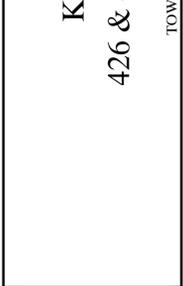
REVISION	DATE	ADDRESS COMMENTS
2-26-15		ADDRESS COMMENTS
3-17-15		ADDRESS COMMENTS
4-9-15		ADDRESS COMMENTS
04/05/2018		BUILDING DIMS
5/19/2018		REVISIONS

DATE	REVISION
2-26-15	ADDRESS COMMENTS
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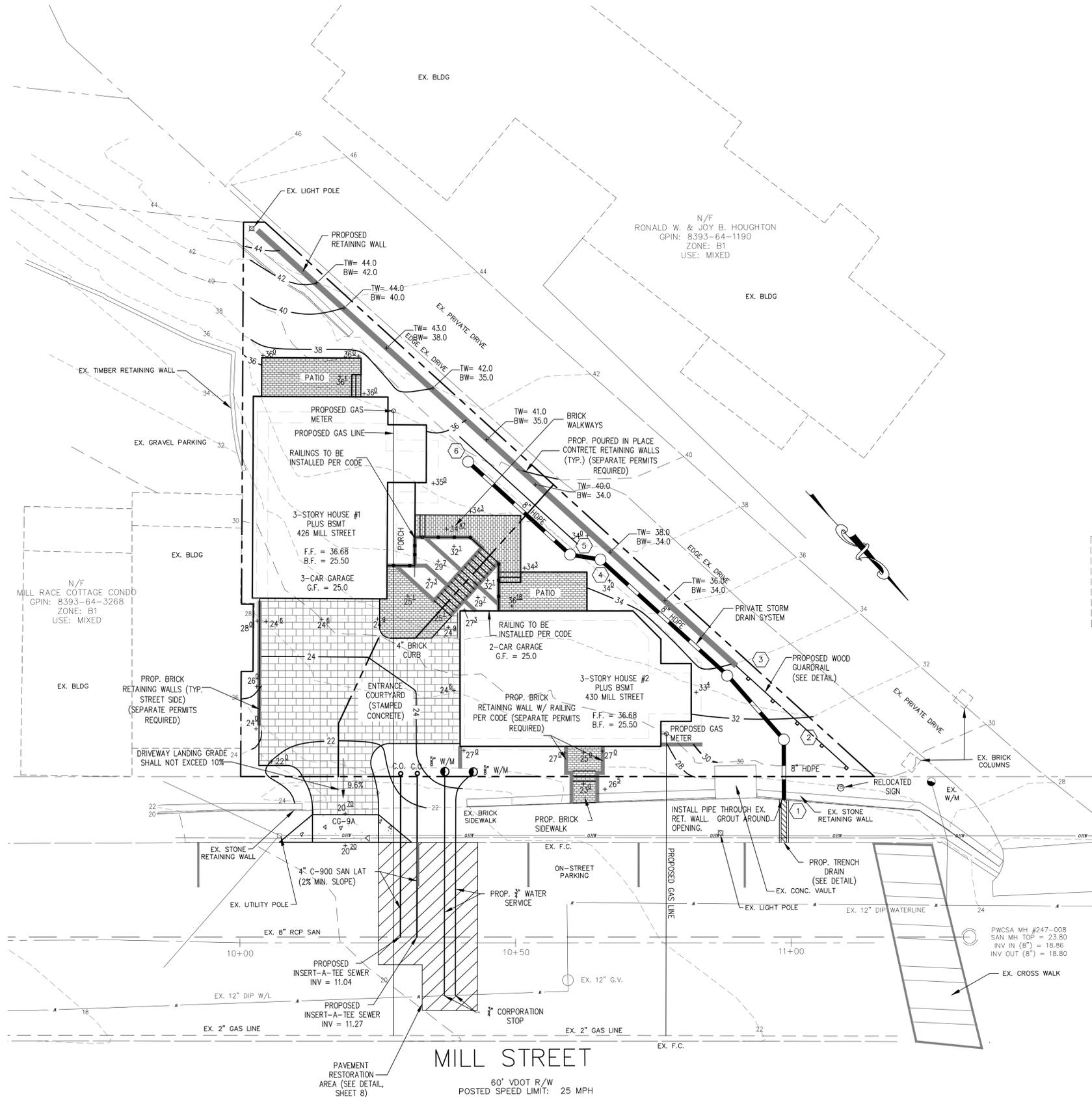
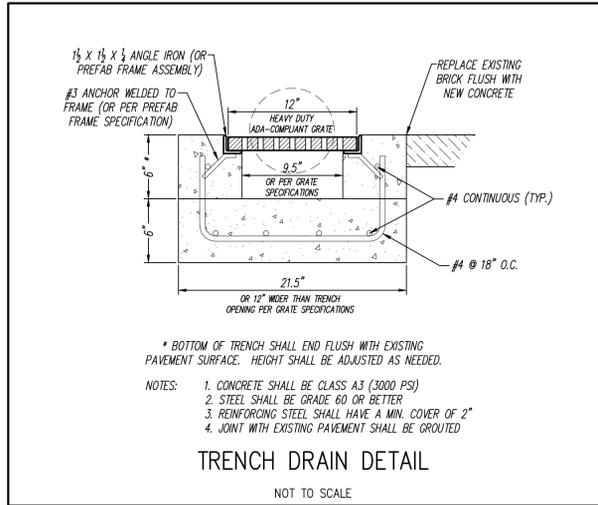


SITE PLAN
KIELY COURT
426 & 430 MILL STREET
 TOWN OF OCCOQUAN, VIRGINIA

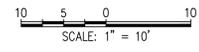


County Plan Number: _____

Drawn By:	RPF
Designed By:	TMP
Checked By:	RPF
Date:	5/18/2018
Scale:	AS NOTED
Sheet:	3 of 10
PROJECT #:	2438



