APPENDIX

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Intensification Conditions
Performance Results

MINOR SYSTEM - HYDRAULIC GRADELINE ASSESSMENT

2-year

	MINOR SYSTEM PERFORMANCE- HYDRAULIC GRADELINE											
Network	Minor System	Per	formance -	Length (m)		Perform	ance (%)				
Network	Length (m)	Α	В	С	D	Α	В	С	D			
CR_E1	214	214	0	0	0	100%	0%	0%	0%			
CR_E2	6481	3466	767	1618	629	53%	12%	25%	10%			
CR_E3	346	254	92	0	0	73%	27%	0%	0%			
CR_W1	300	300	0	0	0	100%	0%	0%	0%			
CR_W2	434	146	62	158	67	34%	14%	36%	16%			
CR_W3	430	430	0	0	0	100%	0%	0%	0%			
CR_W4	1394	1116	278	0	0	80%	20%	0%	0%			
CR_W5	413	361	53	0	0	87%	13%	0%	0%			
LO_E1	126	63	64	0	0	50%	50%	0%	0%			
LO_E2	179	179	0	0	0	100%	0%	0%	0%			
LO_E3	454	454	0	0	0	100%	0%	0%	0%			
LO_W1	106	106	0	0	0	100%	0%	0%	0%			
LO_W2	3437	949	503	1714	271	28%	15%	50%	8%			
LO_W3	2278	1297	440	535	7	57%	19%	23%	0%			
TC1	905	488	0	0	0	54%	0%	0%	0%			
Total	17496	9822	2258	4025	975	56%	13%	23%	6%			

	3-yeui											
		MINOR SYSTI	EM PERFOR	RMANCE- H	YDRAULIC	GRADELINI						
Network	Minor System	Pei	formance -	Length (m)		Perform	ance (%)				
Network	Length (m)	Α	В	С	D	Α	В	С	D			
CR_E1	214	214	0	0	0	100%	0%	0%	0%			
CR_E2	6481	2542	853	2157	929	39%	13%	33%	14%			
CR_E3	346	145	0	177	24	42%	0%	51%	7%			
CR_W1	300	0	66	233	0	0%	22%	78%	0%			
CR_W2	434	0	208	0	226	0%	48%	0%	52%			
CR_W3	430	354	76	0	0	82%	18%	0%	0%			
CR_W4	1394	503	891	0	0	36%	64%	0%	0%			
CR_W5	413	307	106	0	0	74%	26%	0%	0%			
LO_E1	126	63	64	0	0	50%	50%	0%	0%			
LO_E2	179	179	0	0	0	100%	0%	0%	0%			
LO_E3	454	454	0	0	0	100%	0%	0%	0%			
LO_W1	106	0	0	106	0	0%	0%	100%	0%			
LO_W2	3437	303	397	1515	1222	9%	12%	44%	36%			
LO_W3	2278	906	567	342	464	40%	25%	15%	20%			
TC1	905	488	0	0	0	54%	0%	0%	0%			
Total	17496	6456	3229	4530	2865	37%	18%	26%	16%			

MINOR SYSTEM - HYDRAULIC GRADELINE ASSESSMENT

10-year

	MINOR SYSTEM PERFORMANCE- HYDRAULIC GRADELINE											
Network	Minor System	Pei	formance -	Length (m)		Perform	ance (%)				
Network	Length (m)	Α	В	С	D	Α	В	С	D			
CR_E1	214	82	132	0	0	38%	62%	0%	0%			
CR_E2	6481	1605	984	1942	1949	24.8%	15%	30%	30%			
CR_E3	346	145	0	110	91	42%	0%	32%	26%			
CR_W1	300	0	0	213	87	0%	0%	71%	29%			
CR_W2	434	0	146	62	226	0%	34%	14%	52%			
CR_W3	430	173	256	0	0	40%	60%	0%	0%			
CR_W4	1394	164	255	898	77	12%	18%	64%	6%			
CR_W5	413	243	118	53	0	59%	28%	13%	0%			
LO_E1	126	63	0	64	0	50%	0%	50%	0%			
LO_E2	179	179	0	0	0	100%	0%	0%	0%			
LO_E3	454	454	0	0	0	100%	0%	0%	0%			
LO_W1	106	0	0	0	106	0%	0%	0%	100%			
LO_W2	3437	206	306	1367	1558	6%	9%	40%	45%			
LO_W3	2278	860	234	569	615	38%	10%	25%	27%			
TC1	905	905	0	0	0	100%	0%	0%	0%			
Total	17496	5078	2431	5277	4710	29%	14%	30%	27%			

