

Tabular Report of PSR SGM_03973

for CITY OF NIAGARA FALLS

Setup 27	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_03973_	Project		
Date 2019/04/23	Time 7:26	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2019/04/04	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street PITTON RD	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 91.4 M
Length Surveyed 91.4 M	Year Constructed	Year Renewed
Up SMH_03519	Rim to invert 3.00	Grade to invert
Northing	Easting	Elevation
Down SMH_03506	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_03519
0.0		MWL Miscellaneous Water Level			5					
1.1		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
2.3		TF Tap Factory	100				02			
4.0		FL Fracture Longitudinal				J	12			
4.2		FC Fracture Circumferential					07	05		
4.2		IR Infil Runner					08			
4.5		MWL Miscellaneous Water Level			10					
8.3		MWL Miscellaneous Water Level			5					
16.2		MWL Miscellaneous Water Level			15					
17.4		MWL Miscellaneous Water Level			25					
20.3		TF Tap Factory	100				02			
22.3		MWL Miscellaneous Water Level			40					
24.0		MWL Miscellaneous Water Level			20					
25.9		MWL Miscellaneous Water Level			15					
27.5		MWL Miscellaneous Water Level			10					
28.7		MWL Miscellaneous Water Level			5					
35.6		MWL Miscellaneous Water Level			10					
36.5		TF Tap Factory	100				02			
43.5		MWL Miscellaneous Water Level			5					
53.2		MWL Miscellaneous Water Level			15					
53.5		TFA Tap Factory Activity	100				02			
55.3		MWL Miscellaneous Water Level			10					

Tabular Report of PSR SGM_03966

for CITY OF NIAGARA FALLS

Setup 20	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_03966_	Project		
Date 2019/04/16	Time 16:40	Weather Light Rain	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2019/04/04
Inspection Status Complete Inspection	Consequence Of Failure		Pressure 0.000
Inspection Technology Used			
<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other			

Street ELDORADO AV	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced) Lining	
Coating	Pipe Joint length M	Total length 89.6 M
Length Surveyed 89.8 M	Year Constructed	Year Renewed
Up SMH_03522	Rim to invert	Grade to invert
Northing	Easting	Elevation
Down SMH_03527	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System		Vertical Datum
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_03527
0.0		MWL Miscellaneous Water Level			5					
2.9		TFA Tap Factory Activity	100				02			
2.9		FC Fracture Circumferential					07	01		
7.4		DAE Deposits Attached Encrustation			10	J	07	05		
13.6		TF Tap Factory	100				10			
13.6		DAE Deposits Attached Encrustation			5		08	10		
15.3		MWL Miscellaneous Water Level			10					
19.0		MWL Miscellaneous Water Level			15					
20.0		TFA Tap Factory Activity	100				02			
20.0		FC Fracture Circumferential					08	01		
20.0		DAE Deposits Attached Encrustation			5		09			
20.5		MWL Miscellaneous Water Level			20					
24.1		MWL Miscellaneous Water Level			10					
25.3		MWL Miscellaneous Water Level			5					
30.8		TFA Tap Factory Activity	100				10			
30.8		DAE Deposits Attached Encrustation			5		07	10		
34.1		TFA Tap Factory Activity	100				02			
34.4		DAE Deposits Attached Encrustation			5		07	05		
34.4		FM Fracture Multiple				J	10	02		
45.6		TBA Tap Break-in Activity	100				10			
49.3		TFA Tap Factory Activity	100				02			
56.4		IS Infil Stain					08	04		

Tabular Report of PSR SGM_03966

for CITY OF NIAGARA FALLS

Setup 20 Date 2019/04/16 Time 16:40 Up SMH_03522 Down SMH_03527

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
58.1		DAE	Deposits Attached Encrustation			10		08	04		
59.6		DAE	Deposits Attached Encrustation			5		08	04		
60.0		DAE	Deposits Attached Encrustation			5		08	04		
60.5		DAE	Deposits Attached Encrustation			5		10			
60.7		TBA	Tap Break-in Activity	100				10			
63.9		DAE	Deposits Attached Encrustation			10		09	03		
64.1		TBA	Tap Break-in Activity	100				01			
64.2		B	Broken					09	01		
64.5		FS	Fracture Spiral				J	09	03		
76.7		TBA	Tap Break-in Activity	100				10			
76.7		DAE	Deposits Attached Encrustation			10		09	04		
80.5		TBA	Tap Break-in Activity	100				01			
80.6		DAE	Deposits Attached Encrustation			5		08	04		
86.6		DAE	Deposits Attached Encrustation			5		02	04		
87.8		TBA	Tap Break-in Activity	100				02			
87.9		IR	Infil Runner					08			
87.9		DAE	Deposits Attached Encrustation			5		08	04		
89.8		AMH	Manhole								SMH_03522
89.8		FH	End of Survey								

89.8 M Total Length Surveyed

Scores	Structural:	Pipe Rating 15	Pipe Ratings Index 3	Quick Rating 4231
	O&M:	Pipe Rating 33	Pipe Ratings Index 2.1	Quick Rating 412A
	Overall	Pipe Rating 48	Pipe Ratings Index 5.1	Quick Rating 4331

Tabular Report of PSR SGM_03973

for CITY OF NIAGARA FALLS

Setup 27	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_03973_	Project		
Date 2019/04/23	Time 7:26	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2019/04/04			
Flow control	Survey Purpose Maintenance Related	Direction Down	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street PITTON RD	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 91.4 M
Length Surveyed 91.4 M	Year Constructed	Year Renewed
Up SMH_03519	Rim to invert 3.00	Grade to invert
Northing	Easting	Elevation
Down SMH_03506	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_03519
0.0		MWL Miscellaneous Water Level			5					
1.1		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
2.3		TF Tap Factory	100				02			
4.0		FL Fracture Longitudinal				J	12			
4.2		FC Fracture Circumferential					07	05		
4.2		IR Infil Runner					08			
4.5		MWL Miscellaneous Water Level			10					
8.3		MWL Miscellaneous Water Level			5					
16.2		MWL Miscellaneous Water Level			15					
17.4		MWL Miscellaneous Water Level			25					
20.3		TF Tap Factory	100				02			
22.3		MWL Miscellaneous Water Level			40					
24.0		MWL Miscellaneous Water Level			20					
25.9		MWL Miscellaneous Water Level			15					
27.5		MWL Miscellaneous Water Level			10					
28.7		MWL Miscellaneous Water Level			5					
35.6		MWL Miscellaneous Water Level			10					
36.5		TF Tap Factory	100				02			
43.5		MWL Miscellaneous Water Level			5					
53.2		MWL Miscellaneous Water Level			15					
53.5		TFA Tap Factory Activity	100				02			
55.3		MWL Miscellaneous Water Level			10					

Tabular Report of PSR SGM_03973

for CITY OF NIAGARA FALLS

Setup 27 Date 2019/04/23 Time 7:26 Up SMH_03519 Down SMH_03506

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
56.6		MWL	Miscellaneous Water Level			5					
58.0		MWL	Miscellaneous Water Level			10					
67.1		DAE	Deposits Attached Encrustation			5		08			
73.8		TFA	Tap Factory Activity	100				02			
86.0		DAE	Deposits Attached Encrustation			5		08			
88.8		TFA	Tap Factory Activity	100				02			
88.8		MWL	Miscellaneous Water Level			15					
89.4		IR	Infil Runner				J	01			
89.4		FS	Fracture Spiral				J	09	01		
90.7		MWL	Miscellaneous Water Level			10					
91.4		AMH	Manhole								SMH_03506
91.4		FH	End of Survey								

91.4 M Total Length Surveyed

Scores	Structural:	Pipe Rating 8	Pipe Ratings Index 2.7	Quick Rating 3221
	O&M:	Pipe Rating 12	Pipe Ratings Index 3	Quick Rating 4222
	Overall	Pipe Rating 20	Pipe Ratings Index 5.7	Quick Rating 4232

Tabular Report of PSR SGM_03974

for CITY OF NIAGARA FALLS

Setup 28	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_03974_	Project		
Date 2019/04/18	Time 12:55	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2019/04/03			
Flow control	Survey Purpose Maintenance Related	Direction Up	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street KALAR RD	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 92.8 M
Length Surveyed 93.1 M	Year Constructed	Year Renewed
Up SMH_03525	Rim to invert	Grade to invert
Northing	Easting	Elevation
Down SMH_03526	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_03526
0.0		MWL Miscellaneous Water Level			10					
4.3		MWL Miscellaneous Water Level			5					
10.0		TFA Tap Factory Activity	100				02			
10.0		IR Infil Runner					02			
10.0		DAE Deposits Attached Encrustation			5		01	03		
24.5		IS Infil Stain					01			
25.9		DAE Deposits Attached Encrustation			5		03	04		
26.1		MWL Miscellaneous Water Level			10					
32.8		MWL Miscellaneous Water Level			5					
37.2		DAE Deposits Attached Encrustation			5	J	08	04		
47.7		TFA Tap Factory Activity	100				02			
72.2		MMC Miscellaneous Material Change								TO PVC
73.5		TF Tap Factory	100				02			
75.1		MMC Miscellaneous Material Change								TO CP
75.1		MWL Miscellaneous Water Level			10					
78.6		MWL Miscellaneous Water Level			5					
87.8		SAM Surface Damage Aggregate Missing				J	11			
87.8		DAE Deposits Attached Encrustation			5	J	01	04		
87.8		IR Infil Runner				J	03			
93.1		AMH Manhole								SMH_03525
93.1		FH End of Survey								

93.1 M Total Length Surveyed

Scores	Structural:	Pipe Rating 4	Pipe Ratings Index 4	Quick Rating 4100
	O&M:	Pipe Rating 17	Pipe Ratings Index 2.4	Quick Rating 4224
	Overall	Pipe Rating 21	Pipe Ratings Index 6.4	Quick Rating 4324

Tabular Report of PSR SGM_04504

for CITY OF NIAGARA FALLS

Setup 46	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_04504_	Project		
Date 2019/04/23	Time 10:14	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2019/04/04			
Flow control	Survey Purpose Maintenance Related	Direction Down	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street PITTON RD	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details SA SURCHARGED	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 91.4 M
Length Surveyed 31.1 M	Year Constructed	Year Renewed
Up SMH_03505	Rim to invert 2.90	Grade to invert
Northing	Easting	Elevation
Down SMH_03504	Rim to invert 3.00	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info REVERSAL COMPLETE		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_03505
0.0		MWL Miscellaneous Water Level			5					
1.1		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
1.1		FC Fracture Circumferential				09	02			
1.1		DAE Deposits Attached Encrustation			5	08				
1.1		DAE Deposits Attached Encrustation			5	02	04			
3.2		MWL Miscellaneous Water Level			15					
4.3		MWL Miscellaneous Water Level			5					
8.4		TF Tap Factory	100			02				
10.7		MWL Miscellaneous Water Level			10					
15.7		MWL Miscellaneous Water Level			15					
16.7		TF Tap Factory	100			10				
17.5		MWL Miscellaneous Water Level			10					
24.6		IR Infil Runner				J	11			
24.6		DAE Deposits Attached Encrustation			5	J	07	05		
26.5		DAE Deposits Attached Encrustation			10	J	08	04		
26.7		IR Infil Runner				J	12			
29.4		MWL Miscellaneous Water Level			20					
31.1		MSA Miscellaneous Survey Abandoned								REVERSAL COMPLETED

31.1 M Total Length Surveyed

Scores	Structural: Pipe Rating 2	Pipe Ratings Index 2	Quick Rating 2100
	O&M: Pipe Rating 16	Pipe Ratings Index 2.7	Quick Rating 4224
	Overall Pipe Rating 18	Pipe Ratings Index 4.7	Quick Rating 4225

Tabular Report of PSR SGM_05136

for CITY OF NIAGARA FALLS

Setup 29	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05136_	Project		
Date 2019/04/08	Time 7:52	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2019/04/12	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street BURWOOD AV	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Asbestos Cement	Lining
Coating	Pipe Joint length M	Total length 76.2 M
Length Surveyed 74.9 M	Year Constructed	Year Renewed
Up SMH_04389	Rim to invert	Grade to invert
Northing	Easting	Elevation
Down SMH_04400	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System		Vertical Datum
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04400
0.0		MWL Miscellaneous Water Level			10					
1.1		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
35.2		TF Tap Factory	100					03		
41.4		TFA Tap Factory Activity	100					09		
49.5		TF Tap Factory	100					03		
54.6		IG Infil Gusher					J	07		
56.8		TF Tap Factory	100					09		
64.1		TF Tap Factory	100					03		
70.9		TF Tap Factory	100					10		
74.9		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 6489
74.9		AMH Manhole								SMH_04389
74.9		FH End of Survey								

74.9 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 5	Pipe Ratings Index 5	Quick Rating 5100
	Overall Pipe Rating 5	Pipe Ratings Index 5	Quick Rating 5100

Tabular Report of PSR SGM_05160

for CITY OF NIAGARA FALLS

Setup 39	Surveyed By PT-BP	Certificate # U-115-07000686	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05160_	Project		
Date 2019/04/15	Time 11:38	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2019/04/08	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street HARMONY AVE	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 96.1 M
Length Surveyed 76.8 M	Year Constructed	Year Renewed
Up SMH_04394	Rim to invert 4.10	Grade to invert
Northing	Easting	Elevation
Down SMH_04391	Rim to invert 4.30	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST	Start of Survey							
0.0		AMH	Manhole							SMH_04391
0.0		MWL	Miscellaneous Water Level		10					
0.0		MGO	Miscellaneous General Observation							IN MH INFRONT OF HOUSE 6597
1.1		MGO	Miscellaneous General Observation							COUNTER SET TO 1.1 DUE TO SL
1.1		S01	DAGS Deposits Attached Grease		5	11	01			
2.7		MWL	Miscellaneous Water Level		25					
5.4		TB	150	Tap Break-in/Hammer			10			
7.7		TBA	150	Tap Break-in Activity			02			
10.1		TBA	150	Tap Break-in Activity			10			
13.6		TBA	150	Tap Break-in Activity			02			
14.0		DAGS	Deposits Attached Grease		5		09			
14.0		DAGS	Deposits Attached Grease		5		03			
22.2		F01	DAGS Deposits Attached Grease		5	11	01			
22.2		DAGS	Deposits Attached Grease		5	10	02			
22.5		TBA	150	Tap Break-in Activity			02			
22.5		MWL	Miscellaneous Water Level		15					
23.3		TBA	150	Tap Break-in Activity			10			
25.8		DAGS	Deposits Attached Grease		5		10	02		
27.1		TBA	150	Tap Break-in Activity			02			
27.5		S02	DAGS Deposits Attached Grease		5	10	02			
28.7		TBA	150	Tap Break-in Activity			10			
37.4		TBA	150	Tap Break-in Activity			02			
38.4		TBA	150	Tap Break-in Activity			10			

Tabular Report of PSR SGM_05160

for CITY OF NIAGARA FALLS

Setup 39 Date 2019/04/15 Time 11:38 Up SMH_04394 Down SMH_04391

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
42.9			TB Tap Break-in/Hammer	150					02		
43.8			TBA Tap Break-in Activity	150					10		
52.4			TB Tap Break-in/Hammer	150					02		
55.1			TB Tap Break-in/Hammer	150					10		
57.2			TB Tap Break-in/Hammer	150					02		
59.4			TBA Tap Break-in Activity	150					10		
68.3			TB Tap Break-in/Hammer	150					02		
69.0		F02	DAGS Deposits Attached Grease			5			10	02	
72.1			TB Tap Break-in/Hammer	150					02		
75.2			IG Infil Gusher						02		
75.2			RPPD Point Repair Patch Patch Defective						06	06	WATER COMING IN FROM JOINT
75.5			TFA Tap Factory Activity	150					10		
76.8			MGO Miscellaneous General Observation								IN UPSTREAM MH
76.8			AMH Manhole								SMH_04394
76.8			FH End of Survey								

76.8 M Total Length Surveyed

Scores	Structural:	Pipe Rating 4	Pipe Ratings Index 4	Quick Rating 4100
	O&M:	Pipe Rating 99	Pipe Ratings Index 2.1	Quick Rating 512H
	Overall	Pipe Rating 103	Pipe Ratings Index 6.1	Quick Rating 5141

Tabular Report of PSR SGM_05204

for CITY OF NIAGARA FALLS

Setup 35	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05204_	Project		
Date 2019/04/16	Time 11:09	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2019/04/03			
Flow control	Survey Purpose Maintenance Related	Direction Down	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street BELAIRE AV	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 95.1 M
Length Surveyed 94.4 M	Year Constructed	Year Renewed
Up SMH_03517	Rim to invert 2.80	Grade to invert
Northing	Easting	Elevation
Down SMH_03514	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_03517
0.0		MWL Miscellaneous Water Level			5					
1.1		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
1.3		TF Tap Factory	100				10			
6.6		TF Tap Factory	100				02			
13.3		MWL Miscellaneous Water Level			10					
13.8		IS Infil Stain					08	11		
14.7		TF Tap Factory	100				10			
15.4		MWL Miscellaneous Water Level			5					
22.3		TF Tap Factory	100				02			
23.5		MWL Miscellaneous Water Level			10					
29.1		MWL Miscellaneous Water Level			5					
30.8		TFA Tap Factory Activity	100				10			
36.2		TF Tap Factory	100				02			
44.2		MWL Miscellaneous Water Level			10					
45.5		TF Tap Factory	100				10			
45.8		ISSR Intruding Sealing Material Sealing R			5		10	02		AT END OF LATERAL
46.3		FL Fracture Longitudinal					J	12		
46.7		FC Fracture Circumferential					08	04		
47.5		MWL Miscellaneous Water Level			5					
52.1		TF Tap Factory	100				02			
54.3		MWL Miscellaneous Water Level			10					
55.4		MWL Miscellaneous Water Level			15					

Tabular Report of PSR SGM_05204

for CITY OF NIAGARA FALLS

Setup 35 Date 2019/04/16 Time 11:09 Up SMH_03517 Down SMH_03514

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
60.9		MWL	Miscellaneous Water Level			5					
61.8		TF	Tap Factory	100				10			
62.7		SAM	Surface Damage Aggregate Missing					12			
66.3		DAE	Deposits Attached Encrustation			5		01	04		
66.3		IR	Infil Runner					02			
66.3		DAE	Deposits Attached Encrustation			5		08	10		
66.4		MWL	Miscellaneous Water Level			10					
67.1		TFA	Tap Factory Activity	100				02			
72.8		MWL	Miscellaneous Water Level			15					
74.8		MWL	Miscellaneous Water Level			10					
75.6		TF	Tap Factory	100				10			
75.6		DAE	Deposits Attached Encrustation			5		08	10		
76.1		MWL	Miscellaneous Water Level			5					
82.1		TF	Tap Factory	100				02			
91.5		MWL	Miscellaneous Water Level			10					
91.8		TF	Tap Factory	100				10			
93.0		DAE	Deposits Attached Encrustation			15		07	05		
94.4		AMH	Manhole								SMH_03514
94.4		FH	End of Survey								

94.4 M Total Length Surveyed

Scores	Structural:	Pipe Rating 9	Pipe Ratings Index 3	Quick Rating 4131
	O&M:	Pipe Rating 16	Pipe Ratings Index 2.3	Quick Rating 4131
	Overall	Pipe Rating 25	Pipe Ratings Index 5.3	Quick Rating 4232

Tabular Report of PSR SGM_05206

for CITY OF NIAGARA FALLS

Setup 45	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05206_	Project		
Date 2019/04/23	Time 12:48	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2019/04/15			
Flow control	Survey Purpose Maintenance Related	Direction Down	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street KALAR RD	City Niagara Falls	Drainage area DRY
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 132.0 M
Length Surveyed 131.2 M	Year Constructed	Year Renewed
Up SMH_04425	Rim to invert	Grade to invert
Northing	Easting	Elevation
Down SMH_03509	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04425
0.0		MWL Miscellaneous Water Level			10					
1.1		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
2.0		TB Tap Break-in/Hammer	100				02			
18.6		IR Infil Runner					11			
20.9		TB Tap Break-in/Hammer	100				02			
43.5		TB Tap Break-in/Hammer	100				02			
63.6		TB Tap Break-in/Hammer	100				02			
88.0		TB Tap Break-in/Hammer	100				02			
96.7		MWL Miscellaneous Water Level			30					
98.6		DAE Deposits Attached Encrustation			10	J	07	05		
98.9		IG Infil Gusher				J	12			
99.2		MWL Miscellaneous Water Level			10					
111.3		TB Tap Break-in/Hammer	100				02			
122.9		MWL Miscellaneous Water Level			30					
131.2		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 8250
131.2		AMH Manhole								SMH_03509
131.2		FH End of Survey								

131.2 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 11	Pipe Ratings Index 3.7	Quick Rating 5141
	Overall Pipe Rating 11	Pipe Ratings Index 3.7	Quick Rating 5141

Tabular Report of PSR SGM_05450

for NIAGARA REGION

Setup 1	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By	Reviewer #	Work Order	
Customer City of Niagara Falls		P/O #	
Media Label 0.001	Project		
Date 2018/09/18	Time 11:07	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street NASSAU AV	City Niagara Falls	Drainage area
Location Code	Pipe Use Sanitary Sewage Pipe	
Location details	Height 600	Width mm
Shape Circular	Material Reinforced Concrete Pipe	Lining
Coating	Pipe Joint length M	Total length 39.6 M
Length Surveyed 39.6 M	Year Constructed	Year Renewed
Up SMH_04814	Rim to invert 7.00	Grade to invert
Northing	Easting	Elevation
Down SMH_04850	Rim to invert 7.20	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	<input type="checkbox"/> Structural <input type="checkbox"/> O & M	
Additional info	<input type="checkbox"/> Miscellaneous <input type="checkbox"/> Constructional	

