

Make use of your Historical Video Inspections

Video Inspection of Sanitary Sewers

VIDEO REVIEW SUMMARY

South Santry Interceptor Video Date: 08/20/2018
 Date: Inspector: BOB ALONSO

Remarks

START OF RUN IS 0 METERS FROM THE CENTER OF MH 1W.
 LIGHT DEFORMATION OF WALLS AND GROWTH
 INSPECTION PATCH
 LIGHT DEFORMATION CONTINUES.
 LIGHT DEFORMATION ENDS.
 END OF INSPECTION ENDS.
 AS 1
 DEBRIS
 SERVICE RIGHT
 LIGHT DEFORMATION OF WALLS AND GROWTH OF PIPE.
 END OF RUN AT MH 2W. (SMALL BYPASS)

APPROXIMATE GRADE - APPROXIMATE CENTER OF THE PIPE WALLS AND
 CENTER - INSPECTION PATCH AT 10.1 METERS - MANHOLE DEBRIS THROUGHOUT
 RUN - SERVICE CONNECTIONS NOT BEING FROM STREET

Notes



ID	Code	Defect	Y	X	Depth	Level	Circumferential Location	Image Ref.	Grade	Remarks
1	DA	42	1	12	2					MH1
2	DA	501	1	12	3					
3	DA	501	1	12	4					
4	DA	501	1	12	5					
5	DA	502	1	12	6					
6	DA	502	1	12	7					
7	DA	503	1	11	1					
8	DA	503	1	12	2					
9	DA	503	1	12	3					
10	DA	503	1	12	4					
11	DA	503	1	12	5					
12	DA	503	1	12	6					
13	DA	503	1	12	7					
14	DA	503	1	12	8					
15	DA	503	1	12	9					
16	DA	503	1	12	10					
17	DA	503	1	12	11					
18	DA	503	1	12	12					
19	DA	503	1	12	13					
20	DA	503	1	12	14					
21	DA	503	1	12	15					
22	DA	503	1	12	16					
23	DA	503	1	12	17					
24	DA	503	1	12	18					
25	DA	503	1	12	19					
26	DA	503	1	12	20					
27	DA	503	1	12	21					
28	DA	503	1	12	22					
29	DA	503	1	12	23					
30	DA	503	1	12	24					
31	DA	503	1	12	25					
32	DA	503	1	12	26					
33	DA	503	1	12	27					
34	DA	503	1	12	28					
35	DA	503	1	12	29					
36	DA	503	1	12	30					
37	DA	503	1	12	31					
38	DA	503	1	12	32					
39	DA	503	1	12	33					
40	DA	503	1	12	34					
41	DA	503	1	12	35					
42	DA	503	1	12	36					
43	DA	503	1	12	37					
44	DA	503	1	12	38					
45	DA	503	1	12	39					
46	DA	503	1	12	40					
47	DA	503	1	12	41					
48	DA	503	1	12	42					
49	DA	503	1	12	43					
50	DA	503	1	12	44					
51	DA	503	1	12	45					
52	DA	503	1	12	46					
53	DA	503	1	12	47					
54	DA	503	1	12	48					
55	DA	503	1	12	49					
56	DA	503	1	12	50					
57	DA	503	1	12	51					
58	DA	503	1	12	52					
59	DA	503	1	12	53					
60	DA	503	1	12	54					
61	DA	503	1	12	55					
62	DA	503	1	12	56					
63	DA	503	1	12	57					
64	DA	503	1	12	58					
65	DA	503	1	12	59					
66	DA	503	1	12	60					
67	DA	503	1	12	61					
68	DA	503	1	12	62					
69	DA	503	1	12	63					
70	DA	503	1	12	64					
71	DA	503	1	12	65					
72	DA	503	1	12	66					
73	DA	503	1	12	67					
74	DA	503	1	12	68					
75	DA	503	1	12	69					
76	DA	503	1	12	70					
77	DA	503	1	12	71					
78	DA	503	1	12	72					
79	DA	503	1	12	73					
80	DA	503	1	12	74					
81	DA	503	1	12	75					
82	DA	503	1	12	76					
83	DA	503	1	12	77					
84	DA	503	1	12	78					
85	DA	503	1	12	79					
86	DA	503	1	12	80					
87	DA	503	1	12	81					
88	DA	503	1	12	82					
89	DA	503	1	12	83					
90	DA	503	1	12	84					
91	DA	503	1	12	85					
92	DA	503	1	12	86					
93	DA	503	1	12	87					
94	DA	503	1	12	88					
95	DA	503	1	12	89					
96	DA	503	1	12	90					
97	DA	503	1	12	91					
98	DA	503	1	12	92					
99	DA	503	1	12	93					
100	DA	503	1	12	94					