	25-yeur											
		MINOR SYSTI	EM PERFOR	MANCE- H	YDRAULIC	GRADELINI						
Network	Minor System	Pei	formance -	Length (m)		Perform	ance (%)				
Network	Length (m)	Α	В	С	D	Α	В	С	D			
CR_E1	214	82	132	0	0	38%	62%	0%	0%			
CR_E2	6481	1013	1411	1743	2313	15.6%	22%	27%	36%			
CR_E3	346	99	46	110	91	28%	13%	32%	26%			
CR_W1	300	0	0	213	87	0%	0%	71%	29%			
CR_W2	434	0	60	148	226	0%	14%	34%	52%			
CR_W3	430	51	318	61	0	12%	74%	14%	0%			
CR_W4	1394	164	187	632	411	12%	13%	45%	29%			
CR_W5	413	183	178	53	0	44%	43%	13%	0%			
LO_E1	126	63	0	64	0	50%	0%	50%	0%			
LO_E2	179	179	0	0	0	100%	0%	0%	0%			
LO_E3	454	454	0	0	0	100%	0%	0%	0%			
LO_W1	106	0	0	0	106	0%	0%	0%	100%			
LO_W2	3437	206	153	1336	1741	6%	4%	39%	51%			
LO_W3	2278	749	194	721	615	33%	9%	32%	27%			
TC1	905	733	0	0	0	81%	0%	0%	0%			
Total	17496	3975	2679	5080	5590	23%	15%	29%	32%			

MINOR SYSTEM - HYDRAULIC GRADELINE ASSESSMENT

50-year

		MINOR SYSTI	EM PERFOR	MANCE- H	YDRAULIC	GRADELINE			
Network	Minor System	Pei	formance -	Length (m)				
Network	Length (m)	Α	В	С	D	Α	В	С	D
CR_E1	214	38	91	85	0	18%	43%	40%	0%
CR_E2	6481	440	1791	1596	2653	6.8%	28%	25%	41%
CR_E3	346	99	46	53	148	28%	13%	15%	43%
CR_W1	300	0	0	213	87	0%	0%	71%	29%
CR_W2	434	0	0	170	264	0%	0%	39%	61%
CR_W3	430	0	118	251	61	0%	27%	58%	14%
CR_W4	1394	164	125	584	521	12%	9%	42%	37%
CR_W5	413	183	60	170	0	44%	14%	41%	0%
LO_E1	126	63	0	0	64	50%	0%	0%	50%
LO_E2	179	179	0	0	0	100%	0%	0%	0%
LO_E3	454	454	0	0	0	100%	0%	0%	0%
LO_W1	106	0	0	0	106	0%	0%	0%	100%
LO_W2	3437	206	153	668	2410	6%	4%	19%	70%
LO_W3	2278	749	118	667	745	33%	5%	29%	33%
TC1	905	733	0	0	0	81%	0%	0%	0%
Total	17496	3307	2502	4457	7059	19%	14%	25%	40%