N/F
OBC LLC
GPIN: 8393-65-4100
ZONE: B1
USE: COMMERCIAL

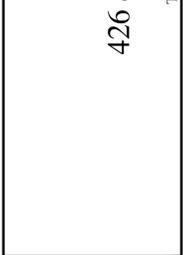


DATE	REVISION
2-26-15	ADDRESS COMMENTS
3-17-15	ADDRESS COMMENTS
9-12-2018	ADDRESS COMMENTS

Freeland Engineering, PC
rfreeland@freelandengineeringpc.com
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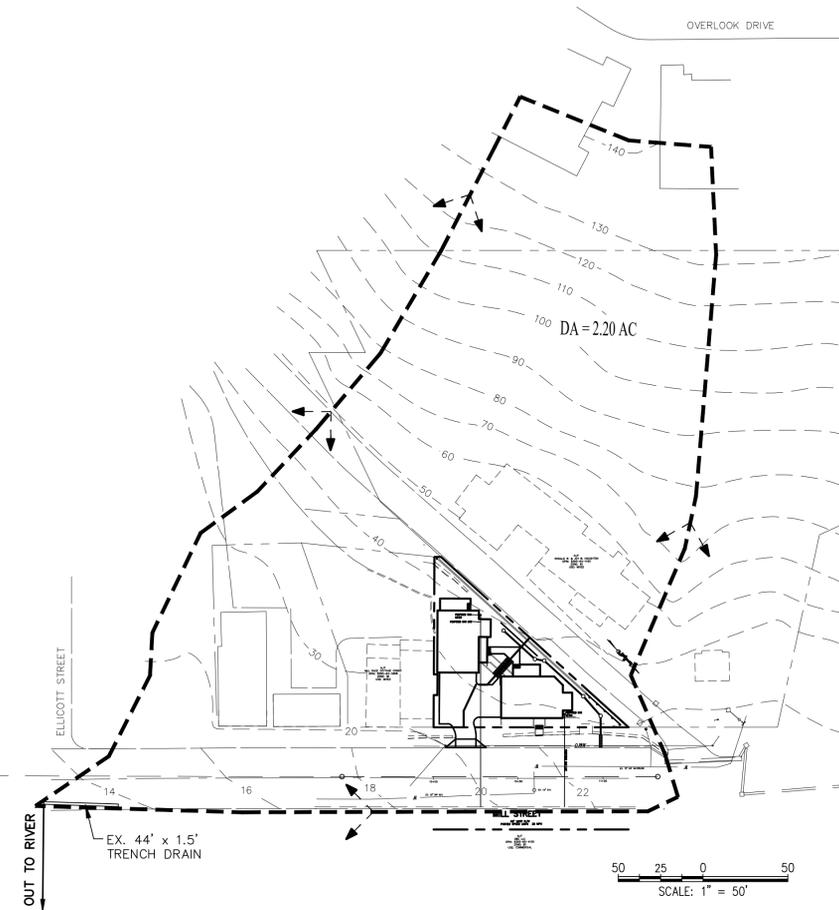


GRADING PLAN
KIELY COURT
426 & 430 MILL STREET
TOWN OF OCCOQUAN, VIRGINIA



County Plan Number:

Drawn By:	SLP
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Sheet:	4 of 10
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OUTFALL ANALYSIS

DRAINAGE AREA TO EX DRAIN: 2.20 AC
 EX. IMPERVIOUS AREA: 38,194 SF = 0.88 AC.
 PROP. IMPERVIOUS AREA: 41,459 SF = 0.95 AC.
 "C" FACTOR: PRE-DEV: 0.54 POST-DEV: 0.56
 Tc: 10 MIN.
 i₂: 4.60
 i₁₀: 5.92

PRE-DEV RUNOFF: Q=CIA Q=CIA
 Q=0.54x4.60x2.20 Q=0.54x5.92x2.20
 Q=5.46 CFS Q=7.03 CFS

POST-DEV RUNOFF: Q=CIA Q=CIA
 Q=0.56x4.60x2.20 Q=0.56x5.92x2.20
 Q=5.67 CFS Q=7.29 CFS

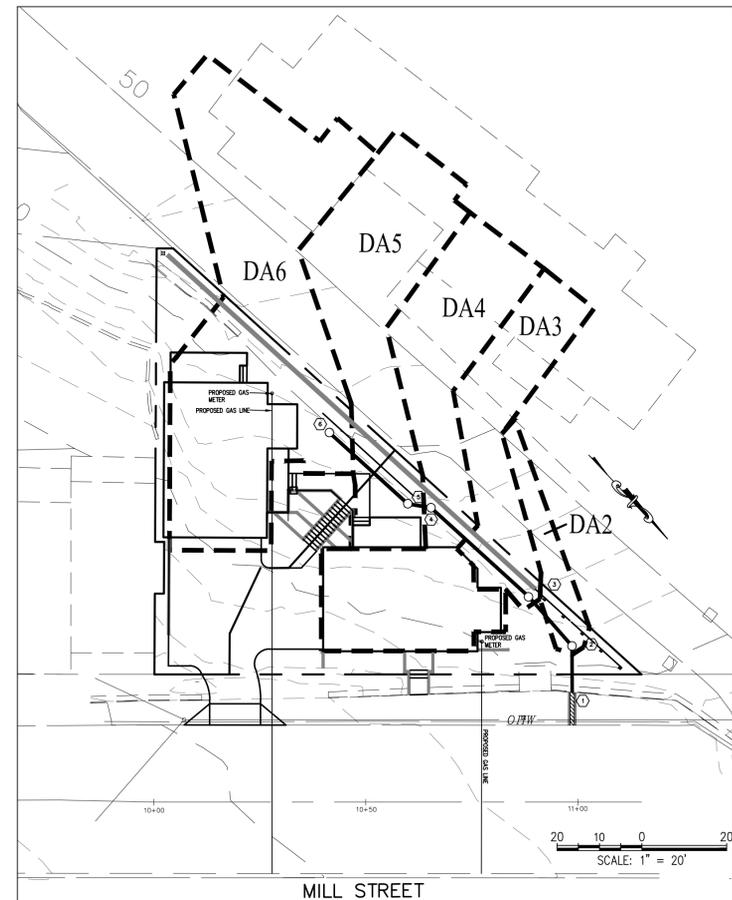
INCREASE: 0.21 CFS 0.26 CFS

ALL PROPERTIES ON SOUTH SIDE OF MILL STREET RELEASE STORM RUNOFF DIRECTLY TO THE STREET. RUNOFF FLOWS TO THE NORTH SIDE OF MILL STREET, THEN ALONG CURB TO EX. 44' LONG GRATE INLET AT ELLCOTT STREET (APPROXIMATELY 200' FROM THE SITE). THE SPREAD ASSOCIATED WITH THE RUNOFF ALONG THE CURB INCREASES BY ONLY 0.09' AND REMAINS WITHIN THE PARKING LANE. THE SPREAD DUE TO THE MINOR INCREASE IN RUNOFF DOES NOT IMPACT THE TRAVELWAY OF MILL STREET.

