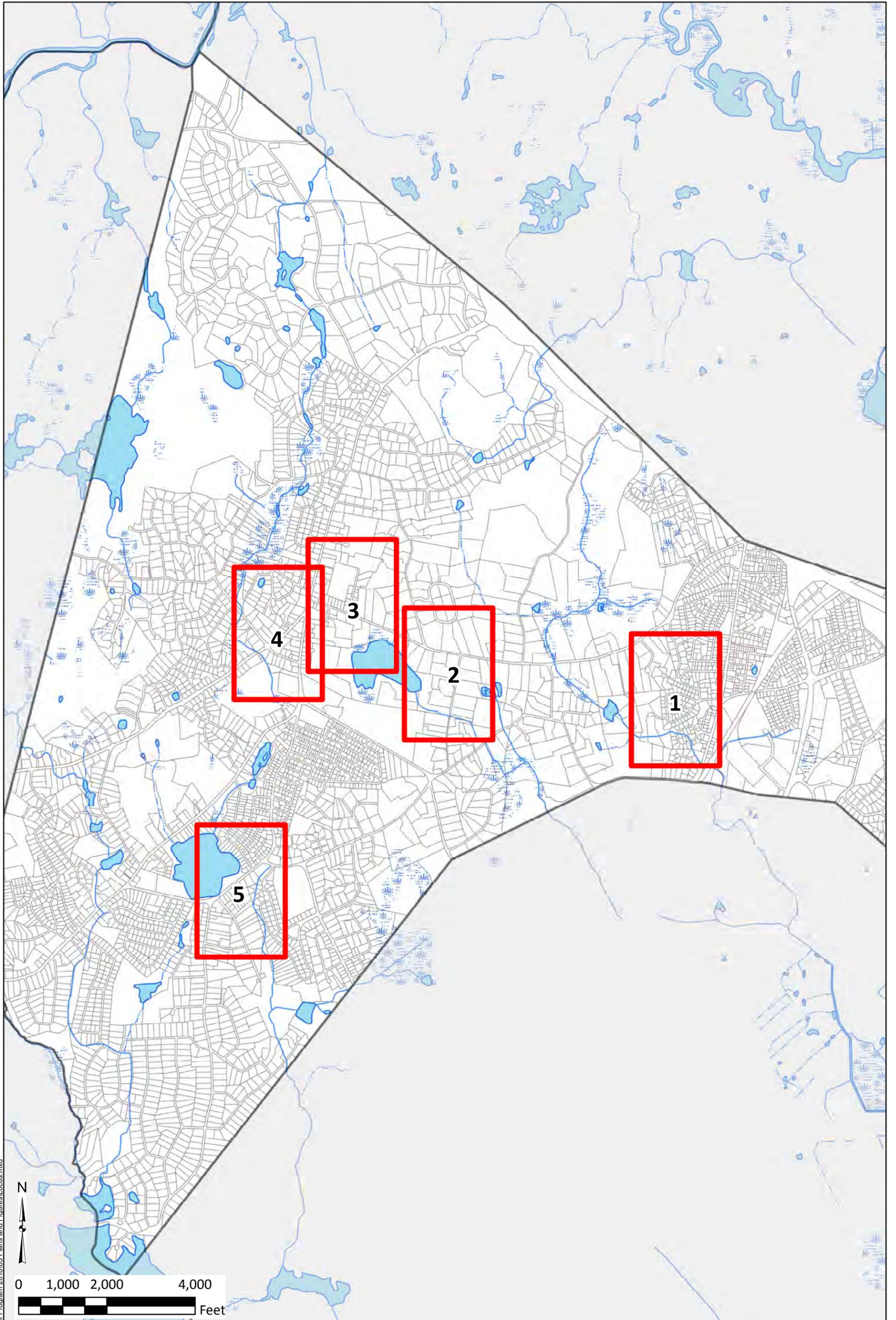


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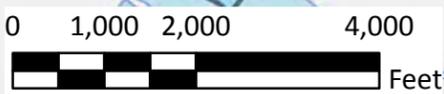
*APPENDIX A*

*WESTWOOD SEWER SYSTEM REHABILITATION FIGURES*

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1 in = 2,000 feet  
 January 2019  
 Job #: 309-1801

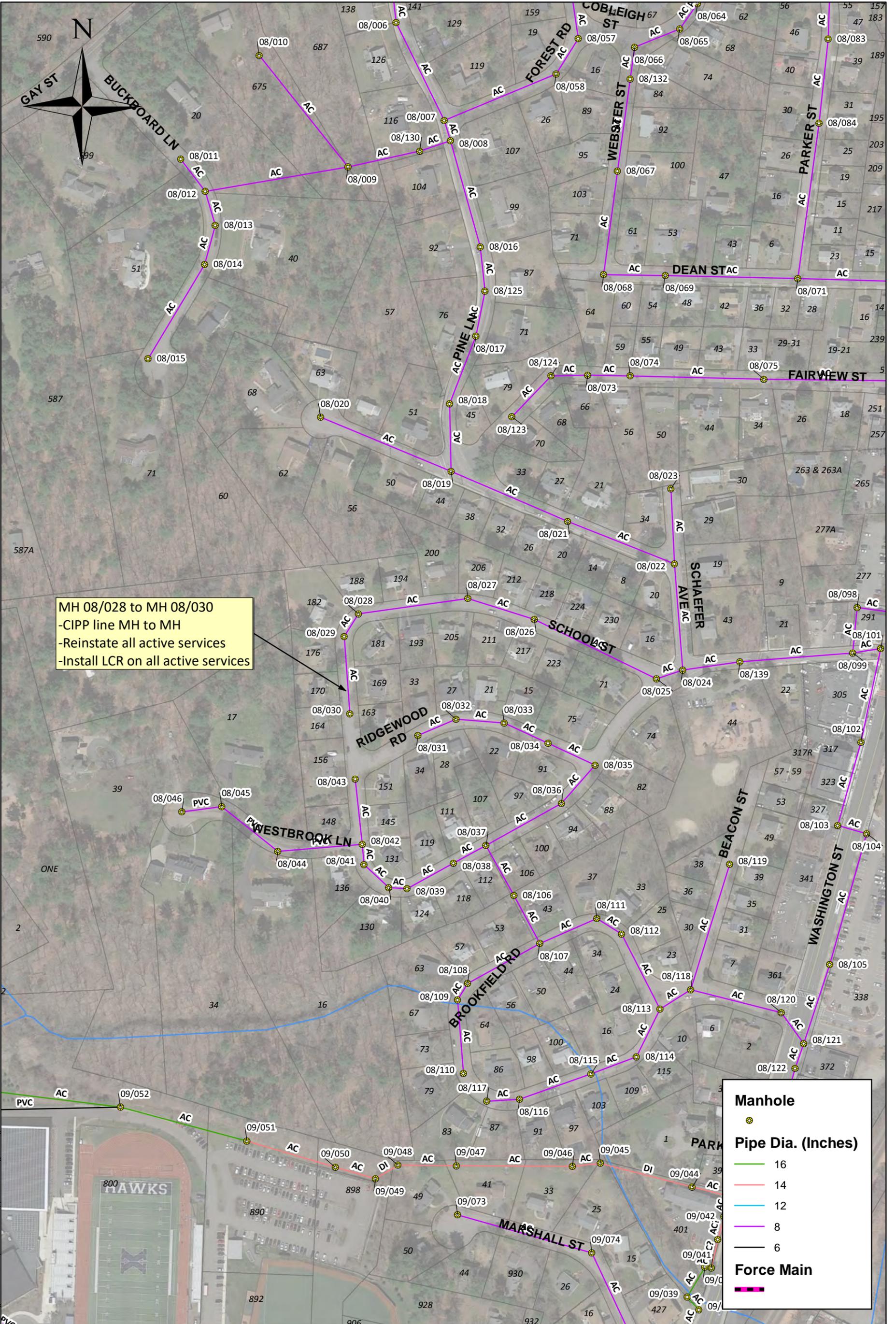
**FY19 SEWER SYSTEM REHABILITATION  
 WESTWOOD, MA  
 LOCUS MAP**

For Bid  
**LOCUS**

# GENERAL & CONSTRUCTION NOTES:

- 1) DRAWINGS ARE BASED ON CITY OF WESTWOOD GIS DATABASE. COMPLETENESS AND CORRECTNESS OF UTILITY LOCATIONS AND CONNECTIVITY ARE NOT GUARANTEED.
- 2) THE CONTRACTOR SHALL RESTORE ALL PUBLIC AND PRIVATE PROPERTY TO ITS PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- 3) ALL EXISTING WATER, SEWER, AND DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE.
- 4) ABBREVIATIONS: AC=ASBESTOS CEMENT; CIPP=CURED-IN-PLACE PIPE; PVC=POLYVINYL CHLORIDE; VC=VITRIFIED CLAY; RCP=REINFORCED CONCRETE PIPE; LCR=LATERAL CONNECTION REPAIR
- 5) DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSION AND STATIONING SHALL PREVAIL. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. REFER TO CCTV INSPECTION RECORDS IN APPENDIX FOR ADDITIONAL INFORMATION.
- 6) THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR WORK IN ROADWAYS. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL PERMITS AS AN INTEGRAL PART OF HIS WORK.
- 7) CONTRACTOR TO FIELD VERIFY WORK AREA CONDITIONS PRIOR TO THE START OF CONSTRUCTION. IF CONDITIONS DIFFER SIGNIFICANTLY FROM PROPOSED PLAN CONTRACTOR TO CONTACT THE CITY AND DESIGN ENGINEER IMMEDIATELY.
- 8) ALL PROPERTY OWNERS TO BE AFFECTED BY THE WORK SHALL RECEIVE ADVANCE NOTICE BY THE CONTRACTOR A MINIMUM OF 48 HOURS IN ADVANCE OF THE WORK INCLUDING CONTRACTOR CONTACT INFORMATION.
- 9) NO DISPOSAL SITE WILL BE PROVIDED FOR DEBRIS REMOVED FROM DRAIN OR SEWER SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRANSPORTATION AND DISPOSAL OF ALL DEBRIS. DISPOSAL OF ALL DEBRIS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
- 10) DISCHARGES FROM ALL CLEANING ACTIVITIES ARE SUBJECT TO THE APPROVAL OF THE MASSACHUSETTS WATER RESOURCES AUTHORITY (THE AUTHORITY). THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY APPROVALS. ALL COSTS ASSOCIATED WITH MEETING THE AUTHORITY'S REGULATIONS SHALL BE INCURRED BY THE CONTRACTOR. SEE SPECIFICATION SPECIAL PROVISIONS SECTION 01170 FOR ADDITIONAL INFORMATION.
- 11) NO WATER USED FOR LINING ACTIVITIES SHALL BE DISCHARGED INTO THE DRAINAGE SYSTEM.
- 12) CIPP LINERS SHALL BE CUT FLUSH WITH MANHOLE INSIDE WALL AND THE ANNULAR SPACE BETWEEN THE HOST PIPE AND CIPP SEALED WITH HYDRAULIC CEMENT AT THE MANHOLE INSIDE WALL.
- 13) NO MORE THAN ONE WORK CREW WILL BE ALLOWED ON SITE AT ANY TIME DURING THE PROJECT. ADDITIONAL WORK CREWS WILL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.

E:\WESTWOOD-309\309-1801\PROGRAM 2018\05 PLANS AND FIGURES\GENERAL NOTES.DWG



MH 08/028 to MH 08/030  
 -CIPP line MH to MH  
 -Reinstate all active services  
 -Install LCR on all active services

**Manhole**

**Pipe Dia. (Inches)**  
 16  
 14  
 12  
 8  
 6

**Force Main**

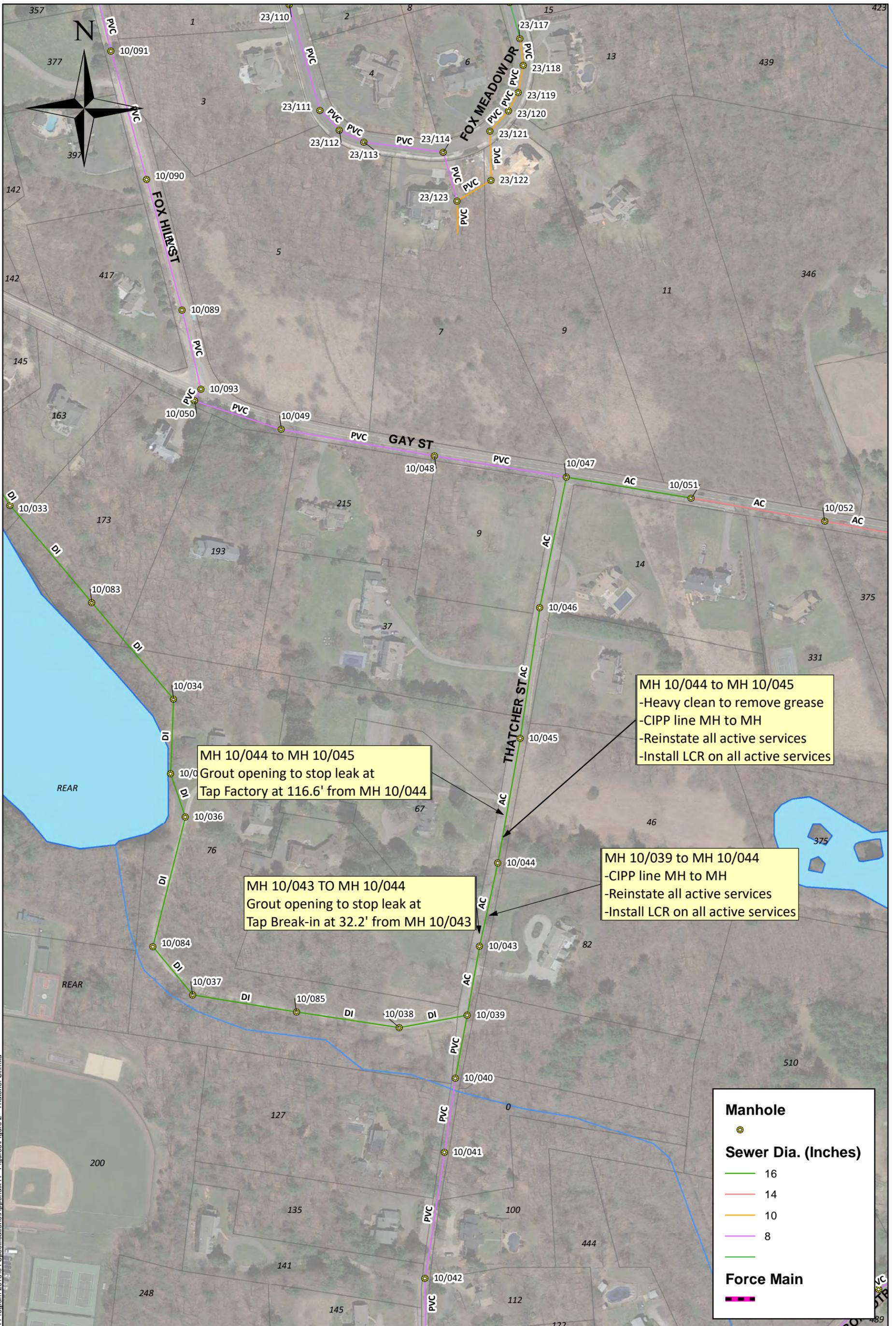
I:\Westwood\_309\309-1801\Program 2018\04 Specifications\Appendix A - Figures\Figure 1 - School St.mxd



1 in = 200 feet  
 June 2019  
 Job #: 309-1801

**FY19 SEWER SYSTEM REHABILITATION  
 WESTWOOD, MA  
 SCHOOL ST**

For Bid  
**FIGURE  
 1**



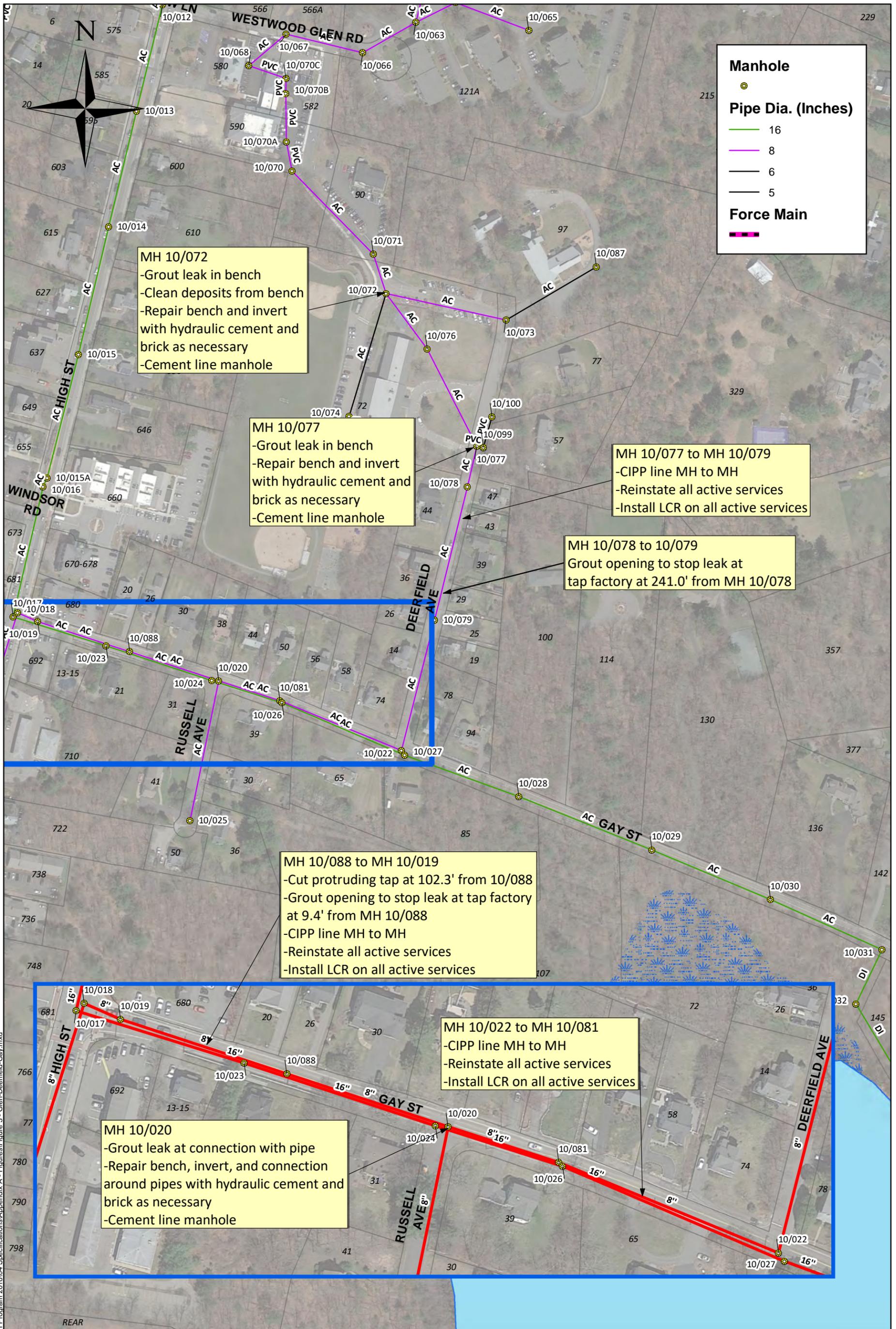
I:\Westwood\_309\309-1802 II Program 2018\04 Specifications\Appendix A - Figures\Figure 2 - Thatcher St.mxd



1 in = 200 feet  
 June 2019  
 Job #: 309-1801

**FY19 SEWER SYSTEM REHABILITATION  
 WESTWOOD, MA  
 THATCHER ST**

For Bid  
**FIGURE  
 2**



**Manhole**  
●

**Pipe Dia. (Inches)**

— 16  
— 8  
— 6  
— 5

**Force Main**  
—

**MH 10/072**  
-Grout leak in bench  
-Clean deposits from bench  
-Repair bench and invert with hydraulic cement and brick as necessary  
-Cement line manhole

**MH 10/077**  
-Grout leak in bench  
-Repair bench and invert with hydraulic cement and brick as necessary  
-Cement line manhole

**MH 10/077 to MH 10/079**  
-CIPP line MH to MH  
-Reinstate all active services  
-Install LCR on all active services

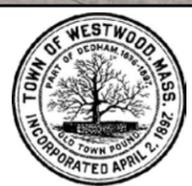
**MH 10/078 to 10/079**  
Grout opening to stop leak at tap factory at 241.0' from MH 10/078

**MH 10/088 to MH 10/019**  
-Cut protruding tap at 102.3' from 10/088  
-Grout opening to stop leak at tap factory at 9.4' from MH 10/088  
-CIPP line MH to MH  
-Reinstate all active services  
-Install LCR on all active services

**MH 10/022 to MH 10/081**  
-CIPP line MH to MH  
-Reinstate all active services  
-Install LCR on all active services

**MH 10/020**  
-Grout leak at connection with pipe  
-Repair bench, invert, and connection around pipes with hydraulic cement and brick as necessary  
-Cement line manhole

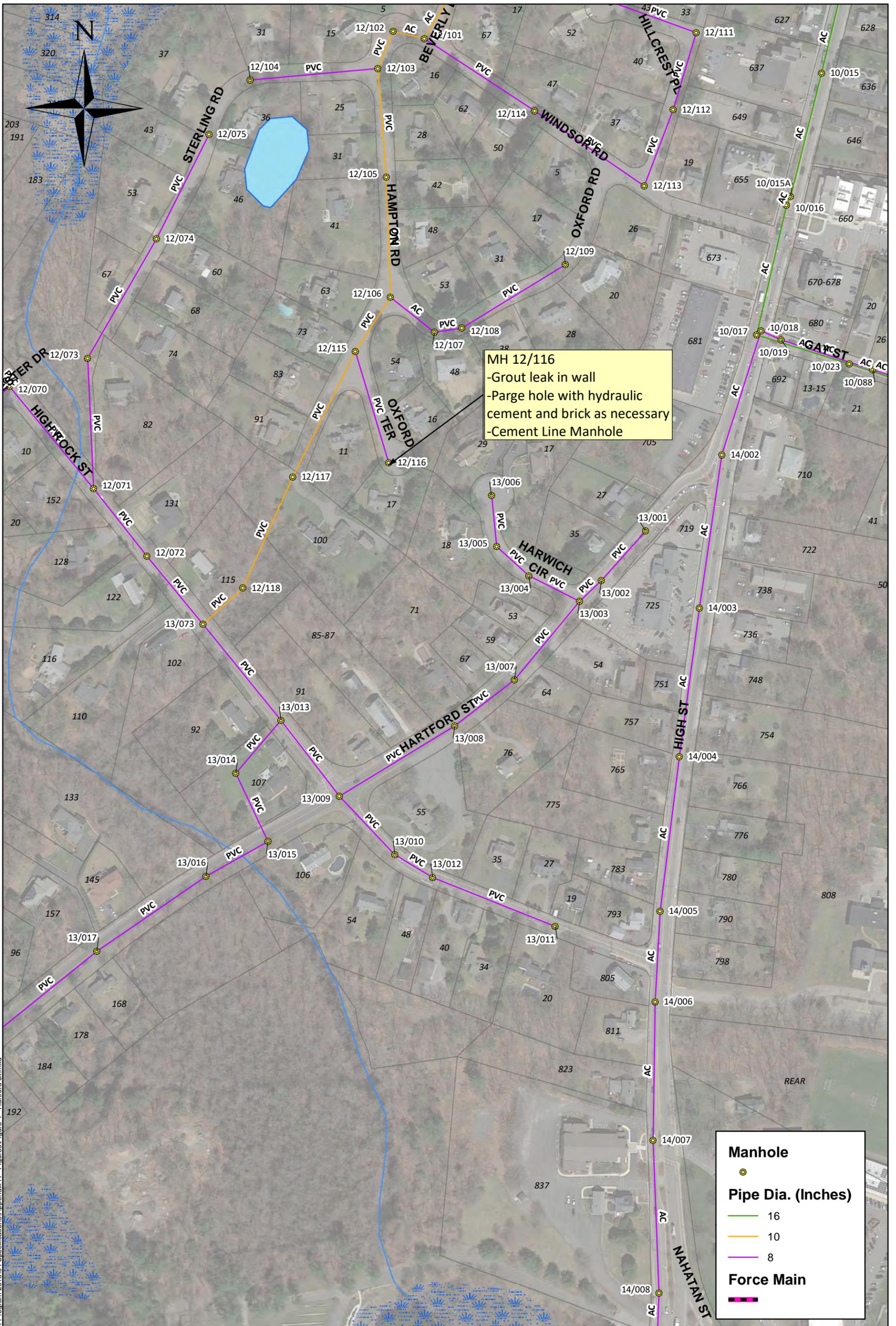
I:\Westwood\_309\309-1802 II Program 2018\04 Specifications\Appendix A - Figures\Figure 3 - Glen-Deerfield-Gay.mxd



1 in = 200 feet  
June 2019  
Job #: 309-1801

**FY19 SEWER SYSTEM REHABILITATION  
WESTWOOD, MA  
WESTWOOD FLEN, DEERFIELD, GAY**

For Bid  
**FIGURE  
3**



MH 12/116  
 -Grout leak in wall  
 -Parge hole with hydraulic cement and brick as necessary  
 -Cement Line Manhole

<b>Manhole</b>	
<b>Pipe Dia. (Inches)</b>	
16	
10	
8	
<b>Force Main</b>	

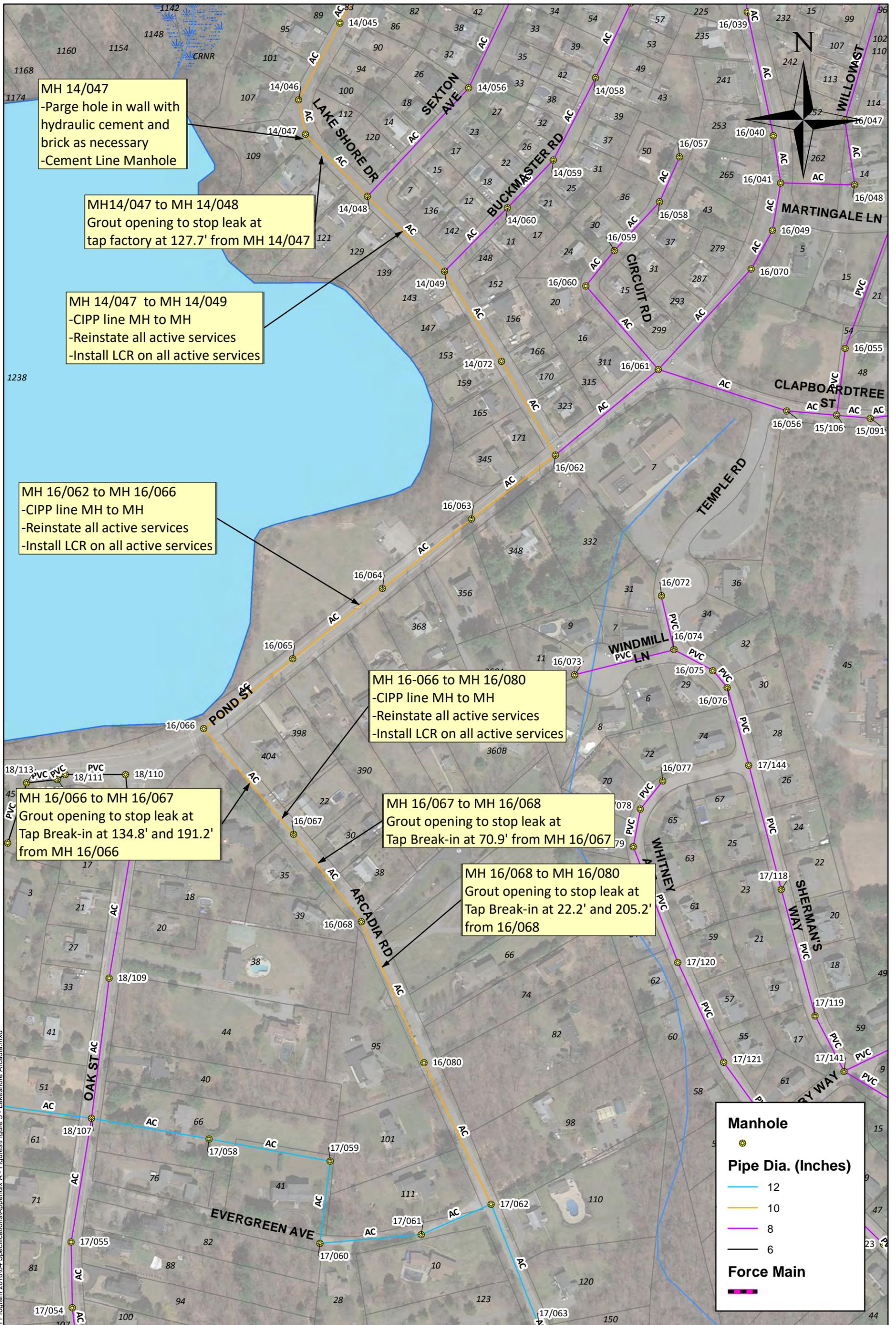
I:\Westwood\_309\309-1802 II Program 2018\04 Specifications\Appendix A - Figures\Figure 4 - Hartford St.mxd



1 in = 200 feet  
 June 2019  
 Job #: 309-1801

**FY19 SEWER SYSTEM REHABILITATION  
 WESTWOOD, MA  
 HARTFORD, HIGH ROCK, AND OXFORD**

For Bid  
**FIGURE  
 4**



MH 14/047  
 -Parge hole in wall with hydraulic cement and brick as necessary  
 -Cement Line Manhole

MH14/047 to MH 14/048  
 Grout opening to stop leak at tap factory at 127.7' from MH 14/047

MH 14/047 to MH 14/049  
 -CIPP line MH to MH  
 -Reinstate all active services  
 -Install LCR on all active services

MH 16/062 to MH 16/066  
 -CIPP line MH to MH  
 -Reinstate all active services  
 -Install LCR on all active services

MH 16-066 to MH 16/080  
 -CIPP line MH to MH  
 -Reinstate all active services  
 -Install LCR on all active services

MH 16/066 to MH 16/067  
 Grout opening to stop leak at Tap Break-in at 134.8' and 191.2' from MH 16/066

MH 16/067 to MH 16/068  
 Grout opening to stop leak at Tap Break-in at 70.9' from MH 16/067

MH 16/068 to MH 16/080  
 Grout opening to stop leak at Tap Break-in at 22.2' and 205.2' from 16/068

**Manhole**

**Pipe Dia. (Inches)**  
 12  
 10  
 8  
 6

**Force Main**

I:\Westwood\_309\309-1802 II Program 2018\04 Specifications\Appendix A - Figures\Figure 5 - Lakeshore Arcadia.mxd



1 in = 200 feet  
 June 2019  
 Job #: 309-1801

**FY19 SEWER SYSTEM REHABILITATION  
 WESTWOOD, MA  
 LAKESHORE, POND, ARCADIA, EVERGREEN**

For Bid  
**FIGURE  
 5**



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*APPENDIX B*

*CCTV INSPECTION REPORTS*

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## NWMCC INSPECTION REPORT

### PACP Rating Description

<p><b><u>1:</u> Excellent Condition</b></p> <p><b>Minor Defects - Failure unlikely in the foreseeable future</b></p>
<p><b><u>2:</u> Good Condition</b></p> <p><b>Defects that have not begun to deteriorate - Pipe unlikely to fail for at least 20 years.</b></p>
<p><b><u>3:</u> Fair Condition</b></p> <p><b>Moderate defects that will continue to deteriorate - Pipe may fail in 10-20 years.</b></p>
<p><b><u>4:</u> Poor Condition</b></p> <p><b>Severe Defects that will become Grade 5 defects within the foreseeable future - Pipe will probably fail in 5-10 years.</b></p>
<p><b><u>5:</u> Immediate Attention</b></p> <p><b>Defects require immediate attention - Pipe has failed or will likely fail within the next 5 years or sooner.</b></p>

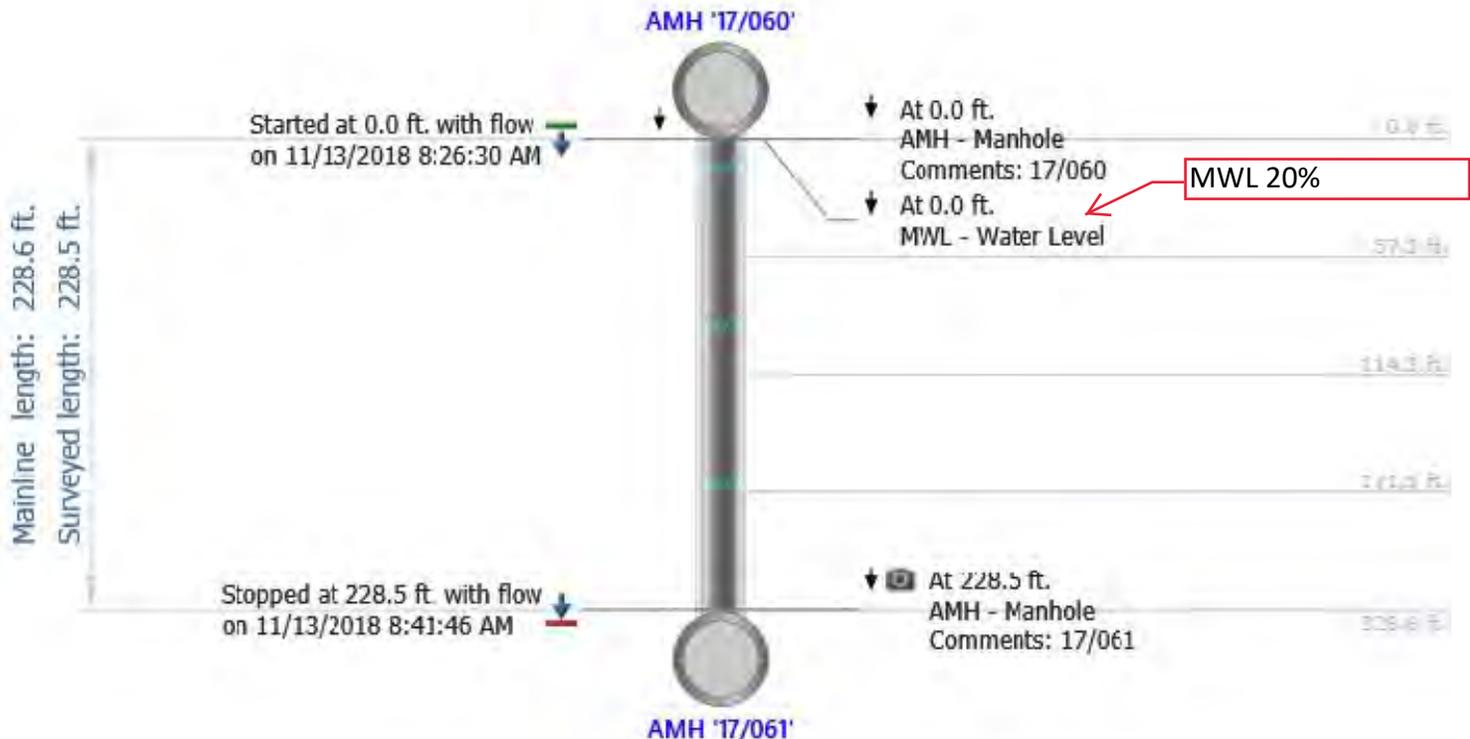


## NWMCC INSPECTION REPORT

Start date/time: <b>20181113 08:26</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>17/060/17/061</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>EVERGREEN AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>17/060</b>	Downstream MH No: <b>17/061</b>	Direction: <b>D</b>	Total length: <b>228.6 ft.</b>	Length surveyed: <b>228.5 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>15 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

### Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City:

WESTWOOD MA

Street:

EVERGREEN AVE

Start date/time:

20181113 08:42

Pipe segment ref.:

17/060/17/061



Photo: 17\_060-17\_061-20181113-084030.JPG

At: 228.5 ft. AMH - Manhole

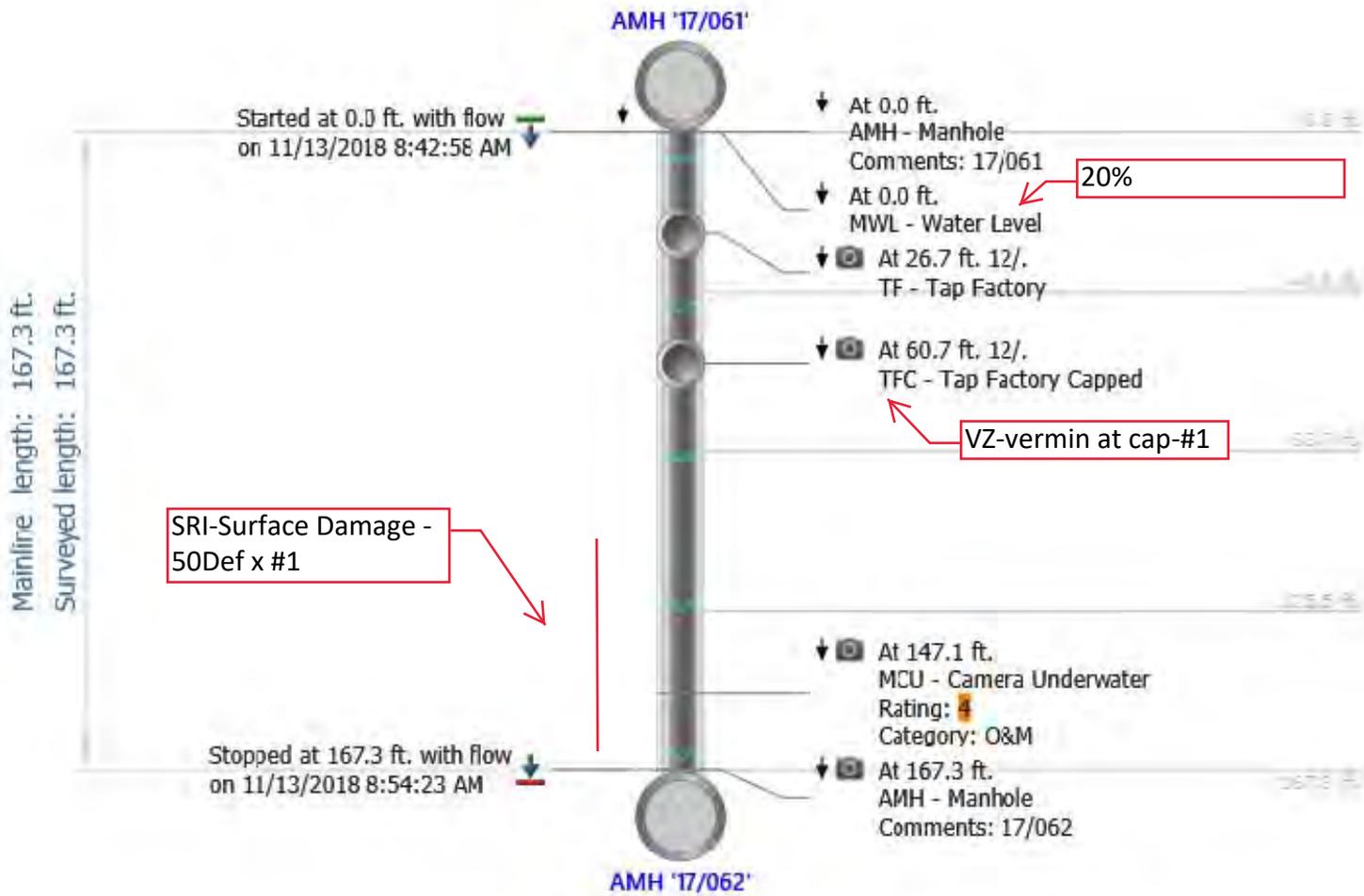
Joint: No 17/061

# NWMCC INSPECTION REPORT

Start date/time: <b>20181113 08:42</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>17/061-17/062</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>EVERGREEN AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control:
Upstream MH No: <b>17/061</b>	Downstream MH No: <b>17/062</b>	Direction: <b>D</b>	Total length: <b>167.3 ft.</b>	Length surveyed: <b>167.3 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>15 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	4	4100	4.00	4	4.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	4							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>EVERGREEN AVE</b>	Start date/time: <b>20181113 09:21</b>	Pipe segment ref.: <b>17/061-17/062</b>
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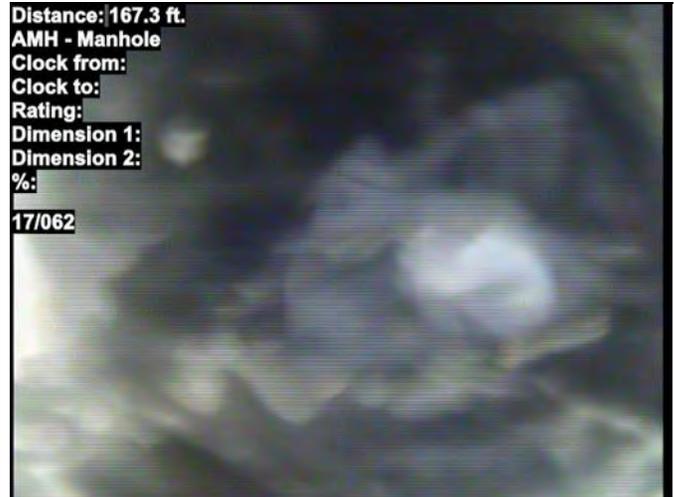
Distance: 26.7 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 17\_061-17\_062-20181113-084600.JPG  
At: 26.7 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 60.7 ft.  
TFC - Tap Factory Capped  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 17\_061-17\_062-20181113-084722.JPG  
At: 60.7 ft. 12/. TFC - Tap Factory Capped  
Joint: No