		MINOR SYST	EM PERFOR	MANCE- H	YDRAULIC	GRADELINE			
Network	Minor System	Pei	formance -	Length (m)		Perform	ance (%)	
Network	Length (m)	Α	В	С	D	Α	В	С	D
CR_E1	214	0	0	214	0	0%	0%	100%	0%
CR_E2	6481	216	1333	1915	3017	3.3%	21%	30%	47%
CR_E3	346	99	46	53	148	28%	13%	15%	43%
CR_W1	300	0	0	213	87	0%	0%	71%	29%
CR_W2	434	0	0	170	264	0%	0%	39%	61%
CR_W3	430	0	69	299	61	0%	16%	70%	14%
CR_W4	1394	164	125	681	424	12%	9%	49%	30%
CR_W5	413	0	183	230	0	0%	44%	56%	0%
LO_E1	126	63	0	0	64	50%	0%	0%	50%
LO_E2	179	179	0	0	0	100%	0%	0%	0%
LO_E3	454	454	0	0	0	100%	0%	0%	0%
LO_W1	106	0	0	0	106	0%	0%	0%	100%
LO_W2	3437	206	153	371	2706	6%	4%	11%	79%
LO_W3	2278	727	140	615	797	32%	6%	27%	35%
TC1	905	905	0	0	0	100%	0%	0%	0%
Total	17496	3011	2050	4762	7674	17%	12%	27%	44%

MINOR SYSTEM - CAPACITY ASSESSMENT

2-year

	MINOR SYSTEM PERFORMANCE- CAPACITY ASSESSMENT											
Network	Minor System	Perfo	rmance - Leng	th (m)	F	Performance (%	5)					
Network	Length (m)	<0.5	0.5 - 1	=1	<0.5	0.5 - 1	=1					
CR_E1	214	123	91	0	57%	43%	0%					
CR_E2	6481	1347	2980	2154	21%	46%	33%					
CR_E3	346	117	229	0	34%	66%	0%					
CR_W1	300	13	287	0	4%	96%	0%					
CR_W2	434	63	94	276	15%	22%	64%					
CR_W3	430	178	252	0	41%	59%	0%					
CR_W4	1394	673	684	37	48%	49%	3%					
CR_W5	413	234	179	0	57%	43%	0%					
LO_E1	126	63	64	0	50%	50%	0%					
LO_E2	179	179	0	0	100%	0%	0%					
LO_E3	454	454	0	0	100%	0%	0%					
LO_W1	106	0	106	0	0%	100%	0%					
LO_W2	3437	344	1095	1998	10%	32%	58%					
LO_W3	2278	825	815	639	36%	36%	28%					
TC1	905	814	90	0	90%	10%	0%					
Total	17496	5429	6965	5103	31%	40%	29%					

	N	INOR SYSTEM	PERFORMANO	CE- CAPACITY	ASSESSMENT		
Network	Minor System	Perfo	rmance - Lengt	th (m)	F	Performance (%	5)
Network	Length (m)	<0.5	0.5 - 1	=1	<0.5	0.5 - 1	=1
CR_E1	214	44	170	0	21%	79%	0%
CR_E2	6481	778	2532	3171	12%	39%	49%
CR_E3	346	50	142	154	15%	41%	45%
CR_W1	300	0	0	300	0%	0%	100%
CR_W2	434	16	130	288	4%	30%	66%
CR_W3	430	86	344	0	20%	80%	0%
CR_W4	1394	268	558	568	19%	40%	41%
CR_W5	413	62	344	7	15%	83%	2%
LO_E1	126	0	126	0	0%	100%	0%
LO_E2	179	144	35	0	81%	19%	0%
LO_E3	454	438	16	0	96%	4%	0%
LO_W1	106	0	0	106	0%	0%	100%
LO_W2	3437	156	533	2748	5%	16%	80%
LO_W3	2278	693	557	1028	30%	24%	45%
TC1	905	814	90	0	90%	10%	0%
Total	17496	3550	5576	8370	20%	32%	48%