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04814
0.0		MWL Miscellaneous Water Level			10					
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.1		MGO Miscellaneous General Observation								STARTING NEXT TO HOUSE 8833
7.5		TF Tap Factory	100				10			
8.1		DSGV Deposits Settled Gravel			5		07			UNDER TAP
14.8		IG Infil Gusher					11	03		
15.6		DSGV Deposits Settled Gravel			5		07			
29.1		TF Tap Factory	100				10			
37.4		TF Tap Factory	100				10			
39.6		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE8917
39.6		AMH Manhole								SMH_04850
39.6		FH End of Survey								

39.6 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 9	Pipe Ratings Index 3	Quick Rating 5122
	Overall Pipe Rating 9	Pipe Ratings Index 3	Quick Rating 5122

Tabular Report of PSR SGM_05453

for NIAGARA REGION

Setup 3	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By	Reviewer #	Work Order	
Customer City of Niagara Falls		P/O #	
Media Label 0.003	Project		
Date 2018/09/17	Time 15:10	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related		Date Cleaned
Inspection Status Complete Inspection	Consequence Of Failure		Pressure 0.000
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street WEINBRENNER RD	City Niagara Falls	Drainage area
Location Code	Pipe Use Sanitary Sewage Pipe	
Location details	Height 600	Width mm
Shape Circular	Material Reinforced Concrete Pipe	Lining
Coating	Pipe Joint length M	Total length 61.0 M
Length Surveyed 55.3 M	Year Constructed	Year Renewed
Up SMH_04817	Rim to invert 6.70	Grade to invert
Northing	Easting	Elevation
Down SMH_04815	Rim to invert 7.40	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04817
0.0		MWL Miscellaneous Water Level			10					
31.1		DSGV Deposits Settled Gravel			5	05	07			
47.5		IG Infil Gusher				11	03			
51.3		DSGV Deposits Settled Gravel			5	05	07			
55.3		MSA Miscellaneous Survey Abandoned								UNABLE TO PASS DEBRIS UNDER

55.3 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 9	Pipe Ratings Index 3	Quick Rating 5122
	Overall Pipe Rating 9	Pipe Ratings Index 3	Quick Rating 5122

Tabular Report of PSR SGM_05548

for CITY OF NIAGARA FALLS

Setup 14	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05548_	Project		
Date 2018/12/14	Time 8:30	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/03	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street WEINBRENNER RD	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Asbestos Cement	Lining
Coating	Pipe Joint length M	Total length 72.8 M
Length Surveyed 72.5 M	Year Constructed	Year Renewed
Up SMH_05105	Rim to invert 2.80	Grade to invert
Northing	Easting	Elevation
Down SMH_05104	Rim to invert 5.00	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05105
0.0		MWL Miscellaneous Water Level			5					
0.0		MGO Miscellaneous General Observation								STARTING AT HOUSE 3489
1.1		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
1.1		DAE Deposits Attached Encrustation			5	J	03	05		
1.4		DAE Deposits Attached Encrustation			5		07	11		
2.9		SAM Surface Damage Aggregate Missing					07	11		
2.9		SAM Surface Damage Aggregate Missing					03	05		
4.7		DAE Deposits Attached Encrustation			5		05			
4.7		DAE Deposits Attached Encrustation			5		07			
5.2		SAM Surface Damage Aggregate Missing					07	05		
9.0		SAM Surface Damage Aggregate Missing					07	10		
12.8		SAM Surface Damage Aggregate Missing					07	11		
13.8		SAM Surface Damage Aggregate Missing					07	10		
20.7		SAM Surface Damage Aggregate Missing					07	05		
21.9		SAP Surface Damage Aggregate Projecti					04			
23.8		SAP Surface Damage Aggregate Projecti					04			
24.7		SAM Surface Damage Aggregate Missing					07	11		
26.7		SAM Surface Damage Aggregate Missing					07	10		
30.3		SAM Surface Damage Aggregate Missing					03	05		
31.8		MWL Miscellaneous Water Level			15					
33.2		SAP Surface Damage Aggregate Projecti					10			
36.5		MWL Miscellaneous Water Level			5					

Tabular Report of PSR SGM_05548

for CITY OF NIAGARA FALLS

Setup 14 Date 2018/12/14 Time 8:30 Up SMH_05105 Down SMH_05104

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
40.5		SAM	Surface Damage Aggregate Missing					07	10		
48.3		MWL	Miscellaneous Water Level			15					
52.6		DAE	Deposits Attached Encrustation			5		05			
55.9		SAM	Surface Damage Aggregate Missing					07	10		
64.6		MWL	Miscellaneous Water Level			5					
67.9		SAM	Surface Damage Aggregate Missing					07	05		
72.0		LD	Line Down			10					
72.0		MMC	Miscellaneous Material Change								TO PVC
72.5		TF	Tap Factory	200				06			DROP STRUCTURE
72.5		AMH	Manhole								SMH_05104
72.5		FH	End of Survey								END AT WILLOUGHBY DR

72.5 M Total Length Surveyed

Scores	Structural:	Pipe Rating	61	Pipe Ratings Index	3.8	Quick Rating	4A33	
		O&M:	Pipe Rating	11	Pipe Ratings Index	1.8	Quick Rating	2511
		Overall	Pipe Rating	72	Pipe Ratings Index	5.6	Quick Rating	4A33

Tabular Report of PSR SGM_05551

for CITY OF NIAGARA FALLS

Setup 6	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05551_	Project		
Date 2018/11/06	Time 9:42	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/11/05	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CHIPMAN CR	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 375	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 115.8 M
Length Surveyed 116.8 M	Year Constructed	Year Renewed
Up SMH_05158	Rim to invert 2.50	Grade to invert
Northing	Easting	Elevation
Down SMH_05159	Rim to invert 3.30	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		MGO	Miscellaneous	General Observation						STARTING IN FRONT OF HOUSE
0.0		ST	Start of Survey							
0.0		MWL	Miscellaneous	Water Level	10					
0.0		AMH	Manhole							SMH_05158
1.2		MGO	Miscellaneous	General Observation						ADJUSTED COUNTER TO SET PO
1.4		S01 SAV	Surface	Damage Aggregate Visible			07	05		
1.4		S02 ISJ	Infiltration	Stain Joint		J	07	05		
1.8		CM	Crack	Multiple		J	10	01		
5.3		CC	Crack	Circumferential			03	05		
6.7		CC	Crack	Circumferential			10	01		
10.2		TBD	Tap	Break-in Defective	100			11		
10.2		RBL	Roots	Ball Lateral				11		
10.9		RMJ	Roots	Medium Joint	10	J	04	05		
18.2		TB	Tap	Break-in/Hammer	100			03		
18.2		DAE	Deposits	Attached Encrustation				03	05	
18.8		RFC	Roots	Fine Connection				03		AROUND TAP
18.8		VZ	Vermin	Other	3					BUGS AROUND TAP
25.4		S03 FL	Fracture	Longitudinal				12		
25.6		RFB	Roots	Fine Barrel				07	05	INTRUDING THROUGH CRACKS
25.6		FM	Fracture	Multiple		J	07	08		
25.6		FM	Fracture	Multiple		J	04	05		
27.0		FL	Fracture	Longitudinal				09		
27.5		F03 FL	Fracture	Longitudinal				12		
27.5		RFL	Roots	Fine Lateral				11		

Tabular Report of PSR SGM_05551

for CITY OF NIAGARA FALLS

Setup 6 Date 2018/11/06 Time 9:42 Up SMH_05158 Down SMH_05159

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
27.6		TB	Tap Break-in/Hammer	100				11			
27.8		HSV	Hole Soil Visible					11			
32.8		RMJ	Roots Medium Joint			5	J	05			
36.3		RMJ	Roots Medium Joint			10	J	07			
36.3		RMJ	Roots Medium Joint			5	J	05			
38.1		RMJ	Roots Medium Joint			5	J	07			
38.1		RFJ	Roots Fine Joint				J	12	05		
39.8		CL	Crack Longitudinal				J	12			
39.8		RFJ	Roots Fine Joint				J	04			
40.2		RMJ	Roots Medium Joint			5	J	07			
41.3		RML	Roots Medium Lateral			20		03			
41.8		TB	Tap Break-in/Hammer	100				03			
43.6		DAE	Deposits Attached Encrustation			5		07	09		
43.6		DAE	Deposits Attached Encrustation			5		03	05		
45.2		RML	Roots Medium Lateral			40		09			
45.2		TBD	Tap Break-in Defective	100				10			
47.4		DAE	Deposits Attached Encrustation			5		07	05		
47.4		CL	Crack Longitudinal					12			
49.0		DAE	Deposits Attached Encrustation			5		07	09		
49.0		DAE	Deposits Attached Encrustation			5		03	05		
51.0		DAE	Deposits Attached Encrustation			5		07	05		
52.5		CL	Crack Longitudinal					11			
52.7		RFJ	Roots Fine Joint				J	03			
53.5		RFB	Roots Fine Barrel					12			
56.4	S04	CL	Crack Longitudinal					12			
56.4	S05	RFB	Roots Fine Barrel					12			INTRUDING FROM CRACK
60.3	F04	CL	Crack Longitudinal					12			
60.3	F05	RFB	Roots Fine Barrel					12			INTRUDING FROM CRACK
61.2		RFJ	Roots Fine Joint				J	12	05		
62.5		TB	Tap Break-in/Hammer	100				03			
62.5		RML	Roots Medium Lateral			20		03			
63.8		DAE	Deposits Attached Encrustation			5		07	05		
64.3		RFL	Roots Fine Lateral					10			
64.3	S06	CL	Crack Longitudinal					12			
64.3	S07	RFB	Roots Fine Barrel					12			INTRUDING FROM CRACK
64.8		TFA	Tap Factory Activity	100				11			
67.4		RFJ	Roots Fine Joint				J	07	09		
67.4		RFJ	Roots Fine Joint				J	03	05		
69.2		CM	Crack Multiple					12	05		
70.5	F06	CL	Crack Longitudinal					12			
70.5	F07	RFB	Roots Fine Barrel					12			INTRUDING FROM CRACK
70.8		CL	Crack Longitudinal					02			
73.3		CL	Crack Longitudinal					12			
74.6	S08	RFJ	Roots Fine Joint				J	04			
81.9	F08	RFJ	Roots Fine Joint				J	04			
82.1		TBI	Tap Break-in Intruding	100	5			11			
82.9		TB	Tap Break-in/Hammer	100				02			
82.9		RFL	Roots Fine Lateral					02			
84.1		RBL	Roots Ball Lateral			80		11			
84.1		TFD	Tap Factory Defective	100				11			

Tabular Report of PSR SGM_05551

for CITY OF NIAGARA FALLS

Setup 6 Date 2018/11/06 Time 9:42 Up SMH_05158 Down SMH_05159

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
85.7			DAE Deposits Attached Encrustation			5		07	05		
87.5			RFJ Roots Fine Joint				J	07			
87.7			CL Crack Longitudinal					05			
89.2			RFJ Roots Fine Joint				J	07	05		
92.8			RFJ Roots Fine Joint				J	09	03		
94.6			RFJ Roots Fine Joint				J	10			
95.9			CL Crack Longitudinal					07			
96.2			RFJ Roots Fine Joint				J	07	05		
98.3			CM Crack Multiple					07	05		
98.3			RFJ Roots Fine Joint				J	07	05		
101.8			RBL Roots Ball Lateral			70		11			
101.8			TFD Tap Factory Defective	100				11			
102.6			TF Tap Factory	100				02			
102.6			RFL Roots Fine Lateral					02			
103.5			RFJ Roots Fine Joint				J	12			
105.3		S09	RFJ Roots Fine Joint				J	07	05		
105.5		S10	DAE Deposits Attached Encrustation			5		07	05		
116.1		F02	ISJ Infiltration Stain Joint				J	07	05		
116.1		F09	RFJ Roots Fine Joint				J	07	05		
116.1		F10	DAE Deposits Attached Encrustation			5		07	05		
116.8			MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3086
116.8		F01	SAV Surface Damage Aggregate Visible					07	05		
116.8			AMH Manhole								SMH_05159
116.8			FH End of Survey								

116.8 M Total Length Surveyed

Scores	Structural:	Pipe Rating	214	Pipe Ratings Index	2.1	Quick Rating	5142
	O&M:	Pipe Rating	215	Pipe Ratings Index	1.4	Quick Rating	433A
	Overall	Pipe Rating	429	Pipe Ratings Index	3.5	Quick Rating	5145

Tabular Report of PSR SGM_05552

for CITY OF NIAGARA FALLS

Setup 7	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05552_	Project		
Date 2018/11/26	Time 8:11	Weather Heavy Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/29	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street USSHER ST	City Niagara Falls	Drainage area HEAVY RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 50.3 M
Length Surveyed 48.2 M	Year Constructed	Year Renewed
Up SMH_05146	Rim to invert 2.40	Grade to invert
Northing	Easting	Elevation
Down SMH_05145	Rim to invert 4.40	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info	UNABLE TO FINISH IN MH DUE TO DROP PIPE	

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		MWL Miscellaneous Water Level			5					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
0.0		AMH Manhole								SMH_05146
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
8.0		B Broken				J	07			
9.3		JSM Joint Separated Medium								
9.6		TF Tap Factory	100				02			
14.6		JSM Joint Separated Medium								
16.0		DAE Deposits Attached Encrustation			10		07	05		
18.8		CL Crack Longitudinal					12			
19.6		JOM Joint Offset Medium								
20.5		JOM Joint Offset Medium								
21.4		TF Tap Factory	100				02			
22.5		B Broken				J	07			
24.0		JOM Joint Offset Medium								
24.8		FL Fracture Longitudinal					11			
25.6		DAE Deposits Attached Encrustation			5		05	07		
29.4		DAE Deposits Attached Encrustation			5		05			
32.3		DAE Deposits Attached Encrustation			10		07	09		
33.9		DAE Deposits Attached Encrustation			10		04	05		
35.7		TFA Tap Factory Activity	100				02			
38.5		DAE Deposits Attached Encrustation			5		07	08		
43.2		FM Fracture Multiple					07	05		

Tabular Report of PSR SGM_05552

for CITY OF NIAGARA FALLS

Setup 7 Date 2018/11/26 Time 8:11 Up SMH_05146 Down SMH_05145

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
44.7		DAE Deposits Attached Encrustation			5		05	07		
47.1		JOM Joint Offset Medium								
47.8		RMJ Roots Medium Joint			10	J	05			
47.8		RMJ Roots Medium Joint			10	J	07			
48.2		TF Tap Factory	100				06			
48.2		AMH Manhole								SMH_05145
48.2		FH End of Survey								
48.2		MGO Miscellaneous General Observation								DROP PIPE UNABLE TO CONTINU

48.2 M Total Length Surveyed

Scores			
Structural:	Pipe Rating	35	Pipe Ratings Index 3.2
O&M:	Pipe Rating	20	Pipe Ratings Index 2.2
Overall	Pipe Rating	55	Pipe Ratings Index 5.4
			Quick Rating 4337
			Quick Rating 3227
			Quick Rating 4339

Tabular Report of PSR SGM_05585

for CITY OF NIAGARA FALLS

Setup 17	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05585_	Project		
Date 2018/12/18	Time 6:55	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2018/12/05			
Flow control	Survey Purpose Maintenance Related	Direction Down	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street WELLAND ST	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Polyvinyl Chloride	Lining
Coating	Pipe Joint length M	Total length 81.4 M
Length Surveyed 81.5 M	Year Constructed	Year Renewed
Up SMH_05035	Rim to invert 3.10	Grade to invert
Northing	Easting	Elevation
Down SMH_05032	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	<input type="checkbox"/> Structural <input type="checkbox"/> O & M	
Additional info	<input type="checkbox"/> Miscellaneous <input type="checkbox"/> Constructional	

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST								Start of Survey
0.0		AMH								Manhole
0.0		MWL			5					Miscellaneous Water Level
0.0		MGO								Miscellaneous General Observation
1.2		MGO								Miscellaneous General Observation
2.6		MWL			10					Miscellaneous Water Level
11.9		MWL			5					Miscellaneous Water Level
14.2		TF	100				12			Tap Factory
15.6		MWL			10					Miscellaneous Water Level
18.2		MWL			5					Miscellaneous Water Level
26.1		MWL			10					Miscellaneous Water Level
30.2		MWL			5					Miscellaneous Water Level
35.3		MWL			10					Miscellaneous Water Level
36.3		MWL			15					Miscellaneous Water Level
37.2		TF	100				12			Tap Factory
38.4		MWL			10					Miscellaneous Water Level
40.4		MWL			5					Miscellaneous Water Level
43.2		MWL			10					Miscellaneous Water Level
48.8		TF	100				12			Tap Factory
49.3		MWL			5					Miscellaneous Water Level
50.6		MWL			10					Miscellaneous Water Level
58.4		TBI	100	50			01			Tap Break-in Intruding
58.4		HSV					01			Hole Soil Visible
58.6		IR					01			Infil Runner
										AROUND CONNECTION

Tabular Report of PSR SGM_05585

for CITY OF NIAGARA FALLS

Setup 17 Date 2018/12/18 Time 6:55 Up SMH_05035 Down SMH_05032

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
58.7		DAE Deposits Attached Encrustation			5		09	12		
62.6		MWL Miscellaneous Water Level			5					
64.8		MWL Miscellaneous Water Level			10					
70.0		DAR Deposits Attached Ragging			5		03	05		
70.2		TF Tap Factory	100				12			
75.3		MWL Miscellaneous Water Level			15					
79.9		MWL Miscellaneous Water Level			20					
80.5		MWL Miscellaneous Water Level			10					
80.8		DAE Deposits Attached Encrustation			5		01	05		
80.8		DAE Deposits Attached Encrustation			5		07	11		
81.5		AMH Manhole								SMH_05032
81.5		FH End of Survey								FINISH AT HOUSE 3913

81.5 M Total Length Surveyed

Scores	Structural:	Pipe Rating 5	Pipe Ratings Index 5	Quick Rating 5100
	O&M:	Pipe Rating 15	Pipe Ratings Index 2.5	Quick Rating 4131
	Overall	Pipe Rating 20	Pipe Ratings Index 7.5	Quick Rating 5141

Tabular Report of PSR SGM_05596

for CITY OF NIAGARA FALLS

Setup 36	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05596_	Project		
Date 2018/11/27	Time 13:24	Weather Snow	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2018/11/26
Inspection Status Complete Inspection	Consequence Of Failure		Pressure 0.000
Inspection Technology Used			
<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other			

Street BOND ST	City Niagara Falls	Drainage area SNOW				
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe					
Location details COMPLETE	Height 200	Width mm				
Shape Circular	Material Vitrified Clay Pipe	Lining				
Coating	Pipe Joint length M	Total length 107.0 M				
Length Surveyed 105.6 M	Year Constructed	Year Renewed				
Up SMH_05011	Rim to invert 0.00	Grade to invert				
Northing	Easting	Elevation				
Down SMH_05012	Rim to invert 3.50	Grade to invert				
Northing	Easting	Elevation				
Coordinate System		Vertical Datum				
GPS Accuracy	<table border="1"> <tr> <td>Structural</td> <td>O & M</td> </tr> <tr> <td>Miscellaneous</td> <td>Constructional</td> </tr> </table>		Structural	O & M	Miscellaneous	Constructional
Structural	O & M					
Miscellaneous	Constructional					
Additional info	UNABLE TO FINISH IN MH DUE TO DROP PIPE					

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST								Start of Survey
0.0		AMH								Manhole
0.0		MWL			10					Miscellaneous Water Level
0.0		MGO								Miscellaneous General Observation
1.1		MGO								Miscellaneous General Observation
1.1		RMJ			5	J	12	05		Roots Medium Joint
1.7		CM					10	02		Crack Multiple
2.6	S01	CM					07	05		Crack Multiple
3.4		TF	100				09			Tap Factory
6.9	F01	CM					07	05		Crack Multiple
10.7		DAE			5		04			Deposits Attached Encrustation
11.5		DAE			5		05			Deposits Attached Encrustation
13.4		DAE			5		05	07		Deposits Attached Encrustation
13.7		TF	100				02			Tap Factory
16.2		CL					12			Crack Longitudinal
23.4		TBI	100	5			10			Tap Break-in Intruding
23.7		TF	100				02			Tap Factory
29.5		TF	100				02			Tap Factory
32.7		JOM								Joint Offset Medium
36.1		TF	100				02			Tap Factory
36.1		MGO								Miscellaneous General Observation
37.4		TF	100				09			Tap Factory
39.6		JOM								Joint Offset Medium
40.9		JOM								Joint Offset Medium

