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					<u>STC</u>	DRM SEWER PROFILE SYSTEM 1					
165							23 <u>9</u> 4	≥			
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						30.2 5 GRADE Accept Accept 44 7.54 (FR	75+74, ST TO G	NEW MH TOP REQ'D. RIM: 153.86 INV IN: 145.67 (FR 2 INV IN: 146.44 (FR 2 INV IN: 148.02 (FR 2 INV OUT: 144.12 (TO			
155			(14707) 20) 14200) 14200)			STA: 74+65, 30.2' ADJUST TO GRADE MODIFY TO ACCEPT NEW MH TOP REQ'D RIM: 151.68 INV IN: 141.44 (FR INV IN: 141.44 (FR INV IN: 141.44 (FR	STA:				
			3, 28.2' RT - GRADE 0P, L=10' REC 7 5.67 (FR 147 35.55 (TO 14								
150		7.1, RT (FR 1470) (FR 52) (T0 14648)	2+93, 28 10 GRA 5.10P, L 135.67 1.135.67		- PROP. GRADE		COM XING STA: 3+74.95 V/L XING TOP: 148.90				
_	(14648)8	STA: 72+50, 37 D0 NOT DISTURE RIM: 142.81 INV IN: 135.24 (INV IN: 133.41	STA: 72+93, STA: 72+93, NEW CB TO 6 NEW IN: 145.47 INV IN: 135.67 INV OUT: 135.67			TOP:146.00	V/L XING 3+70.59 V:147.60 V:147.60 DEV XING TOP:149.44	====	EX 203 LF OF 27" RCP @ 1.85%	= = = =	
145	7, RT 147	STA: STA:			GROUND	EX \$AN XING STA: 3+53.70 INV: 144.35 J928		====	=========		
	239,0 URB (C		NG		GAS XING STA: 2+48.53STA: 2+76.66 INV: 145.28 INV: 146.59	<u>(1928)</u>					
140	STA: 71+65, b0 No1 DIST RIM: 137.22 INV IN: 130.2	COM XII STA: 1+19, TOP: 141					GAS XING STA: 3+86.59 INV: 146.47	SEE STORM PROFILE 1-2 AND 1-3			
	0 <u>0 <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u></u>			EX 172 LF OF 3			INV: 146.47				
135		EX 44 36" RCP		====	=======						
	EX 85 LF OF 36" F	ICP @ 3.39%	DEV XING STA: 1+11.74		SEE STORM ~ PROFILE 1-1						
130	EX 85 LF OF 36" F		TOP:134.11								
125											
	0+00	1+00)	2+00		3+00	4+00		5+00		
	STORM SEWER I		STORM SEWER PROF		TORM SEWER PROFILE	<u>STO</u>	RM SEWER PROFILE		STORM SEWER PROFILE		
	SYSTEM 1	-1	SYSTEM 1-2		SYSTEM 1-3		SYSTEM 1-4				
	<u>SYSTEM 1</u> SEE SHEET C		SYSTEM 1-2 SEE SHEET C-10.1		<u>SYSTEM 1-3</u> <u>SEE SHEET C-10.1</u>		<u>SYSTEM 1-4</u> <u>SEE SHEET C-10.2</u>		SYSTEM 1-5 SEE SHEET C-10.2		
						(23	<u>SEE SHEET C-10.2</u>				
	<u>SEE SHEET C</u>		<u>SEE SHEET C-10.1</u>			(23	<u>SEE SHEET C-10.2</u>				
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	STA: 74+65, 30.2' RT ADJUST TO GRADE MODIFY TO ACCEPT 15" RCP MODIFY TO ACCEPT 15" RCP MMH TOP REQID. NEW MH TOP REQID. RIM: 151.68 INV IN: 138.17 (FR 23942) INV IN: 137.54 (TO 14707) INV UN: 137.54 (TO 14707) INV OUT: 137.54 (TO 14707) INV INV INV INV INV INV INV INV INV INV		STA: 75+74.35, 30.6' RT AbJUST TO GRADE ADJUST TO GRADE MODIFY TO ACCEPT 15" RCP MODIFY TO ACCEPT 15" RCP NEW MH TOP REQ'D. RN NNV IN: 153.86 INV IN: 145.67 (FR 239241) INV IN: 144.12 (TO 14767)(S) INV OUT: 144.12 (TO 14767)(S) INV OUT: 144.12 (TO 14767)(S)	T0 23942	SEE SHEET C-10.1	STA: T77, 33,4' RT	TO GRADE L=8' REQ'D TO ACCEPT 15" RCP TO ACCEPT 15" RCP (149.45 (FR 0014) (149.42 (TO 23942) (149.42	3941)			
160	STA: 74+65, 30.2' RT ADJUST TO GRADE MODIFY TO ACCEPT 15" RCP MODIFY TO ACCEPT 15" RCP MMH TOP REQID. NEW MH TOP REQID. RIM: 151.68 INV IN: 138.17 (FR 23942) INV IN: 137.54 (TO 14707) INV UN: 137.54 (TO 14707) INV OUT: 137.54 (TO 14707) INV INV INV INV INV INV INV INV INV INV		23.2 RI 23.2 RI 23.2 RI 23.2 <td< td=""><td>160 23943 E C C 23943</td><td>SEE SHEET C-10.1 SEE SHEET C-10.1</td><td>(23</td><td>SEE SHEET C-10.2 SEE SHEET C-10.2 SEE SHEET C-10.2 (0014) SEE SHEET C-10.2 SEE SHEET C-10.2 SEE</td><td></td><td></td><td></td></td<>	160 23943 E C C 23943	SEE SHEET C-10.1	(23	SEE SHEET C-10.2 SEE SHEET C-10.2 SEE SHEET C-10.2 (0014) SEE SHEET C-10.2 SEE				
	STA: 74+65, 30.2' RT FT MODIFY TO ACCEPT 15" RCP 914 NEW MH TOP REQ10. RMM 151.68 RIM: 151.68 NNV IN: 138.17 (FR 23942) NNV IN: 144 (FR 0018) CB=2. MV OUT: State (TO 14707) 2.16 (TO 14767) 2.15 (TO 14767)		Aboust 10 GRADE STA: 75+74.35, 30.6' RT Aboust 10 GRADE STA: 75+74.35, 30.6' RT MODIEY TO GRADE MoDIEY TO ACCEPT 15" RCP MODIEY TO ACCEPT 15" RCP MODIEY TO ACCEPT 15" RCP NEW MH TOP REQ ^D . RIM: 153.86 INV IN: 146.44 (FR 23924) INV IN: 146.44 (FR 23924) INV IN: 146.44 (FR 23924) INV IN: 144.12 (TO 14767)(S) A: 75+75, 23.2' RT 0 Y REQ ^D . 144.12 (TO 14767)(S) A: 75+75, 23.2' RT 0 INV IN: 144.12 (TO 14767)(S) 166 A: 75, 23.2' RT 0 A: 75, 75, 23.2' RT 0	и опт: 148.39 (то 23942 011: 148.39 (то 23942 011: 148.39	SEE SHEET C-10.1	23 24, KE 24, KE 25, 124 25, 12425, 124 25, 124 25, 124 25, 12425, 124 25, 124 25, 124 25, 12425, 124 25, 124 25, 12425, 124 25, 124 25, 12425, 124 25, 124 25, 12425, 124 25, 124, 12425, 124, 124, 124, 124, 124, 124, 124, 124	SEE SHEET C-10.2 941) 941) (Crossing and a construction of the	CB-28, L=8, 27.0 L CB-28, L=8, REQ AVOID EXISTING DUCT BANK RIM: 157.80 INV OUT: 150.41 (TO 23941)			
160	ADUUST TO GRADE STA: 74+65, 30.2' RT ADUUST TO GRADE MODIFY TO ACCEPT 15" RCP MODIFY TO ACCEPT 15" RCP MODIFY TO ACCEPT 15" RCP NW MH TOP REQID. RMM: 151.68 RNM: 151.68 RNM: 151.68 NV 0UT: 137.54 (TO 14707) MV 0UT: 137.54 (TO 14707) MV 0UT: 137.54 (TO 14707) V IN: 144.68 (FR 0017) V UN: 144.68 (FR 0017) V UN: 142.16 (TO 14767)	Y: 10.1 Y: 14+83, 23.0' Y: 147.80	1001-7 147.12 1001-7	NN 001: 148:39 (10 53943 100 NN 011: 148:39 (10 53943 1555	<u>SEE SHEET C-10.1</u> <u>SEE SHEET C-10.1 <u>SEE SHEET C-10.1</u> <u>SEE SHEET C-10.1</u> <u>SEE SHEET C-10.1</u> <u>SEE SHEET C-10.1 <u>SEE SHEET C-10.1 <u>SEE SHEET C-10.1 <u>SEE SHEET C-10.1 <u>SEE </u></u></u></u></u></u>	23 24, KE 24, KE 25, 124 25, 12425, 124 25, 124 25, 124 25, 12425, 124 25, 124 25, 124 25, 12425, 124 25, 124 25, 12425, 124 25, 124 25, 12425, 124 25, 124 25, 12425, 124 25, 124, 12425, 124, 124, 124, 124, 124, 124, 124, 124	SEE SHEET C-10.2 SEE SHEET C-10.2 941) 942) 941) 941) 941) 941) 942)	CBH2B, LEB, REQ D. CBH2B, LEB, REQ D. AVOID EXISTING DUCT BANK AVOID EXISTING DUCT BANK			
155	STA: 74+84, 23.0° RT STA: 74+65, 30.2° RT FT STA: 74+84, 23.0° RT MODIFY TO ACCEPT 15" RCP U NEW MH TOP REQID. NEW MH TOP REQID. RRM: 151.68 RMM: 151.92 NNV NUN: 137.54 (TO 14707) U NV NUN: 142.16 (TO 14767) NNV OUT: 142.16 (TO 14767) NNV OUT: 142.16 (TO 14767)	-10.1 -1	SEE SHEET C-10.1 SEE SHEET C-10.1 SEE SHEET C-10.1 STA: 75+74.35, 30.6' RT Abust To GROE MODIFY TO ACCEPT 15" RCP MODIFY TO ACCEPT 15" RCP MoDIFY TO ACCEPT 15" RCP New MH TOP REGID: 15.86 New MH TOP REGID: 15.86 No NIN: 145.67 (FR 239241) INV IN: 145.67 (FR 239241) INV IN: 145.67 (FR 239241) INV IN: 144.12 (TO 14767)(5) STA: 75+75, 23.27 RT 010 INV IN: 144.12 (TO 14767)(5) STA: 75+76, 23.27 RT 010 INV IN: 144.12 (TO 14767)(5) STA: 75+77, 23.27 RT 010 INV IN: 144.12 (TO 14767)(5) STA: 75+77, 23.27 RT 010 INV IN: 144.12 (TO 14767)(5) REGNINE COLS REAL	ADE 155	STA: 75+74, 30.6' RT STA: 75+74, 30.6' RT STA: 75+74, 30.6' RT Nobility To Accept 15" RCP Mobility To Accept 15" RCP Nobility To Accept 15" RCP NEW MH TOP REQ'D. Nobility To Accept 15" RCP NEW MH TOP REQ'D. Nobility To Accept 15" RCP NEW MH TOP REQ'D. Nobility To Accept 15" RCP NEW MH TOP REQ'D. Nobility To Accept 15" RCP STA: 75+44, 63.1' RT TA4.12 (To 14767) STA: 75+44, 63.1' RT TA4.12 (To 14767) NW IN: 146.06 (To 23924) NW IN: 148.02 (FR 0016) NW IN: 146.96 (To 239242) NW IN: 144.12 (To 14767) NW IN: 145.96 (To 23942) NW IN: 144.12 (To 14767) NW IN: 152.81 NW OUT: 144.12 (To 14767) NW IN: 152.81 NW OUT: 144.12 (To 14767) NW IN: 152.81 NW OUT: 144.96 (To 23942)	23 23 23 23 23 24 23 24 23 24 23 24 23 24 24 24 25 24 24 25 24 25 24 24 25 24 24 25 24 24 24 24 25 24 24 24 24 24 25 24 24 24 24 24 25 24 24 24 24 24 24 24 24 24 24	SEE SHEET C-10.2 941) 941) (Crossing and a construction of the	CB-28, L=8, 27.0 L CB-28, L=8, REQ AVOID EXISTING DUCT BANK RIM: 157.80 INV OUT: 150.41 (TO 23941)			
155 150	SEE SHEET C STA: 74+65, 30.2' RT STA: 74+65, 30.2' RT STA: 74+65, 30.2' RT MobileY TO Accept 15" RCP MM: 151.68 MM: 151.68 MM: 151.68 MM: 141.44 MM: 151.92 MM: 141.44 MM: 151.92 MM: 141.44 MM: 151.92 MM: 141.44 MM: 151.92 MM: 151.92 MM: 144.66 MV 0011: MV 144.66 MV 137.54 MV 144.66 MV 137.54 MV 144.44 MV 144.44 MV 137.54 MV 144.44 MV 144.44 MV <	-10.1 -	SEE SHEET C-10.1 SEE SHEET C-10.1 SEE SHEET C-10.1 STA: 75+74.35, 30.6' RT STA: 75+74.35, 30.6' RT Aboust 10 GRADE Aboust 10 GRADE MODIEY TO ACCEPT 15: RCP NN IN: 144.64 (FR 23924) INV IN: 146.74 (FR 23924) INV IN: 146.74 (FR 23924) INV IN: 146.74 (FR 23924) INV IN: 144.12 (TO 14767) TEST HOLE - CENT REQUIRED TO COLO INV IN: 148.02 (FR 0016) INV IN: 144.12 (TO 14767) REST HOLE - CENT REQUIRED TO COLO I DO I STING ACCF REXE RECOTO COLO I STING ACF I S	160 150 150 150 150 150 150 150 15	SEE SHEET C-10.1 SEE SHEET C-10.1 SIA: 74, 30.6 MODIFY TO ACCEPT 15" RCP MALL 12 (TO 14761) MAN IN: 146.94 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 144.12 (TO 14761) MAN IN: 145.98 MAN IN: 145.91 MAN IN MAN IN MAN IN	23 23 23 23 23 23 24 23 24 23 24 23 24 23 24 24 25 24 24 25 24 24 25 24 25 24 25 24 25 25 25 25 25 25 25 25 25 25	SEE SHEET C-10.2 941) a a a a b a a b c c c c c c c c c c c c c	High Stress High Stress High Stress High Stress			
155 150	SEE SHEET C STA: 74+65, 30.2' RT STA: 74+65, 30.2' RT STA: 74+65, 30.2' RT MODIFY TO GRADE MODIFY TO ACCEPT 15" RCP MIL 10P REGID. NNV NI: 141.44 (FR 0018) NV OUT: 137.54 (TO 14707) NV OUT: 142.16 (TO 14707) NV OUT: 142.16 (TO 14707)	-10.1 -10.1 -	SEE SHEET C-10.1 SEE SHEET C-10.1 SEE SHEET C-10.1 (23942) (23942) SUPPLICE STATE SUPPLICE SUPPLICE <td colspan<="" td=""><td>$\begin{array}{c c} & & & & & \\ \hline & & & & & \\ \hline & & & & & \\ \hline & & & &$</td><td>SEE SHEET C-10.1 STA: 75+74, 306 KRDE STA: 75+74, 306 KRDE MODIFY TO ACCEPT 15" RCP MOUNI: 144.12 (FR 0213024) MOUT: 1448.04 (FR 233024) MOUT: 144.12 (FR 86-224B) MOUT: 145.81 MOUT: 145.81 MOUT: 145.91 MOUT: 145.91 MOUT: 145.92 MOUT: 145.92 MOUT: 145.91 MOUT: 145.91 MOUT: 145.91 MOUT: 145.91</td><td>23 23 23 23 23 24 23 24 23 24 23 24 23 24 25 24 25 25 26 26 27 27 27 27 27 27 27 27 27 27</td><td>SEE SHEET C-10.2 941) d) d</td><td>Image: state of the state</td><td></td><td></td></td>	<td>$\begin{array}{c c} & & & & & \\ \hline & & & & & \\ \hline & & & & & \\ \hline & & & &$</td> <td>SEE SHEET C-10.1 STA: 75+74, 306 KRDE STA: 75+74, 306 KRDE MODIFY TO ACCEPT 15" RCP MOUNI: 144.12 (FR 0213024) MOUT: 1448.04 (FR 233024) MOUT: 144.12 (FR 86-224B) MOUT: 145.81 MOUT: 145.81 MOUT: 145.91 MOUT: 145.91 MOUT: 145.92 MOUT: 145.92 MOUT: 145.91 MOUT: 145.91 MOUT: 145.91 MOUT: 145.91</td> <td>23 23 23 23 23 24 23 24 23 24 23 24 23 24 25 24 25 25 26 26 27 27 27 27 27 27 27 27 27 27</td> <td>SEE SHEET C-10.2 941) d) d</td> <td>Image: state of the state</td> <td></td> <td></td>	$\begin{array}{c c} & & & & & \\ \hline & & & & & \\ \hline & & & & & \\ \hline & & & &$	SEE SHEET C-10.1 STA: 75+74, 306 KRDE STA: 75+74, 306 KRDE MODIFY TO ACCEPT 15" RCP MOUNI: 144.12 (FR 0213024) MOUT: 1448.04 (FR 233024) MOUT: 144.12 (FR 86-224B) MOUT: 145.81 MOUT: 145.81 MOUT: 145.91 MOUT: 145.91 MOUT: 145.92 MOUT: 145.92 MOUT: 145.91 MOUT: 145.91 MOUT: 145.91 MOUT: 145.91	23 23 23 23 23 24 23 24 23 24 23 24 23 24 25 24 25 25 26 26 27 27 27 27 27 27 27 27 27 27	SEE SHEET C-10.2 941) d) d	Image: state of the state		
155 150 150 ^{TO BE} STA 145	SEE SHEET C SEE SHEET C STA: 74+65, 30.2' RT STA: 74+65, 30.2' RT MOUNT TO ACCEPT 15" RCP MADUUST TO ACCEPT 15" RCP MIM: 151.68 RIM: 151.68 RIM: 151.82 MY NOUT: 147.65 MIV OUT: 144.66 MIX MOO MIX	-10.1 -11.1 -11.1 -11.1 -11.1 -11.1 -11.1 -11.1 -11.1 -11.1 -11.1 -11.1	SEE SHEET C-10.1 SEE SHEET C-10.1 SEE SHEET C-10.1 (23942) (23942) SUPPLICE STATE SUPPLICE SUPPLICE <td colspan<="" td=""><td>160 150 150 150 150 150 150 150 15</td><td>SEE SHEET C-10.1 SEE SHEET C-10.1 SIA: 74, 30.6 MODIFY TO ACCEPT 15" RCP MALL 12 (TO 14761) MAN IN: 146.94 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 144.12 (TO 14761) MAN IN: 145.98 MAN IN: 145.91 MAN IN MAN IN MAN IN</td><td>23 23 23 23 24 23 24 23 24 23 24 23 24 23 24 24 25 24 25 24 25 26 27 27 27 27 27 27 27 27 27 27</td><td>SEE SHEET C-10.2 941) a) b) b</td><td>High Stress High Stress High Stress High Stress</td><td></td><td></td></td>	<td>160 150 150 150 150 150 150 150 15</td> <td>SEE SHEET C-10.1 SEE SHEET C-10.1 SIA: 74, 30.6 MODIFY TO ACCEPT 15" RCP MALL 12 (TO 14761) MAN IN: 146.94 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 144.12 (TO 14761) MAN IN: 145.98 MAN IN: 145.91 MAN IN MAN IN MAN IN</td> <td>23 23 23 23 24 23 24 23 24 23 24 23 24 23 24 24 25 24 25 24 25 26 27 27 27 27 27 27 27 27 27 27</td> <td>SEE SHEET C-10.2 941) a) b) b</td> <td>High Stress High Stress High Stress High Stress</td> <td></td> <td></td>	160 150 150 150 150 150 150 150 15	SEE SHEET C-10.1 SEE SHEET C-10.1 SIA: 74, 30.6 MODIFY TO ACCEPT 15" RCP MALL 12 (TO 14761) MAN IN: 146.94 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 148.97 (FR 233924) MAN IN: 144.12 (TO 14761) MAN IN: 145.98 MAN IN: 145.91 MAN IN MAN IN MAN IN	23 23 23 23 24 23 24 23 24 23 24 23 24 23 24 24 25 24 25 24 25 26 27 27 27 27 27 27 27 27 27 27	SEE SHEET C-10.2 941) a) b) b	High Stress High Stress		
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155 150 150 145	SEE SHEET C. (14767) (14767) (14767) (14767) (14767) (14767) (14767) (14767) (1110) (1110) (1111) (11110) (1111) (111111) (11111) (1111111)	-10.1 -1	SEE SHEET C-10.1 SEE SHEET C-10.1 SEE SHEET C-10.1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	SEE SHEET C-10.1 SEE SHEET SEE SHEET SHET SH	160 155 55 155 55 155 55 55 145 55 55 55 55 55 55 55 55 55	SEE SHEET C-10.2 941) 40 941) 40 941) 40 941) 40 941) 40 941) 40 941) 40 941) 40 941) 40 941) 41 941) 42 941) 43 941) 44 941) 45 941) 45 941) 46 941) 47 941) 47 941) 47 941) 47 941) 47 941) 47 941) 47 941) 480 941) 941) 941) 941)	WK (1+ WK (1+ <td< td=""><td></td><td></td></td<>			