SPREAD CALCULATIONS

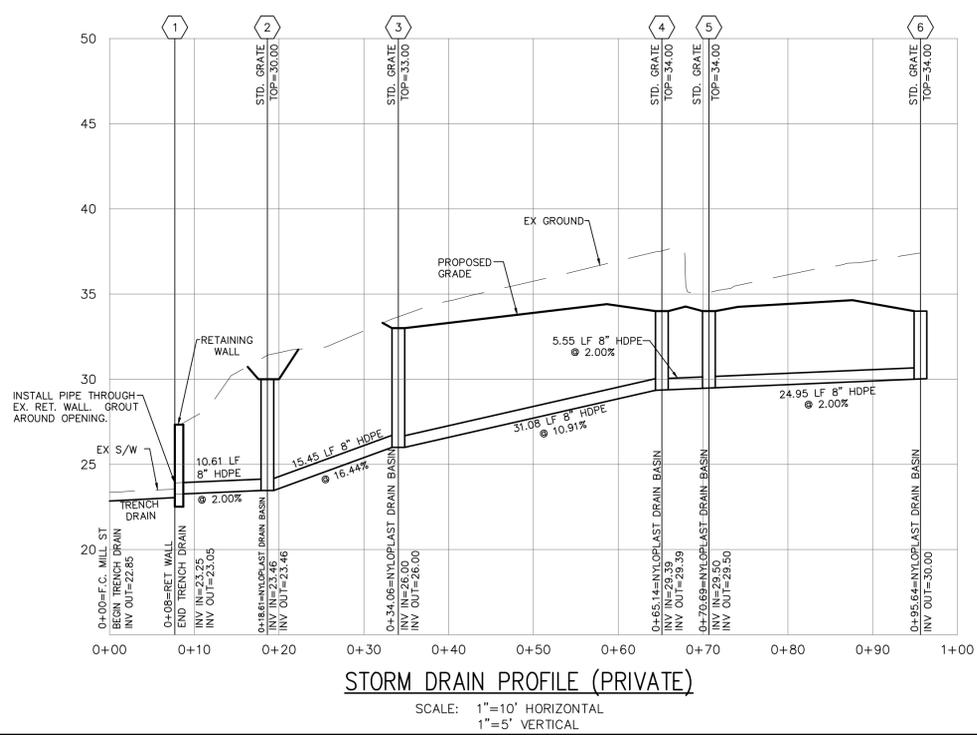
Drain Area (Ac.)	C	CA	CA I	in/hr	Q INCR cfs	Q Carry-Over cfs	QT Gutter Flow cfs	S Gutter Slope	Sx Cross Slope	T (Spread)
2.20	0.54	1.19		4.6	5.46		5.46	0.0300	0.0420	6.91
2.20	0.56	1.23		4.6	5.67		5.67	0.0300	0.0420	7.00

PRE-DEV
POST-DEV



STORM SEWER CALCULATIONS

FROM POINT	TO POINT	DRAIN AREA "A" ACRES	RUNOFF COEFF. C	CA INCR.	INLET TIME MINUTES	RAIN FALL IN./HR.	RUNOFF Q, cfs INCR.	RUNOFF Q, cfs ACCUMULATED	INVERT ELEVATIONS UPPER END	INVERT ELEVATIONS LOWER END	LENGTH FT.	SLOPE FT/FT	DIA. IN.	CAPACITY C.F.S.	VELOCITY F.P.S.	FLOW TIME SEC.
6	5	0.08	0.74	0.08	5	7.27	0.43	0.43	30.00	29.50	25	0.0200	8.00	1.71	4.09	6.10
5	4	0.05	0.80	0.03	5	7.27	0.20	0.63	29.50	28.39	6	0.0200	8.00	1.71	4.53	1.22
4	3	0.05	0.80	0.04	5	7.27	0.28	0.91	28.39	28.00	6	0.1091	8.00	3.90	9.28	3.35
3	2	0.03	0.68	0.02	5	7.27	0.12	1.03	28.00	23.46	15	0.1844	8.00	4.90	11.15	1.39
2	1	0.01	0.80	0.01	5	7.27	0.06	1.09	23.46	23.25	11	0.0200	15.00	9.13	5.02	2.11



STORM DRAIN PROFILE (PRIVATE)

SCALE: 1"=10' HORIZONTAL
1"=5' VERTICAL

STORMWATER NARRATIVE

PROJECT DETAILS

OWNER: CHRIS AND JILLIAN KIELY
 SITE ADDRESS: 426 & 430 MILL STREET OCCOQUAN, VA
 GPIN: 8393-64-2894

DESCRIPTION OF PROJECT

THIS PROJECT INVOLVES THE CONSTRUCTION OF TWO RESIDENCES WITH ASSOCIATED UTILITIES, PARKING AND INFRASTRUCTURE ON A 0.136 ACRE PARCEL LOCATED ON THE SOUTH SIDE OF MILL STREET IN THE TOWN OF OCCOQUAN.

BACKGROUND DATA

THE EXISTING CONDITION OF THE SITE IS PRIMARILY GRASSLAND WITH SOME SHRUBS AND A FEW MATURE TREES. THE PROPERTY SLOPES FROM EAST TO WEST (TOWARD MILL STREET). AS WITH ALL PROPERTIES ALONG MILL STREET, RUNOFF DRAINS TO THE STREET WHERE IT IS COLLECTED IN STORM DRAIN INLETS AND PIPED TO THE OCCOQUAN RIVER. THE SITE SOILS ARE OCCOQUAN SANDY LOAM (HSG B) AND URBAN LAND-UDORTMENTS (HSG D).

AFTER DEVELOPMENT, ALL PERVIOUS SURFACES ARE PLANNED TO BE STABILIZED WITH MULCH AND LANDSCAPING.

STORMWATER QUANTITY

THE DRAINAGE BASIN OF THE OCCOQUAN RIVER AT THIS POINT HAS SUBSTANTIALLY MORE THAN 100 TIMES THE AREA OF THE SUBJECT PARCEL (100 X 0.136 = 13.6 ACRES), THEREFORE, DETENTION OF STORMWATER RUNOFF IS NEITHER REQUIRED NOR DESIRABLE.

RUNOFF LEAVING THE SITE FLOWS ALONG THE NORTH SIDE OF MILL STREET APPROXIMATELY 200 FEET TO A 44' LONG TRENCH DRAIN WHERE IT IS COLLECTED AND PIPED TO THE RIVER. AN ANALYSIS OF THE CHANGE IN CURB SPREAD IS INCLUDED ON THE PLAN. THE SPREAD ONLY INCREASES BY ONE INCH AND THE FLOW REMAINS WITHIN THE WIDTH OF THE PARKING SPACES - THERE IS NO IMPACT ON THE TRAVELWAY.

DRAINAGE AREA MAPS AND CALCULATIONS ARE LOCATED ON SHEET 5 OF THE SITE PLAN.

STORMWATER QUALITY

STORMWATER QUALITY IS ANALYZED ON SHEET 6. MAPPING OF SOILS AND LAND COVER ARE PROVIDED, AS WELL AS THE VRRM SPREADSHEETS.

THE CALCULATIONS RESULT IN A REQUIRED REMOVAL OF 0.14 POUNDS OF PHOSPHOROUS PER YEAR.

THIS REQUIREMENT WILL BE MET THROUGH THE PURCHASE OF NUTRIENT CREDITS. A CREDIT COMMITMENT LETTER IS INCLUDED ON SHEET 6.

