Asset Management Plan Sanitary Sewer System







August 2016

Project No. 675-223

ENGINEERING ■ PLANNING ■ URBAN DESIGN

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1	1	TRUE Consulting				
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Revision Log

Revision #	Revised by	Date	Issue / Revision Description			
1	DPG	2016-02-12	Issued for Submission			
2	2 DPG 2016-0		Updated Capital Works to AM Plan			

Report Submission

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List of Acronyms

TRUE TRUE Consulting
AC Asbestos Cement (Pipe Material)
PVC Polyvinyl Chloride (Pipe Material)
VCT Vitrified Clay Tile (Pipe Material)



Executive Summary

Revision 2 of this document represents the Village of Clinton's efforts to move forward with implementing long-term Asset Management practices. This long-term planning document is intended to provide guidance for the upkeep and replacement of the Village's Sanitary Sewer Collection System. Revision 1 of this document, originally dated 2016-02-12, was entitled "Sanitary Sewer System Capital Works Plan".

In general, the collection system is comprised of approximately 8 km of pipeworks, installed between 1960 and 2010. The majority of this system is constructed using Asbestos Concrete and Vitrified Clay Tile pipes.

TRUE has evaluated the Village's collection system based upon age, criticality, and physical condition (as determined by a video inspection process undertaken by the Village in 2015). From this evaluation, a risk / priority ranking has been assigned to each pipe asset, creating a long term timeline for the guidance of pipe upkeep and replacement.

As Asset Management is considered to be an evolving practice, so to is this document. The Village should strive to keep the information in this document up-to-date with any changes to the Sewer System, or to the Village's evaluation method(s).



1.0 Introduction

In 2015, TRUE Consulting was retained by the Village of Clinton to complete at Capital Works Plan for both the water and sanitary sewer systems. The Sanitary Sewer Capital Works Plan relied heavily on the Village's existing Tangible Capital Assets inventory as well as recently completed sanitary sewer system video inspection completed by Northern Lites Technology Ltd. The video inspections were completed in August and September 2015. The existing inventory table for the sanitary sewer system was created as part of the Village's 2008 PSAB infrastructure inventory project. The inventory contains critical information on the sanitary sewer system, such as material and age of each pipe. This information, in conjunction with the results of the sanitary sewer video inspection, was used to create a phasing plan within the Sanitary Sewer Capital Works Plan.

In 2016, TRUE was retained to assist the Village with further pursuing long-term Asset Management practices, as required under the current Federal Gas Tax Funding Agreement. TRUE and the Village have expanded upon the 2015 Capital Works Plan to include analysis of risk / priority of individual collection assets, as well as an evaluation of capacity for the system.

1.1 Scope

For this Asset Management Plan, the existing sanitary sewer collection network has been assessed in terms of physical capacity as well as overall perceived risk / priority. The results, which have been input and updated on the Village's Truvian Mapping system, provides a suggestion for the order in which the Village should consider maintaining and renewing their sanitary collection system.

It is important to note that the capacity of the existing wastewater treatment systems has not been considered. Considerations for the treatment system capacity is a recommended next step such that the Village can further refine its Asset Management Planning.



2.0 Background

In 2008, a Tangible Capital Assets inventory of the sanitary sewer collection system was created. This generated a database of the wastewater collection system which included physical data pertaining to each pipe, such as; material, type, diameter, length, year installed. Figure 2-1 illustrates the sanitary sewer collection system, categorized by age. As shown, the majority of the sanitary sewer collection system was installed in the 1960s, and is comprised of Asbestos Cement (AC) and Vitrified Clay Tile (VCT) pipe. The network is an aging asset that requires ongoing maintenance to maximize the remaining lifetime of the asset. Table 2-1 following shows the breakdown of the network by material and age.

TABLE 2-1: BREAKDOWN OF SANITARY SEWER COLLECTION SYSTEM BY MATERIAL AND AGE

Material	Year Installed					Grand Total	Percentage of Total	
	1960s	1970s	1990s	2000s	Unknown		Length	
AC	2,260	360			165	2,785	34%	
PVC			75	195		270	3%	
VCT	5,075				35	5,110	62%	
Unknown					80	80	1%	
Grand Total	7,335	360	75	195	280	8,245	100%	

2.1 Pipe Criticality

A criticality analysis was completed by TRUE, to identify the approximate population that would be out of service in the event of a system break of each individual collection main. The majority of the sanitary sewer collection network is comprised of pipes that service less than 40% of the total population. However, approximately 30% of the mains service approximately 60% of the municipality and these pipes are therefore the Village's most critical sanitary sewer assets.

TABLE 2-2: PIPE CRITICALITY

Criticality of sewer main	Description	Total Length By Criticality	Percentage of Total Length
5	100% of the Village is out of service*	540	6%
4	80% of the Village is out of service*	840	10%
3	60% of the Village is out of service*	1,085	13%
2	40% of the Village is out of service*	2,295	28%
1	<20% of the Village is out of service*	3,485	42%
	Grand Total	8,245	100%

^{*}Based on approximate service area



2.2 Renewal of Collection System

In 2013 and 2014, some sections of the sanitary sewer system were repaired as a part of the Village's ongoing renewal/maintenance activities. A summary of the pipes that were recently relined is provided following:

TABLE 2-3: SANITARY SEWER COLLECTION NETWORK REPAIRS COMPLETED IN 2013 AND 2014

Asset ID	Inspection Date	Street	Start	End	Description of Works (from Northern Lites Technology)
SS.033	27-Jul-13	Carson St.	MH.027	MH.026	1-1 metre point repair
SS.035	27-Jul-13	Carson St.	MH.051	MH.049	Inspection shows location of repair completed in 2013; 2-1 metre point repairs
SS.036	27-Jul-13	Carson St.	MH.051	MH.052	Inspection shows location of repairs (2) completed in 2013; 2 - 1 metre point repairs; pressure grouted 4 service connections for root control
SS.037	27-Jul-13	Carson St.	MH.052	MH.053	Inspection shows location of repair completed in 2013; 1-1 metre point repair
SS.062	27-Jul-13	McDonald Avenue	MH.061	MH.060	1-2.5 metre point repair
SS.030	29-Jul-14	Cariboo Hwy.	MH.040	MH.035	2-2 metre and 1-4 metre repair
SS.031	29-Jul-14	Cariboo Hwy.	MH.040	MH.047	3-2 metre repair
SS.027	29-Jul-14	Cariboo Hwy.	MH.036	MH.022	1-2 metre repair
SS.028	29-Jul-14	Cariboo Hwy.	MH.023	MH.022	1-2 metre repair

2.3 2015 Video Inspection

In 2015, video inspection was completed for the majority of the Village's sanitary sewer collection system. The current conditions for the collection system was evaluated from this video inspection and a priority ranking for each pipe segment was given (high, medium, or low). High priority rating was assigned based on poor condition whereas medium priority was assigned based on fair condition, and low priority was assigned based on good condition. No priority ranking was assigned to approximately 50% of the Village's collection mains, for which the condition is assumed to be very good. A complete copy of the Sanitary Sewer Video Inspections can be found in Appendix A at the end of this report.

A summary of the sanitary sewer pipes by priority (and condition) can be found in Table 2-4.



TABLE 2-4: 2015 SANITARY SEWER VIDEO INSPECTION RESULTS

2015 Video Inspection Rating Priority	Condition based on 2015 Priority	Length	Percentage of Total Length	
High	Poor	945	11%	
Medium	Fair	1,320	16%	
Low	Good	1,290	16%	
No rating provided	Very Good	4,690	57%	
Total		8,245	100%	

2.4 Sanitary Capacity Analysis

A capacity analysis was carried out to determine if there are potentially any existing deficient pipes with the Village's collection network. This analysis was conducted using a "worst case scenario" methodology. This methodology assumed that the flow produced by the entire Village would be conveyed by the pipe with the lowest capacity. The smallest and flattest (least slope) pipe combination was chosen for evaluation. This pipe has the theoretical lowest capacity. Reviewing the historic record drawings of the collection system, this combination was determined to be a 200mm diameter AC pipe with a slope of 0.33%. Following the MMCD guidelines, it was determined that this pipe can convey 0.009 m³/s at 50% full.

The design flow was determined based on MMCD guidelines, using a population of 630 capita. The infiltration portion of the flow has been disregarded due to the understanding that the Village's highly granular soils easily convey groundwater well below the level of the buried pipes, resulting in a very low probability that infiltration would ever occur. A design flow of 0.0073 m³/s was determined using the MMCD value of 300 L/cap/d and a calculated peaking factor of 3.3.

TABLE 2-5. SANITARY SEWER PIPE CAPACITY AND MINIMUM DESIGN REQUIREMENTS

Location	Evaluated	Minimum	Actual	Minimum Design
	Minimum Capacity	Design Flow	Velocity	Velocity
	(m³/s)	(m³/s)	(m/s)	(m/s)
SS.005	0.009	0.0073	0.6	0.6

As seen, at 50% full, the sanitary sewer has the capacity to handle flows in the worst case scenario (i.e. the lowest capacity pipe, supporting the entire population of the entire Village). This absolute demand analysis demonstrates that the sanitary network has the capacity to support the Village of Clinton. It is noteworthy that this analysis suggests the system may be able to handle an increase in demand of nearly 25% (ie: 0.009 / 0.073 = 123%)



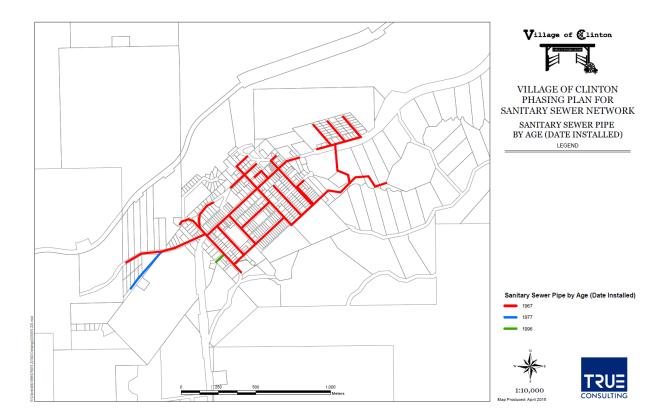


FIGURE 2-1: PIPE BY AGE

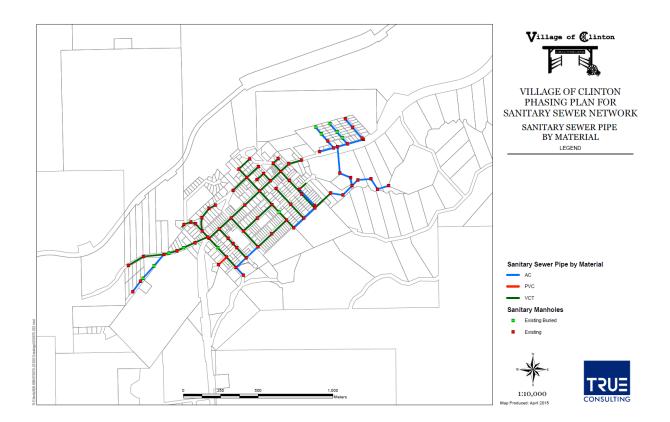


FIGURE 2-2: PIPE BY MATERIAL

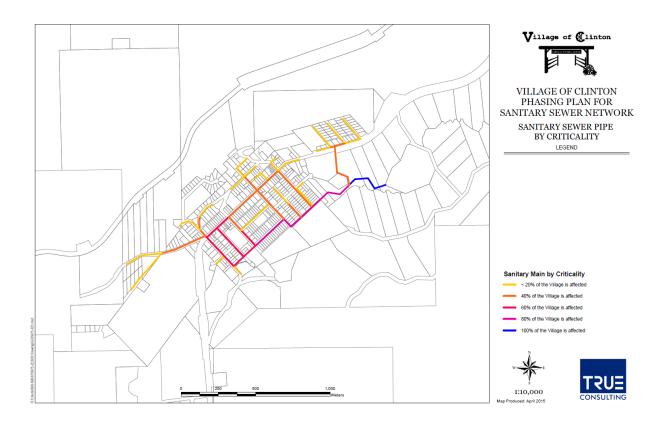


FIGURE 2-3: SANITARY SEWER PIPE BY CRITICALITY

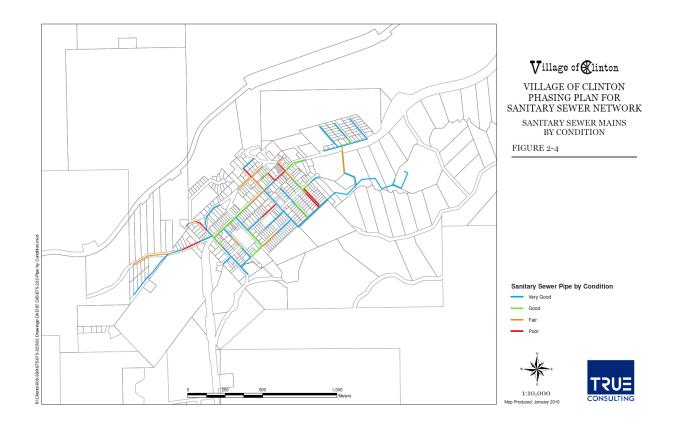


FIGURE 2-4: SANITARY SEWER PIPE BY CONDITION

3.0 Asset Management Plan

The process of making Asset Management decisions requires a balance between deciding which assets to renew, which assets to upgrade, and where capital expansion should occur to add new assets. Generally, these three typical scenarios are driven by:

- Aging and failing assets require replacement or renewal
- Assets providing deficient services, although not near the end of life, require upgrades or replacements
- Areas where the community may grow requires expansion of service networks

The challenge is to balance the needs of these three factors with the available time and resources of the Village in order to produce the most fiscally and social responsible decisions.

The purpose of this section is to summarize the conclusions drawn from the available asset attribute information. This information is known to be incomplete. As this information is updated and expanded upon, the conclusions found in this section will be subject to change.

The following content was developed during the development of the 2015 Water System Capital Works Plan based on criticality, material, and install year. It has not been substantially updated in August 2016 due to negligible changes in the results.

From the information discussed in Section 2.0 above, a Capital Works Plan was formulated based on the following criteria.

- Condition of pipe (from 2015 inspection)
- Pipe criticality rating
- Pipe material type/age

A summary table outlining the criticality and conditions of the assets is provided below. The goal for this Sewer Capital Works Plan is to approach the system with more urgency for the high priority (very poor condition) and high criticality pipes such that the dollars spent on the renewal/maintenance of the pipes within the sanitary sewer collection systems is optimized. Using this methodology, the Village should therefore start with the medium priority (fair condition) pipe with a criticality rating of 4, followed by the high priority (very poor condition) pipes with a criticality rating of 2 and medium priority (fair condition) pipes with a criticality rating of 3, and so on.

This final evaluation provides the basis of the following five phases of works. These phases simply represent an order in which works could be pursued. However, not all phases represent work that must be completed at this time. The Village should develop an evaluation of acceptable levels of service in order to determine at what phase it is in fact necessary to perform the works. This level of service evaluation is not within the scope of this report.



TABLE 3-1: NUMBER OF PIPES BY CRITICALITY AND CONDITION

	Condition to Criticality	Pipe Criticality						
	Condition vs Criticality	5	4	3	2	1		
	High Priority (Very Poor Condition)	-	-	-	4	7		
lition	Medium Priority (Fair Condition)	-	1	2	5	6		
Condition	Low Priority (Good Condition)	-	-	6	3	5		
	No Rating Provided (Very Good Condition)	11	7	5	13	28		

3.1 Assessment Summary

Based on the discussion provided above on the priority rankings and the pipe criticalities, the following phases have been identified:

Phase 1 (Red):

High Priority – Criticality of 5

Phase 2 (Orange):

- High Priority Criticality of 4
- Medium Priority Criticality of 5 and 4

Phase 3 (Yellow):

- High Priority Criticality of 3 and 2
- Medium Priority Criticality of 3
- Low Priority Criticality of 5 and 4

Phase 4 (Green):

- High Priority Criticality of 1
- Medium Priority Criticality of 2
- Low Priority Criticality of 3

Phase 5 (Blue)

- Medium Priority Criticality of 1
- Low Priority Criticality of 2 and 1
- No Rating Provided Criticality of 5, 4, 3, 2 and 1

3.1.1 Phase 1 (Red):

There are no pipes that currently fall within the Phase 1 criteria.

3.1.2 Phase 2 (Orange):

The following pipe falls within the Phase 2 criteria for both criticality and priority (condition), listed below.

TABLE 3-2: MEDIUM PRIORITY - CRITICALITY 4 INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main	Diameter (mm)	Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.012	Soues St.	MH.033	MH.032	4	250	1967	Medium	(Med) Grout 4 services to stop infiltration



3.1.3 Phase 3 (Yellow):

The following pipes fall within the Phase 3 criteria for both criticality and priority (condition), listed below.

TABLE 3-3: HIGH PRIORITY AND CRITICALITY 2 - INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main	Diameter (mm)	Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.024	Cariboo HWY	MH.015	MH.023	2	200	1967	High	(High) 2 - 1 metre point repairs on broken and fractured pipe
SS.053	Kelly Lake Rd.	MH.055	MH.090	2	200	1967	High	(High) Broken Pipe; (Med) Fractured Pipe; (Low) Pressure grout joints to stop root intrusion
SS.063	McDonald Ave.	MH.012	MH.007	2	200	1967	High	(High) 1 - 1 meter point repair (Med) remove large deposits and grout 3 services and joints
SS.088	Kelly Lake Rd.	MH.090	MH.054	2	200	1967	High	(High) Remove roots and grout joint to stop root intrusion

TABLE 3-4: MEDIUM PRIORITY - CRITICALITY 3 INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main	Diameter (mm)	Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.032	Cariboo HWY	MH.048	MH.047	3	200	1967	Medium	(Med) Grout fractured pipe
SS.096	Smith Ave.	MH.039	MH.082	3	200	1967	Medium	(Med) 1 - 1 metre point repair on fractured pipe

3.1.4 Phase 4 (Green):

The following pipes fall within the Phase 4 criteria for both criticality and priority (condition), listed below.

TABLE 3-5: HIGH PRIORITY AND CRITICALITY 1 - INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main	Diameter (mm)	Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.020	Cariboo Cres.	MH.050	MH.049	1	200	1967	High	(High) Remove roots, 1 - 2 metre point repair on fractured pipe grout pipe to stop intrusion
SS.021	Cariboo Cres.	MH.062	MH.050	1	200	1967	High	(High) Remove roots from service and grout service
SS.050	Government St.	MH.030	MH.021	1	200	1967	High	(High) 1 - 1 metre point repair on broken pipe
SS.060	Lebourdais Ave.	MH.028	MH.026	1	200	1967	High	(High) 1 - 1 meter point repair on fractured pipe
SS.062	McDonald Ave	MH.061	MH.060	1	200	1967	High	(High) remove roots and grout service connection
SS.066	McDonald Ave.	MH.018	MH.015	1	200	1967	High	(High) 3 - 1 metre point repairs on fractured pipe and hole
SS.069	ROW - 1509 Carson/Cariboo HWY	MH.024	MH.023	1	200	1967	High	(High) 1 - 1 meter point repair on fractured pipe

TABLE 3-6: MEDIUM PRIORITY - CRITICALITY 2 INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main		Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.027	Cariboo HWY	MH.022	MH.036	2	200	1967	Medium	(Med) 1 - 1 metre point repair on fractured pipe
SS.054	Kelly Lake Rd.	MH.057	MH.084	2	200	1967	Medium	(Med) 1 - 3 metre point repair and 2 - 1 metre repairs
SS.059	Lebourdais Ave.	MH.026	MH.022	2	200	1967	Medium	(Med) Grout 1 fracture pipe & 1 - 1 metre point repair
SS.065	McDonald Ave.	MH.015	MH.014	2	200	1967	Medium	(Med) 2 - 1 metre point repairs on fractured pipe
SS.072	ROW - Hugo servicing	MH.066	MH.065	2	200	1967	Medium	(Med) Steel pipe should be relined

TABLE 3-7: LOW PRIORITY - CRITICALITY 3 INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main	Diameter (mm)	Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.013	ROW - Smith/Dewdney	MH.037	MH.033	3	250	1967	Low	(Low) Grout two fractured pipes
SS.030	Cariboo HWY	MH.035	MH.040	3	200	1967	Low	(Low) minor cracks - reinspect in 5 years
SS.031	Cariboo HWY	MH.047	MH.040	3	200	1967	Low	(Low) minor cracks - reinspect in 5 years
SS.038	Dewdney Ave.	MH.034	MH.033	3	200	1967	Low	(Low) Grout one fractured pipe
SS.074	Smith Ave.	MH.082	MH.038	3	200	1967	Low	(Low) Grout one fractured pipe
SS.086	Cariboo Ave.	MH.047	MH.046	3	200	1967	Low	(Low) minor crack in pipe - review pipe in 5 years

3.1.5 Phase 5 (Blue):

The following pipes fall within the Phase 5 criteria for both criticality and priority (condition), listed below.

TABLE 3-8: MEDIUM PRIORITY - CRITICALITY 1 INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main		Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.022	Cariboo Cres.	MH.063	MH.062	1	200	1967	Medium	(Med) Grout 1 fracture and hole in pipe
SS.033	Carson St.	MH.027	MH.026	1	200	1967	Medium	(Med) Remove roots and grout service connection
SS.034	Carson St.	MH.031	MH.026	1	200	1967	Medium	(Med) 2 - 2 metre point repairs on fractured pipe
SS.055	Kelly Lake Rd.	MH.058	MH.057	1	200	1967	Medium	(Med) 1 - 1 metre point repair on fractured pipe
SS.056	Kelly Lake Rd.	MH.059	MH.058	1	200	1967	Medium	(Med) 2 - 2 metre point repairs on fractured pipes
SS.067	McDonald Cres.	MH.019	MH.018	1	200	1967	Medium	(Med) 1 - 2 metre point repair on fractured pipe & grout 2 other fractures

TABLE 3-9: LOW PRIORITY - CRITICALITY 2 INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main		Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.029	Cariboo HWY	MH.036	MH.035	2	200	1967	Low	(Low) minor cracks - reinspect in 5 years
SS.044	Foster Ave.	MH.010	MH.008	2	200	1967	Low	(Low) Grout to leaking service connections
SS.064	McDonald Ave.	MH.014	MH.012	2	200	1967	Low	(Low) hole that has been repaired

TABLE 3-10: LOW PRIORITY - CRITICALITY 1 INSPECTION RESULTS

ID	Street/R.O.W.	Start	End	Criticality of Main	Diameter (mm)	Year Installed	2015 Inspection Priority	2015 Inspection Recommendations
SS.025	Cariboo HWY	MH.016	MH.015	1	200	1967	Low	(Low) Grout two fractured pipes
SS.026	Cariboo HWY	MH.017	MH.016	1	200	1967	Low	(Low) Grout two fractured pipes
SS.043	Fir Ave	MH.077	MH.070	1	200	1967	Low	(Low) Grout small hole in pipe
SS.068	ROW - 402 Lebourdais/1509 Carson	MH.025	MH.024	1	200	1967	Low	(Low) Grout one fractured pipe
SS.080	Tingley St.	MH.075	MH.061	1	200	1967	Low	(Low) hole that has been repaired

4.0 Recommendations and Next Steps

The Asset Management Plan - Sanitary Sewer provides the Village with the basic information needed to continue the renewal/maintenance activities for the collection system on the basis of completing the more critical and higher priority pipes first. This system will allow the Village to better use available funds for the initial phases, and ultimately create a plan for renewal/maintenance of the less critical pipes with lower priorities.

From the summary of recommendations provided in the 2015 Sanitary Sewer Video inspection, it was recommended that the repairs for the high priority pipes be completed within a timeframe of 24 months or sooner, repairs for the medium priority pipes be completed within a timeframe of 60 months or sooner and that the conditions of the low priority pipes be reviewed within a timeframe of 60 months.

As the Village moves towards an Asset Management approach for maintenance and planning of the sanitary sewer collection system, it is recommended that the Village update the pipe conditions on a regular basis, and thus update the assessment of the pipes for each of the phases identified in Section 3.1.

5.0 References

"Municipal Road Network Phasing Plan: Village of Clinton," TRUE Consulting (675-222 – Revision R2). September 2014.

"Sanitary Sewer Inspections 2015 – Village of Clinton", Northern Lites Technology Ltd, 2015



APPENDIX A

Referenced Reports

VIDEO INSPECTION REPORT

Prepared for

VILLAGE OF CLINTON

Sanitary Sewer Post Relining Inspections

Job #2013-61 July 2013

Prepared by



4937 Old Summit Lake Road Prince George, BC. V2K 5S5

1-250-962-9382



Village of Clinton 1423 Cariboo Hwy Clinton, BC. V0K 1K0 July 27, 2013

Job #2013-61

Invoice #13-61

Attention: Accounts Payable.

RE: Installation of cure-in-place liners and pressure grouting of services connections for roots.

Carson Rd. MH 52 to 53 – 1 -1 me	ter point repair		3,000.00
Carson Rd. MH 52 to 51 - 2 - 1 me Pressure grouted 4 service connect (4 services @ \$750.00/ per)			5,600.00 3,000.00
Carson Rd. MH 51 to 49 – 2 – 1 m	eter point repairs	5,600.00	
Carson Rd. MH 27 to 26 – 1 – 1 m	eter point repair	3,000.00	
Macdonald Rd. MH 7A to 13 - 1 -	- 2.5 meter point repair	_	4,800.00
Pre-cleaning, inspections & root co	utting	3,000.00	
Shared Mobilization to Clinton			1,700.00
		٠	
	Sub Total		29,700.00
	GST		1,485.00
	TOTAL OF THIS INVOICE	\$	31,185.00

TERMS: NET 30 DAYS.

2% Per Month (24% per annual) will be charges on all overdue amounts.

GST #889316022RT.

Northern Lites Technology Ltd. 4937 old Summit Lake Rd. Prince George, BC.

V2K 5S5

PH: 1-800-661-6177

13X: SS.062 (MH.013 to MH.007A)

27X: SS.033 (MH.026 to MH.027)

51X: SS.035 (MH.049 to MH.051)

51X: SS.035 (MH.051 to MH.049) - opposite direction

52X: SS.036 (MH.051 to MH.052) 53X: SS.037 (MH.052 to MH.053)

13X: SS.062 (MH.007A to MH.013) - opposite direction

Project Summary

2013 repairs and inspection

Number of ins	spections: 7			Su	btotal	258.7 m	380.7 m
13X	7/26/2013	McDonald Ave	13	7 A	AC		82.9
53X	7/26/2013	Carson St.	52	53	VC		1.2
52X	7/26/2013	Carson St.	51	52	VC	75.7	75.7
51X	7/26/2013	Carson St.	51	49	VC	91.5	91.4
51X	7/26/2013	Carson St.	49	51	VC	91.5	1.8
27X	7/26/2013	Carson St.	26	27	vc		1.8
13X	7/26/2013	McDonald Ave	7 A	13	AC		125.9
Main ID	Date	Address	Start MH	Finish MH	Pipe	Asset length Sur	veved Length

Total

258.7 m

380.7 m

Friday, July 26, 2013 1:08 PM

Page 1 of 1

Project Summary

SS.035 (MH.051 to MH.049) Inspected July 26, 2013

WRc Sewer Report

Inspected by: Guy Adams	Contract No:	Job number: 2013-041	Catchment:	Division: District:	PLR: 51X Place name:
Start date/time: 26.07.13 10:14	Carson St.			da poderina de la companya de la com	Clinton
Start Manhole No.	Depth: Cover:	Invert:	Finish Manhole No 51	2.50	r: Invert:
Use: F	Direction: Size 2:	Size 1: Shape: 200 C	Material: Lining: VC	: Pipe length:	Total length: Year laid:
VT No: 00003	CONTRACTOR OF THE PROPERTY OF		Comments		AMAZINE AMAZINE TO THE TOTAL TO THE TAXABLE PROPERTY OF TA
Purpose: Category F	Pre-cleanse: Weather: Loc	tion: Location details: To Cariboo A	/e.		
Video No. Photo			tters. Diameter / Dimension ode	Numbers Clock Intrusion at to % mm	Remarks
0000	0.0		ST		
0000	0.0		MH		49
0001	0.0		WL	5	
0004 0	0.2		GO		Start of repair
0013	1.8		SA .		

