

**SMITH ENGINEERING**

PROJECT: 090-01  
BLAKE SMITH, P.E.  
703-956-6204  
Blake@SMITHEngineeringVA.com  
14901 BOGLE DRIVE  
SUITE 101  
CHANTILLY, VA 20151

PLAN STATUS	
01/17/12	ISSUE TO CLIENT/ATTORNEY
01/18/12	SUBMIT TO COUNTY
02/06/12	ISSUE TO CLIENT/ATTORNEY
05/14/12	SUBMIT TO COUNTY
06/19/12	ISSUE TO CLIENT/ATTORNEY
06/22/12	ISSUE TO CLIENT/ATTORNEY
07/16/12	ISSUE TO CLIENT/ATTORNEY
08/06/12	ADDRESS SUB. DEFICIENCIES
09/28/12	ADDRESS SUB. DEFICIENCIES

RECEIVED  
Department of Planning & Zoning  
OCT 01 2012  
Zoning Evaluation Division

**SHEET INDEX**

1.	COVER SHEET
2.	LAYOUT AND LANDSCAPE PLAN
3.	EXISTING VEGETATION MAP / TREE CANOPY CALCULATIONS
4.	OUTFALL ANALYSIS

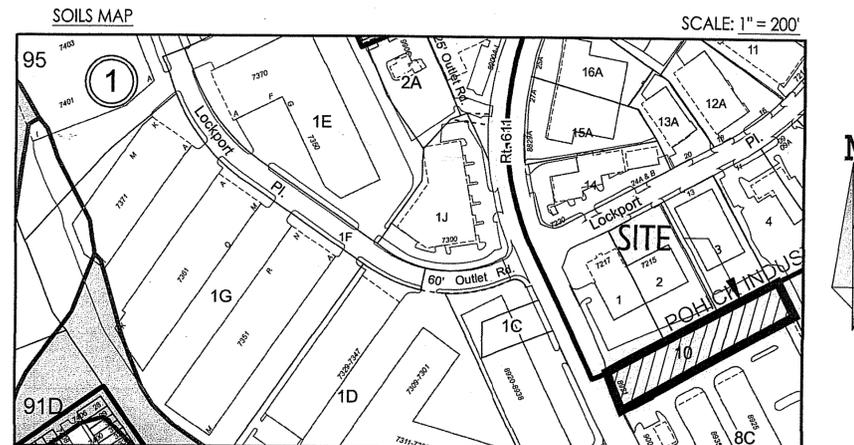
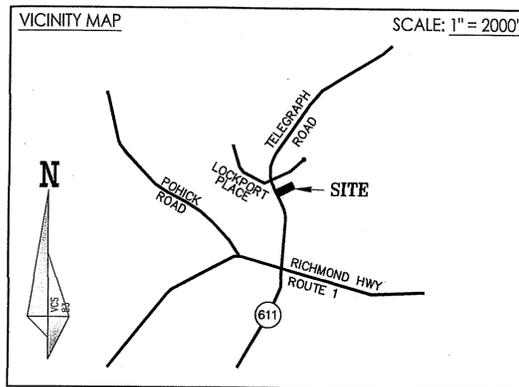
SCALE: AS SHOWN  
DATE: JANUARY 5, 2012  
SHEET 1 OF 4

# RZ 2012 - MV - 004 GENERAL DEVELOPMENT PLAN FOR 8921 PROPERTIES, LLC MOUNT VERNON DISTRICT FAIRFAX COUNTY, VIRGINIA

**GENERAL NOTES**

- THIS SITE CONSISTS OF THE FOLLOWING PARCELS:  