REVISION
ADDRESS COMMENTS
DATE
2-26-15
3-17-15

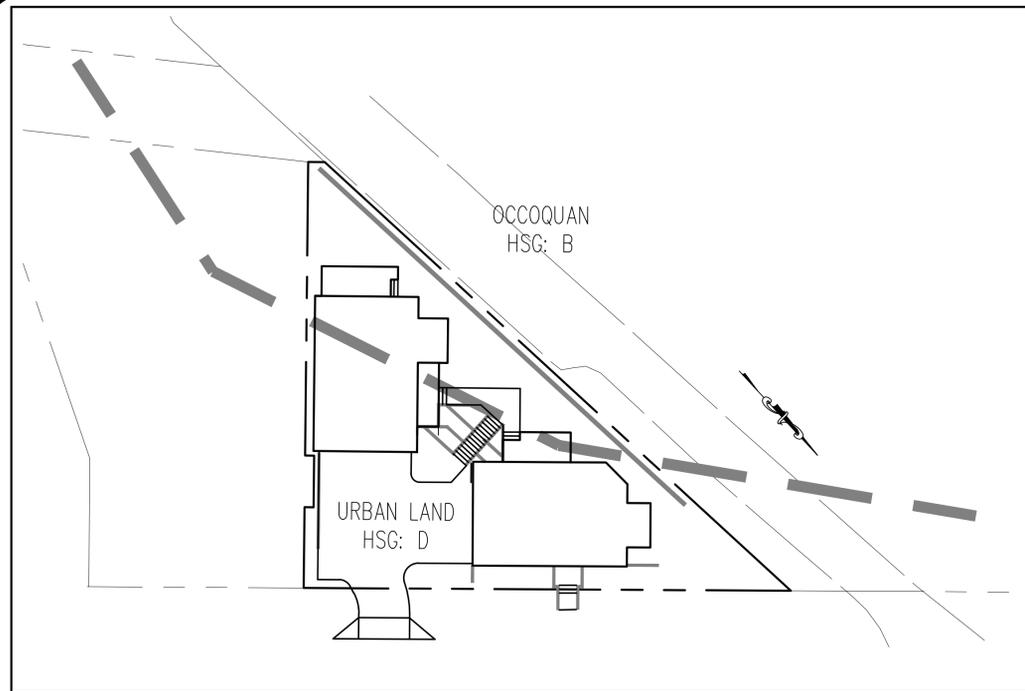
Freeland Engineering, PC
 rfreeland@freelandengineeringPC.com
 10814 Courthouse Road
 Fredericksburg, Virginia 22408
 Phone: 540.898.3092
 Fax: 877.658.7735
 www.FreelandEngineeringPC.com

SWM PLAN - PROFILES & QUANTITY ANALYSIS

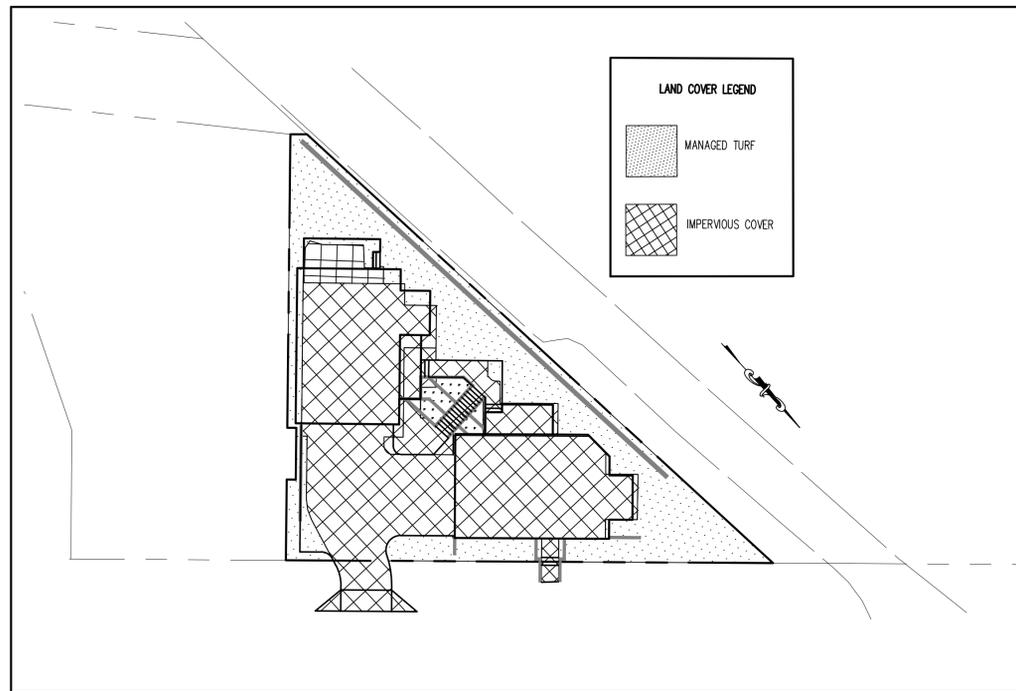
KIELY COURT
 426 & 430 MILL STREET
 TOWN OF OCCOQUAN, VIRGINIA

SEAL

County Plan Number:
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 Designed By: TMP
 Checked By: RPF
 Date: 5/18/2018
 Scale: AS NOTED
 Sheet: 5 of 10
 PROJECT #: 2438



SOILS MAP
SCALE: 1" = 20'



LANDCOVER PLAN
SCALE: 1" = 20'

DEQ INFORMATION

1. LAND DISTURBANCE = 0.14 AC
2. BASED ON THE SOILS AND LAND COVER INFORMATION SHOWN HEREIN, AND THE RESULTS OF THE DEQ VRRM-SPREADSHEET, THE IMPLEMENTATION OF WATER QUALITY BMP'S IS REQUIRED FOR THIS PROJECT. THE FOLLOWING SHALL BE UTILIZED TO MEET THE POLLUTANT REMOVAL REQUIREMENTS:
 - a. PURCHASE OF NUTRIENT CREDITS
3. THE DESIGN OF THIS SITE CONFORMS TO THE CHANNEL ADEQUACY AND FLOOD PROTECTION REQUIREMENTS OF DEQ. SEE SHEET 5.
4. A SWPPP HAS BEEN SUBMITTED TO THE VSMP AUTHORITY



Freeland Engineering, PC
rfreeland@freelandengineeringpc.com
10814 Courthouse Road
Fredericksburg, Virginia 22408
Phone: 540.898.3092
Fax: 877.658.7735
www.freelandengineeringpc.com

SWM PLAN - STORMWATER QUALITY COMPLIANCE
KIELY COURT
426 & 430 MILL STREET
TOWN OF OCCOQUAN, VIRGINIA

VRRM COMPLIANCE SPREADSHEET

Virginia Runoff Reduction Method New Development Worksheet - v2.8 - June 2014
To be used w/ DRAFT 2013 BMP Standards and Specifications

Site Data
Project Name: KIELY COURT
Date: 03/17/15

data input cells	
calculation cells	
constant values	

1. 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

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	0.03	0.00	0.03	0.06
Impervious Cover (acres)	0.00	0.02	0.00	0.06	0.08
				Total	0.14

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

Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.06
Weighted Rv(turf)	0.23
% Managed Turf	45%
Impervious Cover (acres)	0.08
Rv(imperious)	0.95
% Imperious	55%
Total Site Area (acres)	0.14
Site Rv	0.63
Post-Development Treatment Volume (acre-ft)	0.01
Post-Development Treatment Volume (cubic feet)	309
Post-Development Load (TP) (lb/yr)	0.13
Post-Development Load (TN) (lb/yr)	1.39
Total Load (TP) Reduction Required (lb/yr)	0.14

TP REDUCTION REQ'D = 0.14 LB/YR

NUTRIENT CREDIT AVAILABILITY LETTER



"Tomorrow's Natural Resources Today"

Chesapeake Bay Nutrient Land Trust, LLC.