WRc Sewer Report

Inspected by: Guy Adams		Contra	ct No:			Job number: 2013-041		Catchme	nt:			Division:	- Contraction	District:		PLR: 51X		
Start date/time: 26.07.13 10:2	23 [Road name														Place name Clinton	:	West of the second seco
Start Manhole No.		Depth: 2.50		Cover:		Invert:				Finish Ma 49	nhole No.		Dep 2.		Cover:	F. C.	Invert:	
Use:		Direction:	errored er	Size 2:		Size 1:	Shape: C		Material: VC		Lining:	MT (000) THE		pe length: .8		Total length: 91.5	,	Year lald:
VT No:	 00004	ACAZIMINE MANIEL MASA SANAMANA ARABA			**************************************	HIPPORT OF THE PARTY OF THE PAR	1	Comme	ents									
Purpose: Cal	tegory	Pre-cleanse: Y	Weath 1	et	.ocatio C		n details: ariboo A	ve.	October 1980 Annie 198				× must		an kanate Post 1000			ANN AND ANN AND ANN AND ANN AND AND AND
Video No.	Photo	No.	Dista	nce		ntinuous Defect		etters cade	A. 24.25	r / Dimens	ions	mbers Clock to		Intrusio %		Remarks		
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0000				0.	0			МН								51		···
0001		<u>.</u>		0.	0			WL						10				
0012	-			13.	5			JN		100	9					·		
0044	 	001		40.	6			G0								Start of rep	air	
0052 .		1		41.	7		,	GO	ı		,					End repair		1
0074	_			58.	9			JN		150	9		\Box					
0103		<u> </u>		89.	9			GO								Start of rep	air	
0105				89.	9			GO		-			\top			Opposite ei	nd of p	revious rpt
0115	 			91.	.2			GO								End repair		
0121				91.	4			MH					\top			49		
0123	 -		<u> </u>	91.	4	"	 	FH										

0123

SS.036 (MH.051 to MH.052) Inspected July 26, 2013

WRc Sewer Report

Inspected by: Guy Adams	Contract No:	1	Job number: 2013-041		Catchment:		Division:	District:	William Control	PLR: 52X	
Start date/time: 26.07.13 10:42	Road name: Carson St.							The state of the s	T NO TOTAL	Place name Clinton	
Start Manhole No. 51	Depth: Cove	er:	Invert:			Finish Manhole No. 52	i	Depth: 2.40	Cover:	The state of the s	Invert:
Use: F	Direction: Siz	e 2:	Size 1: 200	Shape: C	Materi VC Comments	al: Lining:		Pipe length: 1.8	C S S S S S S S S S S S S S S S S S S S	Total length: 75.7	Year laid:
	re-cleanse: Weather:	Locat C		on details: n 1315 Ca	arson						
Videa No. Photo	No: Distance	G	ontinuous Defect		tiers. Diamo ode	ter / Dimension	lumbers Clock to	Intrusion % m	m	Remarks	

	arte de la companya	code	Diameter / Dimension		1111dsidii :o %	nin-
0000	0.0	ST				
0000	0.0	мн				51
0001	0.0	WL			5	
0004	6.8	CN	100	2		Grouted
0015	14.0	JN	100	9		Live
0023	23.8	, NC	100	3	ŧ	Live
0031	26.5	CN	100	9		Groouted
0041	27.0	GO				Start of repair
0044	28.1	GO				End repair
0071	49.1	CN	100	10		Grouted
0082	60.3	GO				Start of repair
0085	61.4	GO				End repair
0091	61.6	JN	100	10		
0095	65.4	CN	100	2		
0102	66.3	JX	100	2		RF. Grouted
0114	75.7	МН				52

Video No.	Photo No.	Distance (m)	Continous Defect	Letters code	Diameter / Dimension	Numbers Clock at to	Intrusion % mm	Remarks
0121		75.7		FH				

SS.037 (MH.052 to MH.053) Inspected July 26, 2013

WRc Sewer Report

Inspected by: Guy Adams	Contract No:	Job number: 2013-041	Catchment:	Division:	District:	PLR: 53X
Start date/time: 26.07.13 10:57	Road name: Carson St.					Place name: Clinton
Start Manhole No. 52	Depth: Cover: 2.40	Invert:	Finish Manhole No. 53		Depth: Cover	
Use:	Direction: Size 2:	Size 1: Shape:	Material: Lining: VC	and the second	Pipe length: 1.8	Total length: Year laid:
VT No: 00006	mada		Comments			
Purpose: Category Pr		Location: Location details: C To 1315 Cars	on	CONTRACTOR		
Video No. Photo: I			Diameter / Dimension	Numbers Clock ta	Intrusion % mm	Remarks
0000	0	.0	ST			
0000	0	.0	мн			52
0001	0	.0	WL		5	
0003	0	.2	GO			Start of repair
0012	1	.2	GO			End repair
0013	. 1	.2	FH .			



VIDEO INSPECTION REPORT

Prepared for

VILLAGE OF CLINTON

Sanitary Sewer Post Relining Inspections

Job #2014-63 July 2014

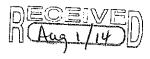
Prepared by



4937 Old Summit Lake Road Prince George, BC. V2K 5S5

1-250-962-9382





Village of Clinton 1423 Cariboo Hwy Clinton, BC. VOK 1K0 July 29, 2014

Job #2014-64

Invoice #14-64

Attention: Accounts Payable.

RE: Installation of cure-in-place liners on Hyw 97 & cleaning catch basins in the village.

Shared Mobilization to Clinton		1,900.00				
Pre-cleaning, inspections & root co	utting	2,000.00				
Cariboo Hwy MH 40 to 35 install Cariboo Hwy MH 40 to 47 install Cariboo Hwy MH 36 to 22 install Cariboo Hwy MH 23 to 22 install	ed $3-2$ meter ed $1-2$ meter		12,800.00 9,800.00 3,500.00 3,500.00			
Traffic control for all repairs			2,000.00			
Cleaning of storm catch basins & Wolf Cry Pub on Cariboo Hwy & (10 hours @ \$225.00/Hr.)			2,225.00			
	Sub Total		37,725.00			
	GST		1,886.25			
	TOTAL OF THIS INVOICE	\$	39,611.25			

TERMS: NET 30 DAYS.

2% Per Month (24% per annual) will be charges on all overdue amounts. GST #889316022RT.

Northern Lites Technology Ltd. 4937 old Summit Lake Rd. Prince George, BC.

V2K 5S5

PH: 1-800-661-6177

Project Summary

2014 repairs

	A A A A A A A A A A A A A A A A A A A		4 - 4 - 10 - 10 - 10 - 10 - 10 - 10 - 10	0-1	ototal	369.5 m	471.0 m
Wolfs cryX	7/29/2014	Highway 97	North	Wolfs cry	ST	60.0	32.2
мн36Х	7/29/2014	Highway 97	MH22	MH36	VC		0.6
MH36X	7/29/2014	Highway 97	MH22	MH36	VC		0.5
MH23X	7/28/2014	Highway 97	MH22	MH23	VC		71.3
MH23X	7/28/2014	Highway 97	MH22	MH23	VC		100.7
MH35X	7/28/2014	Highway 97	MH35	MH40	VC	107.6	63.8
MH35X	7/28/2014	Highway 97	MH35	MH40	VC	107.6	107.6
MH47X	7/28/2014	Highway 97	MH47	MH40	VC	94.3	94.3

WRc Sewer Report Division: District: PLR: Catchment: Contract No: Job number: Inspected by: MH47X 2014-063 **Guy Adams** Place name: Road name: Start date/time: Clinton 28.07.14 22:53 Highway 97 Finish Manhole No. Depth: Cover: Invert: Cover: Invert: Depth: Start Manhole No. MH40 MH47 Lining: Pipe length: Total length: Year laid: Shape: Material: Size 2: Size 1: Direction: Use: 94.3 С VC D 200 Comments VT No: 00001 Location: Location details: Weather: Category Pre-cleanse: Purpose: Α Υ 1 С Numbers Remarks Letters Photo No. Distance Continuous Defect Diameter / Dimension Intrusion Clock atto % mm code ST 0.0 0000 MH 0.0 47 0000 5 WL 0.0 0001 S1 GO 0003 63.0 Start of repair F1 GO 64.9 0003 Start of repair GO 69.9 **\$2** Start of repair 0020 GO 0020 72.1 F2 Start of repair GO 93.1 **S**3 Start of repair 0031 F3 GO 94.0 0031 Start of repair MH 94.0 40 0040

WRc Sewer Report Tuesday, July 29, 2014 7:21 AM Page 1 of 1

FH

94.3

0042

WRc Sewer Report

Inspected by: Guy Adams	Contract No:	Job number: 2014-063	Catchment:	Division: District:	: PLR: MH35X	- Visit
Start date/time: 28.07.14 23:00	Road name: Highway 97				Place name: Clinton	Constitution of the second sec
Start Manhole No. MH35	Depth: Cover:	Invert:	Finish Manhole No MH40	o. Depth:	Cover: I	nvert:
Use:	Direction: Size 2:	Size 1: Shape:	Material: Lining	g: Pipe length:	Total length:	Year laid:
F	D	200 C	VC	PAMAS ON SOMEWHAT AND AND ADMINISTRATION OF SOMEWHAT ADMINISTRATION ADMINISTRATIO	107.6	Approximation and the second s
VT No: 00002			Comments			1900. TAC
William Programme Company	Control of the Contro		and a second sec	REMAY PROPERTY AND ARTHUR THAT IS A STATE OF THE REMAINING THE ARTHUR THE THE THE PARTY THE THE PARTY THE	****	43474 - 34474 Charles - 35474 Annie - 34474
Purpose: Category F	Pre-cleanse: Weather:	Location: Location details	:			9
A STATE OF THE STA	Y 1	A See above	And the second s			The state of the s

		Continuous Defect	Letters	Diameter / Dimension	Numbe Clo		Intr	ısion	Remarks
			code		at		%	mm	
								·	
0000	0.0		ST						
0000	0.0		МН						35
0001	0.0		WL				5		
0030	23.5		NC	100	3				Live.
0050	35.7		JN	100	9				Live. RFJ in service.
0074	52.5	S1	FM		12	12			
0074	55.6	F1	FM		12	12			
0093	57.3		FM		12	12			For 1.2M
0105	61.0		FM		12	12			For 1.1M
0124	70.5		CN	100	9				Live.
0135	71.9		FC		12	12			
0142	72.7		FM		9	3			At joint
0161	82.0		FM		12	12			
0164	82.4		JN	100	3				Live.
0183	94.8	-	NC	100	3				Live.
0202	106.9		FC		10	3			At joint

Video No. Photo No.	Distance (m) Continous Defi		Numbers Diameter f Clock Dimension; at to	Intrusion % mm	Remarks
0213	107.6	МН			40
0214	107.6	FH			

WRc Sewer Report PLR: Division: District: Catchment: Job number: Contract No: Inspected by: MH35X 2014-063 **Guy Adams** Place name: Road name: Start date/time: Clinton Highway 97 28,07.14 23:23 Invert: Depth: Cover: Finish Manhole No. Invert: Depth: Cover: Start Manhole No. MH40 MH35 Total length: Year laid: Material: Pipe length: Lining: Size 1: Shape: Size 2: Direction: Use: 107.6 VC 200 C D Comments VT No: 00003 Location: Location details: Pre-cleanse: Weather: Category Purpose: See above 1 Α С Remarks Numbers Letters Continuous Defect Distance Photo No. Video No. Intrusion Diameter / Dimension Clock % mm at to code ST 0.0 0000 35 MH 0.0 0000 5 0.0 WL 0001 GO Start of repair S1 52.0 0003 GO Start of repair 56.0 F1 0003 Start of repair 57.4 S2 GO 0014 Start of repair F2 GO 59.6 0014 Start of repair S3 GΟ 61.3 0024 F3 GO Start of repair 63.4 0024

0034

SA

63.8

End of repairs

WRc Sewer Report

Start date/time: Road name: Highway 97 Start Manhole No. Depth: Cover: Invert: Shape: MH23 MH23	Inspected by: Guy Adams	Contract No:	Job number: 2014-63	Catchment:	Division: District:	PLR: MH23X
Start Manhole No. Depth: Cover: Invert: Invert: MH23 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F U 200 C VC VT No: 00004						
Use: Direction: Size 2: Size 1: Shape: Flaterial. Calling. VT No: 00004 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: A Y 1 A See above	4	T Designation	Invert:	MH23	Sometime of the second	Maria Construction to the construction of the
Purpose: Category Pre-cleanse: Weather: Location: Location details: A 1 A See above	F MANAGEMENT	U	200 C	VC	A OFFICIAL EASIER	Total length: rear laid:
	Purpose: Category Pr	3 1		Programment and the Committee of the Com		

• Idea iso.					Diameter / Dimension	Clo		%	mm	
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0021		22.0		JN	100	2				Live.
0055		50.0		SSL	125	2				
0070		51.4		NC	100	10				
0074		51.4	S1	DES				10		
0074		56.5	F1	DES				10		
0084		59.5	S 2	DES				5		
0095		63.8		JN	100	2				Live.
0084		64.0	F2	DES			·	5		
0111		68.8	-	FM		12	12			
0122		70.4		CNI	100	9	,		10	live
0150		81.6		JN	100	3				Appears unused
0160		84.5	S3	DES				5		
0163		86.3		JN	100	2				Appears unused

Video No.	Photo No: Distance (m)	Continous Defect	Letters code	Diameter / Dimension	Numbers Clock at to	Intrus %	Remarks sion: mm:	
					- as	azist inneni		
0165	86.3		WL			30		
0172	88.5		WL.			10		
0160	89.0	F3	DES			5		
0182	93.0		WL			25		
0183	93.0	S4	DES			10		
0183	96.5	F4	DES			10		
0191	96.5		WL			5		
0201	100.6		мн				23	
0205	100.7		FH					

WRc Sewer Report Division: District: PLR: Catchment: Contract No: Job number: Inspected by: MH23X 2014-63 **Guy Adams** Place name: Road name: Start date/time: Clinton Highway 97 28.07.14 23:57 Depth: Cover: Invert: Finish Manhole No. Invert: Depth: Cover: Start Manhole No. MH23 MH22 Total length: Year laid: Lining: Pipe length: Material: Shape: Direction: Size 2: Size 1: Use: С VC 200 U Comments VT No: 00005 Location: Location details: Category Pre-cleanse: Weather: Purpose: See above Α 1 С Υ Remarks Numbers Letters Continuous Defect Photo No. Distance Intrusion Diameter / Dimension Clock % mm code aŧ to ST 0.0 0000 22 MH 0.0 0000 5 WL 0.0 0001

Start of repair

Start of repair

Past repair

0004

0004

0015

69.0

71.0

71.3

S1

F1

GO

GO

SA

WRc Sewer Report PLR: Division: District: Catchment: Contract No: Job number: Inspected by: **MH36X** 2014-063 **Guy Adams** Place name: Road name: Start date/time: Clinton Highway 97 29.07.14 00:02 Invert: Depth: Cover: Finish Manhole No. Invert: Cover: Start Manhole No. Depth: MH36 MH22 Year laid: Total length: Lining: Pipe length: Size 1: Shape: Material: Direction: Size 2: Use: VC C U 200 F Comments VT No: 00006 Location details: Weather: Location: Category Pre-cleanse: Purpose: Α See above Υ 1 Remarks Numbers Continuous Defect Letters Distance Video No. Photo No. Intrusion Diameter / Dimension Clock % mm at to code 0.0 ST 0000 22 MH 0.0 0000 5 0.0 WL 0001 12 12 В 0.1 0002 SA 0.5 0013

WRc Sewer Report PLR: Division: District: Job number: Catchment: Inspected by: Contract No: MH36X 2014-063 **Guy Adams** Place name: Road name: Start date/time: Clinton Highway 97 29.07.14 00:05 Invert: Depth: Cover: Finish Manhole No. Invert: Cover: Start Manhole No. Depth: MH36 MH22 Year laid: Pipe length: Total length: Lining: Size 1: Shape: Material: Direction: Size 2: Use: VC С U 200 F Comments VT No: 00007 Weather: Location: Location details: Pre-cleanse: Category Purpose: Α See above Υ С Numbers Remarks Continuous Defect Letters Distance Photo No. Video No. Diameter / Dimension Intrusion Clock % at to mm code ST 0.0 0000 МН 22 0.0 0000 5 0.0 WL 0001 GO Start of repair 0.1 **S**1 0002 GO Start of repair 0.6 F1 0002

SA

0011

0.6

WRc Sewer Report Division: District: PLR: Catchment: Job number: Contract No: Inspected by: Wolfs cryX 2014-063 **Guy Adams** Place name: Road name: Start date/time: Clinton Highway 97 29.07.14 00:08 Finish Manhole No. Cover: Invert: Depth: Invert: Depth: Cover: Start Manhole No. Wolfs cry North Year laid: Pipe length: Total length: Lining: Shape: Material: Size 1: Size 2: Direction: Use: 60.0 ST 300 С U S Comments VT No: 80000 Location details: Weather: Location: Category Pre-cleanse: Purpose: See above Υ 1 Α Remarks Numbers Continuous Defect Letters Photo No. Distance Diameter / Dimension Intrusion Clock % mm. at to code ST 0.0 0000 North 0.0 MH 0000 5 0.0 WL 0001 10 Varies S1 DES 0.1 0044 3 9 SWM 0.1 S2 0052 3 S3 Н Void visible 2.7 0005 9 S4 Н 2.7 0024 3 Н Void visible 10.0 F3 0005 Н 9 F4 10.0 0024 80 9 CNI 200 DES in CNI 31.4 0061 10 31.4 F1 DES Varies 0044 3 9 SWM F2 31.4 0052

Cannot pass CNI

SA

32.2

0800

WRc Sewer Report

Inspected by: Guy Adams	Contract N	io:	Job number: 2013-041		Catchmo	ent:		Division:	District:	PLR: 13X		
Start date/time: 26.07.13 11:00	Road name: McDonald	Ave					a en la companya de			Clin	name: ton Invert:	
Start Manhole No.	Depth:	Cover:	Invert:				Finish Manhole No. 7A		Depth: 2.20	Cover:		
Use:	Direction: D	Size 2:	Size 1: 200	Shape: C	:	Material: AC	Líning:		Pipe length: 3.1	Total le	ngth: Year laid	
VT No: 000					Comn	nents	e e e e e e e e e e e e e e e e e		em valente e e			
Purpose: Category	Pre-cleanse:	•		ition details: om Tingley	y St.							

Meo No	Photo No	Distance Continuous Defi	co eters Diameter	Numbers Dimension Clock	mushi	Remorks
	e de la paper d'altre de		cole	at n	% (nin.
Control of the contro		Control of the Contro				
0000		0.0	ST			
0000		0.0	МН			13
0001		0.0	WL		5	
0003	001	79.8	GO			Start of repair
0012		81.9	GO			End repair
0012		82.9	SA			Past repair

Summary and Recommendations Sanitary sewer inspections 2015 Village of Clinton

Location	MH to MH	Repair location	Pipe size	Recommendation	Priority
Teal St.	62 to 61	20.5 & 22.1	200mm	Grout two holes in pipe	med
Easement of Teal St.	61 to 60	16.4	200mm	Remove roots from service and grout service	med
Kelly Lake Rd.	59 to 58	7.0 & 61.7	200mm	2 - 2 meter point repairs on fractured pipes	med
Kelly Lake Rd.	58 to 57	104	200mm	1 - 1 meter point repair on fractured pipe	med
Kelly Lake Rd.	57 to 55A	various	200mm	1 - 3 meter point repair and 2 - 1 meter repairs	med
Kelly Lake Rd.	55 to 54A	various	200mm	1 - 2 meter point repair on broken pipe	high
				1- 1 meter point repair on fractured pipe	med
				presssure grout joints to stop root intursion	low
Kelly Lake Rd.	54 to 54A	21.4	200mm	remove roots and grout joint to stop root intrusion	high
Cariboo Ave	50A to 50B	31.6 & 33.1	200mm	Grout 1 fracture and hole in pipe	med
Cariboo Ave	50A to 50	28.1	200mm	Remove roots from service and grout service	high
Cariboo Ave	50 to 49	2	200mm	remove roots - 1-2 meter point repair on fractured pipe	high
				grout pipe joints to stop root intrusion	
Cariboo Ave	48 to 47	1.7	200mm	Grout fractured pipe	med
Cariboo Ave	46 to 45	1.4	200mm	1 - 1 meter point repair & grout 1 fractured pipe	med
Cariboo Ave	45 to 44	various	200mm	remove mineral deposits & grout factured pipe &	med
				grout 5 service connections	
Cariboo Ave.	46 to 47	63	200mm	minor crack in pipe - review pipe in 5 years	low
Carson St.	31 to 26	28.2 & 53.1	200mm	2 -2 meter point repairs on fractured pipe	med
Carson St.	27 to 26	75	200mm	remove roots and grout service connection	med
LeBourdais Ave.	28 to 26	31	200mm	1 -1 meter point repair on Fractured pipe	high
LeBourdais Ave.	26 to 22	48.4 & 52.7	200mm	grout 1 fracture pipe & 1 -1 meter point repair	med
Hyw 97	23 to 15	62 & 83.1	200mm	2 - 1 meter point repairs on broken and fractured pipe	high
Hyw 97	36 to 35	22.3 & 65.2	200mm	minor cracks - reinspect in 5 years	low
Hwy 97	36 to 22	81.9	200mm	1 -1 meter point repair on Fractured pipe	med
Hwy 97	40 to 35	various	200mm	minor cracks - reinspect in 5 years	low

Hwy 97	40 to 47	various	200mm	minor cracks - reinspect in 5 years	low
Cariboo Ave.	50 to Stub 01	19.2	150mm	1 -1 meter point repair on Fractured pipe - MH or cleanout	Med
				would have to be installed to provide access to the line	
Cariboo Ave.	41 to 42	14 & 52.7	200mm	grout 2 service connections to stop infiltration	low
Smith Rd.	39 to 38A	19	200mm	1 -1 meter point repair on fractured pipe	med
Smith Rd.	38A to 38	35.4		grout one fractured pipe	low
Dewdney Ave.	34 to 33	2.5	200mm	grout one fractured pipe	low
MacDonald Ave.	18 to 15	various	200mm	3 - 1 meter point repairs on fractured pipe and hole	high
MacDonald Ave.	18 to 19	various		1 -2 meter point reapir on fractured pipe & grout 2 other	med
				fractures	
MacDonald Ave.	14 to 15Y	72.6 & 81.	200mm	2 - 1 meter point repairs on fractured pipes	med
Laneway from Carson	24 to 23	65	200mm	1 - 1 meter point repair on broken pipe	high
Laneway from Carson	24 to 25	58.1	200mm	grout 1 fractured pipe	low
Hyw 97	16 to 17	42.6 & 55.2	200mm	grout 2 fractured pipe	low
Hyw 97	16 to 15	19.6 & 48.9	200mm	grout 2 fractured pipe	low
Government St.	30 to 21	135.4	200mm	1 -1 meter point repair on broken pipe	High
Fir Ave.	70 to 69	9.8		grout small hole in pipe	low
Foster Ave.	10 to 8	40.7 & 58.8	200mm	Grout to leaking service connections	low
Foster Ave.	10 to 11	64.3	200mm	minor crack at service connection	low
MacDonald Ave.	14 to 12	24.7	200mm	hole that has been repaired	low
Tingley Rd.	13A to 13	5.9	200mm	hole that has been repaired	low
MacDonald Ave.	13 to 7A	86.6	200mm	remove roots and grout service connection	high
MacDonald Ave.	12 to 7	16.6	200mm	1 - 1 meter point repair	high
MacDonald Ave.	7A		200mm	Large mineral deposits on MH 7A & 7 - remove deposits	
				grout both manholes	
Mcdonald Ave.	7 to 12	various	200mm	remove large deposits and grout 3 services and joints	med
Smith Ave.	37 to 33	21.8 & 37.9	250mm	grout 2 fractured pipe	low
Soues St.	33 to 32	various	250mm	Grout 4 services to stop infiltration	med
Hyw 97 crossing	67 to 4B	full length	250mm	Steel pipe should be relined.	med

Colour Code

High Priority - Marked in Red - Repair should be completed in the next 24 months or sooner Medium Priority - Marked in Blue - Repairs should be completed in next 60 months Low Priority - Marked in Green - Review lines in 60 months.