Distance: 147.1 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:  
Photo: 17\_061-17\_062-20181113-085235.JPG  
At: 147.1 ft. MCU - Camera Underwater  
Joint: No



Distance: 167.3 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
17/062  
Photo: 17\_061-17\_062-20181113-085409.JPG  
At: 167.3 ft. AMH - Manhole  
Joint: No 17/062

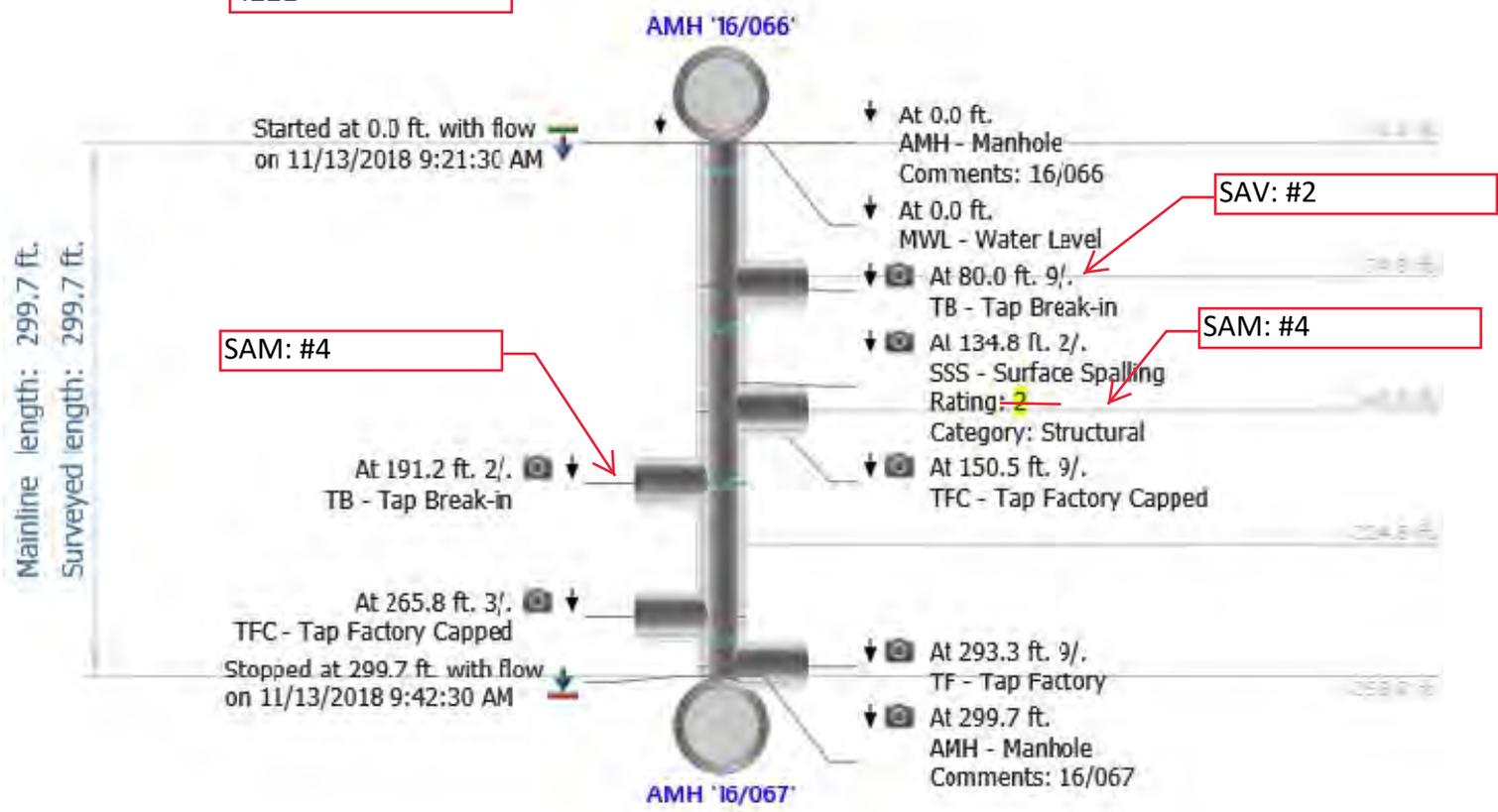
# NWMCC INSPECTION REPORT

Start date/time: <b>20181113 09:21</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>16/066-16/067</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>16/066</b>	Downstream MH No: <b>16/067</b>	Direction: <b>D</b>	Total length: <b>299.7 ft.</b>	Length surveyed: <b>299.7 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>12 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	2	<del>2100</del>	2.00	0	0	0	0000	0.00	2	<del>2.00</del>		
2	0	2				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							

4221



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Start date/time: <b>20181113 09:43</b>	Pipe segment ref.: <b>16/066-16/067</b>
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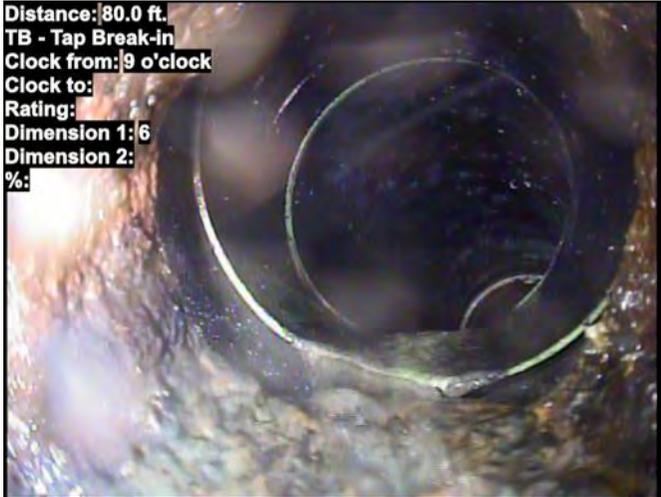


Photo: 16\_066-16\_067-20181113-093101.JPG  
At: 80 ft. 9/. TB - Tap Break-in  
Joint: No



Photo: 16\_066-16\_067-20181113-093245.JPG  
At: 134.8 ft. 2/. SSS - Surface Spalling  
Joint: No



Photo: 16\_066-16\_067-20181113-093342.JPG  
At: 150.5 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Photo: 16\_066-16\_067-20181113-093522.JPG  
At: 191.2 ft. 2/. TB - Tap Break-in  
Joint: No



Distance: 265.8 ft.  
TFC - Tap Factory Capped  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 16\_066-16\_067-20181113-093759.JPG  
At: 265.8 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Distance: 293.3 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 16\_066-16\_067-20181113-093911.JPG  
At: 293.3 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 299.7 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

16/067

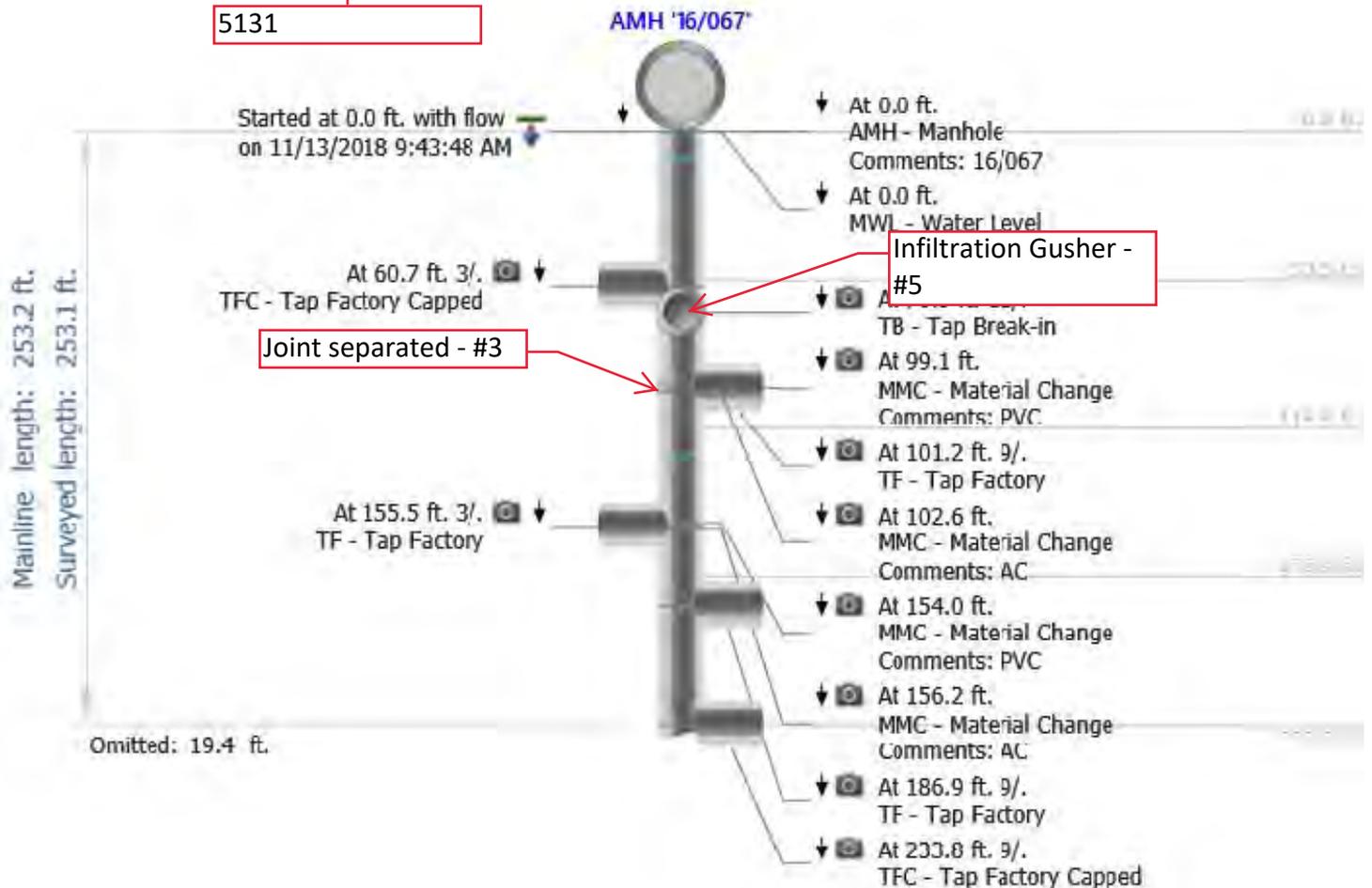
Photo: 16\_066-16\_067-20181113-094003.JPG  
At: 299.7 ft. AMH - Manhole  
Joint: No 16/067

# NWMCC INSPECTION REPORT

Start date/time: <b>20181113 09:43</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>16/067-16/068</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>16/067</b>	Downstream MH No: <b>16/068</b>	Direction: <b>D</b>	Total length: <b>253.2 ft.</b>	Length surveyed: <b>253.1 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>12 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0				0	0							
2	0	0				0	0							
3	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
4	0	0				0	0							
5	0	0				0	0							



Mainline length: 253.2 ft.  
Surveyed length: 253.1 ft.

Omitted: 253.1 ft.

Stopped at 253.1 ft. with flow  
on 11/13/2018 9:56:24 AM



AMH '16/068'



At 253.1 ft.  
AMH - Manhole  
Comments: 16/068

11/13/2018 9:56:24 AM

# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Start date/time: <b>20181113 10:18</b>	Pipe segment ref.: <b>16/067-16/068</b>
------------------------------	------------------------------	---	--



Distance: 60.7 ft.  
TFC - Tap Factory Capped  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 16\_067-16\_068-20181113-094641.JPG  
At: 60.7 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Distance: 70.9 ft.  
TB - Tap Break-in  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 16\_067-16\_068-20181113-094735.JPG  
At: 70.9 ft. 12/. TB - Tap Break-in  
Joint: No



Distance: 99.1 ft.  
MMC - Material Change  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
PVC  
Photo: 16\_067-16\_068-20181113-094849.JPG  
At: 99.1 ft. MMC - Material Change  
Joint: No PVC



Distance: 101.2 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 16\_067-16\_068-20181113-094929.JPG  
At: 101.2 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 102.6 ft.  
 MMC - Material Change  
 Clock from:  
 Clock to:  
 Rating:  
 Dimension 1:  
 Dimension 2:  
 %:  
 AC

Photo: 16\_067-16\_068-20181113-094950.JPG  
 At: 102.6 ft. MMC - Material Change  
 Joint: No AC



Distance: 154.0 ft.  
 MMC - Material Change  
 Clock from:  
 Clock to:  
 Rating:  
 Dimension 1:  
 Dimension 2:  
 %:  
 PVC

Photo: 16\_067-16\_068-20181113-095131.JPG  
 At: 154 ft. MMC - Material Change  
 Joint: No PVC



Distance: 155.5 ft.  
 TF - Tap Factory  
 Clock from: 3 o'clock  
 Clock to:  
 Rating:  
 Dimension 1: 6  
 Dimension 2:  
 %:

Photo: 16\_067-16\_068-20181113-095157.JPG  
 At: 155.5 ft. 3/. TF - Tap Factory  
 Joint: No



Distance: 156.2 ft.  
 MMC - Material Change  
 Clock from:  
 Clock to:  
 Rating:  
 Dimension 1:  
 Dimension 2:  
 %:  
 AC

Photo: 16\_067-16\_068-20181113-095212.JPG  
 At: 156.2 ft. MMC - Material Change  
 Joint: No AC



Distance: 186.9 ft.  
 TF - Tap Factory  
 Clock from: 9 o'clock  
 Clock to:  
 Rating:  
 Dimension 1: 6  
 Dimension 2:  
 %:

Photo: 16\_067-16\_068-20181113-095341.JPG  
 At: 186.9 ft. 9/. TF - Tap Factory  
 Joint: No



Distance: 233.8 ft.  
 TFC - Tap Factory Capped  
 Clock from: 9 o'clock  
 Clock to:  
 Rating:  
 Dimension 1: 6  
 Dimension 2:  
 %:

Photo: 16\_067-16\_068-20181113-095519.JPG  
 At: 233.8 ft. 9/. TFC - Tap Factory Capped  
 Joint: No



Photo: 16\_067-16\_068-20181113-095609.JPG

At: 253.1 ft. AMH - Manhole

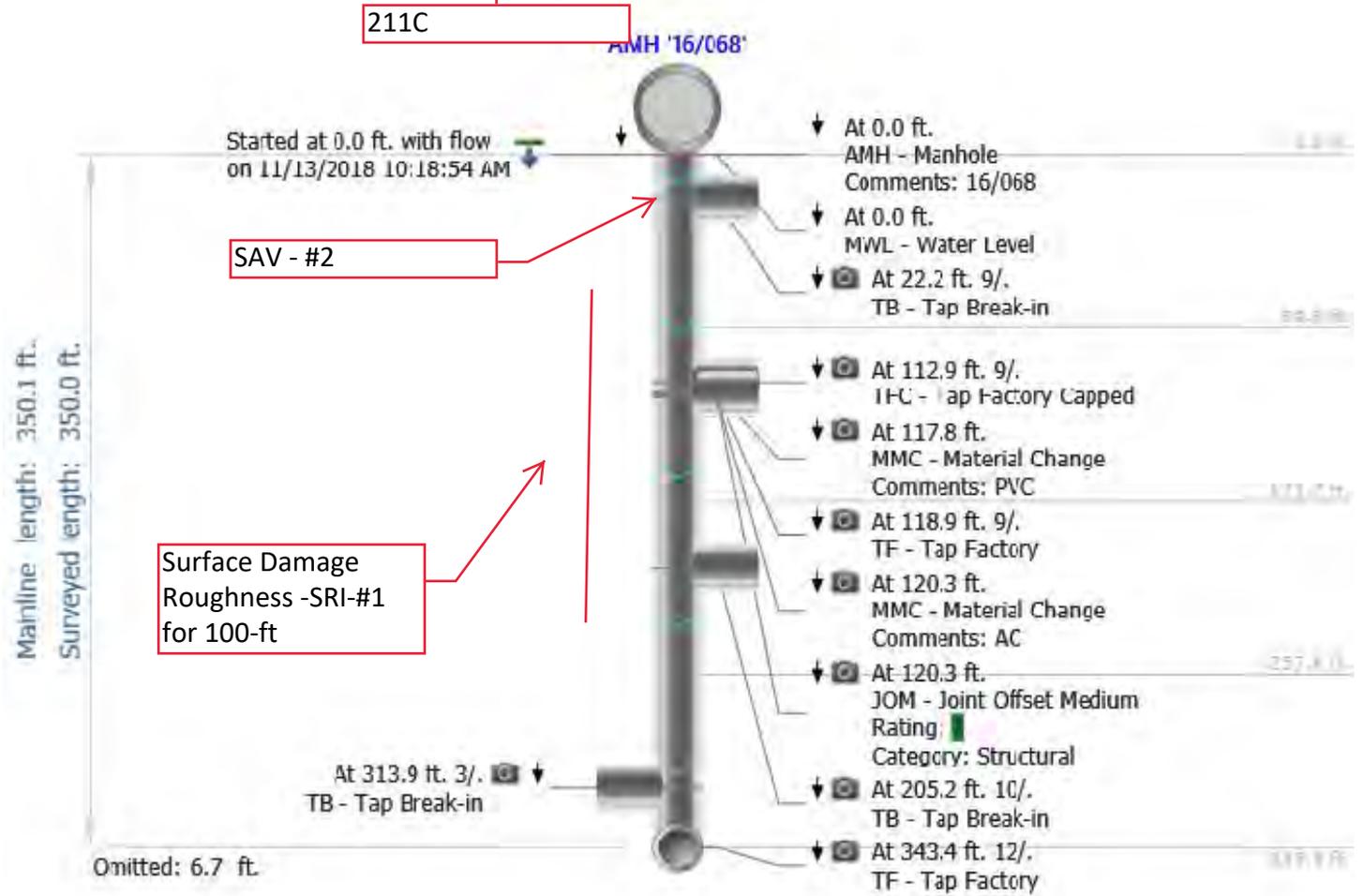
Joint: No 16/068

# NWMCC INSPECTION REPORT

Start date/time: <b>20181113 10:18</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>16/068-16/080</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>16/068</b>	Downstream MH No: <b>16/080</b>	Direction: <b>D</b>	Total length: <b>350.1 ft.</b>	Length surveyed: <b>350.0 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>12 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	1	1	1000	1.00	0	0	0	0000	0.00	1	1.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



Mainline length: 350.1 ft.  
Surveyed length: 350.0 ft.

Omitted: 350 ft.

Stopped at 350.0 ft. with flow  
on 11/13/2018 10:32:48 AM



AMH '16/080'



At 350.0 ft.  
AMH - Manhole  
Comments: 16/080

350.0 ft.  
350.1 ft.

# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Start date/time: <b>20181113 10:34</b>	Pipe segment ref.: <b>16/068-16/080</b>
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Distance: 22.2 ft.  
TB - Tap Break-in  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 16\_068-16\_080-20181113-102004.JPG  
At: 22.2 ft. 9/. TB - Tap Break-in  
Joint: No



Distance: 112.9 ft.  
TFC - Tap Factory Capped  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 16\_068-16\_080-20181113-102252.JPG  
At: 112.9 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Distance: 117.8 ft.  
MMC - Material Change  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
PVC  
Photo: 16\_068-16\_080-20181113-102325.JPG  
At: 117.8 ft. MMC - Material Change  
Joint: No PVC



Distance: 118.9 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 16\_068-16\_080-20181113-102358.JPG  
At: 118.9 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 16\_068-16\_080-20181113-102418.JPG  
At: 120.3 ft. JOM - Joint Offset Medium  
Joint: No



Photo: 16\_068-16\_080-20181113-102406.JPG  
At: 120.3 ft. MMC - Material Change  
Joint: No AC

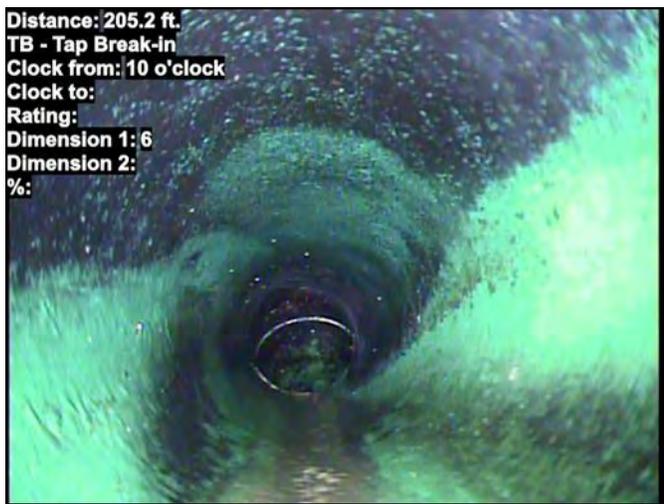


Photo: 16\_068-16\_080-20181113-102721.JPG  
At: 205.2 ft. 10/. TB - Tap Break-in  
Joint: No



Photo: 16\_068-16\_080-20181113-103057.JPG  
At: 313.9 ft. 3/. TB - Tap Break-in  
Joint: No



Photo: 16\_068-16\_080-20181113-103214.JPG  
At: 343.4 ft. 12/. TF - Tap Factory  
Joint: No



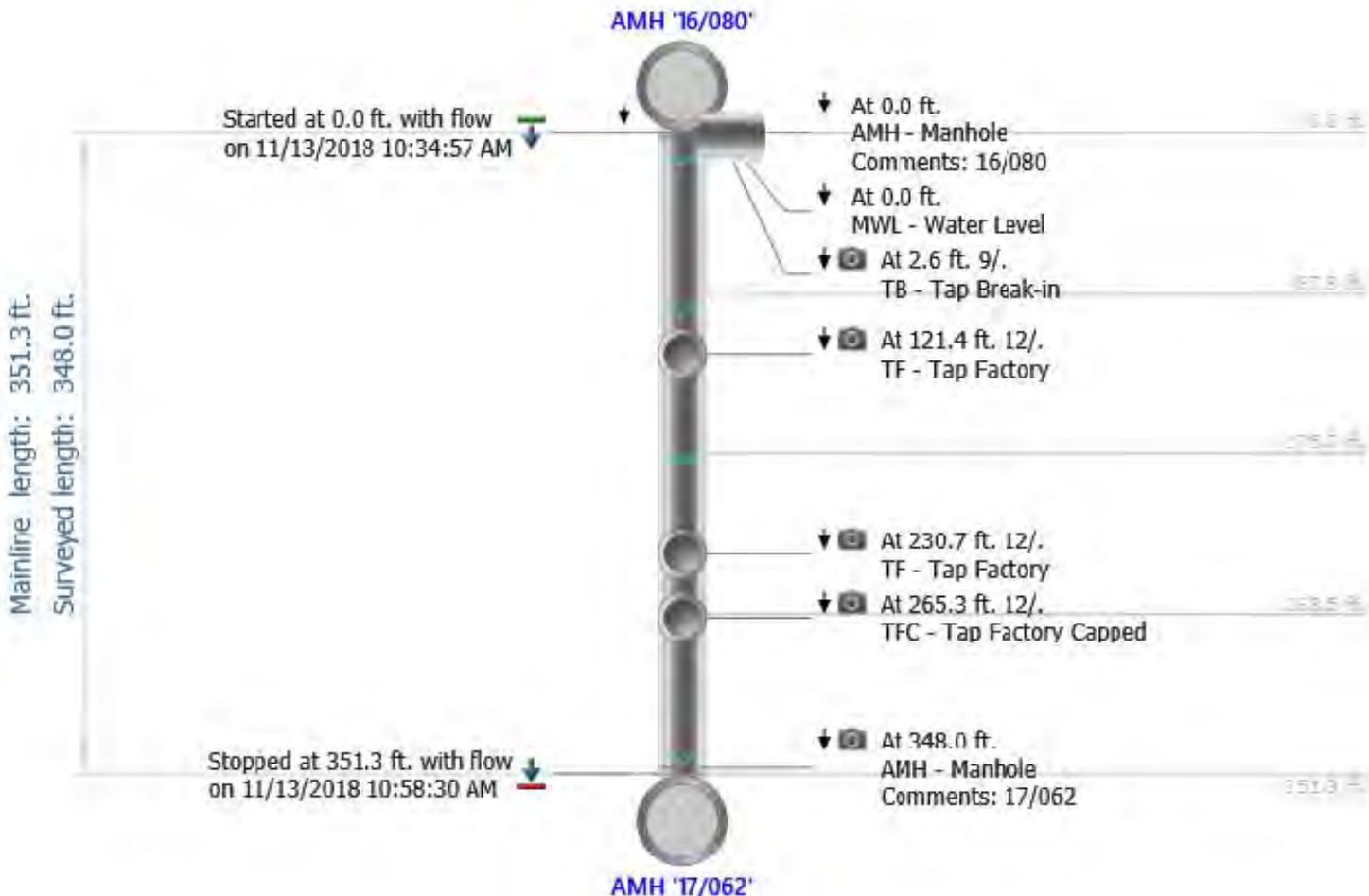
Photo: 16\_068-16\_080-20181113-103236.JPG  
At: 350 ft. AMH - Manhole  
Joint: No 16/080

# NWMCC INSPECTION REPORT

Start date/time: <b>20181113 10:34</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>16/080-17/062</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control:
Upstream MH No: <b>16/080</b>	Downstream MH No: <b>17/062</b>	Direction: <b>D</b>	Total length: <b>351.3 ft.</b>	Length surveyed: <b>348.0 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>12 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Start date/time: <b>20181113 10:58</b>	Pipe segment ref.: <b>16/080-17/062</b>
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Photo: 16\_080-17\_062-20181113-103526.JPG  
At: 2.6 ft. 9/. TB - Tap Break-in  
Joint: No



Photo: 16\_080-17\_062-20181113-104212.JPG  
At: 121.4 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 16\_080-17\_062-20181113-104617.JPG  
At: 230.7 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 16\_080-17\_062-20181113-104732.JPG  
At: 265.3 ft. 12/. TFC - Tap Factory Capped  
Joint: No



Photo: 16\_080-17\_062-20181113-105704.JPG

At: 348 ft. AMH - Manhole

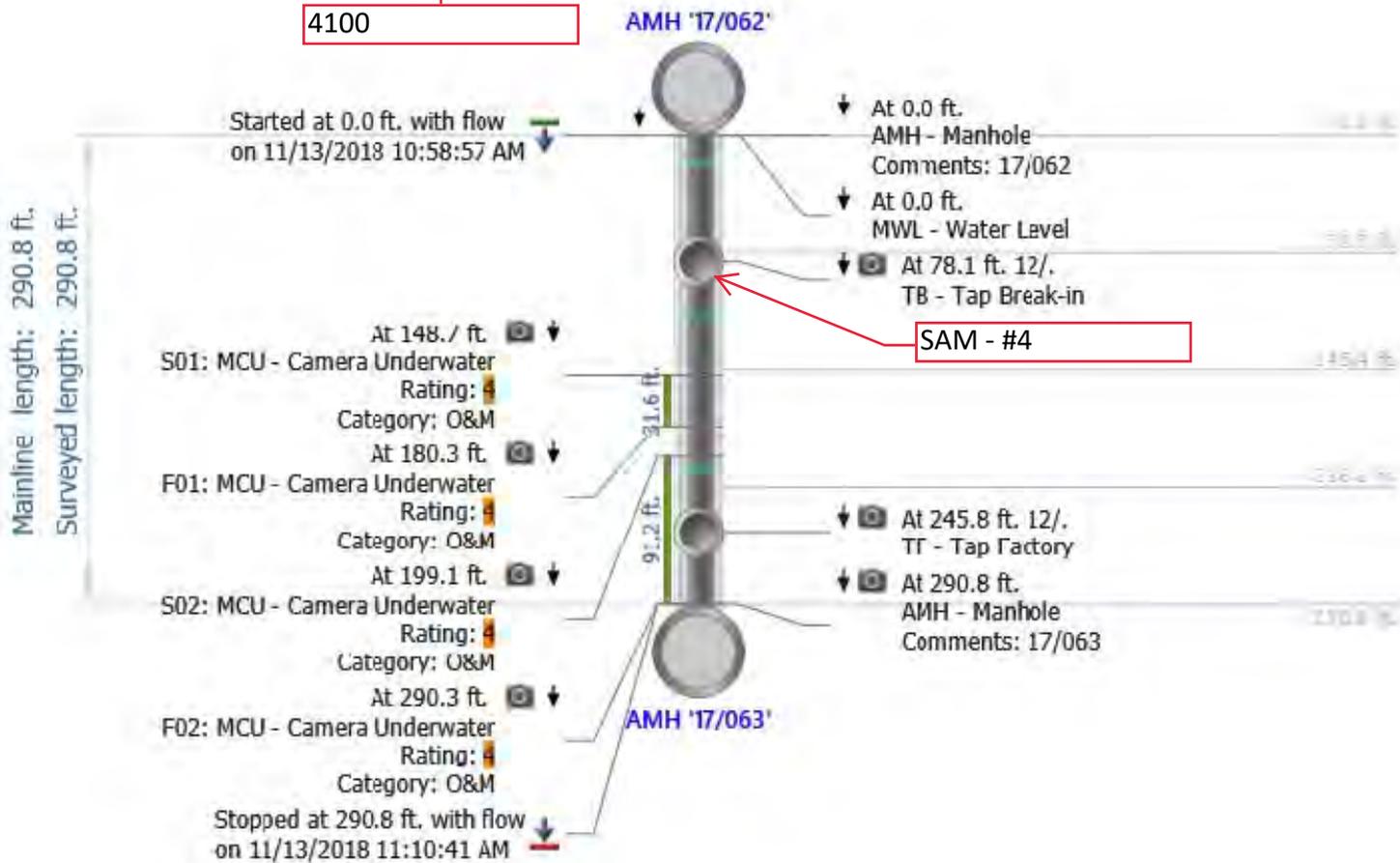
Joint: No 17/062

# NWMCC INSPECTION REPORT

Start date/time: <b>20181113 10:58</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>17/062-17/063</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>17/062</b>	Downstream MH No: <b>17/063</b>	Direction: <b>D</b>	Total length: <b>290.8 ft.</b>	Length surveyed: <b>290.8 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>12 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

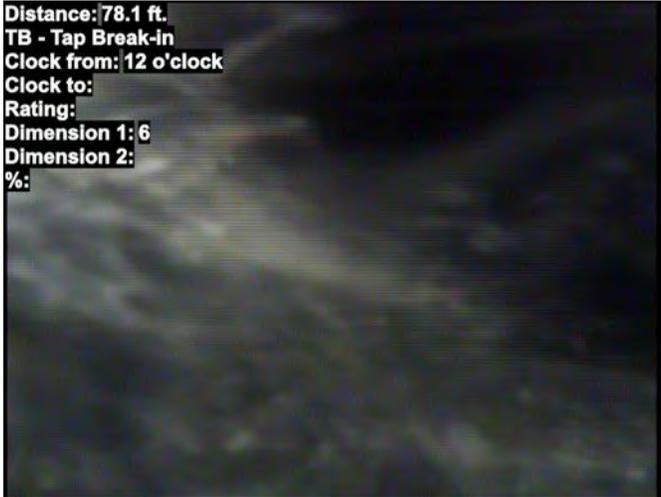
Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	96	<del>4000</del>	4.00	96	4.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	96							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD AVE</b>	Street: <b>ARCADIA RD</b>	Start date/time: <b>20181113 12:30</b>	Pipe segment ref.: <b>17/062-17/063</b>
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Distance: 78.1 ft.  
TB - Tap Break-in  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 17\_062-17\_063-20181113-110139.JPG

At: 78.1 ft. 12/. TB - Tap Break-in

Joint: No



Distance: 148.7 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:

Photo: 17\_062-17\_063-20181113-110440.JPG

At: 148.7 ft. MCU - Camera Underwater

Joint: No



Upstream MH No: AMH '17/062'  
Downstream MH No: AMH '17/063'  
Height: 12 in.

Material: AC  
Direction: D

11/13/2018 11:05:58 AM 181.4 ft.

Photo: 17\_062-17\_063-20181113-110556.JPG

At: 180.3 ft. MCU - Camera Underwater

Joint: No



Distance: 199.1 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:

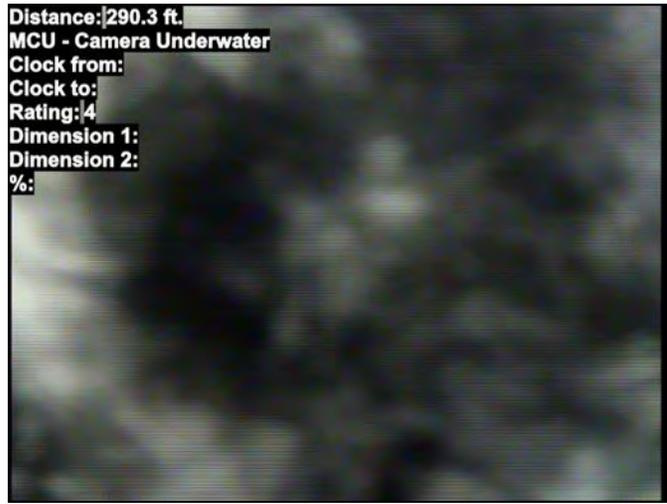
Photo: 17\_062-17\_063-20181113-110640.JPG

At: 199.1 ft. MCU - Camera Underwater

Joint: No



Distance: 245.8 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 17\_062-17\_063-20181113-110832.JPG  
At: 245.8 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 290.3 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:  
Photo: 17\_062-17\_063-20181113-111019.JPG  
At: 290.3 ft. MCU - Camera Underwater  
Joint: No



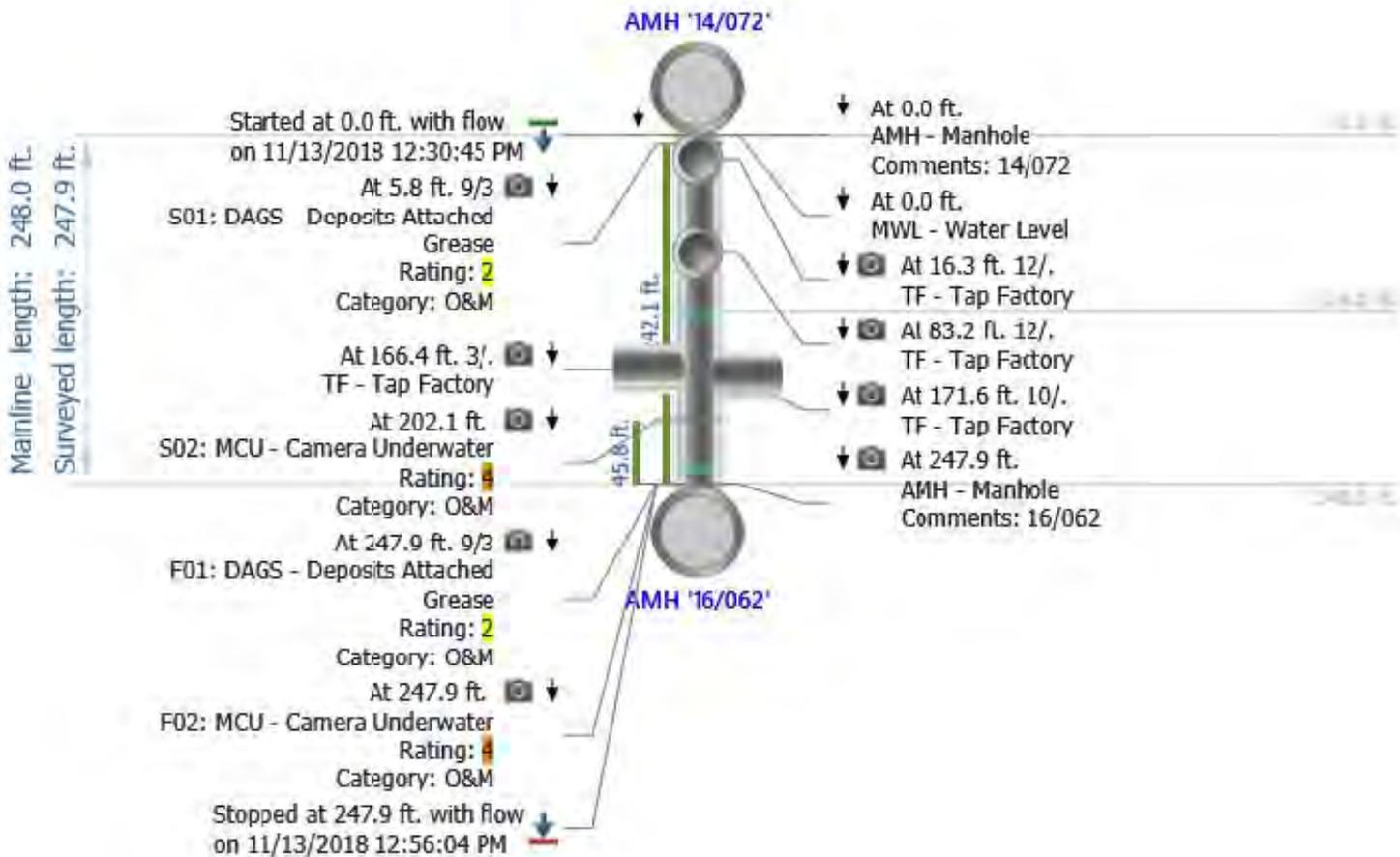
Distance: 290.8 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
17/063  
Photo: 17\_062-17\_063-20181113-111025.JPG  
At: 290.8 ft. AMH - Manhole  
Joint: No 17/063

# NWMCC INSPECTION REPORT

Start date/time: <b>20181113 12:30</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/072-16/062</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/072</b>	Downstream MH No: <b>16/062</b>	Direction: <b>D</b>	Total length: <b>248.0 ft.</b>	Length surveyed: <b>247.9 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	132	492H	2.32	132	2.32		
2	0	0				0	96							
3	0	0				0	0							
4	0	0				0	36							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181113 14:07</b>	Pipe segment ref.: <b>14/072-16/062</b>
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Photo: 14\_072-16\_062-20181113-123915.JPG  
At: 5.8 ft. 9/3 DAGS - Deposits Attached Grease  
Joint: Yes 10 %



Photo: 14\_072-16\_062-20181113-123949.JPG  
At: 16.3 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_072-16\_062-20181113-124159.JPG  
At: 83.2 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_072-16\_062-20181113-125120.JPG  
At: 166.4 ft. 3/. TF - Tap Factory  
Joint: No



Distance: 171.6 ft.  
TF - Tap Factory  
Clock from: 10 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 14\_072-16\_062-20181113-125159.JPG  
At: 171.6 ft. 10/. TF - Tap Factory  
Joint: No



Distance: 202.1 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:

Photo: 14\_072-16\_062-20181113-125319.JPG  
At: 202.1 ft. MCU - Camera Underwater  
Joint: No



Distance: 247.9 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

16/062

Photo: 14\_072-16\_062-20181113-125544.JPG  
At: 247.9 ft. AMH - Manhole  
Joint: No 16/062



Distance: 247.9 ft.  
DAGS - Deposits Attached Grease  
Clock from: 9 o'clock  
Clock to: 3 o'clock  
Rating: 2  
Dimension 1:  
Dimension 2:  
%: 10 %

9/3

Photo: 14\_072-16\_062-20181113-125535.JPG  
At: 247.9 ft. 9/3 DAGS - Deposits Attached Grease  
Joint: Yes 10 %



Distance: 247.9 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:

Photo: 14\_072-16\_062-20181113-125539.JPG  
At: 247.9 ft. MCU - Camera Underwater  
Joint: No