Tabular Report of PSR SGM_05596

for CITY OF NIAGARA FALLS

Setup 36 Date 2018/11/27 Time 13:24 Up SMH_05011 Down SMH_05012

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
47.1		JOM	Joint Offset Medium								
47.1		CC	Crack Circumferential					03	04		
48.5		TF	Tap Factory	100				02			
50.5		TF	Tap Factory	100				10			
60.5		TF	Tap Factory	100				10			
60.7		MGO	Miscellaneous General Observation								CAPPED
61.7		TF	Tap Factory	100				02			
65.0		CC	Crack Circumferential					12	05		
65.8		CM	Crack Multiple					10	02		
67.1		DAE	Deposits Attached Encrustation			5		05	07		
68.4		CC	Crack Circumferential					07	12		
72.4		CM	Crack Multiple					07	10		
72.9		TBI	Tap Break-in Intruding	5	100			11			
74.1		CL	Crack Longitudinal					04			
74.5		TFC	Tap Factory Capped	100				10			
76.7		CL	Crack Longitudinal					01			
82.7		JOM	Joint Offset Medium								
83.0		TBI	Tap Break-in Intruding	10	100			11			
84.8		TFD	Tap Factory Defective	100				11			DEBRIS AND ROOTS IN TAP
85.9		RMJ	Roots Medium Joint			5	J	07	05		
86.0		TF	Tap Factory	100				02			
86.3		CM	Crack Multiple					07	05		
87.7		DAE	Deposits Attached Encrustation			5		07	05		
91.3		JOM	Joint Offset Medium								
93.9		FM	Fracture Multiple					10	11		
97.2		CL	Crack Longitudinal					12			
97.6		TB	Tap Break-in/Hammer	100				12			
103.9		CC	Crack Circumferential					10	11		
105.0		MMC	Miscellaneous Material Change								VCP TO PVC
105.6		TF	Tap Factory	200				06			
105.6		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 8269
105.6		AMH	Manhole								SMH_05012
105.6		FH	End of Survey								

105.6 M Total Length Surveyed

Scores	Structural:	Pipe Rating 55	Pipe Ratings Index 2.5	Quick Rating 413A
	O&M:	Pipe Rating 31	Pipe Ratings Index 2.8	Quick Rating 5233
	Overall	Pipe Rating 86	Pipe Ratings Index 5.3	Quick Rating 5241

Tabular Report of PSR SGM_05597

for CITY OF NIAGARA FALLS

Setup 7	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05597_	Project		
Date 2018/11/12	Time 11:04	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2018/11/07			
Flow control	Survey Purpose Maintenance Related	Direction Up	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street BOND ST	City Niagara Falls	Drainage area DRY
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 225	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 104.8 M
Length Surveyed 104.4 M	Year Constructed	Year Renewed
Up SMH_05011	Rim to invert 1.90	Grade to invert
Northing	Easting	Elevation
Down SMH_04978	Rim to invert 1.40	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04978
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.2		JOM Joint Offset Medium								
1.2		MMC Miscellaneous Material Change								PVC TO VPC
1.4		CM Crack Multiple					07	05		
1.9		FL Fracture Longitudinal					03			
2.6		CM Crack Multiple					07	05		
3.1		JOM Joint Offset Medium								
4.1		CM Crack Multiple					07	05		
4.4		JOM Joint Offset Medium								
5.0		CC Crack Circumferential					07	05		
5.0		JOM Joint Offset Medium								
5.5		CM Crack Multiple					07	05		
6.1		JOM Joint Offset Medium								
7.4		JOM Joint Offset Medium								
7.7		JOM Joint Offset Medium								
8.1		CC Crack Circumferential					11	12		
8.4		JOM Joint Offset Medium								
9.1		TFC Tap Factory Capped	200				02			
10.0		JOM Joint Offset Medium								
10.6		JOM Joint Offset Medium								

Tabular Report of PSR SGM_05597

for CITY OF NIAGARA FALLS

Setup 7 Date 2018/11/12 Time 11:04 Up SMH_05011 Down SMH_04978

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
11.3			CM Crack Multiple					11	02		
11.9			JOM Joint Offset Medium								
13.2		S02	CC Crack Circumferential				J	07	05		
13.2			JOM Joint Offset Medium								
13.5			JOM Joint Offset Medium								
14.4			JOM Joint Offset Medium								
15.8			JOM Joint Offset Medium								
15.8			JOM Joint Offset Medium								
16.6			JOM Joint Offset Medium								
17.6			JOM Joint Offset Medium								
19.4			JOM Joint Offset Medium								
19.8			TF Tap Factory	100				11			
20.8			JOM Joint Offset Medium								
22.8			TBI Tap Break-in Intruding	100	5			02			
23.8			CM Crack Multiple					07	05		
25.2			JOM Joint Offset Medium								
25.9			JOM Joint Offset Medium								
25.9			CM Crack Multiple					10	02		
26.5			JOM Joint Offset Medium								
26.5			CL Crack Longitudinal					11			
27.1			JOM Joint Offset Medium								
27.5			SZ Surface Damage Other					01			SMALL BULDGE ON PIPE WALL
27.7			JOM Joint Offset Medium								
29.0			JOM Joint Offset Medium								
29.6			CL Crack Longitudinal					12			
29.7			JOM Joint Offset Medium								
30.3			JOM Joint Offset Medium								
30.9		S01	JOM Joint Offset Medium								
40.0			TFC Tap Factory Capped	100				11			
41.6			DAE Deposits Attached Encrustation			5		07	05		
43.2			TF Tap Factory	100				02			
43.4			CM Crack Multiple					11	03		
45.9			DAE Deposits Attached Encrustation			5	J	05			
46.0			CH2 Crack Longitudinal Hinge, 2					09	03		
51.3			TFC Tap Factory Capped	100				02			
55.1			TF Tap Factory	100				11			
56.8			TBI Tap Break-in Intruding	100	5			02			
60.4			CM Crack Multiple					09	12		
60.8			TBI Tap Break-in Intruding	100	5			02			
70.3			TFC Tap Factory Capped	200				03			
71.0			TB Tap Break-in/Hammer	100				02			
72.3			TF Tap Factory	100				11			
80.1			CM Crack Multiple					10	03		
81.0			TF Tap Factory	100				03			
82.5			CC Crack Circumferential					07	05		
84.6			CM Crack Multiple					09	12		
87.8			TF Tap Factory	100				10			
93.6		F01	JOM Joint Offset Medium								
97.3			TF Tap Factory	100				02			
97.3			MGO Miscellaneous General Observation								CAPPED

Tabular Report of PSR SGM_05597

for CITY OF NIAGARA FALLS

Setup 7 Date 2018/11/12 Time 11:04 Up SMH_05011 Down SMH_04978

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
98.5			CM Crack Multiple					07	05		
98.9			TB Tap Break-in/Hammer	100				02			
101.2			B Broken					01			
101.9		F02	CC Crack Circumferential				J	07	05		
103.9			DAE Deposits Attached Encrustation			5		07	05		
104.4			MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3596
104.4			AMH Manhole								SMH_05011
104.4			FH End of Survey								

104.4 M Total Length Surveyed

Scores			
Structural:	Pipe Rating	325	Quick Rating 4130
O&M:	Pipe Rating	12	Quick Rating 2600
Overall	Pipe Rating	337	Quick Rating 4130
	Pipe Ratings Index	2.2	
	Pipe Ratings Index	2	
	Pipe Ratings Index	4.2	

Tabular Report of PSR SGM_05598

for CITY OF NIAGARA FALLS

Setup 37 **Surveyed By** PT-RSP **Certificate #** U-1017-07008775 **Owner** City of Niagara Falls
Reviewed By PT-BC **Reviewer #** U10180703002644 **Work Order**
Customer City of Niagara Falls **P/O #** RFP32-2018
Media Label SGM_05598_ **Project**
Date 2018/11/28 **Time** 7:32 **Weather** Snow **Pre-Cleaning** L **Date Cleaned** 2018/11/26
Flow control **Survey Purpose** Maintenance Related **Direction** Down
Inspection Status Complete Inspection **Consequence Of Failure** **Pressure** 0.000
Inspection Technology Used CCTV Laser Sonar Sidewall Zoom Other

Street STRANG DR **City** Niagara Falls **Drainage area** SNOW
Location Code **Pipe Use** Sanitary Sewage Pipe
Location details COMPLETE **Height** 200 **Width** mm
Shape Circular **Material** Vitrified Clay Pipe **Lining**
Coating **Pipe Joint length** M **Total length** 122.8 M
Length Surveyed 120.3 M **Year Constructed** **Year Renewed**
Up SMH_05009 **Rim to invert** 3.50 **Grade to invert** **Rim to grade** M
Northing **Easting** **Elevation**
Down SMH_05008 **Rim to invert** **Grade to invert** **Rim to grade** M
Northing **Easting** **Elevation**
Coordinate System **Vertical Datum**
GPS Accuracy Structural O & M
Miscellaneous Constructional
Additional info DROP PIPE, UNABLE TO FINISH IN MH

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05009
0.0		MWL Miscellaneous Water Level			10					
1.1		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.1		FM Fracture Multiple					07	05		
1.2		TB Tap Break-in/Hammer	100				11			
2.1		CM Crack Multiple					07	05		
2.2		TFC Tap Factory Capped	100				09			
3.2		CL Crack Longitudinal					10			
4.0		CL Crack Longitudinal					01			
4.1		TF Tap Factory	100				03			
6.5		CM Crack Multiple					07	05		
6.5		DAE Deposits Attached Encrustation			5		07	05		
6.7		BSV Broken Soil Visible					12			
7.0		CM Crack Multiple					07	05		
7.7		CH2 Crack Longitudinal Hinge, 2					09	03		
8.9		JOM Joint Offset Medium								
9.5		CL Crack Longitudinal					03			
10.4		CM Crack Multiple					07	05		
10.8		DAE Deposits Attached Encrustation			5	J	05	07		
11.1		TFD Tap Factory Defective	100				09			
11.5		TBA Tap Break-in Activity	100				02			
14.0		TBI Tap Break-in Intruding	100	5			11			

Tabular Report of PSR SGM_05598

for CITY OF NIAGARA FALLS

Setup 37 Date 2018/11/28 Time 7:32 Up SMH_05009 Down SMH_05008

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
15.2		TB	Tap Break-in/Hammer	100				02			
16.6		RML	Roots Medium Lateral			30		02			
16.6		TFD	Tap Factory Defective	100				02			
17.5		CL	Crack Longitudinal					12			
18.8		CL	Crack Longitudinal					02			
20.1		RFJ	Roots Fine Joint				J	07	05		
20.7		CH2	Crack Longitudinal Hinge, 2					09	03		
22.1		TF	Tap Factory	100				11			
22.5		RMJ	Roots Medium Joint			5	J	07	05		
24.5		TBI	Tap Break-in Intruding	5	100			09			
25.0		RMJ	Roots Medium Joint			5	J	07	05		
25.0		TFC	Tap Factory Capped	100				10			
26.2		JOM	Joint Offset Medium								
26.6		TBI	Tap Break-in Intruding	5	100			10			
26.9		RMJ	Roots Medium Joint			5	J	07	05		
28.2		RMJ	Roots Medium Joint			5	J	07	05		
28.4		TFD	Tap Factory Defective	100				03			
28.7		RML	Roots Medium Lateral			20		03			
34.3		CH2	Crack Longitudinal Hinge, 2					09	12		
34.4		RMJ	Roots Medium Joint			5	J	07			
35.3		TFC	Tap Factory Capped	100				11			
36.3		RMJ	Roots Medium Joint			5	J	07			
39.7		TB	Tap Break-in/Hammer	100				02			
40.9		TFC	Tap Factory Capped	100				02			
41.5		TBI	Tap Break-in Intruding	10	100			10			
45.2		TFC	Tap Factory Capped	100				10			
53.4		TFC	Tap Factory Capped	100				03			
53.9		TB	Tap Break-in/Hammer	100				02			
53.9		HVV	Hole Void Visible					01			
56.6		TF	Tap Factory	100				11			
57.0		JOM	Joint Offset Medium								
57.0		CL	Crack Longitudinal					07			
57.7		DAE	Deposits Attached Encrustation			5		07	08		
58.8		DAE	Deposits Attached Encrustation			5		05	07		
60.0		DAE	Deposits Attached Encrustation			5		07	05		
60.0		CM	Crack Multiple					10	02		
60.7		DAE	Deposits Attached Encrustation			5		07	11		
61.0		DAE	Deposits Attached Encrustation			5		05			
61.8		DAE	Deposits Attached Encrustation			5		07	05		
62.5		DAE	Deposits Attached Encrustation			5		01	05		
63.8		JOM	Joint Offset Medium								
65.2		TB	Tap Break-in/Hammer	100				02			
65.9		TFC	Tap Factory Capped	100				02			
65.9		MGO	Miscellaneous General Observation								CAPPED
66.9		RMB	Roots Medium Barrel			10		04	05		
66.9		FM	Fracture Multiple					01	05		
67.0		RML	Roots Medium Lateral			20		10			
67.1		TFD	Tap Factory Defective	100				11			
71.8		CC	Crack Circumferential					02	05		
75.6		CC	Crack Circumferential					07	10		

Tabular Report of PSR SGM_05598

for CITY OF NIAGARA FALLS

Setup 37 Date 2018/11/28 Time 7:32 Up SMH_05009 Down SMH_05008

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr To	ImRef	Remarks
75.9		TFD Tap Factory Defective	100				11		HOLE IN TAP
78.2		TF Tap Factory	100				03		
85.7		TF Tap Factory	100				02		
86.8		TF Tap Factory	100				11		
94.1		JOM Joint Offset Medium							
96.1		DAE Deposits Attached Encrustation			5		05		
98.2		TFC Tap Factory Capped	100				10		
100.5		TFC Tap Factory Capped	100				02		
104.8		JOM Joint Offset Medium							
107.3		DAE Deposits Attached Encrustation			5		05		
112.5		TBA Tap Break-in Activity	100				12		
113.2		TFC Tap Factory Capped	100				11		
113.8		TFC Tap Factory Capped	100				02		
119.7		MMC Miscellaneous Material Change							VCP TO PVC
120.0		TF Tap Factory	200				06		
120.3		MGO Miscellaneous General Observation							DROP PIPE UNABLE TO FINISH IN
120.3		MGO Miscellaneous General Observation							FINISH IN FRONT OF HOUSE 3590
120.3		AMH Manhole							SMH_05008
120.3		FH End of Survey							

120.3 M Total Length Surveyed

Scores	Structural:	Pipe Rating 71	Pipe Ratings Index 2.7	Quick Rating 5242
	O&M:	Pipe Rating 86	Pipe Ratings Index 2.8	Quick Rating 5341
	Overall	Pipe Rating 157	Pipe Ratings Index 5.5	Quick Rating 5543

Tabular Report of PSR SGM_05599

for CITY OF NIAGARA FALLS

Setup 8	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05599_	Project		
Date 2018/11/13	Time 11:25	Weather Light Rain	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2018/11/13
Inspection Status Complete Inspection	Consequence Of Failure		Pressure 0.000
Inspection Technology Used			
<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other			

Street STRANG DR	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 111.5 M
Length Surveyed 110.5 M	Year Constructed	Year Renewed
Up SMH_05009	Rim to invert 0.00	Grade to invert
Northing	Easting	Elevation
Down SMH_05010	Rim to invert 1.40	Grade to invert
Northing	Easting	Elevation
Coordinate System		Vertical Datum
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05010
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.1		MMC Miscellaneous Material Change								PVC TO VCP
1.6		CM Crack Multiple					07	05		
2.2		CL Crack Longitudinal					12			
2.2		JOM Joint Offset Medium								
2.6		CL Crack Longitudinal					03			
3.7		SRI Surface Damage Roughness Increase					07	05		
7.1	S01	JOM Joint Offset Medium								
9.1		CL Crack Longitudinal					09			
9.7		CL Crack Longitudinal					05			
10.0		TB Tap Break-in/Hammer	100				02			
17.1		CC Crack Circumferential					07	05		
17.3		TBI Tap Break-in Intruding	5	100			11			
18.7		TF Tap Factory	200				09			
22.6		RMJ Roots Medium Joint			5	J	07	08		
22.6		RMJ Roots Medium Joint			5	J	03	05		
25.9		RMJ Roots Medium Joint			5	J	10	12		
28.2		CC Crack Circumferential					10	05		
29.1		CC Crack Circumferential					07	05		
29.6		RMJ Roots Medium Joint			10	J	04	05		

Tabular Report of PSR SGM_05599

for CITY OF NIAGARA FALLS

Setup 8 Date 2018/11/13 Time 11:25 Up SMH_05009 Down SMH_05010

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
30.8		S02	SZ Surface Damage Other					07	05		BUBBLING OF PIPE WALL
30.9			RMJ Roots Medium Joint			5	J	03			
31.3			CL Crack Longitudinal					10			
33.5			CL Crack Longitudinal					02			
39.5			DAE Deposits Attached Encrustation			5		07			
45.8			RMJ Roots Medium Joint			10	J	07	05		
45.8			CC Crack Circumferential					07	05		
46.3			RMJ Roots Medium Joint			5	J	07	05		
48.7			RMJ Roots Medium Joint			20	J	07	10		
54.3			TB Tap Break-in/Hammer	100				11			
54.3			RFB Roots Fine Barrel					09			
54.3			RFJ Roots Fine Joint				J	07	05		
54.4			TF Tap Factory	100				03			
54.7			CL Crack Longitudinal					09			
54.7			VZ Vermin Other	1							SPIDER
56.7			RMJ Roots Medium Joint			30	J	07	05		
57.7			CL Crack Longitudinal					11			
63.4			TFC Tap Factory Capped	200				03			
66.4			TF Tap Factory	200				09			
66.9			HSV Hole Soil Visible					12			
67.8			CC Crack Circumferential					07	12		
71.8			CL Crack Longitudinal					12			
76.5			TF Tap Factory	100				02			
79.5			TFC Tap Factory Capped	100				11			
81.2			TBI Tap Break-in Intruding	100	10			10			
84.9			CL Crack Longitudinal					09			
84.9			CL Crack Longitudinal					03			
88.1			TBI Tap Break-in Intruding	100	5			02			
88.5			TFC Tap Factory Capped	100				02			
89.1			CC Crack Circumferential					07	05		
91.6			TF Tap Factory	100				11			
98.1		F02	SZ Surface Damage Other					07	05		BUBBLING OF PIPE WALL
98.7			RFJ Roots Fine Joint				J	12			
98.7			CL Crack Longitudinal					12			
100.3			TF Tap Factory	100				03			
101.0			TFC Tap Factory Capped	100				02			
101.9			CM Crack Multiple					07	05		
103.2			MWL Miscellaneous Water Level			30					
104.0			TF Tap Factory	100				11			
104.3			CM Crack Multiple					07	05		
105.5			CL Crack Longitudinal					11			
106.9			DSF Deposits Settled Fine			5		05	07		
108.9			CM Crack Multiple					11	03		
110.5			MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3505
110.5		F01	JOM Joint Offset Medium								
110.5			AMH Manhole								SMH_05009
110.5			FH End of Survey								

110.5 M Total Length Surveyed

Scores	Structural:	Pipe Rating 263	Pipe Ratings Index 2.7	Quick Rating 513N
	O&M:	Pipe Rating 45	Pipe Ratings Index 2.5	Quick Rating 5139
	Overall	Pipe Rating 308	Pipe Ratings Index 5.2	Quick Rating 523O

Tabular Report of PSR SGM_05600

for CITY OF NIAGARA FALLS

Setup 13	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05600_	Project		
Date 2018/12/15	Time 9:18	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2018/11/29			
Flow control	Survey Purpose Maintenance Related	Direction Up	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CALLAN ST	City Niagara Falls	Drainage area DRY
Location Code Secondary roads, non-numbered suburban/rural for heavy vehicles	Pipe Use Sanitary Sewage Pipe	
Location details SA OBSTRUCTION	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 93.3 M
Length Surveyed 89.8 M	Year Constructed	Year Renewed
Up SMH_05005	Rim to invert 2.00	Grade to invert
Northing	Easting	Elevation
Down SMH_05004	Rim to invert 0.00	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info UNABLE TO PASS TBI		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05004
0.0		MWL Miscellaneous Water Level			5					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		LR Line Right			50					
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.9		MMC Miscellaneous Material Change								PVC TO VPC
2.5		CM Crack Multiple					07	05		
4.4		CM Crack Multiple					07	10		
4.4		JOM Joint Offset Medium								
5.4		CC Crack Circumferential					10	02		
6.2		DAE Deposits Attached Encrustation			5		07	05		
6.3		CM Crack Multiple					10	02		
7.1		DAE Deposits Attached Encrustation			5		07	05		
9.0		DAE Deposits Attached Encrustation			5		07	05		
10.0		CM Crack Multiple					09	03		
11.9		CM Crack Multiple				J	07	05		
11.9		DAE Deposits Attached Encrustation			5		02	05		
11.9		DAE Deposits Attached Encrustation			5		07	10		
14.7		JOM Joint Offset Medium								
15.2		JOM Joint Offset Medium								
15.6		DAE Deposits Attached Encrustation			5		05			
16.0	S01	JOM Joint Offset Medium								
16.5		CL Crack Longitudinal					03			