PH: 1-800-661-6177

Project Summary

2015 sani inspections

Main ID	Date	Address	Start MH	Finish MH	Pipe	Asset length Surv	eyed Length
MH 63X	8/27/2015	Teal St.	MH 62	MH 63	AC	120.0	92.9
MH 62X	8/27/2015	Teal St.	MH 62	MH 61	AC	29.3	29.3
MH 61X	8/27/2015	Easement from Teal St.	MH 61	MH 60	AC	107.1	107.1
MH 60X	8/27/2015	Kelly Lk. Rd.	MH 60	MH 57	AC	110.7	105.8
MH 59X	8/27/2015	Kelly Lk. Rd.	MH 59	MH 58	VC	116.8	116.8
MH 58X	8/28/2015	Kellly Lk Rd.	MH 58	MH 57	VC	131.2	131.2
MH 60X	8/28/2015	Kelly Lk. Rd.	MH 57	MH 60	AC	110.7	4.9
MH 57X	8/28/2015	Kelly Lk. Rd.	MH 57	MH 55A	vc	34.9	34.9
MH 55AX	8/28/2015	Kelly Lk Rd.	MH 55A	MH 55	vc	57.4	57.4

eyed Length	Asset length Surve	Pipe	Finish MH	Start MH	Address	Date	Main ID
49.9	49.9	vc	MH 54A	MH 55	Kelly Lk Rd.	8/28/2015	MH 55X
21.4	100.0	VC	MH 54A	MH 54	Kelly Lk Rd.	8/28/2015	MH 54AX
91.1	91.1	VC	MH 48	MH 54	Kelly Lk Rd.	8/28/2015	MH 54X
48.2	48.2	AC	MH 50B	MH 50A	Cariboo Ave.	8/28/2015	MH 50BX
28.4	29.9	AC	MH 50	MH 50A	Cariboo Ave.	8/28/2015	MH 50AX
1.0	29.9	AC	MH 50A	MH 50	Cariboo Ave.	8/28/2015	MH 50AX
65.7	65.7	VC	MH 49	MH 50	Cariboo Ave.	8/28/2015	MH 50X
49.8	49.8	VC	MH 53	MH 52	Carson St.	8/28/2015	MH 53X
74.3	74.3	VC	MH 51	MH 52	Carsom St.	8/28/2015	mh 52X
51.7	51.7	VC	MH 48	MH 49	Cariboo Ave.	8/28/2015	MH 49X
90.8	90.8	VC	MH 49	MH 51	Carson St.	8/28/2015	MH 51X

yed Length	Asset length Surve	Pipe	Finish MH	Start MH	Address	Date	Main ID
13.3	13.3	VC	MH 47	MH 48	Cariboo Ave.	8/28/2015	MH 48X
83.9	83.9	AC	MH 45	MH 46	Cariboo Ave.	8/28/2015	MH 46X
90.9	90.9	AC	MH 44	MH 45	Cariboo Ave.	8/28/2015	MH 45X
84.7	84.7	AC	MH 47	MH 46	Cariboo Ave.	8/28/2015	MH 47X
121.8	121.8	vc	MH 26	MH 31	Carson St.	8/28/2015	MH 31X
106.0	106.0	vc	MH 26	MH 27	Carson St.	8/29/2015	MH 27X
97.6	97.6	VC	MH 29	MH 28	Engeman Lane	8/29/2015	MH 29X
72.5	72.5	vc	MH 26	MH 28	LeBourdais Ave.	8/29/2015	MH 28X
124.7	124.7	vc	MH 22	MH 26	LeBourdais Ave.	8/29/2015	MH 26X
98.2	98.2	vc	MH 22	MH 23	Hwy 97	8/29/2015	MH 23X
92.1	92.1	VC	MH 15	MH 23	Hwy 97	8/29/2015	MH 15X

eyed Length	Asset length Surve	Pipe	Finish MH	Start MH	Address	Date	Main ID
126.8	126.8	VC	MH 35	MH 36	Hwy 97	8/29/2015	MH 36X
130.6	130.6	VC	MH 22	MH 36	Hwy 97	8/29/2015	MH 22Y
106.7	106.7	VC	MH 35	MH 40	Hwy 97	8/29/2015	MH 35Y
91.9	91.9	VC	MH 47	MH 40	Hwy 97	8/29/2015	MH 47Y
30.2	45.0	VC	Stub S01	MH 50	Cariboo Ave	8/29/2015	Stub S01X
52.7	70.8	AC	MH 42	MH 41	Cariboo Ave.	8/31/2015	MH 42X
48.2	48.2	VC	MH 38A	MH 39	Smith Ave.	8/31/2015	MH 39X
36.0	36.0	VC	MH 38	MH 38A	Smith Ave.	8/31/2015	MH 38AX
92.3	92.3	AC	MH 37	MH 38	Smith Ave.	8/31/2015	MH 38X
83.7	83.7	VC	MH 40	MH 39	Smith Ave.	8/31/2015	MH 40X
141.2	141.2	vc	MH 33	MH 34	Dewdney Ave.	8/31/2015	MH 34X

Main ID	Date	Address	Start MH	Finish MH	Pipe	Asset length Surv	eyed Length
MH 35X	8/31/2015	Dewdney Ave.	MH 34	MH 35	VC	120.3	120.3
MH 22X	8/31/2015	Le Bourdais Ave.	MH 21	MH 22	VC	119.0	119.0
MH 18X	8/31/2015	McDonald Ave.	MH 18	MH 15	VC	72.2	72.2
MH 19X	8/31/2015	McDonald Cres	MH 18	MH 19	VC	43.6	43.6
MH 15Y	8/31/2015	McDonald Ave.	MH 14	MH 15	VC	81.9	81.9
MH 24X	8/31/2015	Lane from rear 1509 Carson	MH 24	MH 23	VC	65.7	65.7
MH 25X	8/31/2015	Easement rear of 1509 Carson	MH 24	MH 25	VC	58.8	58.8
MH 17X	8/31/2015	Hwy 97	MH 16	MH 17	VC	85.9	85.9
MH 16X	8/31/2015	Hwy 97	MH 16	MH 15	VC	72.2	72.2
MH 30X	9/1/2015	Government St.	MH 30	MH 34	VC	123.1	123.1
MH 30Y	9/1/2015	Government St.	MH 30	MH 21	VC	135.6	135.6

eyed Length	Asset length Surve	Pipe	Finish MH	Start MH	Address	Date	Main ID
68.2	68.2	VC	MH 21	MH 20A	LeBourdais Ave.	9/1/2015	MH 21X
72.1	72.1	VC	MH 20	MH 20A	LeBourdais Ave.	9/1/2015	MH 20AX
94.9	140.0	AC	Stub S02	MH 20A	Lane below Government St.	9/1/2015	Stub S02X
82.5	82.5	AC	MH 73	MH 74	Spruce Ave.	9/1/2015	MH 74X
80.1	80.1	AC	MH 75	MH 74	Spruce Ave.	9/1/2015	MH 75X
12.8	12.8	AC	MH 73	MH 72	Spruce Ave.	9/1/2015	MH 73X
57.6	57.6	AC	MH 71	MH 70	Fir Ave.	9/1/2015	MH 71X
69.1	69.1	AC	MH 69	MH 70	Fir Ave.	9/1/2015	MH 70X
47.3	47.3	AC	MH 68	MH 69	Fir Ave.	9/1/2015	MH 69X
54.7	54.7	AC	MH 66	MH 65	Elm Ave.	9/1/2015	мн 66Х
47.1	47.1	AC	Stub S03	MH 66	Elm Ave.	9/1/2015	Stub S03X

eyed Length	Asset length Surve	Pipe	Finish MH	Start MH	Address	Date	Main ID
71.9	71.9	AC	MH 64	MH 65	Elm Ave.	9/1/2015	MH 65X
126.4	126.4	AC	MH 8	MH 10	Foster Ave.	9/1/2015	MH 10X
91.1	125.0	VC	MH 11	MH 10	Foster Ave.	9/1/2015	MH 11X
121.7	121.7	VC	MH 12	MH 14	McDonald Ave.	9/1/2015	MH 14X
42.6	42.6	PVC	MH 13A	MH 13B	Tingley St.	9/2/2015	MH 13BX
51.2	51.2	AC	MH 13	MH 13A	Tingley	9/2/2015	MH 13AX
137.1	137.1	AC	MH 7A	MH 13	McDonald Ave.	9/2/2015	MH 13X
17.0	127.4	AC	MH 7	MH 12	McDonald Ave.	9/2/2015	MH 12X
14.6	14.6	AC	MH 7B	MH 7A	McDonald Ave.	9/2/2015	MH 7AX
110.4	127.4	AC	MH 12	MH 7	McDonald Ave.	9/2/2015	MH 12X
112.1	112.1	AC	MH 68	MH 72	Frontage Rd.	9/2/2015	MH 72X

eyed Length	Asset length Surve	Pipe	Finish MH	Start MH	Address	Date	Main ID
74.4	74.4	AC	MH 67	MH 68	Frontage Rd.	9/2/2015	МН 68Х
22.6	22.6	AC	MH 64	MH 67	Frontage Rd.	9/2/2015	MH 64X
88.8	88.8	AC	MH 63A	MH 64	Frontage Rd.	9/2/2015	МН 63АХ
92.3	92.3	AC	MH 37	MH 41	Cariboo Ave.	9/2/2015	MH 41X
54.4	106.7	AC	MH 33	MH 37	Smith Ave.	9/2/2015	MH 37X
124.8	124.8	AC	MH 32	MH 33	Soues St.	9/2/2015	MH 33X
111.8	132.4	AC	MH 20	MH 32	Soues St.	9/2/2015	MH 32X
35.4		ST	MH 4B	MH 67	Frontage Rd.	9/2/2015	MH 67X
69.6	69.9	AC	MH 4A	MH 4B	Field easement	9/2/2015	МЈН 4ВХ
57.1	57.1	AC	MH 4A	MH 4	Field easement	9/2/2015	MH 4AX
64.8	85.2	AC	MH 2	MH 3	Field easement	9/3/2015	мн зх

eved Length	Asset length Surve	Pipe	Finish MH	Start MH	Address	Date	Main ID
106.7	106.7	AC	MH 33	MH 37	Smith Ave.	9/9/2015	MH 37X
44.2	132.4	AC	MH 32	MH 20	Soues St.	9/9/2015	MH 32X
70.0	70.0	AC	MH 9	MH 20	LeBoudais Ave	9/9/2015	MH 20X
93.1	93.1	AC	MH 8	MH 9	LeBourdais Ave.	9/9/2015	мн 9х
100.1	100.3	AC	MH 7	MH 8	Foster Ave.	9/10/2015	мн 8х
2.5		AC	MH 6	MH 7	McDonald Ave.	9/10/2015	MH 7X
85.2	85.2	AC	MH 5	MH 6	Tingley St.	9/10/2015	мн 6х
117.2	117.2	AC	MH 4	MH 5	Easement behind cemetery	9/10/2015	MH 5X
17.4		AC	MH 7	MH 6	McDonald Ave.	9/10/2015	MH 7X
4.3		AC	MH 6	MH 7	McDonald Ave.	9/10/2015	MH 7X
42.7	42.7	AC	MH 3	MH 4	Easement off W subdivision Rd.	9/10/2015	MH 4X

Main ID	Date	Address	Start MH	Finish MH	Pipe	Asset length S	urveyed Length
мн зх	9/10/2015	Field easement	MH 3	MH 2	AC	85.2	85.2
Number of inspecti	ons: 98			Sub	ototal	7,912.5 m	7,304.0 m
				Tota	al	7,912.5 m	7,304.0 m

WRc Sewer Report

Asset ID: SS.022 Criticality: 1 (Low) From MH-63 to MH-62

Inspected by: R Morris	Contrac	et No:	Job number: 2015-061	Cate	chment:		T	Division:	District:		PLR: MH 63X
Start date/time: 27.08.15 14:22	Road name: Teal St.									j	Place name: Clinton
tart Manhole No. 1H 62	Depth: 2.30	Cover:	Invert:			Finish Manl MH 63	nole No.	1	Depth:	Cover:	Invert:
se:	Direction: U	Size 2:	Size 1: 200	Shape:	Material:	1	Lining:	1	Pipe length:	T	Total length: Year laid: 120.0
OT No: 000 Purpose: Category	Pre-cleanse:	Weather: Local		details:	omments						
Video No. P	hoto No.	Distance C	iontinuous Defect	Letters code	Diameter /	Dimension	Numb n Clo at		Intrusio %	n mm	Remarks
0000		0.0		ST							
0000		0.0		МН							MH 62
0001		0.0		WL					5		10000
0050		39.1		CN	1	00	2				ive.
0061		39.9		ELJ			9		1		Dry
0084		60.1		JN	1	00	3			1	ive.
0091		60.3	S1	ELJ			3	9	5		Soft, wet. Varies
0091		92.9	F1	ELJ			3	9	5		Soft, wet. Varies
0160		92.9		SA							No traction. USMH buried

WRc Sewer Report

Asset ID: SS. Criticality: 1 (Low) From MH- to MH-

Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 62X Start date/time: Road name: Place name: 27.08.15 14:55 Teal St. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 62 2.30 MH 61 2.50 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: D 200 C AC 4.0 29.3 VT No: 00002 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: A 1 D From 1006 Teal Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 62 0001 0.0 WL 5 0002 0.1 LL Slight 0004 0.6 LL Slight 0010 0.6 LD Slight 0015 7.4 JN 100 10 Live. 0040 001 20.5 SSL 100 8 RF from same 0050 003 22.1 SSL 100 7 RF from same 0064 29.0 MH MH 61. RF on barrel. Buried 0073 29.3 FH

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: 8/27/2015 1 R Morris 2:55:19 PM

Upstream node: MH 62 Depth US:

Downstream node: MH 61

Depth DS:

Total length: 29.3

Extra:

Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment	
0.0	MI		No	1		MH 62	
0.0	ST		No	1			
0.0	W	L	No	1			
0.1	LL		No	1		Slight	
0.6	LL		No	1		Slight	
0.6	LD)	No	1		Slight	
7.4	JN		No	10 /		Live.	
20.5	SS	SL	No	8 /		RF from same	



22.1

SSL

तम होहहरी नेम हर्

No

7/

RF from same

Observations



				WRc Se	wer Kepo	t				
spected by: Morris	Contr	act No:	Job number: 2015-061	Catchm	nent:	D	ivision:	Distric	t:	PLR: MH 61X
rt date/time: '.08.15 15:08	Road nam B Easeme	ent from Teal St.								Place name: Clinton
t Manhole No. I 61	Depth: 2.50	Cover:	Invert;	Ī	Finish Man MH 60	hole No.	1	Depth:	Cover:	Invert:
	Direction:	Size 2:	Size 1: 200	Shape:	Material: AC	Lining:		Pipe length	12	Total length: Year laid: 107.1
No:	00003			Comn	nents					
oose: Categ	Y	1 E		east of 1008 To	eal					
Video No.	Photo No.	Distance	Continuous Defect	Letters	Diameter / Dimension	Number Clock		Intru	sion	Remarks
				code		at	to	%	mm	
0000		0.0		CT		1 1				
		171		ST						
0000		0.0		МН						MH 61. RF on barrel. Buried
0002		0.0	1-2-34	WL				5		
0014		5.6		JN	100	10				Live.
0031		16.4		CX	100	3				Live. RM from Service
0053	-	29.5	S1	ELJ		3	9	5		Soft, wet. Varies
0053		49.5	F1	ELJ		3	9	5		Soft, wet. Varies
0121		93.6	S2	ISJ		3	9			Dry, stained. Varies
0130		96.0		WL				15		
0134		101.0		WL				5		
0121		106.5	F2	ISJ		3	9			Dry, stained. Varies
0142		106.9		МН					-	MH 60
0000		107.1		TH.					_	

WRc Sewer Keport Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 60X Start date/time: Road name: Place name: 27.08.15 15:31 Kelly Lk. Rd. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 60 MH 57 3.80 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: D 200 C AC 4.0 110.7 VT No: 00004 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: A 1 В Easement from Teal St. Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 60 0001 0.0 WL 5 0043 17.4 S1 ISJ 3 9 Stained, dry 0105 28.8 JN 100 9 Appears unused 0161 90.0 WL 10 0170 94.0 WL 5 0043 105.7 F1 ISJ 3 9 Stained, dry 0201 105.8 SA No traction

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 59X Start date/time: Road name: Place name: 27.08.15 16:20 Kelly Lk. Rd. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 59 5.70 MH 58 3.70 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: D 200 C VC 1.8 116.8 VT No: 00005 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: Y 1 В From 1001 Kelly Lk. Rd. Video No. Photo No. Distance Continuous Defect Letters Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 59. Wet benching 0001 0.0 WL 5 0011 001 7.0 FM 6 12 From joint DS 1M 0042 002 8.5 FM 12 12 0063 16.0 JX 100 10 Live RF from service 0073 16.7 **RFJ** 5 Trace. 0100 23.9 JN 100 3 Live. 0112 28.3 MC To PVC 0113 28.3 JDM 0141 53.9 JN 100 2 Live 0150 54.6 WL 15 0152 55.0 JN 100 12 Live. 0162 55.4 MC To VC 0164 55.4 WL 5 0173 003 61.7 FM 12 12 RF from same

Video No.	Photo No.	Distance (m)	Continous Defect	Letters	Diameter /	Num Clo		Intru	sion	Remarks
				code	Dimension	at	to	%	mm	
0192	004	72.3		СС		9	11			At joint
0210		81.7		JN	100	2				Live.
0220		84.4		JN	100	10				Live.
0244		109.6		JN	100	3				Appears unused. DES
0262	T C T	116.6		МН						MH 58
0270		116.8		FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Start date/time: Weather: Project Name: PLR: R Morris 8/27/2015 1 2015 sani inspections MH 59X 4:20:29 PM Extra: Total length: Downstream node: Depth DS: Depth US: Upstream node: 116.8 MH 58 MH 59

Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	No	1		
0.0		мн	No	1		MH 59. Wet benching
0.0		WL	No	/		
7.0		FM	No	6 / 12		From joint DS 1M



8.5

FM

No

12 / 12



Observations

Distance	Length Code	Reversed	Clock Pos.	Severity	Comment
16.0	JX	No	10 /		Live RF from service
16.7	RFJ	No	1		Trace.
23.9	JN	No	3 /		Live.
28.3	MC	No	1		To PVC
28.3	JDM	No	1		
53.9	JN	No	2 /		Live
54.6	WL	No	1		
55.0	JN	No	12 /		Live.
55.4	MC	No	1		To VC
55.4	WL	No	1		
61.7	FM	No	12 / 12		RF from same



72.3

CC

No

9 / 11

At joint



81.7	JN	No	2 /	Live.
84.4	JN	No	10 /	Live.
109.6	JN	No	3 /	Appears unused. DES
116.6	МН	No	1	MH 58
116.8	FH	No	1	

							WRc S	ewer r	Керс	ort						
Inspected by: R Morris		Contract No: Job number: 2015-061					Catchment: Division:					Distri	ct:	PLR: MH 58X		
Start date/time: 28.08.15 07:2														Place name: Clinton		
Start Manhole No. MH 58		Depth: 3.70	Cover:		Inve	rt:				Finish Manhole No. MH 57			Cover			
se:		Direction:	Size	2:	Size 1: 200		Shape: C	Material: VC	1	Lining:		Pipe lengt	h:	Total length:	Year laid:	
/T No:	00006						C	omments								
Purpose: Cate A Video No.	7	Pre-cleanse: Y	Weather: 1 Distance	Locat B			L008 Kelly L	k Rd.								
vioco no	- Hoto	ito No. Distance Continuous Defec		aect.			Diameter / Dimension		Numbers Clock		ision	Remarks				
							code			at	to	%	mm			
	_															
0000				0.0			ST									
0000				0.0			МН							MH 58		
0001				0.0			WL					5				
0004				3.3	S1		EL			2	10	5		Soft, wet. Varies		
0004				18.0	F1		EL			2	10	5		Soft, wet. Varies		
0031				24.0			JN		100	10			17	Live. Light flow		
0044			-	32.4			JN		100	10		1		Capped		
0082				66.9			JN		100	10				Live.		
0112			(92.3		\rightarrow	ЛС		100	3				Appears unused		
0131	0	01	1	04.0		-	FM			1	6			At joint		
0153				07.7		+	JN		100	11	1			201700000		
0183		-		31.0		+	МН		117.5					Live.	0.000	
0104				21.2		-	FIX							MH 57. Light stain	on ring	

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Project Name: Start date/time: Weather: PLR: 8/28/2015 7:25:28 AM R Morris MH 58X 2015 sani inspections

Total length: Depth DS:

Upstream node: MH 58

Depth US: 3.7

Downstream node: MH 57

3.8

131.2

Extra:

Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	No	1		
0.0		МН	No	1		MH 58
0.0		WL	No	1		
3.3	14.7	EL	No	2 / 10		Soft, wet. Varies
24.0		JN	No	10 /		Live. Light flow
32.4		JN	No	10 /		Capped
66.9		JN	No	10 /		Live.
92.3		JN	No	3 /		Appears unused
104.0		FM	No	1/6		At joint



107.7	JN	No	11 /	Live.
131.0	МН	No	1	MH 57. Light stain on ring
131.2	FH	No	1	

						WR	: Se	ver R	epoi	t					
nspected by: R Morris			o: Job number: 2015-061			Catchment:				Division: District:			PLR: MH 60X		
tart date/time: 28.08.15 08:10	0	Road name: Kelly Lk.	Rd.											Place name: Clinton	
tart Manhole No. 1H 57		Depth: 3.80	Cove	er:	Invert:		-1		Finish Man MH 60	hole No.		Depth:	Cover	1	nvert:
se:		Direction: U	Siz	e 2:	Size 1: 200	Shape:		Material:	1	Lining:	1	Pipe leng	th:	Total length:	Year laid:
T No:	00007						Comme	ents							
urpose: Cate	gory F	re-cleanse:	Weather:	Locat B	100	ation details: sement fro	m Teal S	t.							
Video No.	Photo	No.	Distance	c	ontinuous Defec		tters	Diameter	/ Dimensio	ne j	nbers Clock		usion	Remarks	
							ode			at	to	%	mm		
0000				0.0			ST				T	1			
0000	12			0.0			мн							MH 57	
0001				0.0		1 +	WL	-				5			

				WRc Se	wer Rep	ort						
nspected by: R Morris	Contra	ct No:	Job number: 2015-061	Catchn	nent:	1	Division:	:	PLR: MH 57X			
tart date/time: 8.08.15 08:17	Road name Kelly Lk									Place name: Clinton		
art Manhole No. H 57	Depth: 3.80	Cover:	Invert:	1	Finish MH	Manhole No.	Depth: C			ver: Invert:		
e:	Direction:	Size 2:	Size 1: 200	Shape:	Material: VC	Lining:	1	Pipe length:		Total length: 34.9	Year laid:	
rpose: Categor	00008 y Pre-cleanse: Y	Weather: Local		n details: 1112 Kelly Lk R	nents Rd							
Vídeo No.	Photo No.	Distance C	ontinuous Defect	Letters	Dlameter / Dim		Numbers Clock		on	Remarks		
				code		at	to	%	mm			
0000		0.0		ST								
0000		0.0		МН						MH 57		
0001		0.0		WL				5				
0002	001	0.1		FM		12	12			From MH interf	ace	
0025		8.2		RFJ				5	*			
0032	002	8.2		FM		12	5			At joint		
0045		10.0		RFJ				10				
0051	003	10.0		FM		3	9					
0072		15.9		JN	100	10				Live. Light flow		
0095	004	34.3		FM		12	12			To MH interface	9	
0104		34.8		MH						MH 55A. Buried	i	
0114		34.9		FH								

V2K 5S5

PH: 1-800-661-6177

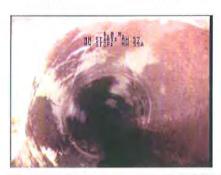
Observation Report with Still Images

Inspected by: Project Name: Start date/time: Weather: 8/28/2015 8:17:12 AM MH 57X 2015 sani inspections R Morris 1 Depth DS: Depth US: Downstream node: Total length: Extra: Upstream node: MH 57 3.8 MH 55A 34.9

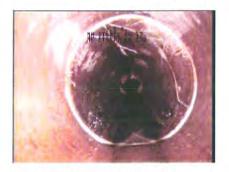
Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	S	T	No	1		
0.0	N	1H	No	1		MH 57
0.0	٧	٧L	No	1		
0.1	F	М	No	12 / 12		From MH interface



8.2 RFJ No / 8.2 FM No 12 / 5 At joint

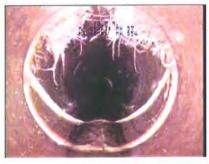


Observations with Still Images

PH: 1-800-661-6177

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
10.0	RF.	j	No	1		
10.0	FM		No	3 / 9		



15.9	JN	No	10 /	Live. Light flow
34.3	FM	No	12 / 12	To MH interface



34.8	мн	No	1	MH 55A. Buried
34.9	FH	No	1	

2

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 55AX Start date/time: Road name: Place name: Kelly Lk Rd. 28.08.15 08:38 Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 55A MH 55 3.40 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 200 C VC 1.8 57.4 VT No: 00009 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: 1 В From 1116 Kelly Lk Rd Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Clock Intrusion code 0000 0.0 ST 0000 0.0 MH MH 55A. Buried 0001 0.0 WL 5 0030 23.7 JN 100 9 Capped 0062 57.1 MH MH 55. 0070 57.4 FH

			W	Rc Se	wer Kepor	t				
spected by: Morris	Contrac	t No:	Job number: 2015-061	Catchm	nent:		Division;	Distri	ti	PLR: MH 55X
ort date/time: 3.08.15 08:59	Road name: Kelly Lk								- 1	Place name: Clinton
rt Manhole No. 1 55	Depth: 3.40	Cover:	Invert:		Finish Manh MH 54A	ole No.	1	Depth:	Cover:	Invert:
	Direction:	Size 2:	Size 1: Shap 200 C	e:	Material: VC	Lining:	1	Pipe lengt	n:	Total length: Year laid: 49.9
No: 00	0010			Comm	nents					
pose: Category	Pre-cleanse:	Weather: Locat 1 B		ils: .8 Kelly Lk F	Rd.					
Video No.	Photo No.	Distance C	ontinuous Defect	Letters	Diameter / Dimension	Numbe		Intru	sion	Remarks
				code		at	to	%	mm	
0000		0.0		ST						
0000		0.0		МН						MH 55
0001		0.0		WL				5		
0002	001	0.5		FC		2	10			At joint, Pipe displaced
0030		15.8		JN	100	9				Live.
0043		25.9		JN	100	9				Appears unused
0053		28.4		RFJ				5		- N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
0070		41.4		RTJ				15		Root tail continues 0.5M
0082	002	48.8		В		12	12			RF from same
0091		49.7		МН						MH 54A. Buried. DES. Root
0102		49.9		FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Start date/time: Weather: Project Name: PLR: 8/28/2015 8:59:38 AM R Morris 2015 sani inspections MH 55X Total length: Extra: Depth US: Downstream node: Depth DS: Upstream node: 49.9 MH 54A MH 55

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	No	1		
0.0		мн	No	1		MH 55
0.0	1	WL	No	1		
0.5	1	-C	No	2 / 10		At joint. Pipe displaced



15.8	JN	No	9 /	Live.
25.9	JN	No	9 /	Appears unused
28.4	RFJ	No	1	
41.4	RTJ	No	1	Root tail continues 0.5M
48.8	В	No	12 / 12	RF from same

Northern Lites Technology Ltd. 4937 old Summit Lake Rd. Prince George, BC. V2K 5S5 PH: 1-800-661-6177



WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 54AX Start date/time: Road name: Place name: 28.08.15 09:34 Kelly Lk Rd. Clinton Start Manhole No. Depth: Cover: Finish Manhole No. Invert: Depth: Cover: Invert: MH 54 2.50 MH 54A Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: U 200 C VC 1.8 100.0 VT No: 00011 Comments Purpose: Pre-cleanse: Category Weather: Location: Location details: В From 12900 Kelly Lk Rd. Video No Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock 0000 0.0 ST 0000 0.0 MH MH 54 0001 0.0 WL 5 0020 17.8 JN 2 100 Live. 0024 19.8 RF 20 Root tail 0042 21.4 SA Cannot pass roots

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 54X Start date/time: Road name: Place name: 28.08.15 09:42 Kelly Lk Rd. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 54 2.50 MH 48 2.20 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 200 C VC 1.8 91.1 VT No: 00012 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: A Y 1 D Easement to Cariboo Ave. Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 54 0001 0.0 WL 5 0013 15.6 JN 150 9 Capped 0062 72.4 MC To PVC 0063 72.4 JDL 0072 78.3 MC To VC 0090 90.7 JN 200 6 Outside drop 0095 90.9 MH MH 48 0105 91.1 FH

				WRc Se	wer kepo	rt					
Inspected by: R Morris	Contract No:	1	Job number: 2015-061	Catchr	ment:		Division:	District:		PLR: MH 50BX	
Start date/time: 28.08.15 10:24	Road name: Cariboo Ave.								ī	Place name: Clinton	
Start Manhole No. MH 50A	Depth: C	over:	Invert:		Finish Mar MH 508		1	Depth:	Cover:	Inv	ert:
Use: F	Direction:	Size 2:	V 20 3 1 4 1	Shape:	Material: AC	Lining:		Pipe length:		Total length: 48.2	Year laid:
A Video No. Pho	Y 1 to No. Distan	C Co	ntinuous Defect	from 407 Car Letters	Diameter / Dimension	Numb on Clo		Intrusio	n	Remarks	
				code		at	to	%	mm		
0000		0.0		ST							
0000		0.0		МН						MH 50A. No MI	d # on plan
0002		0.0		WL				5			1000
0032	001	31.6		SSL		1				At joint. Gaske	t visible
0045	002	33.1		FC		12	12			RF from same	
0065		48.1		МН						MH 50B. No Mi	H # on plan
0081		48.2		FH							

V2K 5S5

PH: 1-800-661-6177

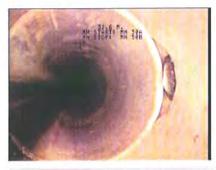
Observation Report with Still Images

Inspected by: Weather: Start date/time: Project Name: R Morris **MH 50BX** 2015 sani inspections 8/28/2015 10:24:35 AM Extra: Depth US: Downstream node: Depth DS: Total length: Upstream node: 48.2 MH 50A 1.9 MH 50B

Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		мн	Yes	1		MH 50A. No MH # on plan
0.0		ST	Yes	1		
0.0		WL	Yes	1		
31.6		SSL	Yes	1 /		At joint. Gasket visible