# NWMCC INSPECTION REPORT

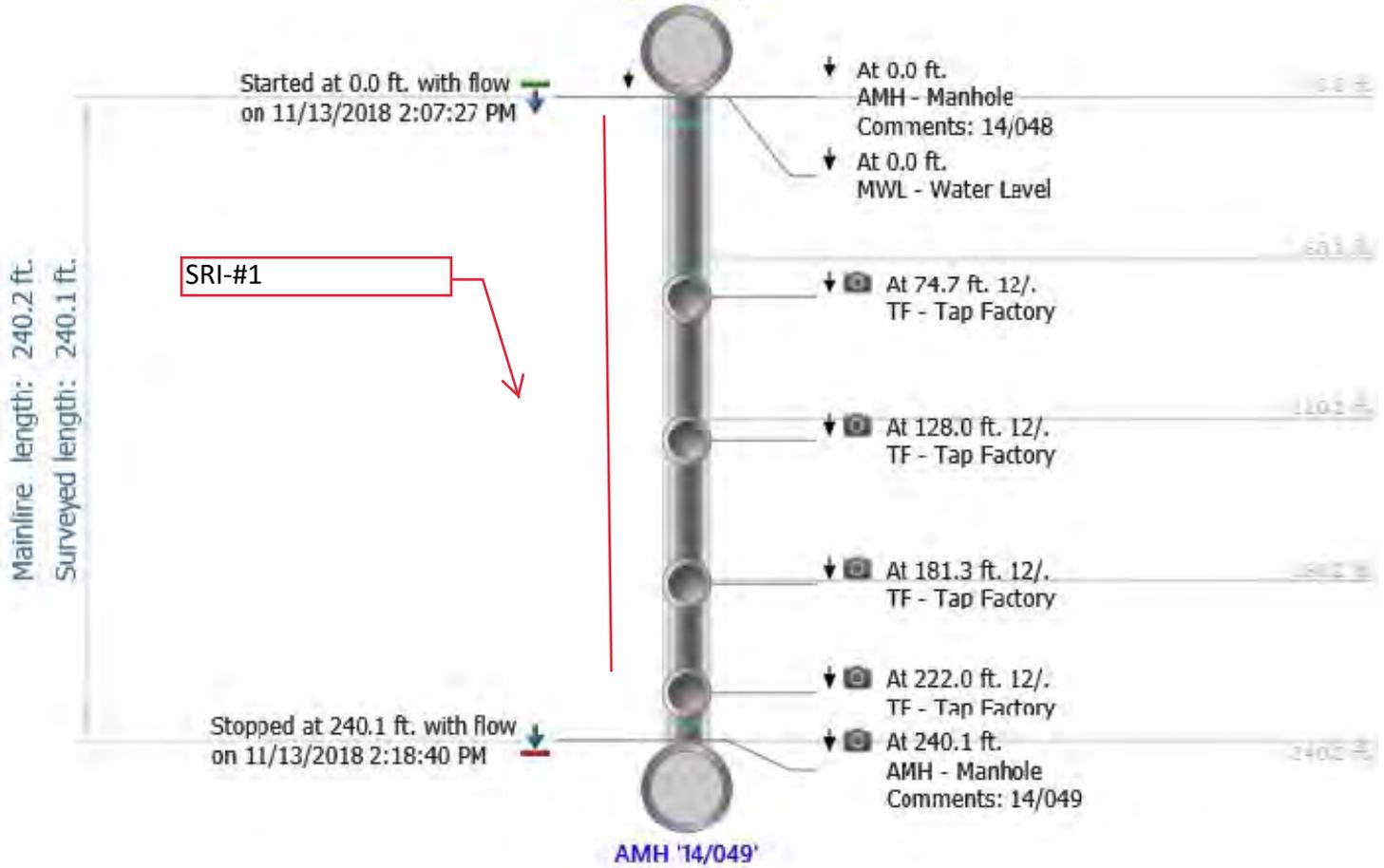
Start date/time: <b>20181113 14:07</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/048-14/049</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>LAKE SHORE RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/048</b>	Downstream MH No: <b>14/049</b>	Direction: <b>D</b>	Total length: <b>240.2 ft.</b>	Length surveyed: <b>240.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							

1C00

AMH '14/048'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>LAKE SHORE RD</b>	Start date/time: <b>20181114 07:29</b>	Pipe segment ref.: <b>14/048-14/049</b>
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Photo: 14\_048-14\_049-20181113-140941.JPG  
At: 74.7 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_048-14\_049-20181113-141358.JPG  
At: 128 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_048-14\_049-20181113-141520.JPG  
At: 181.3 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_048-14\_049-20181113-141629.JPG  
At: 222 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_048-14\_049-20181113-141748.JPG

At: 240.1 ft. AMH - Manhole

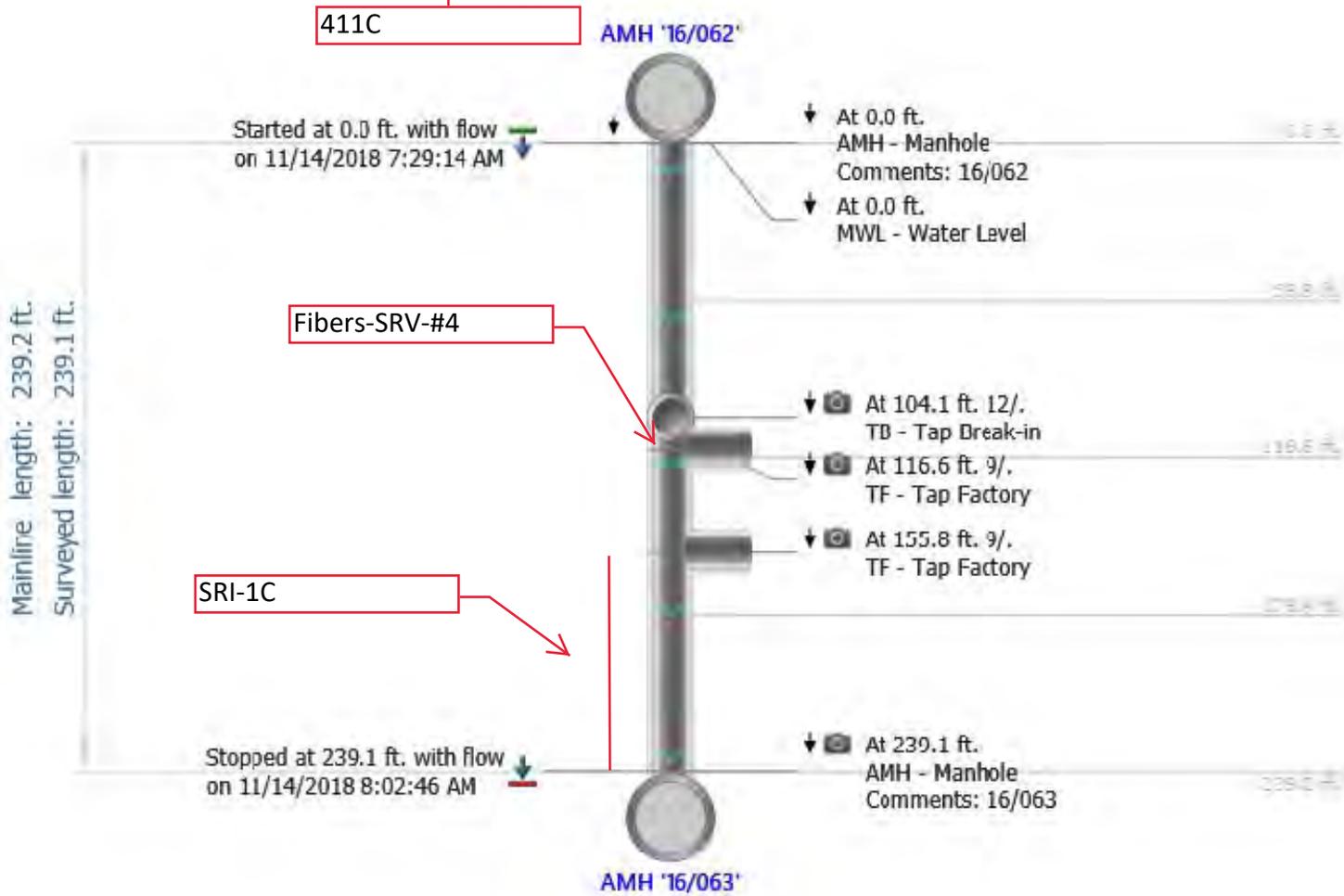
Joint: No 14/049

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 07:29</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>16/062-16/063</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>POND ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>16/062</b>	Downstream MH No: <b>16/063</b>	Direction: <b>D</b>	Total length: <b>239.2 ft.</b>	Length surveyed: <b>239.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>POND ST</b>	Start date/time: <b>20181114 08:15</b>	Pipe segment ref.: <b>16/062-16/063</b>
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Photo: 16\_062-16\_063-20181114-075733.JPG  
At: 104.1 ft. 12/. TB - Tap Break-in  
Joint: No



Photo: 16\_062-16\_063-20181114-075808.JPG  
At: 116.6 ft. 9/. TF - Tap Factory  
Joint: No

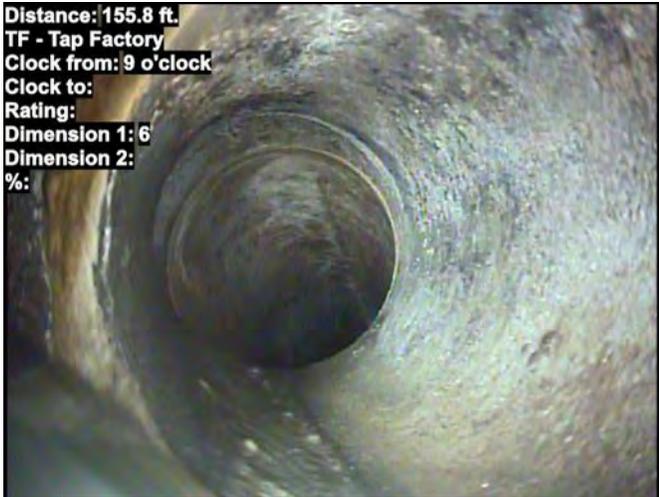


Photo: 16\_062-16\_063-20181114-075953.JPG  
At: 155.8 ft. 9/. TF - Tap Factory  
Joint: No



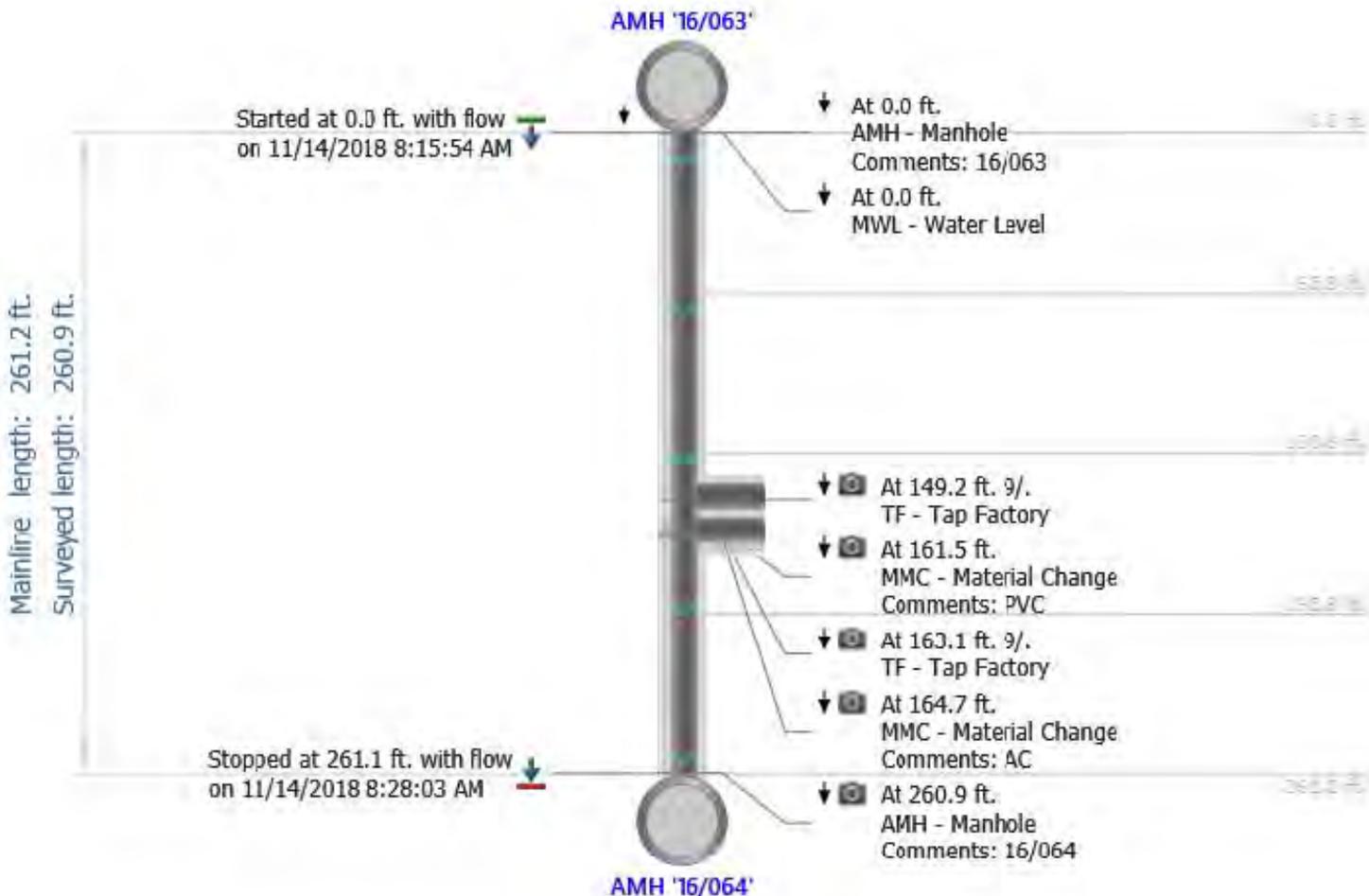
Photo: 16\_062-16\_063-20181114-080230.JPG  
At: 239.1 ft. AMH - Manhole  
Joint: No 16/063

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 08:15</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>16/063-16/064</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>POND ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>16/063</b>	Downstream MH No: <b>16/064</b>	Direction: <b>D</b>	Total length: <b>261.2 ft.</b>	Length surveyed: <b>260.9 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>POND ST</b>	Start date/time: <b>20181114 08:28</b>	Pipe segment ref.: <b>16/063-16/064</b>
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Photo: 16\_063-16\_064-20181114-082123.JPG  
At: 149.2 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 16\_063-16\_064-20181114-082201.JPG  
At: 161.5 ft. MMC - Material Change  
Joint: No PVC



Photo: 16\_063-16\_064-20181114-082225.JPG  
At: 163.1 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 16\_063-16\_064-20181114-082237.JPG  
At: 164.7 ft. MMC - Material Change  
Joint: No AC



Photo: 16\_063-16\_064-20181114-082507.JPG

At: 260.9 ft. AMH - Manhole

Joint: No 16/064

# NWMCC INSPECTION REPORT

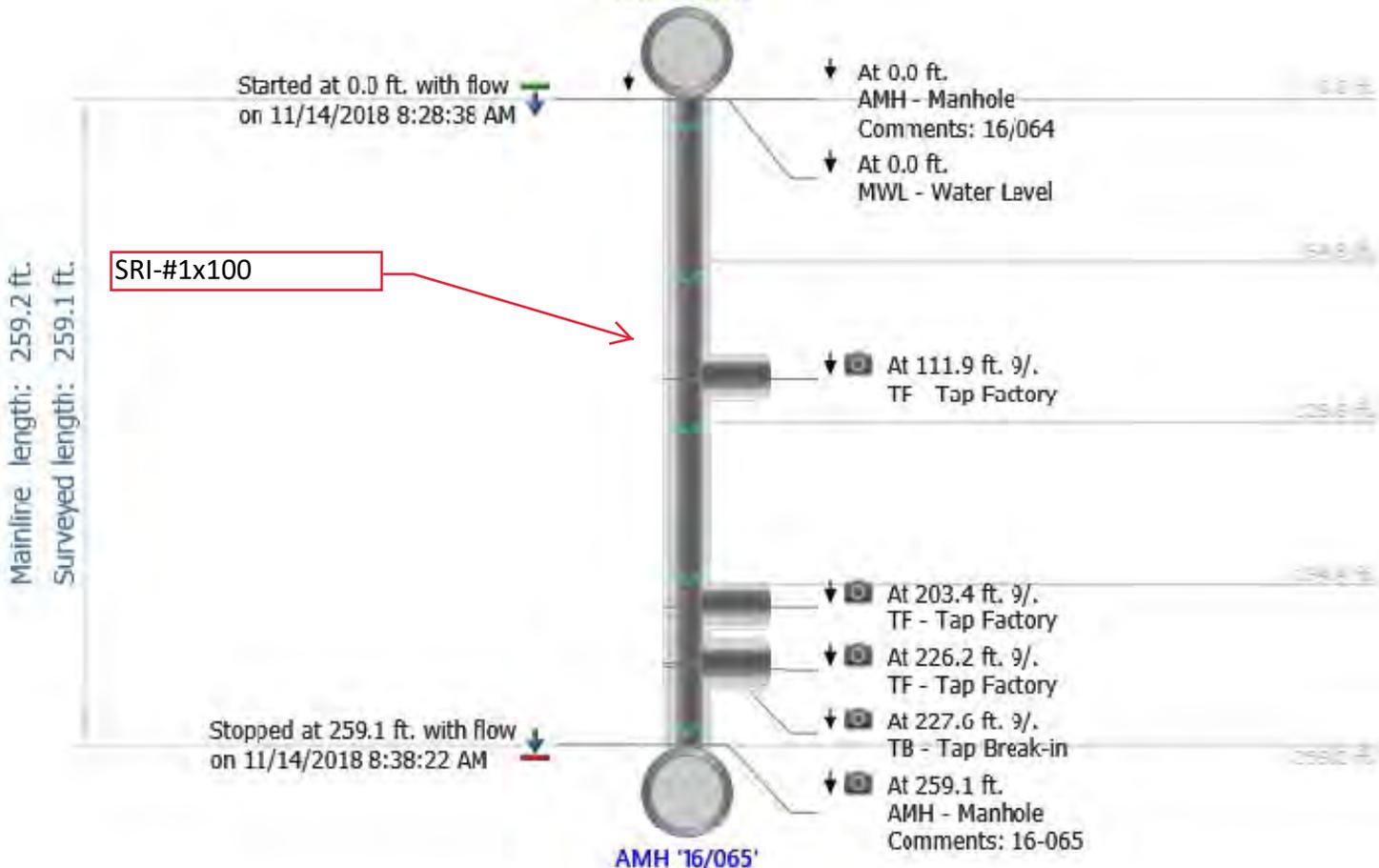
Start date/time: <b>20181114 08:28</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>16/064-16/065</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>POND ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>16/064</b>	Downstream MH No: <b>16/065</b>	Direction: <b>D</b>	Total length: <b>259.2 ft.</b>	Length surveyed: <b>259.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							

1C00

AMH '16/064'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>POND ST</b>	Start date/time: <b>20181114 08:45</b>	Pipe segment ref.: <b>16/064-16/065</b>
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Photo: 16\_064-16\_065-20181114-083155.JPG  
At: 111.9 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 16\_064-16\_065-20181114-083456.JPG  
At: 203.4 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 16\_064-16\_065-20181114-083626.JPG  
At: 226.2 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 16\_064-16\_065-20181114-083649.JPG  
At: 227.6 ft. 9/. TB - Tap Break-in  
Joint: No



Photo: 16\_064-16\_065-20181114-083806.JPG

At: 259.1 ft. AMH - Manhole

Joint: No 16-065

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 08:45</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>16/065-16/066</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>POND ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>16/065</b>	Downstream MH No: <b>16/066</b>	Direction: <b>D</b>	Total length: <b>256.2 ft.</b>	Length surveyed: <b>256.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

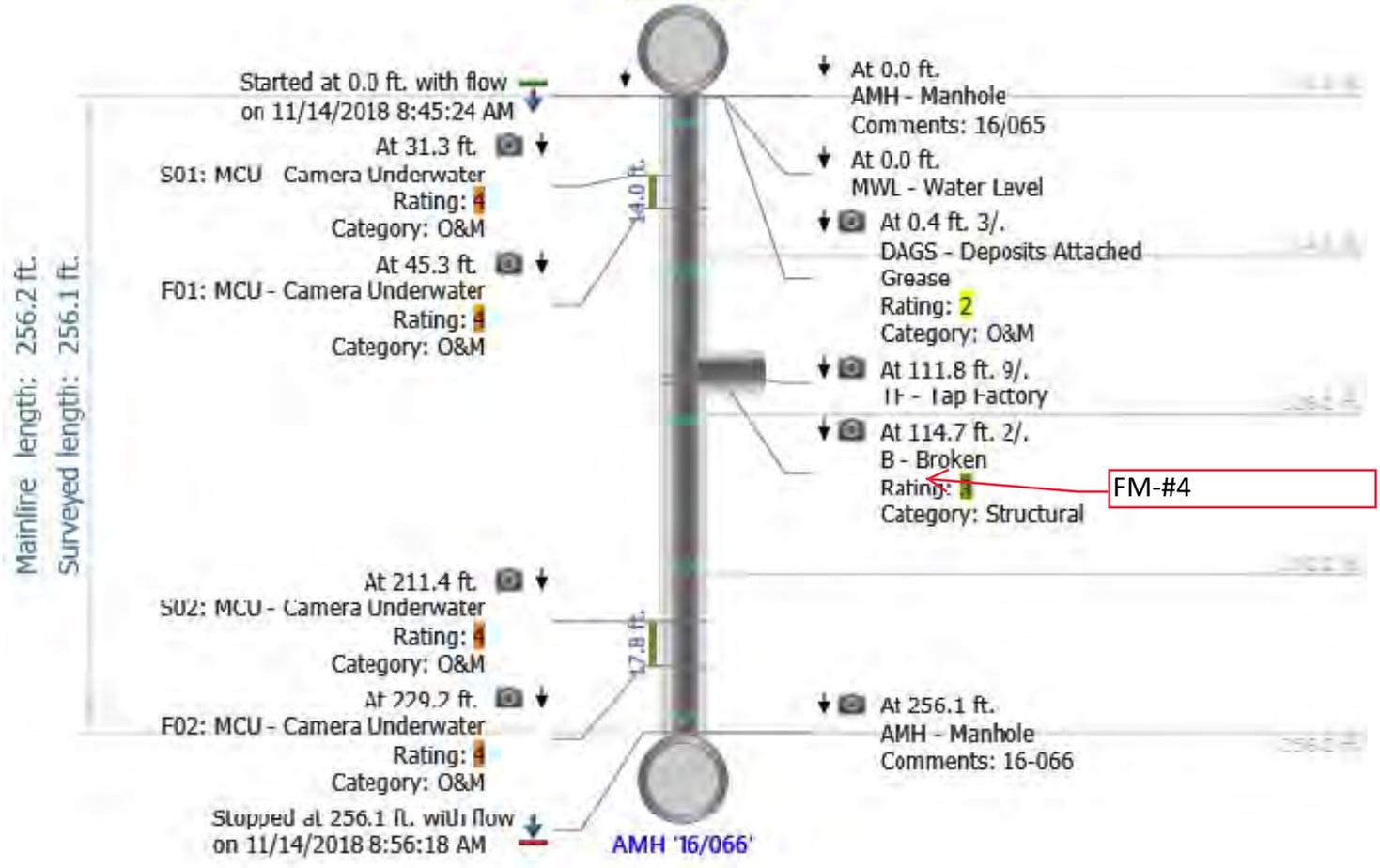
## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0				0	0							
2	0	0				0	2							
3	0	3	3	<del>3100</del>	3.00	0	0	30	<del>4721</del>	3.75	33	3.67		
4	0	0					0		28					
5	0	0					0		0					

4131

AMH '16/065'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>POND ST</b>	Start date/time: <b>20181114 10:05</b>	Pipe segment ref.: <b>16/065-16/066</b>
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Photo: 16\_065-16\_066-20181114-084618.JPG  
At: 0.4 ft. 3/. DAGS - Deposits Attached Grease  
Joint: No 5 %



Photo: 16\_065-16\_066-20181114-084725.JPG  
At: 31.3 ft. MCU - Camera Underwater  
Joint: No



Photo: 16\_065-16\_066-20181114-084758.JPG  
At: 45.3 ft. MCU - Camera Underwater  
Joint: No



Photo: 16\_065-16\_066-20181114-084958.JPG  
At: 111.8 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 114.7 ft.  
B - Broken  
Clock from: 2 o'clock  
Clock to:  
Rating: 3  
Dimension 1:  
Dimension 2:  
%:

Photo: 16\_065-16\_066-20181114-085026.JPG  
At: 114.7 ft. 2/. B - Broken  
Joint: No



Distance: 211.4 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:

Photo: 16\_065-16\_066-20181114-085406.JPG  
At: 211.4 ft. MCU - Camera Underwater  
Joint: No



Upstream MH No: AMH '16/065'  
Downstream MH No: AMH '16/066'  
Height: 10 in.  
Material: AC  
Direction: D

11/14/2018 8:54:48 AM 231.0 ft.

Photo: 16\_065-16\_066-20181114-085445.JPG  
At: 229.2 ft. MCU - Camera Underwater  
Joint: No



Distance: 256.1 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

16-066

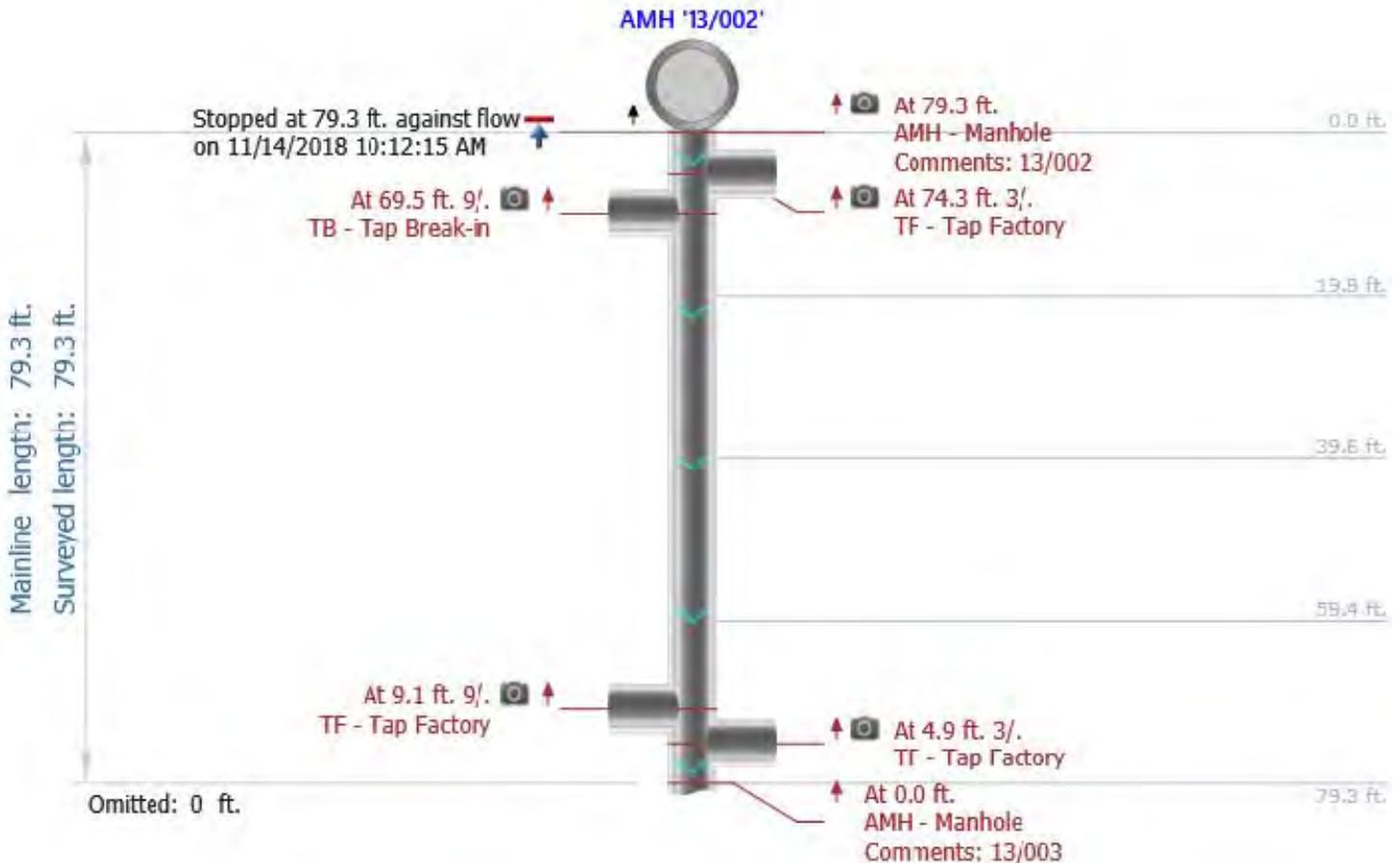
Photo: 16\_065-16\_066-20181114-085605.JPG  
At: 256.1 ft. AMH - Manhole  
Joint: No 16-066

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 10:05</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>13/002-13/003</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>HARTFORD ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>13/002</b>	Downstream MH No: <b>13/003</b>	Direction: <b>U</b>	Total length: <b>79.3 ft.</b>	Length surveyed: <b>79.3 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



Mainline length: 79.3 ft.  
Surveyed length: 79.3 ft.



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>HARTFORD ST</b>	Start date/time: <b>20181114 10:14</b>	Pipe segment ref.: <b>13/002-13/003</b>
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Photo: 13\_002-13\_003-20181114-100707.JPG  
At: 4.9 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 13\_002-13\_003-20181114-100729.JPG  
At: 9.1 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 13\_002-13\_003-20181114-101117.JPG  
At: 69.5 ft. 9/. TB - Tap Break-in  
Joint: No



Photo: 13\_002-13\_003-20181114-101144.JPG  
At: 74.3 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 13\_002-13\_003-20181114-101204.JPG

At: 79.3 ft. AMH - Manhole

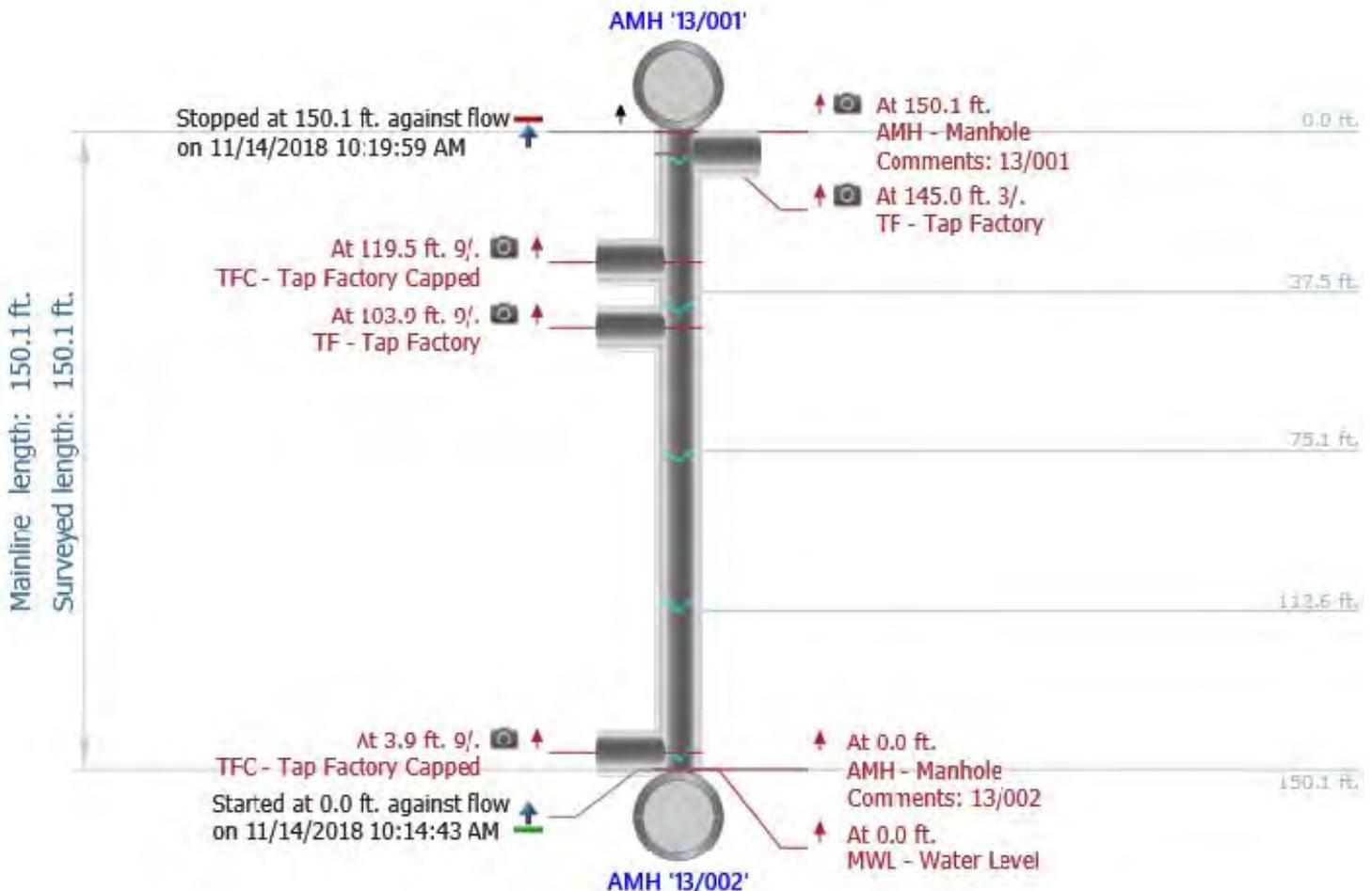
Joint: No 13/002

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 10:14</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>13/001-13/002</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>HARTFORD ST</b>	Location code: <b>Light highway</b>	Sewer use:	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>13/001</b>	Downstream MH No: <b>13/002</b>	Direction: <b>U</b>	Total length: <b>150.1 ft.</b>	Length surveyed: <b>150.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>HARTFORD ST</b>	Start date/time: <b>20181114 10:25</b>	Pipe segment ref.: <b>13/001-13/002</b>
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Photo: 13\_001-13\_002-20181114-101513.JPG  
At: 3.9 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Photo: 13\_001-13\_002-20181114-101810.JPG  
At: 103.9 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 13\_001-13\_002-20181114-101838.JPG  
At: 119.5 ft. 9/. TFC - Tap Factory Capped  
Joint: No

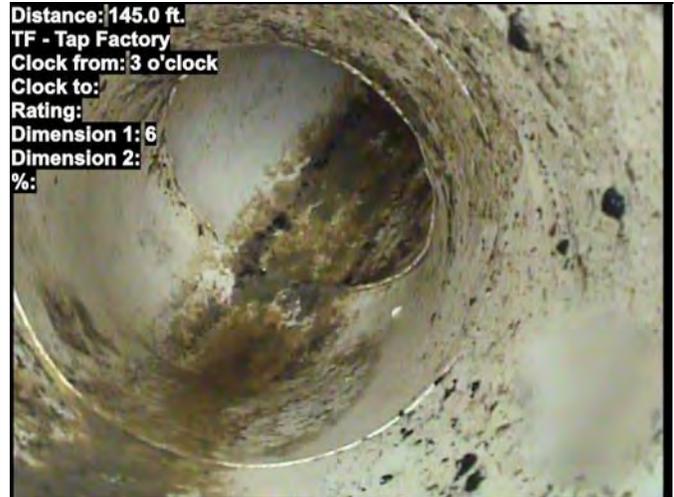


Photo: 13\_001-13\_002-20181114-101934.JPG  
At: 145 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 13\_001-13\_002-20181114-101949.JPG

At: 150.1 ft. AMH - Manhole

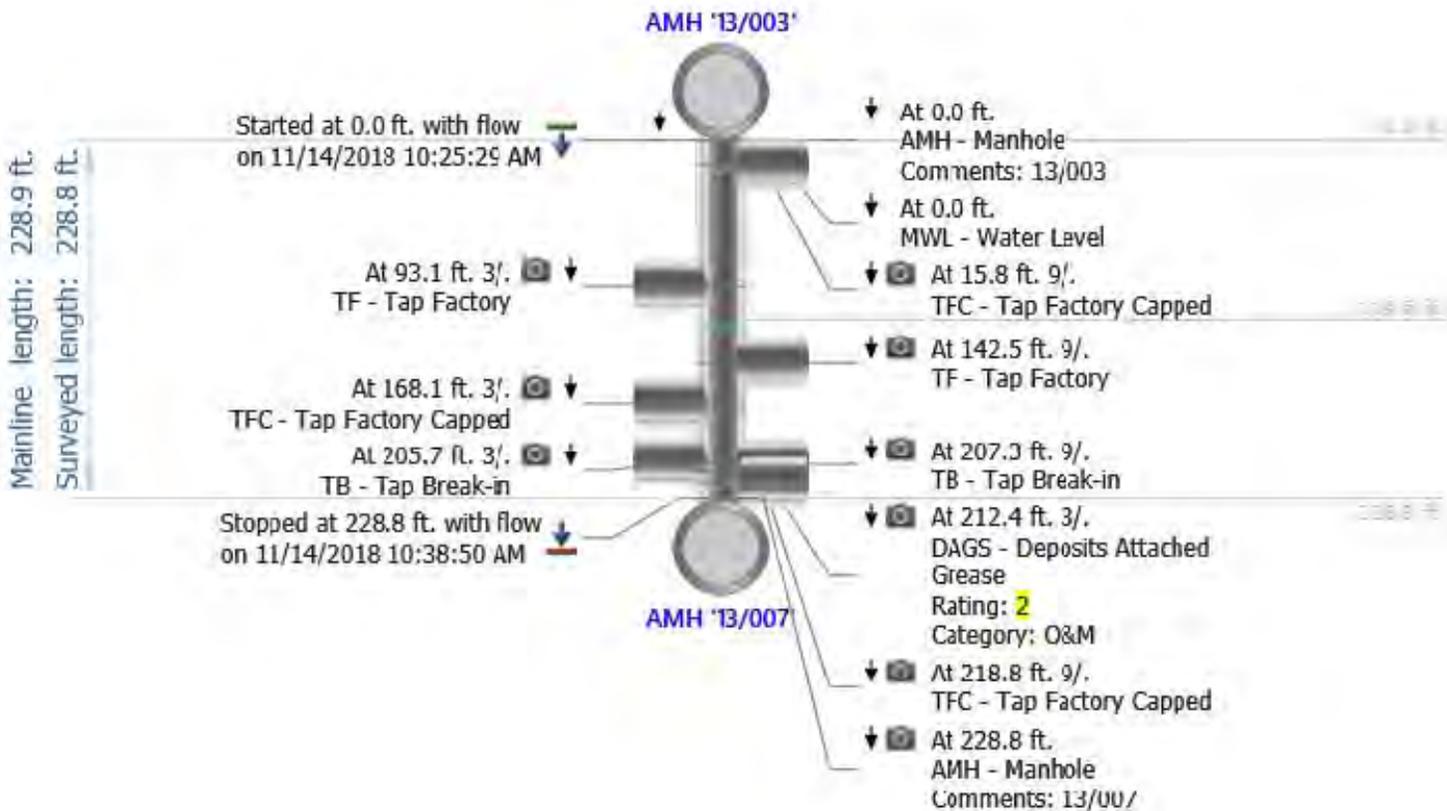
Joint: No 13/001

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 10:25</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>13/003-13/007</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>HARTFORD ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>13/003</b>	Downstream MH No: <b>13/007</b>	Direction: <b>D</b>	Total length: <b>228.9 ft.</b>	Length surveyed: <b>228.8 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	2	2100	2.00	2	2.00		
2	0	0				0	2							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>HARTFORD ST</b>	Start date/time: <b>20181114 11:01</b>	Pipe segment ref.: <b>13/003-13/007</b>
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Photo: 13\_003-13\_007-20181114-102727.JPG  
At: 15.8 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Photo: 13\_003-13\_007-20181114-103043.JPG  
At: 93.1 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 13\_003-13\_007-20181114-103227.JPG  
At: 142.5 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 13\_003-13\_007-20181114-103325.JPG  
At: 168.1 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Distance: 205.7 ft.  
TB - Tap Break-in  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 13\_003-13\_007-20181114-103525.JPG  
At: 205.7 ft. 3/. TB - Tap Break-in  
Joint: No