Job Number	Job Date	Job Location	Job Description	Job Status	Job Notes
101	08/20/2018	101 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
102	08/20/2018	102 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
103	08/20/2018	103 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
104	08/20/2018	104 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
105	08/20/2018	105 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
106	08/20/2018	106 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
107	08/20/2018	107 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
108	08/20/2018	108 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
109	08/20/2018	109 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks
110	08/20/2018	110 SW 15th St	Sanitary Sewer Inspection	Completed	See Remarks

WE ARE AN INFRASTRUCTURE PRE-ENGINEERING FIRM
 WE PROVIDE UNIQUE DATA & SURVEY SOLUTIONS

We can update your historical video for a direct comparison with recent inspections

ConditionID	InspectionID	Distance	Counter	PACP_Code	Value
1	1	0		AMH	
2	1	0.9		NWFL	
3	1	0.9		NGP	
4	1	88.1		NWFL	
5	1	21.4		NWFL	
6	1	38.6		NWFL	
7	1	32.5		NGO	
8	1	44.7		NWFL	
9	1	61.7		NWFL	
10	1	88.9		NGO	
11	1	89.6		NGO	
12	1	75.5		NGO	
13	1	82.8		NGO	
14	1	82.8		NGO	
15	2	0		AMH	
16	2	0.2		NWFL	
17	2	0.2		DAZ	501
18	2	3.8		DAZ	F01
19	2	1.5		NGP	
20	2	5.2		NWFL	
21	2	6.8		NGO	
22	2	11.6		NGO	
23	2	13.3		DAE	
24	2	13.3		DAE	
25	2	45.9		DAZ	502
26	2	52		DAZ	F02
27	2	58.9		DAZ	
28	2	79.6		DAZ	503
29	2	88.8		DAZ	F03
30	2	86.5		DAZ	
31	2	87.9		ID	
32	2	87.9		DAE	
33	2	89.6		AMH	
34	3	2.4		AMH	
35	3	2.4		NWFL	

Historical data re-coded and collected in MS Access



- Have your old historical video & reports digitized to today's standards
- Integrate all your inspection data into one database
- You can compare historical and present day video for automatic pipe condition grading over time
- View your data in MS Access or MS Excel or other freely available software

SINCE 1993 OUR GOAL HAS BEEN TO PROVIDE EASILY UNDERSTOOD DIGITAL SURVEY REPORTS



MAKING SENSE OF YOUR DATA

- Our in-house programmers can tailor our deliverables to your needs
- Update the coding of historic video data to get a better comparison with current inspections
- Connect historic pipe condition grades automatically to present day grades
- Set up for Asset Management Systems

We can clean up & integrate your old reports into an overview of your system

CCPV Data Sheet				Area
Observations	Material			Remarks
10/12/17 10/13/17 10/14/17 10/15/17 10/16/17 10/17/17 10/18/17 10/19/17 10/20/17 10/21/17 10/22/17 10/23/17 10/24/17 10/25/17 10/26/17 10/27/17 10/28/17 10/29/17 10/30/17 10/31/17 11/1/17 11/2/17 11/3/17 11/4/17 11/5/17 11/6/17 11/7/17 11/8/17 11/9/17 11/10/17 11/11/17 11/12/17 11/13/17 11/14/17 11/15/17 11/16/17 11/17/17 11/18/17 11/19/17 11/20/17 11/21/17 11/22/17 11/23/17 11/24/17 11/25/17 11/26/17 11/27/17 11/28/17 11/29/17 11/30/17 12/1/17 12/2/17 12/3/17 12/4/17 12/5/17 12/6/17 12/7/17 12/8/17 12/9/17 12/10/17 12/11/17 12/12/17 12/13/17 12/14/17 12/15/17 12/16/17 12/17/17 12/18/17 12/19/17 12/20/17 12/21/17 12/22/17 12/23/17 12/24/17 12/25/17 12/26/17 12/27/17 12/28/17 12/29/17 12/30/17 12/31/17	10/12/17 10/13/17 10/14/17 10/15/17 10/16/17 10/17/17 10/18/17 10/19/17 10/20/17 10/21/17 10/22/17 10/23/17 10/24/17 10/25/17 10/26/17 10/27/17 10/28/17 10/29/17 10/30/17 10/31/17 11/1/17 11/2/17 11/3/17 11/4/17 11/5/17 11/6/17 11/7/17 11/8/17 11/9/17 11/10/17 11/11/17 11/12/17 11/13/17 11/14/17 11/15/17 11/16/17 11/17/17 11/18/17 11/19/17 11/20/17 11/21/17 11/22/17 11/23/17 11/24/17 11/25/17 11/26/17 11/27/17 11/28/17 11/29/17 11/30/17 12/1/17 12/2/17 12/3/17 12/4/17 12/5/17 12/6/17 12/7/17 12/8/17 12/9/17 12/10/17 12/11/17 12/12/17 12/13/17 12/14/17 12/15/17 12/16/17 12/17/17 12/18/17 12/19/17 12/20/17 12/21/17 12/22/17 12/23/17 12/24/17 12/25/17 12/26/17 12/27/17 12/28/17 12/29/17 12/30/17 12/31/17			10/12/17 10/13/17 10/14/17 10/15/17 10/16/17 10/17/17 10/18/17 10/19/17 10/20/17 10/21/17 10/22/17 10/23/17 10/24/17 10/25/17 10/26/17 10/27/17 10/28/17 10/29/17 10/30/17 10/31/17 11/1/17 11/2/17 11/3/17 11/4/17 11/5/17 11/6/17 11/7/17 11/8/17 11/9/17 11/10/17 11/11/17 11/12/17 11/13/17 11/14/17 11/15/17 11/16/17 11/17/17 11/18/17 11/19/17 11/20/17 11/21/17 11/22/17 11/23/17 11/24/17 11/25/17 11/26/17 11/27/17 11/28/17 11/29/17 11/30/17 12/1/17 12/2/17 12/3/17 12/4/17 12/5/17 12/6/17 12/7/17 12/8/17 12/9/17 12/10/17 12/11/17 12/12/17 12/13/17 12/14/17 12/15/17 12/16/17 12/17/17 12/18/17 12/19/17 12/20/17 12/21/17 12/22/17 12/23/17 12/24/17 12/25/17 12/26/17 12/27/17 12/28/17 12/29/17 12/30/17 12/31/17