33.1

FC

Yes

12 / 12

RF from same



					WRc S	ewer Repo	rt					
nspected by: R Morris		Contract	No:	Job number: 2015-061	Cat	chment:		Division:	Distric	t:	PLR: MH 50AX	
Start date/time: 28.08.15 10:	41	Road name: Cariboo A	ve.							- 1	Place name: Clinton	
Start Manhole No. MH 50A		Depth: 1.90	Cover:	Invert:		Finish Ma MH 50	inhole No.		Depth: 3.00	Cover:	I	nvert:
Jse:		Direction:	Size 2:	Size 1: 200	Shape: C	Material: AC	Lining:	1	Pipe length	ni I	Total length: 29.9	Year laid:
T No:	00014		Weather: Loca	tion: Locatio		omments						
urpose: Ca	ategory		1 C		on details: 05 Cariboo Letters		Numb		Intra	cian.	Remarks	
urpose: Ca	ategory	Pre-cleanse:	1 C	To 4	on details: 05 Cariboo	Diameter / Dimens		bers lock to	Intru %	sion mm	Remarks	
rpose: Ca	ategory	Pre-cleanse:	1 C	To 4	on details: 05 Cariboo Letters		ion C	lock			Remarks	
video No.	ategory	Pre-cleanse:	1 C	To 4	on details: 05 Cariboo Letters		ion C	lock		mm		1H # on plan
Video No.	ategory	Pre-cleanse:	Distance 0	To 4	on details: 05 Cariboo Letters code		ion C	lock		mm	Remarks MH 50A. No N	1H # on plan
Video No. O000 O000	ategory	Pre-cleanse:	1 C Distance 0.0 0.0 0.0	To 4	on details: 05 Cariboo Letters code ST MH		ion C	lock	%	mm		

			W	Rc Sev	ver ker	ort					
spected by: . Morris	Contract	No:	Job number: 2015-061	Catchme	nt:		Division:	District:		PLR: MH 50AX	
art date/time: 8.08.15 10:55	Road name: Cariboo A	Ave.							T	Place name: Clinton	
art Manhole No. IH 50	Depth: 3.00	Cover:	Invert:			Manhole No. 50A		Depth:	Cover:	Inv	ert:
se:	Direction: U	Size 2:	Size 1: Shap 200 C	oe:	Material:	Lining:	1	Pipe length:	1	Total length: 29.9	Year laid:
rpose: Category Video No.	Pre-cleanse: Y Photo No.	Weather: Locat 1 C Distance C	To 405 Co		Diameter / Dim		nbers Clock	Intrusio		Remarks	
				code		at	to	%	mm		
0000		0.0		ST							
0000		0.0		МН						MH 50	
0001		0.0		WL				5			
0003		0.3		RM						Root tail from	previous repor
0012		1.0		SA						0.5M from prev	ious report

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 50X Start date/time: Road name: Place name: 28.08.15 11:01 Cariboo Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 50 3.00 MH 49 2.90 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 200 C VC 1.8 65.7 VT No: 00016 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: Α Y 1 C From 405 Cariboo Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock 0000 0.0 ST 0000 0.0 MH MH 50 0001 0.0 WL 5 0003 001 2.0 FM 12 12 RF from same 0020 4.4 S1 **RFJ** 5 Trace. Varies 0032 14.0 JN 100 10 Live. 0041 18.7 JN 100 3 Appears unused. DES 0020 22.0 F1 RFJ 5 Trace. Varies 0065 42.3 JN 100 3 Appears unused 0080 42.5 MC To AC 0084 47.6 JN 100 4 Live. 0093 47.9 MC To VC 0101 52.3 JN 150 3 Appears unused 0122 65.5 MH MH 49. Barrel wet 0132 65.7 FH

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Project Name: Inspected by: Start date/time: Weather: PLR: R Morris 8/28/2015 1 MH 50X 2015 sani inspections 11:01:53 AM Total length: Extra: Depth DS: Upstream node: Depth US: Downstream node: MH 50 MH 49 2.9 65.7 3.0

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		МН	No	1		MH 50
0.0		ST	No	1		
0.0		WL	No	1		
2.0		FM	No	12 / 12		RF from same



4.4	17.6	RFJ	No	1	Trace. Varies
14.0		JN	No	10 /	Live.
18.7		JN	No	3 /	Appears unused. DES
42.3		JN	No	3 /	Appears unused
42.5		MC	No	1	To AC
47.6		JN	No	4 /	Live.
47.9		MC	No	1	To VC
52.3		JN	No	3 /	Appears unused
65.5		МН	No	1	MH 49. Barrel wet
65.7		FH	No	/	

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 53X Start date/time: Road name: Place name: 28.08.15 11:40 Carson St. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 52 2.40 MH 53 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: U 200 C VC 1.8 49.8 VT No: 00017 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: Y C From 1317 Carson Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code mm 0000 0.0 ST 0010 0.0 MH MH 52 0011 0.0 WL 5 0012 0.1 GO Point repair for 1.2M 0035 20.1 JN 100 9 Appears unused 0045 26.7 JN 100 9 Capped 0052 27.6 JN 100 3 Capped 0055 28.5 JX 100 10 Capped. RF from cap 0065 29.3 JN 100 2 Capped 0071 29.4 RFJ. 5 0073 29.9 JN 100 2 Appears unused 0081 30.9 JN 100 1 Capped 0085 31.4 MLO 0094 35.4 RFJ 5 0102 001 35.4 CM 10 2 At joint 0115 49.5 MH MH 53. Buried

Video No.	Photo No.	Distance (m)	Continous Defect	Letters	Diameter /	Numb Cloc		Intr	usion	Remarks	
				code	Dimension	at	to	%	mm		
0124		49.8		FH							

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Start date/time: Weather: Inspected by: Project Name: PLR: R Morris 2015 sani inspections 8/28/2015 MH 53X 11:40:04 AM Extra: Total length: Depth US: Downstream node: Depth DS: Upstream node: 49.8 MH 52 MH 53 Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	Yes	/		
0.0		МН	Yes	/		MH 52
0.0		WL	Yes	1		
0.1		GO	Yes	1		Point repair for 1.2M
20.1		JN	Yes	9 /		Appears unused
26.7		JN	Yes	9 /		Capped
27.6		JN	Yes	3 /		Capped
28.5		JX	Yes	10 /		Capped. RF from cap
29.3		JN	Yes	2 /		Capped
29.4		RFJ	Yes	1		
29.9		JN	Yes	2 /		Appears unused
30.9		JN	Yes	1 /		Capped
31.4		MLO	Yes	1		
35.4		RFJ	Yes	1		
35.4		СМ	Yes	10 / 2		At joint

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WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 mh 52X Start date/time: Road name: Place name: 28.08.15 11:59 Carsom St. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 52 2.40 MH 51 2.40 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 200 C VC 1.8 74.3 VT No: 00018 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: C From 1313 Carson Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Clock Intrusion 0000 0.0 ST 0000 0.0 MH MH 52 0001 0.0 WL 5 0010 8.8 JN 9 100 Live. RFJ in service 0015 9.5 CN 100 11 Live. 0024 13.2 JN 100 2 Live. 0032 13.4 GO Point repair for 1.0M 0044 25.4 CN 100 2 Live. 0070 46.2 GO Point repair for 1.3M 0074 47.9 JN 100 3 Appears unused. DE in same 0090 50.4 JN 9 100 Live. 0095 55.2 JN 100 2 Live. Light flow 0113 67.3 JX 100 10 Appears unused, 100% DE 0132 74.2 MH MH 51. Stained on barrel 0143 74.3 FH

			W	Rc Sev	ver R	epor	t					
nspected by: R Morris	Contract	No:	Job number: 2015-061	Catchme	nt:			Division:	District:		PLR: MH 49X	
tart date/time: 28.08.15 12:39	Road name: Cariboo A	Ave.									Place name: Clinton	
tart Manhole No. 1H 49	Depth: 2.90	Cover:	Invert:	- 1		Finish Manh MH 48	nole No.		Depth: 2.20	Cover:	Inv	ert:
se:	Direction:	Size 2:	Size 1: Shape 200 C	e:	Material: VC		Lining:	1	Pipe length:		Total length: 51.7	Year laid:
Video No. Pi	Y noto No.	1 C Distance Co	ntinuous Defect	Letters	Diameter	/ Dimension	-	ock	Intrusio	n	Remarks	
				code			at	to	%	mm		
0000		0.0		ST								
0000		0.0		МН							MH 49	
0001		0.0		WL					5			
		0.0							3			
0015		19.0		CN		.00	10				Live.	
0015 0040				CN	-	.00	10				Live. Appears unuse	d
		19.0			-							

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 51X Start date/time: Road name: Place name: 28.08.15 12:58 Carson St. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 51 2.40 MH 49 2.90 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: D 200 C VC 1.8 90.8 VT No: 00020 Comments Purpose: Pre-cleanse: Weather: Category Location: Location details: C 1 To Cariboo Ave. Video No. Photo No. Distance Continuous Defect Numbers Remarks Diameter / Dimension Intrusion Clock 0000 0.0 MH MH 51 0000 0.0 ST 0001 0.0 WL 5 0002 1.4 5 **RFJ** 0014 12.9 JN 100 9 Appears unused 0023 15.2 **RFJ** 25 0044 40.1 GO Point repair for 1M 0061 58.7 JN 150 9 Capped with wood. Leaking 0092 89.4 GO Point repair to MH 0100 90.6 MH MH 49 0104 90.8 FH

						WRo	Se	wer F	еро	rt					-
nspected by: R Morris		Contrac	et No:	i	Job number: 2015-06		Catchm	ent:			Division:	Distr	ict:	PLR: MH 48X	
tart date/time: 28.08.15 13:	:34	Road name: Cariboo											1	Place name: Clinton	
tart Manhole No. 1H 48		Depth: 2.20	Cover;		Invert		1		Finish Mar MH 47	nhole No.		Depth:	Cover:	I	nvert:
se:		Direction:	Size 2	1	Size 1: 200	Shape:		Material: VC		Lining:	- 1	Pipe lengt	th:	Total length:	Year laid:
T No:	00021						Comm	ents	_						
rpose: Ca Video No.		Pre-cleanse: Y	Weather: 1 Distance	A Co		cross Hwy 97	7 tters			Nu	mbers			Remarks	
							ode	Diameter	/ Dimensi	on at	Clock	Intr %	usion		
						*				DC.		70	mm		
0000				0.0		1	МН							MH 48. FM or	riser
0000				0.0			ST				1				
0002				0.0		1	WL					10			
0002	0	01		0.0			WL FC			7	11	10		At joint	
	0	01					100			7	11	10		At joint MH 47. DE (s	teel rod)

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: MH 48X 2015 sani inspections 8/28/2015 R Morris 1 1:34:22 PM Depth DS: Total length: Extra: Upstream node: Depth US: Downstream node: MH 48 2.2 MH 47 13.3

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	ı	1H	No	1		MH 48. FM on riser
0.0	9	ST	No	1		
0.0	١	VL	No	1		
1.7	F	C	No	7 / 11		At joint



13.1	МН	No	/	MH 47. DE (steel rod)
13.3	FH	No	1	

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 46X Start date/time: Road name: Place name: 28.08.15 13:52 Cariboo Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 46 2.80 MH 45 2.50 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Total length: Pipe length: Year laid: F D 200 C AC 1.8 83.9 VT No: 00022 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: C A 1 To Bell Video No. Photo No. Distance Continuous Defect Letters Remarks Numbers Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 46 0.0 0001 WL 5 Varies to 10% 0002 001 1.4 FM 12 12 0012 8.4 JN 100 2 Appears unused 0020 9.4 JN 9 100 Appears unused 0034 21.0 LD Slight 0040 21.2 JN 100 8 Appears unused 0043 22.0 LU Grade reduces 0050 22.3 CNI 100 10 50 Appears unused 0070 39.1 JN 100 2 Appears unused 0082 47.4 JN 100 10 Appears unused 0090 48.3 2 JN 100 Live. 0103 63.0 CN 100 11 Live 0130 002 83.4 FC 12 12 0134 83.7 MH MH 45

Video No.	Photo No.	Distance (m)	Continous Defect	Letters	Diameter /		bers ock	Intr	ıslon	Remarks	
				code	Dimension	at	to		mm		
0142		83.9		FH							

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: 8/28/2015 1 R Morris

Upstream node: Depth US: Downstream node: Depth DS: Total length: Extra:

MH 46 2.8 MH 45 2.5 83.9

Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	5	ST	No	1		
0.0	1	ин	No	1		MH 46
0.0	1	WL	No	1		Varies to 10%
1.4	F	M	No	12 / 12		



8.4	JN	No	2 /	Appears unused
9.4	ЛC	No	9 /	Appears unused
21.0	LD	No	1	Slight
21.2	NC	No	8 /	Appears unused
22.0	LU	No	1	Grade reduces
22.3	CNI	No	10 /	Appears unused
39.1	NC	No	2 /	Appears unused
47.4	NC	No	10 /	Appears unused
48.3	ЛĽ	No	2 /	Live.
63.0	CN	No	11 /	Live

2

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Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
83.4	FC		No	12 / 12		



83.7	МН	No	1	MH 45	
83.9	FH	No	1		

WRc Sewer Report

nspected by: R Morris	Contra	act No:	Job number: 2015-061	Catchm	ent:		Division:	Distri	ct:	PLR: MH 45X
tart date/time: 28.08.15 14:13	Road name Cariboo									Place name: Clinton
tart Manhole No. MH 45	Depth: 2.50	Cover:	Invert:		Finish Manhol MH 44	e No.		Depth:	Cove	: Invert:
se:	Direction:	Size 2:	Size 1: Sha 200 C	pe:	Material: Li	ning:		Pipe lengt	h:	Total length: Year laid: 90.9
T No:	00023			Comn	nents					
'urpose: Category	y Pre-cleanse: Y	Weather: Loca 1 C	tion: Location det From Bel							
Video No.	Photo No.	Distance (Continuous Defect	Letters	Diameter / Dimension	Numbe		Intro	ision	Remarks
				code	Diameter / Dimension	Cloc	k to	%	mm	
0000		0.0		ST						
0000		0.0		MH						MH 45
0001		0.0		WL		10.0		5		Varies to 10%
0002		0.1	JE - 1	EL		5	7	10		
0010		1.0	1	CNI	100	3			30	Live.
0020		3.9	- 14	CN	100	11				Appears unused
0043		23.1		CN	100	2				Live.
0054		31.0		CX	100	10				Live. Light flow. Saddle leak
0074		37.8		CX	100	10				Live. EM at interface
0101		50.8		CN	100	12				Live. Dripping
0114		54.6		DES				5		
0123		61.4		СХ	100	2	1			Live. 30% DE from service
0133		63.0		WL			3	20		
0140	001	64.6		FC		12	12			EM, IG from same
0154		64.9		CX	100	9				Live. EM, ID from same
0171		64.9		GO						EM in service

Video No. Photo No.	Distance (m)	Continous Defect	Letters	Diameter /	Num		Intr	usion	Remarks	
				code	Dimension	at	to	%	mm	
0175		64.9		WL				5		
0181		68.9		CX	100	2				Live. EL from service
0195		77.6		CN	100	9				Live. Trickle flow
0214		90.6		МН						MH 44. Not cleaned yet
0223		90.6		GO						EL on barrel
0230		90.9		FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Start date/time: Weather: Project Name: PLR: 8/28/2015 2:13:24 PM R Morris 1 2015 sani inspections MH 45X Depth DS: Total length: Extra: Depth US: Downstream node: Upstream node: 90.9 2.5 MH 44 MH 45

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	No	1		
0.0		мн	No	1		MH 45
0.0		WL	No	1		Varies to 10%
0.1		EL	No	5 / 7		
1.0		CNI	No	3 /		Live.
3.9		CN	No	11 /		Appears unused
23.1		CN	No	2 /		Live.
31.0		CX	No	10 /		Live. Light flow. Saddle leak
37.8		CX	No	10 /		Live. EM at interface
50.8		CN	No	12 /		Live. Dripping
54.6		DES	No	1		
61.4		CX	No	2 /		Live. 30% DE from service
63.0		WL	No	1		
64.6		FC	No	12 / 12		EM, IG from same



WRc Sewer keport PLR: Inspected by: Contract No: Job number: Catchment: Division: District: MH 47X R Morris 2015-061 Place name: Start date/time: Road name: Clinton 28.08.15 14:52 Cariboo Ave. Invert: Invert: Finish Manhole No. Depth: Cover: Start Manhole No. Depth: Cover: 2.80 MH 47 MH 46 Total length: Shape: Material: Lining: Pipe length: Year laid: Use: Direction: Size 2: Size 1: 84.7 F U 200 C AC 1.8 Comments VT No: 00024 Pre-cleanse: Location details: Weather: Location: Purpose: Category From Hwy 97 Y 1 A Numbers Video No. Photo No. Distance Continuous Defect Letters Diameter / Dimension Intrusion Clock code ST 0000 0.0 0.0 MH 0000 MH 46 5 WL 0.0 0001 3.5 JN 100 2 0004 Appears unused

JN

JN

JN

CL

MH

FH

3

2

10

3

150

100

100

Appears unused

Appears unused

Live. Light flow

MH 46. DE (steel rod)

At joint

0023

0042

0054

0075

0110

0120

001

23.2

37.2

45.5

63.0

84.5

84.7

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Start date/time: Weather: PLR: Project Name: 8/28/2015 R Morris 1 2015 sani inspections MH 47X 2:52:33 PM Depth DS: Total length: Extra: Downstream node: Upstream node: Depth US: 84.7 MH 46 MH 47

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	Yes	1		
0.0		МН	Yes	1		MH 46
0.0		WL	Yes	1		
3.5		JN	Yes	2 /		Appears unused
23.2		JN	Yes	3 /		Appears unused
37.2		JN	Yes	2 /		Appears unused
45.5		JN	Yes	10 /		Live. Light flow
63.0		CL	Yes	3 /		At joint



84.5	МН	Yes	1	MH 46. DE (steel rod)
84.7	FH	Yes	1	

WRc Sewer Report

spected by: Morris	Contract N	lo:	Job number: 2015-061	Catchr	ment:		Division:	District		PLR: MH 31X
art date/time: 8.08.15 15:28	Road name: Carson St.									Place name: Clinton
art Manhole No. IH 31	Depth: 2.90	Cover:	Invert:		Finish Ma MH 26	nhole No.		Depth: 4.20	Cover:	Invert:
se:	Direction:	Size 2:	Size 1: 200	Shape:	Material: VC	Lining:	I	Pipe length:		Total length: Year laid: 121.8
T No: 0	0025			Com	ments					
urpose: Category	Pre-cleanse: W	Veather: Locat		details: Bourdais Ave.						
Video No.	Photo No.	Distance C	ontinuous Defect	Letters	Diameter / Dimens	Numb		Intrus	ion	Remarks
				code	Diameter / Dimens	at at	ock to	%	mm	
0000		0.0		ST						
0000		0.0		МН						MH 31
0001		0.0		WL				5		
0011		11.5	9-2 2 7	WL				10		
0014		17.0		WL				5		
0023		21.2		JN	100	4				Live. Backgraded
0041	001	28.2		СМ		9	3			
0052	002	30.9		FM		12	12			At joint
0063		38.7		JN	100	3				Live.
0072		41.2		NC	100	9				Live.
0085	003	53.1		FM		5	2			At joint. Spiral
0105	004	53.1		СМ		6	4		1	
0130		67.7		WL				10		
0130		67.7		JN	100	3				Live.
0134		68.3	-	WL				5		Varies to 10%

0164

005

102.1

2

10

CM

At joint

Video No.	hoto No.	Distance (m)	Continous Defect	Letters	Diameter /	Numt Clo		Intr	usion	Remarks
				code	Dimension	at	to	%	mm	
0181		112.2		CN	100	12				Live.
0194		121.0		MC			I.			To AC
0201		121.1		JN	200	6				Outside drop
0211		121.5		МН						MH 26
0215		121.8		FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Start date/time: Weather: PLR: Project Name: 8/28/2015 3:28:07 PM R Morris 1 2015 sani inspections MH 31X Extra: Depth US: Downstream node: Depth DS: Total length: Upstream node: 121.8 4.2 MH 26 MH 31 2.9 Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	MI	1	No	1		MH 31
0.0	ST		No	1		
0.0	W		No	1		
11.5	W		No	1		
17.0	W		No	1		
21.2	JN		No	4 /		Live. Backgraded
28.2	CN	1	No	9/3		



30.9

FM

No

12 / 12

At joint

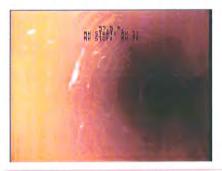
Northern Lites Technology Ltd. 4937 old Summit Lake Rd. Prince George, BC. V2K 5S5 PH: 1-800-661-6177

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment	
100	NA 81881. JA 81	44					
		1957.					
學書機	184	S. Barrie					
A SECTION AND ADDRESS.		OF RESIDENCE OF					
1/3/		/ .					
	9						
38.7	10	/	No	3 /		Live.	
38.7 41.2	ונ ונ		No No	3 / 9 /		Live. Live.	

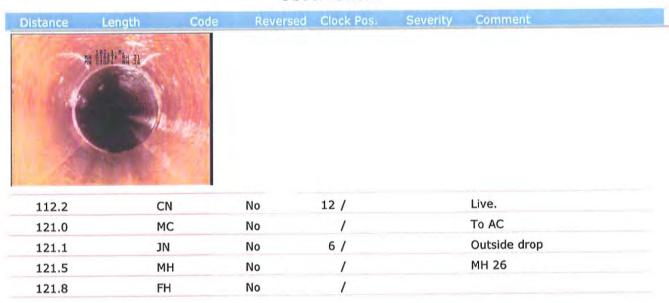


53.1 CM No 6 / 4



67.7	WL	No	1	
67.7	JN	No	3 /	Live.
68.3	WL	No	1	Varies to 10%
102.1	СМ	No	10 / 2	At joint

Page



WRc Sewer Report Job number: Catchment: Division: District: PLR: Inspected by: Contract No: MH 27X 2015-061 R Morris Place name: Road name: Start date/time: Clinton 29.08.15 07:29 Carson St. Invert: Finish Manhole No. Depth: Cover: Cover: Invert: Start Manhole No. Depth: 4.20 MH 26 3.70 MH 27 Material: Lining: Pipe length: Total length: Year laid: Shape: Use: Direction: Size 2: Size 1: 106.0 VC 1.8 D 200 C F Comments VT No: 00026 Location details: Pre-cleanse: Weather: Location: Purpose: Category C To LeBourdais 4 Α Numbers Remarks Distance Continuous Defect Letters Video No. Photo No. Diameter / Dimension Clock Intrusion code 0000 0.0 ST 0.0 MH MH 27 0000 5 WL 0001 0.0 Varies to 10% JN 100 2 23.8 Appears unused 0023 3 35.8 CL 001 Joint to service 0043 3 CN 100 0050 36.0 Live. 15 WL 37.6 0060 5 39.0 WL Vaaries to 10% 0063 FM 8 6 46.5 0072 002 At joint JN 150 3 56.0 Live 0095 25 12 75.0 CXI 100 Live. RF from interface 0122 GO 104.2 0165 Point repair for 1M

Outside drop

MH 26

200

JN

MH

FH

105.4

105.9

106.0

6

0174

0183

0193

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: 8/29/2015 4 R Morris 7:29:02 AM

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	s	Т	No	1		
0.0	M	н	No	1		MH 27
0.0	W	/L	No	1		Varies to 10%
23.8	ונ	V	No	2 /		Appears unused
35.8	C	L	No	3 /		Joint to service



36.0	CN	No	3 /	Live.	
37.6	WL	No	1		
39.0	WL	No	1	Vaaries to 10%	
46.5	FM	No	8 / 6	At joint	

PH: 1-800-661-6177

stance	Length	Code	Reversed	Clock Pos.	Severity	Comment
	म शेक्षर-भा क					
			No	2./		Live
56.0	1E		No	3 /		Live
56.0 75.0		XI N	No No	3 / 12 /		Live. RF from interface
		ΧI				
75.0	C	O XI	No	12 /		Live. RF from interface
75.0 104.2	C: G	O XI	No No	12 /		Live. RF from interface Point repair for 1M

Inspected by: R Morris	Contract No);	Job number: 2015-061		Catchment:		Division:	District:	MH 29X	
Start date/time: 29.08.15 08:03	Road name: Engeman L	ane							Place name: Clinton	
Start Manhole No. MH 28	Depth: 3.00	Cover:	Invert:		1	Finish Manhole No. MH 29		2.90 Cov	ver: In	vert:
Use: F	Direction: U	Size 2:	Size 1: 200	Shape: C	Material: VC	Lining:		Pipe length:	Total length: 97.6	Year laid:
VT No: 0002	.7				Comments					
Purpose: Category	Pre-cleanse: W		manage program	tion details: LeBourdais						
Video No. Pho	oto No.	Distance	Continuous Defect	Lette		/ Dimension	umbers Clock	Intrusion	Remarks	

Video No.	Photo No.	Distance	Continuous Defect	Letters	Diameter / Dimension	Numbe Clos		Intr	ision	Remarks
				code		at	to	%	mm	
0000		0.0		ST						
0000		0.0		MH						MH 28
0001		0.0		WL				5		Varies to 10%
0015		16.1		JN	100	3				Live.
0025		22.2		CN	100	10				Appears unused
0035		26.6	1 - 1 - 1	CN	100	12				Live.
0090		80.0		RFJ				1		Trace.
0100		86.9		CN	100	2				Live.
0112		91.1		RFJ				5		
0121		97.4	E .	МН						MH 29
0131		97.6	5	FH						

nspected by: R Morris	Contract N	No:	Job number: 2015-061	Catch	ment:		Division:	District	:	PLR: MH 28X	
tart date/time: 9.08.15 08:22	Road name: LeBourdai	s Ave.								Place name: Clinton	
art Manhole No. H 28	Depth: 3.00	Cover:	Invert:		Finisi MH	h Manhole No. 26		Depth: 4.20	Cover:	In	envert:
e:	Direction:	Size 2:		Shape:	Material: VC	Lining:		Pipe length		Total length: 72.5	Year laid:
No:	00028			Com	ments						
Video No.	Photo No.	Distance C	ontinuous Defect	Letters	Diameter / Din	Num nension (bers lock	Intru	sion	Remarks	
Video No.	Photo No.	Distance C	ontinuous Defect	Letters code	Diameter / Din			Intru:		Remarks	
Video No.	Photo No.	Distance C	ontinuous Defect		Diameter / Din	nension C	llock			Remarks	
Video No.	Photo No.	Distance C	ontinuous Defect		Diameter / Din	nension C	llock			Remarks	
	Photo No.		ontinuous Defect	code	Diameter / Din	nension C	llock			Remarks MH 28	
0000	Photo No.	0.0	ontinuous Defect	code	Diameter / Din	nension C	llock				
0000	Photo No.	0.0	ontinuous Defect	st MH	Diameter / Din	nension c	llock	96			
0000 0000 0001	Photo No.	0.0 0.0 0.0	ontinuous Defect	ST MH WL		nension c	llock	96		MH 28	displaced

JN

MH

FH

Outside drop

MH 26

200

6

0094

0102

0111

71.9

72.3

72.5

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: 8/29/2015 8:22:15 AM R Morris

Upstream node: MH 28 Depth US: 3.0

Downstream node: MH 26

Depth DS:

Total length: 72.5

Extra:

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	No	1		
0.0		МН	No	1		MH 28
0.0		WL	No	1		
4.3		JN	No	2 /		Live.
31.0		FM	No	2/9		At joint. Pipe displaced



MC	No	1	To AC	
JN	No	6 /	Outside drop	
МН	No	1	MH 26	
FH	No	1		
	JN MH	JN No MH No	JN No 6 / MH No /	JN No 6 / Outside drop MH No / MH 26

Inspected by: R Morris		Contract I	No:	Job number: 201506		Catchment:	Div	ision: District:		PLR: MH 26X	
Start date/time 29.08.15 0		Road name: LeBourdai	s Ave.							Place name: Clinton	
Start Manhole N MH 26	No.	Depth: 4.20	Cover:	Invert:		No.	h Manhole No. 22	Depth:	Cover:	Inv	ert:
Jse: F	1	Direction:	Size 2:	Size 1: 200	Shape: C	Material: VC	Lining:	Pipe length: 1.8		Total length: 124.7	Year laid:
VT No:	000	29			- 1	Comments					
Purpose:	Category		Weather: Loc		cation details: O Hwy 97						

ideo No.	Photo No.	Distance	Continuous Defect	Letters	Diameter / Dimension	Numbe Clo		Intr	usion	Remarks
				code		at	to	%	mm	
0000	ī	0.0		ST						
0000		0.0		МН						MH 26
0001		0.0		WL				5		1
0021		16.9		JN	100	2				Live.
0054	001	48.4		FC		8	4			
0070		48.9		CN	100	10				Appears unused
0081	002	52.7		FM		3	1			At joint
0093		56.5		NC	100	9				Appears unused
0101		57.3		NC	100	3				Live.
0131		90.1		JN	100	10				Live.
0143		96.7		JN	100	3				Live.
0173		124.1		JN	200	6				Outside drop
0181		124.6		МН						MH 22
0191		124.7		FH			1			

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

MH 26X

Project Name:

Start date/time:

8/29/2015
9:05:35 AM

Weather:

Inspected by:

R Morris

Upstream node: MH 26 Depth US:

Downstream node:

Depth DS:

Total length: 124.7

Extra:

-

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	S	Т	No	1		
0.0	M	Н	No	1		MH 26
0.0	W	'L	No	1		
16.9	ונ	N.	No	2 /		Live.
48.4	F		No	8 / 4		



48.9	CN	
52.7	FM	

No	10	/		
No	3	1	1	

Appears	unused	
At joint		

PH: 1-800-661-6177

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
	an elective ye					
56.5	JN		No	9 /		Appears unused
56.5 57.3	NC NC		No No	9 / 3 /		Appears unused Live.
57.3	NC	l	No	3 /		Live.
57.3 90.1	NC NC		No No	3 / 10 /		Live.
57.3 90.1 96.7	AC NC	 	No No	3 / 10 / 3 /		Live. Live. Live.