Distance: 207.3 ft.  
TB - Tap Break-in  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 13\_003-13\_007-20181114-103541.JPG  
At: 207.3 ft. 9/. TB - Tap Break-in  
Joint: No



Distance: 212.4 ft.  
DAGS - Deposits Attached Grease  
Clock from: 3 o'clock  
Clock to:  
Rating: 2  
Dimension 1:  
Dimension 2:  
%: 5 %  
Photo: 13\_003-13\_007-20181114-103602.JPG  
At: 212.4 ft. 3/. DAGS - Deposits Attached Grease  
Joint: No 5 %



Distance: 218.8 ft.  
TFC - Tap Factory Capped  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 13\_003-13\_007-20181114-103626.JPG  
At: 218.8 ft. 9/. TFC - Tap Factory Capped  
Joint: No



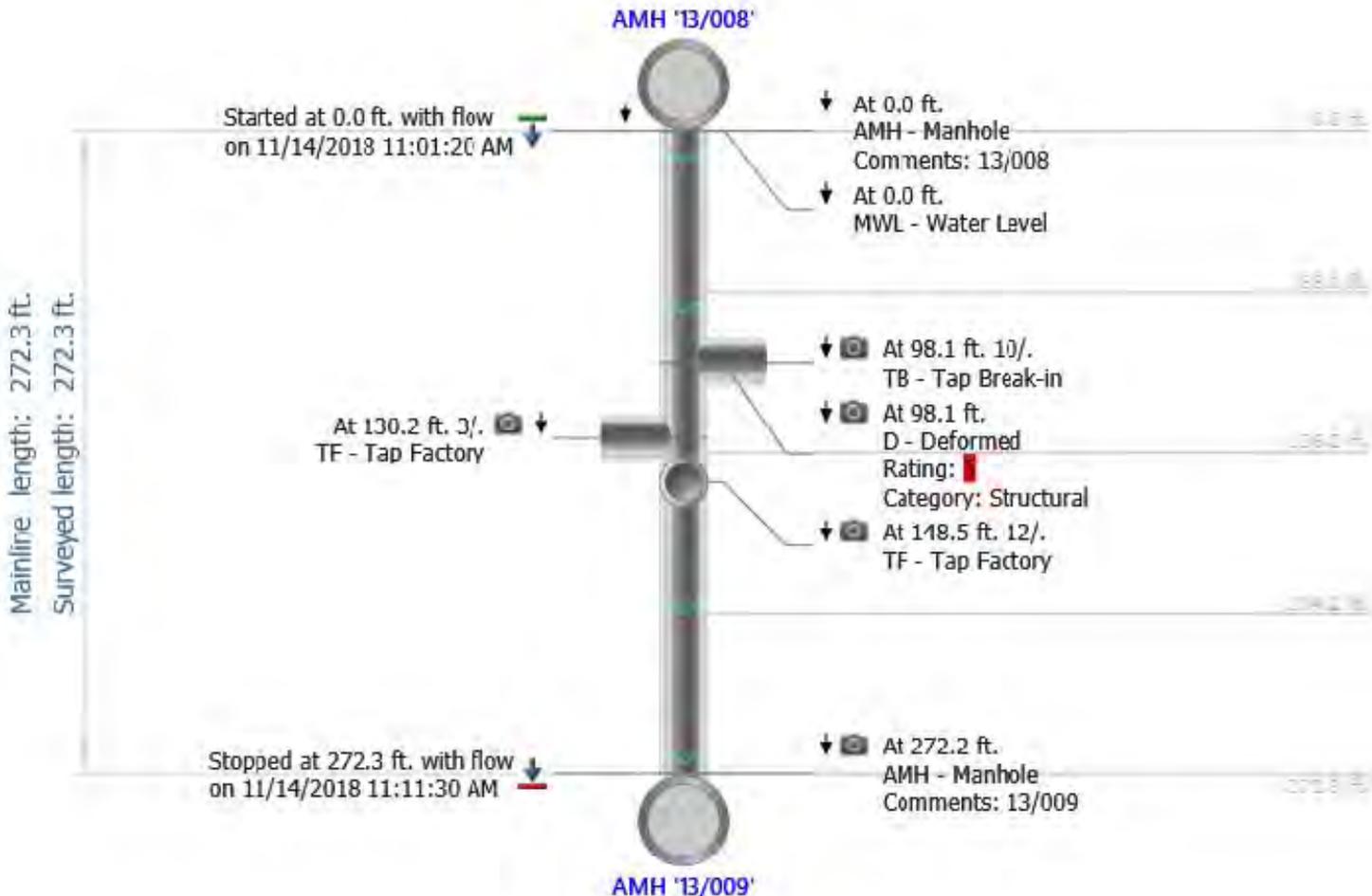
Distance: 228.8 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
13/007  
Photo: 13\_003-13\_007-20181114-103837.JPG  
At: 228.8 ft. AMH - Manhole  
Joint: No 13/007

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 11:01</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>13/008-13/009</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>HARTFORD ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>13/008</b>	Downstream MH No: <b>13/009</b>	Direction: <b>D</b>	Total length: <b>272.3 ft.</b>	Length surveyed: <b>272.3 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>6 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	5	5100	5.00	0	0	0	0000	0.00	5	5.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	5				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>HARTFORD ST</b>	Start date/time: <b>20181114 11:18</b>	Pipe segment ref.: <b>13/008-13/009</b>
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Distance: 98.1 ft.  
D - Deformed  
Clock from:  
Clock to:  
Rating: 5  
Dimension 1:  
Dimension 2:  
%: 15 %  
Photo: 13\_008-13\_009-20181114-110526.JPG  
At: 98.1 ft. D - Deformed  
Joint: No 15 %



Distance: 98.1 ft.  
TB - Tap Break-in  
Clock from: 10 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 13\_008-13\_009-20181114-110510.JPG  
At: 98.1 ft. 10/. TB - Tap Break-in  
Joint: No



Distance: 130.2 ft.  
TF - Tap Factory  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 13\_008-13\_009-20181114-110633.JPG  
At: 130.2 ft. 3/. TF - Tap Factory  
Joint: No



Distance: 148.5 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 13\_008-13\_009-20181114-110718.JPG  
At: 148.5 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 13\_008-13\_009-20181114-111119.JPG

At: 272.2 ft. AMH - Manhole

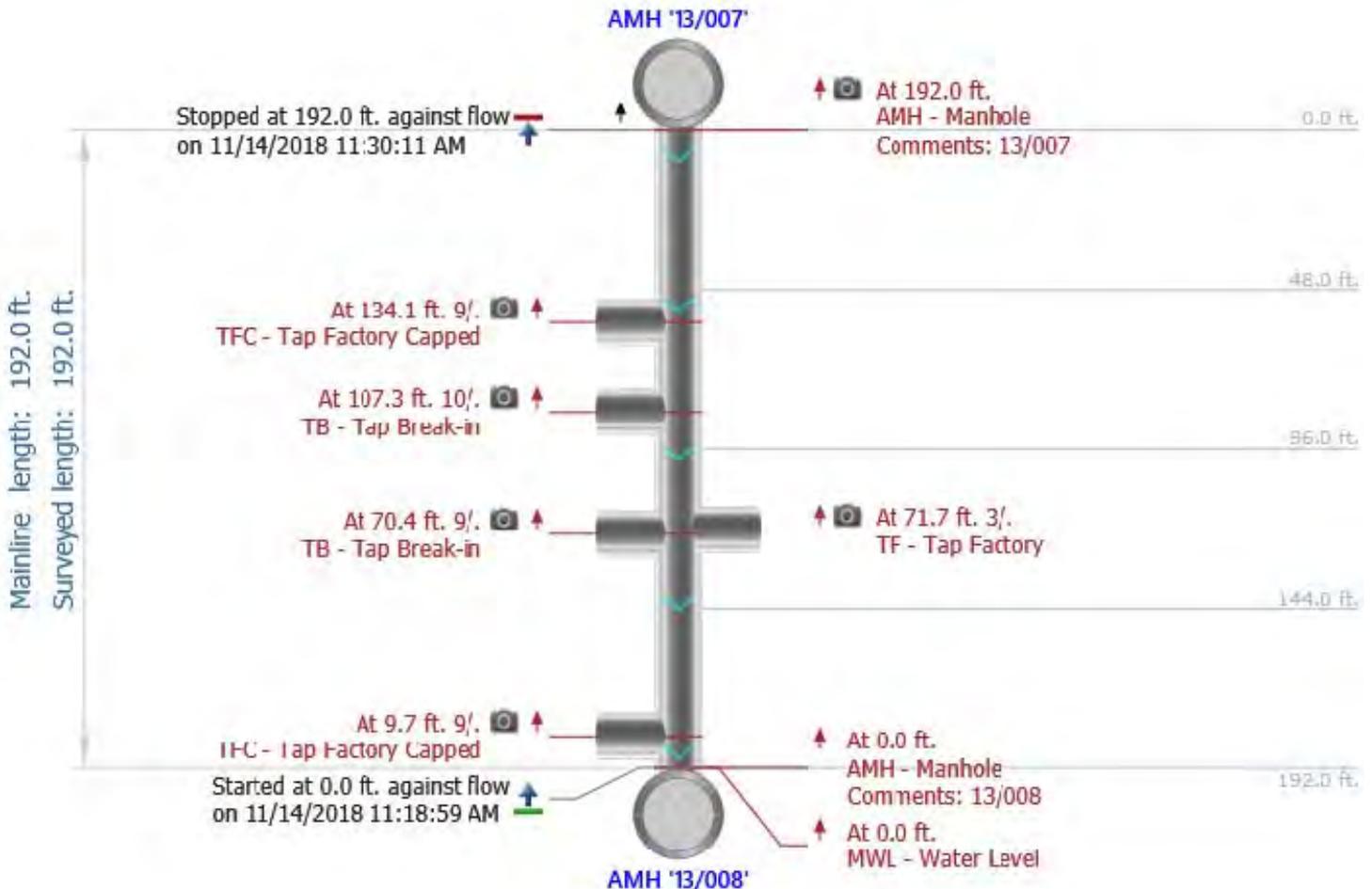
Joint: No 13/009

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 11:18</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>13/007-13/008</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>HARTFORD ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>13/007</b>	Downstream MH No: <b>13/008</b>	Direction: <b>U</b>	Total length: <b>192.0 ft.</b>	Length surveyed: <b>192.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>HARTFORD ST</b>	Start date/time: <b>20181114 11:45</b>	Pipe segment ref.: <b>13/007-13/008</b>
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Photo: 13\_007-13\_008-20181114-112401.JPG  
At: 9.7 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Photo: 13\_007-13\_008-20181114-112541.JPG  
At: 70.4 ft. 9/. TB - Tap Break-in  
Joint: No

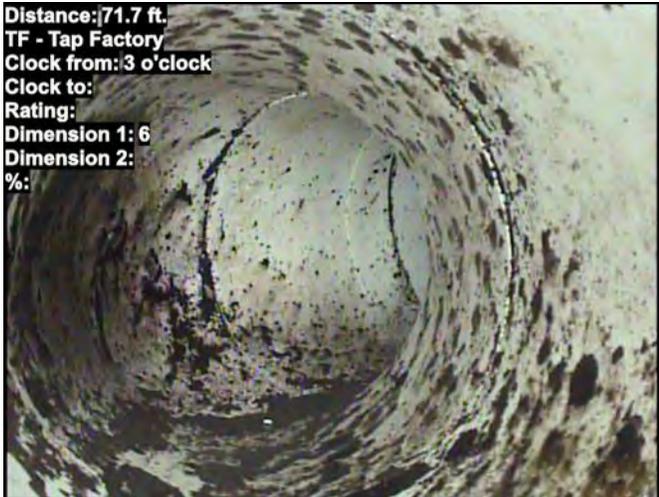


Photo: 13\_007-13\_008-20181114-112555.JPG  
At: 71.7 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 13\_007-13\_008-20181114-112709.JPG  
At: 107.3 ft. 10/. TB - Tap Break-in  
Joint: No



Distance: 134.1 ft.  
TFC - Tap Factory Capped  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 13\_007-13\_008-20181114-112803.JPG  
At: 134.1 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Distance: 192.0 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

13/007

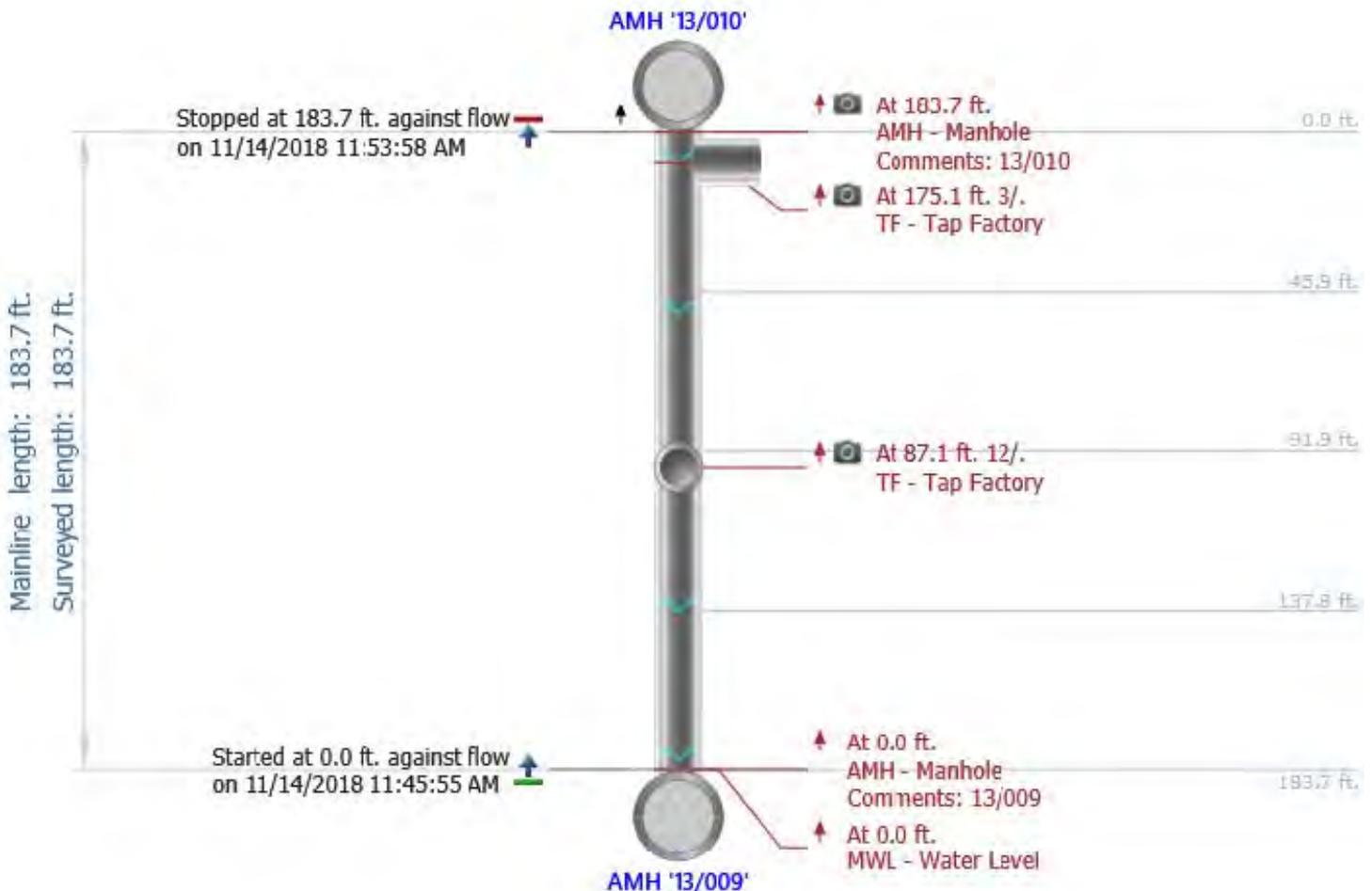
Photo: 13\_007-13\_008-20181114-113001.JPG  
At: 192 ft. AMH - Manhole  
Joint: No 13/007

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 11:45</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>13/101-13/009</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>HIGHROCK ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>13/010</b>	Downstream MH No: <b>13/009</b>	Direction: <b>U</b>	Total length: <b>183.7 ft.</b>	Length surveyed: <b>183.7 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>HIGHROCK ST</b>	Start date/time: <b>20181114 11:55</b>	Pipe segment ref.: <b>13/101-13/009</b>
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Photo: 13\_010-13\_009-20181114-115019.JPG  
At: 87.1 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 13\_010-13\_009-20181114-115311.JPG  
At: 175.1 ft. 3/. TF - Tap Factory  
Joint: No



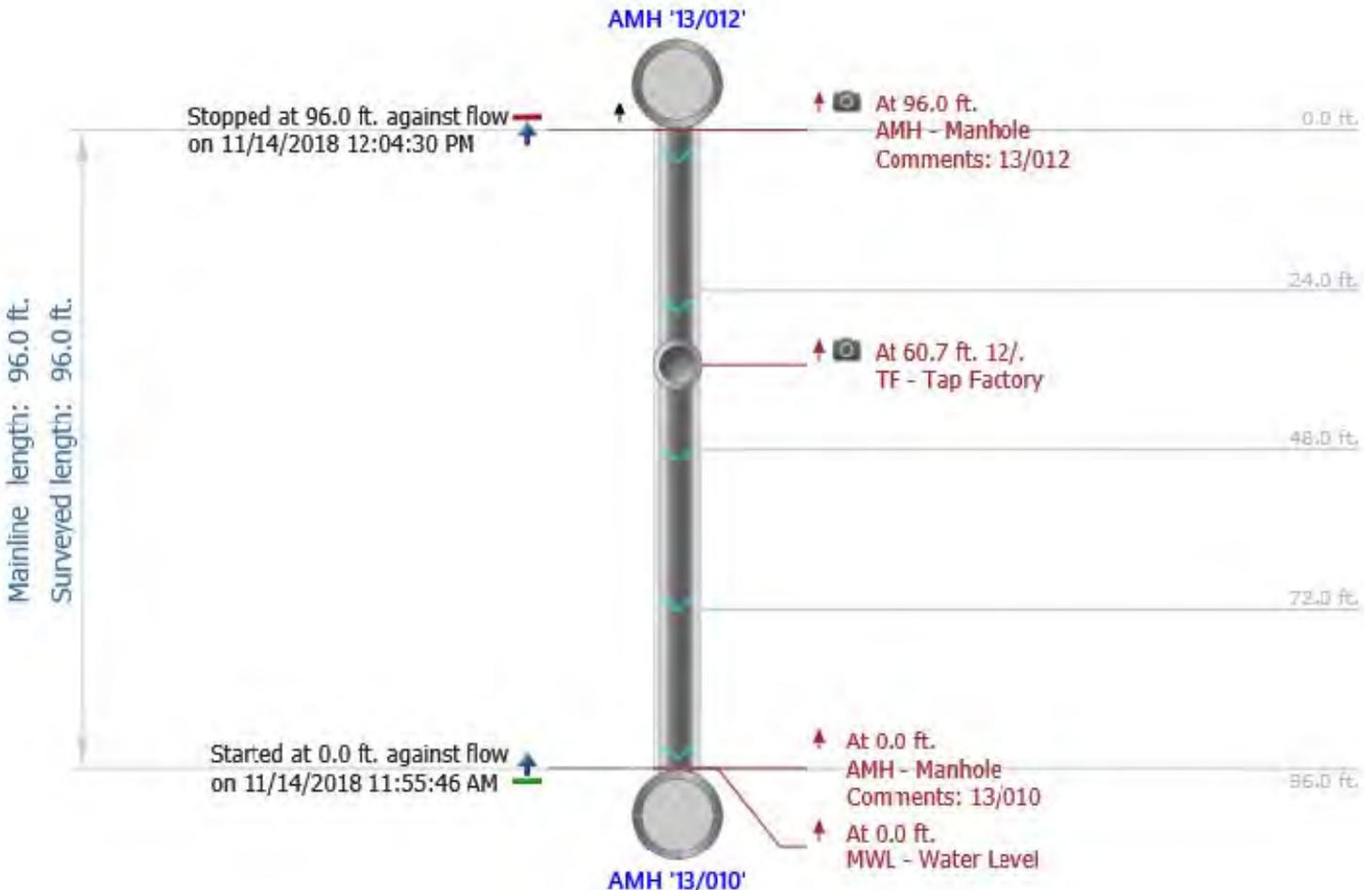
Photo: 13\_010-13\_009-20181114-115343.JPG  
At: 183.7 ft. AMH - Manhole  
Joint: No 13/010

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 11:55</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>13/012-13/010</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>HIGHROCK ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>13/012</b>	Downstream MH No: <b>13/010</b>	Direction: <b>U</b>	Total length: <b>96.0 ft.</b>	Length surveyed: <b>96.0 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>HIGHROCK ST</b>	Start date/time: <b>20181114 12:31</b>	Pipe segment ref.: <b>13/012-13/010</b>
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Distance: 60.7 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 13\_012-13\_010-20181114-120306.JPG  
At: 60.7 ft. 12/. TF - Tap Factory  
Joint: No



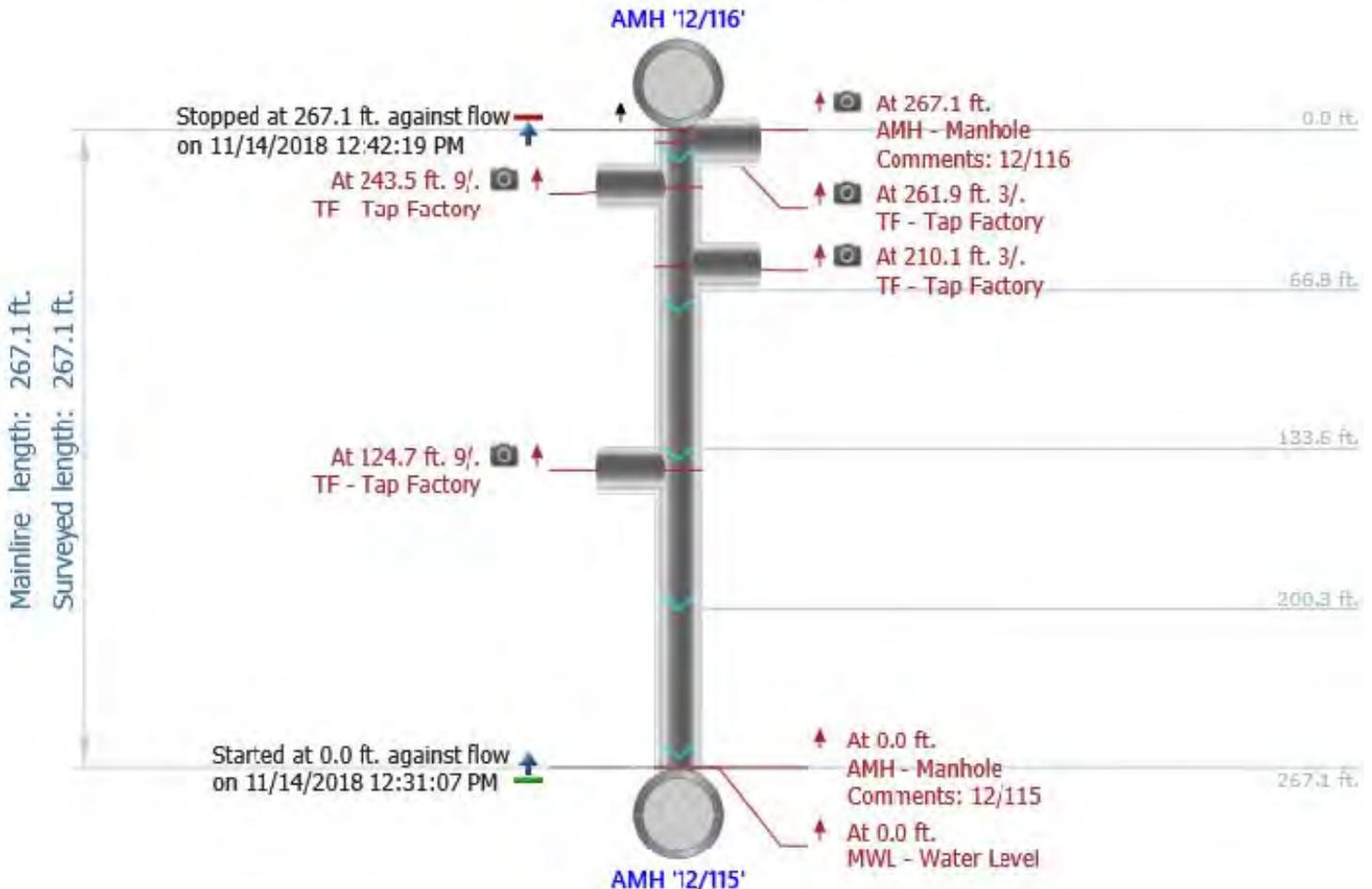
Distance: 96.0 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
13/012  
Photo: 13\_012-13\_010-20181114-120419.JPG  
At: 96 ft. AMH - Manhole  
Joint: No 13/012

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 12:31</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>12/116-12/115</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>OXFORD TER</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>12/116</b>	Downstream MH No: <b>12/115</b>	Direction: <b>U</b>	Total length: <b>267.1 ft.</b>	Length surveyed: <b>267.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>OXFORD TER</b>	Start date/time: <b>20181114 13:52</b>	Pipe segment ref.: <b>12/116-12/115</b>
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Photo: 12\_116-12\_115-20181114-123558.JPG  
At: 124.7 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 12\_116-12\_115-20181114-123854.JPG  
At: 210.1 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 12\_116-12\_115-20181114-124031.JPG  
At: 243.5 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 12\_116-12\_115-20181114-124115.JPG  
At: 261.9 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 12\_116-12\_115-20181114-124139.JPG

At: 267.1 ft. AMH - Manhole

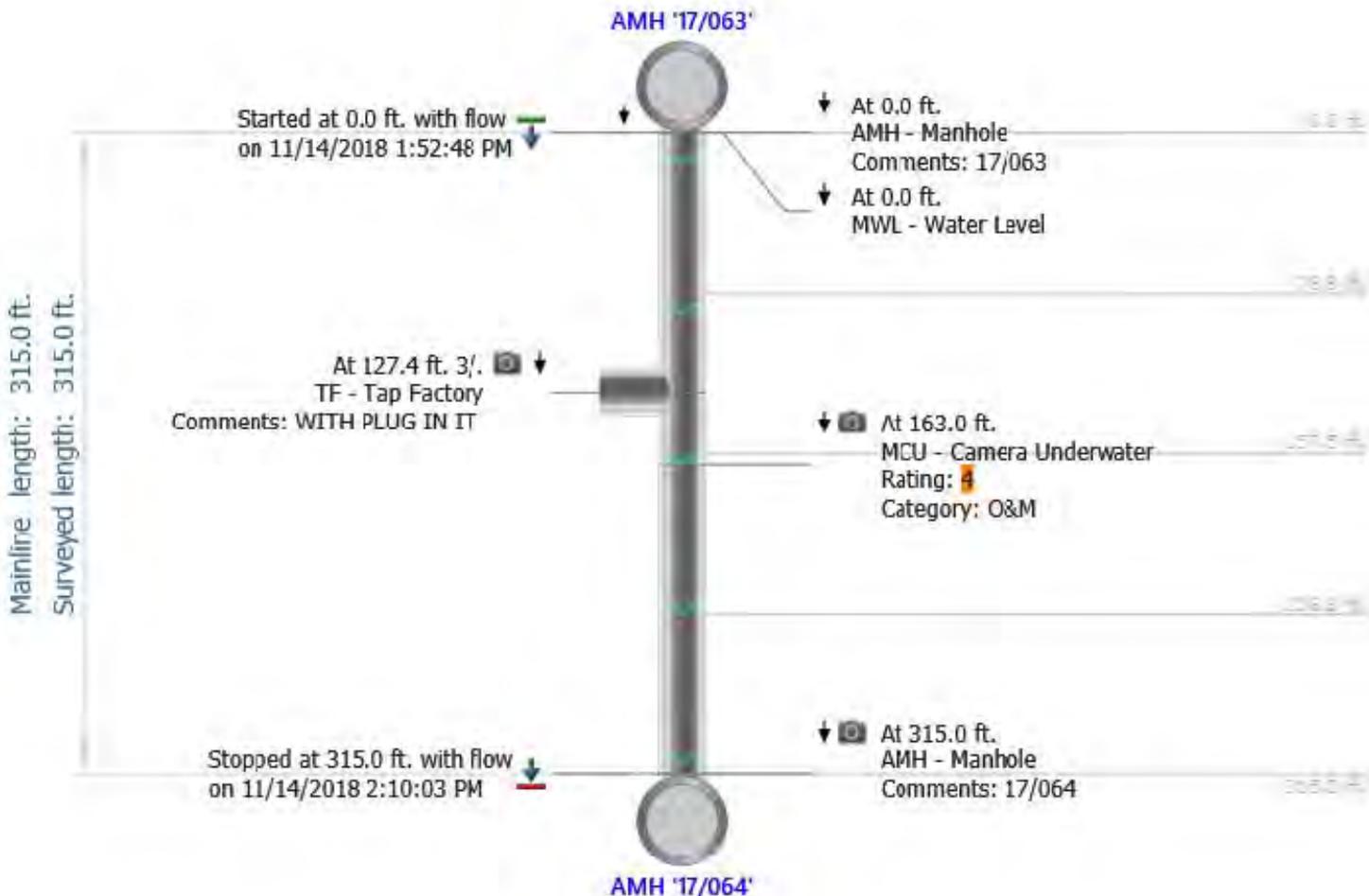
Joint: No 12/116

# NWMCC INSPECTION REPORT

Start date/time: <b>20181114 13:52</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>17/063-17/064</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>ARCADIA RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>17/063</b>	Downstream MH No: <b>17/064</b>	Direction: <b>D</b>	Total length: <b>315.0 ft.</b>	Length surveyed: <b>315.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>12 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	4	4100	4.00	4	4.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	4							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>ARCADIA RD</b>	Start date/time: <b>20181115 08:44</b>	Pipe segment ref.: <b>17/063-17/064</b>
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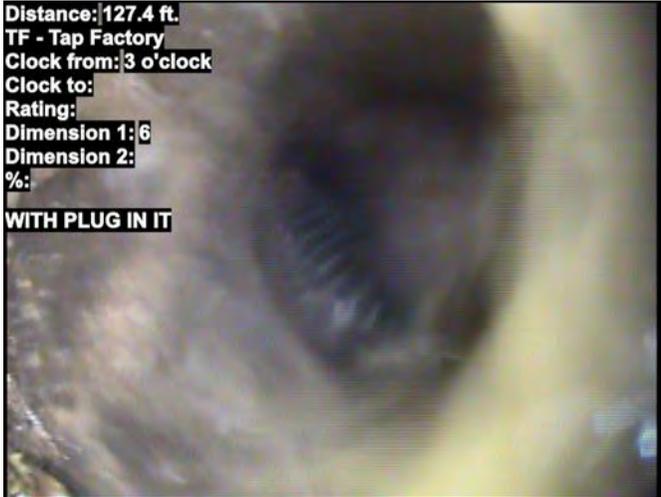


Photo: 17\_063-17\_064-20181114-140122.JPG  
At: 127.4 ft. 3/. TF - Tap Factory  
Joint: No WITH PLUG IN IT



Photo: 17\_063-17\_064-20181114-140227.JPG  
At: 163 ft. MCU - Camera Underwater  
Joint: No



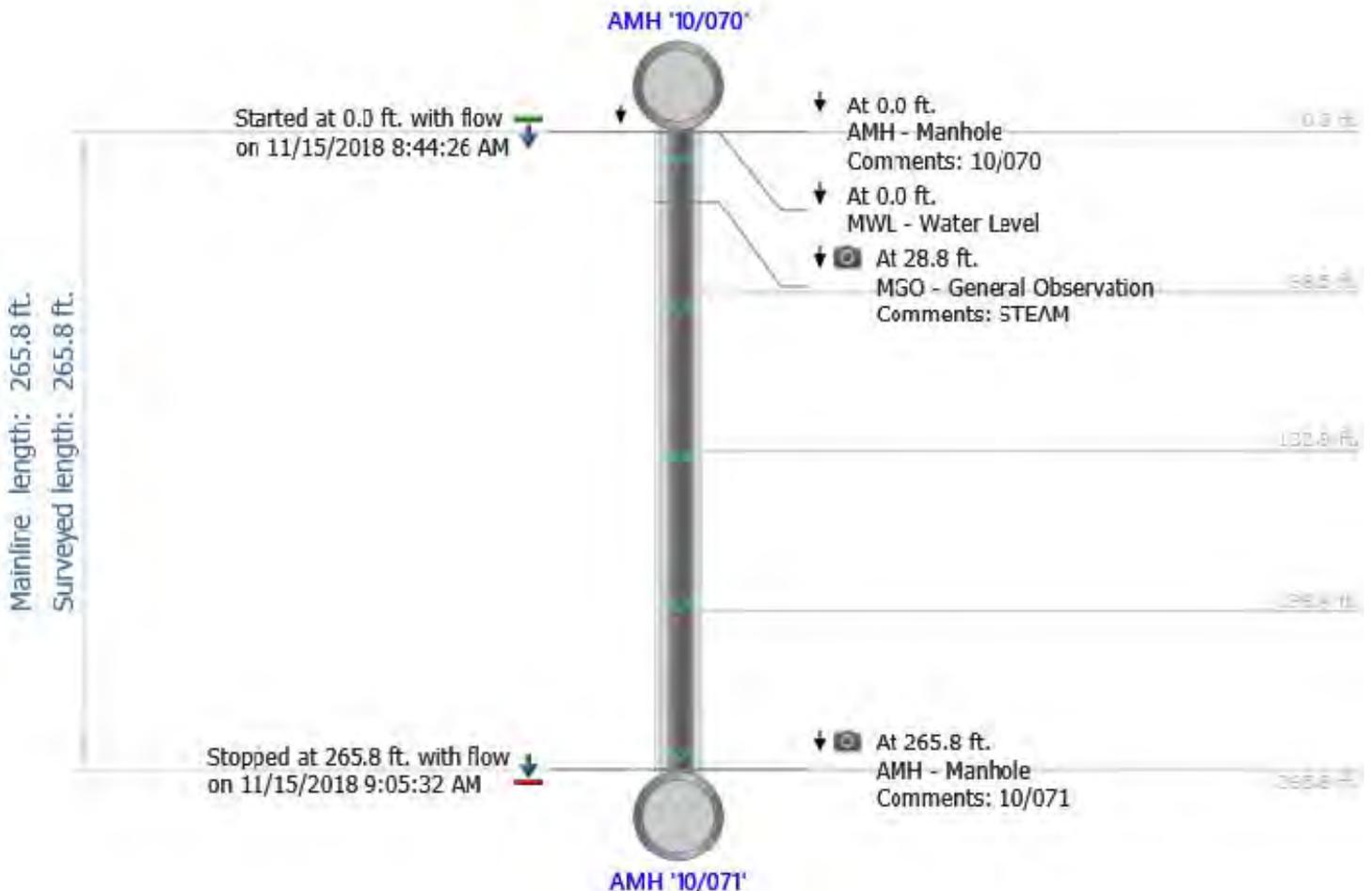
Photo: 17\_063-17\_064-20181114-140742.JPG  
At: 315 ft. AMH - Manhole  
Joint: No 17/064

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 08:44</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/070-10/071</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/070</b>	Downstream MH No: <b>10/071</b>	Direction: <b>D</b>	Total length: <b>265.8 ft.</b>	Length surveyed: <b>265.8 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181115 09:07</b>	Pipe segment ref.: <b>10/070-10/071</b>
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Photo: 10\_070-10\_071-20181115-084837.JPG  
At: 28.8 ft. MGO - General Observation  
Joint: No STEAM



Photo: 10\_070-10\_071-20181115-090515.JPG  
At: 265.8 ft. AMH - Manhole  
Joint: No 10/071

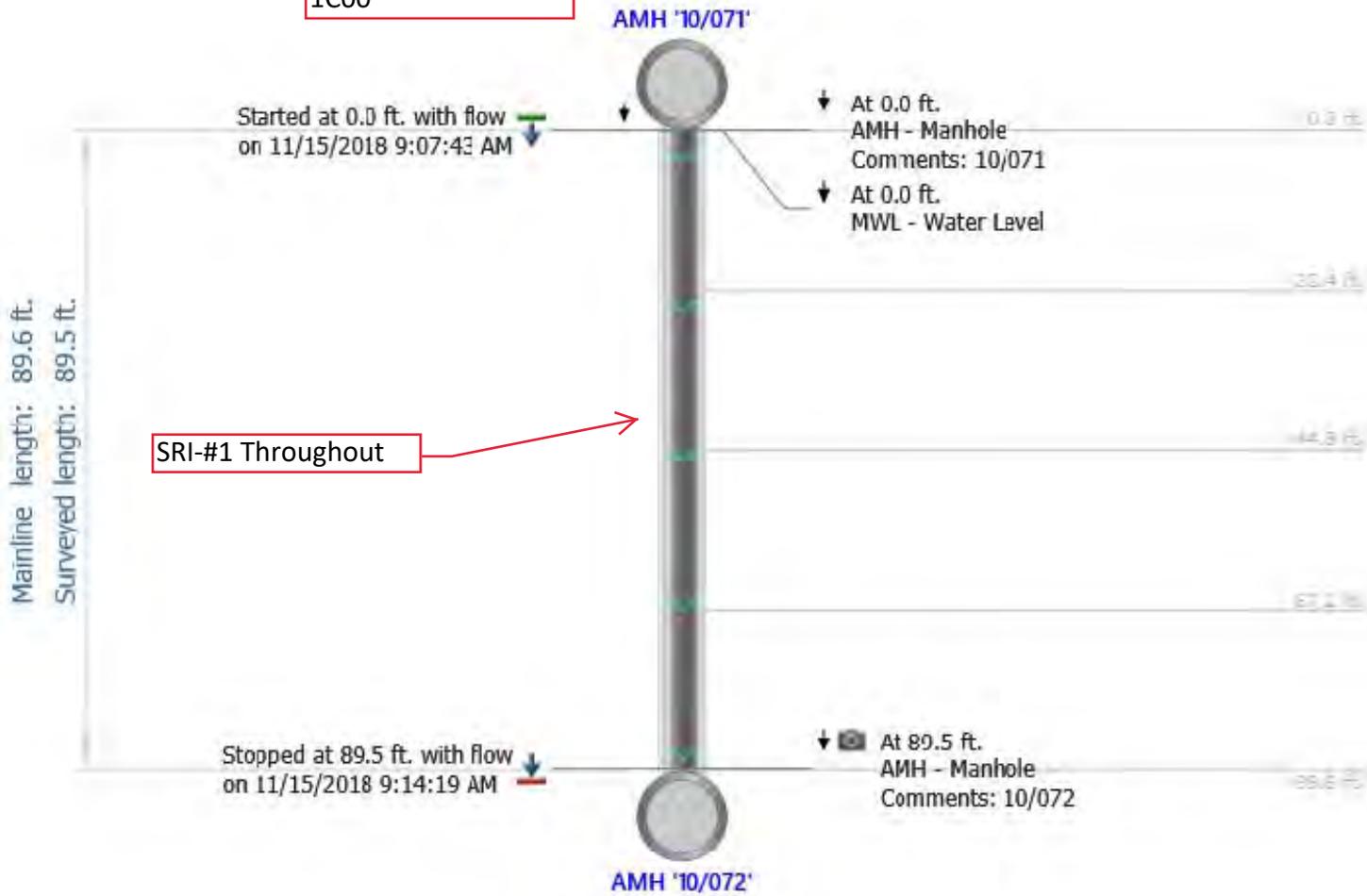
# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 09:07</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/071-10/072</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/071</b>	Downstream MH No: <b>10/072</b>	Direction: <b>D</b>	Total length: <b>89.6 ft.</b>	Length surveyed: <b>89.5 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Defects	Segment Grade	Structural:			Defects	Segment Grade	O&M:			Pipe Rating	Pipe Rating Index	Overall:		
			Pipe Rating	Quick Rating	Pipe Rating Index			Pipe Rating	Quick Rating	Pipe Rating Index			LoF	Risk	
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00			
2	0	0				0	0								
3	0	0				0	0								
4	0	0				0	0								
5	0	0				0	0								

1C00



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181115 09:37</b>	Pipe segment ref.: <b>10/071-10/072</b>
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Photo: 10\_071-10\_072-20181115-091409.JPG