TAX MAP #	AREA (SF/AC)	DB	PG	ADDRESS
108-1-(11)-10	42367 / 0.97261	18490	860	8921 TELEGRAPH ROAD
- THIS SITE IS LOCATED IN THE MOUNT VERNON DISTRICT AND IS CURRENTLY ZONED R-1 (RESIDENTIAL). THE PROPOSED ZONING IS I-4 (MEDIUM INTENSITY INDUSTRIAL DISTRICT). NO ADDITIONAL DISTURBANCE IS PROPOSED WITH THIS GENERAL DEVELOPMENT PLAN, EXCEPT AS NOTED ON SHEET 2.
- BOUNDARY AND FIELD RUN TOPOGRAPHIC SURVEY COMPLETED BY JEFF WARNER LAND SURVEYING, INC. DECEMBER 8, 2011.
- THIS TOPOGRAPHY SHOWN IS AT A TWO-FOOT CONTOUR INTERVAL.
- EXISTING USE: STORAGE YARD, CONTRACTOR'S OFFICE AND SHOPS (NON-CONFORMING)
- PROPOSED USE: CONTRACTOR'S OFFICE AND SHOPS
- THE SITE IS CURRENTLY SERVED BY AN ONSITE WELL AND SEPTIC SYSTEM.
- THERE IS ONE KNOWN WELL ON THIS SITE, AS SHOWN HEREON.
- UPON SITE INSPECTION, THERE ARE NO BURIAL STRUCTURES OR GRAVE SITES KNOWN TO EXIST ON SITE.
- THE PROPERTY IS NOT IMPACTED BY A FEMA 100-YEAR FLOODPLAIN. THE SITE IS SITUATED WITHIN ZONE X ACCORDING TO FEMA FLOOD INSURANCE RATE MAP 51059C0380E, EFFECTIVE SEPTEMBER 17, 2010.
- THE EXISTING STRUCTURES WERE CONSTRUCTED IN 1945.
- OF THE EXISTING STRUCTURES THE FOLLOWING ARE TO BE DEMOLISHED: PORTION OF BLDG. #2, BLDG. #3 AND BLDG.#4 (SEE SHEET 2 FOR MORE INFORMATION).
- THIS DEVELOPMENT SHALL CONFORM TO THE PROVISIONS OF APPLICABLE ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS UNLESS WAIVED OR MODIFIED.
- SIGNS SHALL COMPLY WITH PERTINENT FAIRFAX COUNTY SIGN REGULATIONS.
- THERE ARE NO KNOWN EASEMENTS 25 FEET OR MORE IN WIDTH ON THE PROPERTY.
- PROVIDED SHALL BE PROVIDED IN ACCORDANCE WITH PROVISIONS OF ARTICLE 11 OF THE ZONING ORDINANCE
- THERE ARE NO KNOWN WETLANDS OR RESOURCE PROTECTION AREAS ON THE PROPERTY.
- THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES, AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS, PARTS 116.4, 302.4 AND 355; AND / OR ALL HAZARDOUS WASTE AS SET FORTH IN COMMONWEALTH OF VIRGINIA DEPARTMENT OF WASTE MANAGEMENT VR 672-10-1- VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS; AND / OR PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 280; TO BE GENERATED, UTILIZED, STORED, TREATED, AND / OR DISPOSED OF ON SITE.
- OTHER THAN THE TREES DEPICTED TO BE PRESERVED ON THE ATTACHED EXISTING VEGETATION MAP THERE ARE NO OTHER AREAS THAT HAVE SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION.
- THE APPLICANT SHALL CONNECT TO PUBLIC WATER AND SEWER.
- APPLICANT RESERVES THE RIGHT TO MAKE MINOR MODIFICATIONS FROM WHAT IS SHOWN ON THE GMP SUBJECT TO FINAL DESIGN.



SOIL NO.	SOIL NAME	PROBLEM CLASS	FOUNDATION SUPPORT	DRAINAGE	SEPTIC DRAINFIELD	INFILTRATION TRENCHES	EROSION POTENTIAL	OTHER NOTES
95	URBAN LAND	N/A	N/A	N/A	N/A	N/A	N/A	N/A

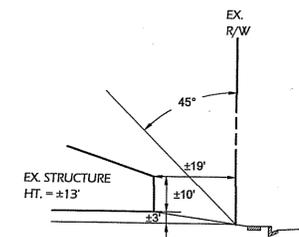
**ZONING & AREA TABULATION - OVERALL**

TOTAL SITE AREA:	42,367 S.F. / 0.97 AC.
EXISTING ZONING:	R-1
PROPOSED ZONING:	I-4
PROPOSED USE:	CONTRACTOR'S OFFICE AND SHOPS
OPEN SPACE REQUIRED:	15%
OPEN SPACE PROVIDED:	45%
MINIMUM LOT AREA:	20,000 S.F.
PROVIDED LOT AREA:	42,367 S.F. / 0.97 AC
MINIMUM LOT WIDTH:	100'
PROVIDED LOT WIDTH:	90' (EXISTING LOT WIDTH)
MAXIMUM BLDG. HEIGHT:	75 FEET
PROVIDED BLDG. HEIGHT:	±20 FEET
MAXIMUM FLOOR AREA RATIO (FAR):	0.50 (FOR I-4 DISTRICT)
EXISTING FLOOR AREA RATIO TO REMAIN	
BUILDING #1 GFA = 984 SF	
BUILDING #2 GFA = 548 SF	
TOTAL EXISTING GFA = 1,532 SF	
EXISTING FLOOR AREA RATIO (FAR):	0.036
PROPOSED FLOOR AREA RATIO (FAR):	
EXISTING BUILDING #1 GFA = 984 SF	
EXISTING BUILDING #2 GFA = 548 SF	
PROPOSED SHED = 1,225 SF	
TOTAL GFA = 2,757 SF	
PROPOSED FLOOR AREA RATIO (FAR):	0.065

**BULK REGULATIONS**

FRONT YARD: CONTROLLED BY A 45° ANGLE OF BULK PLANE, BUT NOT LESS THAN 40°.  
SIDE YARD: NO REQUIREMENT  
REAR YARD: NO REQUIREMENT

\* SEE REQUESTED WAIVERS/MODIFICATION BELOW.



**PARKING TABULATION**

PARKING REQUIRED: NUMBER OF EMPLOYEES = 3  
PARKING REQUIRED PER EMPLOYEE = 1.0  
NUMBER OF COMPANY VEHICLES = 3  
PARKING REQUIRED PER VEHICLE = 1  
TOTAL REQUIRED PARKING = 4

PARKING PROVIDED: EXISTING PARKING SPACES = 4 (MIN.)