	STA:6 TOP	(149.43 (FR 23940) (NV IN: 149.94 (FR 2014) (NV IN: 149.94 (FR 2014) (NV IN: 149.94 (FR 2014) (NV IN: 149.94 (FR 2014) (NV IN: 149.42 (TO 23942) (NV I	MATCHLINE STA: 6+50 - SHEET C11.2	<image/> <section-header><section-header><section-header><section-header><section-header><section-header><text><text><text><text></text></text></text></text></section-header></section-header></section-header></section-header></section-header></section-header>
	6+00 R STORM	6+ 1 CON	50 ST. ONLY	Design Team Engineer Supervisor Construction Management Supervisor Water, Sewer, Streets Bureau Chief Transportation Director Project Manager Revisions Date
2. SE 3. CO TH PC INS RE SH ST TC INS ST CF ST ST ST ST ST SH ST ST ST ST SH ST ST ST ST SH ST ST ST ST SH ST ST ST ST ST ST	ONTRACTOR TO MAI IROUGHOUT THE PF DSSIBLE AT ALL TIME STALLED AND SEQU EQUIRED FOR TIE-IN HOULD PUMP-AROUI FORM SEWER INSTA D THE COST OF STO STALLATION. ONTRACTOR TO FIEL EXISTING UNDERG ROSSING PROPOSED FRUCTURES PRIOR	ULL UTILITY N NTAIN POSITI ROJECT LIMITS ES. STORM SE ENCED TO MI OR CUT-OVE NDS BE REQU LLATIONS, TH RM PIPE AND D VERIFY LOG ROUND UTILI D STORM SEW TO INSTALLAT SER LINE AND OSED IMPROV	ETWORK PLAN VIEWS. VE DRAINAGE S TO THE EXTENT WER SHALL BE NIMIZE DOWN TIME R OPERATIONS. IRED TO COMPLETE EY WILL BE INCIDENTAL STRUCTURE CATION AND ELEVATION TIES ADJACENT TO OR /ER PIPE AND TON. LIGHTING LINE MAY BE /EMENTS. SEE DETAIL	Designed: DCD Drawn: MAT Checked: DCD Miss Utility Transmittal #: Filename: 010073-C-STRM.dwg Path: K:NVA RDWY110010073 columbia pike multimodal/production/task Checked: DCD Miss Utility Transmittal #: Filename: 010073-C-STRM.dwg Path: X: Stail design of columbia pike segments/segment ct/2.5.1 - 75% design pathetes
UT CC CF	TILITIES CANNOT BE DNCRETE PIERS ANI RADLE PER ARLINGT -7.0.	MET, CONTRA D/OR REINFOR TON COUNTY S	ACTOR TO INSTALL	Plotted: September 29, 2022 Plotted by: Miguel.Tyshing RGINIA
	LUMBIA PIK	COLUM	SEGMENT C	
		L	ARLING VIRGI ARAYA BEAU CHIEF, DES - DEVELOPME	INIA ENVIRONMENTAL SERVICE