MINOR SYSTEM - CAPACITY ASSESSMENT

10-year

	MINOR SYSTEM PERFORMANCE- CAPACITY ASSESSMENT										
Network	Minor System	Perfo	rmance - Lengt	th (m)	F	Performance (%	5)				
Network	Length (m)	<0.5	0.5 - 1	=1	<0.5	0.5 - 1	=1				
CR_E1	214	0	123	91	0%	57%	43%				
CR_E2	6481	584	1795	4101	9%	28%	63%				
CR_E3	346	50	94	201	15%	27%	58%				
CR_W1	300	0	0	300	0%	0%	100%				
CR_W2	434	16	130	288	4%	30%	66%				
CR_W3	430	51	287	91	12%	67%	21%				
CR_W4	1394	156	149	1089	11%	11%	78%				
CR_W5	413	62	323	29	15%	78%	7%				
LO_E1	126	0	63	64	0%	50%	50%				
LO_E2	179	102	77	0	57%	43%	0%				
LO_E3	454	438	16	0	96%	4%	0%				
LO_W1	106	0	0	106	0%	0%	100%				
LO_W2	3437	156	300	2981	5%	9%	87%				
LO_W3	2278	445	717	1117	20%	31%	49%				
TC1	905	814	90	0	90%	10%	0%				
Total	17496	2875	4165	10457	16%	24%	60%				

	N	INOR SYSTEM	PERFORMANO	CE- CAPACITY	ASSESSMENT		
Network	Minor System	Perfo	rmance - Lengt	th (m)	F	Performance (%	5)
Network	Length (m)	<0.5	0.5 - 1	=1	<0.5	0.5 - 1	=1
CR_E1	214	0	123	91	0%	57%	43%
CR_E2	6481	411	1365	4706	6%	21%	73%
CR_E3	346	50	67	229	15%	19%	66%
CR_W1	300	0	0	300	0%	0%	100%
CR_W2	434	0	91	343	0%	21%	79%
CR_W3	430	49	126	255	11%	29%	59%
CR_W4	1394	156	149	1089	11%	11%	78%
CR_W5	413	11	341	61	3%	83%	15%
LO_E1	126	0	63	64	0%	50%	50%
LO_E2	179	64	115	0	36%	64%	0%
LO_E3	454	438	16	0	96%	4%	0%
LO_W1	106	0	0	106	0%	0%	100%
LO_W2	3437	78	378	2981	2%	11%	87%
LO_W3	2278	267	729	1282	12%	32%	56%
TC1	905	814	90	0	90%	10%	0%
Total	17496	2338	3653	11506	13%	21%	66%

MINOR SYSTEM - CAPACITY ASSESSMENT

50-year

MINOR SYSTEM PERFORMANCE- CAPACITY ASSESSMENT											
Network	Minor System	Perfo	rmance - Lengt	th (m)	F	Performance (%	5)				
Network	Length (m)	<0.5	0.5 - 1	=1	<0.5	0.5 - 1	=1				
CR_E1	214	0	82	132	0%	38%	62%				
CR_E2	6481	287	905	5289	4%	14%	82%				
CR_E3	346	50	67	229	15%	19%	66%				
CR_W1	300	0	0	300	0%	0%	100%				
CR_W2	434	0	0	434	0%	0%	100%				
CR_W3	430	0	49	381	0%	11%	89%				
CR_W4	1394	88	217	1089	6%	16%	78%				
CR_W5	413	11	341	61	3%	83%	15%				
LO_E1	126	0	63	64	0%	50%	50%				
LO_E2	179	51	128	0	28%	72%	0%				
LO_E3	454	382	73	0	84%	16%	0%				
LO_W1	106	0	0	106	0%	0%	100%				
LO_W2	3437	0	430	3007	0%	13%	87%				
LO_W3	2278	267	729	1282	12%	32%	56%				
TC1	905	814	90	0	90%	10%	0%				
Total	17496	1950	3173	12373	11%	18%	71%				