January 23, 2015

Todd Philipp, PE
Freeland Engineering, PC
10814 Courthouse Road
Fredericksburg, VA 22408

RE: CBNLT/Elk Run - Nutrient Credit Availability
Chesapeake Bay Nutrient Land Trust, LLC

Project Reference: 430 Mill Street

Attention: Mr. Philipp

This letter is to confirm the availability of authorized Nutrient Credits at our Elk Run facility, which is registered with the Virginia Department of Environmental Quality (DEQ) under Certification # Potomac-003. These Nutrient Credits are generated and managed under the terms of the Banking Instrument known as the Elk Run Nutrient Reduction Implementation Plan (NRIP). The NRIP was authorized by the DEQ and the Virginia Department of Conservation and Recreation (DCR) on May 3, 2013.

The Elk Run project has been authorized to provide Nutrient Credits for use in the Potomac River watershed. These Credits are transferable to those entities regulated under DEQ's Stormwater Management Program in accordance with VA Code § 62.1-44.15-35. Currently our Elk Run facility has 45.60 pounds of Phosphorus Credits available for transfer.

If we can provide further assistance please feel free to contact our office.

Sincerely,

Chesapeake Bay Nutrient Land Trust, LLC

By Its Manager
EarthSource Solutions, Inc.

Casey J. Jensen

Casey J. Jensen
Sr. Project Manager / GIS Analyst



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PROJECT #: 2438

LANDSCAPE LEGEND



ACER GINNALA (AMUR MAPLE)
HEIGHT: 6'-8' QUANTITY: 1



PRUNUS x INCAM 'OKAME' (OKAME CHERRY)
HEIGHT: 5'-6' QUANTITY: 2



ORNAMENTAL GRASS OR MEDIUM SHRUB AT
OWNER'S DISCRETION



SMALL SHRUB OR FLOWER AT
OWNER'S DISCRETION



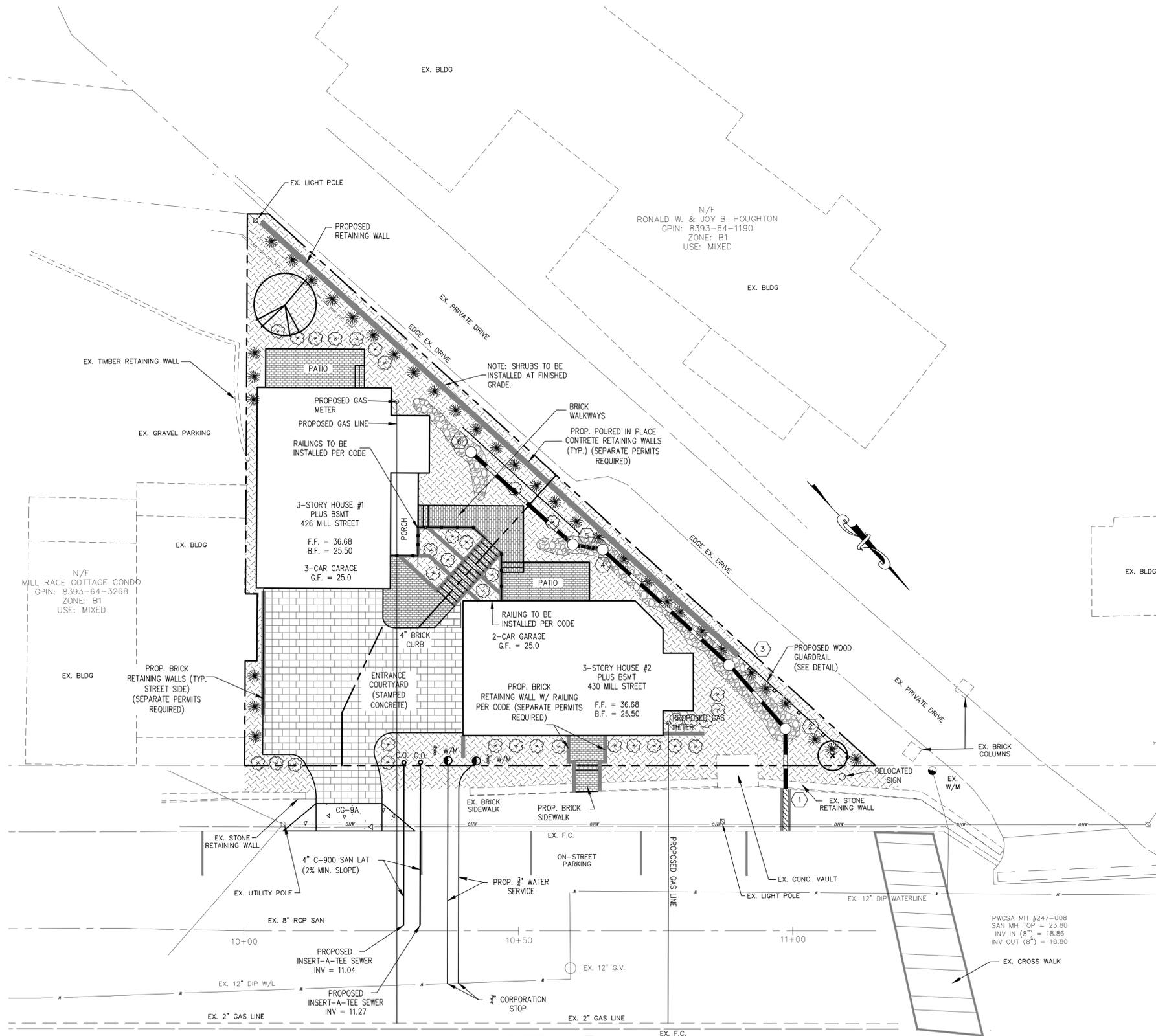
ALL UNPAVED AREAS TO BE COVERED
WITH WEED-BARRIER FABRIC AND 4"
HARDWOOD MULCH



RIVER STONE

LANDSCAPING REQUIREMENTS

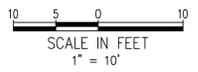
- PLANTS SHALL BE SELECTED TO CONFORM TO THE AVAILABLE PLANTING AREA, LIGHT AND SOIL CONDITIONS, AND PLANT SPACING, BASED ON NURSERY SPECIFICATIONS.
- ALL PLANTS SHALL BE NURSERY GROWN AND SHALL BE HARDY UNDER CLIMATE CONDITIONS IN THE LOCALITY OF THE PROJECT.
- PLANT DIMENSIONS SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE STANDARDIZED LANDSCAPE SPECIFICATIONS FOR THE COMMONWEALTH OF VIRGINIA, WHICH REFERENCES THE AMERICAN STANDARD FOR NURSERY STOCK (ASNS).
- BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH AND SHALL BE PRUNED, STORED, AND DUG IN ACCORDANCE WITH CURRENT ASNS STANDARDS. NO BALLED AND BURLAPPED PLANTS SHALL BE PLANTED IF THE BALL IS EITHER CRACKED OR BROKEN DURING THE PROCESS OF PLANTING.
- ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, WELL ROOTED, AND FREE FROM DISEASE AND INSECT INFESTATION. ANY TREE WITH WEAK, THIN TRUNKS NOT CAPABLE OF SUPPORTING ITSELF WHEN IN THE OPEN WILL NOT BE ACCEPTABLE. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION SHALL CONFORM TO DIMENSIONS AS SHOWN ON THE LANDSCAPE PLAN. LARGER PLANTS OF EQUAL QUALITY MAY BE ACCEPTED.
- PLANTING SOIL SHALL BE THOROUGHLY MIXED, CONTAINING 60% AMENDED SOIL AND 40% OF THE EXISTING TOPSOIL. AMENDED SOIL MIX SHALL CONSIST OF (5) PARTS PROCESSED TOPSOIL, (3) PARTS HUMUS, (1) PART STERILIZED COW MANURE, (1) PART SAND, WITH ADDED FERTILIZER, COTTON SEED MEAL AND LIME AS RECOMMENDED BY LABORATORY TESTING.
- MULCH SHALL BE APPLIED IMMEDIATELY AFTER PLANTING OPERATIONS.
- IN GENERAL, SET PLANTS AT SAME RELATION TO FINISHED GRADE AS THE BORE TO THE GROUND FROM WHICH THEY WERE DUG. PREPARE PLANTING PITS AS SPECIFIED AND AS SHOWN ON THE LANDSCAPE PLAN, PRIOR TO INSERTING PLANTS. USE TOPSOIL MIXTURE TO BACKFILL APPROXIMATELY 2/3 FULL. WATER THOROUGHLY BEFORE INSTALLING REMAINDER OF THE SOIL TO THE TOP OF THE PIT. SET TREES PLUMB AND BRACE RIGIDLY IN POSITION UNTIL THE PLANTING SOIL HAS BEEN TAMPED SOLIDLY AROUND THE BALL AND THE ROOTS.
- GUYING AND STAKING SHALL BE REQUIRED FOR ALL TREES AND MUST BE COMPLETED WITHIN 24 HOURS AFTER PLANTING.
- MAINTENANCE OF NEW PLANTS SHALL CONSIST OF PRUNING, WATERING, CULTIVATING, WEEDING, MULCHING, TIGHTENING, AND RESETTING PLANTS TO PROPER GRADES OR UPRIGHT POSITION. RESTORATION OF THE PLANTING SAUCER AND FURNISHING AND APPLYING SUCH SPRAYS ARE NECESSARY TO KEEP THE PLANT FREE FROM DISEASE AND INSECT INFESTATION. MAINTENANCE SHALL BE PROVIDED UNTIL TIME OF PROVISIONAL ACCEPTANCE.
- ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF PROVISIONAL ACCEPTANCE. THE CONTRACTOR SHALL PROVIDE, IN WRITING, SPECIFIC MAINTENANCE RECOMMENDATIONS TO THE OWNER FOR ALL PLANTS TO REMAIN IN GOOD, HEALTHY, AND FLOURISHING CONDITION.
- FOR PLANTS THAT HAVE BEEN PROPERLY MAINTAINED BY THE OWNER DURING THE ONE-YEAR GUARANTEE PERIOD, THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, ALL DEAD OR SEVERELY DAMAGED PLANTS AS DETERMINED BY A CERTIFIED AGENT. THE REPLACEMENT PLANTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL ROOTED, FREE FROM DISEASE AND INSECT INFESTATION, AND SHALL CLOSELY MATCH SURROUNDING PLANTS OF THE SAME SIZE AND SPECIES. REQUIREMENTS SHALL BE SUBJECT TO ALL REQUIREMENTS STATED IN THIS SPECIFICATION.
- THE GUARANTEE OF ALL REPLACEMENT PLANTS SHALL EXTEND FOR AN ADDITIONAL PERIOD OF ONE YEAR FROM THE DATE OF THEIR ACCEPTANCE AFTER REPLACEMENT. IN THE EVENT THAT A REPLACEMENT IS NOT ACCEPTABLE DURING OR AT THE END OF THE SAID EXTENDED GUARANTEE PERIOD, THE OWNER MAY ELECT A SUBSTITUTION OR A CREDIT FOR EACH ITEM.