At: 89.5 ft. AMH - Manhole

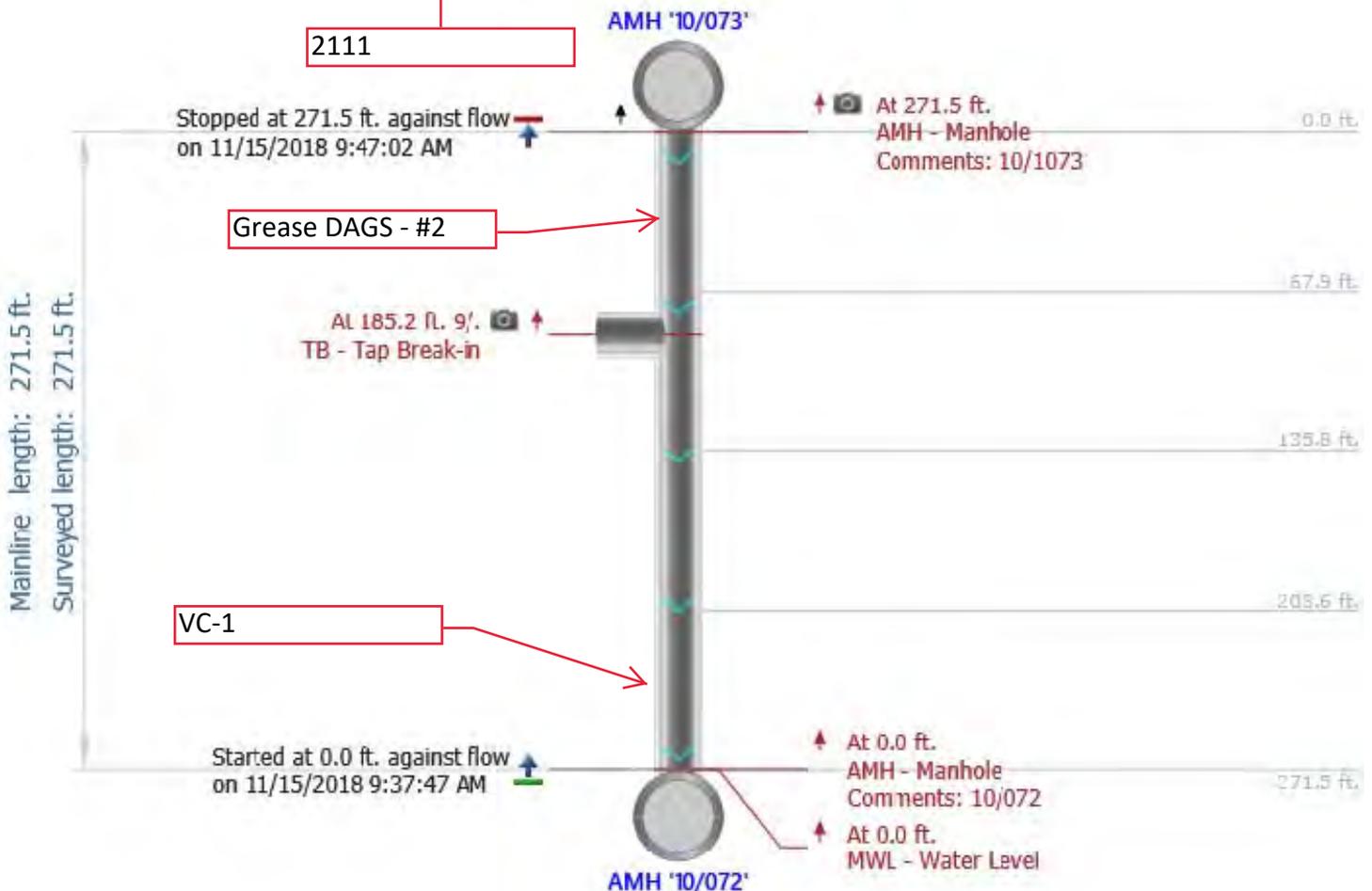
Joint: No 10/072

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 09:37</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/073-10/072</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Parking lot</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/073</b>	Downstream MH No: <b>10/072</b>	Direction: <b>U</b>	Total length: <b>271.5 ft.</b>	Length surveyed: <b>271.5 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181115 10:02</b>	Pipe segment ref.: <b>10/073-10/072</b>
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Distance: 185.2 ft.  
TB - Tap Break-in  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 10\_073-10\_072-20181115-094348.JPG  
At: 185.2 ft. 9/. TB - Tap Break-in  
Joint: No



Distance: 271.5 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/1073

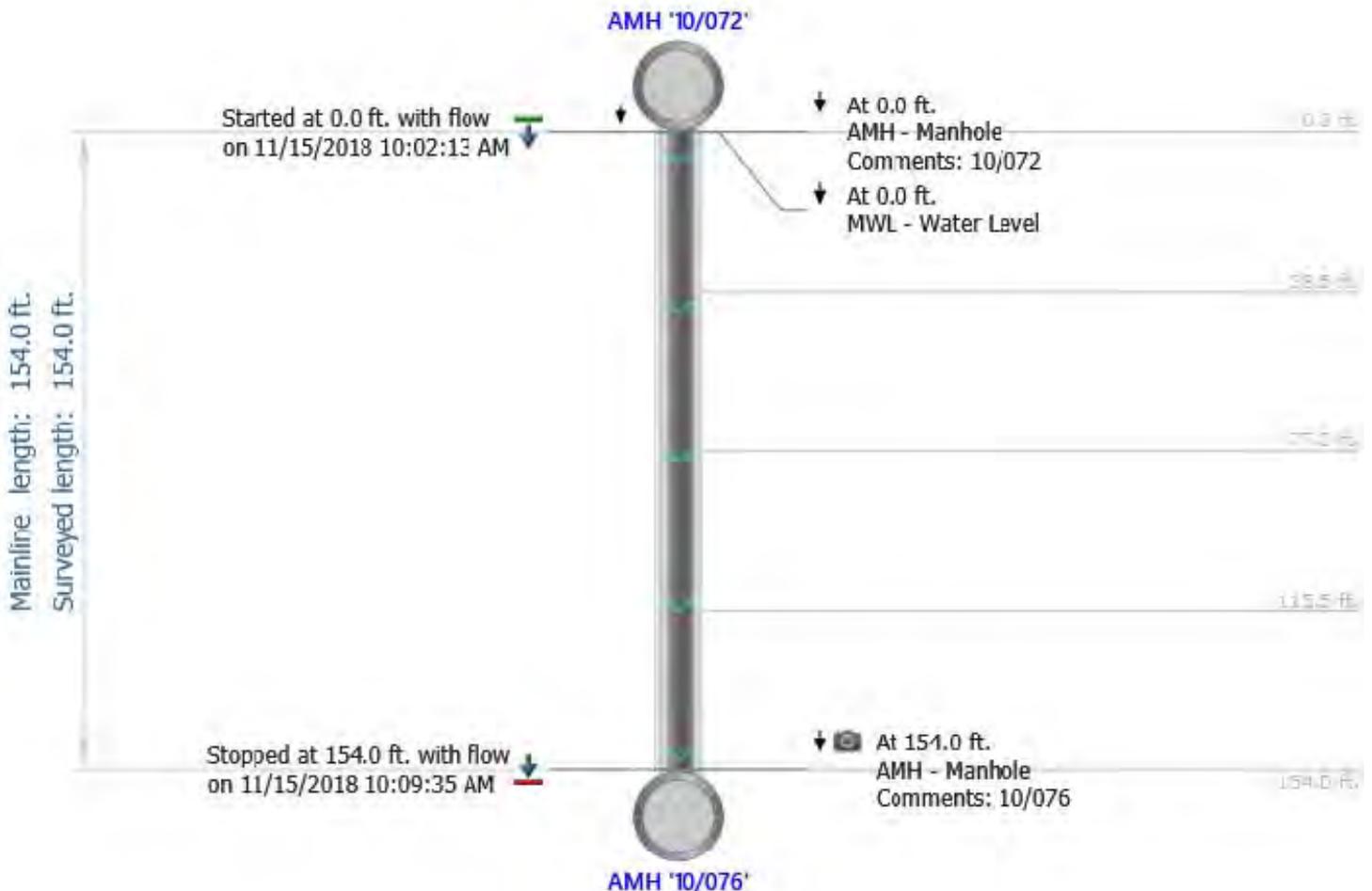
Photo: 10\_073-10\_072-20181115-094637.JPG  
At: 271.5 ft. AMH - Manhole  
Joint: No 10/1073

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 10:02</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/072-10/076</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/072</b>	Downstream MH No: <b>10/076</b>	Direction: <b>D</b>	Total length: <b>154.0 ft.</b>	Length surveyed: <b>154.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181115 10:10</b>	Pipe segment ref.: <b>10/072-10/076</b>
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Photo: 10\_072-10\_076-20181115-100925.JPG

At: 154 ft. AMH - Manhole

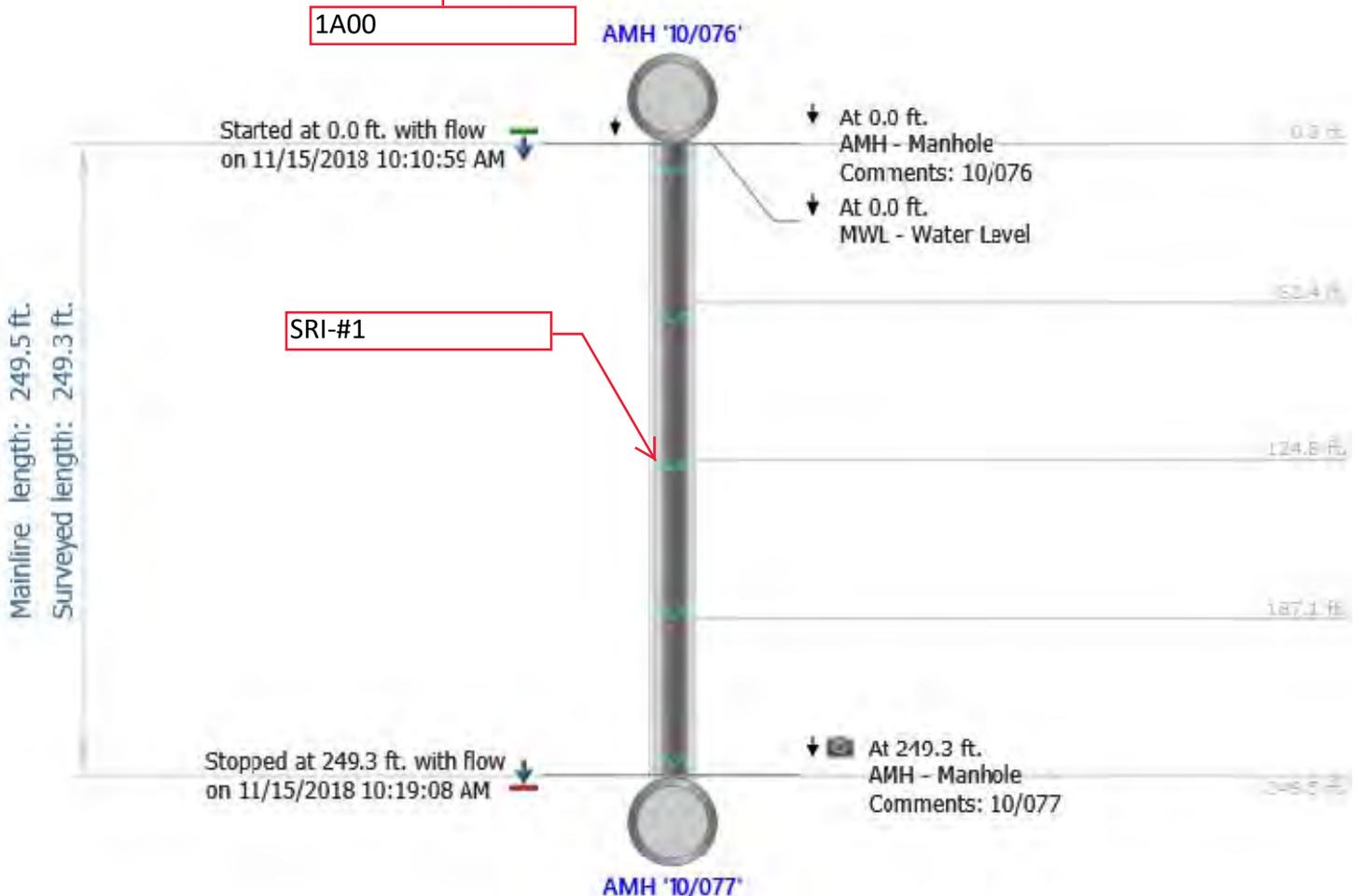
Joint: No 10/076

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 10:10</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/076-10/077</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/076</b>	Downstream MH No: <b>10/077</b>	Direction: <b>D</b>	Total length: <b>249.5 ft.</b>	Length surveyed: <b>249.3 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181115 10:30</b>	Pipe segment ref.: <b>10/076-10/077</b>
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Photo: 10\_076-10\_077-20181115-101857.JPG

At: 249.3 ft. AMH - Manhole

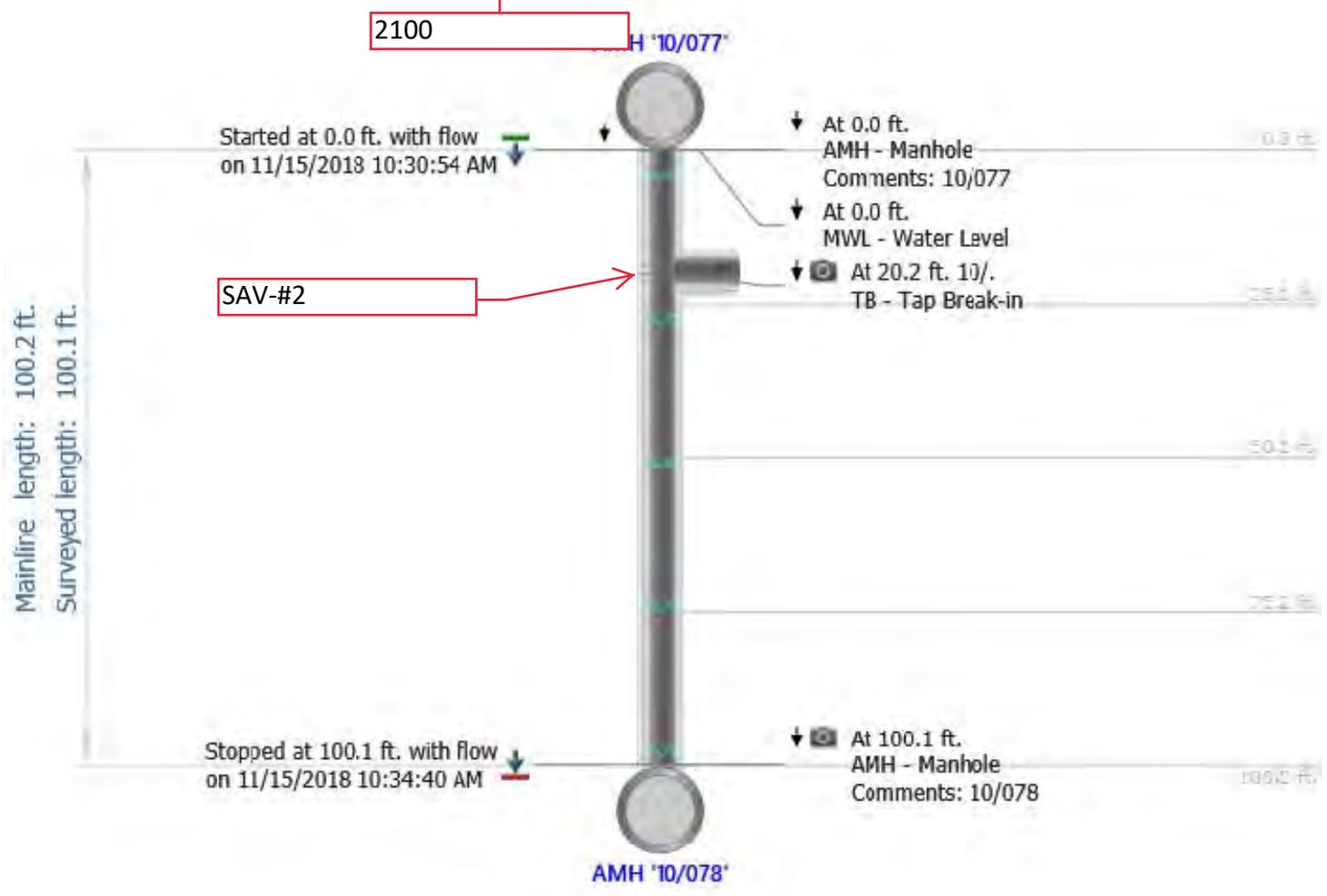
Joint: No 10/077

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 10:30</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/077-10/078</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/077</b>	Downstream MH No: <b>10/078</b>	Direction: <b>D</b>	Total length: <b>100.2 ft.</b>	Length surveyed: <b>100.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181115 10:35</b>	Pipe segment ref.: <b>10/077-10/078</b>
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Distance: 20.2 ft.  
TB - Tap Break-in  
Clock from: 10 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 10\_077-10\_078-20181115-103147.JPG  
At: 20.2 ft. 10/. TB - Tap Break-in  
Joint: No



Distance: 100.1 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/078

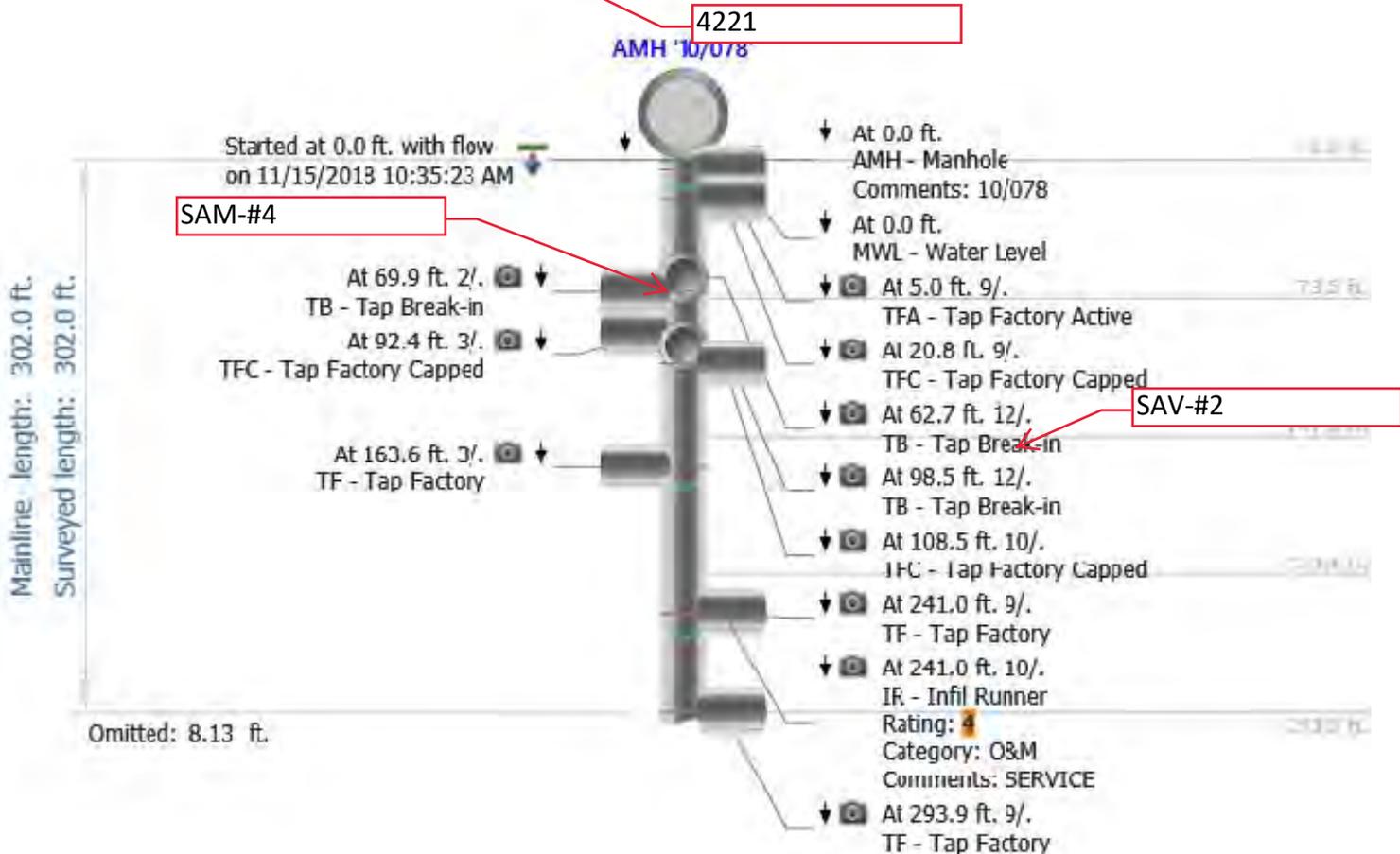
Photo: 10\_077-10\_078-20181115-103423.JPG  
At: 100.1 ft. AMH - Manhole  
Joint: No 10/078

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 10:35</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/078-10/079</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/078</b>	Downstream MH No: <b>10/079</b>	Direction: <b>D</b>	Total length: <b>302.0 ft.</b>	Length surveyed: <b>302.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	4	4100	4.00	4	4.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	4							
5	0	0				0	0							



Mainline length: 302.0 ft.  
Surveyed length: 302.0 ft.

Omitted: 302 ft.

Stopped at 302.0 ft. with flow  
on 11/15/2018 10:50:59 AM



AMH '10/079'



At 302.0 ft.  
AMH - Manhole  
Comments: 10/079

302.0 ft.  
302.0 ft.

# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181115 10:52</b>	Pipe segment ref.: <b>10/078-10/079</b>
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Photo: 10\_078-10\_079-20181115-103616.JPG  
At: 5 ft. 9/. TFA - Tap Factory Active  
Joint: No



Photo: 10\_078-10\_079-20181115-103702.JPG  
At: 20.8 ft. 9/. TFC - Tap Factory Capped  
Joint: No

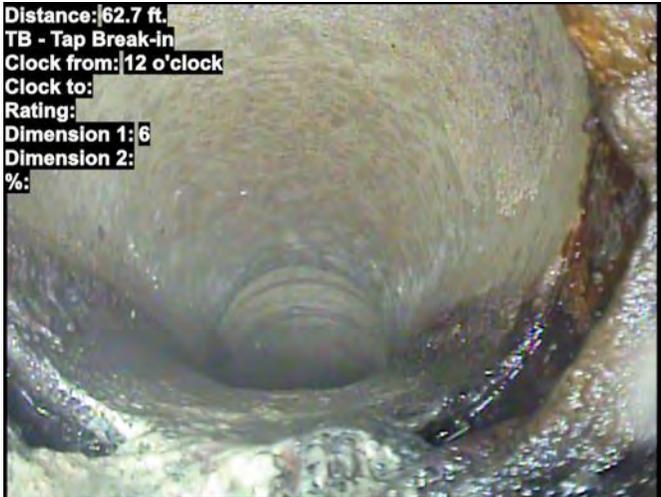


Photo: 10\_078-10\_079-20181115-103905.JPG  
At: 62.7 ft. 12/. TB - Tap Break-in  
Joint: No



Photo: 10\_078-10\_079-20181115-103933.JPG  
At: 69.9 ft. 2/. TB - Tap Break-in  
Joint: No



Distance: 92.4 ft.  
TFC - Tap Factory Capped  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_078-10\_079-20181115-104030.JPG  
At: 92.4 ft. 3/. TFC - Tap Factory Capped  
Joint: No



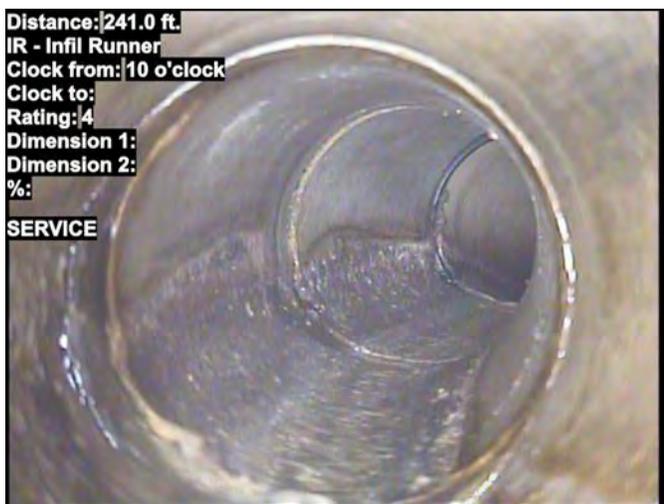
Distance: 98.5 ft.  
TB - Tap Break-in  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_078-10\_079-20181115-104108.JPG  
At: 98.5 ft. 12/. TB - Tap Break-in  
Joint: No



Distance: 108.5 ft.  
TFC - Tap Factory Capped  
Clock from: 10 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_078-10\_079-20181115-104301.JPG  
At: 108.5 ft. 10/. TFC - Tap Factory Capped  
Joint: No



Distance: 163.6 ft.  
TF - Tap Factory  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_078-10\_079-20181115-104452.JPG  
At: 163.6 ft. 3/. TF - Tap Factory  
Joint: No



Distance: 241.0 ft.  
IR - Infil Runner  
Clock from: 10 o'clock  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:  
SERVICE  
Photo: 10\_078-10\_079-20181115-104805.JPG  
At: 241 ft. 10/. IR - Infil Runner  
Joint: No SERVICE



Distance: 241.0 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_078-10\_079-20181115-104754.JPG  
At: 241 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 293.9 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 10\_078-10\_079-20181115-105019.JPG  
At: 293.9 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 302.0 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

10/079

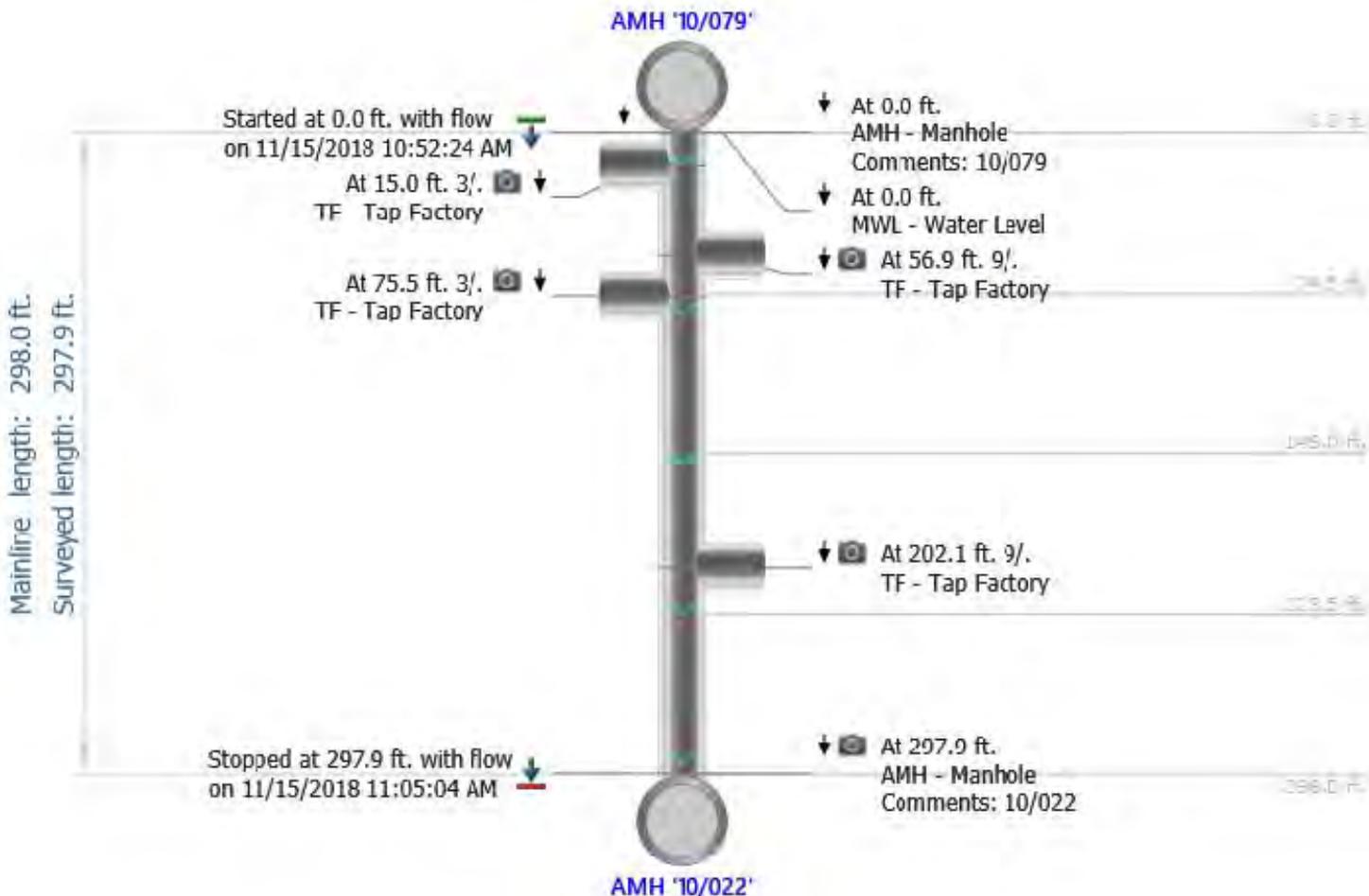
Photo: 10\_078-10\_079-20181115-105046.JPG  
At: 302 ft. AMH - Manhole  
Joint: No 10/079

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 10:52</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/079-10/022</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/079</b>	Downstream MH No: <b>10/022</b>	Direction: <b>D</b>	Total length: <b>298.0 ft.</b>	Length surveyed: <b>297.9 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181115 11:28</b>	Pipe segment ref.: <b>10/079-10/022</b>
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Photo: 10\_079-10\_022-20181115-105319.JPG  
At: 15 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 10\_079-10\_022-20181115-105453.JPG  
At: 56.9 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 10\_079-10\_022-20181115-105611.JPG  
At: 75.5 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 10\_079-10\_022-20181115-110114.JPG  
At: 202.1 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 297.9 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/022

Photo: 10\_079-10\_022-20181115-110452.JPG

At: 297.9 ft. AMH - Manhole

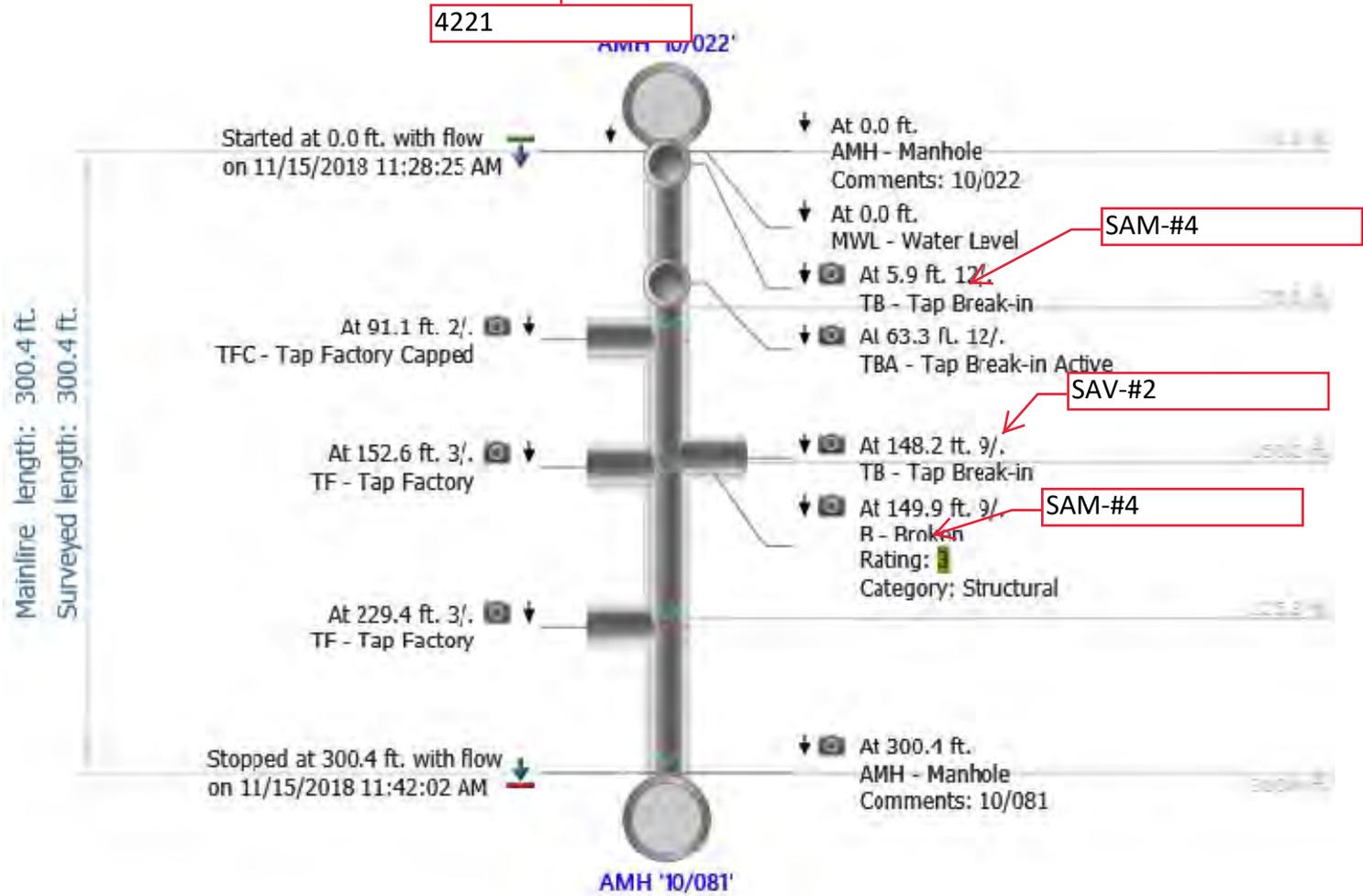
Joint: No 10/022

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 11:28</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/022-10/081</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/022</b>	Downstream MH No: <b>10/081</b>	Direction: <b>D</b>	Total length: <b>300.4 ft.</b>	Length surveyed: <b>300.4 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	3	3100	3.00	0	0	0	0000	0.00	3	3.00		
2	0	0				0	0							
3	0	3				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181115 11:43</b>	Pipe segment ref.: <b>10/022-10/081</b>
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Photo: 10\_022-10\_081-20181115-112951.JPG  
At: 5.9 ft. 12/. TB - Tap Break-in  
Joint: No



Photo: 10\_022-10\_081-20181115-113145.JPG  
At: 63.3 ft. 12/. TBA - Tap Break-in Active  
Joint: No



Photo: 10\_022-10\_081-20181115-113246.JPG  
At: 91.1 ft. 2/. TFC - Tap Factory Capped  
Joint: No



Photo: 10\_022-10\_081-20181115-113457.JPG  
At: 148.2 ft. 9/. TB - Tap Break-in  
Joint: No



Distance: 149.9 ft.

B - Broken

Clock from: 9 o'clock

Clock to:

Rating: 3

Dimension 1:

Dimension 2:

%:

Photo: 10\_022-10\_081-20181115-113515.JPG

At: 149.9 ft. 9/. B - Broken

Joint: No



Distance: 152.6 ft.

TF - Tap Factory

Clock from: 3 o'clock

Clock to:

Rating:

Dimension 1: 6

Dimension 2:

%:

Photo: 10\_022-10\_081-20181115-113540.JPG

At: 152.6 ft. 3/. TF - Tap Factory

Joint: No



Distance: 229.4 ft.

TF - Tap Factory

Clock from: 3 o'clock

Clock to:

Rating:

Dimension 1: 6

Dimension 2:

%:

Photo: 10\_022-10\_081-20181115-113759.JPG

At: 229.4 ft. 3/. TF - Tap Factory

Joint: No



Distance: 300.4 ft.