Tabular Report of PSR SGM_05600

for CITY OF NIAGARA FALLS

Setup 13 Date 2018/12/15 Time 9:18 Up SMH_05005 Down SMH_05004

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
20.4		TBI	Tap Break-in Intruding	100	5			11			
21.1		DAE	Deposits Attached Encrustation			5		09	11		
22.1		DAE	Deposits Attached Encrustation			5		03	05		
22.9		DAE	Deposits Attached Encrustation			5		07	05		
24.7		DAE	Deposits Attached Encrustation			10		07	05		
26.5		CM	Crack Multiple					07	05		
26.5		DAE	Deposits Attached Encrustation			10		07	05		
28.4		CL	Crack Longitudinal					04			
34.5		TB	Tap Break-in/Hammer	100				10			
36.6		CM	Crack Multiple					12	05		
37.5		FM	Fracture Multiple					07	02		
38.5		CL	Crack Longitudinal					01			
38.5		DAE	Deposits Attached Encrustation			5		07	05		
39.3		CL	Crack Longitudinal					01			
39.3		DAE	Deposits Attached Encrustation			5		07	11		
41.2		DAE	Deposits Attached Encrustation			5		07	05		
42.1		DAE	Deposits Attached Encrustation			5		12	05		
44.9		CM	Crack Multiple					01	05		
46.7		CM	Crack Multiple					07	11		
47.6		DAR	Deposits Attached Ragging			5		06			
47.6		CM	Crack Multiple					01	05		
49.5		DAE	Deposits Attached Encrustation			10		07	05		
51.3		DAE	Deposits Attached Encrustation			5		07	05		
52.3		DAE	Deposits Attached Encrustation			10		12	05		
53.2		CM	Crack Multiple					10	12		
53.2		DAE	Deposits Attached Encrustation			5		05			
53.5		TB	Tap Break-in/Hammer	100				11			
53.7		DAE	Deposits Attached Encrustation			5		07	05		
55.1		DAE	Deposits Attached Encrustation			10		07	05		
55.1		CL	Crack Longitudinal					12			
56.0		CM	Crack Multiple					01	03		
56.1		DAE	Deposits Attached Encrustation			5		03	05		
56.7		TBI	Tap Break-in Intruding	100	10			02			
57.0		DAE	Deposits Attached Encrustation			5		07	10		
57.9		CC	Crack Circumferential					07	05		
57.9		DAE	Deposits Attached Encrustation			5		10	02		
58.8		CL	Crack Longitudinal					02			
58.8		CL	Crack Longitudinal					07			
58.9		DAE	Deposits Attached Encrustation			10		07	05		
59.9		CC	Crack Circumferential					07	12		
61.5		CM	Crack Multiple					01	03		
62.2		CL	Crack Longitudinal					01			
63.4		CL	Crack Longitudinal					02			
67.2		CL	Crack Longitudinal					05			
69.1		DAE	Deposits Attached Encrustation			5		02			
70.9		CM	Crack Multiple					02	05		
71.7		CL	Crack Longitudinal					04			
71.8		CL	Crack Longitudinal					11			
75.5		DAE	Deposits Attached Encrustation			5		08	02		
76.5		DAE	Deposits Attached Encrustation			5		11	05		

Tabular Report of PSR SGM_05600

for CITY OF NIAGARA FALLS

Setup 13 Date 2018/12/15 Time 9:18 Up SMH_05005 Down SMH_05004

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
77.4			DAE Deposits Attached Encrustation			5		04			
78.4			DAE Deposits Attached Encrustation			5		07	05		
79.2			CL Crack Longitudinal					01			
79.9			DAR Deposits Attached Ragging			5		06			
80.2			DAE Deposits Attached Encrustation			5		05			
80.2			DAE Deposits Attached Encrustation			5		07			
80.3			TBI Tap Break-in Intruding	100	10			02			
81.4			TB Tap Break-in/Hammer	100				09			
82.0			CM Crack Multiple					09	11		
82.5			CM Crack Multiple					12	03		
85.7			CM Crack Multiple					03	05		
87.5			DAE Deposits Attached Encrustation			5		01	05		
88.4			DAE Deposits Attached Encrustation			5		12	05		
88.9			TBI Tap Break-in Intruding	100	20			11			
89.8		F01	JOM Joint Offset Medium								
89.8			MSA Miscellaneous Survey Abandoned								UNABLE TO PASS TBI

89.8 M Total Length Surveyed

Scores	Structural:	Pipe Rating 240	Pipe Ratings Index 2.8	Quick Rating 413L
	O&M:	Pipe Rating 84	Pipe Ratings Index 2	Quick Rating 412G
	Overall	Pipe Rating 324	Pipe Ratings Index 4.8	Quick Rating 423L

Tabular Report of PSR SGM_05600

for CITY OF NIAGARA FALLS

Setup 13	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05600_	Project		
Date 2019/01/03	Time 7:33	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/29	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CALLAN ST	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 92.6 M
Length Surveyed 92.6 M	Year Constructed	Year Renewed
Up SMH_05005	Rim to invert	Grade to invert
Northing	Easting	Elevation
Down SMH_05004	Rim to invert 2.40	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	<input type="checkbox"/> Structural <input type="checkbox"/> O & M	
Additional info	<input type="checkbox"/> Miscellaneous <input type="checkbox"/> Constructional	

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05004
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.1		LR Line Right			50					
2.6		CM Crack Multiple					11	02		
4.4		JSM Joint Separated Medium								
5.4		CM Crack Multiple					11	02		
6.2		DAE Deposits Attached Encrustation			5		07	05		
6.2		CM Crack Multiple					07	05		
7.2		DAE Deposits Attached Encrustation			5	J	07	05		
9.0		DAE Deposits Attached Encrustation			5	J	07	05		
10.1		DAE Deposits Attached Encrustation			5	J	07	05		
11.9		CM Crack Multiple					07	05		
15.6		JSM Joint Separated Medium								
16.6		JSM Joint Separated Medium								
18.4		JSM Joint Separated Medium								
20.3		JSM Joint Separated Medium								
20.6		TB Tap Break-in/Hammer	100				11			
21.2		DAE Deposits Attached Encrustation			5	J	07	05		
23.0		JSM Joint Separated Medium								
24.8		DAE Deposits Attached Encrustation			5	J	07	05		
26.7		DAE Deposits Attached Encrustation			5		07	05		

Tabular Report of PSR SGM_05600

for CITY OF NIAGARA FALLS

Setup 13 Date 2019/01/03 Time 7:33 Up SMH_05005 Down SMH_05004

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
28.6		JSM	Joint Separated Medium								
29.4		JSM	Joint Separated Medium								
31.3		JSM	Joint Separated Medium								
33.9		JSM	Joint Separated Medium								
34.6		TB	Tap Break-in/Hammer	100				11			
38.6		CL	Crack Longitudinal					01			
38.6		JSM	Joint Separated Medium								
39.5		DAE	Deposits Attached Encrustation			5		07	10		
39.5		CL	Crack Longitudinal					01			
41.4		DAE	Deposits Attached Encrustation			5		07	05		
42.2		DAE	Deposits Attached Encrustation			5		01	05		
43.2		JSM	Joint Separated Medium								
45.0		JSM	Joint Separated Medium								
46.9		JSM	Joint Separated Medium								
47.8		JSM	Joint Separated Medium								
49.6		DAE	Deposits Attached Encrustation			5		07	05		
51.5		DAE	Deposits Attached Encrustation			5		07	05		
52.5		DAE	Deposits Attached Encrustation			5		07	05		
53.5		DAE	Deposits Attached Encrustation			5		05			
53.5		JSM	Joint Separated Medium								
53.8		TB	Tap Break-in/Hammer	100				11			
54.3		DAE	Deposits Attached Encrustation			5		07	05		
55.3		DAE	Deposits Attached Encrustation			10		07	05		
56.3		CM	Crack Multiple					12	03		
56.6		TBI	Tap Break-in Intruding	5	100			02			
57.2		DAE	Deposits Attached Encrustation			5		07	05		
58.1		DAE	Deposits Attached Encrustation			5		07	05		
59.9		DAE	Deposits Attached Encrustation			10		07	05		
61.8		CM	Crack Multiple					12	03		
62.8		JSM	Joint Separated Medium								
66.5		JSM	Joint Separated Medium								
69.3		JSM	Joint Separated Medium								
71.2		JSM	Joint Separated Medium								
71.2		CL	Crack Longitudinal					03			
71.7		CL	Crack Longitudinal					04			
72.0		CL	Crack Longitudinal					11			
75.7		JSM	Joint Separated Medium								
75.7		DAE	Deposits Attached Encrustation			5		07	12		
76.6		DAE	Deposits Attached Encrustation			10		07	05		
78.6		DAE	Deposits Attached Encrustation			5		07	05		
80.6		TBI	Tap Break-in Intruding	5	100			02			
81.5		TF	Tap Factory	100				10			
81.9		CL	Crack Longitudinal					11			
82.8		CM	Crack Multiple					12	03		
84.9		JSM	Joint Separated Medium								
86.9		JSM	Joint Separated Medium								
87.7		DAE	Deposits Attached Encrustation			5		07	05		
88.7		DAE	Deposits Attached Encrustation			5		07	05		
89.5		TBI	Tap Break-in Intruding	5	100			10			
90.3		JSM	Joint Separated Medium								

Tabular Report of PSR SGM_05600

for CITY OF NIAGARA FALLS

Setup 13 **Date** 2019/01/03 **Time** 7:33 **Up** SMH_05005 **Down** SMH_05004

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
91.1		TF	Tap Factory	100				11			
91.7		CM	Crack Multiple					04	08		
92.6		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3497
92.6		AMH	Manhole								SMH_05005
92.6		FH	End of Survey								

92.6 M **Total Length Surveyed**

Scores	Structural:	Pipe Rating 108	Pipe Ratings Index 2.8	Quick Rating 3E26
	O&M:	Pipe Rating 67	Pipe Ratings Index 2.4	Quick Rating 5341
	Overall	Pipe Rating 175	Pipe Ratings Index 5.2	Quick Rating 5341

Tabular Report of PSR SGM_05601

for CITY OF NIAGARA FALLS

Setup	38	Surveyed By	PT-RSP	Certificate #	U-1017-07008775	Owner	City of Niagara Falls
Reviewed By	PT-BC	Reviewer #	U10180703002644	Work Order			
Customer	City of Niagara Falls	P/O #	RFP32-2018				
Media Label	SGM_05601_	Project					
Date	2018/11/29	Time	9:49	Weather	Dry - no Precipitation	Pre-Cleaning	L
Date Cleaned	2018/11/26						
Flow control		Survey Purpose	Maintenance Related	Direction	Up		
Inspection Status	Complete Inspection	Consequence Of Failure		Pressure	0.000		
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other						

Street	CALLAN ST	City	Niagara Falls	Drainage area	DRY
Location Code		Pipe Use	Sanitary Sewage Pipe		
Location details	COMPLETE	Height	200	Width	mm
Shape	Circular	Material	Vitrified Clay Pipe	Lining	
Coating		Pipe Joint length	M	Total length	131.1 M
Length Surveyed	131.1 M	Year Constructed		Year Renewed	
Up	SMH_05006	Rim to invert		Grade to invert	
Northing		Easting		Elevation	
Down	SMH_05007	Rim to invert	2.00	Grade to invert	
Northing		Easting		Elevation	
Coordinate System		Vertical Datum			
GPS Accuracy					
Additional info					Structural O & M Miscellaneous Constructional

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05007
0.0		MWL Miscellaneous Water Level			10					
1.1		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.1		FC Fracture Circumferential					05	07		
2.3		JOM Joint Offset Medium								
3.3		CM Crack Multiple					07	08		
4.1		JOM Joint Offset Medium								
4.6		CL Crack Longitudinal					01			
6.9		DAE Deposits Attached Encrustation			5		05	07		
7.4		JOM Joint Offset Medium								
9.7		CL Crack Longitudinal					07		0009	
9.7		DAE Deposits Attached Encrustation			5		07	09		
13.1		CL Crack Longitudinal					07			
14.1		CL Crack Longitudinal					08			
14.1		CM Crack Multiple					01	03		
15.1		DAE Deposits Attached Encrustation			10		07	12		
15.9		DAE Deposits Attached Encrustation			5		07	05		
17.8		DAE Deposits Attached Encrustation			5		05			
18.3		CM Crack Multiple					07	05		
18.7		DAE Deposits Attached Encrustation			5		07	05		
20.0		TBA Tap Break-in Activity	100				12			
20.1		TF Tap Factory	100				09			

Tabular Report of PSR SGM_05601

for CITY OF NIAGARA FALLS

Setup 38 Date 2018/11/29 Time 9:49 Up SMH_05006 Down SMH_05007

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
20.9		MMC	Miscellaneous Material Change								VCP TO PVC
21.4		TBI	Tap Break-in Intruding	5	100			09			
22.3		JOM	Joint Offset Medium								
22.3		MMC	Miscellaneous Material Change								PVC TO VCP
22.9		DAE	Deposits Attached Encrustation			10		07	05		
23.9		DAE	Deposits Attached Encrustation			5		05	07		
24.9		DAE	Deposits Attached Encrustation			5		07	05		
26.6		CL	Crack Longitudinal					10			
27.1		DAE	Deposits Attached Encrustation			5		07	05		
28.5		DAE	Deposits Attached Encrustation			5		07	05		
29.4		DAE	Deposits Attached Encrustation			5		07	05		
30.4		CL	Crack Longitudinal					12			
32.0		CM	Crack Multiple					10	02		
32.2		CL	Crack Longitudinal					05			
35.8		JOM	Joint Offset Medium								
36.8		DAE	Deposits Attached Encrustation			5		07	05		
37.6		DAE	Deposits Attached Encrustation			5		10	02		
38.4		CM	Crack Multiple					07	12		
39.0		JOM	Joint Offset Medium								
40.3		DAE	Deposits Attached Encrustation			10		07	05		
40.3		CL	Crack Longitudinal					03			
40.9		DAE	Deposits Attached Encrustation			5		07			
40.9		JOM	Joint Offset Medium								
42.2		DAE	Deposits Attached Encrustation			5		07	05		
43.1		TB	Tap Break-in/Hammer	100				02			
43.1		DAE	Deposits Attached Encrustation			10		09	03		
44.9		DAE	Deposits Attached Encrustation			10		07	05		
45.8		DAE	Deposits Attached Encrustation			10		07	05		
45.9		CC	Crack Circumferential					11	05		
47.7		DAE	Deposits Attached Encrustation			5		07	05		
47.7		CL	Crack Longitudinal					01			
48.6		JOM	Joint Offset Medium								
49.6		DAE	Deposits Attached Encrustation			5		12			
49.6		CL	Crack Longitudinal					01			
50.7		B	Broken					12			
51.1		DAE	Deposits Attached Encrustation			5		07	05		
51.1		CL	Crack Longitudinal					10			
51.4		FL	Fracture Longitudinal					09			
51.5		FL	Fracture Longitudinal					01			
51.9		TF	Tap Factory	100				09			
52.0		CM	Crack Multiple					12	02		
53.0		DAE	Deposits Attached Encrustation			5		07	05		
53.9		DAE	Deposits Attached Encrustation			10		07	05		
54.7		DAE	Deposits Attached Encrustation			10		07	05		
56.6		DAE	Deposits Attached Encrustation			5		07	05		
57.6		DAE	Deposits Attached Encrustation			10		07	05		
59.4		CM	Crack Multiple					10	02		
59.5		DAE	Deposits Attached Encrustation			5		07	05		
60.4		CL	Crack Longitudinal					07			
61.2		JOM	Joint Offset Medium								

Tabular Report of PSR SGM_05601

for CITY OF NIAGARA FALLS

Setup 38 Date 2018/11/29 Time 9:49 Up SMH_05006 Down SMH_05007

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
62.1		CM	Crack Multiple					10	03		
63.1		JOM	Joint Offset Medium								
63.5		TF	Tap Factory	100				09			
66.5		JOM	Joint Offset Medium								
69.3		JOM	Joint Offset Medium								
70.2		B	Broken					03			
70.7		CM	Crack Multiple					07	05		
73.8		CL	Crack Longitudinal					02			
77.5		JOM	Joint Offset Medium								
77.9		TF	Tap Factory	100				09			
79.0		CL	Crack Longitudinal					12			
79.9		CL	Crack Longitudinal					12			
80.9		DAE	Deposits Attached Encrustation			5		07	05		
81.8		DAE	Deposits Attached Encrustation			5		07	10		
83.6		DAE	Deposits Attached Encrustation			5		07	10		
87.4		DAE	Deposits Attached Encrustation			10		07	05		
87.5		TBA	Tap Break-in Activity	100				02			
88.2		DAE	Deposits Attached Encrustation			5		07	05		
92.2		DAE	Deposits Attached Encrustation			10		12	05		
95.1		TF	Tap Factory	100				09			
98.0		JOM	Joint Offset Medium								
98.9		DAE	Deposits Attached Encrustation			5		07			
99.9		DAE	Deposits Attached Encrustation			5		03	05		
100.7		DAE	Deposits Attached Encrustation			5		07	05		
101.7		DAE	Deposits Attached Encrustation			10		12	05		
107.7		TBA	Tap Break-in Activity	100				02			
107.9		CL	Crack Longitudinal					12			
107.9		DAE	Deposits Attached Encrustation			5		07			
109.8		DAE	Deposits Attached Encrustation			5		11	05		
112.7		DAE	Deposits Attached Encrustation			5		09			
112.7		CL	Crack Longitudinal					09			
114.0		TF	Tap Factory	100				09			
114.3		DAE	Deposits Attached Encrustation			5		01	05		
116.0		DAE	Deposits Attached Encrustation			5		01	05		
116.2		CM	Crack Multiple					09	03		
116.9		CM	Crack Multiple					10	02		
118.1		DAE	Deposits Attached Encrustation			5		03	05		
118.7		DAE	Deposits Attached Encrustation			5		07	05		
120.7		DAE	Deposits Attached Encrustation			5		07			
125.2		DAE	Deposits Attached Encrustation			5		12	05		
125.7		JOM	Joint Offset Medium								
126.2		CL	Crack Longitudinal					03			
126.8		JOM	Joint Offset Medium								
128.9		JOM	Joint Offset Medium								
128.9		CL	Crack Longitudinal					11			
129.4		TB	Tap Break-in/Hammer	100				03			
129.7		TB	Tap Break-in/Hammer	100				03			
131.1		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3540

Tabular Report of PSR SGM_05601

for CITY OF NIAGARA FALLS

Setup 38 Date 2018/11/29 Time 9:49 Up SMH_05006 Down SMH_05007

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
131.1			AMH Manhole								SMH_05006
131.1			FH End of Survey								

131.1 M Total Length Surveyed

Scores	Structural:	Pipe Rating	139	Pipe Ratings Index	2.6	Quick Rating	423E
	O&M:	Pipe Rating	101	Pipe Ratings Index	2.1	Quick Rating	512H
	Overall	Pipe Rating	240	Pipe Ratings Index	4.7	Quick Rating	5142

Tabular Report of PSR SGM_05609

for CITY OF NIAGARA FALLS

Setup 11	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05609_	Project		
Date 2018/11/07	Time 7:44	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/11/05	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CALLAN ST	City Niagara Falls	Drainage area DRY
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 125.4 M
Length Surveyed 125.2 M	Year Constructed	Year Renewed
Up SMH_04984	Rim to invert 2.80	Grade to invert
Northing	Easting	Elevation
Down SMH_04981	Rim to invert 2.70	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04981
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.8		JOM Joint Offset Medium								
2.7	S01	CL Crack Longitudinal					12			
2.7		DAE Deposits Attached Encrustation			10		02	05		
5.1	F01	CL Crack Longitudinal					12			
6.2		DAE Deposits Attached Encrustation			5	J	03	05		
7.2		DAE Deposits Attached Encrustation			5		10	02		
8.1		JOM Joint Offset Medium								
9.0		DAE Deposits Attached Encrustation			5	J	12	05		
10.0		JOM Joint Offset Medium								
10.9		JOM Joint Offset Medium								
11.7		CL Crack Longitudinal					01			
11.8		JOM Joint Offset Medium								
12.8		DAE Deposits Attached Encrustation			5	J	07	05		
14.5		DAE Deposits Attached Encrustation			12		05			
15.4		DAE Deposits Attached Encrustation			5	J	07	05		
15.4		CM Crack Multiple				J	07	05		AROUND JOINT
16.4		JOM Joint Offset Medium								
16.5	S02	DAE Deposits Attached Encrustation			5		07	05		
17.2		JOM Joint Offset Medium								

Tabular Report of PSR SGM_05609

for CITY OF NIAGARA FALLS

Setup 11 Date 2018/11/07 Time 7:44 Up SMH_04984 Down SMH_04981

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
18.1			DAE Deposits Attached Encrustation			5		12	05		
19.1			JOM Joint Offset Medium								
19.1		F02	DAE Deposits Attached Encrustation			5		07	05		
19.9			DAE Deposits Attached Encrustation			5		07	12		
20.8			DAE Deposits Attached Encrustation			5	J	07	05		
22.7			JOM Joint Offset Medium								
23.3			CL Crack Longitudinal					02			
24.6			CM Crack Multiple					09	12		
24.9		S03	DAE Deposits Attached Encrustation			5		07	05		
25.4			JOM Joint Offset Medium								
29.1			CL Crack Longitudinal					01			
29.1			JOM Joint Offset Medium								
29.4		F03	DAE Deposits Attached Encrustation			5		07	05		
30.0			DAE Deposits Attached Encrustation			10		07	05		
31.4			DAE Deposits Attached Encrustation			5		07	05		
32.8			CC Crack Circumferential					09	12		
34.5			CL Crack Longitudinal					12			
34.8			CM Crack Multiple					11	02		
35.7			DAE Deposits Attached Encrustation			5	J	05			
36.5			CL Crack Longitudinal					01			
37.7			DAE Deposits Attached Encrustation			5	J	05			
39.6			JOM Joint Offset Medium								
45.0			JOM Joint Offset Medium								
46.6			DAE Deposits Attached Encrustation			5	J	07	12		
50.9			ISB Infiltration Stain Barrel					07	08		COMING FROM CRACK
50.9			CL Crack Longitudinal					08			
53.0		S04	DAE Deposits Attached Encrustation			5	J	12	05		POSITION WANDERS
53.7			CL Crack Longitudinal					10			
60.1			CM Crack Multiple				J	11	03		
60.9			CL Crack Longitudinal					12			
61.8			JOM Joint Offset Medium								
62.5			CM Crack Multiple					09	03		
62.5			TBA Tap Break-in Activity	100				11			
62.8			TB Tap Break-in/Hammer	100				03			
73.1			CL Crack Longitudinal					05			
76.1			MWL Miscellaneous Water Level			45					
76.1			CL Crack Longitudinal					12			
76.4			CM Crack Multiple					12	02		
78.4		S05	B Broken					07	05		
78.6			JOM Joint Offset Medium								
78.6			FM Fracture Multiple					07	05		
79.1			TB Tap Break-in/Hammer	100				10			
79.2			HSV Hole Soil Visible					08			
79.2			H Hole					10			
79.2			FH3 Fracture Longitudinal Hinge, 3					06	12		
79.4			TF Tap Factory	100				02			
80.0		F05	B Broken					07	05		
91.9			JOM Joint Offset Medium								
91.9			CM Crack Multiple					04	05		
93.1			JOM Joint Offset Medium								