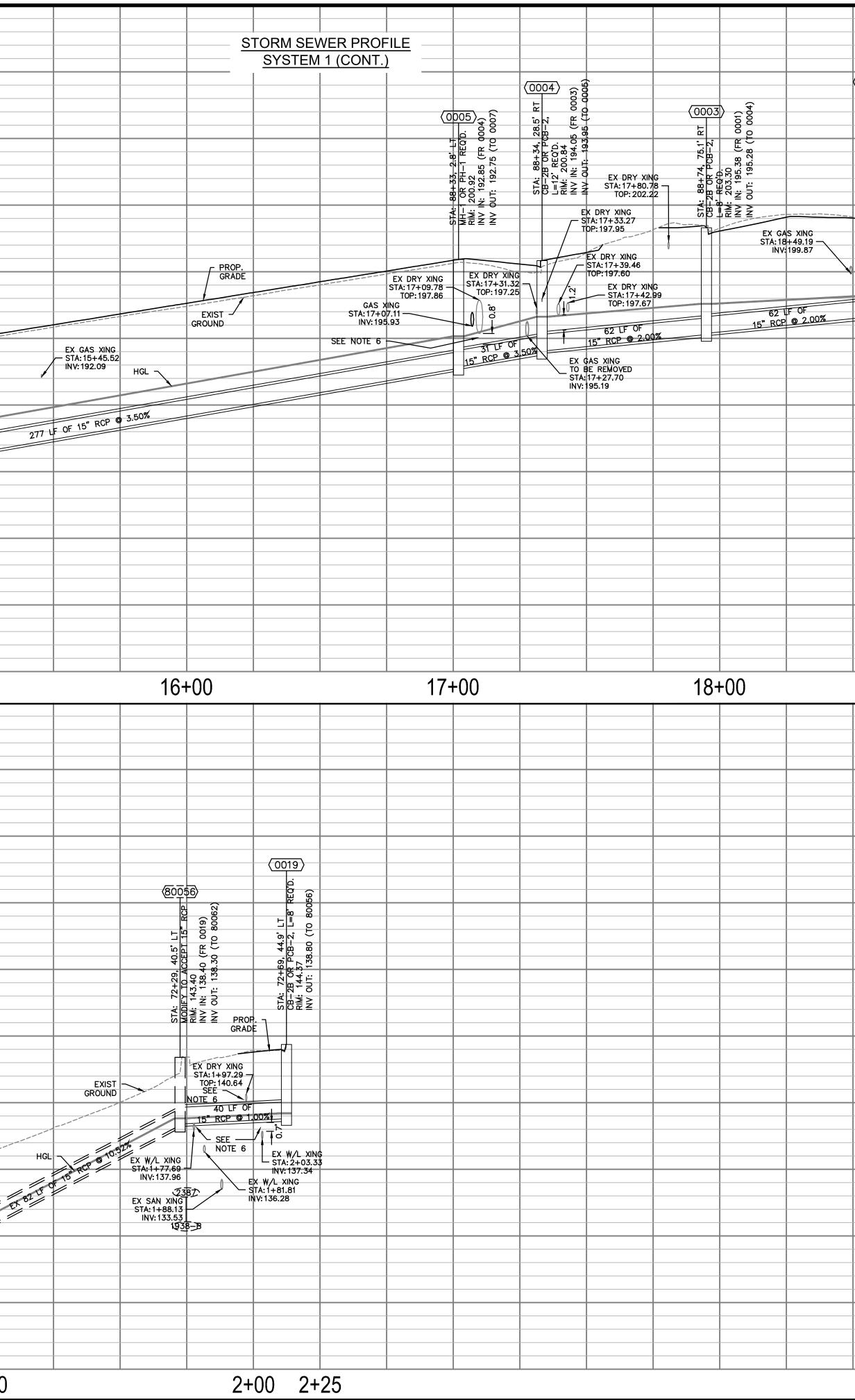
						S.	 FORM SEWER F				_		F
190							SYSTEM 1 (CC						
													3.5 ⁷ RI
185											R1 [23 23937) 239341) 0 23939)		1.12, 26 GRADE
											2.8' RT ADE EQ'D. (FR 235 (FR 235 (FR 235) 0 (TO 2		STA: 83+91. ADJUST TO (
180							(23939)				STA: 82+91, 32.8' R ADJUST TO GRADE NEW MH TOP REQ'D. RIM: 175.06 INV N: 165.30 (FR 2 INV N: 164.60 (FR 2 INV OUT: 164.10 (TO		AD.
											STA: 82 ADJUST NEW MH NEW MH INV IN: INV IN: INV OUT		
175							53.6' RT ADE ADE CEPT 15 REQ'D. (FR 23 (FR 23 64 (TO						
		<u>(23940</u>)	00	3940)		35.4' F REQ'D. 7 (FR 2 22 (FR 5	1+26, 3 10 58, 10 58, 10 58, 10 58, 10 58, 12 58, 12 157, 54 157, 54 157, 54			GRADE			
170			23941) 5.4' RT 5.4' RT 00 00	7" RCP (FR 235 (FR 001 (FR 001 8 (TO 2		STA: 80+74, 35,4' F ADJUST TO GRADE NEW MH TOP REQ'D. RIM: 166.23 INV IN: 157.17 (FR 2 INV IN: 157.17 (FR 2 INV OUT: 154.42 (TO	STA: 81+26, 33.6' RT ADJUST TO GRADE MODIFY TO ACCEPT 15" RCP NEW MH TOP REQ'D. RIM: 168.12 INV IN: 157.62 (FR 23943) INV IN: 157.54 (FR 0009) INV OUT: 157.54 (FR 0009)			EXIST			-
	←		NEW MH 100 REGU. RIM: 160.80 INV IN: 150,53 (FR 0011) INV 0UT: 150.33 (TO 23941) STA: 79+87, 35.4' RT	TIE TO EXIST. 27" RCP (1) RIM: 162.93 INV IN: 152.08 (FR 23938) INV IN: 152.08 (FR 0010) INV IN: 152.08 (TO 23940) INV 0UT: 152.08 (TO 23940)						GROUND		= == == == == EX 100 LF OF 24" RCP @ 2.35	
165	C	9+29 10 28 10 0 6R	1 100 1 150,53 150,5	INC				(409) FX SAN XINGT		S XING A 10+60,95 :167.08		EX 100 LF OF 24" RCP @ 2.35 =	=
		STA: ADJUST MODIFY						14092 EX SAN XING STA:10+24.17 INV:163.42 14090					F
160							HGL -		165 LF OF 24" RCP @ 3.92%	SEE STORM PROFILE 1-10			
	20 + 20 9		W/L XING STA: 7+76.74 INV: 156.05 COM XING STA: 7+91.98 TOP: 157.33 TOP: 157.33	- SEE STOP		EX 52 LF OF 27" RCP @ 0.71%							-
155	COM XING STA: 6+51.47 TOP: 153.82 DEV XING	SEE STORM - PROFILE 1-6	TOP: 157.33 GAS XING STA: 7+94.43 INV: 157.00										
	O DEV XING U STA: 6+56.87 TOP: 154.02 Image: Comparison of the second sec						SEE STORM						
150			57 LF OF 27" RCP @ 2.70%		LF OF 27" RCP @ 2.700								
130	EX 152 LF OF 24"x38" ERCP @ 0.59%	+											
4.45		DEV XING STA: 7+79.10 TOP: 149.58	UNV: 153.75								_		
145			0,00		0			10,00		11,00		10	
	6+50 7+00		8+00		9.	+00		10+00		11+00		12+	
	STORM SEWER PROFILE	· · · · · · · · · · · · · · · · · · ·	 	<u>ST</u>	ORM SEWER PROP	<u></u>	STORM SEWE			STORM SEWER F			
	SYSTEM 1-6 SEE SHEET C-10.2		SYSTEM 1-7 EE SHEET C-10.2		SYSTEM 1-8 SEE SHEET C-10.2	2 <u>39</u> <u>3</u> 9	<u>SYSTE</u> SEE SHEE			SYSTEM 1- SEE SHEET C-	_		
					0, RT	* RC 5943) 2393 2393							
					94, 33.0								-
				011 (0010)	81+25.	AUJUST 10 GRAUE NEW MH TOP REQ'D. NEW MH TOP REQ'D. RIM: 168.12 INV IN: 157.62 (FR 23 INV IN: 157.54 (FR 0 INV OUT: 157.54 (TO CB-2B OR PCB-2, CB-2B OR PCB-2, RIM: 168.10 RIM: 168.10 INV IN: 157.54 (TO INV OUT: 157.54 (TO INV OUT: 157.54 (TO			405		(23944)		E
	(23940)	(23916)	935 10)		STA:	MODII MODII NN II NN IINV 0 INV 0 INV 0 INV 0 S7.57 (1	0.01 0.01	95 (1	185	ADJUST TO GRADE NEW MH TOP REQ'D. (4) RIM: 175.06 INV IN: 165.30 (FR 23937) INV IN: 164.60 (FR 23939) INV OUT: 164.10 (TO 23939)	23943		
			35.4' RT 35.4' RT 1-1 REQ'D. 27" RCP 08 (FR 23 00 (FR 00	RT L=8' RE 0 0011)		81+26 81+26 168.10 IN: 157 0UT: 11	81+25,	INV OUT: 167.77	אַר גע ק	RADE REQ'D. 0 (FR 2 0 (FR 2 10 (TO	28.5' L (ADE L=10' 53 (TC		
		3 (TO 23 59.0' RT L=10' RI 79 (TO 1	STA: 79+87 35. MH-1 OR PH-1 TIE TO EXIST. 27 RIM: 152.93 INV IN: 152.08 INV IN: 152.08 INV OUT: 152.08	28.5 [*] R CB-2, L 5.14 (TO	170				180	AH TOP AH TOP 75.06 11:164.67 164.63	STA: 82+90, ADJUST TO GR NEW CB TOP, RIM: 174.90 INV OUT: 165.		╞
	STA: 79+29, 34.5' RT 0.21 MODIFY TO ACCEPT 15" RCP NEW MH TOP REQ'D. NV IN: 150.53 (FR 0011) INV IN: 150.53 (FR 0011)	JT: 150.3 79+58, JST TO GR CB TOP, 162.53 0UT: 155.		STA: 79+87, 28.5' F CB-2B OR PCB-2, 1 RIM: 162.81 INV OUT: 156.14 (TC	E TO	X GAS XING BE REMOVED ITA: 0+07.46 INV: 163.07	PROP. GRADE				STA: STA: NV OLUS		-
		NIV OUT STA: 0 NEW C NIM: 1	165				EXIST GROUND EX DRY XING STA: 0+26.63 TOP: 163.17	EX DRY XING - STA: 0+54.08 TOP: 163.96	175	PROP. GRADE			
	EXIST GROUND			GRADE	TO	X W/L XING BE REMOVED STA: 0+12.40 INV: 162.61	TOP: 163.17	EX DRY XING — STA: 0+60.16 TOP: 163.68 EX DRY XING STA: 0+57.86 TOP: 162.88		EXIST - GROUND			
	160 TEX W/L XIN	COM XING	160	EXIST GROUND	160	HGL: 160.01		STA: 0+57.86 TOP: 162.88	170	W/L XNG STA: 0+41.53 NV: 169.99			
	W/L XING STA: 0+28.4 STA: 0+15.00 INV: 158.3 INV: 158.13 J	NV:157.18	HGL		AS XING	5 LF OF 57/LF O	F 15" RCP 0,50%	EX W/L XING TO BE REMOVED STA: 0+46.64 INV: 161.68	EX SAN XING TO BE ABANDONED S A: 0+21.84 INV: 167.63	HGL -			
		HGL: 156.41	155	HGL:			W/L XI STA: 0+ INV: 162	NV: 161.68 VG 41.11			1.52%		
	HGL: 154.69			7 LF OF		EX SAN XING TO BE REMOVED STA: 0+20.41 INV: 160.42	INV: 162	.78					
	150	13748 EX SAN XING STA: 0+24,25 LINV: 153,82 1929	150		150	GAS XING	07 SAN XING	.79	160 SEE STORM -/ PROFILE 1	08 SAN XING STA: 0+35.62 INV: 163.28 07	SEE NOTE 6		-
	SEE STORM -	DEV XING STA: 0+16.92 TOP: 149.88	SEE STORM - PROFILE 1			NV:160.73	06	5					
	145	TOP: 149.88	145		145				155				
	140		140		140				150				
'	0+00	0+50	0+	·00 0+	25	0+00		0+75	0+	-00	0+	75	

Monocolumna Abuust TO GRADE Mew CB TOP, L=10' REQ'D. NEW CB TOP, L=10' REQ'D. NN IN: 171.98 (FR 23936) INV IN: 172.29 (FR SP-396D) INV IN: 172.29 (FR SP-396D) INV OUT: 157.66 (TO 23945)(D)	Matchine State Matchine State	<section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header>
00	13+00 FOR STORM CONST. ONLY	
	 NOTES: PROFILE STATIONING ALONG CENTERLINE OF PIPE SEE SERIES 10 FOR FULL UTILITY NETWORK PLAN VIEWS. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE THROUGHOUT THE PROJECT LIMITS TO THE EXTENT POSSIBLE AT ALL TIMES. STORM SEWER SHALL BE INSTALLED AND SEQUENCED TO MINIMIZE DOWN TIME REQUIRED FOR TIE-IN OR CUT-OVER OPERATIONS. SHOULD PUMP-AROUNDS BE REQUIRED TO COMPLETE STORM SEWER INSTALLATIONS, THEY WILL BE INCIDENTA TO THE COST OF STORM PIPE AND STRUCTURE INSTALLATION. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATIO OF EXISTING UNDERGROUND UTILITIES ADJACENT TO OR CROSSING PROPOSED STORM SEWER PIPE AND STRUCTURES PRIOR TO INSTALLATION. OFFSET OF EXIST. FIBER LINE AND LIGHTING LINE MAY BE REQUIRED FOR PROPOSED IMPROVEMENTS. SEE DETAIL SHEET C2.1. WHERE MINIMUM VERTICAL CLEARANCES BETWEEN UTILITIES CANNOT BE MET, CONTRACTOR TO INSTALL CONCRETE PIERS AND/OR REINFORCED CONCRETE CRADLE PER ARLINGTON COUNTY STANDARD DRAWING M-7.0. 	Designed: DCD Drawn: MAT Checked: DCD Miss Utility Transmittal #: Filename: 010073-C-STRM.dwg Filename: 010073-C-STRM.dwg Path: 75 final design of columbia pike multimodal production/task Path: 75 final design of columbia pike segments/segment c/7.5.1-75% design/plansheets Plotted: September 29, 2022
	ARLINGTON COUNTY, V DEPARTMENT OF ENVIRONME STORM SEWER PROP COLUMBIA PIKE - RO COLUMBIA PIKE - MULTIMODAL ST SEGMENT C SCALE: HOR. 1" = 25' VERT. 1" = 5' SHEET:	NTAL SERVICES FILES OUTE 244
		DEPARTMENT OF GINIA