AMH - Manhole

Clock from:

Clock to:

Rating:

Dimension 1:

Dimension 2:

%:

10/081

Photo: 10\_022-10\_081-20181115-114026.JPG

At: 300.4 ft. AMH - Manhole

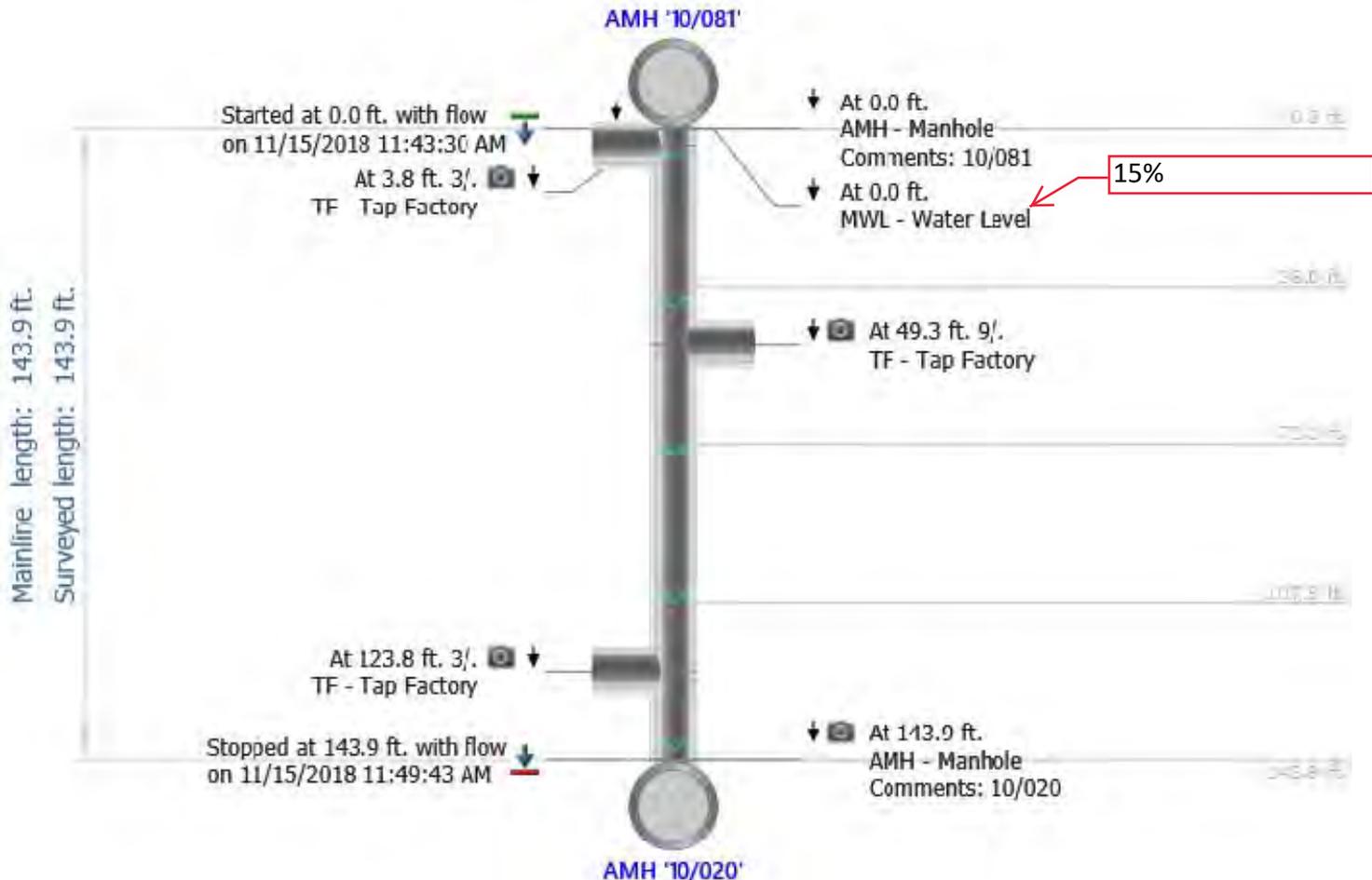
Joint: No 10/081

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 11:43</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/081-10/020</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/081</b>	Downstream MH No: <b>10/020</b>	Direction: <b>D</b>	Total length: <b>143.9 ft.</b>	Length surveyed: <b>143.9 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181115 11:50</b>	Pipe segment ref.: <b>10/081-10/020</b>
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Distance: 3.8 ft.  
TF - Tap Factory  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_081-10\_020-20181115-114412.JPG  
At: 3.8 ft. 3/. TF - Tap Factory  
Joint: No



Distance: 49.3 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_081-10\_020-20181115-114600.JPG  
At: 49.3 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 123.8 ft.  
TF - Tap Factory  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_081-10\_020-20181115-114823.JPG  
At: 123.8 ft. 3/. TF - Tap Factory  
Joint: No



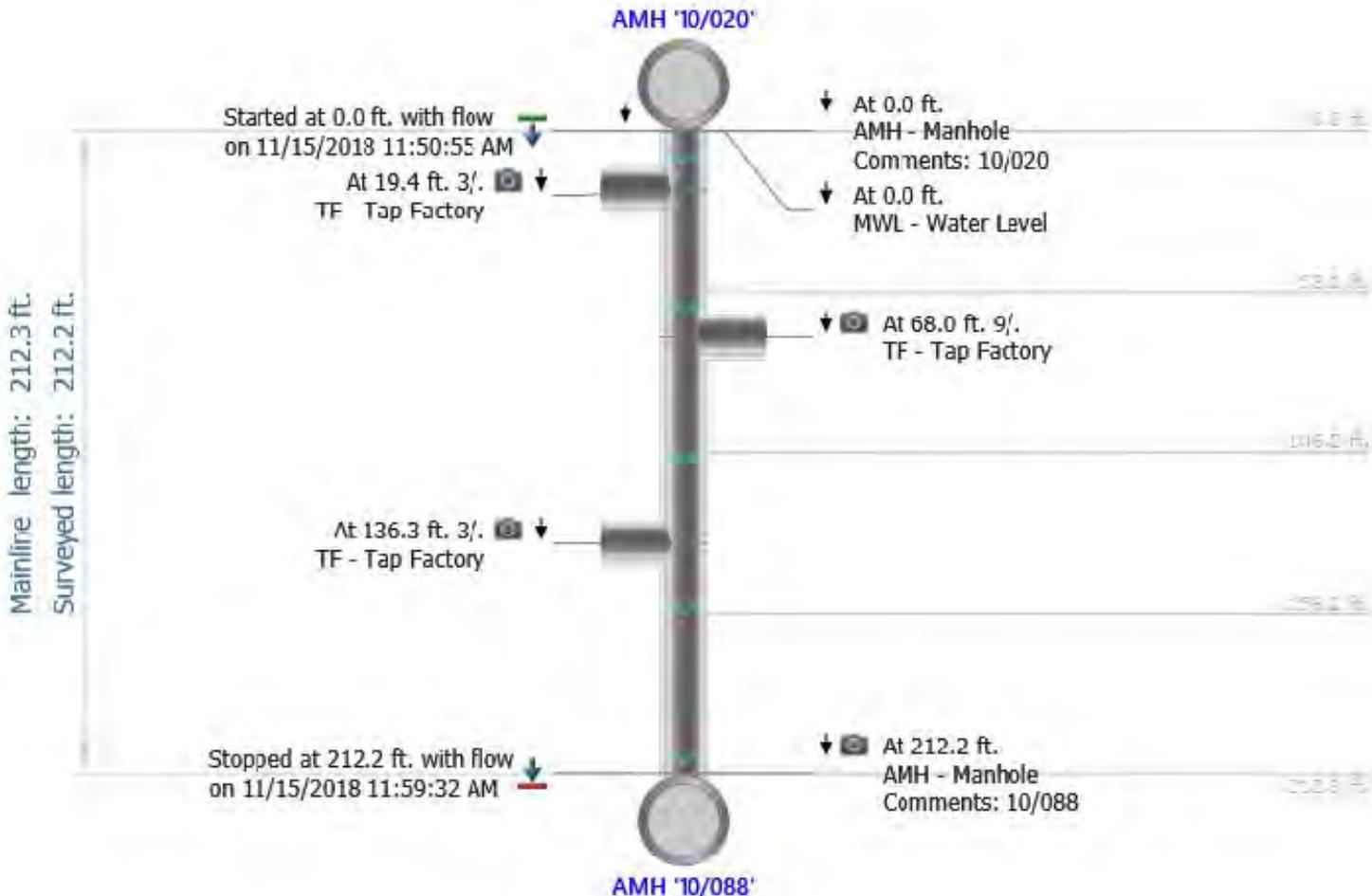
Distance: 143.9 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/020  
Photo: 10\_081-10\_020-20181115-114913.JPG  
At: 143.9 ft. AMH - Manhole  
Joint: No 10/020

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 11:50</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/020-10/088</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/020</b>	Downstream MH No: <b>10/088</b>	Direction: <b>D</b>	Total length: <b>212.3 ft.</b>	Length surveyed: <b>212.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181115 12:23</b>	Pipe segment ref.: <b>10/020-10/088</b>
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Photo: 10\_020-10\_088-20181115-115159.JPG  
At: 19.4 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 10\_020-10\_088-20181115-115413.JPG  
At: 68 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 10\_020-10\_088-20181115-115625.JPG  
At: 136.3 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 10\_020-10\_088-20181115-115919.JPG  
At: 212.2 ft. AMH - Manhole  
Joint: No 10/088

# NWMCC INSPECTION REPORT

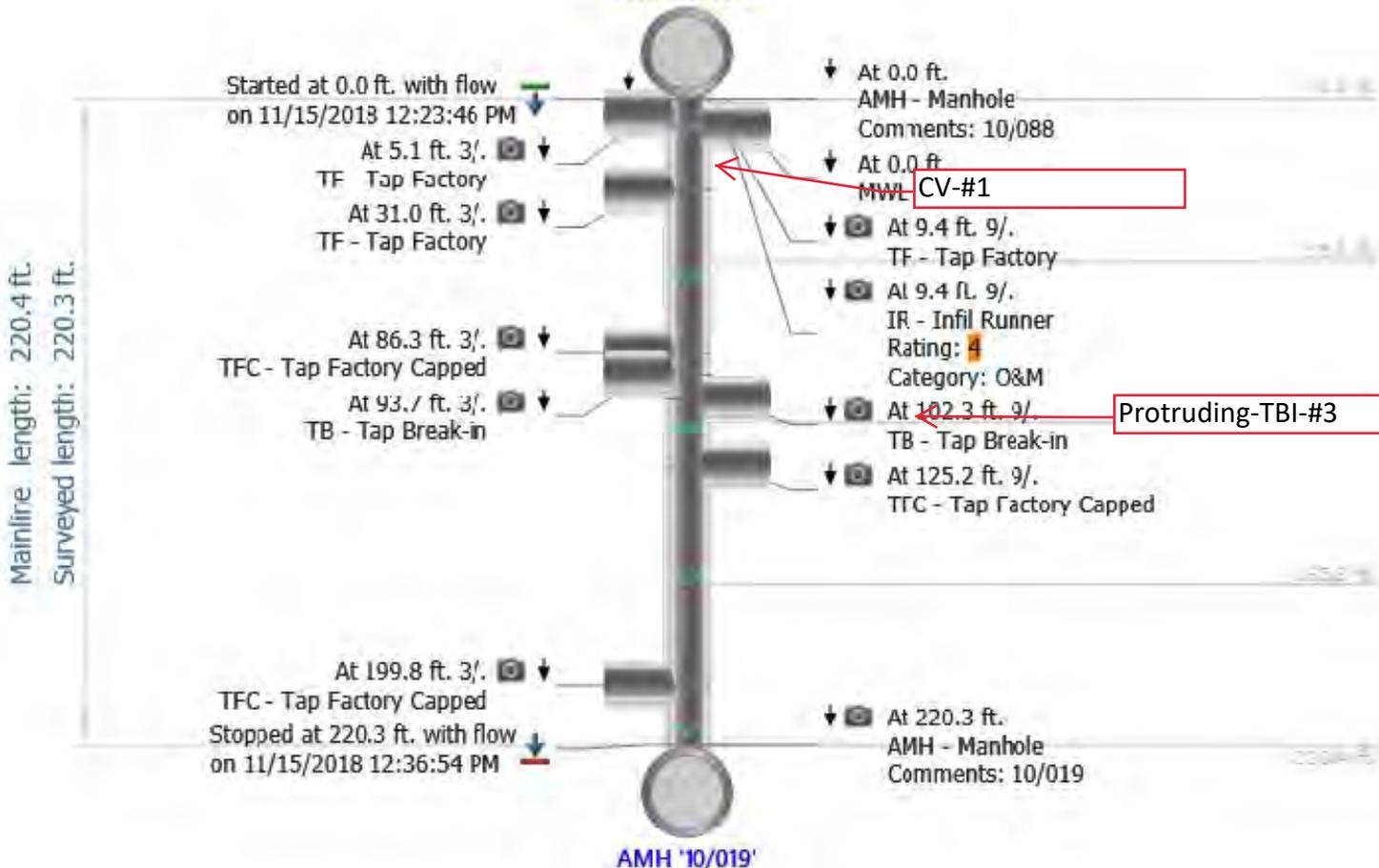
Start date/time: <b>20181115 12:23</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/088-10/018</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/088</b>	Downstream MH No: <b>10/019</b>	Direction: <b>D</b>	Total length: <b>220.4 ft.</b>	Length surveyed: <b>220.3 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	4	4100	4.00	4	4.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	4							
5	0	0				0	0							

4131

AMH '10/088'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181115 12:38</b>	Pipe segment ref.: <b>10/088-10/018</b>
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Photo: 10\_088-10\_019-20181115-122428.JPG

At: 5.1 ft. 3/. TF - Tap Factory

Joint: No

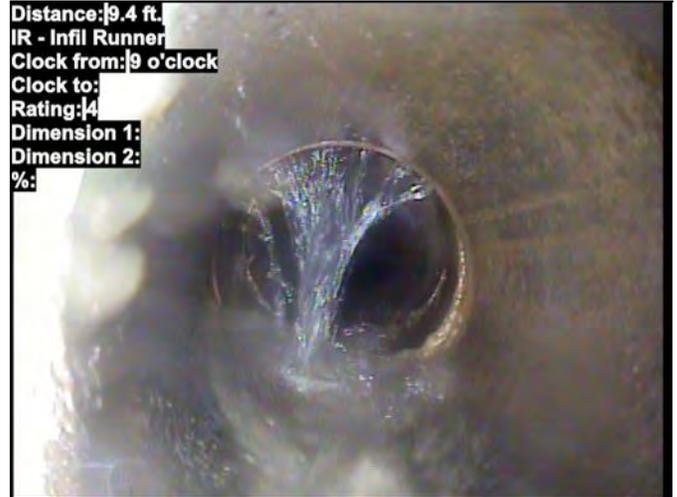


Photo: 10\_088-10\_019-20181115-122522.JPG

At: 9.4 ft. 9/. IR - Infil Runner

Joint: No



Photo: 10\_088-10\_019-20181115-122514.JPG

At: 9.4 ft. 9/. TF - Tap Factory

Joint: No



Photo: 10\_088-10\_019-20181115-122626.JPG

At: 31 ft. 3/. TF - Tap Factory

Joint: No

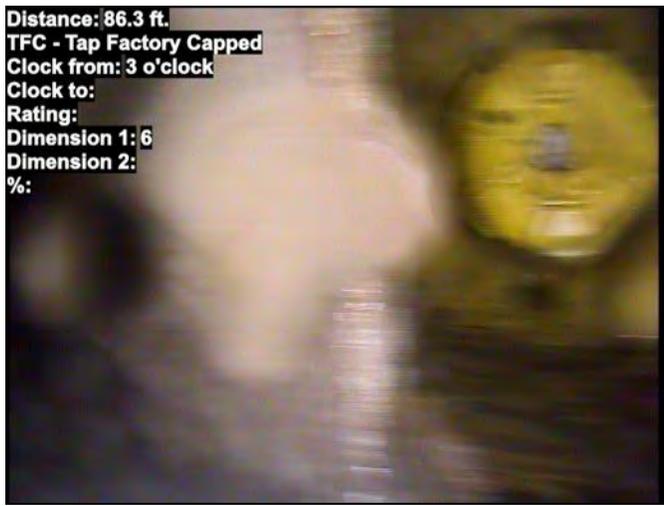


Photo: 10\_088-10\_019-20181115-123149.JPG  
At: 86.3 ft. 3/. TFC - Tap Factory Capped  
Joint: No

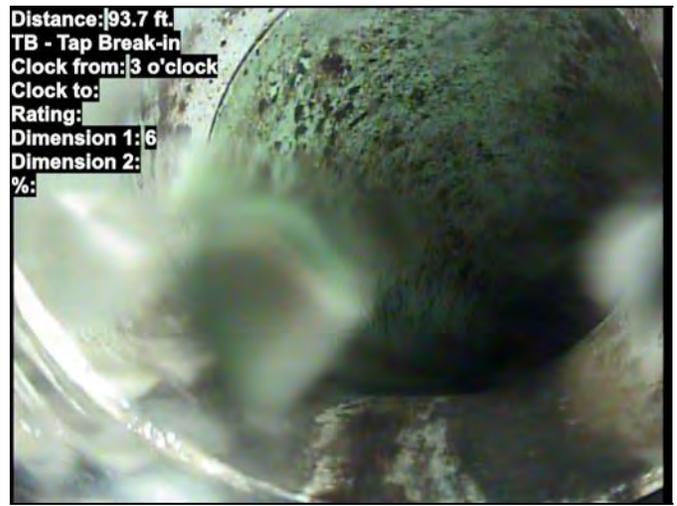


Photo: 10\_088-10\_019-20181115-123206.JPG  
At: 93.7 ft. 3/. TB - Tap Break-in  
Joint: No



Photo: 10\_088-10\_019-20181115-123234.JPG  
At: 102.3 ft. 9/. TB - Tap Break-in  
Joint: No



Photo: 10\_088-10\_019-20181115-123324.JPG  
At: 125.2 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Photo: 10\_088-10\_019-20181115-123531.JPG  
At: 199.8 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Photo: 10\_088-10\_019-20181115-123636.JPG  
At: 220.3 ft. AMH - Manhole  
Joint: No 10/019

# NWMCC INSPECTION REPORT

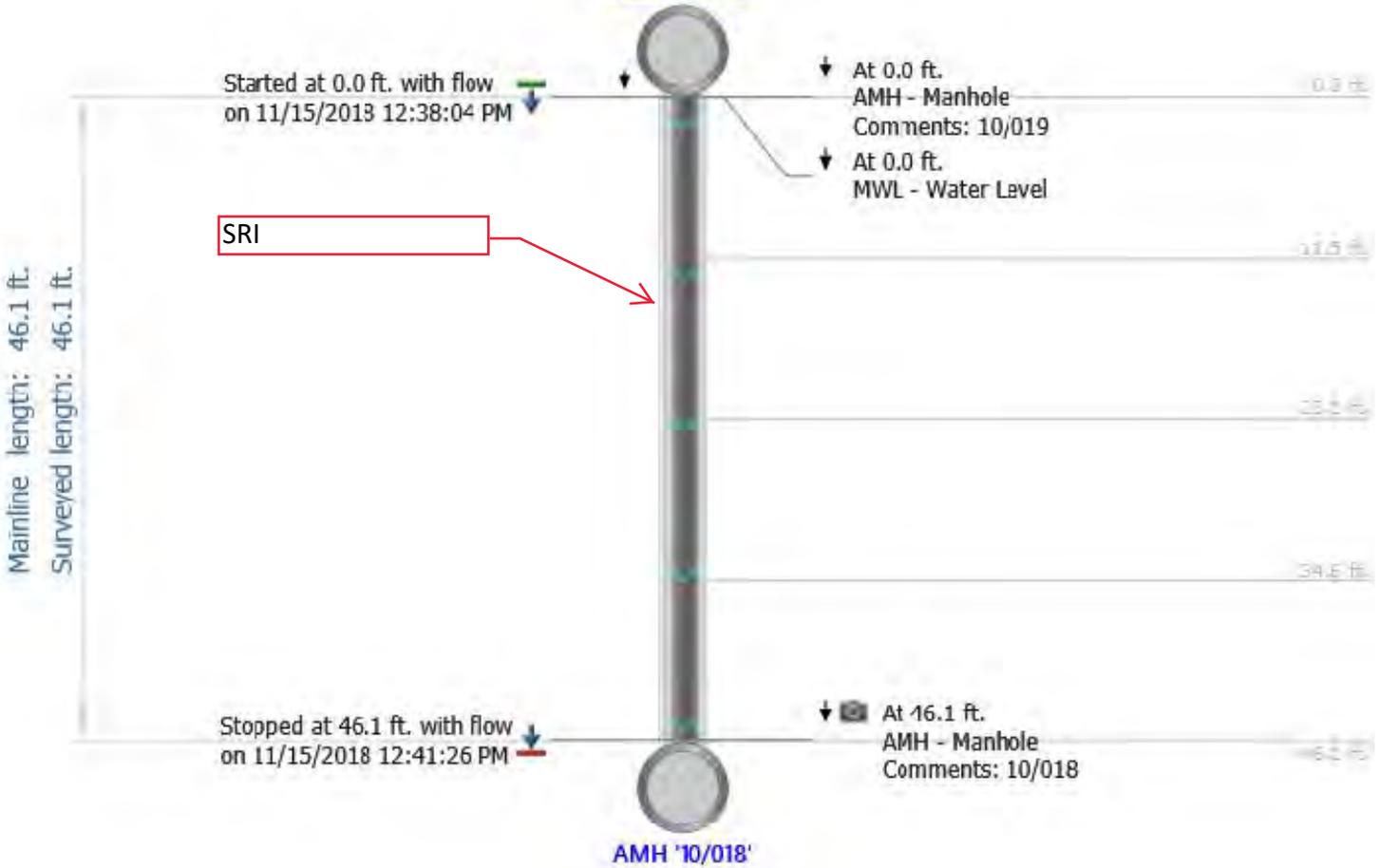
Start date/time: <b>20181115 12:38</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/019-10/018</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/019</b>	Downstream MH No: <b>10/018</b>	Direction: <b>D</b>	Total length: <b>46.1 ft.</b>	Length surveyed: <b>46.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							

1C00

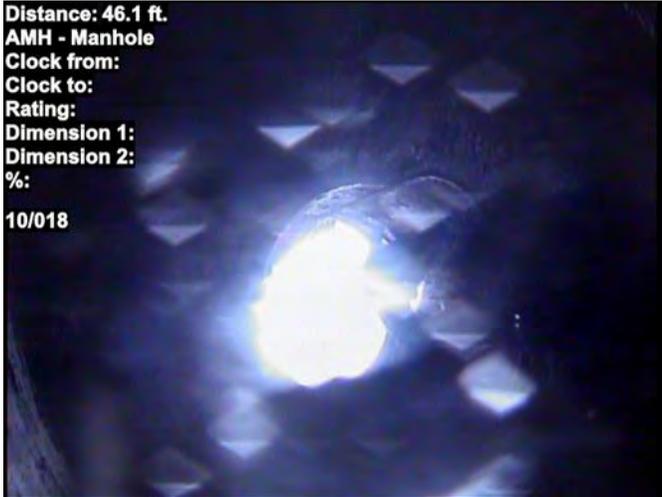
MH '10/019'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181115 13:49</b>	Pipe segment ref.: <b>10/019-10/018</b>
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Distance: 46.1 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/018

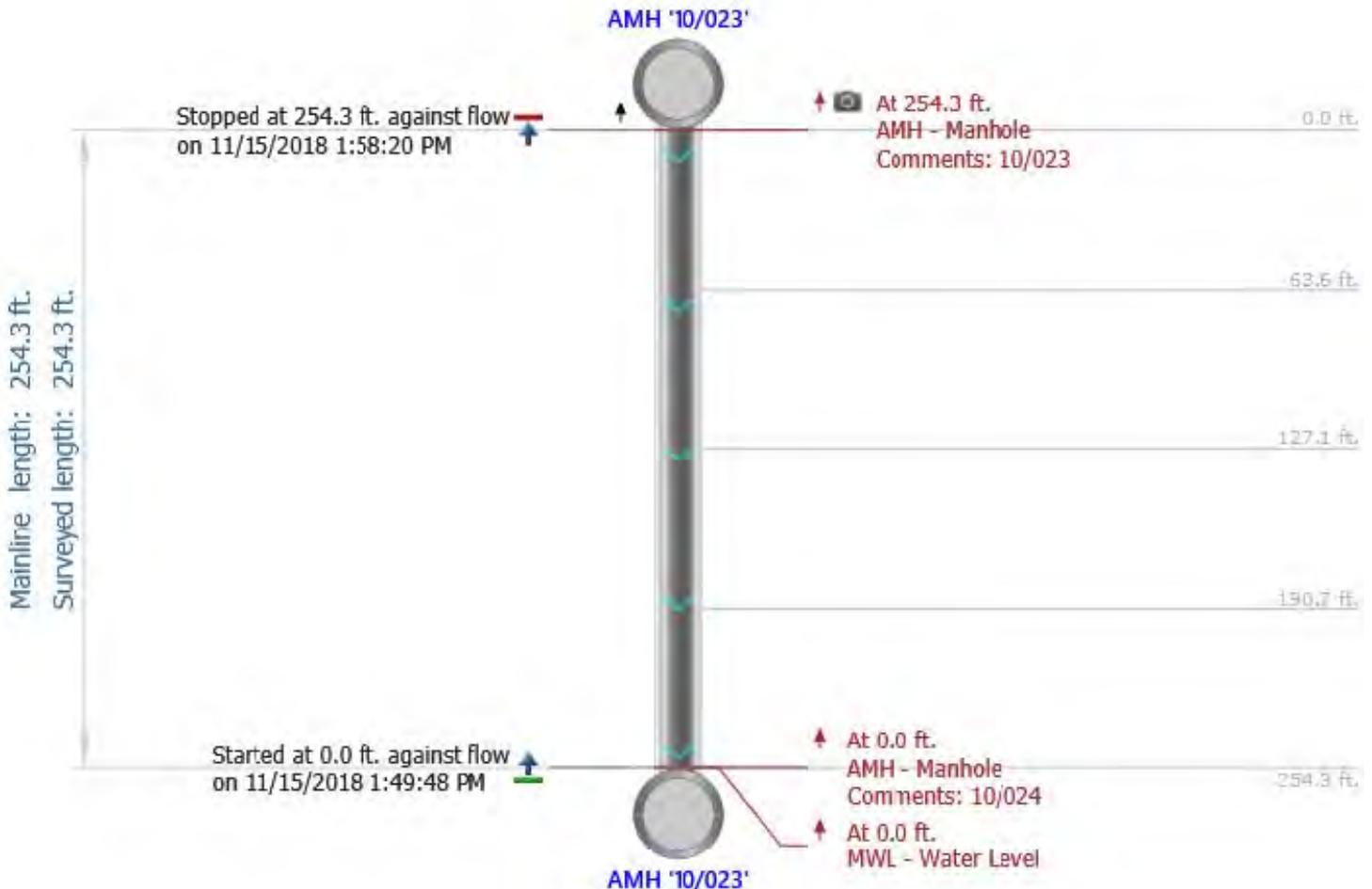
Photo: 10\_019-10\_018-20181115-124034.JPG  
At: 46.1 ft. AMH - Manhole  
Joint: No 10/018

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 13:49</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/023-10/024</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/023</b>	Downstream MH No: <b>10/023</b>	Direction: <b>U</b>	Total length: <b>254.3 ft.</b>	Length surveyed: <b>254.3 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City:

WESTWOOD MA

Street:

GAY ST

Start date/time:

20181115 14:00

Pipe segment ref.:

10/023-10/024



Photo: 10\_023-10\_023-20181115-135806.JPG

At: 254.3 ft. AMH - Manhole

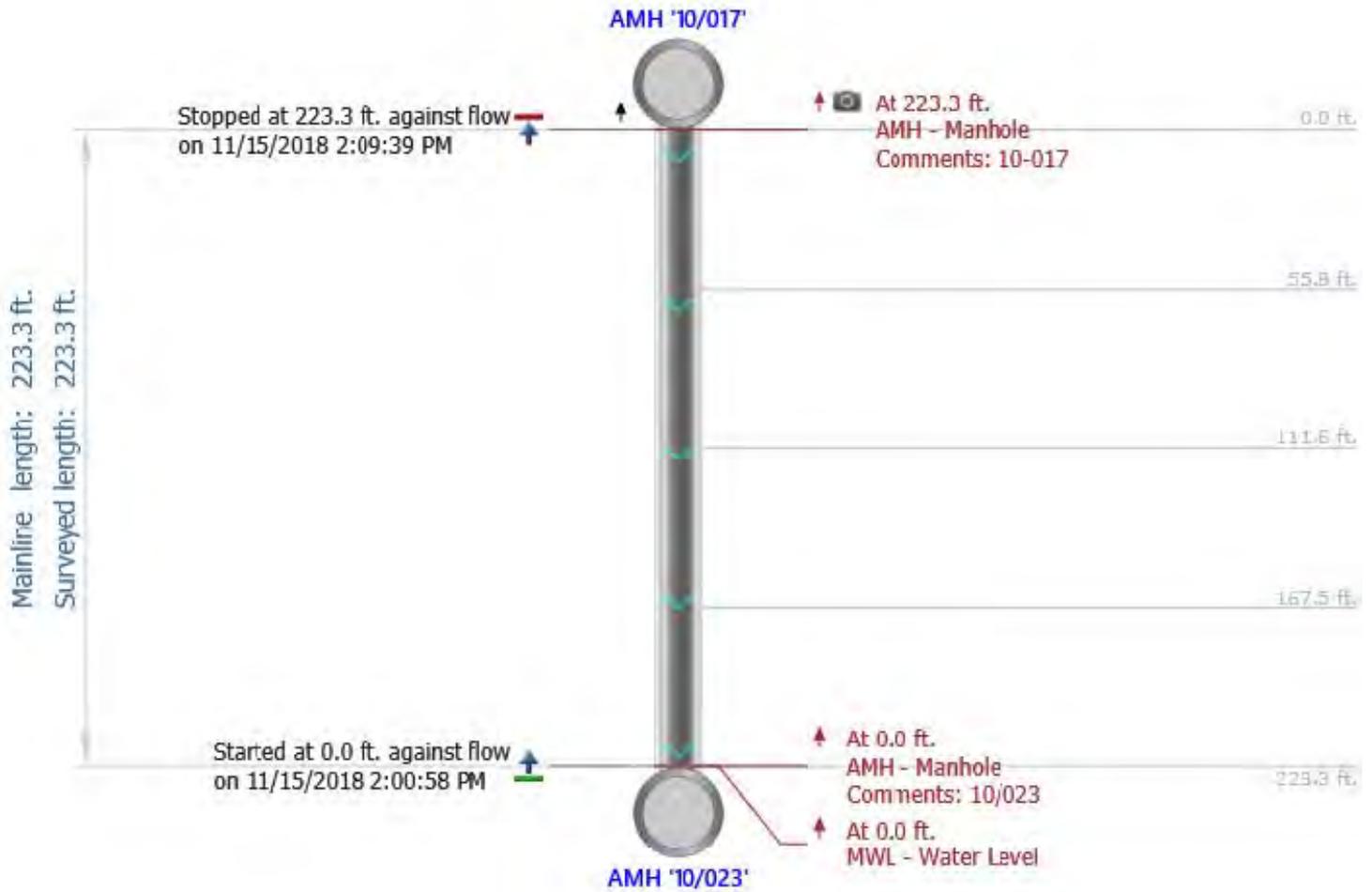
Joint: No 10/023

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 14:00</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/017-10/023</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/017</b>	Downstream MH No: <b>10/023</b>	Direction: <b>U</b>	Total length: <b>223.3 ft.</b>	Length surveyed: <b>223.3 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181116 08:21</b>	Pipe segment ref.: <b>10/017-10/023</b>
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Photo: 10\_017-10\_023-20181115-140924.JPG

At: 223.3 ft. AMH - Manhole

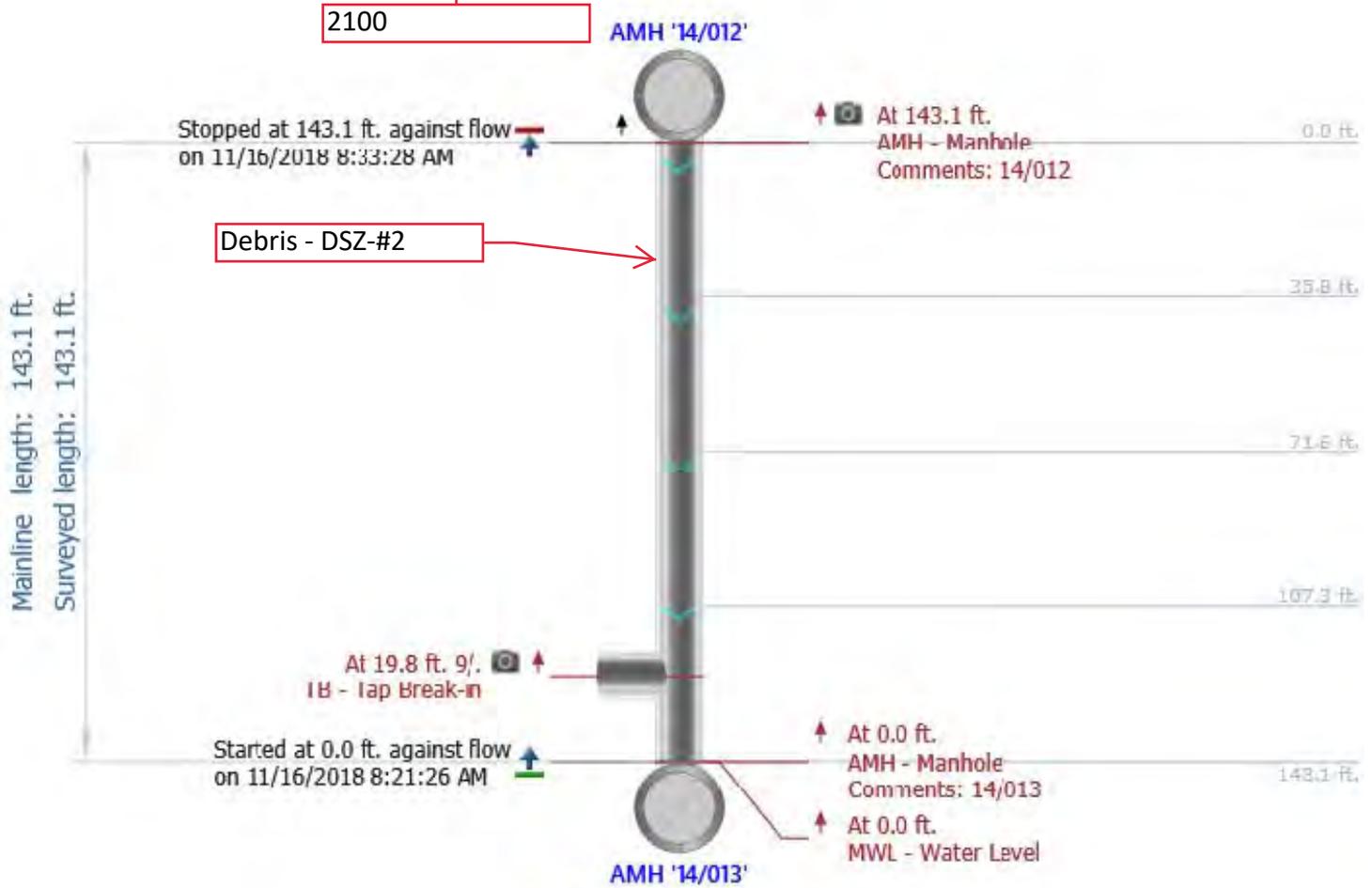
Joint: No 10-017

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 08:21</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/012-14/013</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>HIGH ST EASMENT</b>	Location code: <b>Easement/Right of way</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/012</b>	Downstream MH No: <b>14/013</b>	Direction: <b>U</b>	Total length: <b>143.1 ft.</b>	Length surveyed: <b>143.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>HIGH ST EASMENT</b>	Start date/time: <b>20181116 08:44</b>	Pipe segment ref.: <b>14/012-14/013</b>
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Photo: 14\_012-14\_013-20181116-082351.JPG

At: 19.8 ft. 9/. TB - Tap Break-in

Joint: No



Photo: 14\_012-14\_013-20181116-083205.JPG

At: 143.1 ft. AMH - Manhole

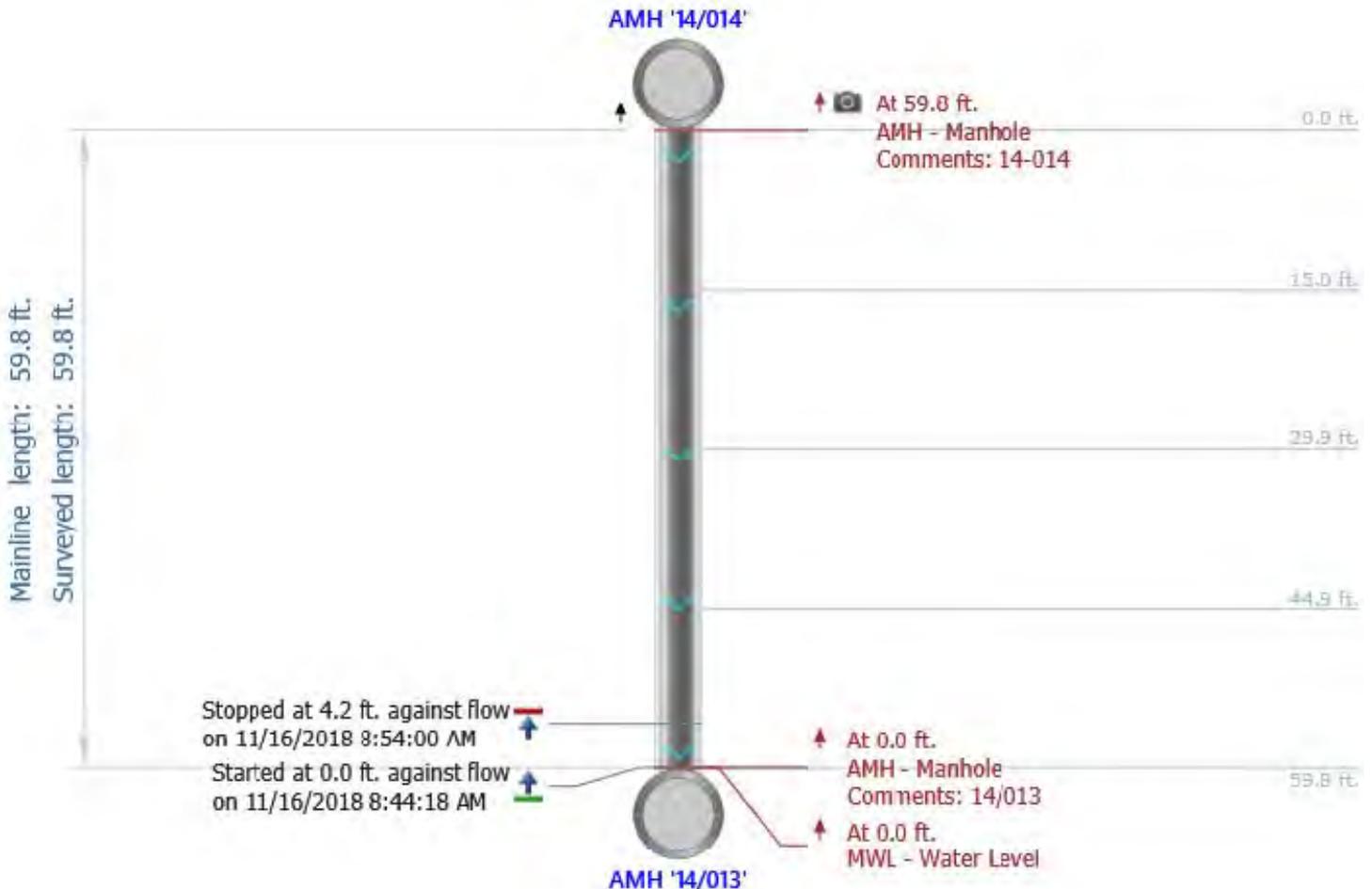
Joint: No 14/012

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 08:44</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/014-14/013</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/014</b>	Downstream MH No: <b>14/013</b>	Direction: <b>U</b>	Total length: <b>59.8 ft.</b>	Length surveyed: <b>59.8 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST</b>	Start date/time: <b>20181116 08:54</b>	Pipe segment ref.: <b>14/014-14/013</b>
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Photo: 14\_014-14\_013-20181116-084853.JPG

At: 59.8 ft. AMH - Manhole

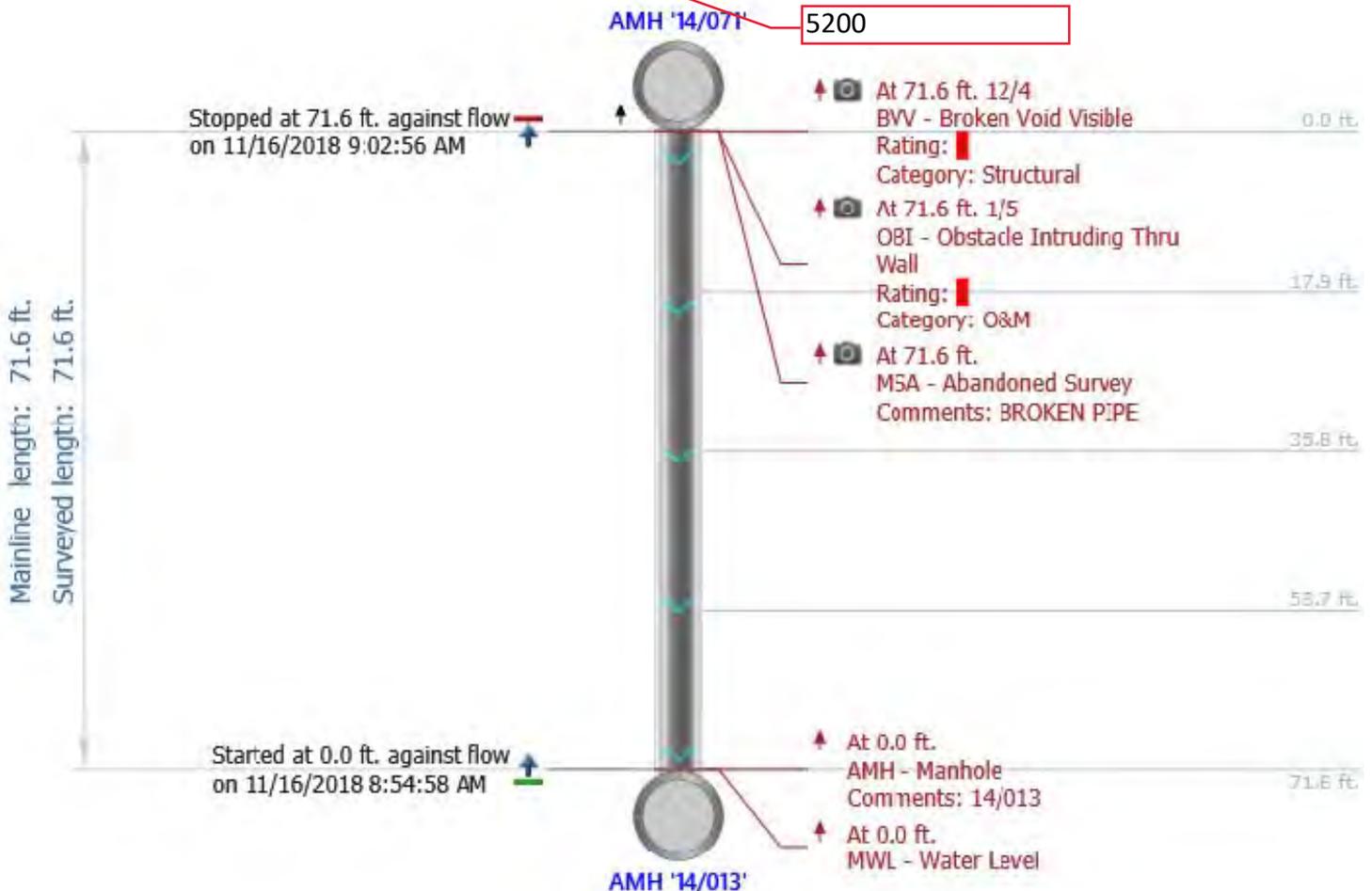
Joint: No 14-014

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 08:54</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/071-14/013</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/071</b>	Downstream MH No: <b>14/013</b>	Direction: <b>U</b>	Total length: <b>71.6 ft.</b>	Length surveyed: <b>71.6 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	5	<del>5100</del>	5.00	0	0	5	<del>5100</del>	5.00	10	5.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	5				0	5							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST</b>	Start date/time: <b>20181116 09:07</b>	Pipe segment ref.: <b>14/071-14/013</b>
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Photo: 14\_071-14\_013-20181116-090045.JPG  
At: 71.6 ft. 12/4 BVV - Broken Void Visible  
Joint: No