**REQUESTED WAIVERS/MODIFICATIONS**

- MINIMUM FRONT YARD REQUIREMENT (PURSUANT TO Z.O. 9-625)
- BEST MANAGEMENT PRACTICES WAIVER (PFM SECTION 6-0400)
- STORMWATER MANAGEMENT WAIVER (PFM SECTION 6-0300)
- INTERIOR PARKING LOT LANDSCAPING (PURSUANT TO Z.O. 13-202 (6))
- PERIPHERAL PARKING LOT LANDSCAPING (PURSUANT TO Z.O. 13-203 (3))
- DUSTLESS SURFACE WAIVER (PFM SECTION 7-0504)

**MINIMUM STORM WATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS**

THE FOLLOWING INFORMATION IS REQUIRED TO BE SHOWN OR PROVIDED IN ALL ZONING APPLICATIONS, OR A WAIVER REQUEST OF THE SUBMISSION REQUIREMENT WITH JUSTIFICATION SHALL BE ATTACHED.  
NOTE: WAIVERS WILL BE ACTED UPON SEPARATELY. FAILURE TO ADEQUATELY ADDRESS THE REQUIRED SUBMISSION INFORMATION MAY RESULT IN A DELAY IN PROCESSING THIS APPLICATION.

THIS INFORMATION IS REQUIRED UNDER THE FOLLOWING ZONING ORDINANCE PARAGRAPHS:  
SPECIAL PERMITS (8-011 2J & 2L) SPECIAL EXCEPTIONS (9-011 2J & 2L)  
CLUSTER SUBDIVISION (9-615 1G & 1N) COMMERCIAL REVITALIZATION DISTRICTS (9-622 2A (I2)&(14))  
DEVELOPMENT PLANS PRC DISTRICT (16-302 2 & 4L) PRC PLAN (16-303 1E & 1O)  
FDP P DISTRICTS (EXCEPT PRC) 916-502 1 F & 1Q) AMENDMENTS (18-202 L OF & 101)

- PLAT IS AT A MINIMUM SCALE OF 1"=50' (UNLESS IT IS DEPICTED ON ONE SHEET WITH A MINIMUM SCALE OF 1"=100).
- A GRAPHIC DEPICTING THE STORMWATER MANAGEMENT FACILITY(IES) AND LIMITS OF CLEARING AND GRADING ACCOMMODATE THE STORMWATER MANAGEMENT FACILITY(IES), STORM DRAINAGE PIPE SYSTEMS AND OUTLET PROTECTION, POND SPILLWAYS, ACCESS ROADS, SITE OUTFALLS, ENERGY DISSIPATION DEVICES, AND STREAM STABILIZATION MEASURES AS SHOWN ON SHEET 2.
- PROVIDE:  

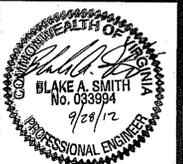
FACILITY NAME/ TYPE & NO.	ON-SITE AREA SERVED (AC)	OFF-SITE AREA SERVED (AC)	DRAINAGE SERVED (AC)	FOOTPRINT AREA (SF)	STORAGE VOLUME (CF)	IF POND, DAM HEIGHT (FT)
- ONSITE DRAINAGE CHANNELS, OUTFALLS AND PIPE SYSTEMS ARE SHOWN ON SHEET 4.
- THERE ARE NO ACCESS ROADS SERVING STORMWATER MANAGEMENT FACILITIES ON THIS SITE.
- THERE ARE NO STORMWATER MANAGEMENT FACILITIES ON THIS SITE.
- A "STORMWATER MANAGEMENT NARRATIVE" WHICH CONTAINS A DESCRIPTION OF HOW DETENTION AND BEST MANAGEMENT PRACTICES REQUIREMENTS WILL BE MET IS PROVIDED ON THIS SHEET.
- A DESCRIPTION OF THE EXISTING CONDITIONS OF EACH NUMBERED SITE OUTFALL EXTENDED DOWNSTREAM FROM THE SITE TO A POINT WHICH IS AT LEAST 100 TIMES THE SITE AREA OR WHICH HAS A DRAINAGE AREA OF AT LEAST ONE SQUARE MILE (640 ACRES) IS PROVIDED ON SHEET 4.
- A DESCRIPTION OF HOW THE OUTFALL REQUIREMENTS, INCLUDING CONTRIBUTING DRAINAGE AREAS OF THE PUBLIC FACILITIES MANUAL WILL BE SATISFIED IS PROVIDED ON SHEET 4.
- EXISTING TOPOGRAPHY WITH MAXIMUM CONTOUR INTERVALS OF TWO (2) FEET AND A NOTE AS TO WHETHER IT IS AN AIR SURVEY OR FIELD RUN IS PROVIDED ON SHEET 2.
- A SUBMISSION WAIVER IS REQUESTED FOR BMP REQUIREMENTS.
- STORMWATER MANAGEMENT IS NOT REQUIRED. SEE THE SWM NARRATIVE ON SHEET 2.