MILL STREET

60' VDOT R/W
POSTED SPEED LIMIT: 25 MPH

N/F
OBC LLC
GPN: 8393-65-4100
ZONE: B1
USE: COMMERCIAL

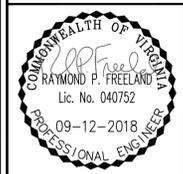


REVISION	DATE	ADDRESS	COMMENTS
2-26-15	2-26-15		
5/18/2018	5/18/2018		
9/12/2018	9/12/2018		

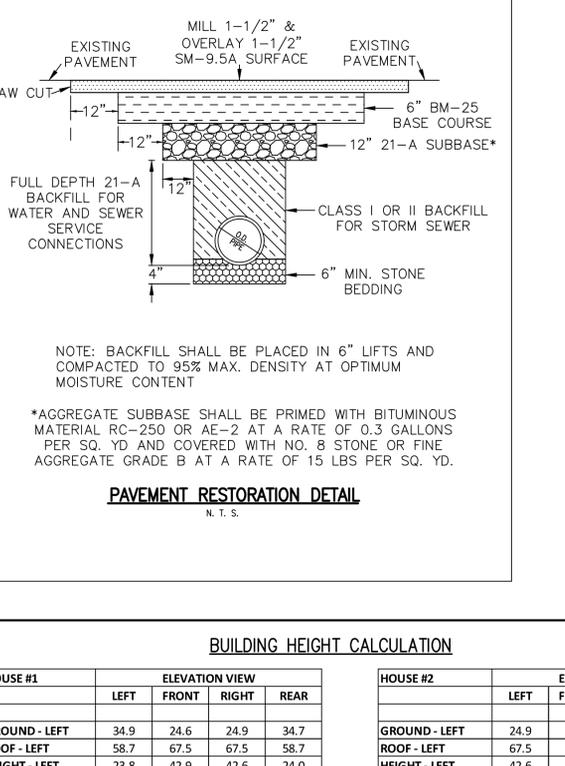
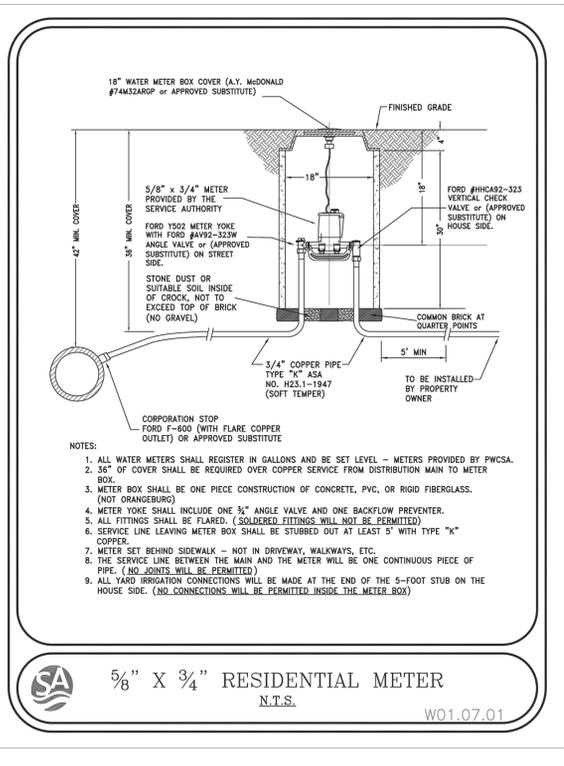
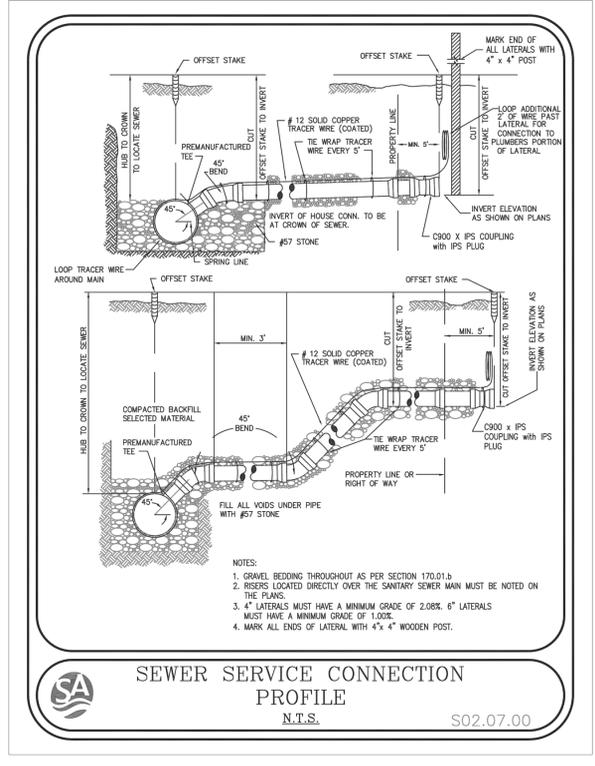
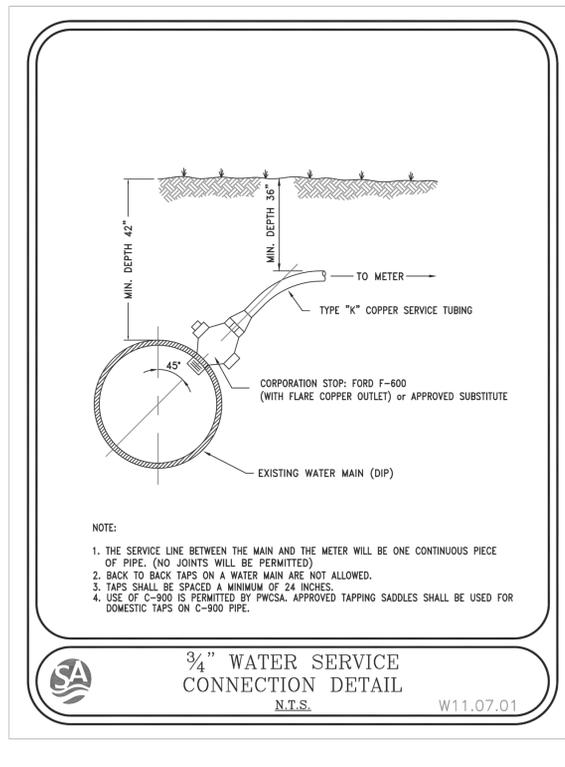
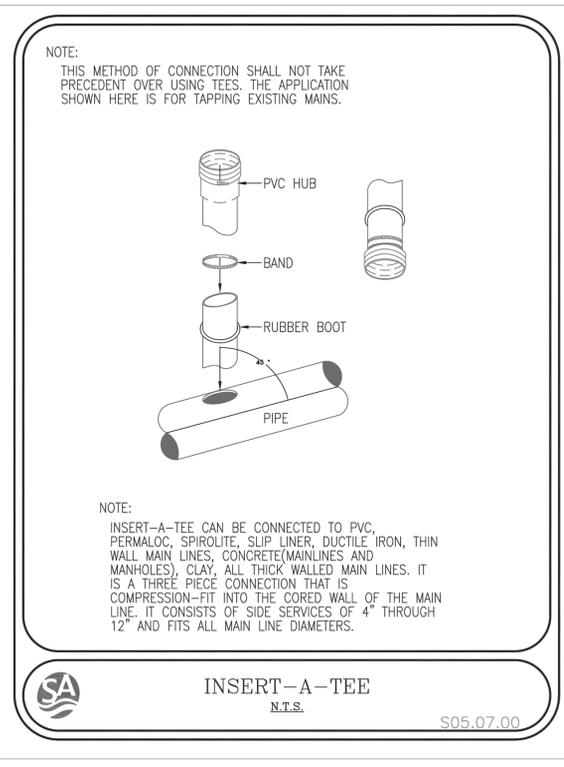
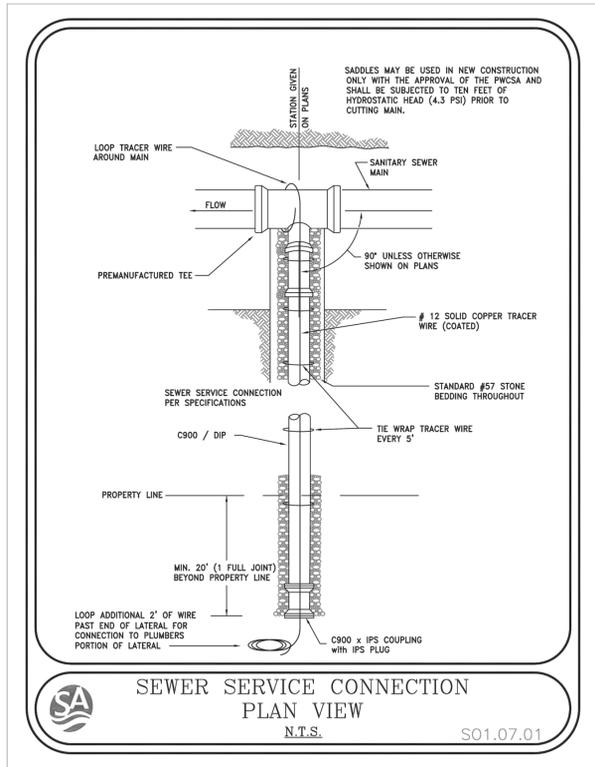
Freeland Engineering, PC
rfreeland@freelandengineeringpc.com
10814 Courthouse Road
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Phone: 540.898.3092
Fax: 877.658.7735
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LANDSCAPING PLAN
KIELY COURT
426 & 430 MILL STREET
TOWN OF OCCOQUAN, VIRGINIA