A	B	C	D	E		H	I	J	K	L					
				Value							Joint	Circumferential Location		Image Ref.	Grad
				Millimeters	%							At/From	To		
1	Distance (m)	Video Ref.	Code	Continuous Defect	1st	2nd									
2															
3															
4	2.4		AMH						1						
5	2.4		MWL			40			2						
6	2.4		DAZ	S01		5	12		3	2					
7	5.1		MGP						4						
8	16.1		DAZ	F01		5	12		5	2					
9	31.9		DAZ	S02		5	12		6	2					
10	39.1		DAZ	F02		5	12		7	2					
11	43.6		DAGS			5	J 11	1	8	2					
12						5	12		9	2					
13						5	12		10	2					
14	55.2		TF		100				2	11					
15	69.6		DAGS			5	10	2	12	2					
16	69.8		TF		200			3	13						
17	71.8		DAR			5	1		14	2					
18	80.5		DAGS	S04		5	11	1	15	2					
19	86.1		MWL			50			16						
20	91.7		DAGS	F04		5	11	1	17	2					
21	93.6		DAZ	S05		5	12		18	2					
22	100.2		DAZ	F05		5	12		19	2					
23	101.8		DAGS			5	11	1	20	2					
24	108.5		DAGS			5	11	1	21	2					
25	115.6		LR			10			22	1					
26	120.1		DAZ	S06		5	12		23	2					
27	146.6		LR			10			24	1					
28	159.3		DAZ	F06		5	12		25	2					
29	161.4		DAGS			5	12		26	2					
30	166.1		DAZ			5	12		27	2					
31	175.0		DAZ	S07		5	12		28	2					
32	190.3		DAZ	F07		5	12		29	2					
33	201.1		DAGS	S08		5	12		30	2					
34	219.8		DAGS	F08		5	12		31	2					
35	229.4		DAZ			5	12		32	2					
36	243.9		DAGS			5	12		33	2					
37	245.6		MWL			55			34						

Combine all data in freely available software such as MS Excel

DIGITIZE YOUR OLD CODED VIDEO

- We can graph the historic and present day results; allowing you to budget for repairs or replacement
- We can link the coded video to GIS asset management software
- Integrate all data, historical and present, into GIS software
- Our reports and databases can include GIS ID

REPEATED
REPEATED

Data	Deficiencies	WentHub			Summary
Type Number: H77	Circumferential Crack				Traces of grease throughout
Acronym: H77	Longitudinal Crack				200mm above finished sewer
Downstream Mile: 5	Sand/Graiel				150mm protrudes to approx 25mm
Upstream Mile: 5	Lateral				
	Structural				
	Grease				
	Deposits				
	Roots				
	Size				
	Joints				
	Left/Right/Vertical				
	Active/Dry/Capped				
	Foreman				
	Inspected By:				
	Comments				