Inspected by: R Morris	Contract No	o:	Job number: 2015-061	Catchn	nent:	Div	ision: Distric	t:	PLR: MH 23X
Start date/time: 29.08.15 10:12	Road name: Hwy 97								Place name: Clinton
tart Manhole No. MH 23	Depth: 2.80	Cover:	Invert:		Finish Man MH 22	hole No.	Depth:	Cover	: Invert:
se:	Direction:	Size 2:	Size 1: S 200 0	hape:	Material: VC	Lining:	Pipe lengti 1.8	1:	Total length: Year laid: 98.2
T No: 00	030			Comr	nents				
urpose: Category	Pre-cleanse: We Y	eather: Local	tion: Location d						
Video No.	Photo No. D	istance C	Continuous Defect	Letters	Diameter / Dimensio	Numbers	-	and the second	Remarks
				code	Diameter / Dimensio	n Clock at:	to %	SION	
0000		0.0		ST		T			
0000		0.0		МН					MH 23
0001		0.0		WL			10		
0004		2.0		WL			5		
0012		5.4		WL			35		
0020		7.3		WL			5	L I	
0025		12.9		WL			30		
0030		13.2		NC	100	10			Appearas unused. DES
0035		15.9		WL			5		
0042		17.9		JN	100	10			Appears unused. DES
0052		24.0		WL			25		
0060		28.5		WL			40		
0062		28.9		CNI	100	3		25	Līve.
0071		29.3		GO					Point repair for 2M
0081		29.3		WL			10		
0085		35.1		JN	100	10			Appears unused

Video No.	hoto No.	Distance (m)	Continous Defect	Letters	Diameter /	Num		Intr	usion	Remarks
				code	Dimension	ät	to		mm	
0093		35.1		WL				20		
0100		41.3		WL				5		Continues to vary to 10%
0105		47.2	1	JN	100	2				Appears unused. JDL in same
0121	001	48.2		Н	100	11				Repaired? CL from same
0160		76.2		JN	100					Appears unused
0183		98.0		МН						MH 22. DE on bench
0193		98.2		FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

MH 23X	2015	Project Name: 2015 sani inspections				Inspected by: R Morris
Upstream node: MH 23	Depth US:	Downstream node:	Depth DS:	Total le 98.2	ength:	Extra:
Comments						

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	No	1		
0.0		МН	No	1		MH 23
0.0		WL	No	1		
2.0		WL	No	1		
5.4		WL	No	1		
7.3		WL	No	1		
12.9		WL	No	1		
13.2		JN	No	10 /		Appearas unused. DES
15.9		WL	No	1		
17.9		JN	No	10 /		Appears unused. DES
24.0		WL	No	1		
28.5		WL	No	1		
28.9		CNI	No	3 /		Live.
29.3		GO	No	1		Point repair for 2M
29.3		WL	No	1		
35.1		JN	No	10 /		Appears unused
35.1		WL	No	1		
41.3		WL	No	1		Continues to vary to 10%
47.2		NC	No	2 /		Appears unused. JDL in same
48.2		Н	No	11 /		Repaired? CL from same

PH: 1-800-661-6177

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
	an etget. An se					
ALL THE	M	0.00				
11,500						
14 (19)	S. S. S.					
	N.					
	W					
76.2	TC.	N	No	/		Appears unused
76.2 98.0	IL M		No No	/		Appears unused MH 22. DE on bench

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 15X Start date/time: Road name: Place name: 29.08.15 10:38 Hwy 97 Clinton Start Manhole No. Cover: Invert: Finish Manhole No. Depth: Cover: Invert: Depth: 2.70 MH 23 2.80 MH 15 Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: Use: Direction: 92.1 F U 200 C VC 1.8 VT No: Comments 00031 Location details: Purpose: Category Pre-cleanse: Weather: Location: From McDonald Y A Remarks Video No. Photo No. Distance Continuous Defect Letters Numbers Diameter / Dimension Intrusion Clock code 0.0 ST 0000 0.0 MH 0000 MH 23 0.0 5 WL 0001 0011 001 13.5 CX 100 3 Live. CC from same. 6 8 0025 002 15.8 FL From joint 0044 25.9 JN 100 3 Live. 100 10 43.7 JN 0064 Live. 3 JN 100 0072 46.1 Live. 61.7 CNI 100 10 15 0090 Live. 62.0 JN 100 2 0094 Appears unused 5 1 0101 003 62.0 В At joint 64.6 JN 100 9 0115 Capped FC 12 12 0135 004 83.1 0145 91.9 MH MH 15

0154

92.1

FH

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Project Name: 2015 sani inspections Inspected by: PLR: Start date/time: Weather: 8/29/2015 4 R Morris MH 15X 10:38:26 AM Total length: Extra: Depth DS: Depth US: Downstream node: Upstream node: MH 15 2.7 MH 23 2.8 92.1

Comments

Observations

Distance	Length	Code Reversed	Clock Pos.	Severity	Comment
0.0	МН	Yes	1		MH 23
0.0	ST	Yes	1		
0.0	WL	Yes	1		
13.5	CX	Yes	3 /		Live. CC from same.



15.8

FL

Yes

6/8

From joint



Page

PH: 1-800-661-6177

Observations

Distance	Length Cod	de Reversed	Clock Pos.	Severity	Comment
25.9	JN	Yes	3 /		Live.
43.7	JN	Yes	10 /		Live.
46.1	JN	Yes	3 /		Live.
61.7	CNI	Yes	10 /		Live.
62.0	JN	Yes	2 /		Appears unused
62.0	В	Yes	5 / 1		At joint



64.6	JN	Yes	9 /	Capped	
83.1	FC	Yes	12 / 12		



91.9	МН	Yes	1	MH 15
92.1	FH	Yes	/	

2

Inspected by: R Morris	Contract	No:	Job number: 2015-06		Catchment:	1	Division: District:	PLR: MH 36	ΣX
tart date/time: 29.08.15 11:20	Road name: Hwy 97							Place n Clint	
tart Manhole No. 1H 36	Depth: 2.60	Cover:	Invert			Finish Manhole No. MH 35	Depth: 2.70	Cover:	Invert:
dse:	Direction:	Size 2:	Size 1: 200	Shape:	Material: VC	Lining:	Pipe length: 1.8	Total leng 126.8	th: Year laid:
T No: 00	0032				Comments				
Purpose: Category	Pre-cleanse: Y		The state of the s	cation details: o Dewdney					
Video No.	Photo No.	Distance	Continuous Defe	ect Lett		A STATE OF THE STA	ibers Dock Intrusion	Remarks	
Video No.	Photo No.	Distance	Continuous Defe	coc Lett	Diameter	A STATE OF THE STA	llock Intrusion		

yides No. Prioto No.		Distance	Continuous Derect	Detters	Diameter / Dimension	Clo		Intro	usion	Remarks			
				code		at	b	%	mm				
0000	Ť	0.0		ST									
0000		0.0		МН						MH 36			
0001		0.0		WL				5					
0011		11.1		JN	150	3				Live.			
0023		21.1		JN	100	9				Live			
0042	001	22.3		CL		9	1			Spiral			
0070		44.0		JN	150	3				Live. Light flow			
0080		46.8		ЛС	100	10				Live.			
0093		60.8		JN	100	10				Appears unused			
0103	002	65.2		CM		5	10			At joint			
0115		69.2	4	JN	100	2				Live. Light flow			
0130		75.6		JN	100	9	1			Live.			
0143		85.9		JN	100	9				Live.			
0151		86.7		JN	100	3				Live.			
0165		101.1		CNI	100	2			15	Live.			
0174		104.3		JN	100	3				Capped			

Video No.	hoto No.	Distance (m)	Continous Defect	Letters	Diameter /	Num Clo		Intri	ision	Remarks	
			code	Dimension	at	to	%	mm			
0182		105.1		JN	100	10				Appears unused	
0210		121.1		JN	100	3				Live.	
0221		126.6		MH						MH 35	
0225		126.8		FH							

V2K 5S5

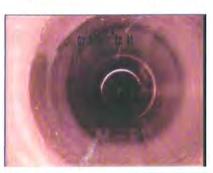
PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Project Name: Start date/time: Weather: PLR: 8/29/2015 11:20:57 AM 2015 sani inspections 3 R Morris MH 36X Depth US: Downstream node: Depth DS: Total length: Extra: Upstream node: 126.8 MH 36 2.6 MH 35 2.7

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	S	Г	No	/		
0.0	М	Н	No	1		MH 36
0.0	W	'L	No	1		
11.1	10	1	No	3 /		Live.
21.1	10	1	No	9 /		Live
22.3	С		No	9 / 1		Spiral



44.0	JN	No	3 /	Live. Light flow	
46.8	JN	No	10 /	Live.	
60.8	JN	No	10 /	Appears unused	
65.2	СМ	No	5 / 10	At joint	

PH: 1-800-661-6177

istance	Length	Code	Reversed	Clock Pos.	Severity	Comment
	pp all it had)				
69.2	JN		No	2 /		Live. Light flow
75.6	JN		No	9 /		Live.
75.6 85.9	NC		No No	9 / 9 /		Live. Live.
		r'				
85.9	NC		No	9 /		Live.
85.9 86.7	NC NC	NI	No No	9 / 3 /		Live. Live.
85.9 86.7 101.1	JN JN	NI	No No No	9 / 3 / 2 /		Live. Live. Live.
85.9 86.7 101.1 104.3	JN 2N 3N	NI	No No No	9 / 3 / 2 / 3 /		Live. Live. Live. Capped
85.9 86.7 101.1 104.3 105.1	JN CP JN JN	NI	No No No No	9 / 3 / 2 / 3 / 10 /		Live. Live. Capped Appears unused

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 22Y Start date/time: Road name: Place name: 29.08.15 11:52 Hwy 97 Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 22 MH 36 2.60 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: U 200 C VC 1.8 130.6 F VT No: 00033 Comments Pre-cleanse: Weather: Location: Location details: Purpose: Category Y 3 From LeBourdais Α Continuous Defect Letters Numbers Remarks Video No. Photo No. Distance Diameter / Dimension Clock Intrusion code 0.0 ST 0000 0.0 MH 0000 MH 36 5 0001 0.0 WL Varies to 15% 0002 1.5 JN 100 9 Appears unused 2 0011 4.3 JN 100 Live. 9 0035 25.9 JN 100 Live. JN 100 2 0052 36.2 Live. 44.5 9 JN 100 0065 Appears unused 0093 66.2 JN 100 2 Capped 0102 70.7 JN 100 9 Live. FM 5 10 0120 001 81.9 At joint 97.7 JN 100 10 0141 Live. JDL, Trickle flow 128.4 GO 0174 Point repair to MH

0183

0190

130.4

130.6

MH

FH

MH 22

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: 8/29/2015 3 R Morris 11:52:02 AM

Upstream node: MH 22 Depth US:

Downstream node: MH 36

Depth DS: 2.6

Total length: 130.6 Extra:

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	ST		Yes	1		
0.0	MI	1	Yes	1		MH 36
0.0	W		Yes	1		Varies to 15%
1.5	JN		Yes	9 /		Appears unused
4.3	NC		Yes	2 /		Live.
25.9	JN		Yes	9 /		Live.
36.2	JN		Yes	2 /		Live.
44.5	NC		Yes	9 /		Appears unused
66.2	JN		Yes	2 /		Capped
70.7	NC		Yes	9 /		Live.
81.9	FM		Yes	5 / 10		At joint



97.7	JN	Yes	10 /	Live. JDL, Trickle flow	
128.4	GO	Yes	1	Point repair to MH	
130.4	МН	Yes	/	MH 22	

Inspected by: R Morris	Contra	ect No:	Job number: 2015-061	Catchn	nent:		Division:	Distri	ct:	PLR: MH 35Y	
Start date/time: 29.08.15 12:32	Road name Hwy 97								1	Place name: Clinton	
tart Manhole No. 1H 40	Depth: 2.70	Cover:	Invert:	1	Finish I	1anhole No. 5	- 1	Depth: 2.70	Cover:	In	vert:
se:	Direction: U	Size 2:	Size 1: Shape		Material: VC	Lining:	1	Pipe lengt	h:	Total length: 106.7	Year laid:
T No: 0	0034			Comr	nents						
urpose: Category	Pre-cleanse:	Weather: Loca	tion: Location detail: To Smith	:							
Video No.	Photo Na.	Distance (Continuous Defect	Letters	Diameter / Dime	Nu nsion	mbers Clock	Intro	usion	Remarks	
				code		at	to	%	mm		
0000		0.0		ST							
0000		0.0		МН						MH 40	
0001		0.0		WL				5			
0013		12.3		JN	100	10)			Live.	
0030		24.5		JN	100	9				Live.	
0033	001	24.9		SSL	75	10)			Pinhole in san	ne
0043	002	24.9		CL		7	11			From SSL	
0060	003	34.9		CC		12	12				
0063		36.3		CN	100	3				Live.	
0072	004	39.0		CC		12	12				
0800	1.	43.6		GO						Point repair fo	or 2M
0084		47.5		GO			(L.E.			Point repair fo	or 2M
0092		50.8		GO						Point repair fo	or 4M
0111		70.4		JN	100	3				Appears unus	ed. RFJ in servi
0124		82.7		JN	100	9				Live.	
0145		106.5		МН						MH 35	

MH 35

Video No.	hoto No.	Distance (m)	Continous Defect	Letters	Diameter /		Numbers Clock		usion	Remarks	
				code	Dimension	at	to	%	mm		
0153		106.7		FH							

V2K 5S5

PH: 1-800-661-6177

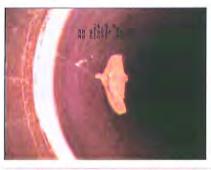
Observation Report with Still Images

Start date/time: Weather: Inspected by: Project Name: PLR: 8/29/2015 12:32:27 PM **MH 35Y** 2015 sani inspections 3 R Morris Upstream node: Depth US: Downstream node: Depth DS: Total length: Extra: 106.7 MH 35 MH 40 2.7 2.7

Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	MI	-1	Yes	/		MH 40
0.0	ST		Yes	1		
0.0	W	L	Yes	1		
12.3	JN		Yes	10 /		Live.
24.5	JN		Yes	9 /		Live.
24.9	SS	L	Yes	10 /		Pinhole in same



24.9

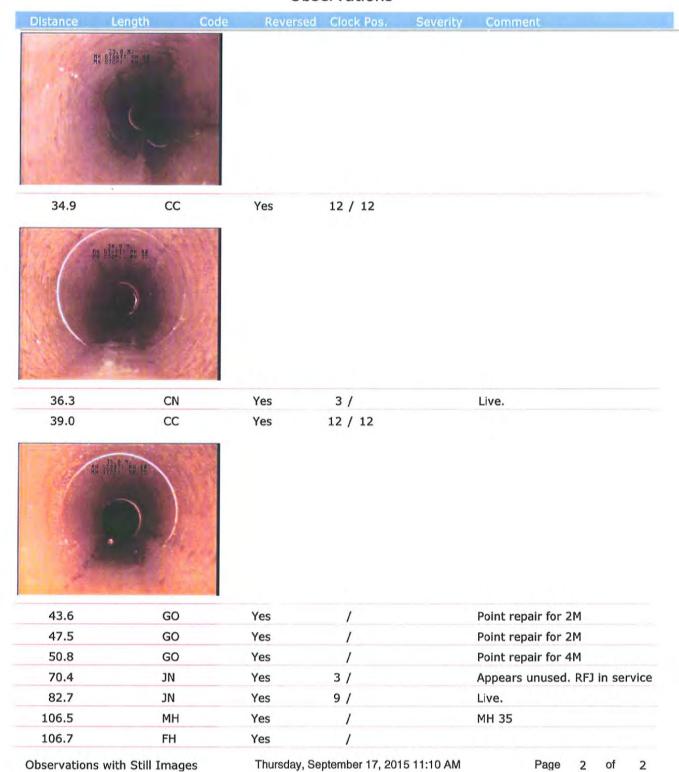
CL

Yes

7 / 11

From SSL

PH: 1-800-661-6177



				WRc Se	wer kepo	rt					
spected by: Morris	Contra	ct No:	Job number: 2015-061	Catchm	ent:		Division:	District:		PLR: MH 47Y	
art date/time: 9.08.15 12:57	Road name Hwy 97									Place name: Clinton	
art Manhole No. H 40	Depth: 2.70	Cover:	Invert:		Finish Man MH 47	nhole No.	1	Depth:	Cover:	Invert:	
e:	Direction: U	Size 2:	Size 1: 200	Shape:	Material: VC	Lining:	I	Pipe length:		Total length: Year laid: 91.9	
Video No.	Photo No.	Distance (Continuous Defect	Letters code	Diameter / Dimensio	Numb on Clo at:		Intrusion %	nm	Remarks	
0000		0.0		ST							
0000		0.0		MH					-	MH 40	
0001		0.0		WL				5		1411 40	
0003		0.1		GO						Point repair for 1M	
0022		18.5		JN	100	2				Apears unused	
0034		18.8		G0		1		4		Point repair for 2M	
0043	001	21.4		СМ		9	3				
0053		26.0		GO					- 1	Point repair for 2M	
0060		28.5		JN	100	10				Live	
0064	002	29.6		СМ		12	12				

0081

0085

0094

0104

0114

0132

003

004

005

38.0

40.5

45.3

48.9

53.4

61.4

100

100

100

10

2

12

3

10

10

12

CL

JN

CM

JN

JN

CM

From joint

Appears unused

Live.

Live.

Video No.	noto No.	Distance (m)	Continous Defect	Letters	Diameter /	Numbers Clock		Intrusion		Remarks
				code	Dimension	at	to	%	mm	
0141		63.5		JN	100	3				Live
0162		77.7		JN	100	2				Appears unused
0175		91.5		ОВ				5		Steel rod in MH
0182		91.8		MH						MH 47
0184		91.9		FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: PLR: Project Name: Start date/time: Weather: 8/29/2015 12:57:09 PM **MH 47Y** 2015 sani inspections 3 R Morris Upstream node: Depth US: Downstream node: Depth DS: Total length: Extra: MH 47 91.9 MH 40 2.7 Comments

Distance	Length	Code Reversed	Clock Pos.	Severity	Comment
0.0	МН	Yes	/		MH 40
0.0	ST	Yes	1		
0.0	WL	Yes	/		
0.1	GO	Yes	/		Point repair for 1M
18.5	JN	Yes	2 /		Apears unused
18.8	GO	Yes	/		Point repair for 2M
21.4	СМ	Yes	9/3		



26.0	GO	Yes	/	Point repair for 2M
28.5	JN	Yes	10 /	Live
29.6	CM	Yes	12 / 12	

PH: 1-800-661-6177

Observations

			Obse	ervations		
Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
Marie	n at Af-"ph in					
38.0	CL	١	⁄es	10 /		From joint
40.5	JN	1	⁄es	2 /		Live.
45.3	CM		⁄es	12 / 12		
48.9	JN	١	res es	3 /		Appears unused

10 /

10 /

Yes

Yes

Live.

JN

CM

53.4

61.4

PH: 1-800-661-6177

tance	Length	Code	Reversed	Clock Pos.	Severity	Comment
19						
	n state in					
199						
	1					
63.5	٠,٠		Yes	3 /		Live
63.5 77.7	۱۲. ۱۱.		Yes Yes	3 / 2 /		Live Appears unused
77.7		N .				
	JIC .	N B	Yes	2 /		Appears unused

			All tales	2.2		a turk a		
nspected by: R Morris	Contract	t No:	Job number: 2015-061	Catchm	ent:	Division	n: District:	Stub S01X
tart date/time: 19.08.15 14:12	Road name: Cariboo A	Ave						Place name: Clinton
art Manhole No. 1H 50	Depth: 3.00	Cover:	Invert:	1	Finish Man Stub SC		Depth: Co	ver: Invert:
se:	Direction: U	Size 2:	Size 1: 150	Shape:	Material: VC	Lining:	Pipe length:	Total length: Year laid
/T No: 00	0036			Comm	nents			
Video No.	Y Photo No.	4 F	Easen	nent to Cariboo	Diameter / Dimensio	Numbers on Clock	Intrusion	Remarks
				code		at to	% пип	
0000	-	0.0		MH				MUEO
0000								MH 50
		0.0		ST				
0001		0.0		WL			5	
0011		7.5		WL			15	
0012		7.5		DES			5	
0021		9.0		WL			5	1

12

12

FM

MC

JDL

SA

0024

0041

0042

0044

001

19.2

29.9

29.9

30.2

RF from same

To PVC

At JDL

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: Stub S01X 2015 sani inspections 8/29/2015 4 R Morris 2:12:29 PM Upstream node: Depth US: Downstream node: Depth DS: Total length: Extra: Stub S01 MH 50 3.0 45.0 Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		МН	Yes	/		MH 50
0.0		ST	Yes	/		
0.0		WL	Yes	1		
7.5		WL	Yes	1		
7.5		DES	Yes	/		
9.0		WL	Yes	1		
19.2		FM	Yes	12 / 12		RF from same



29.9	MC	Voc	,	To DVC	
29.9	MC	Yes	,	To PVC	
29.9	JDL	Yes	1		
20.2	CA	V	,	44.704	
30.2	SA	Yes	/	At JDL	

						and the same of					
nspected by: R Morris	Contra	oct No:	Job number: 2015-061	Catchr	ment:		Division:	Distric	t:	PLR: MH 42X	
tart date/time: Road name: 81.08.15 10:25 Cariboo										Place name: Clinton	
tart Manhole No. MH 41	Depth: 2.70	Cover:	Invert:			ih Manhole No. I 42		Depth:	Cover:	Invert:	
se:	Direction: U	Size 2:		Shape:	Material:	Lining:	1	Pipe length	1:	Total length: Y	ear laid:
/T No:	00037			Com	ments						
Purpose: Cate	gory Pre-cleanse:	Weather: Local	그렇게 하다 그 그 아이들이 다르기	details: ek at park							
Video No.	Photo No.	Distance C	ontinuous Defect	Letters	Diameter / Dia		mbers Clock	Intru	sion	Remarks	
				code		at	to	%	mm		
0000		0.0		ST							
0000		0.0		МН						MH 41	
0001		0.0		WL				60			
0005		2.3		WL				15			
0012		5.0		WL				5			
0025		14.0		CX	100	3		1	===	Live. EL at interface	
0050		26.5	S1	DES				5		Off and on	
0050		52.7	F1	DES				5		Off and on	
0081		52.7		CX	100	10				Appears unused. El	1 99%
0122		67.3		DES				25		Larger rocks	

0130

67.3

SA

MH 42, 3.5M upstream

Inspected by: R Morris	Contract	No:	Job number: 2015-061	Catchment:		Division:	District:	PLR: MH 39X	
Start date/time: 31.08.15 10:54	Road name: Smith Ave	e						Place name: Clinton	
Start Manhole No. MH 39	Depth: 2.40	Cover:	Invert:		Finish Manhole No. MH 38A		Depth: Cove	r: Inv	ert:
Jse:	Direction:	Size 2:	Size 1: Shape 200 C	: Material: VC	Lining:		Pipe length:	Total length: 48.2	Year laid:
/T No: 000	038			Comments					
Purpose: Category A	Pre-cleanse:	Weather: Locat	Location details						
Video No.	hoto No.	Distance C	ontinuous Defect	Letters Diamete		mbers Clock	Intrusion	Remarks	
				code	at	to	% mm		
0000	1	0.0		ST					
0000		0.0		МН				MH 39	
0001		0.0		WL			5		

100

100

2

2

2

7

15

Varies 5-15%

At joint

Live. Trickle flow

Appears unused

MH 38A. Tight benching

WL

JN

FM

JN

MH

FH

001

3.3

9.0

19.0

28.5

47.9

0004

0014

0033

0054

0080

WRc Sewer Report

PH: 1-800-661-6177

Observation Report with Still Images

Project Name: PLR: Start date/time: Weather: Inspected by: MH 39X 2015 sani inspections 8/31/2015 R Morris 1 10:54:36 AM Depth DS: Upstream node: Depth US: Downstream node: Total length: Extra: MH 39 **MH 38A** 2.4 2.3 48.2

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	No	/		
0.0	1	МН	No	1		MH 39
0.0	1	WL	No	1		
3.3	1	WL	No	1		Varies 5-15%
9.0		IN	No	2 /		Live. Trickle flow
19.0	1	FM	No	2/7		At joint



28.5	JN	No	2 /	Appears unused
47.9	МН	No	1	MH 38A. Tight benching
48.2	FH	No	1	

nspected by: R Morris	Contrac	t No:	Job number: 2015-061	Catchm	ent:		Division:	District:		PLR: MH 38AX	
tart date/time: 1.08.15 11:08	Road name: Smith Av	e.								Place name: Clinton	
art Manhole No. IH 38A	Depth: 2.30	Cover:	Invert:		Finish MH	Manhole No.		Depth: 2.40	Cover:	Inv	ert:
se:	Direction:	Size 2:	Size 1: S 200 C	hape:	Material: VC	Lining:		Pipe length:		Total length: 36.0	Year laid:
r No: 000	039			Comm	nents						
Video No. F	Y Photo No.	1 C	To Bell	Letters	Diameter / Din		imbers Clock	Intrusio	n	Remarks	
				code		at	to	%	mm		
0000		0.0		ST				1 1	-		
0000		0.0		МН					_	MH 38A. Tight	benching.
0002		0.0		WL				5			
0002		0.0		GO						Pipe is AC at M	H.
					_		_	_	_		
0014		9.0		WL				15			

100

2

12

12

JN

FC

MH

FH

0033

0052

0062

0065

001

22.7

35.4

35.8

36.0

Appears unused

At interface

MH 38

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: PLR: Project Name: Start date/time: Weather: **MH 38AX** 2015 sani inspections 8/31/2015 R Morris 1 11:08:26 AM Depth US: Depth DS: Total length: Extra: Upstream node: Downstream node: **MH 38A** 2.3 MH 38 2.4 36.0 Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	S	Т	No	1		
0.0	M	1H	No	1		MH 38A. Tight benching.
0.0	٧	٧L	No	1		
0.0	G	io	No	1		Pipe is AC at MH
9.0	٧	VL.	No	1		
11.3	٧	/L	No	1		
22.7	J	N	No	2 /		Appears unused
35.4	F	С	No	12 / 12		At interface



35.8	МН	No	1	MH 38	
36.0	FH	No	1		

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 38X Start date/time: Road name: Place name: 31.08.15 11:18 Smith Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: 2.40 MH 38 MH 37 1.90 Use: Shape: Direction: Size 2: Size 1: Material: Lining: Pipe length: Total length: Year laid: F D 200 C AC 4.0 92.3 VT No: 00040 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: Y 1 C From Bell Α