SEAL
County Plan Number:
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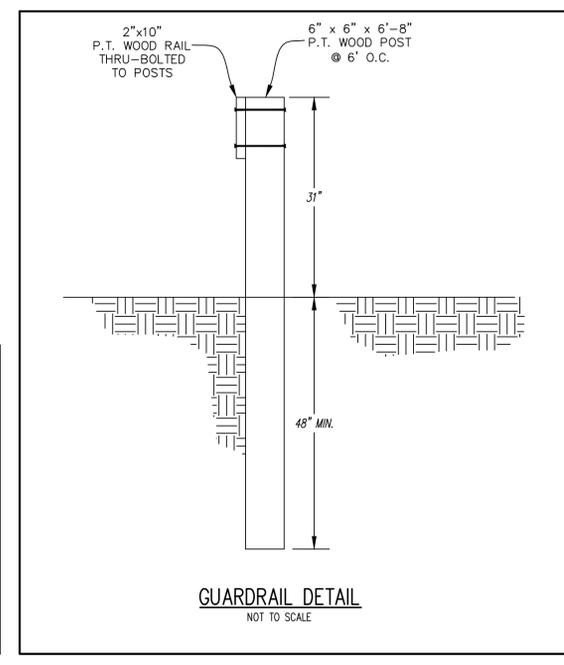


BUILDING HEIGHT CALCULATION

HOUSE #1	ELEVATION VIEW			
	LEFT	FRONT	RIGHT	REAR
GROUND - LEFT	34.9	24.6	24.9	34.7
ROOF - LEFT	58.7	67.5	67.5	58.7
HEIGHT - LEFT	23.8	42.9	42.6	24.0
GROUND - RIGHT	28.0	24.9	34.7	36.2
ROOF - RIGHT	67.5	67.5	58.7	58.7
HEIGHT - RIGHT	39.5	42.6	24.0	22.5
AVERAGE WALL HT	31.7	42.8	33.3	23.3
HOUSE #1 AVERAGE HEIGHT =	32.7			

HOUSE #2	ELEVATION VIEW			
	LEFT	FRONT	RIGHT	REAR
GROUND - LEFT	24.9	27.0	30.0	34.0
ROOF - LEFT	67.5	67.5	58.7	58.7
HEIGHT - LEFT	42.6	40.5	28.7	24.7
GROUND - RIGHT	24.6	27.0	34.3	27.3
ROOF - RIGHT	67.5	58.7	58.7	67.5
HEIGHT - RIGHT	42.9	31.7	24.4	40.2
AVERAGE WALL HT	42.8	36.1	26.6	32.5
HOUSE #2 AVERAGE HEIGHT =	34.5			

- GENERAL NOTES**
- ALL UTILITY AND CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH TOWN, COUNTY AND VDOT CONSTRUCTION SPECIFICATIONS & STANDARDS.
 - THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY, AND THE WAYS, MEANS, AND METHODS OF CONSTRUCTION. ALL APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
 - THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR APPLYING FOR ALL NECESSARY PERMITS. CONTRACTOR SHALL ENSURE THAT ALL FEDERAL, STATE AND LOCAL PERMITS HAVE BEEN OBTAINED PRIOR TO START OF CONSTRUCTION.
 - THE DESIGN OFFICE DOES NOT CERTIFY TO THE LOCATION OR EXISTENCE OF ANY UNDERGROUND UTILITIES. THE UNDERGROUND UTILITIES ARE SHOWN FROM AVAILABLE RECORDS BUT THIS DOES NOT CONSTITUTE A GUARANTEE OF THEIR ACTUAL LOCATION, OR THAT THEY HAVE BEEN SHOWN, DUE TO FIELD CONDITIONS. IF CONDITIONS ARE FOUND IN THE FIELD WHICH ARE MATERIALLY DIFFERENT FROM THE PLANS, REVISIONS SHALL BE MADE AT THAT TIME.
 - CONTRACTOR SHALL CONTACT MISS UTILITY AND ALL RELEVANT UTILITY COMPANIES. PRIOR TO START OF CONSTRUCTION, ADEQUATE TEST PITS SHALL BE REQUIRED TO VERIFY LOCATIONS OF EXISTING UTILITIES IN ORDER TO AVOID CONFLICTS. ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN THE EVENT OF A CONFLICT.
 - THE CONTRACTOR OR HIS AGENT SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ANY EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. UTILITIES SHOWN HEREON ARE BASED ON AVAILABLE INFORMATION. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER ANY UTILITIES OTHER THAN THOSE SHOWN ON THESE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE CONTINUANCE OF SERVICES. ANY DAMAGES, WHICH OCCUR BY FAILURE TO LOCATE OR PRESERVE THESE UTILITIES, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - ALL UTILITIES, INCLUDING ALL POLES, ARE TO BE RELOCATED AT DEVELOPER'S EXPENSE, PRIOR TO CONSTRUCTION.
 - ALL BASE, SUBBASE AND SUBGRADE MATERIALS SHALL BE COMPACTED TO 95% OF THEORETICAL MAXIMUM DENSITY AS DETERMINED BY A.A.S.H.T.O. T-99 METHOD WITHIN PLUS OR MINUS 20% OF OPTIMUM MOISTURE. THIS STANDARD OF COMPACTION IS TO APPLY TO THE SUPPORT MATERIAL FOR ALL PAVED AREAS AND SIDEWALKS UNLESS OTHERWISE SUPERCEDED BY THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
 - THE DEVELOPER IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO EXISTING RIGHT-OF-WAY.
 - ALL CONCRETE ITEMS SHALL CONSIST OF CLASS A-3 CONCRETE.
 - NO BURNING OF CONSTRUCTION OR DEMOLITION DEBRIS SHALL BE ALLOWED ON SITE.
 - CONTRACTOR TO VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD BEFORE STARTING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DIFFERENCES.
 - THIS PLAN DOES NOT ADDRESS TOXIC OR CONTAMINATED WASTE OR SOIL CONDITIONS, NOR HAVE ANY REPORTS OR STUDIES BEEN FURNISHED TO THIS ENGINEER.
 - NO TITLE REPORT FURNISHED.
 - THERE ARE NO KNOWN PLACES OF BURIAL OR REGISTERED HISTORIC SITES LOCATED WITHIN THE LIMITS OF THIS PROJECT.
 - STANDARD GUARDRAILS AND/OR HANDRAILS SHALL BE INSTALLED AT HAZARDOUS LOCATIONS AS DESIGNATED DURING FIELD REVIEW BY THE COUNTY/TOWN INSPECTOR OR VDOT.
 - OPEN CUTTING OF PAVED ROAD SHALL BE ADDRESSED AT THE PERMIT STAGE.



REVISION ADDRESS COMMENTS

DATE 2-26-15

Freeland Engineering, PC
 rfreeland@freelandengineeringPC.com
 10814 Courthouse Road
 Fredericksburg, Virginia 22408
 Phone: 540.898.3092
 Fax: 877.658.7735
 www.FreelandEngineeringPC.com

CONSTRUCTION NOTES & DETAILS

KIELY COURT
426 & 430 MILL STREET
 TOWN OF OCCOQUAN, VIRGINIA

COMMONWEALTH OF VIRGINIA
 RAYMOND P. FREELAND
 Lic. No. 040752
 09-12-2018
 PROFESSIONAL ENGINEER

SEAL

County Plan Number:

Drawn By: SLP
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Sheet: 8 of 10
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