OWNER - PARCEL 10  
8921 PROPERTIES, LLC  
8815 TELEGRAPH ROAD  
LORTON VA 22079

ENGINEER  
**SMITH ENGINEERING**  
14901 BOGLE DRIVE SUITE 101  
CHANTILLY, VIRGINIA 20151  
(703) 956-6204

Application No: RZ-2012-MV-004 Staff: NAR

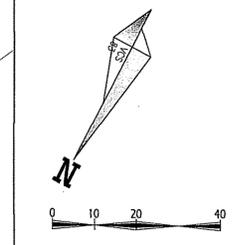
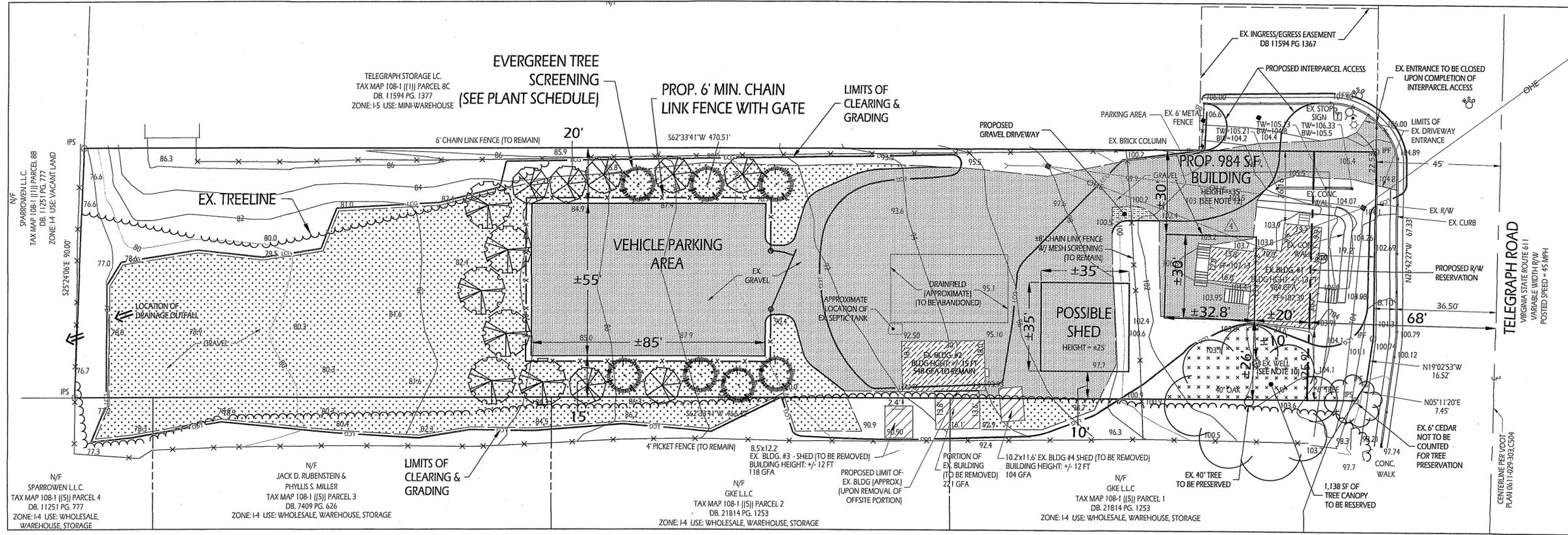
APPROVED DEVELOPMENT PLAN  
 (DP)  (GDP)  (CDP)  (FDP)  (PRC)  (CP)  
SEE PROFFERS DATED: February 26, 2013  
Date of (BOS) (PC) Approval: February 26, 2013  
Sheet: 1 of 4  
Comments:



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SCALE: 1" = 20'  
DATE: JANUARY 5, 2012  
SHEET 2 OF 4



- LEGEND:**
- LCG --- LIMITS OF CLEARING & GRADING
  - [Stippled] EXIST. GRAVEL TO BE REMOVED AND SEEDED
  - [Dotted] EXIST. GRAVEL TO REMAIN
  - [Hatched] EXIST. BUILDING TO REMAIN
  - [Diagonal lines] BUILDING (OR PORTION THEREOF) TO BE REMOVED
  - [Cross-hatched] TREE PRESERVATION (1,138 SF)

**PLANT LIST**

	COMMON NAME	BOTANICAL NAME	QTY	SIZE (MIN.)	TREE COVER EACH (SF)	TREE COVER TOTAL (SF)	REMARKS	NATIVE (1.5)	WILD LIFE (1.5)	ADJUSTED CANOPY CREDIT (SF)
	AMERICAN HOLLY	ILEX OPACA	7	8'-10' HT	125	875	FULL / UNIFORM / B&B	YES	YES	1313
	PITCH PINE	PINUS RIGIDA	7	7'-8' HT	150	1050	FULL / UNIFORM / B&B	YES	YES	1575
	LOBLOLLY PINE	PINUS TAEDA	7	7'-8' HT	200	1400	FULL / UNIFORM / B&B	YES	YES	2100
	TOTAL		21			3325				4988

**PERIPHERAL PARKING LOT LANDSCAPING**

LF OF VEHICLE PARKING AREA = ± 250  
REQUIRED PLANTING = 1 TREE / 50 LF  
TOTAL REQUIRED = 250 / 50 = 5 TREES  
TOTAL PROVIDED = 21 TREES