Video No.	Photo No.	Distance	Continuous Defect	Letters	Diameter / Dimension	Numbe		Intr	usion	Remarks
				code		at	to	%	mm	
0000		0.0		ST						Ī
0000		0.0		МН						MH 38
0000		0.0		WL			177	5		
0010		7.4		ОВ		6	8	5		Gasket
0021		13.0		CN	100	2				Live.
0045		41.0		CN	100	2	. 7.1			Live.
0063		55.2		WL				10		Varies 5-10%
0095		92.1		МН						MH 37. Stained, top of barre
0110		92.3		FH			7 - 1			

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 40X Start date/time: Road name: Place name: 31.08.15 11:38 Smith Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 39 2.40 MH 40 2.70 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F U 200 C 83.7 VC 1.8 VT No: 00041 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: A 1 A From Hwy 97 Video No. Photo No. Distance Continuous Defect Letters Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 39 0001 0.0 WL 5 Varies to 15% 0004 4.9 JN 150 10 Appearrs unused 0030 20.8 JN 100 2 Capped 0035 21.4 CN 100 12 Live. Poor install 0045 25.0 JN 100 3 Appears unused 0072

0085

0110

0141

0150

39.0

49.8

58.8

83.5

83.7

100

100

100

3

12

2

JN

CN

JN

MH

FH

Appears unused

Live. Light flow

MH 40

Live. FC in service

Inspected by: R Morris	Contrac	ct No:	Job number: 2015-061	Catchment:		1	Division:	District:		PLR: MH 34X
Start date/time: 31.08.15 12:08	Road name: Dewdne									Place name: Clinton
Start Manhole No. MH 34	Depth: 2.40	Cover:	Invert:		Finish Manh MH 33	ole No.		Depth: 3.00	Cover:	Invert:
se:	Direction:	Size 2:	Size 1: Shape 200 C		Material: VC	Lining:		Pipe length:	1	Total length: Year laid: 141.2
/T No: (00042			Comments	5		-			
urpose: Category	y Pre-cleanse: Y	Weather: Loca C		ernment St						
Video No.	Photo No.	Distance (Continuous Defect	Letters code	Diameter / Dimension	Numbe Clo at		Intrusio	n mm	Remarks
0000		0.0		МН						MH 34
0000		0.0		ST						
0001		0.0		WL				5		Varies to 15%
0003	001	2.5		FC		12	12			
0023		17.5		WL				25		
0025		18.0		WL		===		45		
0032		20.0		WL				5		
0042		29.6		JN	100	9	1			Live.
0800		58.3		CN	100	11				Live.
0085		62.0		JN	150	3				Appears unused
0103		74.2		JN	100	10				Appears unused
0143		112.8		JN	100	3				Live. FC in service
0173		140.9		МН						MH 33
0182		141.2		FH						

PH: 1-800-661-6177

Observation Report with Still Images

Weather: Project Name: 2015 sani inspections Start date/time: Inspected by: PLR: 8/31/2015 12:08:00 PM **MH 34X** 1 R Morris Upstream node: Extra: Depth US: Downstream node: Depth DS: Total length: 141.2 MH 34 MH 33 3.0 2.4 Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	M	Н	No	1		MH 34
0.0	s	Т	No	/		
0.0	W	'L	No	1		Varies to 15%
2.5	F		No	12 / 12		



17.5	WL	No	1	
18.0	WL	No	1	
20.0	WL	No	1	
29.6	JN	No	9 /	Live.
58.3	CN	No	11 /	Live.
62.0	JN	No	3 /	Appears unused
74.2	JN	No	10 /	Appears unused
112.8	JN	No	3 /	Live. FC in service
140.9	МН	No	1	MH 33
141.2	FH	No	1	

1

pected by: Morris		Contract N	0:	Job number: 2015-061	1	Catchment:		Division: Dis	trict:	PLR: MH 35X	
art date/time: 1.08.15 12:32		Road name: Dewdney A	lve.							Place name: Clinton	
tart Manhole No. 1H 34		Depth: 2.40	Cover:	Invert:			Finish Manhole No. MH 35	Depth: 2.70	Cover:	In	vert:
Jse:		Direction: U	Size 2:	Size 1; 200	Shape: C	Material: VC	Lining:	Pipe len	gth:	Total length: 120.3	Year laid:
T No:	00043				- 1	Comments					
Purpose: Categ	ory Pr	Dec. 100 100 100 100 100	eather: Loc		tion details: m Hwy 97						
Video No.	Photo I	No.	Distance	Continuous Defect	Lette	Diameter		nbers Clock In to %	trusion mm	Remarks	

				Clock		
		code		at t	ю % п	m .
0000	0.0	ST				
0000	0.0	МН				MH 34. Ramp
0001	0.0	WL			5	Varies to 15%
0020	19.9	JN	100	3		Appears unused
0050	45.1	JN	100	2		Live.
0061	49.9	JN	100	9		Live.
0152	72.7	JN	100	9	-1 1	Appears unused
0202	80.7	JN	100	2		Live. Trickle flow
0212	81.5	JN	100	10		Appears unused
0230	91.8	JN	100	10		Live.
0283	120.1	МН				MH 35
0292	120.3	FH				

nspected by: R Morris	Contrac	t No:	Job number: 2015-061	Catchmer	nt:		Division:	District:		PLR: MH 22X	
art date/time: 1.08.15 13:49	Road name: Le Bourd									Place name: Clinton	
art Manhole No. H 21	Depth: 3.00	Cover:	Invert:		Finish MH 2	Manhole No. 22		Depth:	Cover:	Invert:	
e:	Direction: U	Size 2:	Size 1: Shape 200 C		Material: VC	Lining:		Pipe length: 1.8		otal length:	Year laid:
r No: 00	0044			Comme	nts						
rpose: Category Video No.	Pre-cleanse: Y Photo No.	Weather: Locat C Distance	ion: Location details From Hwy ontinuous Defect		Diameter / Dime		mbers	Intrusion	R	emarks	
				code	Diameter / Dime	at	Clock				
				Code		ot.	10	% m			
0000		0.0		ST			1		T		
0000		0.0		МН			1 7		М	H 21. Ramp	
0001		0.0		WL				5	-		
0031		27.2		JN	100	3			Li	ve.	
0045		41.2		JN	100	10				ve.	
0065		58.9		JN	100	2	1			ve. Light flow	
0083		69.0		JN	100	2			_	ppears unused	
0102		83.0		JN	100	10				ve. Light flow	

0261

0270

MH

FH

118.9

119.0

MH 22. Barrel stained

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 18X Start date/time: Road name: Place name: 31.08.15 14:33 McDonald Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 18 4.50 MH 15 2.70 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: D 200 C VC 72.2 1.8 VT No: Comments 00045 Purpose: Category Pre-cleanse: Weather: Location: Location details: Y 1 A Across Hwy 97 Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion

			code		at	to	%	mm	
0000		0.0	ST						
0000		0.0	MH						MH 18
001		0.0	WL				5		
003	(0.3	RFJ				20		Root tail for 0.4M
011	001	0.3	FM		12	12			DS of joint
042	002	16.1	FC		12	12			
063	17.	41.8	NC	100	2				Live.
090	003	71.4	н	30	5	11			At joint. Fill visible
103		71.8	NC	200	6				Outside drop
111	1	72.0	МН		1		1		MH 15
0115	10 (1)	72.2	FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

MH 18X	2015	Project Name: 5 sani inspections	8/31/201 2:33:25	5 1	Weather: In R Mc	
Upstream node: MH 18	Depth US:	Downstream node:	Depth DS:	Total length: 72.2		Extra:

Observations

Distance	Length	Code Reversed	Clock Pos.	Severity	Comment
0.0	ST	No	1	Seventy	Comment
0.0	МН	No	1		MH 18
0.0	WL	No	1		
0.3	RFJ	No	1		Root tail for 0.4M
0.3	FM	No	12 / 12		DS of joint

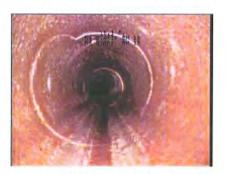


16.1

FC

No

12 / 12



Observations with Still Images

PH: 1-800-661-6177

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
41.8	JN	1	No	2 /		Live.
71.4	Н	1	No	5 / 11		At joint. Fill visible



71.8	JN	No	6 /	Outside drop
72.0	МН	No	1	MH 15
72.2	FH	No	1	

Inspected by: R Morris		Contract	No:	Job number: 2015-061	Catchi	ment:	T	Division:	Distri	ct:	PLR: MH 19X	
Start date/time: 31.08.15 14:5		Road name: McDonald	d Cres								Place name: Clinton	
Start Manhole No. MH 18		Depth: 4.50	Cover:	Invert:	- 1	Finish Manh MH 19	ole No.	- 1	Depth: 2.50	Cover	: Invert:	
Use: F		Direction: U	Size 2:		Shape:	Material: VC	Lining:	1	Pipe lengt	hi	Total length: 43.6	Year laid:
VT No:	00046				Com	ments		_				
Α	regory Pre-	2.00	Weather: Locat 1 C	To McD	letails: Oonald Ave.							
Video No.	Photo No	t.	Distance C	ontinuous Defect	Letters	Diameter / Dimension	Numbe		Intro	sion	Remarks	
					code		at	to	%	mm		
0000			0.0		МН						MH 18	
0000			0.0		ST							
0001			0.0		WL				5			
0010			6.7	= = 1	JN	100	10				Live. Light flow	
0015			6.8		RFJ				5		Trace.	
0023	001	is i	7.5		FM		12	12			RF from same	
0043			14.7		JN	100	2				Live.	
0051			16.7		RFJ		1		5	7		
0054	002	2	19.2		FM		12	12			RF from same	
0073			25.6	S1	RFJ		V		5		Root tail. Varies	
0081	003	3	27.3		FC		7	1			At joint	
0073			32.0	F1	RFJ				5		Root tail. Varies	
0103	11-		41.7		WL		11-		15			
0105			42.9		WL				5			
0111			43.5		МН						MH 19	
0115	1/7		43.6		FH							

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: MH 19X 2015 sani inspections 8/31/2015 1 R Morris 2:51:10 PM Upstream node: Depth US: Downstream node: Depth DS: Total length: Extra: MH 19 2.5 MH 18 4.5 43.6

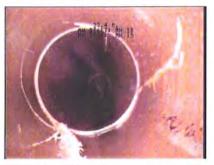
Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	N	1H	Yes	/		MH 18
0.0	S	T	Yes	1		
0.0	٧	VL	Yes	1		
6.7	J	N	Yes	10 /		Live. Light flow
6.8	R	FJ	Yes	1		Trace.
7.5	F	М	Yes	12 / 12		RF from same



14.7	JN	Yes	2 /	Live.
16.7	RFJ	Yes	1	
19.2	FM	Yes	12 / 12	RF from same

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
720	nu státřícím 18					
		1 生				
	1	7 3				
	1	1				
	3					
25.6	6.4	RFJ	Yes	/		Root tail. Varies



41.7	WL	Yes	/	
42.9	WL	Yes	/	
43.5	МН	Yes	/	MH 19
43.6	FH	Yes	1	

WRc Sewer keport Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 15Y Start date/time: Road name: Place name: 31.08.15 15:28 McDonald Ave. Clinton Start Manhole No. Finish Manhole No. Depth: Depth: Cover: Invert: Cover: Invert: MH 14 2.40 MH 15 2.70 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Total length: Pipe length: Year laid: 200 F U C VC 1.8 81.9 VT No: Comments 00047 Category Weather: Location: Location details: Purpose: Pre-cleanse: From Hwy 97 A Y 1 A

Video No.	Photo No.	Distance	Continuous Defect	Letters	Diameter / Dimension	Numbe Clo		Intr	usion	Remarks
				code		at	to	%	mm	
0000		0.0		ST						Ī
0000		0.0		МН						MH 14
0001		0.0		WL				5		
0013		13.6		CN	100	12				Appears live but unused
0030		23.3		NC	100	3	1			Live.
0040		29.5		CN	100	2				Live.
0055		46.6	h i i	JN	100	2				Live.
0070		54.9		JN	100	10				Live.
0094	001	72.6	4	FM		12	12			
0120	002	81.0		FM		11	2			At joint
0132		81.6		ОВ				5		Stick lodged in MH
0140		81.8		МН						MH 15
0141	1	81.9		FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Start date/time: Weather: PLR: Project Name: 8/31/2015 1 R Morris 2015 sani inspections MH 15Y 3:28:49 PM Extra: Total length: Depth DS: Upstream node: Depth US: Downstream node: 2.4 81.9 MH 15 2.7 MH 14 Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	Yes	1		
0.0		МН	Yes	1		MH 14
0.0		WL	Yes	1		
13.6		CN	Yes	12 /		Appears live but unused
23.3		JN	Yes	3 /		Live.
29.5		CN		2 /		Live.
46.6		JN	Yes	2 /		Live.
54.9		JN	Yes	10 /		Live.
72.6		FM	Yes	12 / 12		



81.0

FM

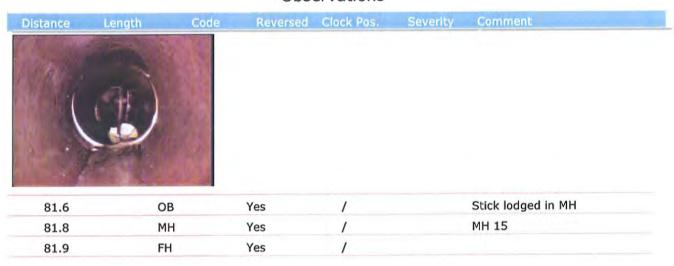
Yes

11 / 2

At joint

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Observations



Page

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: PLR: District: R Morris 2015-061 MH 24X Start date/time: Road name: Place name: Lane from rear 1509 Carson 31.08.15 16:02 Clinton Start Manhole No. Invert: Finish Manhole No. Depth: Cover: Invert: Depth: Cover: 3.00 MH 23 2.80 MH 24 Total length: Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Year laid: F D 200 C VC 1.8 65.7 VT No: 00048 Comments Category Pre-cleanse: Weather: Location: Location details: Purpose: Y 1 A Across Hwy 97 A Remarks Video No. Photo No. Distance Continuous Defect Letters Numbers Diameter / Dimension Intrusion Clock code 0.0 ST 0000 0000 0.0 MH MH 24 0.0 WL 5 0001 0022 28.0 JN 100 3 Appears live but unused

JN

FM

В

MH

FH

9

12

5

12

8

150

Appears unused

MH 23

At joint. Pipe displaced

0032

0062

0080

0093

0095

001

002

30.6

62.2

65.0

65.5

65.7

WRc Sewer Report Catchment: PLR: Inspected by: Contract No: Job number: Division: District: 2015-061 MH 25X R Morris Start date/time: Road name: Place name: Easement rear of 1509 Carson 31.08.15 16:33 Clinton Start Manhole No. Invert: Finish Manhole No. Depth: Depth: Cover: Cover: Invert: 3.00 MH 25 MH 24 Lining: Use: Pipe length: Total length: Year laid: Direction: Size 2: Size 1: Shape: Material: 58.8 F U 200 C VC 1.8 VT No: 00049 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: To corner of Building 1509 Carson Y 1 F A

Video No.	Photo No.	Distance	Continuous Defect	Letters	Diameter / Dimension	Numbe		Intn	usion	Remarks
				code		at	to	%	mm	
0000		0.0		ST						
0000		0.0		МН						MH 24
0001		0.0		WL				10		
0005		6.4		CNI	100	1		+ = = =	15	Live.
0022		17.7	7	WL				20		
0030		19.7	7	JN	100	2		1 7 1 1		Live.
0032		19.7	7	WL				35		
0041		26.6	5	WL				5		
0061		48.2	2	CN	100	2				Live. Light flow
0065		49.2	2	WL				15		Varies 5-15%
0080	001	58.:	L	FC		12	12			
0085		58.	5	МН						MH 25
0094		58.8	3	FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Start date/time: Weather: PLR: Project Name: 2015 sani inspections 8/31/2015 1 R Morris MH 25X 4:33:24 PM Depth US: Depth DS: Total length: Extra: Downstream node: Upstream node: MH 25 MH 24 58.8

Comments

Distance	Length C	ode Reverse	d Clock Pos.	Severity	Comment
0.0	ST	Yes	/		
0.0	МН	Yes	/		MH 24
0.0	WL	Yes	/		
6.4	CNI	Yes	1 /		Live.
17.7	WL	Yes	/		
19.7	JN	Yes	2 /		Live.
19.7	WL	Yes	/		
26.6	WL	Yes	/		
48.2	CN	Yes	2 /		Live. Light flow
49.2	WL	Yes	/		Varies 5-15%
58.1	FC	Yes	12 / 12		



58.5	МН	Yes	1	MH 25
58.8	FH	Yes	1	

nspected by: R Morris		Contract	t No:		umber: 5-061	Catchm	nent:		Div	vision:	District:		PLR: MH 17X	
Start date/time: 31.08.15 1		Road name: Hwy 97											Place name Clinton	11
Start Manhole N MH 16	lo.	Depth: 2.90	Cover:	1	Invert:			Finish Manhole MH 17	e No.		pth: .90	Cover:		Invert:
Jse:		Direction: U	Size 2:	Size		Shape: C	Material: VC	Lir	ning:		ipe length: L.8		Total length: 85.9	Year laid:
/T No:	000	50				Comn	nents							
Purpose:	Category	Pre-cleanse:	Weather:	Location:	Location From	details: 1625 Hwy 97								
Video No.	Př	hoto No.	Distance	Continue	ous Defect	Letters	Diameter	/ Dimension	Numbers Clock		Intrusio	n	Remarks	
						code			at	to	%	mm		

				Diditiotel / Differiblett	LI0	UK.			
			code		at	to	%	mm	
		9							
0000		0.0	ST						
0000		0.0	МН						MH 16
0001		0.0	WL				5		
0005		8.4	JN	100	3				Appears unused
0022		20.7	NC	100	9			1	Appears unused. DES
0032		26.8	JN	100	3				Live.
0050	001	42.6	FM		12	12			
0061		44.2	NC	100	3				Capped
0064		45.7	CNI	100	2	I		15	Appears unused but may be liv
0081	002	55.2	FM		12	8			At joint
0105		74.5	JN	100	1				Live.
0121		85.5	DE			100	25		At MH 17
0125		85.7	МН		-	1	111		MH 17
0131		85.9	FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: Project Name: Start date/time: Weather: PLR: MH 17X 2015 sani inspections 8/31/2015 1 R Morris 5:51:32 PM Upstream node: Depth US: Downstream node: Depth DS: Total length: Extra: MH 17 85.9 2.9 MH 16

Comments

Observations

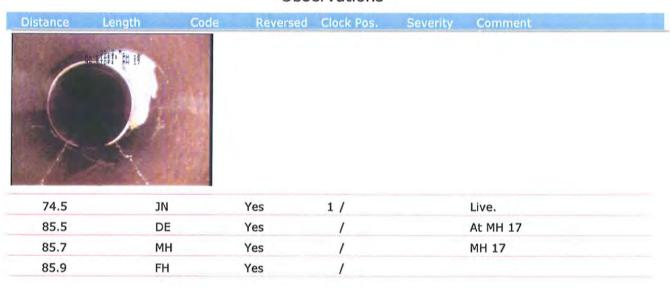
Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	ST		Yes	1		
0.0	MH	1	Yes	1		MH 16
0.0	WI		Yes	1		
8.4	JN		Yes	3 /		Appears unused
20.7	NC		Yes	9 /		Appears unused. DES
26.8	JN		Yes	3 /		Live.
42.6	FM		Yes	12 / 12		



44.2	JN	Yes	3 /	Capped
45.7	CNI	Yes	2 /	Appears unused but may be live
55.2	FM	Yes	12 / 8	At joint

2

PH: 1-800-661-6177



Inspected by: R Morris	Contract N	10:	Job number: 2015-061	Catc	hment:		Division: District:	Í	PLR: MH 16X	
Start date/time: 31.08.15 18:09	Road name: Hwy 97								Place name: Clinton	
Start Manhole No. MH 16	Depth: 2.90	Cover:	Invert:			Finish Manhole No. MH 15	Depth: 2.70	Cover:	Inve	ert:
Jse: F	Direction:	Size 2:	Size 1: 200	Shape: C	Material: VC	Lining:	Pipe length: 1.8		Total length: 72.2	Year laid:
VT No: 000	51			Co	mments					
Purpose: Category A	Pre-cleanse: V	Veather: Loc	to the second second	ntion details: McDonald Ave.						
Video No. Pl	noto No.	Distance	Continuous Defect	Letters	Diamaka	Number / Dimension Clos	Total Control of the		Remarks	

			code		at	to	%	mm	
0000		0.0	ST						
0000		0.0	MH		1				MH 16
0001		0.0	WL				5		
0005		9.7	WL				15		
0011		12.0	WL				5		Varies to 15%
0020	001	19.6	FC		12	12			
0033	1-1	30.8	JN	100	2				Live.
0050	1	44.6	NC	100	2				Live.
0055	002	48.9	СС		9	2			At joint
0080		72.0	МН						MH 15
0083		72.2	FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

MH 16X	2015	Project Name: Sani inspections	8/31/201 6:09:32	15 1	Weather:	R Morris
Upstream node:	Depth US:	Downstream node:	Depth DS:	Total length: 72.2		Extra:

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		мн	No	1		MH 16
0.0		ST	No	1		
0.0	,	WL	No	1		
9.7	1	WL	No	1		
12.0	,	WL	No	1		Varies to 15%
19.6		FC	No	12 / 12		



30.8	JN	No	2 /	Live.	
44.6	JN	No	2 /	Live.	
48.9	CC	No	9 / 2	At joint	

PH: 1-800-661-6177



WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 **MH 30X** Start date/time: Road name: Place name: 01.09.15 07:54 Government St. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 30 2.90 MH 34 2.40 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 200 C VC 1.8 123.1 VT No: 00052 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: 4 D To Dewdney Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code to 0000 0.0 ST 0000 0.0 MH MH 30 0001 0.0 WL 5 0002 0.1 CC 12 12 Not visible on video 0011 6.7 CN 100 2 Live. 0020 8.2 JN 100 10 Capped 0024 9.4 S1 DES 15 Appears to be clay 0024 11.2 F1 DES 15 Appears to be clay 0032 11.2 CNI 100 9 15 Appears unused. DES 0061 16.5 JN 100 3 Appears unused. DES 0071 16.5 GO Following flusher 0074 23.0 CN 100 1 Live. 23.4 0081 CNI 100 2 20 Appears unused. DES 0095 35.9 JN 3 100 Appears unused. DES

38.5

54.4

0104

0132

100

100

10

10

JN

JN

Appears unused

Live.

Video No.	hoto No.	Distance (m)	Continous Defect	Letters	Diameter / Dimension	Numbers Clock		Intrusion		Remarks
				code		at	to	%	mm	
0143		60.8		JN	100	10				Live.
0155		73.0		JN	100	3				Live.
0162		73.8		JN	100	2				Live.
0181		91.5		JN	100	3				Live.
0220		122.9		МН						MH 34
0230		123.1		FH						

					WRC SE	ewer Ke	DOFT					
nspected by: R Morris		Contrac	ct No:	Job number: 2015-061	Catch	ment:		Division:	District		PLR: MH 30Y	
Start date/time: 01.09.15 08	:45	Road name Governn									Place name: Clinton	
Start Manhole No MH 30		Depth: 2.90	Cover:	Invert:			sh Manhole No. I 21		Depth: 3.00	Cover:	Inv	ert:
Jse: F		Direction:	Size 2:	Size 1: 200	Shape: C	Material: VC	Lining:		Pipe length:		Total length: 135.6	Year laid:
Purpose: C A Video No.	Category	Pre-cleanse: Y		Contract the second	tion details: LeBourdais Letters	Diameter / Dir	Num mension C	bers lock	Intrus	ion	Remarks	
					code		at	to	%	mm		
2000	-1	1	0	0	CT.							
0000				.0	ST						DUALS	
0000			0.	.0	МН						MH 30	
0001			0	.0	WL				45			
0003			0	.3	FC		12	12			Not on video	
0005			0	.3	WL				10			

WL

JN

JN

JN

JN

JN

FM

MH

FH

5

Varies to 15%

Live.

Live.

Live.

Appears unused

Live. Trickle flow

Pipe displaced. Fill visible

MH 21. DE on bench

100

100

100

100

100

3

2

10

3

10

12

12

001

0013

0043

0073

0094

0111

0121

0154

0173

0183

4.5

35.4

64.6

82.5

92.8

99.3

134.8

135.4

135.6

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: 2015 sani inspections **MH 30Y** 9/1/2015 R Morris 4 8:45:09 AM Total length: Depth DS: Extra: Upstream node: Depth US: Downstream node: MH 30 2.9 MH 21 3.0 135.6 Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	5	ST	No	1		
0.0	1	4H	No	1		MH 30
0.0	١	VL	No	1		
0.3	F	C	No	12 / 12		Not on video
0.3	١	VL	No	1		
4.5	١	VL	No	1		Varies to 15%
35.4	J	N	No	3 /		Appears unused
64.6	J	N	No	2 /		Live.
82.5	J	N	No	10 /		Live. Trickle flow
92.8	J	N	No	3 /		Live.
99.3	J	N	No	10 /		Live.
134.8	F	M	No	12 / 12		Pipe displaced. Fill visible



135.4	МН	No	1	MH 21. DE on bench
135.6	FH	No	,	

1

				WRc Se	wer kepor	t			
nspected by: R Morris	Contra	ct No:	Job number: 2015-061	Catchm	ent:	Division	on: Distric	t:	PLR: MH 21X
art date/time: 1.09.15 09:35	Road name LeBourd	: dais Ave.							Place name: Clinton
rt Manhole No. Depth: H 20A 2.70					Finish Manhole No. MH 21			Cover	: Invert:
e:	Direction: U	Size 2:		Shape: C	Material: VC	Lining:	Pipe lengti	n:	Total length: Year laid: 68.2
rpose: Categor	00054 ry Pre-cleanse: Y	Weather: Locat	A STATE OF THE STA	details: Government					
Video No.	Photo No.	Distance C	ontinuous Defect	Letters code	Diameter / Dimension	Numbers 1 Clock at t	Intru	sion mm	Remarks
0000		0.0		ST					
0000		0.0		МН					MH 20A. Tight access
0001		0.0		WL			5		
0012		13.2		JN	100	10			Live.
0022		14.0		JN	100	3			Live.
0044		32.6		CNI	100	2		30	Live
0054		37.3		JN	100	10			Appears unused
0064		41.7		CNI	100	10		30	Live.
0083		58.7		ЛC	100	3			Appears unused
0100		66.9		WL			35		
0104		68.0		WL			55		
0105		68.0		MH					MH 21
0114		68.2		FH					7 - 1 - 1

				WRc Se	wer kep	ort					
nspected by: R Morris	Contrac	t No:	Job number: 2015-061	Catchi	ment:	Divisio	on: District:	PLR: MH 20AX			
Start date/time: 01.09.15 09:54			ame: urdais Ave.								
tart Manhole No. MH 20A	Depth: 2.70	Cover:	Cover: Invert:		Finish Manhole No. DMH 20			Cover:	Invert:		
Jse:	Direction:	Size 2:		Shape:	Material: VC	Lining:	Pipe length:	Total length: 72.1	Year laid:		
T No: 000 Purpose: Category	Pre-cleanse:	Weather: Locati	on: Location o	details:	ments						
Video No. P	hoto No.	Distance Co	ntinuous Defect	Letters	Diameter / Dim	Numbers ension Clock at to	Intrusion 1 % m	Remarks m			
0000		0.0		ST				1			
0000		0.0		МН				MH 20A			
0001		0.0		WL			5				
0003		1.6		NC	100	10		Live.			
0023		18.9		CN	100	10		Live.			
0064		56.8		JN	100	10		Live.			
0080		65.3		JN	100	10		Live.			
0090		71.9		МН				MH 20			
0093		72.1		FH							

pected by: Morris	Contract	No:	Job number: 2015-061	Catch	ment:		Division:	District:	1	PLR: Stub S02X	
art date/time: 1.09.15 10:09	Road name: Lane belo	w Government	St.						Ţ	Place name: Clinton	
art Manhole No. H 20A	Depth: 2.70	Cover:	Invert:			h Manhole No. b S02		Depth:	Cover:	Ir	vert:
se:	Direction: U	Size 2:	Size 1: 250	Shape:	Material:	Lining:	Ĭ	Pipe length: 4.0	1	Total length: 140.0	Year laid:
T No: 000	056			Con	nments						
urpose: Category	Pre-cleanse: Y	Weather: Local	CANAL STATE OF	details: Bourdais							
Video No. F	Photo No.	Distance (Continuous Defect	Letters	Diameter / Din	Numb nension Cl	bers lock	Intrusion	1	Remarks	
				code		at	to	%	mm		
0000		0.0		МН						MH 20A. Insi	do drop

		code		at t	%	mm
0000	0.0	МН				MH 20A. Inside drop
0000	0.0	ST				
0002	0.0	WL			5	
0005	5.1	MC				To PVC
0010	5.1	RFJ			5	Root tail for 0.5M
0014	6.1	MC				To AC
0015	6.1	RFJ			5	Root tail for 1M
0023	7.6	RFJ			5	
0033	20.0	GO				Camera set at 200mm
0050	41.6	CX	100	2		Appears unused. RFJ
0082	67.5	SSM	75	5		
0094	74.9	CN	100	1		Appears unused
0115	94.8	МН				Unplotted. Buried
0144	94.9	SA		1		Cannot proceed past MH

WRc Sewer Report PLR: Catchment: Division: District: Job number: Contract No: Inspected by: MH 74X 2015-061 R Morris Place name: Start date/time: Road name: Clinton 01.09.15 11:06 Spruce Ave. Depth: Cover: Invert: Finish Manhole No. Start Manhole No. Depth: Cover: Invert: 3.70 MH 73 MH 74 2.00 Total length: Year laid: Material: Lining: Pipe length: Use: Direction: Size 2: Size 1: Shape: 82.5 4.0 200 C AC F D Comments VT No: 00057 Location: Location details: Category Pre-cleanse: Weather: Purpose: C To bottom of Spruce Y 1 Remarks Numbers Continuous Defect Letters Photo No. Distance Video No. Intrusion Diameter / Dimension Clock

	0.01	MH				MU 74
000	0.0	МН				MH 74
000	0.0	ST				
001	0.0	WL			5	
004	4.9	JN	100	9		Live.
023	21.5	JN	100	2		Live.
033	26.4	JN	100	9		Live. Light flow
050	39.2	JN	100	2		Live.
060	43.9	JN		9		Live.
092	82.4	МН				MH 73. Inside drop
0102	82.5	FH				

WRc Sewer Report PLR: Catchment: Division: District: Inspected by: Contract No: Job number: MH 75X 2015-061 R Morris Place name: Road name: Start date/time: Clinton 01.09.15 11:21 Spruce Ave. Finish Manhole No. Depth: Cover: Invert: Start Manhole No. Depth: Cover: Invert: MH 75 2.60 MH 74 2.00 Total length: Year laid: Pipe length: Size 2: Size 1: Shape: Material: Lining: Use: Direction: 200 C 4.0 80.1 F AC U Comments VT No: 00058 Location details: Pre-cleanse: Weather: Location: Category Purpose: From top of Spruce Y 1 C Continuous Defect Letters Numbers Photo No. Distance Diameter / Dimension Intrusion Clock 0.0 ST 0000 0.0 MH MH 74 0000 5 WL 0.0 0001 3 12.7 JN 100 0012 Capped 10 0024 18.6 CN 100 Live. Light flow

JN

NC

CN

JN

CN

MH

FH

3

3

9

3

12

100

100

100

100

100

Live. Trickle flow

Appears unused

Live. Trickle flow

MH 75. DES in channel

Live.