	MINOR SYSTEM PERFORMANCE- CAPACITY ASSESSMENT											
Network	Minor System	Perfo	rmance - Leng	th (m)	F	Performance (%	5)					
Network	Length (m)	<0.5	0.5 - 1	=1	<0.5	0.5 - 1	=1					
CR_E1	214	0	0	214	0%	0%	100%					
CR_E2	6481	194	640	5647	3%	10%	87%					
CR_E3	346	0	117	229	0%	34%	66%					
CR_W1	300	0	0	300	0%	0%	100%					
CR_W2	434	0	0	434	0%	0%	100%					
CR_W3	430	0	49	381	0%	11%	89%					
CR_W4	1394	88	217	1089	6%	16%	78%					
CR_W5	413	11	267	135	3%	65%	33%					
LO_E1	126	0	63	64	0%	50%	50%					
LO_E2	179	51	128	0	28%	72%	0%					
LO_E3	454	351	103	0	77%	23%	0%					
LO_W1	106	0	0	106	0%	0%	100%					
LO_W2	3437	0	430	3007	0%	13%	87%					
LO_W3	2278	130	867	1282	6%	38%	56%					
TC1	905	703	111	90	78%	12%	10%					
Total	17496	1528	2991	12977	9%	17%	74%					

MAJOR SYSTEM - DEPTH/SPREAD ASSESSEMENT

2-year

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MAJOR SYSTEM PERFORMANCE- DEPTH										
Network	Major System	Major System Performance - Length (m)					Performance (%)			
Network	Length (m)	Α	В	С	Α	В	С			
CR_E1	123	123	0	0	100%	0%	0%			
CR_E2	6518	6464	54	0	99%	1%	0%			
CR_E3	318	318	0	0	100%	0%	0%			
CR_W1	233	233	0	0	100%	0%	0%			
CR_W2	383	383	0	0	100%	0%	0%			
CR_W3	406	406	0	0	100%	0%	0%			
CR_W4	1255	1255	0	0	100%	0%	0%			
CR_W5	240	240	0	0	100%	0%	0%			
LO_E1	62	62	0	0	100%	0%	0%			
LO_E2/3	499	499	0	0	100%	0%	0%			
LO_W1	419	399	20	0	95%	5%	0%			
LO_W2	3467	3467	0	0	100%	0%	0%			
LO_W3	2155	2155	0	0	100%	0%	0%			
TC1	848	848	0	0	100%	0%	0%			
Total	16927	16853	74	0	100%	0%	0%			

MAJOR SYSTEM PERFORMANCE- DEPTH									
Network	Major System	Perfor	mance - Leng		Performance (%)				
TICCHOIN.	Length (m)	Α	В	С	Α	В	С		
CR_E1	123	79	44	0	64%	36%	0%		
CR_E2	6518	6318	181	19	97%	3%	0%		
CR_E3	318	318	0	0	100%	0%	0%		
CR_W1	233	233	0	0	100%	0%	0%		
CR_W2	383	383	0	0	100%	0%	0%		
CR_W3	406	406	0	0	100%	0%	0%		
CR_W4	1255	1255	0	0	100%	0%	0%		
CR_W5	240	240	0	0	100%	0%	0%		
LO_E1	62	62	0	0	100%	0%	0%		
LO_E2/3	499	461	38	0	92%	8%	0%		
LO_W1	419	363	55	0	87%	13%	0%		
LO_W2	3467	3311	156	0	95%	5%	0%		
LO_W3	2155	2155	0	0	100%	0%	0%		
TC1	848	848	0	0	100%	0%	0%		
Total	16927	16433	475	19	97%	3%	0%		

MAJOR SYSTEM - DEPTH/SPREAD ASSESSEMENT

10-year

MAJOR SYSTEM PERFORMANCE- DEPTH									
Network	Major System	Perfor	mance - Leng	jth (m)	Performance (%)				
Network	Length (m)	Α	В	С	Α	В	С		
CR_E1	123	79	44	0	64%	36%	0%		
CR_E2	6518	5860	639	19	90%	10%	0%		
CR_E3	318	318	0	0	100%	0%	0%		
CR_W1	233	233	0	0	100%	0%	0%		
CR_W2	383	383	0	0	100%	0%	0%		
CR_W3	406	406	0	0	100%	0%	0%		
CR_W4	1255	1255	0	0	100%	0%	0%		
CR_W5	240	240	0	0	100%	0%	0%		
LO_E1	62	62	0	0	100%	0%	0%		
LO_E2/3	499	419	80	0	84%	16%	0%		
LO_W1	419	315	48	55	75%	11%	13%		
LO_W2	3467	3173	189	106	92%	5%	3%		
LO_W3	2155	2046	109	0	95%	5%	0%		
TC1	848	848	0	0	100%	0%	0%		
Total	16927	15638	1109	180	92%	7%	1%		