Tabular Report of PSR SGM_05609

for CITY OF NIAGARA FALLS

Setup 11 Date 2018/11/07 Time 7:44 Up SMH_04984 Down SMH_04981

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
93.7		TBA	Tap Break-in Activity	100				11			
94.4		TBA	Tap Break-in Activity	100				03			
96.2		CL	Crack Longitudinal					11			
96.3		CL	Crack Longitudinal					02			
96.7		CM	Crack Multiple					11	05		
97.4		CL	Crack Longitudinal					02			
101.0		FM	Fracture Multiple					11	12		
106.4		CM	Crack Multiple					10	02		
107.6		RFJ	Roots Fine Joint				J	07	09		
108.3		RMJ	Roots Medium Joint			5	J	07	05		
108.3		CM	Crack Multiple					12	05		
108.8		TB	Tap Break-in/Hammer	100				11			
108.8		RML	Roots Medium Lateral			5		11			
109.1		RFL	Roots Fine Lateral					02			
109.2		TB	Tap Break-in/Hammer	100				02			
111.8		CC	Crack Circumferential					10	03		
112.5		CL	Crack Longitudinal					11			
113.1		CM	Crack Multiple					10	02		
113.5		TB	Tap Break-in/Hammer	100				01			
114.8		CM	Crack Multiple					10	03		
121.4		CC	Crack Circumferential					07	03		
123.3		CM	Crack Multiple					07	05		
123.7	F04	DAE	Deposits Attached Encrustation			5	J	12	05		POSITION WANDERS
124.6		CM	Crack Multiple					11	03		
125.2		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 8198
125.2		AMH	Manhole								SMH_04984
125.2		FH	End of Survey								

125.2 M Total Length Surveyed

Scores			
Structural:	Pipe Rating	151	Quick Rating 5145
O&M:	Pipe Rating	148	Quick Rating 332L
Overall	Pipe Rating	299	Quick Rating 5145
	Pipe Ratings Index	2.7	
	Pipe Ratings Index	2	
	Pipe Ratings Index	4.7	

Tabular Report of PSR SGM_05623

for CITY OF NIAGARA FALLS

Setup 18	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05623_	Project		
Date 2018/12/11	Time 10:09	Weather Snow	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/01	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street PARLIAMENT AV	City Niagara Falls	Drainage area SNOW
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 116.3 M
Length Surveyed 102.3 M	Year Constructed	Year Renewed
Up SMH_05089	Rim to invert 2.70	Grade to invert
Northing	Easting	Elevation
Down SMH_05090	Rim to invert 2.90	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05090
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING AT HOUSE 8863
0.0		DAE Deposits Attached Encrustation			10	11	04			
1.0		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
1.0		TBI Tap Break-in Intruding	100	10			02			
1.1		DAE Deposits Attached Encrustation			5		01	04		
4.1		TBI Tap Break-in Intruding	100	5			10			
4.4		DAE Deposits Attached Encrustation			5		07	11		
18.0		TBI Tap Break-in Intruding	100	5			02			
18.3		DAE Deposits Attached Encrustation			5		02	05		
19.7		TB Tap Break-in/Hammer	100				10			
20.0		DAE Deposits Attached Encrustation			5		07	11		
20.0		IR Infil Runner					10			FROM UNDER CONNECTION
21.6		TBI Tap Break-in Intruding	100	5			10			
21.8		DAE Deposits Attached Encrustation			5		07	09		
23.9		MWL Miscellaneous Water Level			15					
25.9		MWL Miscellaneous Water Level			10					
29.7		MWL Miscellaneous Water Level			15					
31.9		MWL Miscellaneous Water Level			10					
36.0		TBI Tap Break-in Intruding	100	5			02			
38.2		TBI Tap Break-in Intruding	100	5			02			
38.5		DAE Deposits Attached Encrustation			5		07	11		

Tabular Report of PSR SGM_05623

for CITY OF NIAGARA FALLS

Setup 18 Date 2018/12/11 Time 10:09 Up SMH_05089 Down SMH_05090

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
42.9		JSM	Joint Separated Medium								
45.6		MWL	Miscellaneous Water Level			15					
46.7		SSS	Surface Damage Surface Spalling				J	09			
51.3		MWL	Miscellaneous Water Level			10					
54.5		TBI	Tap Break-in Intruding	100	5			02			
59.7		SSS	Surface Damage Surface Spalling					02			
59.9		SSS	Surface Damage Surface Spalling					02	03		
60.0		MWL	Miscellaneous Water Level			15					
61.2		MWL	Miscellaneous Water Level			20					
62.3		SSS	Surface Damage Surface Spalling					02			
62.9		MWL	Miscellaneous Water Level			15					
64.5		MWL	Miscellaneous Water Level			10					
68.7		SSS	Surface Damage Surface Spalling					09	03		
72.0		SSS	Surface Damage Surface Spalling					10			
74.1		SSS	Surface Damage Surface Spalling					01	02		
76.9		TBI	Tap Break-in Intruding	100	5			02			
77.2		MWL	Miscellaneous Water Level			15					
78.3		SSS	Surface Damage Surface Spalling					02			
78.6		SSS	Surface Damage Surface Spalling					02			
80.7		SSS	Surface Damage Surface Spalling					09			
81.5		SSS	Surface Damage Surface Spalling					09			
82.0		SSS	Surface Damage Surface Spalling					09			
83.3		SSS	Surface Damage Surface Spalling					09			
83.8		SSS	Surface Damage Surface Spalling					03			
84.5		SSS	Surface Damage Surface Spalling					04			
84.8		MWL	Miscellaneous Water Level			10					
92.2		SSS	Surface Damage Surface Spalling					10			
94.1		MWL	Miscellaneous Water Level			15					
95.2		MWL	Miscellaneous Water Level			20					
99.6		MWL	Miscellaneous Water Level			15					
100.4		MWL	Miscellaneous Water Level			10					
101.9		IR	Infil Runner					12			
101.9		DAE	Deposits Attached Encrustation			10		07	05		
102.3		MGO	Miscellaneous General Observation								FINISH AT HOUSE 8778
102.3		AMH	Manhole								SMH_05089
102.3		FH	End of Survey								

102.3 M Total Length Surveyed

Scores	Structural:	Pipe Rating 35	Pipe Ratings Index 2.1	Quick Rating 312B
	O&M:	Pipe Rating 40	Pipe Ratings Index 2.2	Quick Rating 422B
	Overall	Pipe Rating 75	Pipe Ratings Index 4.3	Quick Rating 4231

Tabular Report of PSR SGM_05627

for CITY OF NIAGARA FALLS

Setup 22	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05627_	Project		
Date 2018/12/10	Time 11:16	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/01	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CHAMPLAIN DR	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details SA SURCHARGED	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 111.6 M
Length Surveyed 2.6 M	Year Constructed	Year Renewed
Up SMH_05088	Rim to invert 2.60	Grade to invert
Northing	Easting	Elevation
Down SMH_05078	Rim to invert 3.30	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info	UNABLE TO PASS HIGH WATER LEVEL	

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr To	ImRef	Remarks
0.0		ST Start of Survey							
0.0		AMH Manhole							SMH_05078
0.0		MWL Miscellaneous Water Level			15				
0.0		MGO Miscellaneous General Observation							STARTING AT HOUSE 8624
1.0		MGO Miscellaneous General Observation							CABLE ADJUSTED TO SET POINT
1.0		DAE Deposits Attached Encrustation			10	08	04		
1.5		MWL Miscellaneous Water Level			25				
1.8		MWL Miscellaneous Water Level			40				
2.3		LL Line Left			5				
2.4		MWL Miscellaneous Water Level			50				
2.6		MCU Miscellaneous Camera Underwater							
2.6		MSA Miscellaneous Survey Abandoned							DUE TO WATER LEVEL

2.6 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 7	Pipe Ratings Index 2.3	Quick Rating 4121
	Overall Pipe Rating 7	Pipe Ratings Index 2.3	Quick Rating 4121

Tabular Report of PSR SGM_05627

for CITY OF NIAGARA FALLS

Setup 37	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05627_	Project		
Date 2018/12/10	Time 11:43	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/01	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CHAMPLAIN DR	City Niagara Falls	Drainage area DRY				
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe					
Location details SA SURCHARGED	Height 200	Width mm				
Shape Circular	Material Vitrified Clay Pipe	Lining				
Coating	Pipe Joint length M	Total length 111.6 M				
Length Surveyed 100.0 M	Year Constructed	Year Renewed				
Up SMH_05088	Rim to invert 2.60	Grade to invert				
Northing	Easting	Elevation				
Down SMH_05078	Rim to invert 3.30	Grade to invert				
Northing	Easting	Elevation				
Coordinate System	Vertical Datum					
GPS Accuracy	<table border="1"> <tr> <td>Structural</td> <td>O & M</td> </tr> <tr> <td>Miscellaneous</td> <td>Constructional</td> </tr> </table>		Structural	O & M	Miscellaneous	Constructional
Structural	O & M					
Miscellaneous	Constructional					
Additional info UNABLE TO PASS HIGH WATER LEVEL						

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05088
0.0		MWL Miscellaneous Water Level			15					
0.0		MGO Miscellaneous General Observation								STARTING AT HOUSE 8683
1.0		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
2.5		TBI Tap Break-in Intruding	100	10			02			
2.6		DAE Deposits Attached Encrustation			5		01	05		
3.7		MWL Miscellaneous Water Level			10					
8.4		SAM Surface Damage Aggregate Missing					J	03		
17.8		TBI Tap Break-in Intruding	100	10			10			
17.9		DAE Deposits Attached Encrustation			5		08	11		
19.7		TBI Tap Break-in Intruding	100	10			03			
20.0		ID Infil Dripper					01			
20.0		DAE Deposits Attached Encrustation			15		12	04		
34.2		MWL Miscellaneous Water Level			15					
35.2		MWL Miscellaneous Water Level			20					
36.1		TBI Tap Break-in Intruding	100	10			10			
37.4		TBI Tap Break-in Intruding	100	10			02			
37.6		DAE Deposits Attached Encrustation			5		01	02		
39.2		MWL Miscellaneous Water Level			15					
40.0		MWL Miscellaneous Water Level			10					
42.2		MWL Miscellaneous Water Level			15					
45.0		MWL Miscellaneous Water Level			10					
53.0		MWL Miscellaneous Water Level			15					

Tabular Report of PSR SGM_05627

for CITY OF NIAGARA FALLS

Setup 37 Date 2018/12/10 Time 11:43 Up SMH_05088 Down SMH_05078

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
54.7		TBI	Tap Break-in Intruding	100	5			10			
55.0		DAE	Deposits Attached Encrustation			5		08	11		
56.1		TBI	Tap Break-in Intruding	100	10			02			
56.3		DAE	Deposits Attached Encrustation			5		01	05		
58.1		MWL	Miscellaneous Water Level			10					
72.2		MWL	Miscellaneous Water Level			15					
73.3		TBI	Tap Break-in Intruding	100	5			10			
73.5		DAE	Deposits Attached Encrustation			5		08	11		
73.7		TBI	Tap Break-in Intruding	100	10			02			
73.8		DAE	Deposits Attached Encrustation			5		02	04		
74.0		MWL	Miscellaneous Water Level			20					
75.5		MWL	Miscellaneous Water Level			25					
78.4		MWL	Miscellaneous Water Level			20					
79.5		MWL	Miscellaneous Water Level			15					
81.9		MWL	Miscellaneous Water Level			10					
90.7		TBI	Tap Break-in Intruding	100	10			02			
90.9		DAE	Deposits Attached Encrustation			5		01	03		
92.5		TBI	Tap Break-in Intruding	100	10			10			
92.6		IR	Infil Runner					09			UNDER CONNECTION
92.7		DAE	Deposits Attached Encrustation			5		09	11		
93.0		MWL	Miscellaneous Water Level			15					
95.3		DAGS	Deposits Attached Grease			5		02			
95.3		VZ	Vermin Other	1							WORM
96.6		MWL	Miscellaneous Water Level			20					
97.8		MWL	Miscellaneous Water Level			30					
98.6		MWL	Miscellaneous Water Level			40					
98.7		DAGS	Deposits Attached Grease			5		10	02		
98.9		DAGS	Deposits Attached Grease			15		10	02		
99.7		DAGS	Deposits Attached Grease			20		10	02		
99.8		MWL	Miscellaneous Water Level			50					
99.8		MCU	Miscellaneous Camera Underwater								
100.0		MSA	Miscellaneous Survey Abandoned								DUE TO WATER LEVEL

100.0 M Total Length Surveyed

Scores	Structural:	Pipe Rating 4	Pipe Ratings Index 4	Quick Rating 4100
	O&M:	Pipe Rating 65	Pipe Ratings Index 2.2	Quick Rating 4234
	Overall	Pipe Rating 69	Pipe Ratings Index 6.2	Quick Rating 4334

Tabular Report of PSR SGM_05673

for CITY OF NIAGARA FALLS

Setup 17	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05673_	Project		
Date 2018/11/01	Time 9:46	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/30	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CATTELL DR	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 57.3 M
Length Surveyed 57.0 M	Year Constructed	Year Renewed
Up SMH_05139	Rim to invert 3.90	Grade to invert
Northing	Easting	Elevation
Down SMH_05138	Rim to invert 4.80	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST								Start of Survey
0.0		AMH								Manhole SMH_05138
0.0		MWL			10					Miscellaneous Water Level
1.1		MGO								Miscellaneous General Observation
1.1		MGO								Miscellaneous General Observation
1.1		S01					07	05		Surface Damage Roughness Increase
1.6		DAE			5	J	07			Deposits Attached Encrustation
2.4		ISJ				J	09	12		Infiltration Stain Joint
2.6		DAE			5	J	05			Deposits Attached Encrustation
4.0		IWJ				J	07	12		Infiltration Weeper Joint
4.0		S02				J	03	05		Infiltration Stain Joint
5.5		S03				J	07	12		Infiltration Stain Joint
8.7		CL					09			Crack Longitudinal
9.9		DAE			5	J	07	05		Deposits Attached Encrustation
10.1		IG					12			Infil Gusher
11.1		TF	100				12			Tap Factory
11.1		DAE			5		03	05		Deposits Attached Encrustation
14.8		DAE			5	J	07	05		Deposits Attached Encrustation
17.9		F02				J	03	05		Infiltration Stain Joint
17.9		F03				J	07	12		Infiltration Stain Joint
19.3		DAE			5		07	05		Deposits Attached Encrustation
22.4		DAE			5	J	07	05		Deposits Attached Encrustation
25.1		TF	100				11			Tap Factory
25.1		DAE			5		07	09		Deposits Attached Encrustation

Tabular Report of PSR SGM_05673

for CITY OF NIAGARA FALLS

Setup 17 Date 2018/11/01 Time 9:46 Up SMH_05139 Down SMH_05138

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
25.5		CM	Crack Multiple					08	04		
29.6		DAE	Deposits Attached Encrustation			5		03	05		
29.8		TFA	Tap Factory Activity	100				02			
32.8		DAE	Deposits Attached Encrustation			5		07	05		
34.8		CL	Crack Longitudinal					03			
37.6		DAE	Deposits Attached Encrustation			5	J	12	05		
43.5		TF	Tap Factory	100				11			
45.3		CL	Crack Longitudinal					09			
48.2		DAE	Deposits Attached Encrustation			5	J	07	05		
51.0		DAE	Deposits Attached Encrustation			5		03	05		
51.2		TFC	Tap Factory Capped	100				02			
51.2		MGO	Miscellaneous General Observation								CAPPED
51.2		DAE	Deposits Attached Encrustation			5	J	03	05		
51.2		DAE	Deposits Attached Encrustation			5	J	07	10		
51.2		CL	Crack Longitudinal					01			
51.2		RFL	Roots Fine Lateral					02			
51.7		TF	Tap Factory	100				02			
54.0		ISJ	Infiltration Stain Joint				J	02	05		
54.0		ISJ	Infiltration Stain Joint				J	07	10		
57.0		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3135
57.0		AMH	Manhole								SMH_05139
57.0		FH	End of Survey								
57.0	F01	SRI	Surface Damage Roughness Increase					07	05		

57.0 M Total Length Surveyed

Scores			
Structural:	Pipe Rating	48	Quick Rating 3124
O&M:	Pipe Rating	58	Quick Rating 512B
Overall	Pipe Rating	106	Quick Rating 5131
	Pipe Ratings Index	1.1	
	Pipe Ratings Index	1.5	
	Pipe Ratings Index	2.6	

Tabular Report of PSR SGM_05676

for CITY OF NIAGARA FALLS

Setup 21	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05676_	Project		
Date 2018/12/13	Time 12:28	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/04	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CATTELL DR	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 375	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 100.4 M
Length Surveyed 99.8 M	Year Constructed	Year Renewed
Up SMH_05136	Rim to invert 0.00	Grade to invert
Northing	Easting	Elevation
Down SMH_05130	Rim to invert 5.20	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05130
0.0		MWL Miscellaneous Water Level			20					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
7.9		TBI Tap Break-in Intruding	5	100			12			
8.6		DAE Deposits Attached Encrustation			5		07	05		
10.5		DAE Deposits Attached Encrustation			5		07	05		
12.4		B Broken					07	05		
14.1		B Broken				J	07	05		
15.9		B Broken					07	11		
16.1		CC Crack Circumferential					07	05		
17.8		B Broken				J	07	05		
21.4		DAE Deposits Attached Encrustation			5		07	05		
22.4		TBA Tap Break-in Activity	100				11			
23.2		B Broken				J	07	05		
25.1		DAE Deposits Attached Encrustation			5		07	05		
26.2		TB Tap Break-in/Hammer	100				12			
27.0		B Broken				J	07	05		
28.8		B Broken				J	07	05		
30.6		B Broken				J	07	05		
34.3		B Broken				J	12	05		
36.2		DAE Deposits Attached Encrustation			5		07			
38.1		DAE Deposits Attached Encrustation			5		07	05		
39.8		DAE Deposits Attached Encrustation			5		07	05		

Tabular Report of PSR SGM_05676

for CITY OF NIAGARA FALLS

Setup 21 Date 2018/12/13 Time 12:28 Up SMH_05136 Down SMH_05130

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
40.9		TB	Tap Break-in/Hammer	100				11			
41.3		DAE	Deposits Attached Encrustation			5		03	05		
41.5		DAE	Deposits Attached Encrustation			5		07			
44.3		TBA	Tap Break-in Activity	100				12			
52.6		DAE	Deposits Attached Encrustation			5		12	05		
56.1		DAE	Deposits Attached Encrustation			5		07	05		
61.1		TB	Tap Break-in/Hammer	100				11			
64.7		TBA	Tap Break-in Activity	100				02			
65.6		B	Broken				J	10	02		
69.2		FM	Fracture Multiple					07	05		
70.9		B	Broken				J	10	02		
72.7		DAE	Deposits Attached Encrustation			5		07	05		
74.5		DAE	Deposits Attached Encrustation			5		05			
78.2		DAE	Deposits Attached Encrustation			5		10	02		
85.5		DAE	Deposits Attached Encrustation			5		07	05		
86.8		TB	Tap Break-in/Hammer	100				01			
89.2		DAE	Deposits Attached Encrustation			5		02	05		
91.1		DAE	Deposits Attached Encrustation			5		07	05		
92.8		DAE	Deposits Attached Encrustation			5		07	05		
97.6		MMC	Miscellaneous Material Change								CP TO PVC
99.8		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3148
99.8		AMH	Manhole								SMH_05136
99.8		FH	End of Survey								

99.8 M Total Length Surveyed

Scores			
Structural:	Pipe Rating	49	Pipe Ratings Index 3.8
O&M:	Pipe Rating	40	Pipe Ratings Index 2.1
Overall	Pipe Rating	89	Pipe Ratings Index 5.9
			Quick Rating 4A11
			Quick Rating 412B
			Quick Rating 4A2B

Tabular Report of PSR SGM_05680

for CITY OF NIAGARA FALLS

Setup 25	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05680_	Project		
Date 2018/12/12	Time 7:03	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/04	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CATTELL DR	City Niagara Falls	Drainage area DRY
Location Code Secondary roads, non-numbered suburban/rural for heavy vehicles	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 375	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 61.5 M
Length Surveyed 62.0 M	Year Constructed	Year Renewed
Up SMH_05059	Rim to invert 4.70	Grade to invert
Northing	Easting	Elevation
Down SMH_05060	Rim to invert 3.20	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05059
0.0		MWL Miscellaneous Water Level			30					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.2		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
2.7		B Broken					07			
2.7		FM Fracture Multiple					12	05		
4.5		B Broken				J	07	05		
6.7		B Broken				J	07			
8.1		B Broken				J	07			
9.2		TB Tap Break-in/Hammer	150				12			
10.0		B Broken				J	03	05		
15.6		CL Crack Longitudinal					12			
16.3		TBA Tap Break-in Activity	150				11			
17.3		B Broken				J	07	09		
17.3		B Broken				J	05			
19.2		B Broken				J	07	05		
20.9		B Broken				J	07	05		
21.1		MWL Miscellaneous Water Level			10					
22.5		B Broken				J	07	05		
24.4		B Broken				J	07	05		
26.3		B Broken				J	07	05		
28.2		B Broken				J	02	05		
31.7		B Broken				J	07	05		