**NOTES:**

- NO TITLE REPORT FURNISHED.
- THE PROPERTY SHOWN HEREON IS LOCATED ON TAX MAP 108-01 (01) PARCEL 10 AND IS ZONED R-1.
- MERIDIAN ESTABLISHED FROM VDOT HIGHWAY PLAN 0611-029-303, C504 DATED MAY 4, 1999.
- OWNER: 8921 PROPERTIES LLC, DEED BOOK 18490 PAGE 860
- AREA = 42,367 SQUARE FEET OR 0.97261 ACRE OF LAND.
- VERTICAL DATUM TAKEN FROM AS-BUILT SANITARY SEWER INFORMATION PROVIDED BY FAIRFAX COUNTY WASTEWATER MANAGEMENT.
- THIS TOPOGRAPHIC SURVEY WAS COMPLETE UNDER THE DIRECT AND RESPONSIBLE CHARGE OF JEFFERY D. WARNER FROM AN ACTUAL GROUND SURVEY MADE UNDER HIS SUPERVISION; ORIGINAL DATA WAS OBTAINED ON DECEMBER 8, 2011 AND THAT THIS PLAN MEETS THE MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
- APPROXIMATELY 24,184 SF (0.555 AC) OF DISTURBANCE IS EXPECTED.
- EXISTING FENCES ARE TO REMAIN AS IS, AND WILL NOT BE RELOCATED.
- EXISTING WELL SHALL BE CAPPED AT SUCH TIME THE EXISTING AND/OR PROPOSED USE CONNECTS TO THE PUBLIC WATER SYSTEM.
- PLANTING LOCATION AND SPECIES MAY VARY W/ FINAL ENGINEERING.
- RELOCATION OF THE EXISTING 984 SF BUILDING TO OCCUR AT APPLICANT'S ELECTION PRIOR TO RIGHT-OF-WAY DEDICATION.

**LEGEND:**

- W-SO - WATER VALVE
- O-H-E - OVER-HEAD ELECTRIC LINE
- T - TELEPHONE POLE
- G-M - GAS METER
- I-P-F - IRON PIPE FOUND
- I-P-S - IRON PIPE SET

**STORMWATER MANAGEMENT NARRATIVE:**

THE SITE IS CURRENTLY DEVELOPED AND CONSISTS OF TWO LARGER STRUCTURES AND TWO SMALL SHEDS. OF THE FOUR STRUCTURES, A PORTION OF BLDG. #2 AND BLDG'S #3 AND #4 ARE TO BE REMOVED. THE SQUARE FOOTAGE OF THE BUILDINGS TO BE REMOVED IS +/- 385 SF. THE LIMITS OF CLEARING AND GRADING SHALL NOT EXTEND BEYOND WHICH IS NECESSARY TO REMOVE THE SAID STRUCTURE AND REMOVE THE DEBRIS. THE REMOVAL OF THIS BUILDING WILL REDUCE THE AMOUNT OF EXISTING IMPERVIOUS AREA ON THE PROPERTY. IN ADDITION, EXISTING GRAVEL WILL BE REMOVED AND SEEDED. THROUGH THE REDUCTION OF THE IMPERVIOUS AREA THE PEAK RUNOFF RATES WILL IN TURN BE REDUCED. THEREFORE, NO SWM FACILITY IS PROPOSED.

**LEGEND**

- LINES OF EXISTING VEGETATION / CANOPY
- EXISTING TREE CANOPY (1,218 SF)

Existing Vegetation Map Table						
Type Number	Cover Type	Primary Species	Succession Stage	Condition	Area (sq. ft.)	Comments
5	Developed Land	N/A	N/A	N/A	41138	No trees identified on site are acceptable as canopy cover.
10	Miscellaneous	5, Developed L	N/A	Good	1218	This area consists of one 40" diameter white oak and one 6" diameter eastern redcedar on the boundary line in the northeast corner of the site near the existing house.
Total Area					42356	

EVM INFORMATION PROVIDED BY ZIMAR & ASSOCIATES

**Table 12.12 10-YR TREE CANOPY CALCULATION WORKSHEET**

Project:	8921 Telegraph Road	CURRENT ZONE:	I-4
TAX MAP #	108-1-(11)-10	SITE AREA (SF)	42384

STEP			
<b>A. Tree Preservation Target and Statement</b>			
A	Pre-development area of existing tree canopy (from Existing Vegetation Map)	=	1218
B	Percentage of gross site area covered by existing tree canopy	=	3%
C	Percentage of 10-year canopy required for site (see Table 12.4)	=	10%
D	Percentage of the 10-year canopy requirement that should be met through tree preservation	=	3%
E	Proposed percentage of canopy requirement that will be met through tree preservation	=	34%
F	Has the Tree Preservation Target minimum been met? (YES/NO)	YES	1423 sf
G	If NO for line F, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in §12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree		
H	If step G requires a narrative, it shall be prepared in accordance with §12-0507.4		

STEP		TOTALS	REFERENCE
<b>B. Tree Canopy Requirement</b>			
B1	Identify gross site area	=	42,384 § 12-0510.1A
B2	Subtract area dedicated to parks, road frontage and	=	0 § 12-0510.1B
B3	Subtract area of exemptions	=	0 § 12-0510.1C(1) through § 12-0510.1C(6)
B4	Adjusted gross site area (B1-B2)	=	42,384
B5	Identify site's zoning and/or use	=	I-4
B6	Percentage of 10-year tree canopy required	=	10% § 12-0509.1 and Table 12.4
B7	Area of 10-year canopy required (B4 x B6)	=	4,238
B8	Modification of 10-year Tree Canopy Requirements requested?	NO	Yes or No
B9	If B8 is YES, then list plan sheet where modification request is located	N/A	Sheet Number