LUS ARAYA BUREAU CHIEF, DES - DEVELOPMENT SERVICES

CES

210											
210											
205											
					(23936)	<u> </u>) 07)				
200					6" T	тоР, L=14' REQ'D. 73 80.42 (FR оро7) 179.92 (TO 23937) 5+56, 4.0' ЦТ <u>О</u>	MH-1 OR PH-1 REQ'D. 0 RIM: 191.31 INV IN: 183.04 (FR 0006) INV IN: 183.04 (FR 0005) INV OUT: 182.04 (TO 23936) INV OUT: 182.04 (TO 23936)				
						=14' F (FR 0 2 (TO 4.0' L	-1 RE(4 (FR 4 (FR .04 (T				
195						NEW CB TOP, L=14' RIM: 190.73 INV IN: 180.42 (FF (INV OUT: 179.92 (TC STA: 85+56, 4.0'	0R PH- 1.31 183.0 183.0				
195					:: 85+ UST T DIFY T(TA: 0UT: 190.1					
	1.2				STA ADJ MOL	N N N N N N N N N N N N N N N N N N N	ZZZZ		EX DR	r XING	
190	ပဲ								TOP: 19	r XING +78.66 1.28	
							EX DRY XING STA:14+15.54 TOP:187.57	GAS XING	SEE NOTE 6 7	GAS XING STA:14+96. INV:187.76	72
	SHEE			EX GA TO BE RE SAN XING INV: REMOVED	S XING MOVED		+=-				
185	- 00		EX S TO BE STA	SAN XING INV: REMOVED 14+11.38 V:184.07	184.78						
	13+00	EX SAN XI		V: 184.07 X W/L XING				EX W/L	xing		
180	STA:	EX SAN XI TO BE ABANDON STA:13+40 INV:181.	ED 10 E 10 ST 30	X W/L XING BE REMOVED A: 14+03.87 INV: 182.41		33 LF OF RCP @ 5.00%		EX W/L TO BE R STA:14+ INV:185.0	MOVED 46.62 06		
100						NO	SEE STORN PROFILE 1-	-11			
			21" RCP @ 4.8	0%=		0					
175	MATCHLINE	EX 165 LF OF									
	N N N N N N N N N N N N N N N N N N N					08	SAN XING — STA: 14+2 INV: 175.80	1.67			
170											
	13-	+00			14-	+00			15-	+00	
	STOF	∣ RM SEWEF					STOR				
		SYSTEM	1-11	·				SYSTEM	12		
		SEE SHEET	<u>C10.4</u>					SEE SHEET	<u>C10.1</u>		
					155						
200		EQD. 0006) R 0006) R 0005) T 23336) T	06) ¥ ∩		150						
200	۲ ۵	Г REQ'D. (FR 000 (FR 000 04 (TO 2 LT	0. BANK 0 0007)		150						<u>o</u>
	56. 4.0	R PH-1 F 1.31 183.04 (F 183.04 (F 183.04 (F 1: 182.04 6, 28.5' L	CB-2B, L=10' REQ'D. AVOID EXISTING DUCT I RIM: 190.75 INV QUT: 183.53 (TO C							57.2' LT 88 (5) (5) (5) (5) (5) (5) (5) (5) (5) (5)	(TO 80070
195	85+5	1 OR PH- 191.31 IN: 183.0 IN: 183.0 UT: 182.0 OUT: 182	C=10 XISTIN 3.75 183.		145					7.2' L ⁻ 18 (FR 8	7 (To
	STA:	MH-1 OR RIM: 191 INV IN: 11 INV IN: 11 INV OUT: TA: 85+56,	8–28, VOIDE, VOIDE, VOUT							STA: 71+46, 37.2' DO NOT DISTURB RIM: 135.31 INV IN: 129.62 (FR	127.4
		GRADE \	Ŭ∢₽Z							A: 714 NOT : 135.	÷ NO /
190			Π		140	(800	070)g			ST RIM INV	Ň
ES	X DRY XING STA: 0+20.79 TOP: 187.74		EX DRY XIN - STA: 0+23.8 TOP: 187.48	G 37			270) 8 8 8				
		HGL			105	20.5 56.5	DO NOT DISTURB RIM: 130.09 INV IN: 126.99 (FR				
185 s	W/L XING TA: 0+05.15 INV: 185.63		EX DRY XI STA: 0+26. TOP: 186.9	NG 86 4	135	70+58	01 DIS 130.09 126.				
						STA:	D N N N N N N N				
180	L		EX W/L XING TO BE REMOVE STA: 0+12.84 INV:184.04	D	130						EXS
	SEE STORM -/ PROFILE 1	25_LF_0	OF								
		15" RCI	P @ 2.00%					EX 90 LF 15" RCP @	OF ====================================		
175					125						
170					120						
	^		<u> </u>		120	^					
	()+	·00	0+	·50		0+	·00			1+	00



CB-2B OR PCB-2, CB-2B OR PCB-2, L=12' REQ'D. TE TO EXIST, 10" RCP RIM: 204.41 INV OUT: 196.61 (TO 0003)				ARLINGTON ARLING	VICES ion te 813
				Seal EDWARD J. DELLO Lic. No. 0402054356 O9/29/2022	WEER VI WO
	19+00	Image: select		Approvals Design Team Engineer Supervise Construction Management Super Water, Sewer, Streets Bureau Ch Transportation Director	visor
FC	PROFILE STATIONIN SEE SERIES 10 FOR CONTRACTOR TO M. THROUGHOUT THE I POSSIBLE AT ALL TII INSTALLED AND SEG REQUIRED FOR TIE- SHOULD PUMP-ARO STORM SEWER INST	M CONST. <u>NOTES:</u> G ALONG CENTERLINE FULL UTILITY NETWOR AINTAIN POSITIVE DRA PROJECT LIMITS TO TH MES. STORM SEWER SI QUENCED TO MINIMIZE IN OR CUT-OVER OPER UNDS BE REQUIRED TO TALLATIONS, THEY WILL	ONLY OF PIPE K PLAN VIEWS. INAGE E EXTENT HALL BE DOWN TIME ATIONS. D COMPLETE BE INCIDENTAL	Project Manager Revisions	Date
4. 5. 6.	INSTALLATION. CONTRACTOR TO FI OF EXISTING UNDER CROSSING PROPOS STRUCTURES PRIOF OFFSET OF EXIST. F REQUIRED FOR PRO SHEET C2.1. WHERE MINIMUM VE UTILITIES CANNOT E CONCRETE PIERS A	ORM PIPE AND STRUC ELD VERIFY LOCATION RGROUND UTILITIES AD ED STORM SEWER PIP R TO INSTALLATION. IBER LINE AND LIGHTIN POSED IMPROVEMENT ERTICAL CLEARANCES BE MET, CONTRACTOR ND/OR REINFORCED CO GTON COUNTY STANDA	AND ELEVATION JACENT TO OR E AND IG LINE MAY BE 'S. SEE DETAIL BETWEEN TO INSTALL ONCRETE	Designed: DCD Drawn: MAT Checked: DCD Miss Utility Transmittal #: Filename: 010073-C-STRM.dw Path: 7.5 fnal design of columbia pike segments/segme design/plansheets Plotted: September 29, 2 Plotted by: Miguel.Tyshin	7g imodal\production\task nt c\7.5.1 - 75% 022
C		COLUMBIA I KE - MULTIM	VIRONMENT WER PROFII PIKE - ROU	ΓAL SERVICES LES	INTS
SCA	LE: HOR. 1"	= 25' VERT. 1" = 5'	SHEET:	C11.3 of C11.8	

11/15/2022 APPROVAL DATE

VIRGINIA Devir D Jaya LUIS ARAYA BUREAU CHIEF, DES - DEVELOPMENT SERVICES

												Арре	endix 9E	3-1 LD	-204 S	tormw	ater Inle	et Com	putatio	ons												I
LD-204 Rev. 6-85					1	PPMS#	1 [.]	1001007	73		PROJ		Columb	ia Pike N	Aultimod	lal - Segi	nent C					DATE	s	eptembe	er 29, 202	2			SHEET	OF	1	
																											•			Con Inla	to Only	
	INLET										-		(Sag Inle	ts Only	
NUMBER	ТҮРЕ	LENGTH (FT)	STATION	DRAINAGE AREA (AC)	С	CA	sum CA	I (IN/HR)	Q INCR (CFS)	Q _b , CARRYOVER (CFS)	Q _T , GUTTER FLOW (CFS)	S, GUTTER SLOPE (FT/FT)	S _X , CROSS SLOPE (FT/FT)	T, SPREAD (FT)	W (FT)	W/T	S _W , (FT/FT)	S _W /S _X	Ε	a = 12W(S _W - S _X)+Local Depression	S' _w = a/(12w)	$S_{e} = S_{X} + S'_{W}(E_{0}), (FT/FT)$	COMPUTED LENGTH, L _T , (FT)	L, SPECIFIED LENGTH (F	L/L _T	ш	Q _i , INTERCEPTED (CFS)	Qb, CARRYOVER (CFS)	d (FT)	h (FT)	d/h	T, SPREAD @ SAG (FT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)
INLETS - 0 0001	New CB	E 10	89+11	0.71	0.65	0.462	0.462	4.0	1.846	0.000	1.846	0.0170	0.0366	5.03	1.5	0.30	0.0833	2.28	0.69	2.84	0.158	0.146	10	10	1.00	1.00	1.85	0.000				
	New CB	8	88+66	0.71	0.05	0.462	0.462	4.0	0.510	0.000	0.510	0.0170	0.0300	2.35	1.5	0.64	0.0833	2.26	0.89	2.04	0.156		5	8	1.60	1.00	0.51	0.000		 		<u> </u>
	New CB	12	88+34	0.17	0.75	0.120	0.120	4.0	1.786	0.000	1.786	0.0222	0.0400	6.05	1.5	0.25	0.0833	4.17	0.68	3.14	0.174	0.139	12	12	1.00	1.00	1.79	0.000		 		
	New CB	10	85+56	0.60	0.65	0.390	0.390	4.0	1.560	0.000	1.560	0.0521	0.0200	4.95	1.5	0.30	0.0833	4.17	0.78	3.14	0.174	0.156	12	10	0.83	0.96	1.50	0.062		 		
23936	New Top	14	85+56	1.10	0.65	0.715	0.715	4.0	2.860	0.000	2.860	0.0528	0.0200	6.74	1.5	0.22	0.0833	4.17	0.63	3.14	0.174		17	14	0.82	0.96	2.73	0.126		i — †		
23937	New Top	8	83+91	0.20	0.85	0.170	0.170	4.0	0.680	0.126	0.806	0.0618	0.0200	2.99	1.5	0.50	0.0833	4.17	0.95	3.14	0.174	0.186	9	8	0.89	0.98	0.79	0.015				
23944	New Top	10	82+90	0.45	0.68	0.306	0.306	4.0	1.224	0.062	1.286	0.0517	0.0200	4.43	1.5	0.34	0.0833	4.17	0.83	3.14	0.174	0.164	11	10	0.91	0.99	1.27	0.017				
0008	New CB	8	81+25	0.17	0.68	0.116	0.116	4.0	0.462	0.017	0.480	0.0360	0.0200	2.37	1.5	0.63	0.0833	4.17	0.98	3.14	0.174	0.192	6	8	1.33	1.00	0.48	0.000		i T		
0009	New CB	8	81+26	0.41	0.71	0.291	0.291	4.0	1.164	0.015	1.180	0.0360	0.0200	4.69	1.5	0.32	0.0833	4.17	0.80	3.14	0.174	0.160	9	8	0.89	0.98	1.16	0.023				
0010	New CB	8	79+87	0.28	0.72	0.202	0.202	4.0	0.806	0.023	0.829	0.0361	0.0200	3.74	1.5	0.40	0.0833	4.17	0.89	3.14	0.174	0.175	8	8	1.00	1.00	0.83	0.000				
23916	New Top	10	79+58	0.35	0.80	0.280	0.280	4.0	1.120	0.000	1.120	0.0320	0.0330	3.60	1.5	0.42	0.0833	2.53	0.85	2.91	0.161	0.171	9	10	1.11	1.00	1.12	0.000				
23941	New CB	8	77+77	0.70	0.65	0.455	0.455	4.0	1.820	0.000	1.820	0.0190	0.0295	5.51	1.5	0.27	0.0833	2.82	0.67	2.97	0.165	0.141	10	8	0.80	0.94	1.72	0.100				
0014	New CB	8	77+23	0.36	0.85	0.306	0.306	4.0	1.224	0.000	1.224	0.0200	0.0200	5.62	1.5	0.27	0.0833	4.17	0.72	3.14	0.174	0.146	8	8	1.00	1.00	1.22	0.000				
0016	New CB	8	75+75	0.19	0.83	0.158	0.158	4.0	0.631	0.100	0.731	0.0200	0.0200	4.19	1.5	0.36	0.0833	4.17	0.85	3.14	0.174	0.168	6	8	1.33	1.00	0.73	0.000				
23924	New Top	8	75+44	0.10	0.81	0.081	0.081	4.0	0.324	0.000	0.324	0.0245	0.0226	1.84	1.5	0.82	0.0833	3.69	1.00	3.09	0.172	0.194	5	8	1.60	1.00	0.32	0.000				ļ
0017	New CB	8	74+71	0.31	0.75	0.233	0.233	4.0	0.930	0.000	0.930	0.0200	0.0200	4.84	1.5	0.31	0.0833	4.17	0.79	3.14	0.174	0.158	7	8	1.14	1.00	0.93	0.000				
0018	New CB	8	74+71	0.44	0.75	0.330	0.330	4.0	1.320	0.000	1.320	0.0200	0.0200	5.85	1.5	0.26	0.0833	4.17	0.70	3.14	0.174	0.142	9	8	0.89	0.98	1.29	0.025				
0019	New CB	8	72+69	0.17	0.72	0.122	0.122	4.0	0.490	0.000	0.490	0.0530	0.0139	2.14	1.5	0.70	0.0833	6.00	1.00	3.25	0.181	0.194	7	8	1.14	1.00	0.49	0.000				
14707	New Top	10	72+93	0.15	0.90	0.135	0.135	4.0	0.540	0.025	0.565	0.0584	0.0200	2.18	1.5	0.69	0.0833	4.17	0.99	3.14	0.174	0.193	7	10	1.43	1.00	0.57	0.000				
80062	Existing	20	71+46	0.62	0.70	0.434	0.434	4.0	1.736	0.000	1.736	0.0755	0.0401	3.28	1.5	0.46	0.0833	2.08	0.87	2.78	0.154	0.174	13	20	1.54	1.00	1.74	0.000				
INLETS - I	N SAG																															
No Inlets in	n Sag																															