Tabular Report of PSR SGM_05680

for CITY OF NIAGARA FALLS

Setup 25 Date 2018/12/12 Time 7:03 Up SMH_05059 Down SMH_05060

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
32.7		TB	Tap Break-in/Hammer	100				01			
37.3		B	Broken				J	07	05		
39.1		B	Broken				J	05			
41.2		CC	Crack Circumferential				J	07	05		
42.9		B	Broken				J	07	05		
44.6		B	Broken				J	05			
44.6		B	Broken				J	07			
46.2		MWL	Miscellaneous Water Level			40					
46.5		B	Broken				J	05			
50.3		MWL	Miscellaneous Water Level			60					
51.1		TB	Tap Break-in/Hammer	100				11			
52.2		B	Broken				J	05			
53.9		B	Broken				J	07	05		
55.9		JSM	Joint Separated Medium								
59.7		B	Broken				J	07	05		
60.8		FL	Fracture Longitudinal					05			
62.0		MGO	Miscellaneous General Observation								FINISH BEHIND HOUSE 3303
62.0		AMH	Manhole								SMH_05060
62.0		FH	End of Survey								

62.0 M Total Length Surveyed

Scores	Structural:	Pipe Rating	105	Pipe Ratings Index	3.8	Quick Rating	4C32
	O&M:	Pipe Rating	0	Pipe Ratings Index	0	Quick Rating	0000
	Overall	Pipe Rating	105	Pipe Ratings Index	3.8	Quick Rating	4C32

Tabular Report of PSR SGM_05681

for CITY OF NIAGARA FALLS

Setup 26	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05681_	Project		
Date 2018/12/12	Time 7:56	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/04	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CATTELL DR	City Niagara Falls	Drainage area DRY
Location Code Secondary roads, non-numbered suburban/rural for heavy vehicles	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 375	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 73.0 M
Length Surveyed 74.9 M	Year Constructed	Year Renewed
Up SMH_05060	Rim to invert 3.20	Grade to invert
Northing	Easting	Elevation
Down SMH_05062	Rim to invert 4.80	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05060
0.0		MWL Miscellaneous Water Level			20					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.2		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
7.4		B Broken				J	05			
7.4		B Broken				J	07			
7.9		TBI Tap Break-in Intruding	150	10			12			
9.9		B Broken				J	05			
9.9		B Broken				J	07			
11.0		B Broken				J	07			
11.5		TBI Tap Break-in Intruding	100	10			12			
12.1		B Broken				J	05			
12.1		B Broken				J	07			
15.8		B Broken				J	07	05		
17.2		SAV Surface Damage Aggregate Visible					07	05		
18.3		JSM Joint Separated Medium								
25.6		JSM Joint Separated Medium								
26.1		TBI Tap Break-in Intruding	100	10			01			
31.1		TBI Tap Break-in Intruding	100	10			11			
37.8		B Broken				J	07	05		
39.2		B Broken				J	07			
43.1		TBI Tap Break-in Intruding	100	10			12			
44.0		B Broken				J	07	05		

Tabular Report of PSR SGM_05681

for CITY OF NIAGARA FALLS

Setup 26 Date 2018/12/12 Time 7:56 Up SMH_05060 Down SMH_05062

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
48.8		B	Broken				J	07			
49.4		TB	Tap Break-in/Hammer	100				11			
50.1		JSM	Joint Separated Medium								
52.7		JSM	Joint Separated Medium								
53.8		JSM	Joint Separated Medium								
61.6		TBI	Tap Break-in Intruding	100	10			01			
68.9		TB	Tap Break-in/Hammer	100				11			
71.2		MWL	Miscellaneous Water Level			60					
74.9		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3327
74.9		AMH	Manhole								SMH_05062
74.9		FH	End of Survey								

74.9 M Total Length Surveyed

Scores	Structural:	Pipe Rating 65	Pipe Ratings Index 3.6	Quick Rating 4A35
	O&M:	Pipe Rating 12	Pipe Ratings Index 2	Quick Rating 2600
	Overall	Pipe Rating 77	Pipe Ratings Index 5.6	Quick Rating 4A35

Tabular Report of PSR SGM_05698

for CITY OF NIAGARA FALLS

Setup 30	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05698_	Project		
Date 2018/12/11	Time 12:33	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2018/11/28			
Flow control	Survey Purpose Maintenance Related	Direction Up	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street MUNDARE CR	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 85.0 M
Length Surveyed 91.0 M	Year Constructed	Year Renewed
Up SMH_05002	Rim to invert 2.90	Grade to invert
Northing	Easting	Elevation
Down SMH_05001	Rim to invert 3.30	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05001
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.7		TF Tap Factory	100				11			
6.2		TF Tap Factory	100				02			
10.7		TF Tap Factory	100				02			
15.3		TF Tap Factory	100				11			
19.2		CM Crack Multiple					10	02		
19.8		TF Tap Factory	100				11			
22.1		IG Infil Gusher				J	12	02		
24.3		TF Tap Factory	100				02			
28.9		TF Tap Factory	100				02			
33.5		TF Tap Factory	100				11			
38.1		TF Tap Factory	100				11			
42.5		TF Tap Factory	100				02			
47.0		TFA Tap Factory Activity	100				02			
51.7		TF Tap Factory	100				11			
60.1		TFA Tap Factory Activity	100				11			
60.4		TFA Tap Factory Activity	100				02			
65.3		TF Tap Factory	100				02			
73.8		TF Tap Factory	100				11			
76.1		IG Infil Gusher				J	11			

Tabular Report of PSR SGM_05698

for CITY OF NIAGARA FALLS

Setup 30 Date 2018/12/11 Time 12:33 Up SMH_05002 Down SMH_05001

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
76.1		IG Infil Gusher				J	11			
78.3		TF Tap Factory	100				11			
79.0		TF Tap Factory	100				01			
83.5		TF Tap Factory	100				02			
91.0		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 8272
91.0		AMH Manhole								SMH_05002
91.0		FH End of Survey								

91.0 M Total Length Surveyed

Scores	Structural:	Pipe Rating 3	Pipe Ratings Index 3	Quick Rating 3100
	O&M:	Pipe Rating 15	Pipe Ratings Index 5	Quick Rating 5300
	Overall	Pipe Rating 18	Pipe Ratings Index 8	Quick Rating 5331

Tabular Report of PSR SGM_05699

for CITY OF NIAGARA FALLS

Setup 31	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05699_	Project		
Date 2018/12/05	Time 14:19	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/11/27	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street MUNDARE CR	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 77.2 M
Length Surveyed 77.6 M	Year Constructed	Year Renewed
Up SMH_04992	Rim to invert 3.00	Grade to invert
Northing	Easting	Elevation
Down SMH_05002	Rim to invert 2.70	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05002
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
1.6		TB Tap Break-in/Hammer	100				10			
6.1		TB Tap Break-in/Hammer	100				02			
6.7		TB Tap Break-in/Hammer	100				10			
11.3		TB Tap Break-in/Hammer	100				02			
15.6		CM Crack Multiple					07	05		
19.8		TB Tap Break-in/Hammer	100				10			
24.4		TB Tap Break-in/Hammer	100				02			
28.9		TB Tap Break-in/Hammer	100				10			
29.6		TB Tap Break-in/Hammer	100				02			
34.3		CL Crack Longitudinal					12			
41.8		TBA Tap Break-in Activity	100				02			
48.4		IR Infil Runner					J	05		
48.4		IR Infil Runner					J	07		
50.4		TB Tap Break-in/Hammer	100				02			
50.9		JSM Joint Separated Medium								
53.6		MWL Miscellaneous Water Level			5					
62.8		TB Tap Break-in/Hammer	100				02			
67.3		TB Tap Break-in/Hammer	100				01			
76.9		DAE Deposits Attached Encrustation			5		03	05		

Tabular Report of PSR SGM_05699

for CITY OF NIAGARA FALLS

Setup 31 **Date** 2018/12/05 **Time** 14:19 **Up** SMH_04992 **Down** SMH_05002

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
77.6		MGO	Miscellaneous General Observation								FINISH AT HOUSE 8226
77.6		AMH	Manhole								SMH_04992
77.6		FH	End of Survey								

77.6 M **Total Length Surveyed**

Scores	Structural:	Pipe Rating 8	Pipe Ratings Index 2.7	Quick Rating 3221
	O&M:	Pipe Rating 10	Pipe Ratings Index 3.3	Quick Rating 4221
	Overall	Pipe Rating 18	Pipe Ratings Index 6	Quick Rating 4232

Tabular Report of PSR SGM_05735

for CITY OF NIAGARA FALLS

Setup 27	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05735_	Project		
Date 2019/01/04	Time 11:06	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2018/12/11
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used			
<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other			

Street BRIDGEWATER ST	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 450	Width mm
Shape Circular	Material Reinforced Concrete Pipe	Lining
Coating	Pipe Joint length M	Total length 93.0 M
Length Surveyed 93.2 M	Year Constructed	Year Renewed
Up SMH_04941	Rim to invert 4.60	Grade to invert
Northing	Easting	Elevation
Down SMH_04940	Rim to invert 4.80	Grade to invert
Northing	Easting	Elevation
Coordinate System		Vertical Datum
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04941
0.0		MWL Miscellaneous Water Level			20					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.3		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
38.8		TB Tap Break-in/Hammer	100					11		
41.9		IG Infil Gusher						09		
57.2		TB Tap Break-in/Hammer	100					12		
93.2		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3994
93.2		AMH Manhole								SMH_04940
93.2		FH End of Survey								

93.2 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 5	Pipe Ratings Index 5	Quick Rating 5100
	Overall Pipe Rating 5	Pipe Ratings Index 5	Quick Rating 5100

Tabular Report of PSR SGM_05747

for CITY OF NIAGARA FALLS

Setup 22	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05747_	Project		
Date 2018/10/31	Time 10:56	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/30	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street USSHER ST	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Secondary roads, non-numbered suburban/rural for heavy vehicles	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 300	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 54.6 M
Length Surveyed 50.5 M	Year Constructed	Year Renewed
Up SMH_05155	Rim to invert 2.70	Grade to invert
Northing	Easting	Elevation
Down SMH_05154	Rim to invert 2.50	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST	Start of Survey							
0.0		MWL	Miscellaneous Water Level		20					
0.0		AMH	Manhole							SMH_05155
0.0		MGO	Miscellaneous General Observation							STARTING IN FRONT OF HOUSE
1.1		MGO	Miscellaneous General Observation							ADJUSTED COUNTER TO SET PO
1.1		TBI	100	5			02			
1.4		FC	Fracture Circumferential				11	02		
1.4		RFB	Roots Fine Barrel				11	02		SMALL ROOTS ENTERING THROU
1.4		MMC	Miscellaneous Material Change							VCP TO CP
1.5		S01	SRI Surface Damage Roughness Increa				07	05		
4.9		DAE	Deposits Attached Encrustation		5	J	03	05		
4.9		DAE	Deposits Attached Encrustation		5	J	07	09		
8.4		CC	Crack Circumferential				07	09		
10.2		DAE	Deposits Attached Encrustation		5	J	07	09		
12.2		DAE	Deposits Attached Encrustation		5	J	03	05		
14.1		DAE	Deposits Attached Encrustation		5	J	07	08		
15.8		DAE	Deposits Attached Encrustation		5		03	05		
21.5		DAE	Deposits Attached Encrustation		5	J	07	08		
21.5		CC	Crack Circumferential				03	05		
23.2		ISJ	Infiltration Stain Joint			J	03	05		
23.2		ISJ	Infiltration Stain Joint			J	07	08		
24.9		ISJ	Infiltration Stain Joint			J	07	08		
26.8		ISJ	Infiltration Stain Joint			J	03	05		
26.8		DAE	Deposits Attached Encrustation		5		07	09		

Tabular Report of PSR SGM_05747

for CITY OF NIAGARA FALLS

Setup 22 Date 2018/10/31 Time 10:56 Up SMH_05155 Down SMH_05154

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr To	ImRef	Remarks
28.3		ISJ Infiltration Stain Joint				J	03 05		
28.3		ISJ Infiltration Stain Joint				J	07 12		
30.3		DAE Deposits Attached Encrustation			5	J	02 05		
30.3		DAE Deposits Attached Encrustation			5	J	07 09		
32.1		ISJ Infiltration Stain Joint				J	03 05		
32.1		DAE Deposits Attached Encrustation			5	J	07 12		
34.1		ISJ Infiltration Stain Joint				J	07 09		
35.9		DAE Deposits Attached Encrustation			5	J	03 05		
35.9		DAE Deposits Attached Encrustation			5	J	07 09		
37.8		DAE Deposits Attached Encrustation			5	J	07 09		
40.9		CL Crack Longitudinal					12		
41.4		DAE Deposits Attached Encrustation			5	J	07 10		
43.3		DAE Deposits Attached Encrustation			5	J	07 09		
45.2		ISJ Infiltration Stain Joint				J	03 05		
48.7		ISJ Infiltration Stain Joint				J	03 05		
48.7		ISJ Infiltration Stain Joint				J	07 09		
50.5		MGO Miscellaneous General Observation							FINISH IN FRONT OF HOUSE 8188
50.5		AMH Manhole							SMH_05154
50.5		FH End of Survey							
50.5	F01	SRI Surface Damage Roughness Increa					07 05		

50.5 M Total Length Surveyed

Scores	Structural:	Pipe Rating 40	Pipe Ratings Index 1.1	Quick Rating 221F
	O&M:	Pipe Rating 47	Pipe Ratings Index 1.6	Quick Rating 2B1A
	Overall	Pipe Rating 87	Pipe Ratings Index 2.7	Quick Rating 2C1H

Tabular Report of PSR SGM_05748

for CITY OF NIAGARA FALLS

Setup 23	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05748_	Project		
Date 2018/10/31	Time 10:13	Weather Heavy Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/30	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street USSHER ST	City Niagara Falls	Drainage area HEAVY RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 81.8 M
Length Surveyed 85.0 M	Year Constructed	Year Renewed
Up SMH_05156	Rim to invert 2.50	Grade to invert
Northing	Easting	Elevation
Down SMH_05155	Rim to invert 2.70	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05156
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.5		ISJ Infiltration Stain Joint				J	03	05		
1.5	S01	SRI Surface Damage Roughness Increase					07	05		
4.6		DAE Deposits Attached Encrustation			5	J	07	09		
6.2		DAE Deposits Attached Encrustation			5	J	07	09		
7.7		DAE Deposits Attached Encrustation			5	J	07	08		
10.7		DAE Deposits Attached Encrustation			5	J	03	05		
10.7		CL Crack Longitudinal					12			
10.7		CL Crack Longitudinal				J	03			
12.3		CL Crack Longitudinal				J	08			
13.8		DAE Deposits Attached Encrustation			5	J	03	05		
13.8		DAE Deposits Attached Encrustation			5		07	09		
14.9		CM Crack Multiple					11	02		
15.2		DAE Deposits Attached Encrustation			5		03	05		
15.2		DAE Deposits Attached Encrustation			5	J	08	12		
16.8		CL Crack Longitudinal				J	12			
16.8		DAE Deposits Attached Encrustation			5		04			
17.2		TB Tap Break-in/Hammer	100				11			
17.2		RMC Roots Medium Connection			20		11			
18.3		DAE Deposits Attached Encrustation			5		03	05		

Tabular Report of PSR SGM_05748

for CITY OF NIAGARA FALLS

Setup 23 Date 2018/10/31 Time 10:13 Up SMH_05156 Down SMH_05155

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
18.3		DAE	Deposits Attached Encrustation			5		07	09		
18.4		CL	Crack Longitudinal				J	11			
18.4		ISB	Infiltration Stain Barrel					08	11		COMING FROM CRACK
18.8		TF	Tap Factory	100				02			
21.6		DAE	Deposits Attached Encrustation			5	J	04	05		
23.0		DAE	Deposits Attached Encrustation			5	J	03	05		
23.1		DAE	Deposits Attached Encrustation			5	J	07	08		
24.6		DAE	Deposits Attached Encrustation			5	J	07	05		
26.0		DAE	Deposits Attached Encrustation			5		03	05		
27.4		ISJ	Infiltration Stain Joint				J	07	10		
29.1		DAE	Deposits Attached Encrustation			5	J	02	05		
29.1		DAE	Deposits Attached Encrustation			5	J	07	09		
30.6		DAE	Deposits Attached Encrustation			5	J	07	09		
30.7		DAE	Deposits Attached Encrustation			5	J	03	05		
32.1		ISJ	Infiltration Stain Joint				J	03	05		
33.7		DAE	Deposits Attached Encrustation			5	J	03	05		
33.7		DAE	Deposits Attached Encrustation			5	J	07	09		
37.1		TFA	Tap Factory Activity	100				02			
38.3		DAE	Deposits Attached Encrustation			5	J	07	09		
38.7		TF	Tap Factory	100				10			
42.8		DAE	Deposits Attached Encrustation			5	J	04			
42.8		DAE	Deposits Attached Encrustation			5	J	08			
44.3		CM	Crack Multiple				J	11	03		
45.3		MWL	Miscellaneous Water Level			30					
47.4		DAE	Deposits Attached Encrustation			5	J	07			
49.0		CL	Crack Longitudinal					10			
49.0		ISB	Infiltration Stain Barrel					07	10		FROM CRACK
50.5		ISJ	Infiltration Stain Joint				J	07	09		
52.0		DAE	Deposits Attached Encrustation			5	J	03	05		
53.8		DAR	Deposits Attached Ragging			5		02			COMING FROM TAP
53.9		TFA	Tap Factory Activity	100				02			
53.9		RFC	Roots Fine Connection					04			
54.9		MWL	Miscellaneous Water Level			10					
55.1		DAE	Deposits Attached Encrustation			5		07			
56.7		ISJ	Infiltration Stain Joint				J	04	05		
56.7		ISJ	Infiltration Stain Joint				J	07	09		
58.2		DAE	Deposits Attached Encrustation			5	J	03	05		
58.5		TF	Tap Factory	100				09			
58.9		MWLS	Miscellaneous Water Level Sag			40					
59.6		DAE	Deposits Attached Encrustation			5	J	08	04		
61.2		DAE	Deposits Attached Encrustation			5	J	03			
62.8		CM	Crack Multiple					10	01		
64.3		CL	Crack Longitudinal				J	12			
64.3		ISB	Infiltration Stain Barrel				J	12	04		
71.8		DAE	Deposits Attached Encrustation			5		07	08		
72.2		DAE	Deposits Attached Encrustation			5		04	05		
72.4		TF	Tap Factory	100				02			
73.4		DAE	Deposits Attached Encrustation			5	J	07	09		
73.4		ISJ	Infiltration Stain Joint				J	09	05		
74.3		ISB	Infiltration Stain Barrel					07	10		

Tabular Report of PSR SGM_05748

for CITY OF NIAGARA FALLS

Setup 23 Date 2018/10/31 Time 10:13 Up SMH_05156 Down SMH_05155

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
74.9		DAE Deposits Attached Encrustation			5	J	03	05		
74.9		DAE Deposits Attached Encrustation			5		07	08		
76.5		ISJ Infiltration Stain Joint				J	07	10		
76.5		ISJ Infiltration Stain Joint				J	03	05		
78.0		DAE Deposits Attached Encrustation			5	J	03	05		
78.0		DAE Deposits Attached Encrustation			5	J	07	09		
79.8		CM Crack Multiple					11	01		
80.1		TF Tap Factory	100				11			
80.2		VZ Vermin Other	25							UNKNOWN BUGS IN TAP
81.0		ISJ Infiltration Stain Joint				J	03	05		
81.0		ISJ Infiltration Stain Joint				J	07	09		
82.6		ISJ Infiltration Stain Joint				J	03	05		
82.6		CL Crack Longitudinal				J	11			
82.6		ISB Infiltration Stain Barrel				J	09	11		COMING FROM CRACK
83.9		DAE Deposits Attached Encrustation			5	J	07	05		
84.0	F01	SRI Surface Damage Roughness Increase					07	05		
85.0		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3087
85.0		AMH Manhole								SMH_05155
85.0		FH End of Survey								

85.0 M Total Length Surveyed

Scores	Structural:	Pipe Rating 86	Pipe Ratings Index 1.3	Quick Rating 3528
	O&M:	Pipe Rating 102	Pipe Ratings Index 1.7	Quick Rating 312G
	Overall	Pipe Rating 188	Pipe Ratings Index 3	Quick Rating 362H

Tabular Report of PSR SGM_05749

for CITY OF NIAGARA FALLS

Setup 24	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05749_	Project		
Date 2018/10/31	Time 12:25	Weather Heavy Rain	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2018/10/30
Inspection Status Complete Inspection	Consequence Of Failure		Pressure 0.000
Inspection Technology Used			
<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other			