STEP		TOTALS	REFERENCE
<b>C. Tree Preservation</b>			
C1	Tree Preservation Target area	=	127
C2	Total existing canopy area meeting standards of § 12-0500	=	1,138
C3	C2 x 1.25	=	1,423 § 12-0509.3B
C4	Total canopy area provided by unique or valuable forest or woodland communities	=	0
C5	C4 x 1.5	=	0 § 12-0509.3B(1)
C6	Total canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees	=	0
C7	C6 x 1.5 to 3.0 =	=	0 § 12-0509.3B(2)
C8	Canopy area of trees within Resource Protection Areas (RPA) and 100-year floodplains	=	0
C9	C8 x 1.0 =	=	0 § 12-0509.3C(1)
C10	Total of C3, C5, C7 and C9	=	1,423

STEP		TOTALS	REFERENCE
<b>D. Tree Planting</b>			
D1	Area of canopy to be met through tree planting (B7-C10)	=	0
D2	Area of canopy planted for air quality benefits	=	0
D3	D2 x 1.25	=	0 § 12-0509.4B(1)
D4	Area of canopy planted for energy conservation	=	0
D5	D4 x 1.5	=	0 § 12-0509.4B(2)
D6	Area of canopy planted for water quality benefits	=	0
D7	D6 x 1.25	=	0 § 12-0509.4B(3)
D8	Area of canopy planted for wildlife benefits	=	3,325
D9	D8 x 1.5	=	4,988 § 12-0509.4B(4)
D10	Area of canopy provided by native trees	=	0
D11	D10 x 1.5	=	0 § 12-0509.4B(5)
D12	Area of canopy provided by improved cultivars and varieties	=	0
D13	D12 x 1.25	=	0 § 12-0509.4B(6)
D14	Area of canopy provided through tree seedlings	=	0 § 12-0509.4D(1)
D15	Area of canopy provided through native shrubs or woody seed mix	=	0 § 12-0509.4D(1)(a)
D16	Percentage of D14 represented by D15	=	0
D17	Total tree canopy area provided through tree planting	=	Must not exceed 33% of D14
D18	Is an offsite planting relief requested?	Yes or No	§ 12-0511
D19	Tree Bank or Tree Fund?	Yes or No	§ 12-0511
D20	Canopy area requested to be provided through offsite banking or tree fund	=	0
D21	Amount to be deposited into the Tree Preservation and Planting Fund	=	N/A

STEP		TOTALS	REFERENCE
<b>E. Total of 10-year Tree Canopy Provided</b>			
E1	Total of canopy area provided through tree preservation (C10)	=	1,423
E2	Total of canopy area provided through tree planting (D17)	=	4,600
E3	Total of canopy area provided through offsite mechanism (D19)	=	0
E4	Total of 10-year Tree Canopy Provided	=	5,923

E4 IS GREATER THAN OR EQUAL TO B7 THEREFORE CANOPY REQUIREMENT HAS BEEN MET

Application No: R-2-2013-MV-001 Staff: NAR

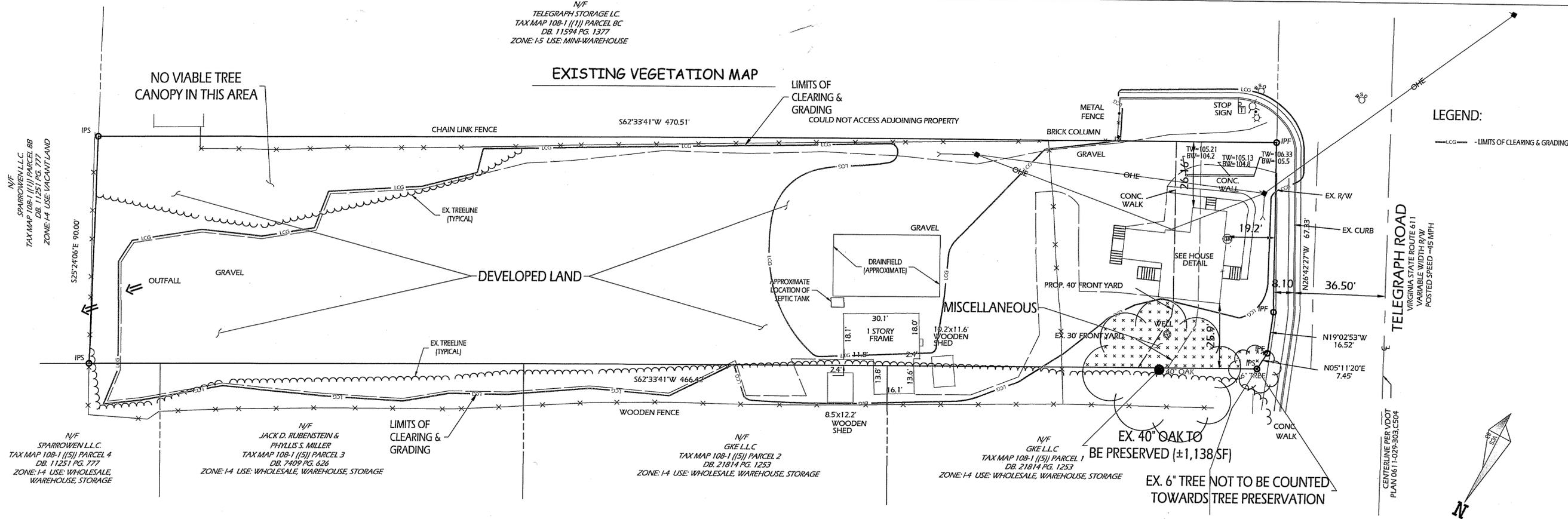
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 (DP)  (GDP)  (CDP)  (FDP)  (PRC)  (CP)