Photo: 14\_071-14\_013-20181116-090119.JPG  
At: 71.6 ft. MSA - Abandoned Survey  
Joint: No **BROKEN PIPE**

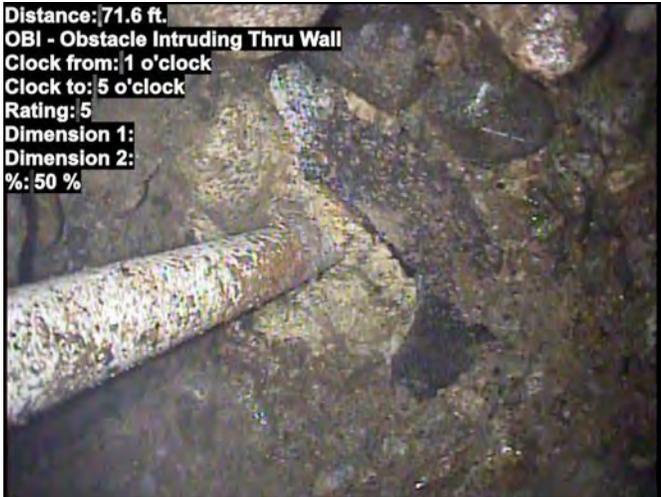


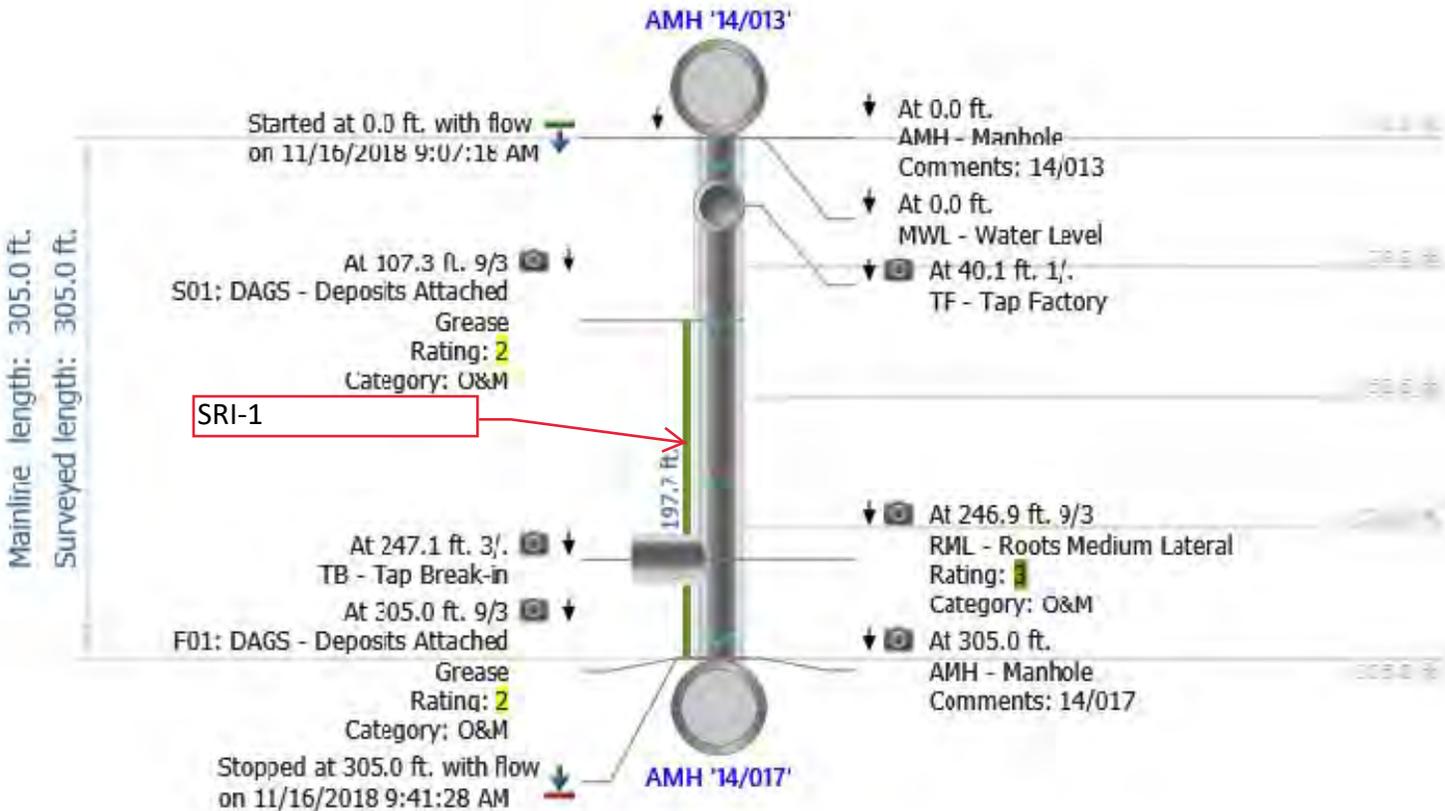
Photo: 14\_071-14\_013-20181116-090054.JPG  
At: 71.6 ft. 1/5 OBI - Obstacle Intruding Thru Wall  
Joint: No 50 %

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 09:07</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/013-14/017</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST EASMENT</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/013</b>	Downstream MH No: <b>14/017</b>	Direction: <b>D</b>	Total length: <b>305.0 ft.</b>	Length surveyed: <b>305.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	83	312G	2.02	83	2.02		
2	0	0				0	80							
3	0	0				0	3							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST EASMENT</b>	Start date/time: <b>20181116 10:23</b>	Pipe segment ref.: <b>14/013-14/017</b>
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Photo: 14\_013-14\_017-20181116-090913.JPG  
At: 40.1 ft. 1/. TF - Tap Factory  
Joint: No



Photo: 14\_013-14\_017-20181116-091123.JPG  
At: 107.3 ft. 9/3 DAGS - Deposits Attached Grease  
Joint: Yes 5 %



Photo: 14\_013-14\_017-20181116-091541.JPG  
At: 246.9 ft. 9/3 RML - Roots Medium Lateral  
Joint: No 50 %



Photo: 14\_013-14\_017-20181116-093734.JPG  
At: 247.1 ft. 3/. TB - Tap Break-in  
Joint: No



Distance: 305.0 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
14/017

Photo: 14\_013-14\_017-20181116-094115.JPG

At: 305 ft. AMH - Manhole

Joint: No 14/017



Distance: 305.0 ft.  
DAGS - Deposits Attached Grease  
Clock from: 9 o'clock  
Clock to: 3 o'clock  
Rating: 2  
Dimension 1:  
Dimension 2:  
%: 5 %

Photo: 14\_013-14\_017-20181116-094100.JPG

At: 305 ft. 9/3 DAGS - Deposits Attached Grease

Joint: Yes 5 %



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>NORFOLK AVE</b>	Start date/time: <b>20181116 10:41</b>	Pipe segment ref.: <b>14/020-14/019</b>
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Photo: 14\_020-14\_019-20181116-102457.JPG  
At: 13 ft. 10/. TF - Tap Factory  
Joint: No



Photo: 14\_020-14\_019-20181116-102638.JPG  
At: 68.2 ft. 10/. TF - Tap Factory  
Joint: No



Photo: 14\_020-14\_019-20181116-102659.JPG  
At: 71.1 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_020-14\_019-20181116-103040.JPG  
At: 80.3 ft. AMH - Manhole  
Joint: No 14/020

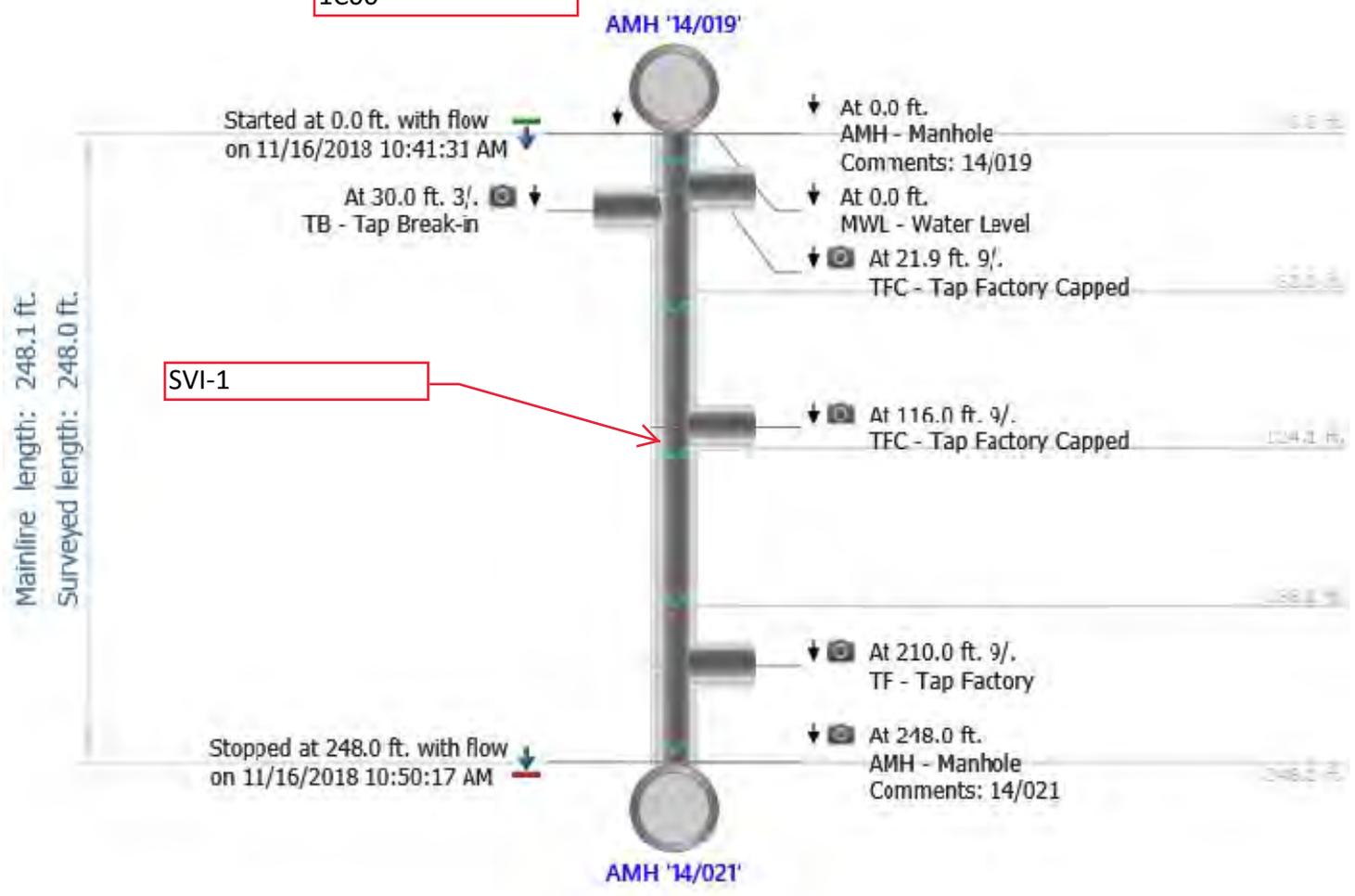
# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 10:41</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/019-14/021</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>WESTVIEW TER</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/019</b>	Downstream MH No: <b>14/021</b>	Direction: <b>D</b>	Total length: <b>248.1 ft.</b>	Length surveyed: <b>248.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Defects	Segment Grade	Structural:			Defects	Segment Grade	O&M:			Overall:			
			Pipe Rating	Quick Rating	Pipe Rating Index			Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0												
3	0	0												
4	0	0												
5	0	0												

1C00



SVI-1

# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>WESTVIEW TER</b>	Start date/time: <b>20181116 10:55</b>	Pipe segment ref.: <b>14/019-14/021</b>
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Distance: 21.9 ft.  
TFC - Tap Factory Capped  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_019-14\_021-20181116-104302.JPG  
At: 21.9 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Distance: 30.0 ft.  
TB - Tap Break-in  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_019-14\_021-20181116-104320.JPG  
At: 30 ft. 3/. TB - Tap Break-in  
Joint: No



Distance: 116.0 ft.  
TFC - Tap Factory Capped  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_019-14\_021-20181116-104556.JPG  
At: 116 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Distance: 210.0 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_019-14\_021-20181116-104849.JPG  
At: 210 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 14\_019-14\_021-20181116-105004.JPG

At: 248 ft. AMH - Manhole

Joint: No 14/021

# NWMCC INSPECTION REPORT

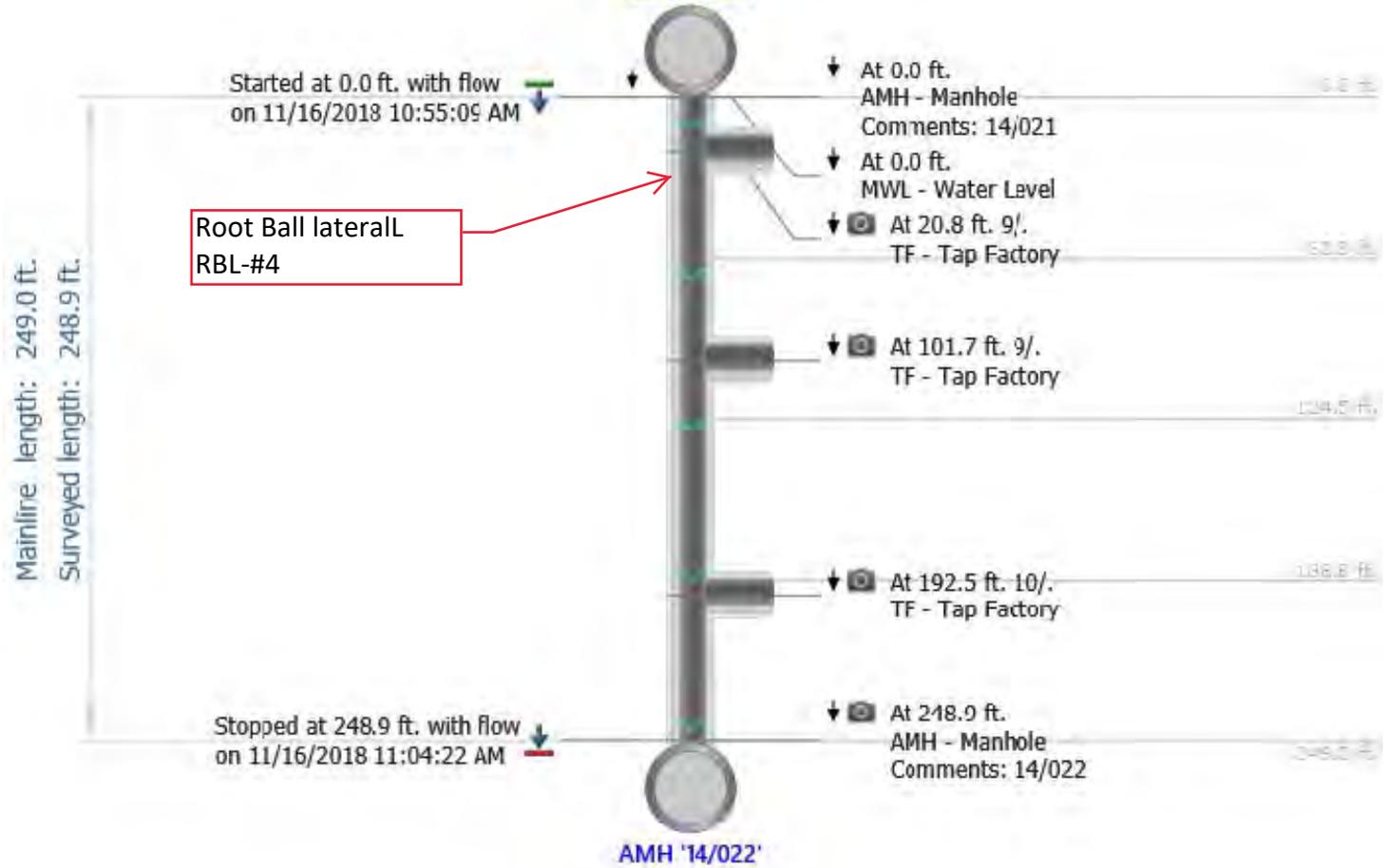
Start date/time: <b>20181116 10:55</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/021-14/022</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>WESTVIEW TER</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/021</b>	Downstream MH No: <b>14/022</b>	Direction: <b>D</b>	Total length: <b>249.0 ft.</b>	Length surveyed: <b>248.9 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							

4100

AMH '14/021'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>WESTVIEW TER</b>	Start date/time: <b>20181116 11:18</b>	Pipe segment ref.: <b>14/021-14/022</b>
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Photo: 14\_021-14\_022-20181116-105611.JPG  
At: 20.8 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 14\_021-14\_022-20181116-105823.JPG  
At: 101.7 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 14\_021-14\_022-20181116-110121.JPG  
At: 192.5 ft. 10/. TF - Tap Factory  
Joint: No



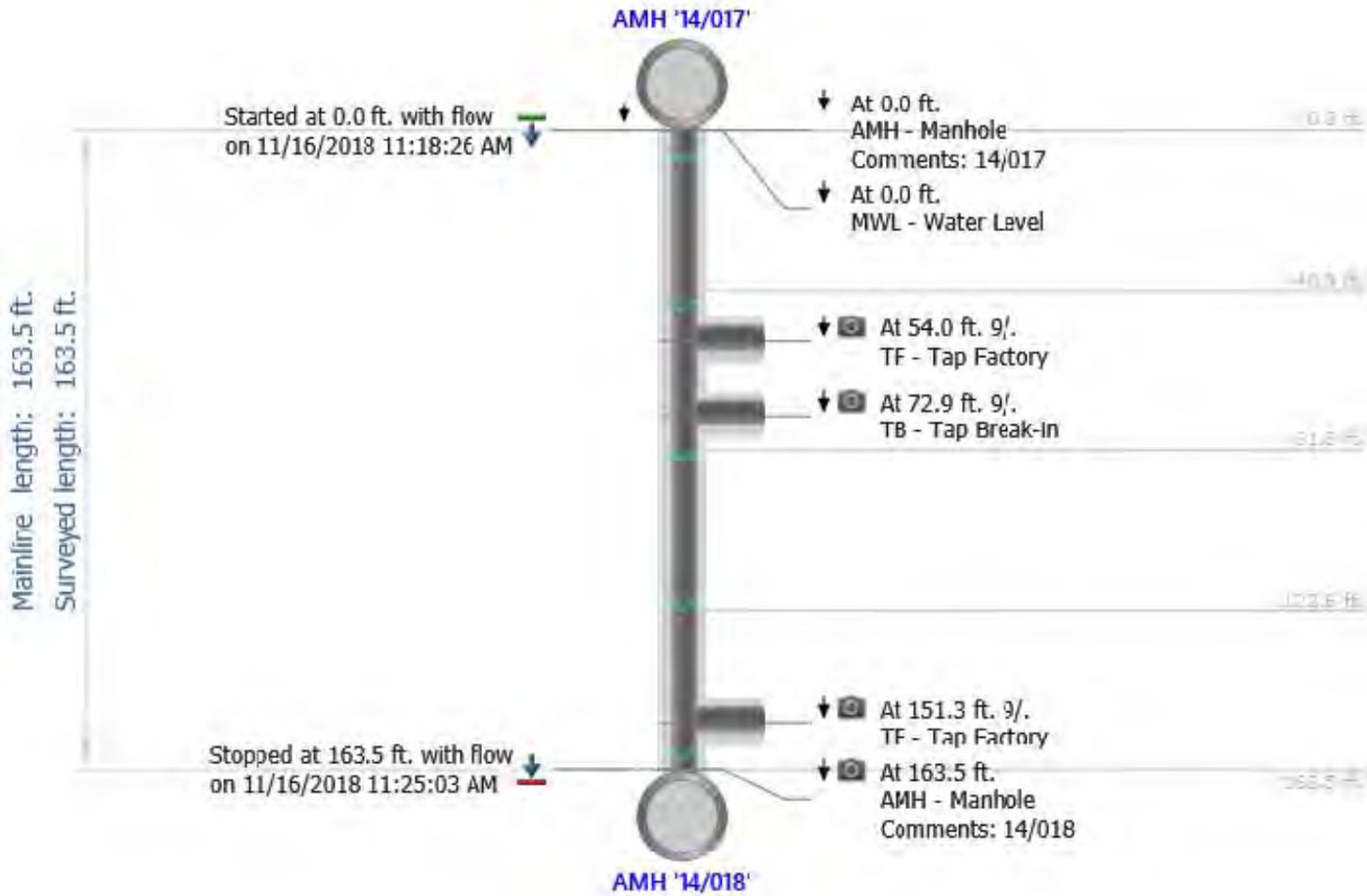
Photo: 14\_021-14\_022-20181116-110410.JPG  
At: 248.9 ft. AMH - Manhole  
Joint: No 14/022

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 11:18</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/017-14018</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>NORFOLK AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/017</b>	Downstream MH No: <b>14/018</b>	Direction: <b>D</b>	Total length: <b>163.5 ft.</b>	Length surveyed: <b>163.5 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>NORFOLK AVE</b>	Start date/time: <b>20181116 11:28</b>	Pipe segment ref.: <b>14/017-14018</b>
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Distance: 54.0 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_017-14\_018-20181116-112030.JPG  
At: 54 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 72.9 ft.  
TB - Tap Break-in  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_017-14\_018-20181116-112112.JPG  
At: 72.9 ft. 9/. TB - Tap Break-in  
Joint: No



Distance: 151.3 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_017-14\_018-20181116-112350.JPG  
At: 151.3 ft. 9/. TF - Tap Factory  
Joint: No



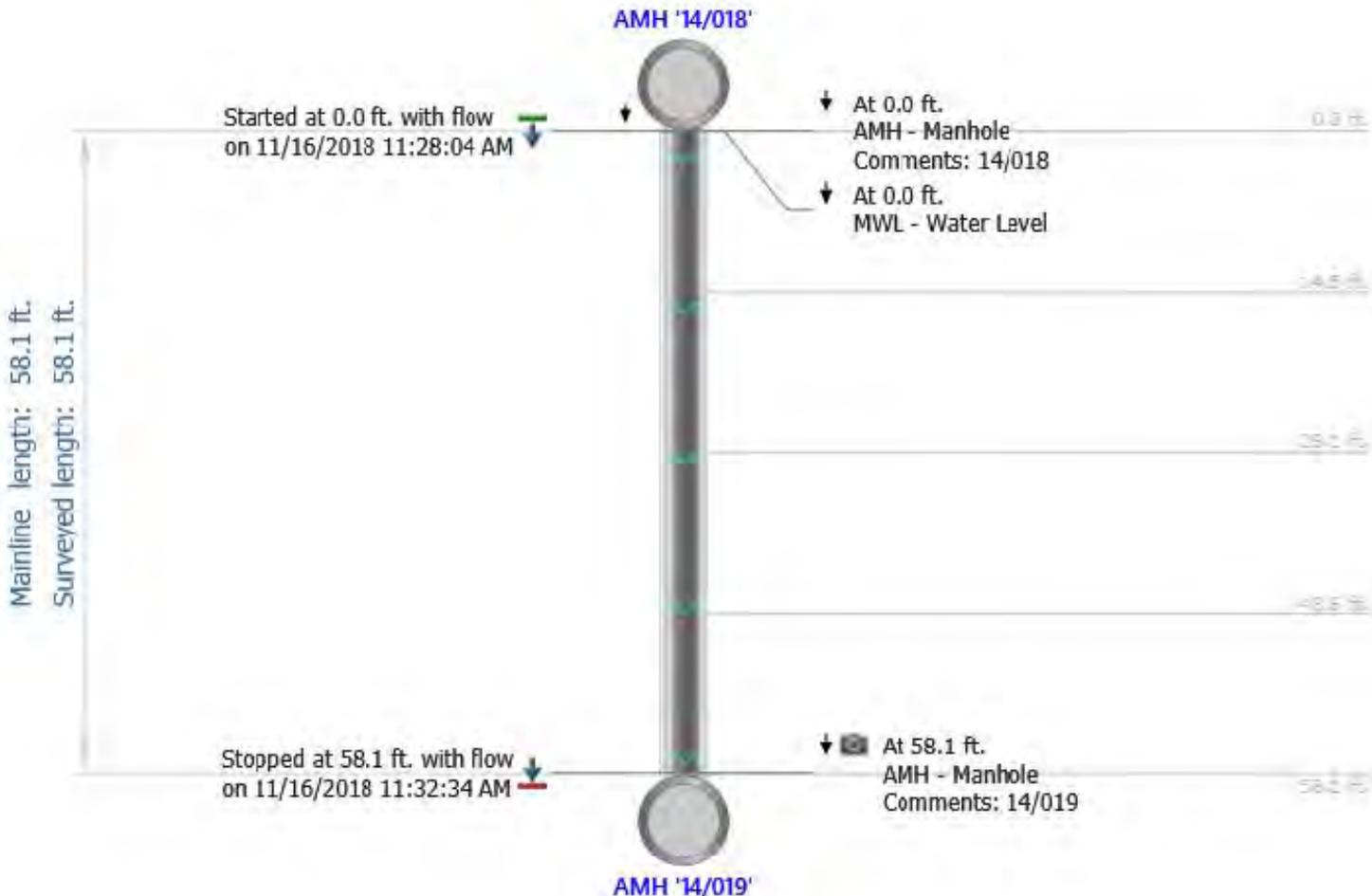
Distance: 163.5 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
14/018  
Photo: 14\_017-14\_018-20181116-112443.JPG  
At: 163.5 ft. AMH - Manhole  
Joint: No 14/018

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 11:28</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/018-14/019</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>NORFOLK AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/018</b>	Downstream MH No: <b>14/019</b>	Direction: <b>D</b>	Total length: <b>58.1 ft.</b>	Length surveyed: <b>58.1 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>NORFOLK AVE</b>	Start date/time: <b>20181116 11:53</b>	Pipe segment ref.: <b>14/018-14/019</b>
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Photo: 14\_018-14\_019-20181116-113217.JPG

At: 58.1 ft. AMH - Manhole

Joint: No 14/019

# NWMCC INSPECTION REPORT

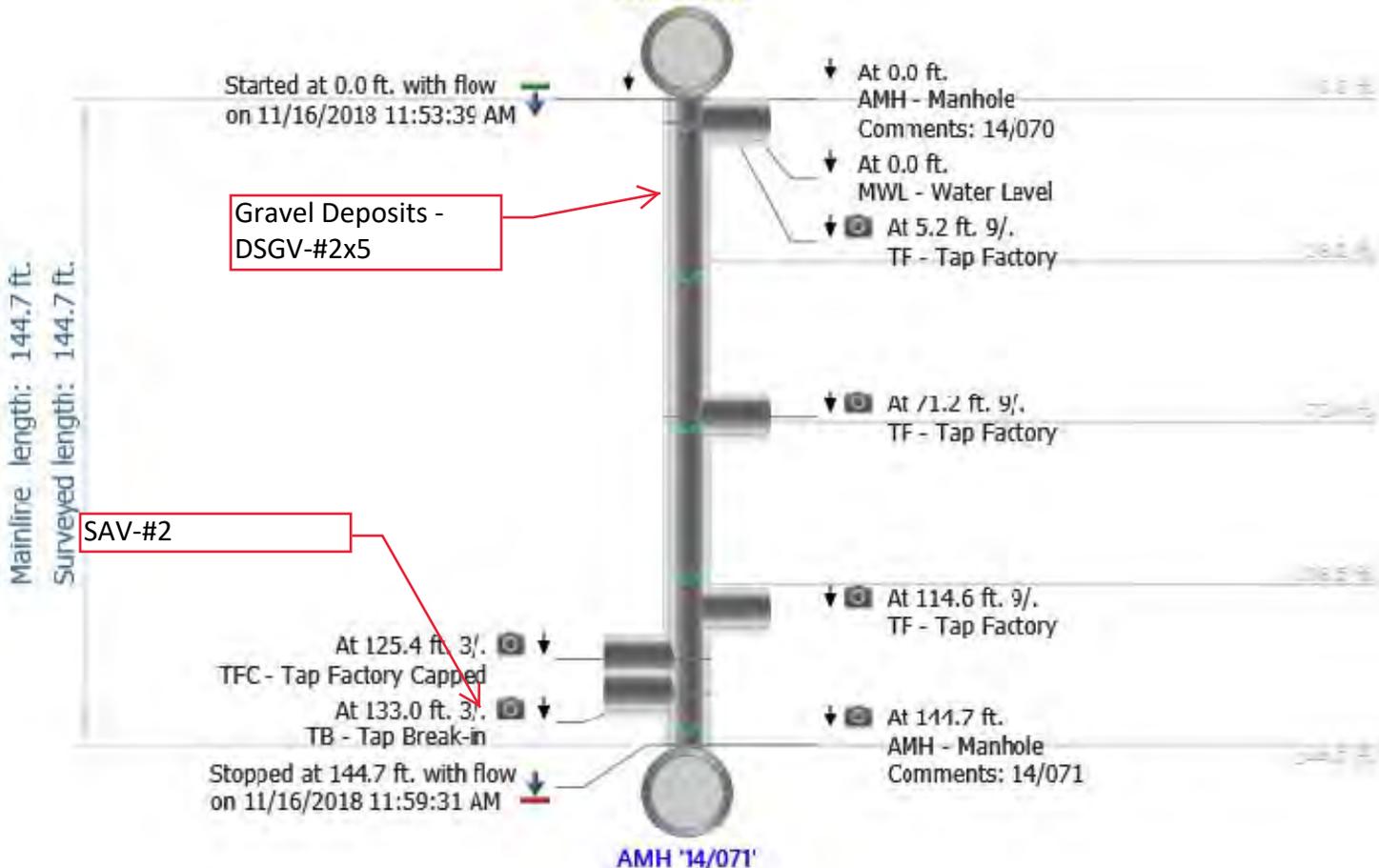
Start date/time: <b>20181116 11:53</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/070-14/071</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/070</b>	Downstream MH No: <b>14/071</b>	Direction: <b>D</b>	Total length: <b>144.7 ft.</b>	Length surveyed: <b>144.7 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0				0	0							
2	0	0				0	0							
3	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
4	0	0				0	0							
5	0	0				0	0							

2600

AMH '14/070'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST</b>	Start date/time: <b>20181116 12:00</b>	Pipe segment ref.: <b>14/070-14/071</b>
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Photo: 14\_070-14\_071-20181116-115427.JPG  
At: 5.2 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 14\_070-14\_071-20181116-115613.JPG  
At: 71.2 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 14\_070-14\_071-20181116-115742.JPG  
At: 114.6 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 14\_070-14\_071-20181116-115817.JPG  
At: 125.4 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Distance: 133.0 ft.  
TB - Tap Break-in  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 14\_070-14\_071-20181116-115834.JPG  
At: 133 ft. 3/. TB - Tap Break-in  
Joint: No



Distance: 144.7 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

14/071

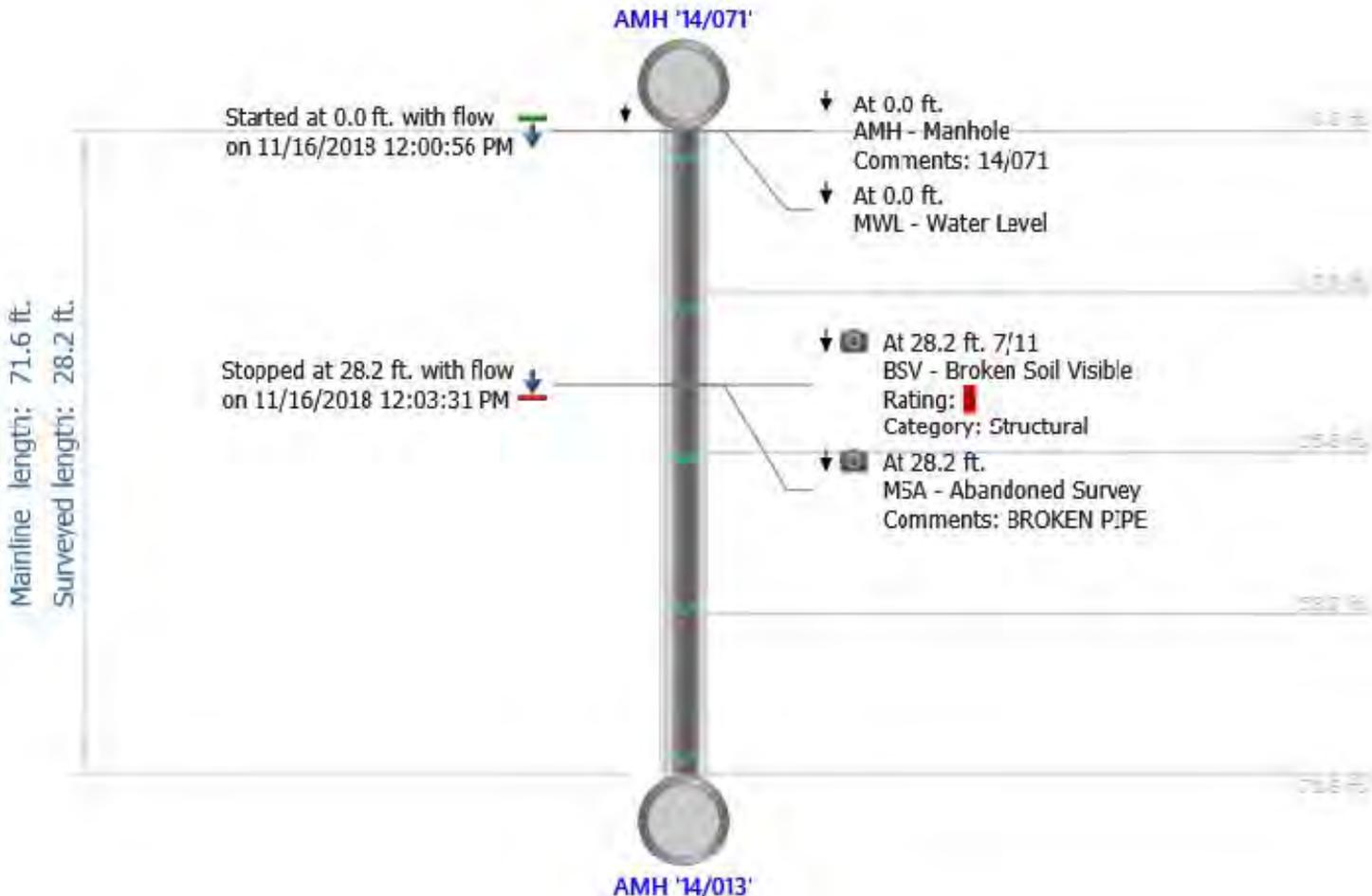
Photo: 14\_070-14\_071-20181116-115917.JPG  
At: 144.7 ft. AMH - Manhole  
Joint: No 14/071

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 12:00</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/071-14/013</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/071</b>	Downstream MH No: <b>14/013</b>	Direction: <b>D</b>	Total length: <b>71.6 ft.</b>	Length surveyed: <b>28.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info: <b>REVERSAL</b>	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	5	5100	5.00	0	0	0	0000	0.00	5	5.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	5				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>FISHER ST</b>	Start date/time: <b>20181116 12:28</b>	Pipe segment ref.: <b>14/071-14/013</b>
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Photo: 14\_071-14\_013-20181116-120243.JPG  
At: 28.2 ft. 7/11 BSV - Broken Soil Visible  
Joint: No



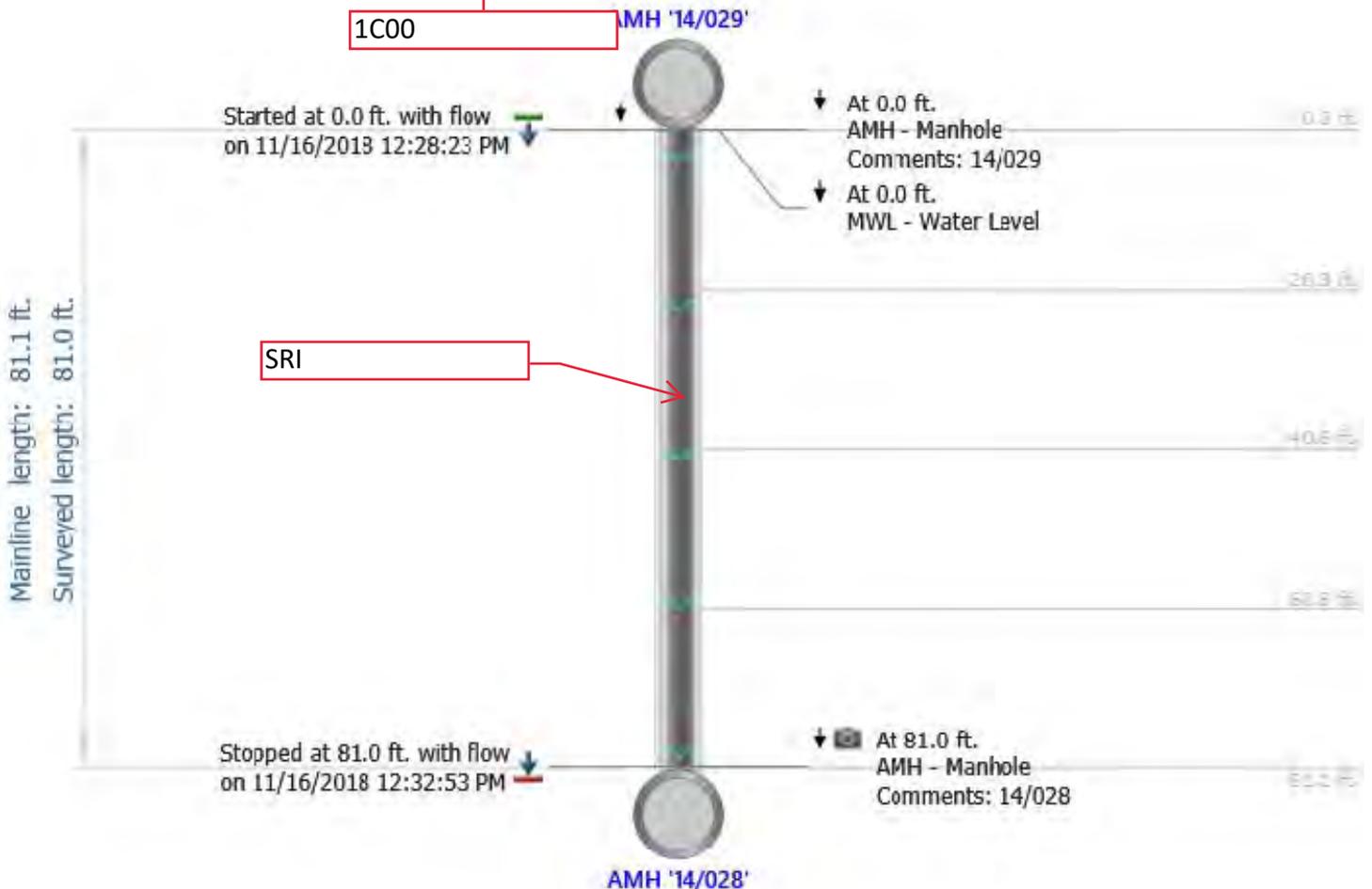
Photo: 14\_071-14\_013-20181116-120319.JPG  
At: 28.2 ft. MSA - Abandoned Survey  
Joint: No **BROKEN PIPE**

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 12:28</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/029-14/028</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/029</b>	Downstream MH No: <b>14/028</b>	Direction: <b>D</b>	Total length: <b>81.1 ft.</b>	Length surveyed: <b>81.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181116 12:34</b>	Pipe segment ref.: <b>14/029-14/028</b>
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Photo: 14\_029-14\_028-20181116-123235.JPG