Street USSHER ST	City Niagara Falls	Drainage area HEAVY RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 116.5 M
Length Surveyed 118.1 M	Year Constructed	Year Renewed
Up SMH_05146	Rim to invert 2.50	Grade to invert
Northing	Easting	Elevation
Down SMH_05156	Rim to invert 2.60	Grade to invert
Northing	Easting	Elevation
Coordinate System		Vertical Datum
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST								Start of Survey
0.0		MWL			10					Miscellaneous Water Level
0.0		AMH								Manhole
0.0		MGO								Miscellaneous General Observation
1.1		MGO								Miscellaneous General Observation
1.1		S01					07	05		Surface Damage Roughness Increase
3.6		CL					03			Crack Longitudinal
4.2		CM					11	03		Crack Multiple
4.2		FM					11	03		Fracture Multiple
7.3		ISJ					J	07	09	Infiltration Stain Joint
8.9		DAE			5		J	04	05	Deposits Attached Encrustation
8.9		ISJ					J	07	09	Infiltration Stain Joint
9.3		TF	100				11			Tap Factory
10.4		DAE			5		J	04	05	Deposits Attached Encrustation
11.8		ISJ					J	07	05	Infiltration Stain Joint
11.8		DAE			5		J	07	08	Deposits Attached Encrustation
15.0		DAE			5		J	07	09	Deposits Attached Encrustation
16.5		DAE			5		J	07	05	Deposits Attached Encrustation
18.0		DAE			10			07	05	Deposits Attached Encrustation
21.0		CL					J	12		Crack Longitudinal
21.0		DAE			5		J	03	05	Deposits Attached Encrustation
21.1		DAE			5			05		Deposits Attached Encrustation
22.7		DAE			5			07	11	Deposits Attached Encrustation
22.7		IRJ					J	09	07	Infiltration Runner Joint

Tabular Report of PSR SGM_05749

for CITY OF NIAGARA FALLS

Setup 24 Date 2018/10/31 Time 12:25 Up SMH_05146 Down SMH_05156

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
23.0		TF	Tap Factory	100				11			
24.2		DAE	Deposits Attached Encrustation			5	J	07	09		
24.5		TF	Tap Factory	100				03			
25.7		RMJ	Roots Medium Joint			10	J	04	05		
25.7		VZ	Vermin Other	1							UNKNOWN BUG ON PIPE WALL
26.8		DAE	Deposits Attached Encrustation			5		07			
27.2		DAE	Deposits Attached Encrustation			5		05			
27.2		RMJ	Roots Medium Joint			5	J	05			
28.8		RMJ	Roots Medium Joint			5	J	05			
28.8		RMJ	Roots Medium Joint			5	J	08			
28.8		DAE	Deposits Attached Encrustation			5	J	04	05		
30.0		S02	DAE Deposits Attached Encrustation			5	J	07	09		
31.5		DAE	Deposits Attached Encrustation			5		03	05		
33.2		DAE	Deposits Attached Encrustation			5	J	05			
36.8		MWL	Miscellaneous Water Level			35					
38.0		F02	DAE Deposits Attached Encrustation			5	J	07	09		
39.4		CL	Crack Longitudinal				J	12			
39.4		DAE	Deposits Attached Encrustation			5	J	08			
40.7		MWL	Miscellaneous Water Level			10					
40.8		CL	Crack Longitudinal				J	05			
42.2		DAE	Deposits Attached Encrustation			5	J	07	08		
44.0		S03	DAE Deposits Attached Encrustation			5	J	07	09		
44.0		S04	DAE Deposits Attached Encrustation			5	J	03	05		
44.4		TF	Tap Factory	100				09			
45.8		DAE	Deposits Attached Encrustation			5		03	05		AROUND TAP
45.8		RFL	Roots Fine Lateral					04	05		
45.9		TF	Tap Factory	100				02			
54.7		F03	DAE Deposits Attached Encrustation			5	J	07	09		
54.7		F04	DAE Deposits Attached Encrustation			5	J	03	05		
56.3		DAE	Deposits Attached Encrustation			5	J	05			
59.2		DAE	Deposits Attached Encrustation			5	J	07	10		
61.0		DAE	Deposits Attached Encrustation			5		01			
61.3		TF	Tap Factory	100				10			
61.6		VZ	Vermin Other	6							UNKOWN BUGS IN TAP
62.4		DAE	Deposits Attached Encrustation			5	J	04	05		
62.7		TF	Tap Factory	100				03			
65.4		DAE	Deposits Attached Encrustation			5	J	07	09		
66.6		DAE	Deposits Attached Encrustation			5	J	03	05		
68.2		DAE	Deposits Attached Encrustation			5	J	07	08		
70.9		FS	Fracture Spiral				J	11	03		
76.9		ISJ	Infiltration Stain Joint				J	07	09		
76.9		DAE	Deposits Attached Encrustation			5	J	03	05		
78.5		DAE	Deposits Attached Encrustation			5		07	09		
78.8		CM	Crack Multiple					12	02		
79.9		DAE	Deposits Attached Encrustation			5	J	07	09		
80.4		TF	Tap Factory	100				09			
80.4		RFL	Roots Fine Lateral					07	08		
81.6		RMJ	Roots Medium Joint			5	J	03	05		
81.6		RMJ	Roots Medium Joint			5	J	07			
83.0		DAE	Deposits Attached Encrustation			5	J	03	05		

Tabular Report of PSR SGM_05749

for CITY OF NIAGARA FALLS

Setup 24 Date 2018/10/31 Time 12:25 Up SMH_05146 Down SMH_05156

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
83.0		RFJ	Roots Fine Joint				J	07			
83.5		TF	Tap Factory	100				02			
84.6		DAE	Deposits Attached Encrustation			5		09			
86.3		DAE	Deposits Attached Encrustation			5		05			
87.6		RFJ	Roots Fine Joint				J	07	09		
89.1		RFJ	Roots Fine Joint				J	07			
90.6		DAE	Deposits Attached Encrustation			5	J	07			
95.2		DAE	Deposits Attached Encrustation			5	J	07			
96.8		ISJ	Infiltration Stain Joint				J	05			
96.8		ISJ	Infiltration Stain Joint				J	07			
98.8		TF	Tap Factory	100				11			
100.3		TF	Tap Factory	100				03			
102.0		CL	Crack Longitudinal					03			
103.0		ISJ	Infiltration Stain Joint				J	07			
106.0		DAE	Deposits Attached Encrustation			5	J	07	08		
107.4		DAE	Deposits Attached Encrustation			5	J	07	08		
108.9		ISJ	Infiltration Stain Joint				J	07	05		
108.9		DAE	Deposits Attached Encrustation			5	J	03	05		
108.9		DAE	Deposits Attached Encrustation			5	J	07	09		
110.5		ISJ	Infiltration Stain Joint				J	09	05		
112.0		DAE	Deposits Attached Encrustation			5	J	07	09		
113.6		DAE	Deposits Attached Encrustation			5		07	09		
113.6		DAE	Deposits Attached Encrustation			5	J	03	05		
115.1		ISJ	Infiltration Stain Joint				J	03	05		
115.1		CL	Crack Longitudinal				J	02			
116.6		DAE	Deposits Attached Encrustation			5	J	07			
116.6		ISJ	Infiltration Stain Joint				J	03	05		
118.1		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3095
118.1		AMH	Manhole								SMH_05156
118.1		FH	End of Survey								
118.1	F01	SRI	Surface Damage Roughness Increase					07	05		

118.1 M Total Length Surveyed

Scores	Structural:	Pipe Rating 104	Pipe Ratings Index 1.2	Quick Rating 4133
	O&M:	Pipe Rating 164	Pipe Ratings Index 1.9	Quick Rating 4136
	Overall	Pipe Rating 268	Pipe Ratings Index 3.1	Quick Rating 4239

Tabular Report of PSR SGM_05752

for CITY OF NIAGARA FALLS

Setup 27	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05752_	Project		
Date 2018/11/02	Time 14:28	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/30	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street SARAH ST	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 78.4 M
Length Surveyed 78.5 M	Year Constructed	Year Renewed
Up SMH_04986	Rim to invert 2.40	Grade to invert
Northing	Easting	Elevation
Down SMH_04987	Rim to invert 2.70	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04987
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.3	S01	SAV Surface Damage Aggregate Visible					07	05		
1.3	S02	DAE Deposits Attached Encrustation			5	J	03	05		
1.3	S03	DAE Deposits Attached Encrustation			5	J	07	09		
2.8		TBA Tap Break-in Activity	100				02			
3.0		VZ Vermin Other	1							SPIDER IN TAP
4.4		DAE Deposits Attached Encrustation			5		03	05		
4.9		FM Fracture Multiple					07	05		
11.3		CL Crack Longitudinal				J	08			
12.0		CL Crack Longitudinal				J	01			
14.1		CL Crack Longitudinal				J	10			
15.3		CL Crack Longitudinal				J	10			
16.5		CL Crack Longitudinal				J	09			
18.6		CL Crack Longitudinal				J	11			
19.6		CL Crack Longitudinal				J	12			
20.9		DAE Deposits Attached Encrustation			5		03	05		
21.1		TF Tap Factory	100				02			
23.0		CL Crack Longitudinal					01			
23.2	S04	DAE Deposits Attached Encrustation			5		07			
24.5	S05	CL Crack Longitudinal					07			

Tabular Report of PSR SGM_05752

for CITY OF NIAGARA FALLS

Setup 27 Date 2018/11/02 Time 14:28 Up SMH_04986 Down SMH_04987

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
26.4		F04	DAE Deposits Attached Encrustation			5		07			
26.4		F05	CL Crack Longitudinal					07			
26.4			CC Crack Circumferential					07	04		
27.4			B Broken					05			
27.5		S06	FL Fracture Longitudinal				J	05			
28.1		S07	FL Fracture Longitudinal					07			
29.5		F06	FL Fracture Longitudinal				J	05			
29.5		F07	FL Fracture Longitudinal					07			
30.6			FL Fracture Longitudinal					07			
39.9			CL Crack Longitudinal					07			
39.9			CL Crack Longitudinal					05			
40.9			DAE Deposits Attached Encrustation			5		03	05		
41.0			TF Tap Factory	100				11			
41.0			TF Tap Factory	100				02			
53.1			CL Crack Longitudinal				J	08			
59.5			CL Crack Longitudinal				J	07			
59.7			VZ Vermin Other	6							BUGS IN CRACK
60.6		F02	DAE Deposits Attached Encrustation			5	J	03	05		
60.6		F03	DAE Deposits Attached Encrustation			5	J	07	09		
63.0			TF Tap Factory	100				02			
63.2			MWL Miscellaneous Water Level			30					
63.2			VZ Vermin Other	2							BUG
71.4			DAE Deposits Attached Encrustation			5	J	07	08		
74.9			CL Crack Longitudinal					12			
74.9			ISB Infiltration Stain Barrel					12			COMING FROM CRACK
75.5			DAE Deposits Attached Encrustation			5	J	05			
75.5			DAE Deposits Attached Encrustation			5	J	07			
78.5			MGO Miscellaneous General Observation								FINISH IN FRONT 8099
78.5		F01	SAV Surface Damage Aggregate Visible					07	05		
78.5			AMH Manhole								SMH_04986
78.5			FH End of Survey								

78.5 M Total Length Surveyed

Scores	Structural:	Pipe Rating 150	Pipe Ratings Index 2.1	Quick Rating 4233
	O&M:	Pipe Rating 184	Pipe Ratings Index 2	Quick Rating 2Q14
	Overall	Pipe Rating 334	Pipe Ratings Index 4.1	Quick Rating 4233

Tabular Report of PSR SGM_05753

for CITY OF NIAGARA FALLS

Setup 28	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05753_	Project		
Date 2018/11/02	Time 7:29	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/30	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street HARLEYFORD CR	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Secondary roads, non-numbered suburban/rural for heavy vehicles	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 68.3 M
Length Surveyed 59.2 M	Year Constructed	Year Renewed
Up SMH_04991	Rim to invert 2.40	Grade to invert
Northing	Easting	Elevation
Down SMH_04990	Rim to invert 2.70	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		MWL Miscellaneous Water Level			10					
0.0		AMH Manhole								SMH_04991
0.0		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
0.6		TF Tap Factory	100				09			
3.1		DAE Deposits Attached Encrustation			5		03	05		
3.2		TF Tap Factory	100				03			
5.1		ISJ Infiltration Stain Joint				J	03	05		
5.1		ISJ Infiltration Stain Joint				J	07	09		
5.3		CL Crack Longitudinal					02			
5.8		TFA Tap Factory Activity	100				03			
10.4		TFA Tap Factory Activity	100				03			
14.9		TF Tap Factory	100				09			
20.1		CL Crack Longitudinal					09			
21.7		CL Crack Longitudinal					09			
27.4		TF Tap Factory	100				03			
33.6		MWM Miscellaneous Water Mark			80					
39.4		CL Crack Longitudinal				J	03			
43.2		ISJ Infiltration Stain Joint				J	03	05		
43.2		ISJ Infiltration Stain Joint				J	07	09		
43.2		CL Crack Longitudinal					11			
46.2		CL Crack Longitudinal					01			
46.2		DAE Deposits Attached Encrustation			5		03	05		
46.8		TFA Tap Factory Activity	100				03			

Tabular Report of PSR SGM_05753

for CITY OF NIAGARA FALLS

Setup 28 Date 2018/11/02 Time 7:29 Up SMH_04991 Down SMH_04990

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
56.9		DAE	Deposits Attached Encrustation			5		03	05		
56.9		TF	Tap Factory	100				03			
58.5		IR	Infil Runner					12			
59.2		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3300
59.2		AMH	Manhole								SMH_04990
59.2		FH	End of Survey								

59.2 M Total Length Surveyed

Scores	Structural:	Pipe Rating	12	Pipe Ratings Index	2	Quick Rating	2600
	O&M:	Pipe Rating	14	Pipe Ratings Index	1.8	Quick Rating	4123
	Overall	Pipe Rating	26	Pipe Ratings Index	3.8	Quick Rating	4129

Tabular Report of PSR SGM_05756

for CITY OF NIAGARA FALLS

Setup 31	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05756_	Project		
Date 2018/11/01	Time 12:34	Weather Light Rain	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2018/10/30
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street HARLEYFORD CR	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Secondary roads, non-numbered suburban/rural for heavy vehicles	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 36.9 M
Length Surveyed 37.6 M	Year Constructed	Year Renewed
Up SMH_04988	Rim to invert 2.40	Grade to invert
Northing	Easting	Elevation
Down SMH_04987	Rim to invert 2.70	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04987
0.0		MWL Miscellaneous Water Level			10					
1.1		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.1	S01	SRI Surface Damage Roughness Increase					07	05		
1.1	S02	CL Crack Longitudinal					04			
1.5		CL Crack Longitudinal					01			
6.6	F02	CL Crack Longitudinal					04			
6.9		TFC Tap Factory Capped	200				09			STILL ACTIVE FLOW COMING THRU
11.7	S04	ISJ Infiltration Stain Joint					J 03	05		
11.7	S03	ISJ Infiltration Stain Joint					J 07	09		
27.5	F03	ISJ Infiltration Stain Joint					J 07	09		
27.5	F04	ISJ Infiltration Stain Joint					J 03	05		
34.8		DAE Deposits Attached Encrustation			5		12	01		
37.6		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3260
37.6		AMH Manhole								SMH_04988
37.6		FH End of Survey								
37.6	F01	SRI Surface Damage Roughness Increase					07	05		

37.6 M Total Length Surveyed

Scores	Structural: Pipe Rating 36	Pipe Ratings Index 1.2	Quick Rating 261C
	O&M: Pipe Rating 24	Pipe Ratings Index 1	Quick Rating 211C
	Overall Pipe Rating 60	Pipe Ratings Index 2.2	Quick Rating 271H

Tabular Report of PSR SGM_05757

for CITY OF NIAGARA FALLS

Setup 32	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05757_	Project		
Date 2018/11/06	Time 12:59	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/30	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street SARAH ST	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 375	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 126.2 M
Length Surveyed 122.0 M	Year Constructed	Year Renewed
Up SMH_05152	Rim to invert 3.00	Grade to invert
Northing	Easting	Elevation
Down SMH_05150	Rim to invert 3.00	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05150
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.2		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.4		ISJ Infiltration Stain Joint				J	07	05		
3.2	S01	SAV Surface Damage Aggregate Visible				J	07	05		
3.2		CL Crack Longitudinal				J	12			
7.7		DAE Deposits Attached Encrustation			5		07	09		
8.1		TF Tap Factory	100				02			
8.6		CC Crack Circumferential				J	10	12		
14.0		ISJ Infiltration Stain Joint				J	03	05		
14.0		ISJ Infiltration Stain Joint				J	07	09		
14.8		TF Tap Factory	100				11			
15.0	S02	ISJ Infiltration Stain Joint				J	07	05		
31.0		B Broken				J	05			
32.7		B Broken				J	05			
32.7		B Broken				J	07			
37.7		CL Crack Longitudinal					10			
38.3		TB Tap Break-in/Hammer	100				11			
39.2		TB Tap Break-in/Hammer	100				02			
39.9		B Broken					07			
39.9		B Broken					05			
50.8		B Broken					07			

Tabular Report of PSR SGM_05757

for CITY OF NIAGARA FALLS

Setup 32 Date 2018/11/06 Time 12:59 Up SMH_05152 Down SMH_05150

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
50.8		B	Broken					05			
60.6		TF	Tap Factory	100				11			
61.5		MWL	Miscellaneous Water Level			50					
69.7		TBA	Tap Break-in Activity	100				02			
82.9		MWL	Miscellaneous Water Level			15					
85.0		TF	Tap Factory	100				11			
88.7		CC	Crack Circumferential					01	05		
95.5		DSGV	Deposits Settled Gravel			10		05			
99.5		TB	Tap Break-in/Hammer	100				02			
107.1		VZ	Vermin Other	1							BUG ON TAP
107.1		TB	Tap Break-in/Hammer	100				11			
109.5		DSGV	Deposits Settled Gravel			20		05	07		
112.9		DSGV	Deposits Settled Gravel			20		05			
119.6		CM	Crack Multiple					10	02		
120.1		RFJ	Roots Fine Joint				J	10	02		
120.3		VZ	Vermin Other	2							SPIDER
121.0	F02	ISJ	Infiltration Stain Joint				J	07	05		
122.0		MGO	Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 8131
122.0	F01	SAV	Surface Damage Aggregate Visible					07	05		
122.0		AMH	Manhole								SMH_05152
122.0		FH	End of Survey								

122.0 M Total Length Surveyed

Scores			
Structural:	Pipe Rating	197	Quick Rating 4731
O&M:	Pipe Rating	87	Quick Rating 3222
Overall	Pipe Rating	284	Quick Rating 4733
	Pipe Ratings Index	2.1	
	Pipe Ratings Index	1.1	
	Pipe Ratings Index	3.2	

Tabular Report of PSR SGM_05760

for CITY OF NIAGARA FALLS

Setup 51	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05760_	Project		
Date 2018/12/12	Time 13:09	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/04	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CARRY CR	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 66.4 M
Length Surveyed 68.0 M	Year Constructed	Year Renewed
Up SMH_05058	Rim to invert 2.80	Grade to invert
Northing	Easting	Elevation
Down SMH_05057	Rim to invert 3.30	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	<input type="checkbox"/> Structural <input type="checkbox"/> O & M	
Additional info	<input type="checkbox"/> Miscellaneous <input type="checkbox"/> Constructional	

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05057
0.0		MWL Miscellaneous Water Level			30					
0.1		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
2.6		MWM Miscellaneous Water Mark			80					
4.1		MWL Miscellaneous Water Level			20					
21.5		TB Tap Break-in/Hammer	100				11			
23.1		TB Tap Break-in/Hammer	100				02			
23.1		DAR Deposits Attached Ragging			10		01			INTRUDING THROUGH TAP
29.6		CL Crack Longitudinal					11			
32.7		CL Crack Longitudinal					01			
39.0		CL Crack Longitudinal					02			
40.4		TB Tap Break-in/Hammer	100				02			
40.7		VZ Vermin Other	8							BUGS IN TAP
49.9		ISB Infiltration Stain Barrel					01	04		
50.4		DAE Deposits Attached Encrustation			10		07	05		
50.6		IR Infil Runner					11	02		
57.6		TB Tap Break-in/Hammer	100				02			
68.0		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3265
68.0		AMH Manhole								SMH_05058
68.0		FH End of Survey								

68.0 M Total Length Surveyed

Scores	Structural:	Pipe Rating 6	Pipe Ratings Index 2	Quick Rating 2300
	O&M:	Pipe Rating 10	Pipe Ratings Index 2	Quick Rating 4122
	Overall	Pipe Rating 16	Pipe Ratings Index 4	Quick Rating 4125

Tabular Report of PSR SGM_05761

for CITY OF NIAGARA FALLS

Setup 52	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05761_	Project		
Date 2018/12/12	Time 13:53	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2018/12/03			
Flow control	Survey Purpose Maintenance Related	Direction Down	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CARRY CR	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 61.3 M
Length Surveyed 80.8 M	Year Constructed	Year Renewed
Up SMH_05057	Rim to invert 3.30	Grade to invert
Northing	Easting	Elevation
Down SMH_05147	Rim to invert 3.30	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05057
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
11.5		DAE Deposits Attached Encrustation			10	07	05			
12.5		TB Tap Break-in/Hammer	100			11				
33.5		TB Tap Break-in/Hammer	100			11				
39.6		TB Tap Break-in/Hammer	100			02				
39.8		IR Infil Runner				12				
48.0		TB Tap Break-in/Hammer	100			11				
48.7		MWL Miscellaneous Water Level			50					
55.9		MWL Miscellaneous Water Level			30					
60.5		TB Tap Break-in/Hammer	100			02				
67.6		TB Tap Break-in/Hammer	100			11				
67.9		MWL Miscellaneous Water Level			10					
79.0		DAE Deposits Attached Encrustation			5	07	05			
80.8		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3199
80.8		AMH Manhole								SMH_05147
80.8		FH End of Survey								

80.8 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 8	Pipe Ratings Index 2.7	Quick Rating 4122
	Overall Pipe Rating 8	Pipe Ratings Index 2.7	Quick Rating 4122