Live

0042

0063

0075

0092

0101

0110

0115

33.3

53.8

63.2

74.8

77.8

79.8

80.1

					WRc S	ewer	eport						
nspected by: R Morris		Contract	t No:	Job number: 2015-061	Cate	chment:		Div	vision:	District:		PLR: MH 73X	
Start date/time: 01.09.15 11:4	7	Road name: Spruce A	ve.								1	Place name: Clinton	
tart Manhole No. 1H 72		Depth: 3.40	Cover:	Invert:			Finish Manhole MH 73	No.	1	Depth: 3.70	Cover:	I	nvert:
se:		Direction: U	Size 2:	Size 1: 200	Shape: C	Material:	Lin	ning:		Pipe length:		Total length: 12.8	Year laid:
T No:	00059				Co	omments							
Video No.	egory Pr Y Photo I		Weather: Lo 1 C		on details: oot of Spruce Letters	Diamete	r / Dimension	Numbers Clock		Intrusi	on	Remarks	
					code			at	to	%	mm		
	1												
0000			0.0		ST								
0000			0.0		MH							MH 72	
0001			0.0		WL					5			
0010			7.7		GO							Pipe appears	good and clean
0020			12.6		МН							MH 73	
0022			12.8		FH								

			WRc Sei	wer Report			
nspected by: R Morris	Contract No:	Job number: 2015-061	Catchme	ent:	Division	: District:	PLR: MH 71X
tart date/time: 01.09.15 12:12	Road name: Fir Ave.						Place name: Clinton
art Manhole No. H 70	Depth: Cover:	Invert:		Finish Manho MH 71	le No.	Depth: Cove	er: Invert:
se:	Direction: Size :	2: Size 1: 200	Shape:	Material: L	ining:	Pipe length:	Total length: Year laid:
rpose: Category	Pre-cleanse: Weather: Y 1	Location: Location C From	details: top of Fir				
Video No. Pho	to No. Distance	Continuous Defect	Letters code	Diameter / Dimension	Numbers Clock at to	Intrusion % mm	Remarks
0000		0.0	ST			1 1	
0000		0.0	MH				MIL 70
0001		0.0	WL			5	MH 70
0012		13.0	JN	100	10		Live.
0020		14.0	JN	100	10		Live.
0023		14.8	JN	100	2		Live.
0044		35.7	JN	100	2		Live.
0055		44.3	JN	100	10		Appears unused
0065		49.2	CN	100	10		Live.
0081		57.4	MH				MH 71. Buried
0085		57.6	FH				

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: MH 70X R Morris 2015-061 Start date/time: Road name: Place name: 01.09.15 12:27 Clinton Fir Ave. Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 70 2.40 MH 69 2.10 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 200 C AC 4.0 69.1 VT No: Comments 00062 Purpose: Category Pre-cleanse: Weather: Location: Location details: D From 405 Fir Y 1

Video No.	Photo No.	Distance	Continuous Defect	Letters	Diameter / Dimension	Numbe		Intr	usion	Remarks
				code		at	to	%	mm	
0000		0.0		ST						
0000		0.0		МН						MH 70
0001		0.0		WL				5		
0010		8.5	5	JN	100	10				Live. OJM in service
0020	001	9.8	3	SSL	40	2	4			
0030		13.:	1	JN	100	2				Appears unused
0043		25.	7	JN	100	9				Live.
0061		42.7	2	JN	100	2				Live.
0065		42.	9	JN	100	9				Live.
0083		59.	5	JN	100	9				Live.
0095		68.	8	МН		1				MH 69. Inside drop
0103		69.	1	FH						

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Project Name: 2015 sani inspections PLR: Start date/time: Weather: Inspected by: **MH 70X** 9/1/2015 R Morris 1 12:27:29 PM Upstream node: Depth US: Depth DS: Total length: Extra: Downstream node: MH 70 2.4 MH 69 2.1 69.1 Comments

Distance	Length	Code Reverse	ed Clock Pos.	Severity	Comment
0.0	ST	No	/		
0.0	МН	No	1		MH 70
0.0	WL	No	1		
8.5	JN	No	10 /		Live. OJM in service
9.8	SSL	. No	2/4		



13.1	JN	No	2 /	Appears unused
25.7	ЛC	No	9 /	Live.
42.2	NC	No	2 /	Live.
42.9	NC	No	9 /	Live.
59.5	JN	No	9 /	Live.
68.8	MH	No	/	MH 69. Inside drop
69.1	FH	No	1	

WRc Sewer keport Division: District: PLR: Inspected by: Contract No: Job number: Catchment: MH 69X 2015-061 R Morris Place name: Start date/time: Road name: 01.09.15 12:53 Clinton Fir Ave. Finish Manhole No. Depth: Cover: Invert: Cover: Invert: Start Manhole No. Depth: 4.00 MH 69 2.10 MH 68 Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: Use: Direction: 4.0 47.3 F D 200 C AC VT No: Comments 00063 Location details: Purpose: Pre-cleanse: Weather: Location: Category To foot of Fir 1 C Remarks Numbers Continuous Defect Letters

			Diameter / Dimension	Clock	Intrusion	
		code		at	to %	mm
0000	0.0	ST				
0000	0.0	МН				MH 69
0001	0.0	WL			5	
0024	28.8	JN	100	2		Live.
0044	46.2	JN	200	6		Outside drop
0052	47.1	МН				MH 68
0065	47.3	FH				

WRc Sewer keport Division: PLR: Inspected by: Contract No: Job number: Catchment: District: 2015-061 MH 66X R Morris Place name: Start date/time: Road name: Clinton 01.09.15 13:16 Elm Ave. Finish Manhole No. Depth: Cover: Invert: Start Manhole No. Depth: Cover: Invert: MH 66 MH 65 2.50 Year laid: Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: 4.0 54.7 F U 200 C AC VT No: Comments 00064 Location details: Pre-cleanse: Weather: Location: Purpose: Category From 406 Elm Y 1 C Numbers Remarks Photo No. Distance Continuous Defect

				Diameter / Dimension	on Clock		Intrusion		
			code		at	to	%	mm	
		4						_	
0000	0.0		ST						
0000	0.0		МН						MH 65
0001	0.0		WL				5		
0023	25.2		CN	100	12				Live.
0033	28.8		JN	100	2				Appears unused
0051	45.5		JN	100	3				Live.
0063	54.5		МН			1			MH 66. Buried
0070	54.7		FH			/ = -			

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 Stub S03X Start date/time: Road name: Place name: 01.09.15 13:27 Elm Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 66 Stub S03 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Total length: Pipe length: Year laid: F U C 200 AC 4.0 47.1 VT No: Comments 00065 Purpose: Category Pre-cleanse: Weather: Location: Location details: Y C From top of Elm A 1 Video No. Photo No. Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 66. Buried

5

Live. Light flow

Stub S03. Unplotted. Buried

Live.

2

2

100

100

WL

JN

JN

MH

FH

0001

0010

0040

0054

0064

0.0

8.8

37.6

46.9

47.1

				Albert Berger		• •				
spected by: Morris	Contra	ct No:	Job number: 2015-061	Catchr	ment:	D	vision: Dis	trict:	PLR: MH 65X	
tart date/time: 1.09.15 13:39	Road name Elm Ave								Place name: Clinton	
tart Manhole No. 1H 65	Depth: 2.50	Cover:	Invert:		Finish Ma MH 64	nhole No.	Depth:	Cover	: Inv	ert:
se:	Direction:	Size 2:	Size 1: Shap 200 C	e:	Material:	Lining:	Pipe ler	gth:	Total length: 71.9	Year laid:
urpose: Categor	00066 y Pre-cleanse:	Weather: Locat	tion: Location detai	ls:						
4	Y	1 C	To foot of							
Video No.	Photo No.	Distance C	ontinuous Defect	Letters	Diameter / Dimens	Number:		trusion	Remarks	
				code		at	to %	mm		
0000		0.0		ST		1				
0000		0.0		МН					MH 65	
0001		0.0	1	WL			5			
0004		4.4		JN	100	9			Appears live b	ut unused
0050		54.1		MC					To PVC	

100

9

JN

MC

МН

FH

0053

0061

0075

0085

54.2

54.5

71.7

71.9

Live.

To AC

MH 64. Buried

Inspected by: R Morris	Contr	ract No:	Job number: 2015-061	Catchm	ent:	1	Division:	District		PLR: MH 10X
Start date/time: 01.09.15 14:26	Road nam Foster								Ĭ	Place name: Clinton
Start Manhole No. MH 10	Depth: 2.60	Cover:	Invert:		Finish Man MH 8	hole No.	-	Depth: 2.20	Cover:	Invert:
Use: F	Direction:	Size 2;	Size 1: Shape 200 C		Material:	Lining:	I	Pipe length:		Total length: Year laid: 126.4
VT No:	00067			Comm	ents					
Purpose: Categor	y Pre-cleanse: Y	Weather: Local	ion: Location detail To bottom							
Video No.	Photo No.	Distance C	ontinuous Defect	Letters	Diameter / Dimension	Numb		Intrusi		Remarks
				code	Diameter / Dimension	" CI	ock to	%	mm	
0000		0.0	2 1	ST		1				
0000		0.0		МН						MH 10
0001		0.0		WL		1		5		× × × =
0003		2.1		CN	100	1				Live.
0020		17.3		CN	100	2				Live. Trickle flow
0031		18.2		CN	100	10				Live.
0043		30.2		CN	100	2				Live. Trickle flow
0055		31.3		ОВ		5	7	5		Gasket
0064		34.5		CN	100	10				Live.
0074		40.7		CX	100	10				Live. EH in service.
0091		49.1		CN	100	12				Live. Light flow
0103		56.7		CN	100	10				Live. Trickle flow
0113		58.8		CX	100	12				Live. EL at interface
0121		58.8		GO	1.3					Poor install on CN
0141		77.7		CN	100	2				Live. EM in service
0153		84.0		CN	100	10				Live. Light flow

Video No.	noto No.	Distance (m)	Continous Defect	Letters	Diameter /	Num Clo		Intru	Remarks sion	
				code	Dimension	at	to	%	mm	
0165		95.5		CN	100	10			Live. EL from service	U
0175		96.0		CN	100	11		1	Appears unused. 100	% blocked
0185		96.7		CN	100	2			Live.	
0203		108.1		CN	100	2		15 0	Live.	
0223	3	121.3		ОВ		4	7	5	Gasket.	
0231		123.7		WL				30	DS line not cleaned	
0240		125.5		WL				45		
0242	001	126.1		МН		1			MH 8. EL and barrel	offset
0253		126.4		FH						

nspected by: R Morris	Contra	act No:	Job number: 2015-0661	Catchm	ent:		Division:	Distri	ct:	PLR: MH 11X
tart date/time: 01.09.15 15:04	Road name Foster									Place name: Clinton
tart Manhole No. 1H 10	Depth: 2.60	Cover:	Invert:		Finish Manh MH 11	nole No.		Depth:	Cover	: Invert:
se:	Direction: U	Size 2:	Size 1: Shape: 200 C		Material: VC	Lining:	1	Pipe lengt	h:	Total length: Year laid: 125.0
T No: 00	068			Comn	nents					
urpose: Category	Pre-cleanse:	Weather: Loca	tion: Location details From top o							
Video No.	Photo No.	Distance (Continuous Defect	Letters	Diameter / Dimension	Numb n Cli	ers ock	Intro	ision	Remarks
				code		at	to	%	mm	
0000		0.0		ST						
0001		0.0		МН						MH 10
0002		0.0	1	WL				5		
0005		5.2		JN	100	2		711		Appears unused.
0014		8.8	I JE	CN	100	3				Live. Trickle flow
0025		13.3		CNI	100	3			15	Live.
0040		20.3		CN	100	9				Live.
0045		22.4		JN	100	3				Appears unused. DES
0073		48.6		CN	100	10				Live. FC in service
0102	001	64.3		FC		11	9			From service
0110		64.5		CX	100	10				Appears unused. FC in main
0132		68.1		JN	100	3				Live. Light flow
0155		80.2		JN	100	9				Live.
0171		86.5		JN	100	3				Appears unused
0180		89.8		CNI	100	3		1	20	Live.
0200		91.1		SA						No traction

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Inspected by: PLR: Project Name: Start date/time: Weather: MH 11X 2015 sani inspections 9/1/2015 1 R Morris 3:04:53 PM Upstream node: Depth US: Downstream node: Depth DS: Total length: Extra:

2.6

125.0

MH 10

Comments

MH 11

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	5	ST	Yes	1		
0.0	1	4H	Yes	1		MH 10
0.0	1	VL	Yes	1		
5.2	J	N	Yes	2 /		Appears unused.
8.8	(CN	Yes	3 /		Live. Trickle flow
13.3	(CNI	Yes	3 /		Live.
20.3	(CN	Yes	9 /		Live.
22.4	J	N	Yes	3 /		Appears unused. DES
48.6	(CN	Yes	10 /		Live. FC in service
64.3	F	C	Yes	11 / 9		From service



64.5	CX	Yes	10 /	Appears unused. FC in main
68.1	JN	Yes	3 /	Live. Light flow
80.2	JN	Yes	9 /	Live.
86.5	JN	Yes	3 /	Appears unused

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 14X Start date/time: Road name: Place name: 01.09.15 15:45 McDonald Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 14 2.40 MH 12 2.70 Use: Direction: Size 2: Shape: Size 1: Material: Lining: Pipe length: Total length: Year laid: F D 200 C VC 1.8 121.7 VT No: 00069 Comments Category Purpose: Pre-cleanse: Weather: Location: Location details: Y 1 C From 309 McDonald Video No. Continuous Defect Photo No. Distance Letters Numbers Remarks Diameter / Dimension Intrusion Clock code to 0000 0.0 ST 0000 0.0 MH MH 14 0001 0.0 WL 5 0022 21.6 JN 100 3 Live. Light flow 0031 22.6 JN 100 9 Capped 0035 23.0 CN 100 9 Appears unused 0045 001 24.7 H 200 11 1 Appears repaired 0062 29.2 CN 100 9 Live. Light flow 0071 30.6 CN 9 100 Live. Trickle flow 0083 36.6 CN 100 2 Live. 0092 41.6 JN 100 3 Appears unused 0110 53.4 FC 12 5 At joint 0125 67.0 JN 100 2 Live. 0160 100.9 CN 100 2 Live. 0180 118.8 CN 100 1 Live. Light flow 0185 121.5 MH MH 12

Video No.	hoto No.	Distance (m)	Continous Defect	Letters	Diameter /	Num Clo		Intrusion		Remarks	
				code	Dimension	at	to	%	mm		
0192		121.	7	FH							

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Start date/time: Weather: Inspected by: PLR: Project Name: 9/1/2015 R Morris **MH 14X** 2015 sani inspections 1 3:45:46 PM Total length: Extra: Upstream node: Depth US: Downstream node: Depth DS: 121.7 MH 14 MH 12 2.7 2.4 Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	S.	Г	No	1		
0.0	М	Н	No	1		MH 14
0.0	W	L	No	1		
21.6	ונ	i	No	3 /		Live. Light flow
22.6	JI.	ĺ	No	9 /		Capped
23.0	C	V	No	9 /		Appears unused
24.7	н		No	11 / 1		Appears repaired



29.2	CN	No	9 /	Live. Light flow
30.6	CN	No	9 /	Live. Trickle flow
36.6	CN	No	2 /	Live.
41.6	NC	No	3 /	Appears unused
53.4	FC	No	12 / 5	At joint
67.0	JN	No	2 /	Live.
100.9	CN	No	2 /	Live.

WRc Sewer Report Division: PLR: Inspected by: Contract No: Job number: Catchment: District: 2015-061 **MH 13BX** R Morris Start date/time: Place name: Road name: 02.09.15 07:35 Tingley St. Clinton Finish Manhole No. Depth: Cover: Invert: Start Manhole No. Depth: Cover: Invert: MH 13A MH 13B 2.20 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: 200 C PVC 4.0 42.6 F D VT No: Comments 00070 Weather: Location details: Purpose: Category Pre-cleanse: Location: Y D To 1607 Tingley A 1 Remarks Distance Continuous Defect Letters Numbers Video No. Photo No. Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 13B 0.0 WL 5 0001

JN

JN

JN

JN

MC

MH

FH

9

3

3

2

100

100

100

100

Appears live but unused

Appears unused. DES

MH 13A. Tight access

Appears unused

Live.

To AC

0005

0024

0032

0042

0063

0070

0075

7.1

19.2

19.7

24.5

41.9

42.5

42.6

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: 2015-061 MH 13AX R Morris Start date/time: Road name: Place name: 02.09.15 07:48 Tingley Clinton Start Manhole No. Depth: Finish Manhole No. Depth: Cover: Cover: Invert: Invert: MH 13A MH 13 2.50 Lining: Use: Direction: Size 2: Size 1: Shape: Material: Pipe length: Total length: Year laid: F D 200 C AC 4.0 51.2 VT No: 00071 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: Y 1 D To McDonald A Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Clock Intrusion 0000 0.0 ST 0000 0.0 MH MH 13A. Buried 0002 0.0 WL 5 3 0010 4.8 JN 100 Live. 5.5 JN 9 0014 100 Live. 5.9 В 6 11 0022 001 At joint. Repaired 0032 5.9 DE 10 0040 002 6.2 H 25 10 12 Two small holes 0054 17.9 JN 100 9 Live. 2 0063 19.9 CN 100 Live. 2 0085 44.0 CN 100 Live. 0100 51.1 MH MH 13. Ponding in MH

51.2

0110

FH

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Start date/time: Weather: Inspected by: Project Name: 9/2/2015 R Morris MH 13AX 2015 sani inspections 7:48:36 AM Total length: Extra: Upstream node: Depth US: Downstream node: Depth DS: **MH 13A** MH 13 51.2

Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	1	мн	No	1		MH 13A. Buried
0.0		ST	No	1		
0.0	1	WL	No	1		
4.8		IN	No	3 /		Live.
5.5		IN	No	9 /		Live.
5.9		3	No	6 / 11		At joint. Repaired



5.9	DE	No	1		
6.2	н	No	10 / 12	Two small holes	

PH: 1-800-661-6177

Observations

stance	Length	Code	Reversed	Clock Pos.	Severity	Comment
	g 21887: "AH 134					
	H STORE NH 13"					
100		1000				
1						
A MARK	NO. STATE OF THE PARTY OF THE P					
1	ALC: N					
17.9	ALC.		No	9 /		Live.
17.9 19.9	JN		No No	9 / 2 /		Live. Live.
		V				
19.9	CI	V V	No	2 /		Live.

Page

spected by: Morris	Contract No:		Job number: 2015-061	Catchme	ent:		Division:	Distric	t:	PLR: MH 13X
tart date/time: 2.09.15 08:20	Road name: McDonald Av	e.								Place name: Clinton
tart Manhole No. 1H 13	Depth: 2.50	Cover:	Invert:		Finish Ma MH 7A	nhole No.		Depth: 2.00	Cover:	Invert:
e:	Direction:	Size 2:	Size 1: Shape 200 C		Material:	Lining:	1	Pipe lengtl	1:	Total length: Year laid: 137.1
T No: 00072	2			Comm	ents		2			
Video No. Phot	Pre-cleanse: Weat Y 1	D	ion: Location details From Tingl			Numb	Prs			Remarks
VIGEO NO.	a no.	iones c	onembous perece	Editors.	Diameter / Dimens	ion Clo		Intru	sion	
				code		at	to	%	mm	
								,		
0000		0.0		ST						
0000		0.0		MH						MH 13. Ponding in MH
0001		0.0	101	WL				5		
0013		12.6		JN	100	10				Live.
0034		33.1		JN	100	9				Live, unused JDM in service
0062		33.1		JN	100	10				Live.
0083	- 1	72.1		JN	100	11				Live.
0095		79.7		GO						Point repair for 2.2M
0105		86.6		CX	100	10				Live. RM from same
0131		101.1		CN	100	9	-			Live.
0151		114.0		JN	100	9				Live. Trickle flow
0164		121.3		CN	100	12				Live. Light flow. IS
0174		121.5		CN	100	12				Live. IS at interface
						_	_	+		
0192		130.4		JN	100	9				Live.

0215

FH

137.1

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 12X Start date/time: Road name: Place name: 02.09.15 08:56 McDonald Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 12 2.70 MH 7 1.90 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 200 C AC 4.0 127.4 VT No: Comments 00073 Purpose: Category Pre-cleanse: Weather: Location details: Location: Y D 1 From 215 McDonald Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 12 0001 0.0 5 WL 0013 13.3 CN 100 2 Live. 0023 001 16.6 JDL 0033 17.0 SA Cannot pass JDL

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Project Name: 2015 sani inspections PLR: Start date/time: Weather: Inspected by: 9/2/2015 MH 12X 1 R Morris 8:56:59 AM Depth US: Total length: Upstream node: Downstream node: Depth DS: Extra: MH 12 2.7 MH 7 1.9 127.4 Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	1	4H	No	1		MH 12
0.0	9	ST	No	1		
0.0	١	VL	No	/		
13.3	(CN	No	2 /		Live.
16.6	J	DL	No	1		



17.0 SA No / Cannot pass JDL

				WRc S	ewer ké	port				
Inspected by: R Morris	Contract I	No:	Job number: 2015-061	Cato	chment:		Division:	District:	PLR: MH 7AX	
Start date/time: 02.09.15 09:13	Road name: McDonald	Ave.							Place name: Clinton	
Start Manhole No. MH 7A	Depth: 2.00	Cover:	Invert:			sh Manhole No. H 7B	1	Depth: Co	over: In	vert:
Jse: F	Direction:	Size 2:	Size 1: 200	Shape: C	Material: AC	Lining:	1	Pipe length:	Total length: 14.6	Year laid:
Purpose: Category A Video No. Pho	Y :	Veather: Locati C Distance G		on details: ss McDonald a Letters	0.500	Num	bers		Remarks	
				code	Diameter / D	mension C	lock to	Intrusion % mm		
0000		0.0		ST						
0000		0.0		МН					MH 7A. EL on	lower barrel
0003		0.0		WL				5		
0005		2.4		CX	100	12			Capped. IS, E	L from interface
0031		14.4		МН					MH 7B. Unplo	tted
0040		14.4		GO					Barrel wet, st	ained
0044		14.4		GO					No camera ac	cess DS.
0052		14.6		FH						

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: PLR: District: R Morris 2015-061 MH 12X Start date/time: Road name: Place name: 02.09.15 09:34 McDonald Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 7 1.90 MH 12 2.70 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F 200 C U AC 4.0 127.4 VT No: Comments 00075 Purpose: Category Pre-cleanse: Weather: Location: Location details: Y From 215 McDonald H 1 D Video No. Photo No. Continuous Defect Letters Distance Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 7 0001 0.0 WL 5 0013 001 12.0 SSM 50 12 Stained 0021 12.6 **EMJ** 20 Possible crack 0033 13.5 MH MH 7B. Unplotted 0040 13.5 GO IS, EL in MH 0055 33.6 CN 100 10 Live. 0091 002 64.7 SSS 2 30 EL from same 0102 65.2 CX 12 100 Live. EL from same. 0115 70.5 EMJ 20 0135 84.4 CX 100 11 Live. EL at interface 0161 96.7 CX 100 11 Live. EM at interface 0200 110.3 JDL 0205 110.4 SA

At previous report

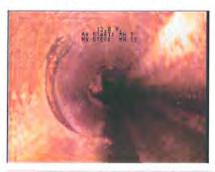
V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Project Name: PLR: Start date/time: Weather: Inspected by: 9/2/2015 MH 12X 2015 sani inspections 1 R Morris 9:34:51 AM Depth US: Depth DS: Total length: Upstream node: Downstream node: Extra: MH 12 2.7 MH 7 127.4 1.9 Comments

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0		ST	Yes	1		
0.0		МН	Yes	/		MH 7
0.0		WL	Yes	1		
12.0		SSM	Yes	12 /		Stained



12.6	EMJ	Yes	/	Possible crack	
13.5	МН	Yes	1	MH 7B. Unplotted	
13.5	GO	Yes	1	IS, EL in MH	
33.6	CN	Yes	10 /	Live.	
64.7	SSS	Yes	2 /	EL from same	

PH: 1-800-661-6177

stance	Length	Code	Reversed	Clock Pos.	Severity	Comment
NI NI	1 \$78\$7: "AH 72	-				
		2				
		10				
	S. Call	12				
	THE RESIDENCE OF THE PARTY OF T	NA CONTRACTOR				
		9.7				
		en de la companie de				
65.2	C		Yes	12 /		Live. EL from same.
65.2 70.5	C)		Yes Yes	12 /		Live. EL from same.
		43		12 / / 11 /		Live. EL from same. Live. EL at interface
70.5	EN	4 J	Yes	1		
70.5 84.4	EN C)	1) (Yes Yes	/ 11 /		Live. EL at interface

Inspected by: R Morris	Contract	No:	Job number: 2015-061	Catchi	ment:		Division:	District		PLR: MH 72X
Start date/time: 02.09.15 10:50	Road name: Frontage	Rd.								Place name: Clinton
Start Manhole No. MH 72	Depth: 3.40	Cover:	Invert:	-1	Finish Man MH 68	hole No.		Depth: 4.00	Cover	Invert:
Use: F	Direction:	Size 2:	Size 1: Shap 200 C	e:	Material: AC	Lining:		Pipe length: 4.0		Total length: Year laid: 112.1
VT No: 00	0076			Com	ments					
Purpose: Category A		Weather: Local	tion: Location deta From Spr							
Video No.	Photo No.	Distance C	Continuous Defect	Letters	Diameter / Dimension	Numbe		Intrus	00	Remarks
				code	Diameter / Dimensit	n Cloc	k to	%	mm	
0000		0.0		ST						
0000		0.0		МН						MH 72
0001		0.0		WL				5		
0015		21.4		JN	100	2				Live. Trickle flow
0034		37.0		WL				10		2.02.100.00.00
0042		41.8	1	WL				15		
0044		42.4		JN	100	12				Live.
0054		45.5		WL				40		
0061		47.3		WL				55		
0082		48.0	S1	CU					0	
0082		61.6	F1	CU						
0115		68.8		WL				15		Lens blurry
0124		73.6		JN	100	2				Live.
0142		82.6		WL				5		Varies to 15%
0154	- 11	94.2		JN	100	1				Live. RF in service
0184		111.9		МН						MH 68. Roots on barrel

Video No.	oto No.	Distance (m)	Continous Defect	Letters Diamete	Diameter / Dimension	Numbers Clock		Intrusion		Remarks	
				code	Dimension	at	to	%	mm		
0194		112.1		FH							

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 68X Start date/time: Road name: Place name: 02.09.15 11:23 Frontage Rd. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 68 4.00 MH 67 2.80 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: D 200 C AC 4.0 74.4 VT No: Comments 00077 Purpose: Category Pre-cleanse: Weather: Location: Location details: C A 1 From Fir Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code

0000	0.0	ST				- 1)
0000	0.0	MH				MH 68. Roots from barrel
0002	0.0	WL			5	Varies to 15%
0042	0.0	WL			25	
0045	44.8	WL			35	
0052	48.0	WL			5	Varies to 10%
0054	48.9	JN	100	1		Appears unused
0064	53.7	JN	100	2		Appears unused
0090	74.3	МН				MH 67. Flusher working
0094	74.4	FH				

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 64X Start date/time: Road name: Place name: 02.09.15 12:09 Frontage Rd. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 67 2.80 MH 64 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F U 200 C AC 4.0 22.6 VT No: 00078 Comments Purpose: Category Pre-cleanse: Weather: Location details: Location: Y C 1 From Elm Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock 0000 0.0 ST 0000 0.0 MH MH 67. 0001 0.0 WL 15 0003 3.5 WL 5 0005 4.6 JN 100 1 Live.