0001 CB-2B OR PCB-2, L=12' REQ'D. TIE TO EXIST. 10" RCP STA: 89+11.23, 124.58RT RIM: 204.41 INV OUT: 196.61 15" RCP

0003 CB-2B OR PCB-2, L=8' REQ'D. STA: 88+74.34, 75.05RT RIM: 203.30 INV IN: 195.38 15" RCP INV OUT: 195.28 15" RCP

0004 CB-2B OR PCB-2, L=12' REQ'D. STA: 88+33.81, 28.50RT RIM: 200.84 INV IN: 194.05 15" RCP INV OUT: 193.95 15" RCP

0005 MH-1 OR PH-1 REQ'D. STA: 88+33.49, 2.78LT RIM: 200.92 INV IN: 192.85 15" RCP INV OUT: 192.75 15" RCP

0006 CB-2B, L=10' REQ'D. AVOID EXISTING DUCT BANK STA: 85+56.44, 28.50LT RIM: 190.75 INV OUT: 183.53 15" RCP

STORMWATER INLET CALCULATIONS

STORM STRUCTURE DATA

0007 MH-1 OR PH-1 REQ'D. STA: 85+56.43, 4.00LT RIM: 191.31 NM: 191.31 INV IN: 183.04 15" RCP INV IN: 183.04 15" RCP INV OUT: 182.04 18" RCP

0008 CB-2B OR PCB-2, L=8' REQ'D. STA: 81+24.59, 28.50LT RIM: 167.77 INV OUT: 157.95 15" RCP

0009 CB-2B OR PCB-2, L=8' REQ'D. STA: 81+25.83, 28,50RT RIM: 168.10 INV IN: 157.67 15" RCP INV OUT: 157.57 15" RCP

0010 CB-2B OR PCB-2, L=8' REQ'D. STA: 79+87.07, 28.50RT RIM: 162.81 INV OUT: 156.14 15" RCP

0011 MH-1 OR PH-1 REQ'D. TIE TO EXIST. 27" RCP STA: 79+86.68, 35.43RT RIM: 162.93 INV IN: 152.08 27" RCP INV IN; 156.00 15" RCP INV OUT: 152.08 27" RCP 0014 CB-2B, L=8' REQ'D. AVOID EXISTING DUCT BANK STA: 77+79.91, 34.63LT RIM: 157.80 INV OUT: 150.41 15" RCP

0016 CB-2B OR PCB-2, L=8' REQ'D. STA: 75+74.74, 23.23RT RIM: 153.72 INV OUT: 148.39 15" RCP

0017 CB-2B, L=8' REQ'D. AVOID EXISTING DUCT BANK STA: 74+83.28, 23.00LT RIM: 151.91 INV OUT: 147.80 15" RCP

0018 CB-2B OR PCB-2, L=8' REQ'D. STA: 74+83.83, 23.00RT RIM: 151.92 INV IN: 144.58 15" RCP INV OUT: 142.16 15" RCP

0019 CB-2B OR PCB-2, L=8' REQ'D. STA: 72+69.22, 44.95LT RIM: 144.37 INV OUT: 138.80 15" RCP

	ARLINGTON VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES Aciiities & Engineering Division Engineering Bureau 2100 Clarendon Boulevard, Suite 813 Ariington, VA 22201 Phone: 703.228.3629 Eax: 703.267 Eax: 703.267 Eax: 703.267 Eax: 703.267 Eax: 703.2
	Approvals Date Design Team Engineer Supervisor Construction Management Supervisor Water, Sewer, Streets Bureau Chief Transportation Director Project Manager Revisions Date
	Designed: DCD Drawn: MAT Checked: DCD Miss Utility Transmittal #: Filename: 010073-C-STRM-CALCS.dwg Destermined Distributed
DEPARTM ST CO	Filename: 010073-C-STRM-CALCS.dwg KNVA RDWV11001073 columbia pike segments segment (7.5.1 - 75% design of columbia pike segments segment (7.5.1 - 75% design of columbia pike segment (7.5.1 - 75% design
SCALE:	SHEET: C11.4 of C11.8

LUIS ARAYA BUREAU CHIEF DES DES BUREAU CHIEF, DES - DEVELOPMENT SERVICES

ARLINGTON VIRGINIA

SCALE:

DEPARTMENT OF ENVIRONMENTAL SERVICES

	Pro	posed	Storm	Dra	in De	esigi	n Calc	ulatic	ons			-	Columbia Arlington (Pike - Segn	nent C			
	VDOT	-				•							11001007	-				
											rojecti		9/29/2022					
	KIM	ley » F	lorn							Desian	ed Bv/Cł			shing /Derik	Doughty	P.E.		
		DRAINAGE	RUNOFF	(CA	INLET			INVERT EL					PIPE			FLO	W TIME
FROM POINT	TO POINT	AREA	COEFFICIENT		1	TIME	RAINFALL	RUNOFF	upper end	lower end	LENGTH	SLOPE	SIZE	CAPACITY	Q / Q _f	VELOCITY	incr	accum
i oliti		acres	С	inlet	accum	min	in/hr	cfs	ft	ft	ft	%	in	cfs	%	fps	r	min
0003	0004	0.17	0.75	0.13	0.98	5.00	6.75	6.66	195.28	194.05	62	2.00%	15	9.12	73%	8.11	0.13	5.13
0004	0005	0.58	0.77	0.45	1.43	5.00	6.70	9.64	193.95	192.85	31	3.50%	15	12.11	80%	7.85	0.05	5.26
0005	0007	(N/A)	(N/A)	0.00	1.43	0.00	6.68	9.61	192.75	183.04	277	3.50%	15	12.09	79%	10.93	0.42	5.32
0006	0007	0.60	0.65	0.39	0.39	5.00	6.79	2.67	185.70	185.21	25	2.00%	15	9.13	29%	6.46	0.06	5.00
0007	23936	(N/A)	(N/A)	0.00	1.82	0.00	6.54	11.98	182.04	180.42	33	5.00%	18	23.46	51%	13.35	0.04	5.75
23936	23937	1.10	0.70	0.77	2.59	5.00	6.53	17.03	179.92	171.98	166	4.80%	21	34.70	49%	14.35	0.19	5.79
23937	23943	0.20	0.85	0.17	3.46	5.00	6.47	22.56	167.66	165.30	100	2.40%	24	34.71	65%	11.76	0.14	5.98
SP396D	23937	1.21	0.58	0.70	0.70	5.00	6.79	4.80	174.23	172.29	33	5.80%	15	15.58	31%	11.19	0.05	5.00
23944	23943	0.45	0.68	0.31	0.31	5.00	6.79	2.09	165.53	164.60	61	1.50%	15	7.96	26%	5.47	0.19	5.00
23943	23939	(N/A)	(N/A)	0.00	3.76	0.00	6.43	24.39	164.10	157.62	165	3.90%	24	44.78	54%	14.56	0.19	6.12
23939	23938	(N/A)	(N/A)	0.00	4.17	0.00	6.31	26.54	157.54	157.17	52	0.70%	27	26.01	102%	7.45	0.12	6.52
0009	23939	0.41	0.71	0.29	0.41	5.00	6.33	2.59	157.57	157.54	6	0.50%	15	4.75	55%	2.11	0.02	6.47
0008	0009	0.17	0.68	0.12	0.12	5.00	6.79	0.79	157.95	157.67	57	0.50%	15	4.53	17%	0.64	0.26	5.00
23938	0011	(N/A)	(N/A)	0.00	5.20	0.00	6.28	32.94	154.42	152.08	87	2.70%	27	50.92	65%	13.62	0.11	6.64
P396B	23938	1.64	0.63	1.03	1.03	5.00	6.79	7.07	161.22	159.32	27	7.20%	15	17.29	41%	13.38	0.03	5.00
0011	23940	(N/A)	(N/A)	0.00	5.41	0.00	6.25	34.05	152.08	150.53	57	2.70%	27	50.92	67%	13.72	0.07	6.74
0010	0011	0.28	0.72	0.20	0.20	5.00	6.79	1.38	156.14	156.00	7	2.00%	15	9.14	15%	5.37	0.02	5.00
23916	23940	0.35	0.80	0.28	0.28	5.00	6.79	1.92	155.79	154.40	38	3.60%	15	12.34	16%	7.30	0.09	5.00
23940	23941	(N/A)	(N/A)	0.00	5.69	0.00	6.23	35.70	150.33	149.43	152	0.60%	0	31.43	114%	7.18	0.40	6.81
23942	14767	(N/A)	(N/A)	0.00	7.26	0.00	6.06	44.34	144.12	138.17	110	5.40%	27	72.09	62%	19.06	0.10	7.44
23924	23942	0.10	0.81	0.08	0.66	5.00	6.78	4.49	146.96	146.44	45	1.20%	15	6.97	64%	6.04	0.12	5.04
0016	23942	0.19	0.83	0.16	0.16	5.00	6.79	1.08	148.39	148.02	7	5.00%	15	14.44	7%	6.90	0.02	5.00
86224	23924	0.80	0.72	0.58	0.58	5.00	6.79	3.94	147.65	147.43	16	1.40%	15	7.64	52%	6.28	0.04	5.00
14767	14707	(N/A)	(N/A)	0.00	7.75	0.00	6.03	47.10	137.54	135.67	172	1.10%	36	69.54	68%	10.57	0.27	7.54
0018	14767	0.44	0.57	0.25	0.48	5.00	6.76	3.29	142.16	141.44	20	3.50%	15	12.16	27%	8.42	0.04	5.09
0017	0018	0.31	0.75	0.23	0.23	5.00	6.79	1.59	147.80	144.58	46	7.00%	15	17.03	9%	8.70	0.09	5.00
0019	80056	0.17	0.72	0.12	0.12	5.00	6.79	0.84	138.80	138.40	40	1.00%	15	6.47	13%	3.63	0.18	5.00
80056	80062	0.06	0.90	0.05	0.18	5.00	6.73	1.20	138.30	129.62	83	10.50%	15	20.90	6%	9.24	0.15	5.18
14707	14700	0.15	0.85	0.13	7.87	5.00	5.96	47.33	135.55	135.24	44	0.70%	36	55.89	85%	8.87	0.08	7.81
14700	14648	0.61	0.57	0.35	8.22	5.00	5.94	49.24	133.41	130.52	85	3.40%	36	122.85	40%	16.42	0.09	7.89
80062	80070	0.62	0.67	0.42	0.59	5.00	6.68	3.98	127.47	126.99	90	0.50%	15	4.72	84%	4.31	0.35	5.33
23941	23942	0.70	0.65	0.46	6.45	5.00	6.13	39.85	149.42	145.67	203	1.80%	27	42.11	95%	12.05	0.28	7.16
0001	0003	1.17	(N/A)	0.00	0.85	5.00	6.79	5.83	196.61	195.38	62	2.00%	15	9.12	64%	7.88	0.13	5.00
0014	23941	0.36	0.85	0.31	0.31	5.00	6.79	2.09	150.41	149.94	68	0.70%	15	5.37	39%	1.71	0.26	5.00
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STORMWATER PIPE CALCULATIONS

		GTON AINIA
	DEPART	MENT OF TAL SERVICES
	Engineer 2100 Clarendon B Arlington, Phone: 70	ineering Division ng Bureau oulevard, Suite 813 VA 22201 3.228.3629 .228.3606
	Kimley-Ho Kimley-Ho and Assoc ©2022 KIMLEY-HORN 11400 Commerce Po Reston Virginic 2019 Phone: 703-674-13	Horn n iates, Inc. AND ASSOCIATES, INC. rk Drive, Suite 400 o
	Lic. No. C	I OF J. DELIO 402054356 AL ENG
	Approvals	Date
	Design Team Enginee	r Supervisor
	Construction Manager	
	Water, Sewer, Streets Transportation Director	
	Project Manager	
	Revisions	Date
ARLIN	Designed: Designed: Drawn: Checked: Miss Utility Trans Filename: 010073-C Path: 7.5 fmal design of columbia design protoumbia Plotted: Septemi Plotted: Septemi Plotted by: Migu	C-STRM-CALCS.dwg 3 columbia pike multimodal production/task pike segments/segment c/7.5.1 - 75% 0er 29, 2022
	OF ENVIRONMENTAL SERVICE	S
COLU	IWATER CALCULATIONS MBIA PIKE - ROUTE 244 JLTIMODAL STREET IMPRO SEGMENT C	VEMENTS
SCALE: HOR. N/A VERT	N/A SHEET: C11.5 c	of C11. 8
		EPARTMENT OF

SCALE:

																		Osharal		0	0	
	Prop	ose	d Hv	dra	ulic (Grad	de L	ine	Cal	cula	ation	S					-			e - Segment	C	
	-		···· J	•••••	•••••				••••			•			Dro			Arlingto		nty		
	VDOT L														Pro	ect N		110010				
	Kiml	ev»	Hor	n														9/29/20				_
					I										ignea	By/Ch	ecked:	Miguei	i ysnin	ig /Derik Doι Ι	ignty, P.I	=. I
INLET	DESIGN OUTLET	D	Q	Ι.	S _{fo}	H _f					J		ON LOSS	5					FINAL	INLET WSE	RIM	AVAILABLE
	WSE	Do	Q 0	L。	J _{fo}	Πf	V。	н。	Qi	Vi	$\mathbf{Q}_{i}\mathbf{V}_{i}$	V_i^2	Hi	Angle	H₄	Ht	1.3 H _t	0.5 H _t	н	INLET WSE	ELEV	FREEBOARD
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	2g	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
14700	132.92	36	49.24	85	0.0340	2.90	16.42	1.05	47.33	14.59	690.54	3.31	1.16	10.92	0.46	2.66	2.66	1.33	4.23	137.15	142.81	5.66
14707	137.64	36	47.33	44	0.0070	0.31	8.87	0.31	47.10	7.55	355.61	0.89	0.31	11.71	0.13	0.75	0.75	0.37	0.68	138.32	145.47	7.15
14767	138.32	36	47.10	172	0.0110	1.89	10.57	0.43	44.34	11.47	508.58	2.04	0.72	0.51	0.01	1.16	1.16	0.58	2.47	140.79	151.68	10.89
0018	142.44	15	3.29	20	0.0190	0.39	8.42	0.28	1.59	1.30	2.07	0.03	0.01	41.98	0.01	0.30	0.38	0.19	0.58	143.02	151.92	8.90
0017	145.58	15	1.59	46	0.0530	2.45	8.70	0.35	0.00	0.00	0.00	0.00	0.00	0	0.00	0.35	0.46	0.23	2.68	148.26	151.91	3.65
23942	140.79	27	44.34	110	0.0350	3.84	19.06	1.41	39.85	13.61	542.36	2.88	1.01	133.01	2.51	4.93	4.93	2.46	6.31	147.10	153.86	6.76
0016	149.02	15	1.08	7	0.0200	0.15	6.90	0.22	0.00	0.00	0.00	0.00	0.00	0	0.00	0.22	0.29	0.14	0.29	149.31	153.72	4.41
23924	147.44	15	4.49	45	0.0110	0.49	6.04	0.14	3.94	5.25	20.69	0.43	0.15	83.59	0.29	0.58	0.75	0.38	0.87	148.31	152.86	4.55
86224	148.43	15	3.94	16	0.0100	0.16	6.28	0.18	0.00	0.00	0.00	0.00	0.00	0	0.00	0.18	0.24	0.12	0.28	148.71	150.75	2.04
23941	147.47	27	39.85	203	0.0170	3.45	12.05	0.56	35.70	7.18	256.33	0.80	0.28	97.01	0.58	1.43	1.43	0.71	4.16	151.63	157.72	6.09
0014	151.63	15	2.09	68	0.0010	0.07	1.71	0.01	0.00	0.00	0.00	0.00	0.00	0	0.00	0.01	0.02	0.01	0.08	151.71	157.80	6.09
23940	151.63	0	35.70	152	0.0080	1.21	7.18	0.20	34.05	8.56	291.47	1.14	0.40	2.88	0.04	0.64	0.64	0.32	1.53	153.16	160.78	7.62
23916	155.40	15	1.92	38	0.0260	0.99	7.30	0.25	0.00	0.00	0.00	0.00	0.00	0	0.00	0.25	0.32	0.16	1.15	156.55	162.51	5.96
0011	153.16	27	34.05	57	0.0150	0.86	13.72	0.73	32.94	8.28	272.74	1.06	0.37	0.37	0.01	1.11	1.11	0.55	1.42	154.58	162.93	8.35
0010	157.00	15	1.38	7	0.0110	0.08	5.37	0.13	0.00	0.00	0.00	0.00	0.00	0	0.00	0.13	0.17	0.09	0.16	157.16	162.81	5.65
23938	154.58	27	32.94	87	0.0250	2.16	13.62	0.72	26.54	6.67	177.02	0.69	0.24	104.35	0.52	1.48	1.48	0.74	2.90	157.48	166.06	8.58
SP396B	160.32	15	7.07	27	0.0330	0.87	13.38	0.83	0.00	0.00	0.00	0.00	0.00	0	0.00	0.83	1.08	0.54	1.42	161.74	163.16	1.42
23939	158.97	27	26.54	52	0.0070	0.37	7.45	0.22	24.39	7.76	189.27	0.94	0.33	89.18	0.65	1.19	1.19	0.60	0.96	159.93	167.92	7.99
0009	159.93	15	2.59	6	0.0020	0.01	2.11	0.02	0.79	0.64	0.51	0.01	0.00	0.04	0.00	0.02	0.03	0.01	0.02	159.96	167.82	7.86
0008	159.96	15	0.79	57	0.0000	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	159.96	167.77	7.81
23943	159.93	24	24.39	165	0.0380	6.28	14.56	0.82	22.56	12.34	278.39	2.36	0.83	2.26	0.07	1.72	1.72	0.86	7.14	167.07	175.06	7.99
23944	167.07	15	2.09	61	0.0010	0.06	5.47	0.14	0.00	0.00	0.00	0.00	0.00	0	0.00	0.14	0.18	0.09	0.15	167.23	174.90	7.67
23937	167.07	24	22.56	100	0.0180	1.81	11.76	0.54	17.03	7.08	120.57	0.78	0.27	46.63	0.37	1.18	1.18	0.59	2.40	169.47	180.68	11.21
SP396D	173.29	15	4.80	33	0.0320	1.07	11.19	0.58	0.00	0.00	0.00	0.00	0.00	0	0.00	0.58	0.76	0.38	1.44	174.73	177.17	2.44
23936	173.38	21	17.03	166	0.0380	6.29	14.35	0.80	11.98	6.78	81.22	0.71	0.25	89.73	0.50	1.55	2.01	1.01	7.30	180.68	190.73	10.05
0007	181.62	18	11.98	33	0.0430	1.40	13.35	0.69	9.61	8.76	84.18	1.19	0.42	89.74	0.83	1.94	1.94	0.97	2.37	183.99	191.31	7.32
0006	186.21	15	2.67	25	0.0140	0.34	6.46	0.19	0.00	0.00	0.00	0.00	0.00	0	0.00	0.19	0.25	0.13	0.47	186.68	190.75	4.07
0005	184.04	15	9.61	277	0.0330	9.15	10.93	0.46	9.64	7.85	75.67	0.96	0.33	89.16	0.67	1.47	1.47	0.73	9.88	193.92	200.92	7.00
0004	193.92	15	9.64	31	0.0220	0.69	7.85	0.24	6.66	5.43	36.16	0.46	0.16	39.65	0.20	0.59	0.77	0.39	1.08	195.00	200.84	5.84
0003	195.05	15	6.66	62	0.0130	0.80	8.11	0.26	5.83	5.00	29.15	0.39	0.14	2.55	0.01	0.40	0.52	0.26	1.06	196.11	203.36	7.25
0001	196.38	15	5.83	62	0.0190	1.17	7.88	0.29	0.00	0.00	0.00	0.00	0.00	0	0.00	0.29	0.38	0.19	1.36	197.74	204.41	6.67
80062	127.99	15	3.98	90	0.0050	0.45	4.31	0.07	1.20	0.97	1.16	0.01	0.01	10.63	0.00	0.08	0.10	0.05	0.50	128.49	135.31	6.82
80056	130.62	15	1.20	83	0.0930	7.72	9.24	0.33	0.84	2.61	2.19	0.11	0.04	4.64	0.01	0.37	0.49	0.24	7.96	138.58	143.40	4.82
0019	139.40	15	0.84	40	0.0100	0.40	3.63	0.06	0.00	0.00	0.00	0.00	0.00	0	0.00	0.06	0.08	0.04	0.44	139.84	144.31	4.47

STORMWATER HGL CALCULATIONS

IGTON GINIA
TMENT OF NTAL SERVICES
gineering Division ring Bureau Boulevard, Suite 813 n, VA 22201 03.228.3629 3.228.3606
WHORN Orn Ciates, Inc. AND ASSOCIATES, INC. Work Drive, Suite 400
H O_{E1} D J. DELLO 0402054356 E9/2022 NAL ENGLA
Date
er Supervisor
ment Supervisor
Bureau Chief
Date
DCD MAT DCD nsmittal #:
C-STRM-CALCS.dwg ⁰⁷³ columbia pike multimodal production task ia pike segments segment cV7.5.1 - 75% aber 29, 2022 ael.Tyshing
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of C11.8

UIRGINIA Sun D Junya LUIS ARAYA BUREAU CHIEF, DES - DEVELOPMENT SERVICES

SCALE:

STORMWATER MANAGMENT

TOTAL PROJECT AREA: 3.34 ACRES

EXISTING IMPERVIOUS AREA: 2.94 ACRES

PROPOSED IMPERVIOUS AREA: 3.06 ACRES

THIS PROJECT WAS FUNDED BEFORE 7/1/2012, IT HAS BEEN GRANDFATHERED, THEREFORE NOT SUBJECT TO ARLINGTON'S NEW STORMWATER MANAGEMENT ORDINANCE. IT SHOULD BE GRANTED AN EXEMPTION UNDER THE CHESAPEAKE BAY PRESERVATION ORDINANCE SECTION §61-15(A). THIS EXEMPTION IS APPLICABLE TO PUBLIC LINEAR PROJECTS THAT CONSIST SOLELY OF TRANSPORTATION AND UTILITY-RELATED INFRASTRUCTURE.

THIS PROJECT MEETS THE THREE EXEMPTION CONDITIONS IN THE CODE OF VIRGINIA FOR LINEAR DEVELOPMENT PROJECTS.

- 1. THERE WILL BE LESS THAN 1 ACRE DISTURBED PER OUTFALL, WITH EACH OUTFALL BEING DEFINED AS A COLLECTION POINT FOR SURFACE RUNOFF
- 2. THE EXISTING HYDRAULIC CHARACTERISTICS AND OUTFALLS REMAIN THE SAME IN THE PROPOSED CONDITIONS, WITH IMPROVEMENTS TO THE ROADWAY DRAINAGE NETWORK. THE IMPERVIOUS AREA SLIGHTLY INCREASES IN THE PROPOSED CONDITIONS, BUT THE INCREASE IN PEAK FLOW RATE IS INSIGNIFICANT AND THE EXISTING STORMWATER NETWORK REMAINS ADEQUATE AS DEMONSTRATED IN THE STORMWATER CALCULATIONS.
- 3. THERE ARE NO EXISTING OR ANTICIPATED FLOODING OR EROSION PROBLEMS DOWNSTREAM OF THE DISCHARGE POINT. THE PROPOSED STORMWATER NETWORK DISCHARGES INTO THE EXISTING SYSTEM. THE STORMWATER PIPE AND HYDRAULIC GRADE LINE CALCULATIONS DEMONSTRATE THAT THE EXISTING SYSTEM IS ADEQUATE DOWNSTREAM OF THE DISCHARGE POINT.

Arlington, Virginia

COMPLETE ARLINGTON STREETS

FY2009 - FY2014 CIP

FY 09 FY 10 FY 11 FY 12 FY 13 FY 14 Total

6 Yea

3,000

500

1,250

4,300

1,100

4,200

15,350

FY 6 Year

Program Description

6 YEAR PROGRAMMED SUMMARY (IN \$1,000s) n November, 2007, the County oard adopted the Master ransportation Plan (MTP) Goals Columbia Pike Complete Streets 1,000 2,000 and Policies document and MTP map. One of the three general Pentagon City; Hayes Street Corridor orm the plan indation is to "support the losslyn Area Multimodal design and operation of complete mprovements streets." This CIP category, Crystal City Street Improvements formed primarily, but not Ballston-Rosslyn Arterial Street exclusively, from the former Improvements Arterials category, focuses on Improvements to Major Travel multimodal projects integrated with Corridors Outside Principal Business 2,300 adjacent community uses. Projects Districts in this program range from Wayfinding Signage intersection or interchange Transportation Systems and Traffic mprovements, to new street links, Signals Total Recommendation to major corridor reconstruction. Although the focus is on major streets, in commercial and mixed-Footnote: Due to the fluid nature of federal and state Transportation funding, programs and projects use areas, neighborhood street will be subject to annual allocation of funds by the County Board. The allocations will maximize the improvements are included in this use of available resources and enable the Transportation Investment Fund to flexibly respond to category. current conditions.

Master Plan Impact Master Transportation Plan, edestrian Master Plan, Bikeway Master Plan, Transit Master Plan,

PROGRAM FUNDING SOURCES (IN \$1,0005) FY 09 FY 10 FY 11 FY 12 FY 13 14 Total Revenue from the Commonwealth 750 750 Inderground Utilities Guidelines

Revenue from the Commonwealth	750	75C	1,500	
Developer Contribution	-	-		
Other Funding	-	-	-	
Transportation Investment Fund	6,900	5,600	13,250	
Commonwealth Loan Funds	-	-	-	
Master Lease	-	-	-	
PAYG	600	-	600	
Bond Issue			-	
Total Funding Sources	8.250	6.350	15 350	

2,000 500

800 30

2,150 2,050

8,250 6,350

Bond Financing Notes Costs shown are based on current

costs. Future costs are subject to market variables that can either increase or decrease the costs shown. Bond maturity is assumed to be 20 years. The costs shown also reflect the costs as if the full approved bond was sold in the first year following approval by the voters, which may or may not be the case for any particular program.