Tabular Report of PSR SGM_05762

for CITY OF NIAGARA FALLS

Setup 35	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05762_	Project		
Date 2018/11/02	Time 9:10	Weather Light Rain	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/30	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CARRY CR	City Niagara Falls	Drainage area LIGHT RAIN
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 81.7 M
Length Surveyed 64.0 M	Year Constructed	Year Renewed
Up SMH_05147	Rim to invert 0.00	Grade to invert
Northing	Easting	Elevation
Down SMH_05148	Rim to invert 3.20	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info	SURVEY LENGTH SHORTER THAN GIS LENGTH	

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_05148
0.0		MWL Miscellaneous Water Level			30					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
0.6		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.2		TFA Tap Factory Activity	100				02			
1.6		MWM Miscellaneous Water Mark			80					
7.3		B Broken					05			
10.9		ISB Infiltration Stain Barrel					09	12		
11.4		CM Crack Multiple					10	02		
13.5		DAE Deposits Attached Encrustation			5		07	09		
14.0		TFA Tap Factory Activity	100				02			
15.3		CM Crack Multiple					10	02		
16.3		ISB Infiltration Stain Barrel					09	04		
20.5		CL Crack Longitudinal					10			
20.6		CL Crack Longitudinal					03			
24.8		CH2 Crack Longitudinal Hinge, 2					09	03		
28.6		ISB Infiltration Stain Barrel					10			
29.8		CL Crack Longitudinal					03			
29.8		ISB Infiltration Stain Barrel					01	05		
31.9		DAE Deposits Attached Encrustation			5		07	09		
32.0		TF Tap Factory	100				10			
32.5		CL Crack Longitudinal					09			
37.7		DAE Deposits Attached Encrustation			5		03	05		

Tabular Report of PSR SGM_05762

for CITY OF NIAGARA FALLS

Setup 35 **Date** 2018/11/02 **Time** 9:10 **Up** SMH_05147 **Down** SMH_05148

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
38.0		TFA Tap Factory Activity	100				02			
39.3		CL Crack Longitudinal					12			
39.3		DSF Deposits Settled Fine			10		06			
40.8		ISB Infiltration Stain Barrel					11	02		
47.1		CL Crack Longitudinal					11			
50.2		TFA Tap Factory Activity	100				11			
51.6		ISB Infiltration Stain Barrel					07	12		
56.1		DAE Deposits Attached Encrustation			5		03	05		
56.1		DAE Deposits Attached Encrustation			5		07	09		
56.4		TFA Tap Factory Activity	100				02			
64.0		MGO Miscellaneous General Observation								FNISH IN FRONT OF HOUSE 3199
64.0		AMH Manhole								SMH_05147
64.0		FH End of Survey								

64.0 M **Total Length Surveyed**

Scores	Structural:	Pipe Rating 24	Pipe Ratings Index 2.4	Quick Rating 4132
	O&M:	Pipe Rating 18	Pipe Ratings Index 1.5	Quick Rating 2616
	Overall	Pipe Rating 42	Pipe Ratings Index 3.9	Quick Rating 4132

Tabular Report of PSR SGM_05763

for CITY OF NIAGARA FALLS

Setup 36	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05763_	Project		
Date 2018/11/06	Time 14:05	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2018/10/23			
Flow control	Survey Purpose Maintenance Related	Direction Down	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CARRY CR	City Niagara Falls	Drainage area DRY
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 250	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 74.6 M
Length Surveyed 70.7 M	Year Constructed	Year Renewed
Up SMH_05148	Rim to invert 3.30	Grade to invert
Northing	Easting	Elevation
Down SMH_05149	Rim to invert 3.60	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST								Start of Survey
0.0		AMH								Manhole SMH_05148
0.0		MWL			10					Miscellaneous Water Level
0.0		MGO								Miscellaneous General Observation
1.1		MGO								Miscellaneous General Observation
1.1		S01			5		10	02		DAE Deposits Attached Encrustation
1.1		S02					09	03		CM Crack Multiple
4.7		S03					07	05		ISB Infiltration Stain Barrel
5.9		DAE			5	J	07	09		Deposits Attached Encrustation
6.2		F01			5		10	02		DAE Deposits Attached Encrustation
12.7		F02					09	03		CM Crack Multiple
12.7		F03					07	05		ISB Infiltration Stain Barrel
14.2		S04			5		07	05		DAE Deposits Attached Encrustation
15.0		CM					09	02		Crack Multiple
15.0		ISB					09	02		Infiltration Stain Barrel
17.6		TBA	100				02			Tap Break-in Activity
19.3		TF	100				11			Tap Factory
19.3		F04			5		07	05		DAE Deposits Attached Encrustation
23.6		S05					12			CL Crack Longitudinal
24.0		CM					08	02		Crack Multiple
24.0		ISB					08	04		Infiltration Stain Barrel
26.4		CM					08	09		Crack Multiple
26.4		ISB					07	10		Infiltration Stain Barrel
27.5		ISB					07	05		Infiltration Stain Barrel

Tabular Report of PSR SGM_05763

for CITY OF NIAGARA FALLS

Setup 36 Date 2018/11/06 Time 14:05 Up SMH_05148 Down SMH_05149

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
28.2		F05	CL Crack Longitudinal					12			
28.2			ISB Infiltration Stain Barrel					07	05		
34.6			ISB Infiltration Stain Barrel					02	05		
38.1			TFA Tap Factory Activity	100				11			
38.7			TFA Tap Factory Activity	100				02			
41.6			DAE Deposits Attached Encrustation			5	J	03	05		
44.6			CM Crack Multiple					10	12		
44.6			ISB Infiltration Stain Barrel					07	12		
45.6			DAE Deposits Attached Encrustation			5	J	05			
45.6			DAE Deposits Attached Encrustation			5	J	07	09		
49.4			DAE Deposits Attached Encrustation			5	J	03	05		
49.4			DAE Deposits Attached Encrustation			5	J	07	08		
54.1			CL Crack Longitudinal					11			
56.3			CM Crack Multiple					11	02		
57.7			ISB Infiltration Stain Barrel					02	05		
58.3			CM Crack Multiple					09	03		
58.3			ISB Infiltration Stain Barrel					09	05		
61.5			JSM Joint Separated Medium								
61.9			ISB Infiltration Stain Barrel					10	03		
62.8			ISB Infiltration Stain Barrel					12			
63.9			CL Crack Longitudinal					09			
66.0			ISB Infiltration Stain Barrel					07	12		
67.2			ISB Infiltration Stain Barrel					07	09		
67.8			JSM Joint Separated Medium								
69.8			MWLS Miscellaneous Water Level Sag			50					
70.7			MGO Miscellaneous General Observation								DROP PIPE AHEAD 1M, JUST BEF
70.7			MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3109
70.7			AMH Manhole								SMH_05149
70.7			FH End of Survey								

70.7 M Total Length Surveyed

Scores	Structural:	Pipe Rating 63	Pipe Ratings Index 2.7	Quick Rating 3B26
	O&M:	Pipe Rating 46	Pipe Ratings Index 1.4	Quick Rating 2A1B
	Overall	Pipe Rating 109	Pipe Ratings Index 4.1	Quick Rating 3B2C

Tabular Report of PSR SGM_05797

for CITY OF NIAGARA FALLS

Setup 14	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05797_	Project		
Date 2018/11/19	Time 10:22	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2018/11/13
Inspection Status Complete Inspection	Consequence Of Failure		Pressure 0.000
Inspection Technology Used			
<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other			

Street BRIDGEWATER ST	City Niagara Falls	Drainage area DRY
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 200	Width mm
Shape Circular	Material Vitrified Clay Pipe	Lining
Coating	Pipe Joint length M	Total length 82.3 M
Length Surveyed 82.5 M	Year Constructed	Year Renewed
Up SMH_04962	Rim to invert 1.40	Grade to invert
Northing	Easting	Elevation
Down SMH_04961	Rim to invert 1.70	Grade to invert
Northing	Easting	Elevation
Coordinate System		Vertical Datum
GPS Accuracy	<input type="checkbox"/> Structural <input type="checkbox"/> O & M	
Additional info	<input type="checkbox"/> Miscellaneous <input type="checkbox"/> Constructional	

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04962
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.1		CM Crack Multiple				J	07	05		
1.1		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
1.7		S01 DAE Deposits Attached Encrustation			5		07	05		
3.9		TF Tap Factory	100				09			
6.2		TF Tap Factory	100				11			
10.7		DSGV Deposits Settled Gravel			5		05	07		
11.1		TBI Tap Break-in Intruding	100	5			11			
11.9		CC Crack Circumferential					03	05		
17.2		CM Crack Multiple					07	05		
18.7		DSGV Deposits Settled Gravel			5		05	07		
19.6		BSV Broken Soil Visible					07	11		
28.3		DSGV Deposits Settled Gravel			5		05			
30.7		TF Tap Factory	100				11			
30.9		CL Crack Longitudinal				J	09			
30.9		MGO Miscellaneous General Observation								CAPPED
32.3		CM Crack Multiple					07	05		
34.1		DAE Deposits Attached Encrustation			5		05	07		
34.4		CM Crack Multiple				J	07	05		
35.4		CL Crack Longitudinal				J	09			
38.7		CM Crack Multiple					07	05		

Tabular Report of PSR SGM_05797

for CITY OF NIAGARA FALLS

Setup 14 Date 2018/11/19 Time 10:22 Up SMH_04962 Down SMH_04961

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
39.7			CC Crack Circumferential					07	05		
47.4			FM Fracture Multiple					07	05		
50.3			MWLS Miscellaneous Water Level Sag			35					
50.5			HVV Hole Void Visible				J	07	05		
52.9		F01	DAE Deposits Attached Encrustation			5		07	05		
54.8			CM Crack Multiple					10	02		
55.0			TBC Tap Break-in Capped	100				12			
55.1			TBD Tap Break-in Defective	100				10			ENCRUSTATION
57.9			DAE Deposits Attached Encrustation			5		07	08		
58.6			CM Crack Multiple					10	02		
59.1			CC Crack Circumferential					12	03		
64.3			TF Tap Factory	100				09			
64.8			B Broken				J	12			
65.2			FM Fracture Multiple					11	02		
65.4			B Broken				J	11			
66.0		S02	CM Crack Multiple					07	05		
66.4			FL Fracture Longitudinal				J	05			
75.5			MWLS Miscellaneous Water Level Sag			50					
75.5			FL Fracture Longitudinal					12			
79.1			FM Fracture Multiple				J	07	05		
81.3		F02	CM Crack Multiple					07	05		
82.5			FH End of Survey								
82.5			MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 3634
82.5			AMH Manhole								SMH_04961

82.5 M Total Length Surveyed

Scores	Structural:	Pipe Rating	103	Pipe Ratings Index	3	Quick Rating	5245
	O&M:	Pipe Rating	85	Pipe Ratings Index	2	Quick Rating	312G
	Overall	Pipe Rating	188	Pipe Ratings Index	5	Quick Rating	5245

Tabular Report of PSR SGM_05809

for CITY OF NIAGARA FALLS

Setup 23	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05809_	Project		
Date 2019/01/15	Time 13:24	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2018/12/06
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used			
<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other			

Street CHIPPAWA PY	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 600	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 17.2 M
Length Surveyed 18.2 M	Year Constructed	Year Renewed
Up SMH_04877	Rim to invert	Grade to invert
Northing	Easting	Elevation
Down SMH_04878	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System		Vertical Datum
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04878
0.0		MWL Miscellaneous Water Level			15					
1.4		MGO Miscellaneous General Observation								CABLE ADJUSTED TO SET POINT
5.4		DAE Deposits Attached Encrustation			5	J	07	12		
5.4		IR Infil Runner				J	12			
10.3		DAE Deposits Attached Encrustation			5	J	07	11		
10.4		IR Infil Runner				J	11			
13.7		MWL Miscellaneous Water Level			10					
17.6		IR Infil Runner					10			
17.6		DAE Deposits Attached Encrustation			5		07	10		
17.6		IR Infil Runner					03			
17.6		DAE Deposits Attached Encrustation			5		03	05		
18.2		AMH Manhole								SMH_04877
18.2		FH End of Survey								

18.2 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 24	Pipe Ratings Index 3	Quick Rating 4424
	Overall Pipe Rating 24	Pipe Ratings Index 3	Quick Rating 4424

Tabular Report of PSR SGM_05810

for CITY OF NIAGARA FALLS

Setup 24	Surveyed By PT-JL	Certificate # U-1111-13046	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05810_	Project		
Date 2018/12/19	Time 14:13	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control		Survey Purpose Maintenance Related	Date Cleaned 2018/12/19
Inspection Status Complete Inspection	Consequence Of Failure		Pressure 0.000
Inspection Technology Used			
<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other			

Street CHIPPAWA PY	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 600	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced) Lining	
Coating	Pipe Joint length M	Total length 131.1 M
Length Surveyed 131.1 M	Year Constructed	Year Renewed
Up SMH_04875	Rim to invert 8.20	Grade to invert
Northing	Easting	Elevation
Down SMH_04891	Rim to invert	Grade to invert
Northing	Easting	Elevation
Coordinate System		Vertical Datum
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST								Start of Survey
0.0		AMH								Manhole SMH_04875
0.0		MWL			15					Miscellaneous Water Level
0.0		MGO								Miscellaneous General Observation
1.4		MGO								Miscellaneous General Observation
3.5		MWL			10					Miscellaneous Water Level
4.4		DAE			5	J	08	11		Deposits Attached Encrustation
4.4		ID				J	10			Infil Dripper
28.9		IG				J	10			Infil Gusher
29.2		DAE			5	J	07	10		Deposits Attached Encrustation
32.6		MWL			15					Miscellaneous Water Level
36.5		DAE			5	J	02	05		Deposits Attached Encrustation
55.1		MWL			10					Miscellaneous Water Level
56.2		DAE			5	J	07	05		Deposits Attached Encrustation
61.1		DAE			5	J	07	11		Deposits Attached Encrustation
67.4		TB	199				11			Tap Break-in/Hammer
78.0		MWL			15					Miscellaneous Water Level
82.1		MWL			10					Miscellaneous Water Level
86.7		MWL			15					Miscellaneous Water Level
131.1		AMH								Manhole SMH_04891
131.1		FH								End of Survey

131.1 M Total Length Surveyed

Tabular Report of PSR SGM_05810

for CITY OF NIAGARA FALLS

Setup 24 Date 2018/12/19 Time 14:13 Up SMH_04875 Down SMH_04891

Scores	Structural:	Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M:	Pipe Rating 18	Pipe Ratings Index 2.6	Quick Rating 5131
	Overall	Pipe Rating 18	Pipe Ratings Index 2.6	Quick Rating 5131

Tabular Report of PSR SGM_05815

for CITY OF NIAGARA FALLS

Setup 33	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05815_	Project		
Date 2019/01/07	Time 10:33	Weather Dry - no Precipitation	Pre-Cleaning L
Date Cleaned 2019/01/02			
Flow control	Survey Purpose Maintenance Related	Direction Down	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street CHIPPAWA PY	City Niagara Falls	Drainage area DRY
Location Code Local rural streets with light traffic, town and city back streets	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 600	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 93.2 M
Length Surveyed 91.4 M	Year Constructed	Year Renewed
Up SMH_04881	Rim to invert 7.20	Grade to invert
Northing	Easting	Elevation
Down SMH_04884	Rim to invert 7.80	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04881
0.0		MWL Miscellaneous Water Level			10					
0.0		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
0.3		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
7.8		IG Infil Gusher						01		
15.1		TB Tap Break-in/Hammer	100					11		
27.7		TB Tap Break-in/Hammer	100					12		
34.1		TB Tap Break-in/Hammer	100					11		
47.0		TF Tap Factory	100					12		
59.3		TB Tap Break-in/Hammer	100					12		
61.0		TB Tap Break-in/Hammer	100					12		
69.3		TB Tap Break-in/Hammer	100					12		
74.4		TB Tap Break-in/Hammer	100					11		
78.5		TB Tap Break-in/Hammer	100					11		
91.4		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 4270
91.4		AMH Manhole								SMH_04884
91.4		FH End of Survey								

91.4 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 5	Pipe Ratings Index 5	Quick Rating 5100
	Overall: Pipe Rating 5	Pipe Ratings Index 5	Quick Rating 5100

Tabular Report of PSR SGM_05819

for **CITY OF NIAGARA FALLS**

Setup 37	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05819_	Project		
Date 2018/12/20	Time 9:51	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/12/07	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street FRONT ST	City Niagara Falls	Drainage area DRY
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 600	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 87.7 M
Length Surveyed 87.5 M	Year Constructed	Year Renewed
Up SMH_04873	Rim to invert 3.60	Grade to invert
Northing	Easting	Elevation
Down SMH_04872	Rim to invert 4.30	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04873
0.0		MWL Miscellaneous Water Level			20					
1.6		MGO Miscellaneous General Observation								STARTING IN FRONT OF BUILDING
1.6		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET POINT
9.1		TF Tap Factory	100				12			
30.2		TFA Tap Factory Activity	100				01			
30.6		IR Infil Runner					10			
48.3		TF Tap Factory	100				01			
69.3		TFA Tap Factory Activity	100				01			
79.8		TF Tap Factory	100				12			
87.5		MGO Miscellaneous General Observation								FINISH IN FRONT OF BUILDING 4.
87.5		AMH Manhole								SMH_04872
87.5		FH End of Survey								

87.5 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 4	Pipe Ratings Index 4	Quick Rating 4100
	Overall Pipe Rating 4	Pipe Ratings Index 4	Quick Rating 4100

Tabular Report of PSR SGM_05847

for CITY OF NIAGARA FALLS

Setup 42	Surveyed By PT-RSP	Certificate # U-1017-07008775	Owner City of Niagara Falls
Reviewed By PT-BC	Reviewer # U10180703002644	Work Order	
Customer City of Niagara Falls	P/O # RFP32-2018		
Media Label SGM_05847_	Project		
Date 2018/12/03	Time 7:56	Weather Dry - no Precipitation	Pre-Cleaning L
Flow control	Survey Purpose Maintenance Related	Date Cleaned 2018/10/12	
Inspection Status Complete Inspection	Consequence Of Failure	Pressure 0.000	
Inspection Technology Used	<input checked="" type="checkbox"/> CCTV <input type="checkbox"/> Laser <input type="checkbox"/> Sonar <input type="checkbox"/> Sidewall <input type="checkbox"/> Zoom <input type="checkbox"/> Other		

Street FRONT ST	City Niagara Falls	Drainage area DRY
Location Code Primary major arterial roads, interstates, numbered roads or town/city	Pipe Use Sanitary Sewage Pipe	
Location details COMPLETE	Height 600	Width mm
Shape Circular	Material Concrete Pipe (non-reinforced)	Lining
Coating	Pipe Joint length M	Total length 110.8 M
Length Surveyed 113.4 M	Year Constructed	Year Renewed
Up SMH_04879	Rim to invert 4.60	Grade to invert
Northing	Easting	Elevation
Down SMH_04880	Rim to invert 6.30	Grade to invert
Northing	Easting	Elevation
Coordinate System	Vertical Datum	
GPS Accuracy	Structural O & M Miscellaneous Constructional	
Additional info		

Count	Video	CD Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0		ST Start of Survey								
0.0		AMH Manhole								SMH_04880
0.0		MWL Miscellaneous Water Level			20					
1.6		MGO Miscellaneous General Observation								STARTING IN FRONT OF HOUSE
1.6		MGO Miscellaneous General Observation								ADJUSTED COUNTER TO SET PO
4.7		DAE Deposits Attached Encrustation			5		07	05		
19.2		DAE Deposits Attached Encrustation			5		07	05		
31.4		TFA Tap Factory Activity	100				11			
36.4		DAE Deposits Attached Encrustation			5		07	05		
61.1		IG Infil Gusher					12			
62.1		TFA Tap Factory Activity	100				11			
78.9		TFA Tap Factory Activity	100				11			
102.8		TFA Tap Factory Activity	100				11			
108.0		IR Infil Runner					12			
109.1		DAE Deposits Attached Encrustation			5		05			
113.4		MGO Miscellaneous General Observation								FINISH IN FRONT OF HOUSE 4151
113.4		AMH Manhole								SMH_04879
113.4		FH End of Survey								

113.4 M Total Length Surveyed

Scores	Structural: Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
	O&M: Pipe Rating 17	Pipe Ratings Index 2.8	Quick Rating 5141
	Overall Pipe Rating 17	Pipe Ratings Index 2.8	Quick Rating 5141

Tabular Report of PSR SGM_03973

for CITY OF NIAGARA FALLS

Setup 27 Date 2019/04/23 Time 7:26 Up SMH_03519 Down SMH_03506

Count	Video	CD	Code	Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
56.6		MWL	Miscellaneous Water Level			5					
58.0		MWL	Miscellaneous Water Level			10					
67.1		DAE	Deposits Attached Encrustation			5		08			
73.8		TFA	Tap Factory Activity	100				02			
86.0		DAE	Deposits Attached Encrustation			5		08			
88.8		TFA	Tap Factory Activity	100				02			
88.8		MWL	Miscellaneous Water Level			15					
89.4		IR	Infil Runner				J	01			
89.4		FS	Fracture Spiral				J	09	01		
90.7		MWL	Miscellaneous Water Level			10					
91.4		AMH	Manhole								SMH_03506
91.4		FH	End of Survey								

91.4 M Total Length Surveyed

Scores	Structural:	Pipe Rating 8	Pipe Ratings Index 2.7	Quick Rating 3221
	O&M:	Pipe Rating 12	Pipe Ratings Index 3	Quick Rating 4222
	Overall	Pipe Rating 20	Pipe Ratings Index 5.7	Quick Rating 4232