Chalage (Meters)					
0.0 m	Joint of man at MH 5 opening		10723		
7.6	100mm AT/Dry/1/4th		10924		
22.0	Joint		11105		Visible O-Ring
25.8	150mm AT/Dry/1/4th		11205		
27.5	Joint		11235		protruding to 25mm
31.2	100mm AT/Dry/1/4th		11311		Visible O-Ring
32.7	100mm AT/Dry/1/4th		11347		
47.9	end of run to next 4 opening		11509		



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PAQC Sewer Report

(1) Surveyed By: (2) Certificate Number: (3) Owner: (4) Customer: (24) Drainage Area: (10) Mile: (7) PO Number: (25) Pipe Segment Reference: (11) Date: (10) Time: (20) Day:

(26) Street: (27) Inlet Manhole: (28) Upstream Mile: (29) Downstream Mile: (30) Direction: (31) Line: (32) Material: (33) Year Constructed: (34) Year Renewed: (35) Pre-Cleaning: (36) Date Cleaned: (37) Project:

Distance (m)	Video Ref.	Code	Continuous Defect		Value Millimeters	Joint %	Circ. Loc.	Image Ref.		Grade	Remarks
			1st	2nd				As From	To		
2.0	AMH								1		MHIE
2.6	MWL			20					2		
2.6	SAD	S01					9	3	3	3	POSSIBLY HAS ATTACK
2.6	MSO							4	2		FOGGY PIPE CONDITION
2.6	FO						8	9	5	2	
2.6	FO						3	9	6	2	
4.6											
7.9											
7.9											
10.9											
12.8											
33.9											
52.8											
63.0											
151.3											
166.3											
176.1											
177.5											
190.9											
190.9											

We can export your data to updated standard databases

AquaCooustic
Remote Technologies Inc.

SSD - MHIE to UNDOCUMENTED MHIAE - Photo00 - 1908110

Grade	Amount of Structural Defects	Structural Support Grade	Structure Pipe Type
0	0	0	13
1	0	0	0
2	2	4	4
1	0	0	0
190.9			

AquaCooustic
Remote Technologies Inc.

SSD - MHIE to UNDOCUMENTED MHIAE - Photo01 - 1908110

Grade	Amount of Structural Defects	Structural Support Grade	Structure Pipe Type
0	0	0	13
1	0	0	0
2	2	4	4
1	0	0	0
190.9			



AQUACOUSTIC'S KEY POINTS

- Re-process your historic CCTV video to present day standards & link them to present day grades
- Provide standardized coding throughout the organization
- Our software enables automatic pipe condition grading for all collected video
- Re-coding of historic video allows for direct comparison with current inspections
- We can correct any coding mistakes and add missed observations
- Receive critical information that will assist in budgeting for repairs or replacement
- If you have any technical questions please phone or email us & we'd be happy to provide an answer

AREAS OF INFRASTRUCTURE INSPECTIONS

IF YOU HAVE A PARTICULAR INTEREST OR CHALLENGE, WE CAN DISCUSS SOLUTIONS ON THE PHONE OR WE CAN SEND ADDITIONAL INFORMATION ON THE FOLLOWING:

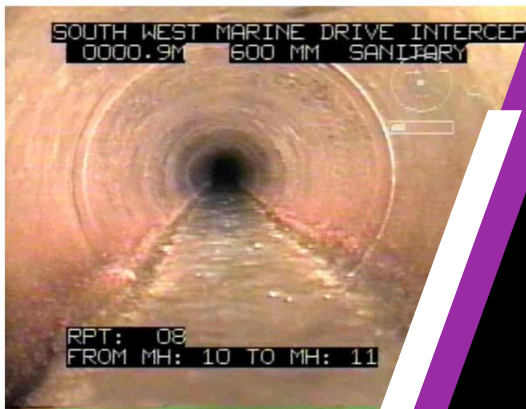
- ✓ Dams
- ✓ Bridges
- ✓ Tunnels
- ✓ Culverts
- ✓ Manholes
- ✓ Mine Stopes
- ✓ Ports & Marinas
- ✓ Large Diameter Pipes
- ✓ Mine Tailing Ponds
- ✓ Shafts and Boreholes
- ✓ Pipe and Cable River Crossing Surveys
- ✓ Historical Video Re-coding to New Standards
- ✓ Processing Client Collected Sonar & Laser Data
- ✓ Specialty Sonar/Laser Surveys

AQUACOUSTIC CAN PLAY A SIGNIFICANT ROLE IN YOUR RISK MANAGEMENT STRATEGY

SWI - MH10 TO MH11 - Photo001 - 19990607



SWI - MH10 TO MH11 - Photo002 - 19990607



SWI - MH10 TO MH11 - Photo003 - 19990607



SWI - MH10 TO MH11 - Photo004 - 19990607



WHAT CAN WE DO FOR YOU



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Updated & organized video frame grab report