SEE PROFFERS DATED: February 26, 2013

Date of (GOS) (PC) Approval: February 26, 2013

Sheet: 3 of 4

Comments:

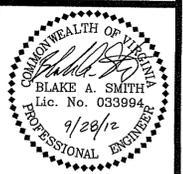


**SMITH ENGINEERING**

EXISTING VEGETATION MAP / TREE CANOPY CALCULATIONS

8921 TELEGRAPH ROAD GENERAL DEVELOPMENT PLAN

MOUNT VERNON DISTRICT FAIRFAX COUNTY, VIRGINIA CO. # RZ 2012 - MV - 004



**SMITH ENGINEERING**

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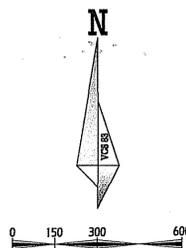
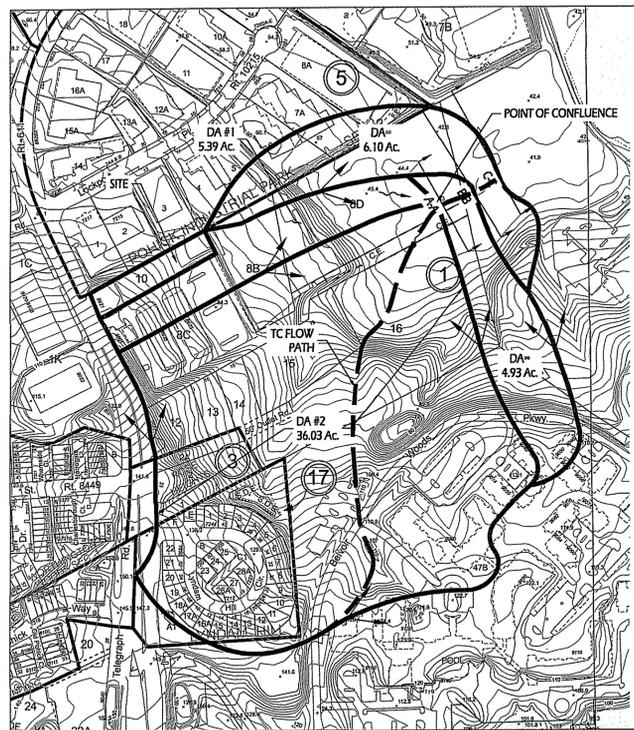
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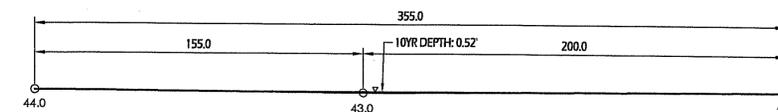
SHEET 3 OF 4

**OUTFALL NARRATIVE:**

THE SUBJECT 0.9726 AC SITE CURRENTLY DRAINS FROM WEST TO EAST IN AN UN-CHANNELIZED MANNER. FLOW CONTINUES OFFSITE TO THE EAST WHERE IT MEANDERS THROUGH AN EXISTING VEHICLE STORAGE LOT. BEYOND THE STORAGE LOT FLOW BECOMES MORE DEFINED INTO A BROAD CHANNEL WHERE IT IS JOINED BY A SECOND DRAINAGE AREA. AT THIS POINT OF CONFLUENCE THE DRAINAGE INCLUDING THE SUBJECT PARCEL (DA #1) TOTALS 11/5.39 AC. THE SECOND DRAINAGE AREA (DA #2) HAS AN AREA OF 17/36.03 AC. PER PFM 6-0203.2A WE HAVE ANALYZED 150 FEET DOWNSTREAM OF THE SAID POINT OF CONFLUENCE AND, BASED ON THE CROSS SECTIONS AND CALCULATIONS ON THIS SHEET, BELIEVE AN ADEQUATE OUTFALL EXISTS WHICH CONCLUDES THE ANALYSIS.

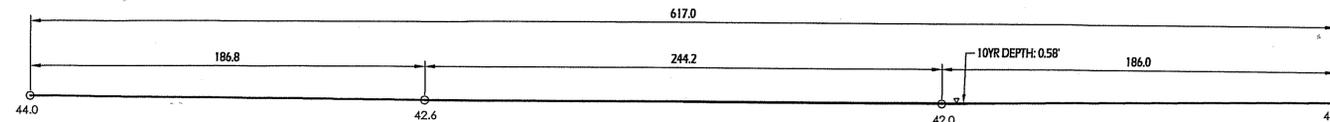


DA (A-A)  
 A = 41.42 AC  
 TC = 15 min  
 C = 0.40  
 IZ = 3.9  
 I10 = 5.1  
 Q2 = 64.61 cfs  
 Q10 = 84.50 cfs  
 SLOPE = 1%  
 DEPTH (10YR) = 0.52'  
 VELOCITY (2YR) = 1.63 FT/S