BOND FINANCING IMPACT (IN \$1,000s)

ond Financing Cost (P& I) 0 0 0 0 0

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharge	Likely Present at Your Project Site?	
External buildings wash down Uncontaminated foundation or footing drains Uncontaminated excavation dewatering Landscape irrigation Others	 Yes Yes No Yes No Yes No Yes No Yes No 	

STORMWATER POLLUTION PREVENTION PLAN COLUMBIA PIKE MULTIMODAL STREET IMPROVEMENTS - SEGMENT C

5.0 Potential Sources of Pollution & Pollution Prevention Practices

			į	Polluta	ants							
Pollutant-Generating Activity	Likely Present at your Project Site?	Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals	Pollution Prevention Practice	Responsible Party
Clearing, grading, excavating, and un-stabilized areas	🛛 Yes 🗌 No	х		C					х		(1)	
Paving operations	🛛 Yes 🗌 No	х					х		х		(2)	
Concrete washout and cement waste	🛛 Yes 🗌 No			х	х				х		(3)	
Structure construction, stucco, painting, and cleaning	🛛 Yes 🗌 No			х	х				х	х	(4)	
Dewatering operations	🛛 Yes 🗌 No	х	х						х		(5)	
Material delivery and storage	🛛 Yes 🗌 No	х	х	х	х	3	х		х	х	(6)	Construction Activity Operator (See Cover Page of this SWPPP)
Material use during building process	🛛 Yes 🗌 No		х	х	х		х		х	х	(7)	r age of this own in y
Solid waste disposal	🛛 Yes 🗌 No						8		х	х	(8)	
Sanitary waste	🛛 Yes 🗌 No		х		х			х			(9)	
Landscaping operations	🛛 Yes 🗌 No	х	х			х			х	х	(10)	
Others	🗌 Yes 🗌 No										(11)	

Arlington County – SWPPP 7/2014

7.0 Spill Prevention & Response

Most spills can be cleaned up following manufacturer specifications. Absorbent/oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at this location.

1st Priority: 2nd Priority:

Protect all people Protect equipment and property 3rd Priority: Protect the environment

- 1. Check for hazards (flammable material, noxious fumes, cause of spill) if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
- 2. Make Sure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of
- any person. 3. Stop the spill source.
- 4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
- If possible, stop spill from entering drains (use absorbent or other material as necessary). Stop spill from spreading (use absorbent or other material)
- 7. If spilled material has entered a storm sewer; contact locality's storm water department. 8. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials

and do not flush area with water. 9. Properly dispose of cleaning materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Normal Working Hours

DEQ Northern Regional Office

Nights, Holidays & Weekends

VA Dept. of Emergency Management 24 Hour Reporting Service

Local Contacts

Arlington County Fire & Police DES Water, Sewer, Streets 24-Hour Emergency Washington Gas Emergency

804-674-2400

703-583-3800

703-558-2222 703-228-6555

703-750-1400

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
Facilities & Engineering Division Engineering Bureau 2100 Clarendon Boulevard, Suite 813 Arlington, VA 22201 Phone: 703.228.3629 Fax: 703.228.3606
Kimley >>> Horn Kimley-Horn and Associates, Inc. 11400 Commerce Park Drive, Suite 400 Reston Virginia 20191 Reston Virginia 20191
Phone: 703–674–1300 Fax: 703–674–1360 Seal DEDWARD J. DELLO Lic. No. 0402054356 MOSTONAL Approvals Date
Design Team Engineer Supervisor
Construction Management Supervisor
Water, Sewer, Streets Bureau Chief
Transportation Director Project Manager
Revisions Date
Designed:DCDDrawn:MATChecked:DCDMiss Utility Transmittal #:
Filename: 010073-C-STRM-CALCS.dwg Rath: 7.5 final design of columbia pike multimodal/production/task Path: 7.5 final design of columbia pike segments/segment c/7.5.1 - 75% design/plansheets Plotted: September 29, 2022 Plotted by: Miguel.Tyshing
NGTON COUNTY, VIRGINIA NT OF ENVIRONMENTAL SERVICES
RMWATER MANAGEMENT UMBIA PIKE - ROUTE 244
/IULTIMODAL STREET IMPROVEMENTS SEGMENT C

SCALE:

BUREAU CHIEF, DES - DEVELOPMENT SERVICES

DEPARTMENT OF

ENVIRONMENTAL SERVICES

ARLINGTON

VIRGINIA

		PERMIT FOR DISCHARGES ONSTRUCTION ACTIVITIES REGISTRATION STATEME		PLAN/ID #: TECHNICAL CRITERIA: IIB 🗆 IIC 🗆
-	CHOOSE ONE)	NEW PERMIT ISSUANCE MODIFICATION WITH ACR MODIFICATION WITHOUT EXISTING PERMIT RE-ISSUARD	ACREAGE INCREASE	
Sec	ction I. Operator/	Permittee Information.		
Α.	operational contr	ol over construction activitie	s to ensure compliance with t	blying for permit coverage and will hav the general permit. A person with I. (per Part III. K. of the VAR10 Permit).
Ор	erator Name:	Kimley—Horn and Assoc	ciates	
Со	ntact person:	Ted DeLio		
	dress:	11400 Commerce Park	Dr. Suite 400	
	y, State Zip Code:	Reston, VA 20191		
	one Number:	703-674-1358		
	mary Email: Email:	ted.delio@kimley-horn.c	om	
	Billing Informatio	-	-	I. A. above). This entity will receive
B. Nai Cor Add City Pho Prin CC	Billing Informatio Annual Permit Ma me: ntact Person: dress: y, State Zip Code: one Number: mary Email: Email:	aintenance and Permit Modi	fication Fee invoices (if applica	able).
B. Nai Con Add City Pho Prin CC C.	Billing Informatio Annual Permit Ma me: ntact Person: dress: y, State Zip Code: one Number: mary Email: Email: May we transmit credit card and to	correspondence electronical	fication Fee invoices (if application Fee inv	able).
B. Nai Con Add City Pho Prin CC C.	Billing Informatio Annual Permit Ma me: ntact Person: dress: y, State Zip Code: one Number: mary Email: Email: May we transmit credit card and to	correspondence electronical	fication Fee invoices (if application Fee	able).
B. Nat Con Add City Pho Prin CC C. Sec	Billing Informatio Annual Permit Ma me: ntact Person: dress: y, State Zip Code: one Number: mary Email: Email: May we transmit credit card and to ction II. Construct	aintenance and Permit Modi correspondence electronical receive your permit coverage on Activity Location Information o showing the location of the	fication Fee invoices (if application Fee invoices (if application) for the second sec	able).
B. Nat Cor Add City Prin CC C. Sec A.	Billing Informatio Annual Permit Ma me: ntact Person: dress: y, State Zip Code: one Number: mary Email: Email: May we transmit credit card and to ction II. Construct	correspondence electronical orceeive your permit coverage on Activity Location Information of the location of the truction entrances and all wa	fication Fee invoices (if application Fee invoices (if application) lly? You must choose <u>YES</u> and ge approval letter via email: ation. Project site information e existing or proposed land-dis ater bodies receiving stormwa	able).
B. Nat Cor Add City Prin CC C. Sec A.	Billing Informatio Annual Permit Ma me: ntact Person: dress: y, State Zip Code: one Number: mary Email: Email: May we transmit credit card and to ction II. Construct Include a site may disturbance, cons	correspondence electronical orceeive your permit coverage on Activity Location Information of the location of the truction entrances and all wa	fication Fee invoices (if application Fee invoices (if application) lly? You must choose <u>YES</u> and ge approval letter via email: ation. Project site information e existing or proposed land-dis ater bodies receiving stormwation Columbia Pike Multimodal St	able).
B. Nat Cor Add City Prin CC C. Sec A.	Billing Informatio Annual Permit Ma me: ntact Person: dress: y, State Zip Code: one Number: mary Email: Email: May we transmit credit card and to ction II. Construct Include a site may disturbance, cons	aintenance and Permit Modif	fication Fee invoices (if application Fee invoices (if application) lly? You must choose <u>YES</u> and ge approval letter via email: ation. Project site information e existing or proposed land-dis ater bodies receiving stormwation Columbia Pike Multimodal St	able).

 Construction Activity Entrance Location (description, street address and/or latitude/longitude in decimal degrees):

38,864980, -77,077556

Rev 01/2020

PAGE 1 | 6

REGISTRATION STATEMENT

CONSTRUCTION GENERAL PERMIT (V	/AR10) REGISTRATION STATEMENT 2019
Officite Support Activity Location Information	List all offsite support activities to be include

Section III. Offsite Support Activity Lo permit registration. Enter additional a to obtain coverage under a separate V	reas on a separate					
 A. Offsite Activity Name: Address: City and/or County and Zip Code: Latitude and Longitude (6-digit, decimal degrees format): B. Offsite Activity Entrance Location (description, street address and/or latitude/longitude in decimal degrees 						
Section IV. Site Information.						
 A. Property Owner Status: B. Nature of the Construction Activity Description (i.e. commercial, industrial, residential, agricultural, environmental): 			STATE - PUBLIC X PRI	VATE 🗆		
C. Municipal Separate Storm Sewer S name(s) (if the site is discharging t	Arlington County					
D. Acreage totals for all land-disturbin permit coverage. Report to the ne	-		E. Estimated P (MM/D	roject Dates D/YYYY)		
Total land area of development (includ area to be disturbed as approved in the Management Plan):	ding the entire	3.34 acres	Start date:			
Primary estimated area to be disturbe Erosion and Sediment Control Plan ap	3.34 acres	Completion date:				
Offsite estimated area to be disturbed	, , ,	N/A				
F. Is this construction activity part of	a common plan o	f development or sale?	YES 🛛 NO 🗆			
G. 6 th Order Hydrologic Unit Code (HU	JC) and Receiving	Water Name(s). Attac	h a separate list if neede	d.		
HUC		RECEIVING WAT				
020700100103 PL24		Potomac River — Pimmit Run				
Section V. Other Information.						
 A. A stormwater pollution prevention General VPDES Permit for Discharg Statement. By signing the Registra 	ges of Stormwater	from Construction Act	ivities <u>prior to</u> submittin	g the Registration		

B. Has an Erosion and Sediment Control Plan been submitted to the VESC Authority for review? YES 🛛 NO 🗌

D. Annual Standards and Specifications. If this project is utilizing approved Annual Standards and Specifications (AS&S), attach the completed AS&S Entity Form.
 AS&S Entity Name (if different from the Operator identified in Section II. A.):

Rev 01/2020

PAGE 2 | 6

CONSTRUCTION GENERAL PERMIT (VAR10)

Section VI. Certification. A person representing the operator as i of 9VAC25-880-70. Part III. K must physically sign this certification operator is defined in 9VAC25-870-10 as follows:

"Operator" means the owner or operator of any facility or activity subject associated with a large or small construction activity, operator means and either of the following two criteria: (i) the person has direct operational of the ability to make modifications to those plans and specifications or (ii) activities at a project that are necessary to ensure compliance with a stor permit or VSMP authority permit conditions (i.e., they are authorized to of stormwater pollution prevention plan or comply with other permit condition Municipal Separate Storm Sewer Systems (MS4s), operator means the operator

9VAC25-880-70. Part III. K. Signatory Requirements. *Registration Statem a. For a corporation: by a responsible corporate officer. For the means: (i) a president, secretary, treasurer, or vice-president of any other person who performs similar policy-making or decisio of one or more manufacturing, production, or operating facilitie decisions that govern the operation of the regulated facility incl capital investment recommendations, and initiating and directin compliance with environmental laws and regulations; the mana actions taken to gather complete and accurate information for to sign documents has been assigned or delegated to the mana b. For a partnership or sole proprietorship: by a general partner c. For a municipality, state, federal, or other public agency: by e For purposes of this chapter, a principal executive officer of a pu agency or (ii) a senior executive officer having responsibility for agency.*

Certification: "I certify under penalty of law that I have read and u document and all attachments were prepared in accordance with properly gathered and evaluated the information submitted. Base the system or those persons directly responsible for gathering the of my knowledge and belief true, accurate, and complete. I am av false information including the possibility of fine and imprisonmen

Printed Name: Ted DeLio

Signature (signed in ink):

Date Signed:

Section VII. Submittal Instructions. Submit this form to the VSMF please send your Registration Statement submittal directly to the VSMP Authorities is available here: <u>VSMP Authorities</u>.

.....

If DEQ is the VSMP Authority, please send to: Department of Environmental Quality

Office of Stormwater Management Suite 1400 PO Box 1105 Richmond VA 23218 <u>constructiongp@deq.virginia.gov</u>

Rev 01/2020

NOTE: ARLINGTON COUNTY WILL COMPLETE AND SUBMIT THE REQUIRED PERMIT(S) FROM DEQ. CONTRACTOR SHALL CONF ARE IN PLACE PRIOR TO BEGINNING WORK.