4

6

5

Gasket

MH 64. Buried

OB

MH

FH

0014

0032

0040

4.6

22.4

22.6

nspected by: R Morris	Contract I	No:	Job number: 2015-061		atchment:	1	Division: District:	PLR:	63AX
tart date/time: 02.09.15 12:18	Road name: Frontage	Rd.							e name: nton
tart Manhole No. MH 64	Depth:	Cover:	Invert:			Finish Manhole No. MH 63A	Depth:	Cover:	Invert:
Jse:	Direction: U	Size 2:	Size 1: 200	Shape: C	Material:	Lining:	Pipe length: 4.0	Total le 88.8	The state of the s
T No: 00	079				Comments				
durpose: Category	Pre-cleanse: Y	Veather: Loc		ation details: om end of road					
Video No.	Photo No.	Distance	Continuous Defec	t Letters	Diameter,	Number Dimension Clo		Remar n	cs
				code		at		mm	

				Diameter / Dimension	Clock	Intrusion	
			code		at	to % n	ım
0000		0.0	ST			1 1	
0000		0.0	МН				MH 64. Buried
0001		0.0	WL			5	
0040		38.8	JN	100	3		Live.
0073		71.4	NC	100	3		Live. Trickle flow
0102		88.6	МН		1		MH 63A. MH 63 on Teal
0114		88.8	FH				

			- VIII	C Dewel I	Кериге				
nspected by: R Morris	Contrac	t No:	Job number: 2015-061	Catchment:		Division:	District:	PLR: MH 41	×
tart date/time: 02.09.15 13:10	Road name: Cariboo							Place n	
tart Manhole No. 1H 41	Depth: 2.70	Cover:	Invert:		Finish Manhole No. MH 37		Depth: 1.90	Cover;	Invert:
Jse:	Direction:	Size 2:	Size 1: Shape: 250 C	Materia AC	il: Lining:		Pipe length: 4.0	Total leng 92.3	th: Year laid:
T No: 0008	30			Comments					
Purpose: Category	Pre-cleanse:	Weather: Loca	tion: Location details: From Caribo	00					
Video No. Pho	oto No.	Distance	Continuous Defect	Letters Diamet	Ni ter / Dimension	umbers Clock	Intrusion	Remarks	
				code	at	to	% r	nm	
0000		0.0		ST					
0000		0.0		МН				MH 41	
0001		0.0		WL			70		

100

100

100

10

9

2

20

5

WL

CX

WL

CN

CX

MH

FH

0010

0040

0044

0065

0080

0110

0114

7.6

23.9

23.9

52.8

62.9

92.1

92.3

Live. EL from service

Live.

Varies to 15%. DE in flow

Live. EL from interface

MH 37. Barrel stained

spected by: Morris	Contrac	t No:	Job number: 2015-061	Catchment:			Division:	Distric	t:	PLR:	
art date/time: 2.09.15 13:26	Road name: Smith A		2013-001							MH 37X Place name: Clinton	
rt Manhole No. H 37	Depth: 1.90	Cover:	Invert:		Finish Man	hole No.	1	Depth: 3.00	Cover:	Inv	vert:
:	Direction:	Size 2:	Size 1: Shape 250 C	e: Ma	terial:	Lining:		Pipe lengtl	n:	Total length: 106.7	Year laid:
Video No.	Photo No.	Distance C	ontinuous Defect	Letters Dia	ameter / Dimensio	Numb n Clo		Intru	sion	Remarks	
				code		at	to	%	mm		
0000		0.0		ST							
0000		0.0		ST MH						MH 37. EL fron	n barrel
								5		MH 37. EL fron	
0000	001	0.0		МН		12	12	5			
0000	001	0.0		MH WL		12	12	5 25		Varies to 10%	

WL

WL

CU

CU

SA

0055

0064

0073

0073

0115

40.0

51.3

53.5

54.4

54.4

S1

F1

5

45

Varies to 15%

Unknown obstruction

DE in flow

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

PLR: Project Name: Start date/time: Weather: Inspected by: 9/2/2015 1 R Morris 1:26:58 PM

Comments

Observations

Distance	Length	Code Reverse	Clock Pos.	Severity	Comment
0.0	ST	No	1		
0.0	MH	l No	1		MH 37. EL from barrel
0.0	WL	. No	1		Varies to 10%
21.8	FC	No	12 / 12		EL from same



36.0 WL No / 37.9 FC No 1 / 11 Stained



Observations with Still Images

			V	/Rc Se	wer Report				
nspected by: R Morris	Contrac	ct No:	Job number: 2015-061	Catchm	nent:	- 1	Division:	District:	PLR: MH 33X
art date/time: 2.09.15 14:02	Road name Soues S								Place name: Clinton
art Manhole No. IH 33	Depth: 3.00	Cover:	Invert:	1	Finish Manhol MH 32	e No.		Pepth: Cove	er: Invert:
se;	Direction:	Size 2:	Size 1: Sha 250 C	pe:	Material: Li	ning:		Pipe length:	Total length: Year laid:
T No:	00082			Comm	nents		1		
Video No.	ory Pre-cleanse: Y Photo No.	Weather: Local C Distance	Location deta From Deta continuous Defect		Diameter / Dimension	Numbe		1900	Remarks
				code	Didirectly Difficultion	at	to to	Intrusion % mm	
0000		0.0		ST					
0000		0.0		МН					MH 33
0001		0.0		WL				5	Varies to 15%
0010		6.9		CN	100	1			Live.
0032		31.3		CN	100	2			Live.
0042		37.4		CX	100	2			Live. Stained at interface
0060		43.2		CN	100	10			Live.
0072		53.7		CN	100	10		1 11 1	Live.
0082		61.6		CN	100	1			Live.
0090	001	62.0		Н	25	12	1		Three. Stained

002

0105

0134

0142

0161

0181

0183

69.7

96.5

96.6

102.4

115.5

116.4

100

100

20

100

100

10

12

11

2

10

35

CX

CX

H

CX

WL

CN

Live. EL at interface

IR from same

Live.

Live. IR, EL from interface

Live. IR, EL at interface

Video No.	leo No. oto No.	oto No.	Distance (m)	Continous Defect	nous Defect Letters code	Diameter /	Numbers Clock		Intrusion		Remarks	
			code			code	code	Dimension	at	to	%	mm
0191		118.8		WL				40				
0200		124.6		МН						MH 32.		
0204	-	124.8		FH				-				

Northern Lites Technology Ltd. 4937 old Summit Lake Rd. Prince George, BC.

V2K 5S5

PH: 1-800-661-6177

Observation Report with Still Images

Project Name: 2015 sani inspections PLR: Start date/time: Inspected by: Weather: **MH 33X** 9/2/2015 2:02:22 PM 1 R Morris Upstream node: Depth US: Downstream node: Depth DS: Total length: Extra: **MH 33** 3.0 MH 32 124.8 2.9 Comments

Observations

Distance	Length	Code	Reversed	Clock Pos.	Severity	Comment
0.0	MI	1	No	1		MH 33
0.0	ST		No	1		
0.0	W		No	1		Varies to 15%
6.9	CN	ı	No	1 /		Live.
31.3	CN	ı	No	2 /		Live.
37.4	CX		No	2 /		Live. Stained at interface
43.2	CN		No	10 /		Live.
53.7	CN		No	10 /		Live.
61.6	CN		No	1 /		Live.
62.0	Н		No	12 / 1		Three. Stained



CX	No	10 /	Live. EL at interface
CX	No	12 /	Live. IR, EL from interface
Н	No	11 /	IR from same
	CX H	CX No	CX No 12 /

Northern Lites Technology Ltd. 4937 old Summit Lake Rd. Prince George, BC. V2K 5S5

PH: 1-800-661-6177

Observations

istance	Length	Code	Reversed	Clock Pos.	Severity	Comment
	Age of the state o		il Com	The first		
34	THE P		1	1		
102.4	cx		No	2 /		Live. IR, EL at interface
102.4 115.5	CX		No No	2 /		Live. IR, EL at interface
				2 / / 10 /		Live. IR, EL at interface
115.5	WL		No	1		
115.5 116.4	WI CN		No No	1		

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 32X Start date/time: Road name: Place name: 02.09.15 14:26 Soues St. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 32 2.90 MH 20 2.80 Use: Direction: Size 2: Shape: Size 1: Material: Lining: Pipe length: Total length: Year laid: F D 250 C AC 4.0 132.4 VT No: 00083 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: A C 1 To LeBourdais Video No. Photo No. Distance Continuous Defect Letters Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 32 0001 0.0 WL 25 0004 2.5 WL 5 Varies to 15% 0005 2.5 CN 100 1 Live. Light flow 0020 9.1 CX 100 11 Live. EL from interface 0034 21.0 WL 25 0042 28.5 CN 100 1 Live. 0050 29.3 WL 5

0052

0061

0065

0084

0090

0101

0110

30.2

31.7

31.7

50.3

50.3

62.7

68.2

100

100

100

100

100

10

2

10

9

1

CN

CN

WL

CN

WL

CN

CN

Live.

Live.

Live.

Live.

Live.

Continues to vary to 25%

25

10

Video No. oto No.	Distance (m)	Continous Defect	Letters	Diameter /	Num Clo		Intrusion		Remarks	
				code	Dimension	at	to	%	mm	
0123		80.0		WL				40		
0133		88.0		CX	100	11				Live. EL at interface
0142		88.5		WL				10	1.1	Continues to vary
0153		99.0		CX	100	2				Live. EL at interface
0170		101.8		CX	100	10				Appears unused. EL from same
0183		106.5		CX	100	2				Live. EL from interface
0193		107.4		CX	100	10				Live. EL from interface
0214		111.8		DES				25		
0215		111.8		SA		1				Cannot pass DES

nspected by: C Morris	Contract	No:	Job number: 2015-061	Catchm	ent:		Division:	Distric	t:	PLR: MH 67X	
art date/time: 2.09.15 15:24	Road name: Frontage	Rd.								Place name: Clinton	
rt Manhole No. H 67	Depth: 2.80	Cover:	Invert:		Finisi MH	Manhole No. 4B		Depth: 2.20	Cover:	Inv	ert:
e:	Direction:	Size 2:	Size 1: Sh 250 C	ape:	Material: ST	Lining:	T	Pipe length	d I	Total length:	Year laid:
Video No. Ph	noto No.	1 A Distance C	Across F	Letters	Diameter / Din		nbers Clock	Intru	sion	Remarks	
				code	1000000	at	to	%	mm		
0000		0.0		ST					T		
0000		0.0		МН						MH 67.	
0001		0.0		WL				5			
0022		0.1	S1	SSS		7	4			Beginning to re	ust
0023											
0023		7.9	S2	DES				5			

LD

МН

SSS

SA

0033

0063

0023

0075

11.7

35.1

35.1

35.4

F1

7

4

Unplotted. Inside drop. Buried

Beginning to rust

At unplotted MH

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MJH 4BX Start date/time: Road name: Place name: 02.09.15 16:07 Field easement Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 4B 2.20 MH 4A Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 200 C AC 4.0 69.9 VT No: 00085 Comments Purpose: Pre-cleanse: Category Weather: Location: Location details: E 1 From cemetery gate Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 4B 0001 0.0 WL 5 0033 44.5 GO Pipe appears good and clean 0055 69.4 MH MH 4A. Inside drop 0073 69.6 FH

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 4AX Start date/time: Road name: Place name: 02.09.15 16:41 Field easement Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 4 1.30 MH 4A Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: U 200 C AC 57.1 4.0 VT No: 00086 Comments Purpose: Category Pre-cleanse: Weather: Location details: Location: E 1 Past cemetery Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks

			meter / Dimension Clock	Intrusion		
		code	at to	% mi	m	
0000	0.0	ST				
0000	0.0	МН			MH 4	
0001	0.0	WL		5		
0032	35.3	GO			Pipe appears good and clear	
0064	56.9	МН			MH 4A	
0071	57.1	FH				

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: MH 3X Start date/time: Road name: Place name: 03.09.15 08:56 Field easement Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 3 2.10 MH 2 2.00 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: D 250 C AC 4.0 85.2 VT No: 00087 Comments Weather: Purpose: Category Pre-cleanse: Location: Location details: E From next to Shed Video No. Photo No. Distance Continuous Defect Letters Remarks Diameter / Dimension Clock Intrusion code 0000 0.0 ST

100

11

12

12

MH

WL

CN

WL

WL

GO

FC

SA

0000

0000

0002

0015

0024

0053

0083

0095

0.0

0.0

1.0

8.0

14.0

14.0

64.7

64.8

MH 3

Live. Trickle flow

Varies to 45

May be joint

DES under flow

Cannot pass DES

45

35

25

Inspected by: R Morris		Contrac	t No:	Job number: 2015-061	Catch	ment:			ivision:	District	ti	PLR: MH 37X
Start date/time: 09.09.15 22:32	2	Road name: Smith Av										Place name: Clinton
Start Manhole No. MH 37		Depth: 1.90	Cover:	Invert:			sh Manhole No).		Depth: 3.00	Cover:	Invert:
Use: F		Direction:	Size 2:	Size 1: 250	Shape: C	Material: AC	Lining	:		Pipe length	1	Total length: Year laid: 106.7
VT No:	00088				Con	nments						
Purpose: Categ	gory P	re-cleanse:	Weather: Local		n details: park at Smith							
Video No.	Photo	No.	Distance C	ontinuous Defect	Letters	Diameter / Di	mension	Number		Intrus	ion	Remarks
					code			at	to	%	mm	
0000			0.0		ST		111			71		
0000			0.0		MH							MH 37
0002			0.0		WL					10		Varies to 10%
0021	00	01	22.0		ELJ			7	5	5		May be FC
0042			34.8		WL					20		
0045			37.0		WL					35		
0052	00	02	37.7		FC			12	12			Stained
0065			40.0		WL					10		Varies to 10%
0074			48.5		WL					20		
0082			51.4		WL					40		
0091			53.0	S1	DEG			9	3	5		
0100			54.0	52	CU							
0134			63.5		WL					15		Varies to 10%
0140			63.5		GO							Lens blurry from CU
0091			63.5	F1	DEG			9	3	5		
0100			63.5	F2	CU			-				

Video No.	Video No.	Distance (m)	Continous Defect	Letters	Diameter /	Numbers Clock		Intrusion		Remarks	
			code	Dimension	at	to	%	mm			
0194		63.6		GO						Lens cleaned	
0231		106.6		МН						MH 33	
0241		106.7		FH							

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 32X Start date/time: Road name: Place name: 09.09.15 23:16 Soues St. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 20 2.80 MH 32 2.90 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F U 250 C AC 4.0 132.4 VT No: 00089 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: H 1 C To LeBourdais Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 20 0001 0.0 WL 10 0005 4.2 **EMJ** 7 5 20 0020 4.2 OJM 0030 15.2 WL 30 0033 21.0 WL 40

0035

0045

0061

0071

0085

0094

24.9

25.8

30.4

33.2

44.2

44.2

CN

CX

CN

CX

CX

SA

2

9

2

10

2

100

100

100

100

100

Appears unused but stained

Appears unused but stained

Overlap of previous report

Live.. EL, ID at interface

Live. EL at interface

Live. EL at interface

				WRc Se	wer Repor	t				
Inspected by: R Morris	Contra	ct No:	Job number: 2015-061	Catchm	ent:	D	ivision:	Distri	ct:	PLR: MH 20X
Start date/time: 09.09.15 23:34	Road name LeBouda									Place name: Clinton
Start Manhole No. MH 20	Depth: 2.80	Cover:	Invert:		Finish Manh MH 9	ole No.		Depth: 2.50	Cove	r: Invert:
Use: F VT No: 00	Direction: D	Size 2:	Size 1: 250	Shape: C	Material: AC	Lining:		Pipe lengt	h:	Total length: Year laid: 70.0
Purpose: Category A Video No.	Pre-cleanse: Y Photo No.	Weather: Local C Distance		ion details: end of LeBourdais Letters	Diameter / Dimension	Number:		Intr	islon	Remarks
				code		at	to	%	mm	
0000		0.0		ST						
0000		0.0		МН						MH 20
0000		0.0		WL				10		
0021		25.8		CN	100	10				Live.
0041		44.0		СХ	100	10				Live. Light flow. EL
0060		56.9		CN	100	10				Live.
0065		57.3		ED		7	10	5		Trace. Stained
0080		60.0	S1	DEG		10	2	5		Trace. Varies
0080		64.0	F1	DEG		10	2	5		Trace. Varies
0091		69.7		МН						MH 9. EL, stained lower barrel
0102		70.0		FH						

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 9X Start date/time: Road name: Place name: 09.09.15 23:57 LeBourdais Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 9 2.50 MH 8 2.20 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 250 C AC 4.0 93.1 VT No: 00091 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: A Y E 1 Easement to Foster Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 ST 0000 0.0 MH MH 9. EL, IS from lower barrel 0003 0.0 WL 10 Varies 5-15% 0064 83.7 GO

MH

FH

0075

0090

92.9

93.1

Pipe appears good and clean

MH 8. Barrel offset. EL, stain

Inspected by: Contract No: Job number: 2015-061 Start date/time: Road name: 10.09.15 00:10 Catchment: Catchment: Division: Division: 2015-061

Clinton Start Manhole No. Cover: Invert: Finish Manhole No. Depth: Cover: Invert: Depth: MH 8 2.20 MH 7 1.90 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: 250 F D C AC 4.0 100.3

District:

PLR:

MH 8X

Place name:

VT No: 00092 Comments

Purpose: Category Pre-cleanse: Weather: Location: Location details:

A Y 1 E Easement to McDonald

/ideo No. Photo No.		Distance	Continuous Defect	Letters	Diameter / Dimension	Numbers n Clock Intrusion				Remarks	
				code			to	%			
0000		1 0	.0	МН						T	
0000			.0	ST						MH 8. Barrel offset. EL	
1000								10	-	Was a series	
0003			.0	WL				10		Varies 5-15%	
0021		17		WL				25			
0031		26	.8	WL				10		Varies 5-15%	
0060		61	.2	WL				25			
0063		63	.2	WL				35			
0065		66	.5	WL				10		Varie 5-15%	
0075		77	.8	WL				30			
0084		86	.9	WL				10		Varies to 15%	
0095		100	0.1	МН						MH 7. Barrel stained	
0103		100	0.1	FH		1					

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 7X Start date/time: Road name: Place name: 10.09.15 00:39 McDonald Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 7 1.90 MH 6 2.90 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 250 C AC 4.0 VT No: 00093 Comments Purpose: Category Pre-cleanse: Weather: Location details: Location: A E 1 Easement from McDonald. Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks

			Didifferent / Difficultion	Clock		muusion	
			code	at	to	% mr	n
0000	0.0		МН				MH 7. Barrel stained
0000	0.0		ST				
0001	0.0		WL			40	
0002	0.1	S1	DES			35	
0002	2.5	F1	DES			35	
0083	2.5		SA				Cannot pass DES

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 6X Start date/time: Road name: Place name: 10.09.15 01:04 Tingley St. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 6 2.90 MH 5 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F 250 D C AC 4.0 85.2 VT No: 00094 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: E A Sheep pasture 1 Video No. Photo No. Distance Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock to

0000		0.0		ST					
0000	1===-1	0.0		МН					MH 6. Barrel wet, stained
0001		0.0		WL				10	
0022		26.3	S1	DEG		10	2	5	Trace. Varies
0022		30.3	F1	DEG		10	2	5	Trace. Varies
0032		30.9		ISJ		9	12	5	EL from same
0053	001	49.9		SSM		10	12		EL from same
072		55.4		SSL	50	10			
103		85.0		MH					MH 5
112		85.2		FH					

Inspected by: R Morris	Contract N	lo:	Job number: 2015-061	Catchm	ent:		Division:	District:		PLR: MH 5X
Start date/time: 10.09.15 01:19	Road name: Easement	behind cemete	ery							Place name: Clinton
Start Manhole No. MH 5	Depth:	Cover:	Invert:		Finish Manl MH 4	nole No.		Depth: 1.30	Cover	Invert:
Use: F	Direction:	Size 2:	Size 1: Shape: 250 C		Material: AC	Lining:		Pipe length:		Total length: Year laid: 117.2
VT No: O(0095			Comm	nents					
Purpose: Category A	Pre-cleanse: W	/eather: Locat	ion: Location details							
Video No.	Photo No.	Distance C	ontinuous Defect	Letters	Diameter / Dimensio	Numbe n Cloc		Intrusio	n	Remarks
				code		at	to	96	mm	
						0				
0000		0.0		ST						
0000		0.0		МН						MH 5
0001		0.0		WL				10		
0003		2.0		WL				30		
0005		3.6		WL				40		
0021		15.0		WL				10		
0023		17.2		SSL	50	1				
0030		18.0		WL			-	25		
0040		27.0		WL				40		
0043		31.5		WL				20		
0053		39.5		WL				10		Varies to 20%
0105		104.3		WL				35		73.103 to 20 /0
0112		107.5		WL				45		
0120		112.5		WL		1		15		
0124		116.9		МН		+		1		MILA
0132		117.2		FH						MH 4.

WRc Sewer Report Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 7X Start date/time: Road name: Place name: 10.09.15 01:42 McDonald Ave. Clinton Start Manhole No. Depth: Invert: Cover: Finish Manhole No. Depth: Cover: Invert: MH 6 2.90 MH 7 1.90 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F U C 250 AC 4.0 VT No: 00096 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: Н E Easement from McDonald. 1 Video No. Photo No. Continuous Defect Letters Numbers Remarks Diameter / Dimension Intrusion Clock code 0000 0.0 MH MH 6. Stained

10

20

ST

WL

WL

SA

0000

0002

0003

0023

0.0

0.0

1.7

17.4

Requires re-cleaning

WRc Sewer keport Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 7X Start date/time: Road name: Place name: 10.09.15 13:39 McDonald Ave. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Cover: Depth: Invert: MH 7 1.90 MH 6 2.90 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: F D 250 C AC 4.0 VT No: 00097 Comments Purpose: Category Pre-cleanse: Weather: Location details: Location: H Y E 1 Easement from McDonald.

				Diameter / Dimension	Clock		Intrusion		NCHIOL S
			code		at	to	%	mm	
0000	0.	0	ST						
0000	0.	0	МН	1					MH 7
0001	0.	0	WL				25		
0010	3.	5	DES				35		
0023	4.	3	SA						Cannot pass DES

WRc Sewer keport Inspected by: Contract No: Job number: Catchment: Division: District: PLR: R Morris 2015-061 MH 4X Start date/time: Road name: Place name: 10.09.15 14:02 Easement off W subdivision Rd. Clinton Start Manhole No. Depth: Cover: Invert: Finish Manhole No. Depth: Cover: Invert: MH 4 1.30 MH 3 2.10 Use: Direction: Size 2: Size 1: Shape: Material: Lining: Pipe length: Total length: Year laid: D 250 C AC 4.0 42.7 VT No: 00098 Comments Purpose: Category Pre-cleanse: Weather: Location: Location details: Y 1 E From rear corner of cemetery

				code	Diameter / Dimension	Clock		Intrusion		Remarks
						at	to	%	mm	
0000		0.0		ST						
0000		0.0		MH						MH 4
0001		0.0		WL				15		
0003		1.7		WL				25		Varies 15-25%
0043		41.6		GO						Pipe clean. WL varies
0051		42.5	1	MH				1		MH 3
0055	1	42.7		FH						

Asset ID: SS.003 Criticality: 5 (High) From MH.004 to MH.003

spected by: Morris	Contract No:		number: 15-061	Catchment:		Division:	District:		PLR: MH 3X	
art date/time: 0.09.15 14:13	Road name: Field easement							1	Place name: Clinton	
art Manhole No. IH 3	Depth: Cover		Invert:	1	Finish Manhole MH 2	vo.	Depth: 2.00	Cover:	Inv	ert:
e:	Direction: Size	ALCOHOL: NO CONTRACTOR OF THE PARTY OF THE P	ze 1: Shape: 50 C	Material AC	l: Linin	ig:	Pipe length:	T	Total length: 85.2	Year laid:
No: 00099				Comments						
rpose: Category I	Pre-cleanse: Weather:	Location:	Location details: From next to	Shed						
Video No. Photo	No. Distance	Continu	ious Defect Li	tters Diameter / Dimension		Numbers Clock	Intrusion		Remarks	
				code		at to	%	mm		
0000		0.0		CT.						
UUUU I										
		11471		ST						
0000		0.0		MH					MH 3	
0000 0001		11471					20		MH 3 Varies 15-25%	
0000		0.0		MH WL	100	12	20			
0000 0001		0.0		MH WL	100	12	20		Varies 15-25%	
0000 0001 0003		0.0 0.0 0.8		MH WL CNI WL	100	12		20	Varies 15-25% Live. Trickle flo	
0000 0001 0003 0071		0.0 0.0 0.8 71.4		MH WL CNI WL				20	Varies 15-25%	

2013 Re-lining

2014 re-lining

2015 Video Inspection Report