MAJOR SYSTEM PERFORMANCE- DEPTH									
Network	Major System	Perfor	mance - Leng	jth (m)	Performance (%)				
Network	Length (m)	Α	В	С	Α	В	С		
CR_E1	123	79	44	0	64%	36%	0%		
CR_E2	6518	5497	865	156	84%	13%	2%		
CR_E3	318	318	0	0	100%	0%	0%		
CR_W1	233	233	0	0	100%	0%	0%		
CR_W2	383	327	56	0	85%	15%	0%		
CR_W3	406	406	0	0	100%	0%	0%		
CR_W4	1255	1147	108	0	91%	9%	0%		
CR_W5	240	240	0	0	100%	0%	0%		
LO_E1	62	62	0	0	100%	0%	0%		
LO_E2/3	499	419	80	0	84%	16%	0%		
LO_W1	419	315	48	55	75%	11%	13%		
LO_W2	3467	3109	248	110	90%	7%	3%		
LO_W3	2155	2001	154	0	93%	7%	0%		
TC1	848	848	0	0	100%	0%	0%		
Total	16927	15002	1603	321	89%	9%	2%		

MAJOR SYSTEM - DEPTH/SPREAD ASSESSEMENT

50-year

MAJOR SYSTEM PERFORMANCE- DEPTH									
Network	Major System	Perfor	mance - Leng	jth (m)	Performance (%)				
Network	Length (m)	Α	В	С	Α	В	С		
CR_E1	123	41	82	0	33%	67%	0%		
CR_E2	6518	5151	1053	313	79%	16%	5%		
CR_E3	318	318	0	0	100%	0%	0%		
CR_W1	233	233	0	0	100%	0%	0%		
CR_W2	383	327	56	0	85%	15%	0%		
CR_W3	406	406	0	0	100%	0%	0%		
CR_W4	1255	1033	222	0	82%	18%	0%		
CR_W5	240	229	11	0	95%	5%	0%		
LO_E1	62	62	0	0	100%	0%	0%		
LO_E2/3	499	419	80	0	84%	16%	0%		
LO_W1	419	266	98	55	63%	23%	13%		
LO_W2	3467	2867	490	110	83%	14%	3%		
LO_W3	2155	1952	203	0	91%	9%	0%		
TC1	848	848	0	0	100%	0%	0%		
Total	16927	14153	2295	478	84%	14%	3%		

MAJOR SYSTEM PERFORMANCE- DEPTH									
Network	Major System	Perfor	mance - Leng	jth (m)	Performance (%)				
Network	Length (m)	Α	В	С	Α	В	С		
CR_E1	123	41	38	44	33%	31%	36%		
CR_E2	6518	4838	1342	338	74%	21%	5%		
CR_E3	318	253	66	0	79%	21%	0%		
CR_W1	233	203	30	0	87%	13%	0%		
CR_W2	383	327	56	0	85%	15%	0%		
CR_W3	406	406	0	0	100%	0%	0%		
CR_W4	1255	1033	222	0	82%	18%	0%		
CR_W5	240	229	11	0	95%	5%	0%		
LO_E1	62	62	0	0	100%	0%	0%		
LO_E2/3	499	419	80	0	84%	16%	0%		
LO_W1	419	139	225	55	33%	54%	13%		
LO_W2	3467	2383	923	160	69%	27%	5%		
LO_W3	2155	1922	187	46	89%	9%	2%		
TC1	848	732	116	0	86%	14%	0%		
Total	16927	12987	3296	643	77%	19%	4%		



