	ARLINGTON
AR10) REGISTRATION STATEMENT 2019	VIRGINIA
or as identified in Section I. A. and meeting the requirements cation. A typed signature is not acceptable. Please note that	DEPARTMENT OF ENVIRONMENTAL SERVICES
subject to the Act and this chapter. In the context of stormwater ans any person associated with a construction project that meets ional control over construction plans and specifications, including or (ii) the person has day-to-day operational control of those	Facilities & Engineering Division Engineering Bureau 2100 Clarendon Boulevard, Suite 813 Arlington, VA 22201 Phone: 703.228.3629 Fax: 703.228.3606
a a stormwater pollution prevention plan for the site or other state ed to direct workers at a site to carry out activities required by the conditions). In the context of stormwater discharges from the operator of the regulated MS4 system. Statement. All Registration Statements shall be signed as follows: for the purpose of this chapter, a responsible corporate officer ent of the corporation in charge of a principal business function, or decision-making functions for the corporation; or (ii) the manager facilities, provided the manager is authorized to make management	Kimley >>> Horn Kimley-Horn and Associates, Inc. (© 2022 KIMLEY-HORN AND ASSOCIATES, INC. 11400 Commerce Park Drive, Suite 400 Reston Virginia 20191 Phone: 703-674-1300
ty including having the explicit or implicit duty of making major lirecting other comprehensive measures to assure long-term manager can ensure that the necessary systems are established or on for state permit application requirements; and where authority manager in accordance with corporate procedures; artner or the proprietor, respectively; or the proprietor, respectively; or the system a principal executive officer or ranking elected official. of a public agency includes: (i) the chief executive officer of the ty for the overall operations of a principal geographic unit of the and understand this Registration Statement and that this with a system designed to assure that qualified personnel	Seal Seal EDWARD J. DELLO D Lic. No. 0402054356 C 09/29/2022
. Based on my inquiry of the person or persons who manage ng the information, the information submitted is to the best am aware that there are significant penalties for submitting	ONAL DI
nment for knowing violations."	Approvals Date
	Design Team Engineer Supervisor
VSMP Authority. If the locality is the VSMP Authority,	Construction Management Supervisor
the locality; do NOT send this form to DEQ. A list of local	Water, Sewer, Streets Bureau Chief
<u>If the locality is the VSMP Authority</u> , please send to: The Local VSMP Authority (insert address below)	Transportation Director
Department of Environmental Services Development Services Bureau	Project Manager
2100 Clarendon Blvd., Suite 800 Arlington, VA 22201	Revisions Date
PAGE 3 6	
T THE REGISTRATION STATEMENT, AND WILL OBTAIN THE CONFIRM WITH THE COUNTY THAT THE REQUIRED PERMITS	
	Designed: DCD Drawn: PNH Checked: DCD Miss Utility Transmittal #:
	Filename: 010073-C-STRM-CALCS.dwg R:NVA_RDWY110010073 columbia pike multimodal/production/task Path: 7.5 final design of columbia pike segments/segment e/7.5.1 - 75% design/plansheets Plotted: September 29, 2022 Plotted by: Miguel.Tyshing
	NGTON COUNTY, VIRGINIA
	NT OF ENVIRONMENTAL SERVICES
COLU	RMWATER MANAGEMENT UMBIA PIKE - ROUTE 244 AULTIMODAL STREET IMPROVEMENTS SEGMENT C
SCALE:	SHEET: C11.7.1 of C11.8
	ARLINGTON VIRGINIA DEPARTMENT OF ENVIRONMENTAL SE

LUS ARAYA BUREAU CHIEF, DES - DEVELOPMENT SERVICES

STORMWATER MANAGEMENT RUNOFF REDUCTION INFORMATION

THE RUNOFF REDUCTION SPREADSHEET INFORMATION ON THIS PLAN IS FOR DATA TRACKING PURPOSES TO DOCUMENT THE AREA OF LAND DISTURBANCE AND TO CHARACTERIZE PRE- AND POST-DEVELOPMENT LAND USE CONDITIONS.

IN ACCORDANCE WITH ARLINGTON COUNTY'S CHESAPEAKE BAY TOTAL MAXIMUM DAILY LOAD (TMDL) ACTION PLAN, APPROVED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) ON SEPTEMBER 1, 2015, LINEAR DEVELOPMENT PROJECTS CONDUCTED BY THE COUNTY ARE ADMINISTERED AND TRACKED AS FOLLOWS CONSISTENT WITH 9VAC25-870-69.A.4, 9VAC25-870-76, AND 9VAC25-870-92:

- POLLUTANT LOAD CHANGES WILL BE COMPUTED AS DESCRIBED IN SECTION 3.A OF THE ACTION PLAN.
- RETROFIT OPPORTUNITIES WILL BE EVALUATED FOR EACH PROJECT, USING THE SCREENING AND SELECTION CRITERIA APPLIED AND DESCRIBED IN THE ADOPTED STORMWATER MASTER PLAN.
- RETROFIT PROJECTS THAT MEET THE SCREENING CRITERIA AND ARE DETERMINED BY ARLINGTON TO BE FEASIBLE AND COST-EFFECTIVE WILL BE IMPLEMENTED WITH SPECIFIC LINEAR DEVELOPMENT PROJECTS. POLLUTANT LOAD REDUCTIONS FROM RETROFIT PROJECTS WILL BE COMPUTED AS DESCRIBED IN SECTION 5 OF THE ACTION PLAN.
- IN CASES WHERE RETROFIT PROJECTS ARE NOT FEASIBLE AND COST-EFFECTIVE FOR A PARTICULAR LINEAR PROJECT, ANY POLLUTANT OF CONCERN (POC) LOAD INCREASES THAT MIGHT OCCUR FOR THAT PROJECT WILL BE ADDRESSED BY LARGER OVERALL POC LOAD REDUCTIONS IN PLACE OR ADDED THROUGH TMDL ACTION PLAN IMPLEMENTATION.

IN THE ABOVE MANNER ARLINGTON, AS THE MS4 OPERATOR AND THE CONSTRUCTION SITE OPERATOR FOR ITS LINEAR DEVELOPMENT PROJECTS, IMPLEMENTS LINEAR PROJECTS AND RETROFIT PROJECTS IN A MANNER THAT ACHIEVES THE MOST TMDL POC REDUCTION FOR THE LEAST COST, WHILE FULLY ACCOUNTING FOR LOAD CHANGES THAT OCCUR WITH LINEAR DEVELOPMENT PROJECT ACTIVITY CONSISTENT WITH THE DEQ CHESAPEAKE BAY TMDL SPECIAL CONDITION GUIDANCE.

					-	1			L			_
Project Name:			Multimodal - Segm /10/2022	ent C		CLEAR	ALL	data input cells				
Date:			elopment Project?	Yes				calculation cells				
Site Information								final results				-
Post-Development Project	(Treatmen	t Volume a	nd Loads)									
		Ente	er Total Disturbe	d Area <i>(acres)</i> →	3.3705]	DAAD Dealars Co	Check:	TRUE	oft Ctale 8. Crosse		
				reduction required:				Linear project?	Yes	aft Stds & Specs		
				ious cover (acres) is: ction for Site (lb/yr):	0.1169 1.5177		and cover areas en Total disturbe	tered correctly? d area entered?	✓ ✓			
Dro Dobologneet Lond Cover (area	c)											
Pre-ReDevelopment Land Cover (acres Forest/Open Space (acres) undisturbed	s) A Soils	B Soils	C Soils	D Soils	Totals	1						_
forest/Open space (acres) undisturbed forest/open space Managed Turf (acres) disturbed, graded for					0.0000	1						
yards or other turf to be mowed/managed Impervious Cover (acres)				0.4057	0.4057	1						
				2.9648	3.3705							-
Post-Development Land Cover (acres)												
Forest/Open Space (acres) undisturbed,	A Soils	B Soils	C Soils	D Soils	Totals 0.0000							+
protected forest/open space or reforested land Managed Turf (acres) disturbed, graded for yards or other turf to be mowed/managed				0.2888	0.2888							
Impervious Cover (acres)				3.0817	3.0817	1						
Area Check	OK.	ОК.	ОК.	ОК.	3.3705							+
Constants			Dunoff Coofficient									
Constants Annual Rainfall (inches) Target Rainfall Event (inches)	43 1.00		Runoff Coefficient	A Soils	B Soils	C Soils	D Soils					+
Total Phosphorus (TP) EMC (mg/L) Total Nitrogen (TN) EMC (mg/L)	0.26		Managed Turf Impervious Cover	0.15	0.20	0.22	0.05					
Target TP Load (Ib/acre/yr) Pj (unitless correction factor)	0.41				0.55	0.55						-
LAND COVER SUMMARY P		LOPMENT				LAND COVE	R SUMMARY P	OST DEVELO	DPMEN	IT		
Land Cover Summ				Land Cover Summa			Land Cover Su			Land Cover Summ	nary-Post	-
Pre-ReDevelopment	Listed	Adjusted ¹		Post ReDev. & Ne Forest/Open Space	-		Post-ReDeve Forest/Open Space			Post-Development Ne	ew Impervious	F
Forest/Open Space Cover (acres) Weighted Rv(forest)	0.0000	0.0000		Cover (acres) Weighted Rv(forest)	0.0000		Cover (acres) Weighted Rv(forest)	0.0000				ŀ
% Forest	0%	0%		% Forest Managed Turf Cover	0%		% Forest Managed Turf Cover	0%				F
Managed Turf Cover (acres)	0.4057	0.2888		(acres)	0.2888		(acres)	0.2888				ŀ
Weighted Rv(turf) % Managed Turf	0.2500	0.2500 		Weighted Rv (turf) % Managed Turf	0.2500 		Weighted Rv (turf) % Managed Turf	0.2500 				⊢
Impervious Cover (acres)	2.9648	2.9648		Impervious Cover (acres)	3.0817		ReDev. Impervious	2.9648		New Impervious Cover	0.1169	Ē
Rv(impervious)	0.9500	0.9500		Rv(impervious)	0.9500		Cover (acres) Rv(impervious)	0.9500		(acres) Rv(impervious)	0.9500	-
% Impervious	88%	91%		% Impervious	91%		% Impervious	91%			0.5500	
Total Site Area (acres)	3.3705	3.2536		Final Site Area (acres)	3.3705		Total ReDev. Site Area (acres)	3.2536				L
Site Rv	0.8657	0.8879		Final Post Dev Site Rv	0.8900		ReDev Site Rv	0.8879				-
Treatment Volume and	d Nutrient Loa	ad				Treat	ment Volume and	d Nutrient Loa	d			1-
Pre-ReDevelopment Treatment Volume (acre-ft)	0.2432	0.2407		Final Post-Development Treatment Volume (acre-ft)	0.2500		Post-ReDevelopment Treatment Volume (acre-ft)	0.2407		Post-Development Treatment Volume (acre-ft)	0.0093	
Pre-ReDevelopment Treatment Volume (cubic feet)	10,592.2856	10,486.1988		Final Post-Development Treatment Volume (cubic feet)	10,889.3285		Post-ReDevelopment Treatment Volume (cubic feet)	10,486.1988		Post-Development Treatment Volume (cubic feet)	403.1296	
Pre-ReDevelopment TP Load (lb/yr)	6.6551	6.5885		Final Post- Development TP Load (lb/yr)	6.8417		Post-ReDevelopment Load (TP) (lb/yr)*	6.5885		Post-Development TP Load (lb/yr)	0.2533	
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.9700	2.0200		Final Post-Development TP Load per acre (lb/acre/yr)	2.0300		Post-ReDevelopment TP Load per acre (Ib/acre/yr)	2.0200		1		
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area land proposed for new impervious co		1.3340					Max. Reduction Required (Below Pre- ReDevelopment Load)	20%				
¹ Adjusted Land Cover Summary: Pre ReDevelopment land cover minus pervious lan turf) acreage proposed for new impervious cover.							TP Load Reduction Required for Redeveloped Area (lb/yr)	1.3177		TP Load Reduction Required for New Impervious Area (lb/yr)	0.2054	
Adjusted total acreage is consistent with Post-ReD of new impervious cover).								•				-
Column I shows load reduction requriement for ne development load limit, 0.41 lbs/acre/year).	w impervious cover	(based on new										
			Post-Dev	velopment Requ	irement for S	Site Area						
				Reduction Required		1.5230						
			Linear P	roject TP Load Reductio	on Required (lb/yr):	1.5177						
										T		
			Ni	trogen Loads (Info	rmational Purp		evelopment TN Load					

		ARLING VIRGIN	
		DEPARTMENT ENVIRONMENTAL SE Facilities & Engineering D Engineering Bureau 2100 Clarendon Boulevard, 3 Arlington, VA 2220 Phone: 703.228.362 Fax: 703.228.3606	ERVICES ivision Suite 813 1 9
		Kimley Horn Kimley-Horn And Associates, ©2022 KIMLEY-HORN AND ASSOCI 11400 Commerce Park Drive, S Reston Virgina 20191 Phone: 703–674–1300 Fax: 703–674–1350	, INC. Ates, INC.
		Seal EDWARD J, DEL Lic. No. 04020543 09/29/2022	
		Approvals	Date
		Design Team Engineer Superv	isor
		Construction Management Sup	
		Water, Sewer, Streets Bureau G Transportation Director	Chief
		Project Manager	
		Revisions	Date
		Designed: DCD Drawn: MAT Checked: DCD Miss Utility Transmittal Filename: 010073-C-STRM- KNVA_RDWY110010073 columbia pike Path: 7.5 fnal design of columbia pike design/plansheets	#:
A DI INI	GTON COUNTY V	Plotted: September 29, Plotted by: Miguel.Tysh	2022
	GTON COUNTY, V I OF ENVIRONMEN		
	MWATER MANAG MBIA PIKE - ROU ULTIMODAL STF SEGMENT C	UTE 244	ENTS
SCALE:	SHEET:	C11.8 of C11.	8
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LUS ARAYA BUREAU CHIEF, DES - DEVELOPMENT SERVICES

11/15/2022

APPROVAL DATE