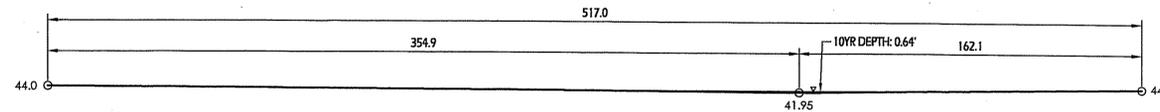
CROSS SECTION A-A  
 SCALE: 1" = 40'

DA (B-B)  
 A = 46.35 AC  
 TC = 15 min  
 C = 0.40  
 IZ = 3.9  
 I10 = 5.1  
 Q2 = 72.31 cfs  
 Q10 = 94.55 cfs  
 SLOPE = 1%  
 DEPTH (10YR) = 0.58'  
 VELOCITY (2YR) = 1.73 FT/S

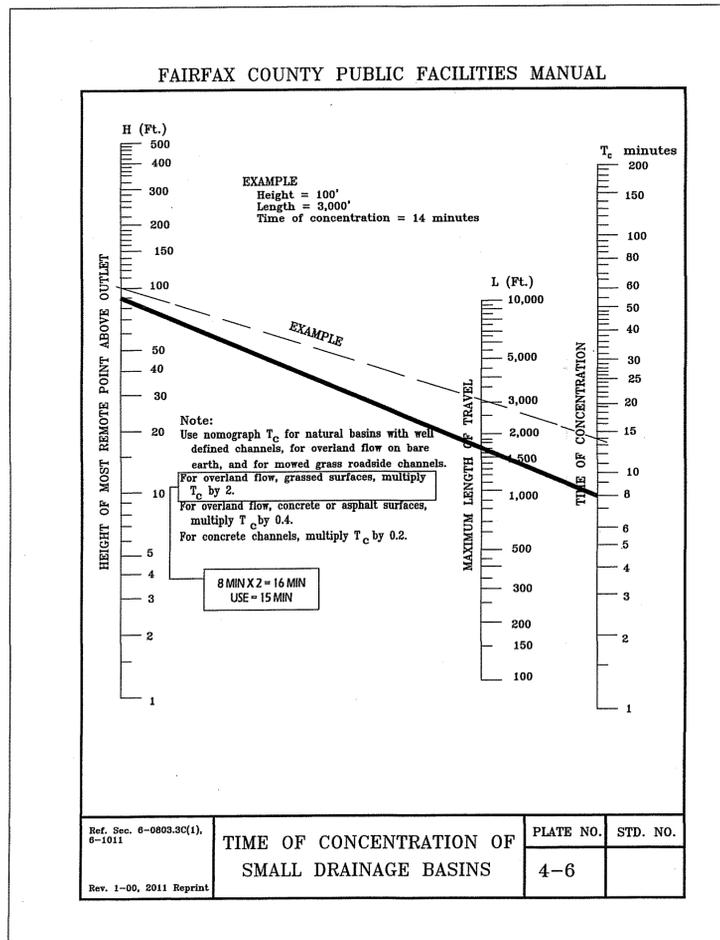


CROSS SECTION B-B  
 SCALE: 1" = 40'

DA (C-C)  
 A = 52.45 AC  
 TC = 15 min  
 C = 0.40  
 IZ = 3.9  
 I10 = 5.1  
 Q2 = 81.82 cfs  
 Q10 = 107.00 cfs  
 SLOPE = 1%  
 DEPTH (10YR) = 0.64'  
 VELOCITY (2YR) = 1.87 FT/S



CROSS SECTION C-C  
 SCALE: 1" = 40'

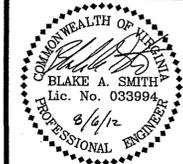


Application No: RZ 200-MU-004 Staff: NAR

APPROVED DEVELOPMENT PLAN  
 (DP)  (GDP)  (CDP)  (FDP)  (PRC)  (CP)  
 SEE PROFFERS DATED: February 26, 2015  
 Date of (GOS) (PC) Approval: February 26, 2015  
 Sheet: 4 of 4  
 Comments:

**SMITH ENGINEERING**

OUTFALL ANALYSIS  
 8921 TELEGRAPH ROAD  
 GENERAL DEVELOPMENT PLAN  
 MOUNT VERNON DISTRICT  
 FAIRFAX COUNTY, VIRGINIA  
 CO. # RZ 2012 - MV - 004



**SMITH ENGINEERING**  
 PROJECT: 090-01  
 BLAKE SMITH, P.E.  
 703-956-6204  
 Blake@SMITHEngineeringVA.com  
 14901 BOGLE DRIVE  
 SUITE 101  
 CHANTILLY, VA 20151

PLAN STATUS	
01/17/12	ISSUE TO CLIENT/ATTORNEY
01/18/12	SUBMIT TO COUNTY
02/06/12	ISSUE TO CLIENT/ATTORNEY
05/14/12	SUBMIT TO COUNTY
06/19/12	ISSUE TO CLIENT/ATTORNEY
06/22/12	ISSUE TO CLIENT/ATTORNEY
07/16/12	ISSUE TO CLIENT/ATTORNEY
08/06/12	ADDRESS SUB DEFICIENCIES

SCALE: AS NOTED  
 DATE: FEBRUARY 9, 2012  
 SHEET 4 OF 4