At: 81 ft. AMH - Manhole

Joint: No 14/028

# NWMCC INSPECTION REPORT

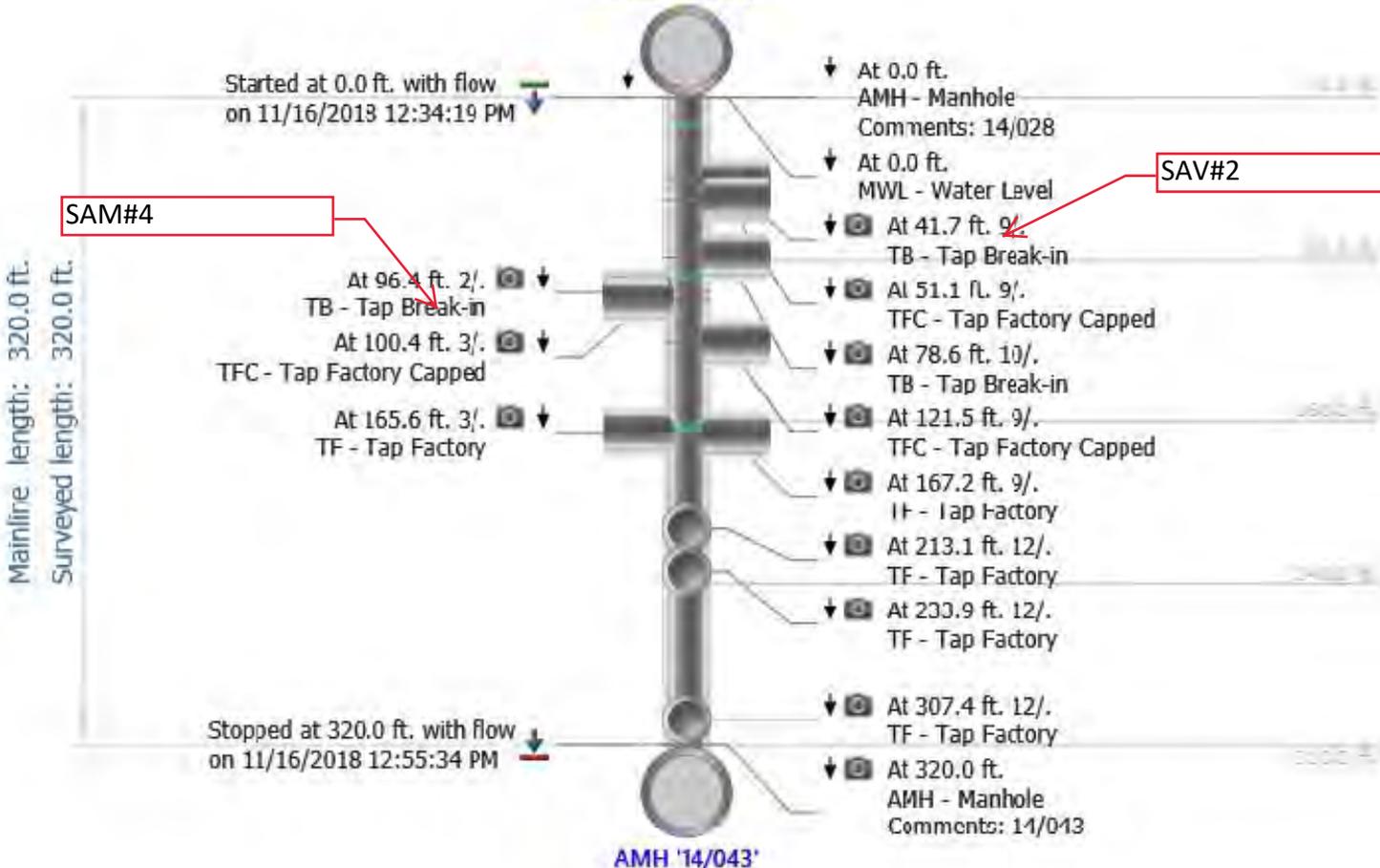
Start date/time: <b>20181116 12:34</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/028-14/043</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/028</b>	Downstream MH No: <b>14/043</b>	Direction: <b>D</b>	Total length: <b>320.0 ft.</b>	Length surveyed: <b>320.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							

4121

MH '14/028'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181116 12:57</b>	Pipe segment ref.: <b>14/028-14/043</b>
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Photo: 14\_028-14\_043-20181116-123842.JPG  
At: 41.7 ft. 9/. TB - Tap Break-in  
Joint: No



Photo: 14\_028-14\_043-20181116-123909.JPG  
At: 51.1 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Photo: 14\_028-14\_043-20181116-124010.JPG  
At: 78.6 ft. 10/. TB - Tap Break-in  
Joint: No



Photo: 14\_028-14\_043-20181116-124117.JPG  
At: 96.4 ft. 2/. TB - Tap Break-in  
Joint: No



Distance: 100.4 ft.  
TFC - Tap Factory Capped  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2: 6  
%:  
Photo: 14\_028-14\_043-20181116-124140.JPG  
At: 100.4 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Distance: 121.5 ft.  
TFC - Tap Factory Capped  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2: 6  
%:  
Photo: 14\_028-14\_043-20181116-124332.JPG  
At: 121.5 ft. 9/. TFC - Tap Factory Capped  
Joint: No



Distance: 165.6 ft.  
TF - Tap Factory  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2: 6  
%:  
Photo: 14\_028-14\_043-20181116-124504.JPG  
At: 165.6 ft. 3/. TF - Tap Factory  
Joint: No



Distance: 167.2 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2: 6  
%:  
Photo: 14\_028-14\_043-20181116-124513.JPG  
At: 167.2 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 213.1 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2: 6  
%:  
Photo: 14\_028-14\_043-20181116-124645.JPG  
At: 213.1 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 233.9 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2: 6  
%:  
Photo: 14\_028-14\_043-20181116-124740.JPG  
At: 233.9 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 307.4 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 14\_028-14\_043-20181116-125351.JPG  
At: 307.4 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 320.0 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

14/043

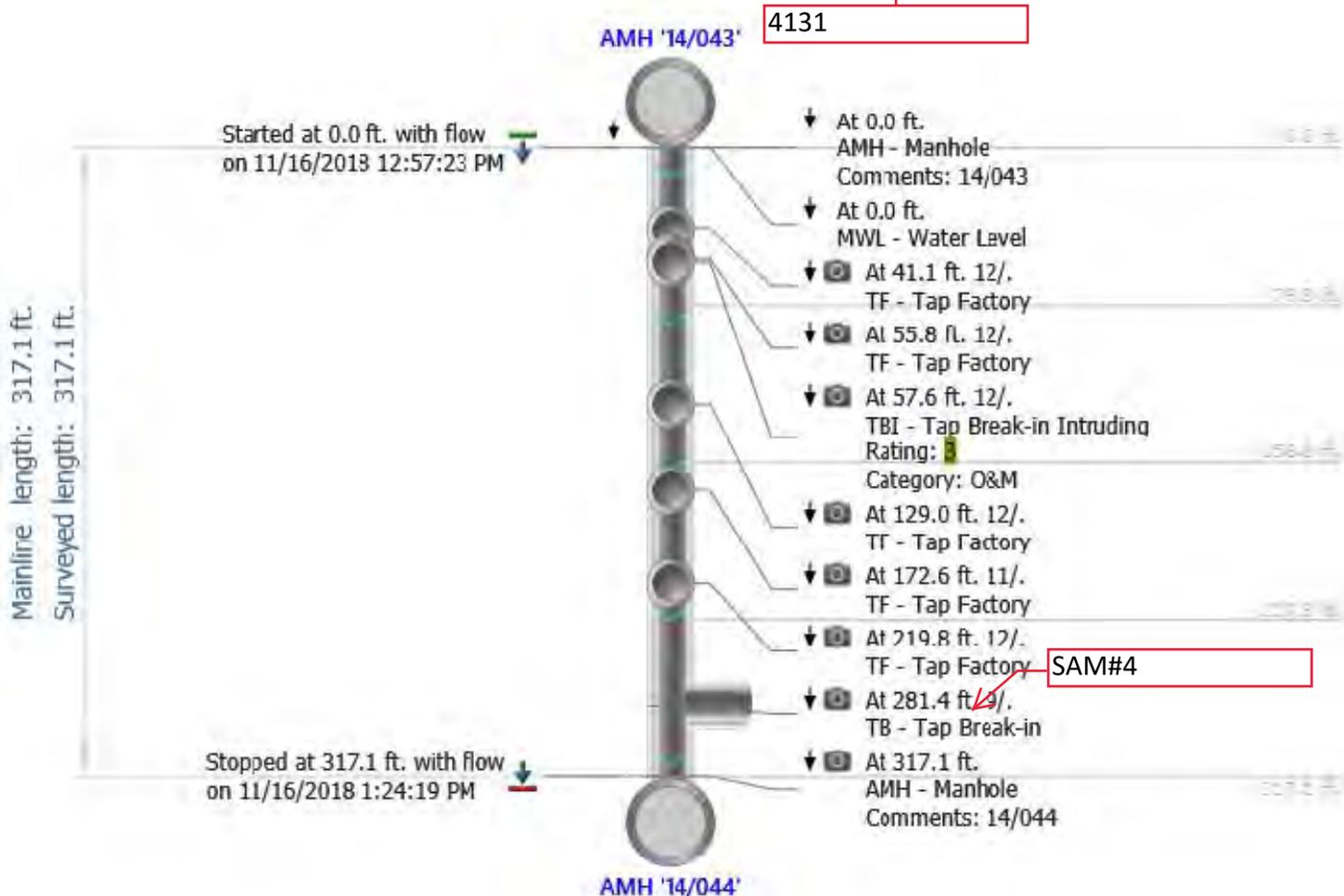
Photo: 14\_028-14\_043-20181116-125436.JPG  
At: 320 ft. AMH - Manhole  
Joint: No 14/043

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 12:57</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/043-14/044</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control:
Upstream MH No: <b>14/043</b>	Downstream MH No: <b>14/044</b>	Direction: <b>D</b>	Total length: <b>317.1 ft.</b>	Length surveyed: <b>317.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	3	3/100	3.00	3	3.00		
2	0	0				0	0							
3	0	0				0	3							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

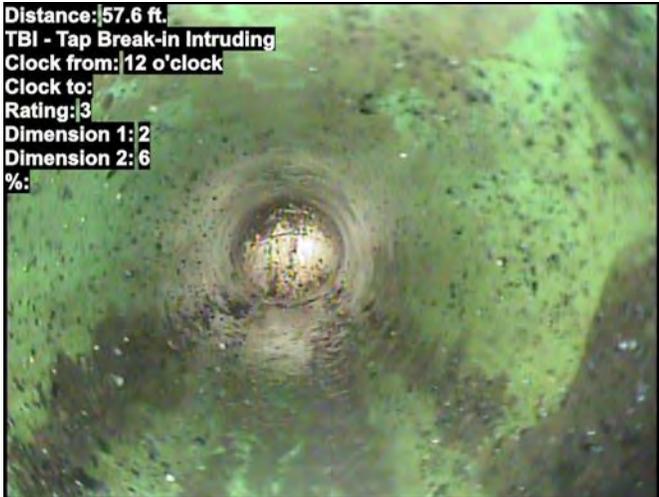
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181116 13:27</b>	Pipe segment ref.: <b>14/043-14/044</b>
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Distance: 41.1 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_043-14\_044-20181116-125921.JPG  
At: 41.1 ft. 12/. TF - Tap Factory  
Joint: No



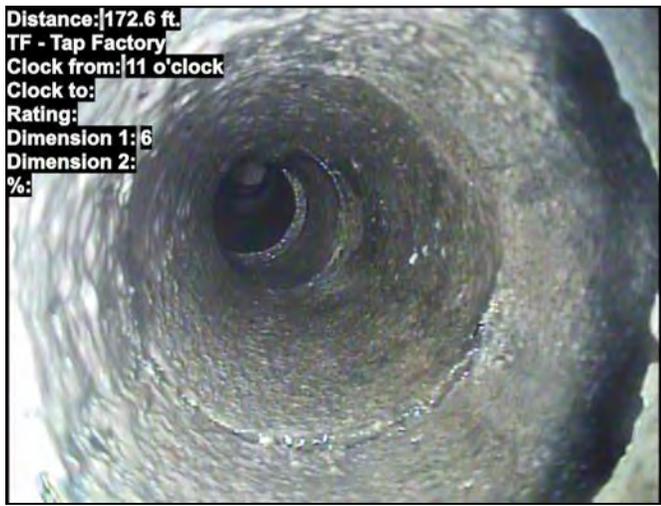
Distance: 55.8 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_043-14\_044-20181116-130000.JPG  
At: 55.8 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 57.6 ft.  
TBI - Tap Break-in Intruding  
Clock from: 12 o'clock  
Clock to:  
Rating: 3  
Dimension 1: 2  
Dimension 2: 6  
%:  
Photo: 14\_043-14\_044-20181116-130013.JPG  
At: 57.6 ft. 12/. TBI - Tap Break-in Intruding  
Joint: No



Distance: 129.0 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_043-14\_044-20181116-131744.JPG  
At: 129 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 172.6 ft.  
TF - Tap Factory  
Clock from: 11 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_043-14\_044-20181116-131934.JPG  
At: 172.6 ft. 11/. TF - Tap Factory  
Joint: No



Distance: 219.8 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_043-14\_044-20181116-132110.JPG  
At: 219.8 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 281.4 ft.  
TB - Tap Break-in  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_043-14\_044-20181116-132251.JPG  
At: 281.4 ft. 9/. TB - Tap Break-in  
Joint: No



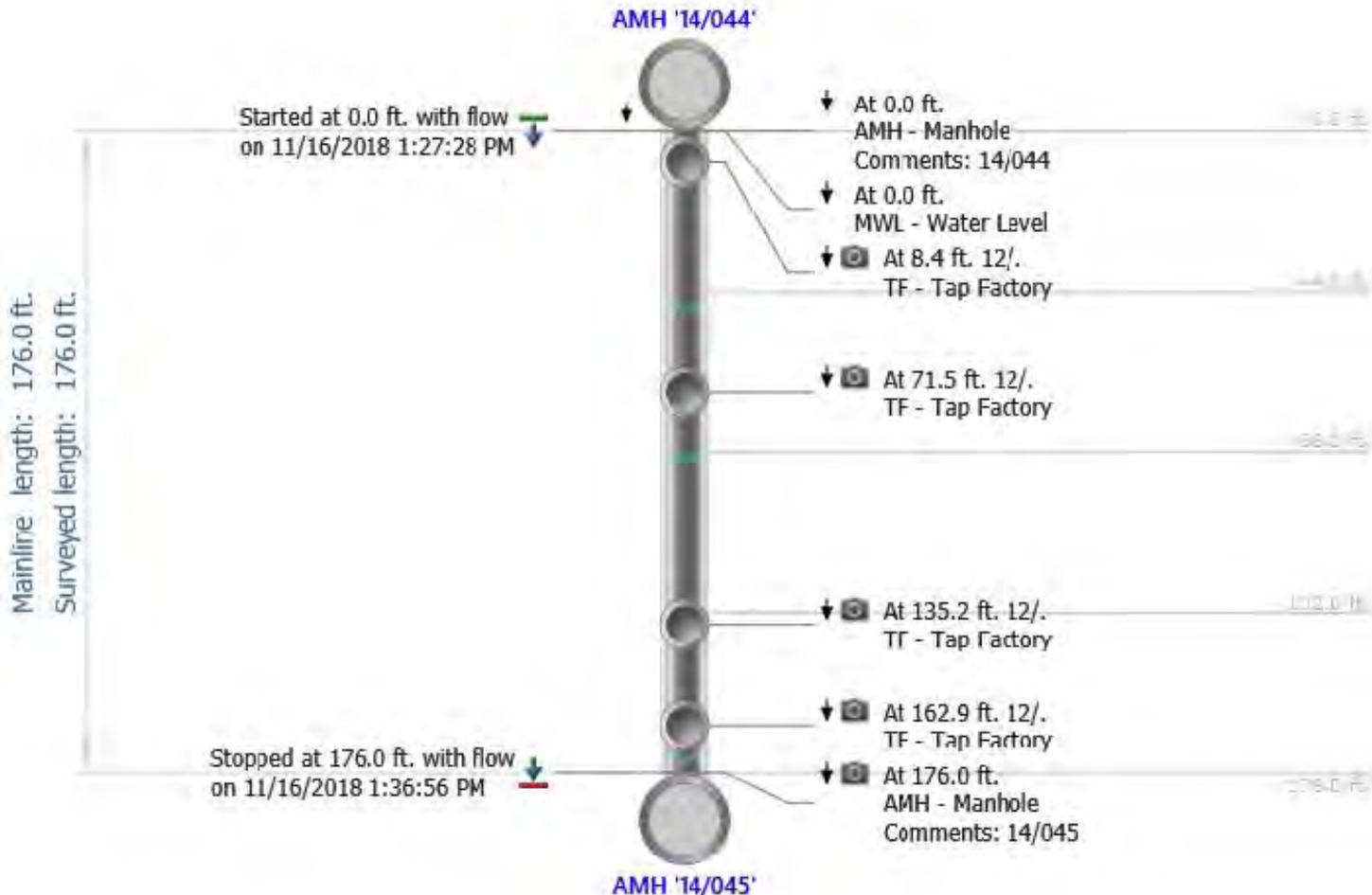
Distance: 317.1 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
14/044  
Photo: 14\_043-14\_044-20181116-132404.JPG  
At: 317.1 ft. AMH - Manhole  
Joint: No 14/044

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 13:27</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/044-14/045</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control:
Upstream MH No: <b>14/044</b>	Downstream MH No: <b>14/045</b>	Direction: <b>D</b>	Total length: <b>176.0 ft.</b>	Length surveyed: <b>176.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181116 13:38</b>	Pipe segment ref.: <b>14/044-14/045</b>
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Photo: 14\_044-14\_045-20181116-133104.JPG  
At: 8.4 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_044-14\_045-20181116-133307.JPG  
At: 71.5 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_044-14\_045-20181116-133502.JPG  
At: 135.2 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_044-14\_045-20181116-133608.JPG  
At: 162.9 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_044-14\_045-20181116-133644.JPG

At: 176 ft. AMH - Manhole

Joint: No 14/045

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 13:38</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/045-14/046</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/045</b>	Downstream MH No: <b>14/046</b>	Direction: <b>D</b>	Total length: <b>192.0 ft.</b>	Length surveyed: <b>192.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

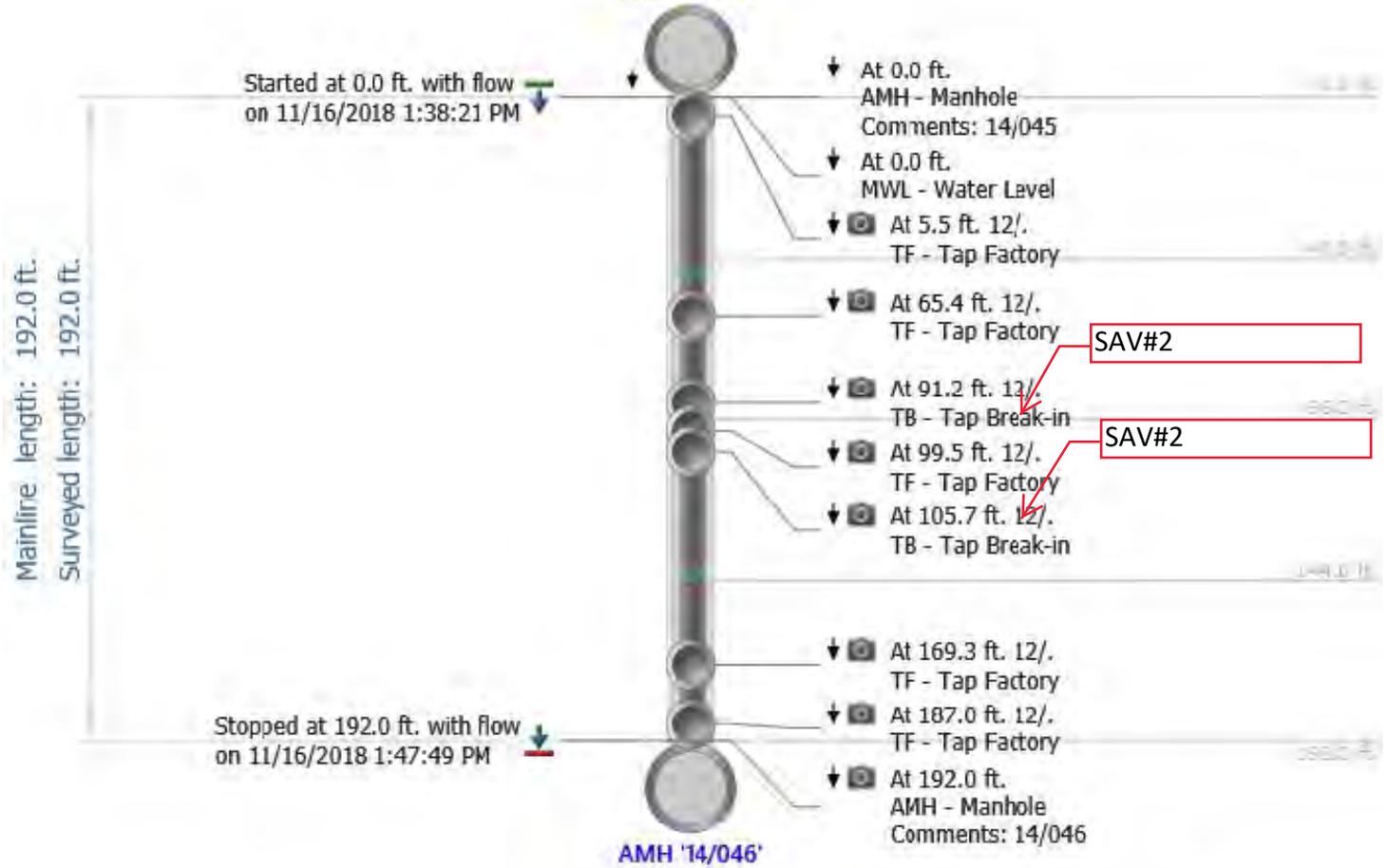
## Pipe Ratings

Grade	Structural:			O&M:			Overall:					
	Defects	Segment Grade	Pipe Rating	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0	0	0	0000	0.00	0	0.00		
2	0	0		0	0							
3	0	0		0	0							
4	0	0		0	0							
5	0	0		0	0							

2200

AMH '14/045'

AMH '14/046'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181116 14:03</b>	Pipe segment ref.: <b>14/045-14/046</b>
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Photo: 14\_045-14\_046-20181116-133856.JPG  
At: 5.5 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_045-14\_046-20181116-134301.JPG  
At: 65.4 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_045-14\_046-20181116-134346.JPG  
At: 91.2 ft. 12/. TB - Tap Break-in  
Joint: No



Photo: 14\_045-14\_046-20181116-134413.JPG  
At: 99.5 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 105.7 ft.  
TB - Tap Break-in  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_045-14\_046-20181116-134435.JPG  
At: 105.7 ft. 12/. TB - Tap Break-in  
Joint: No



Distance: 169.3 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_045-14\_046-20181116-134629.JPG  
At: 169.3 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 187.0 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_045-14\_046-20181116-134712.JPG  
At: 187 ft. 12/. TF - Tap Factory  
Joint: No



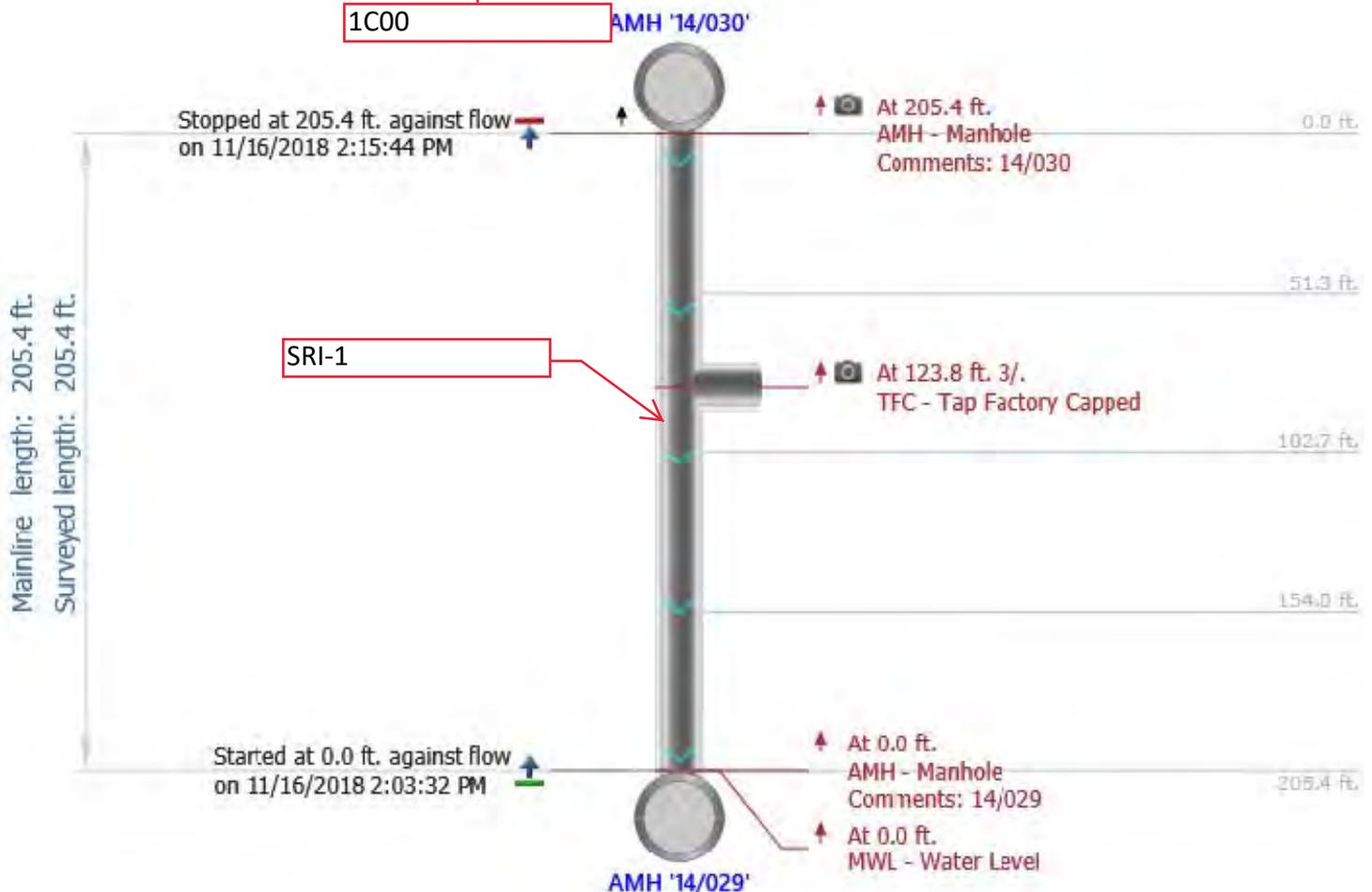
Distance: 192.0 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
14/046  
Photo: 14\_045-14\_046-20181116-134736.JPG  
At: 192 ft. AMH - Manhole  
Joint: No 14/046

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 14:03</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/030-14/029</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/030</b>	Downstream MH No: <b>14/029</b>	Direction: <b>U</b>	Total length: <b>205.4 ft.</b>	Length surveyed: <b>205.4 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

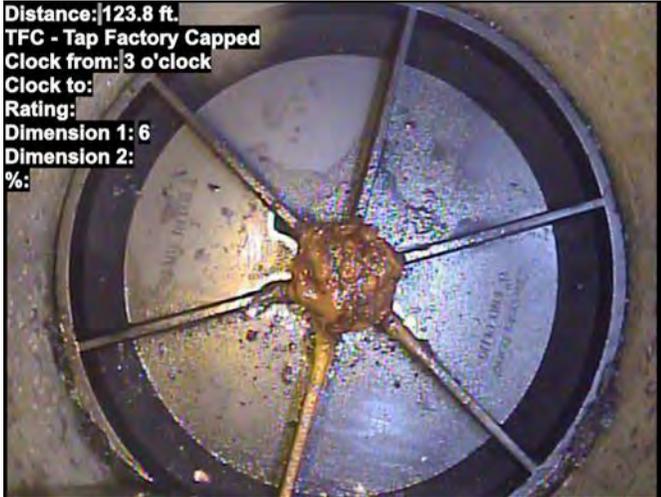
Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE RD</b>	Start date/time: <b>20181119 07:28</b>	Pipe segment ref.: <b>14/030-14/029</b>
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Distance: 123.8 ft.  
TFC - Tap Factory Capped  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 14\_030-14\_029-20181116-140954.JPG  
At: 123.8 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Distance: 205.4 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

14/030

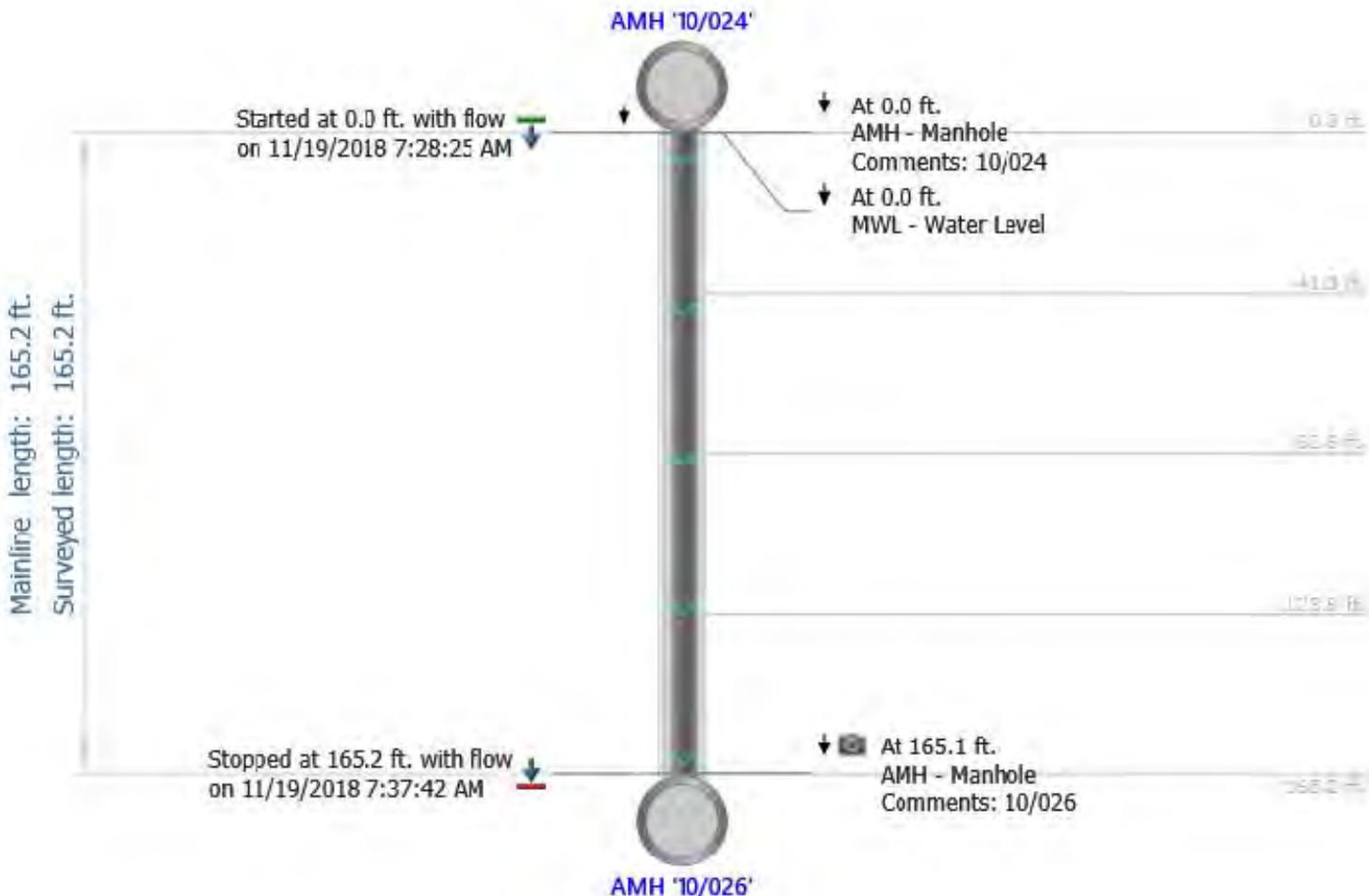
Photo: 14\_030-14\_029-20181116-141530.JPG  
At: 205.4 ft. AMH - Manhole  
Joint: No 14/030

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 07:28</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/024-10/026</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/024</b>	Downstream MH No: <b>10/026</b>	Direction: <b>D</b>	Total length: <b>165.2 ft.</b>	Length surveyed: <b>165.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181119 07:40</b>	Pipe segment ref.: <b>10/024-10/026</b>
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Photo: 10\_024-10\_026-20181119-073730.JPG

At: 165.1 ft. AMH - Manhole

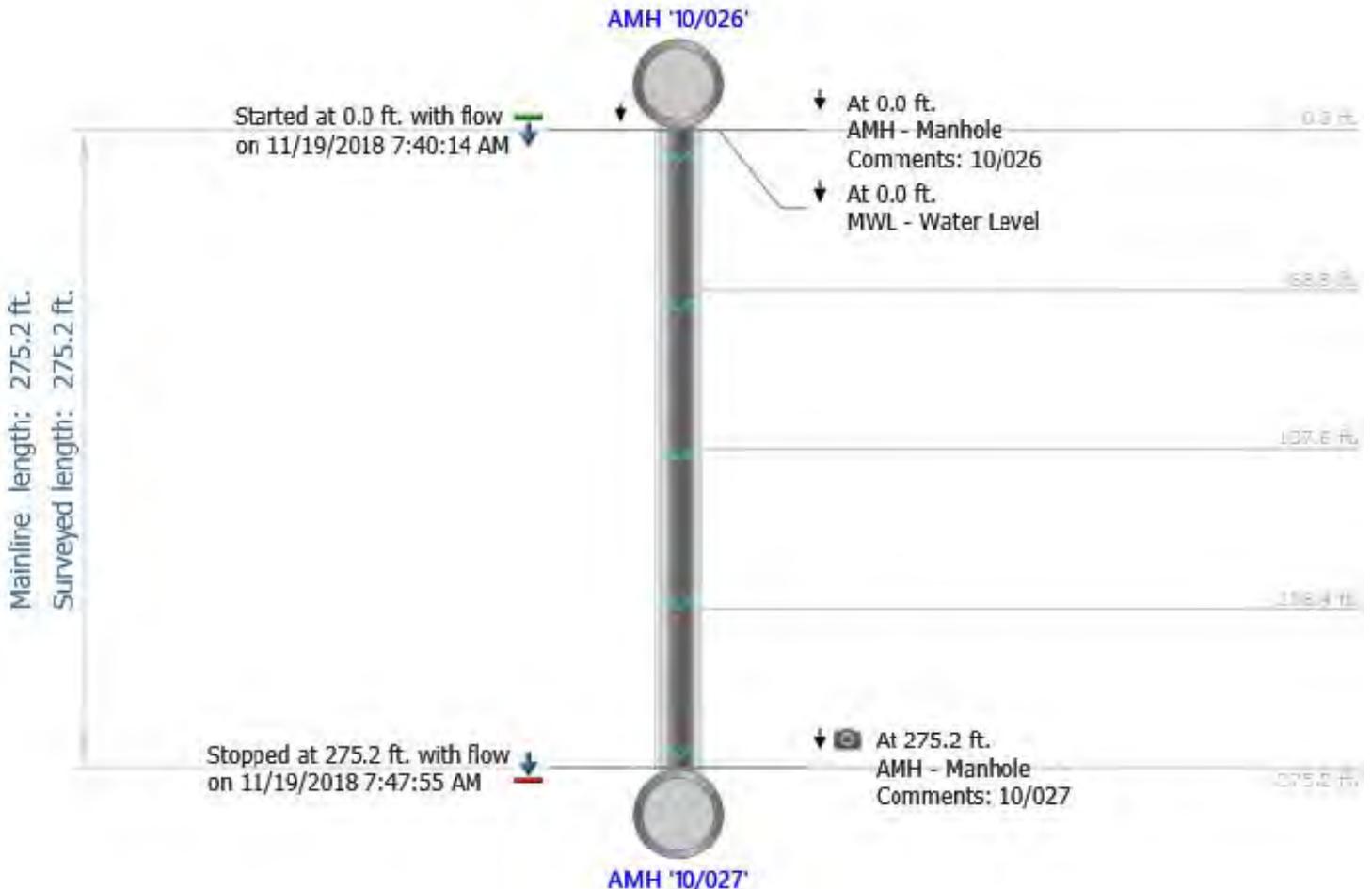
Joint: No 10/026

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 07:40</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/026-10/027</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/026</b>	Downstream MH No: <b>10/027</b>	Direction: <b>D</b>	Total length: <b>275.2 ft.</b>	Length surveyed: <b>275.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181119 07:49</b>	Pipe segment ref.: <b>10/026-10/027</b>
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Photo: **10\_026-10\_027-20181119-074743.JPG**

At: **275.2 ft. AMH - Manhole**

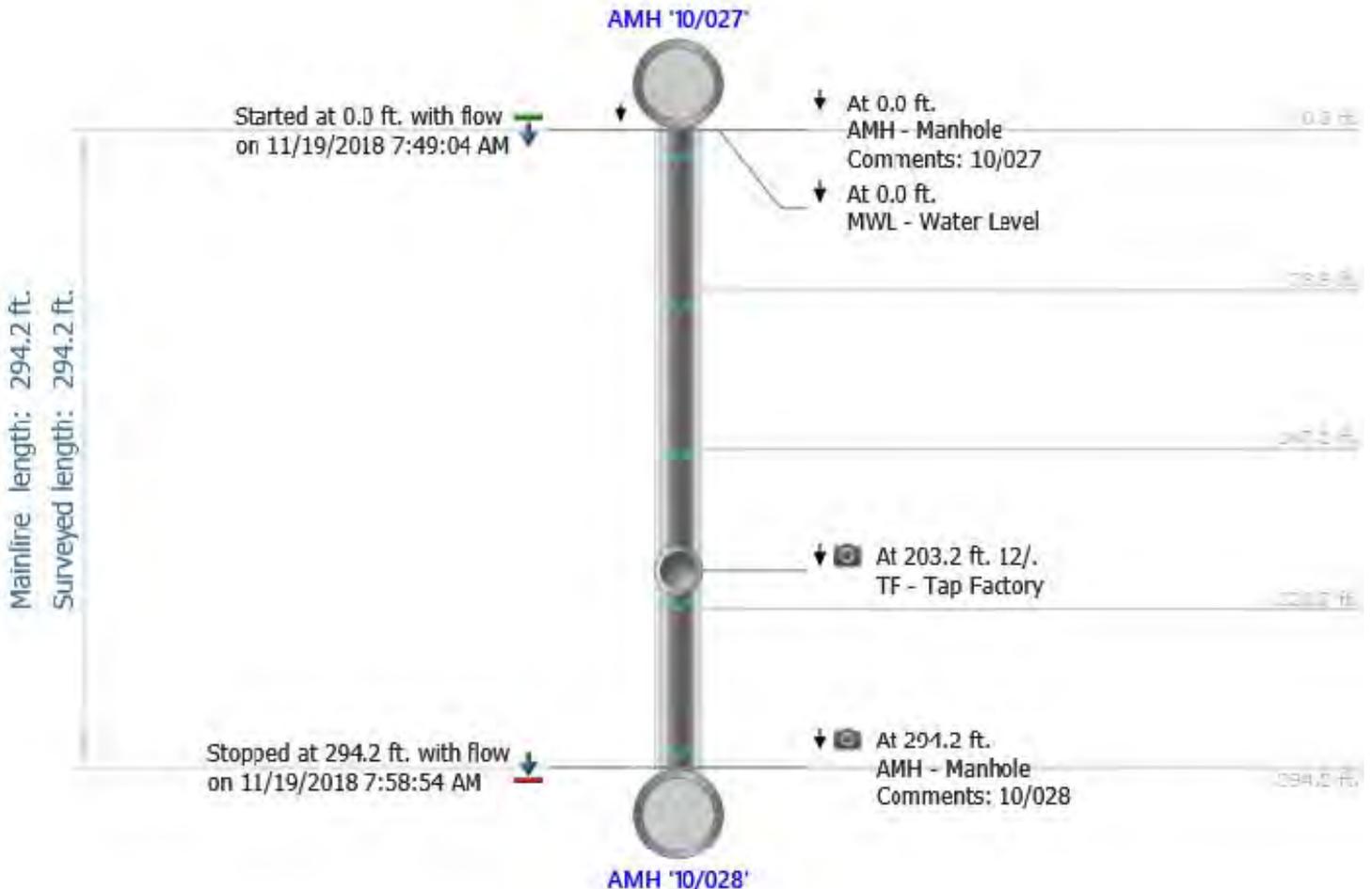
Joint: **No 10/027**

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 07:49</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/027-10/028</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/027</b>	Downstream MH No: <b>10/028</b>	Direction: <b>D</b>	Total length: <b>294.2 ft.</b>	Length surveyed: <b>294.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181119 08:02</b>	Pipe segment ref.: <b>10/027-10/028</b>
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Distance: 203.2 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 10\_027-10\_028-20181119-075540.JPG  
At: 203.2 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 294.2 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/028

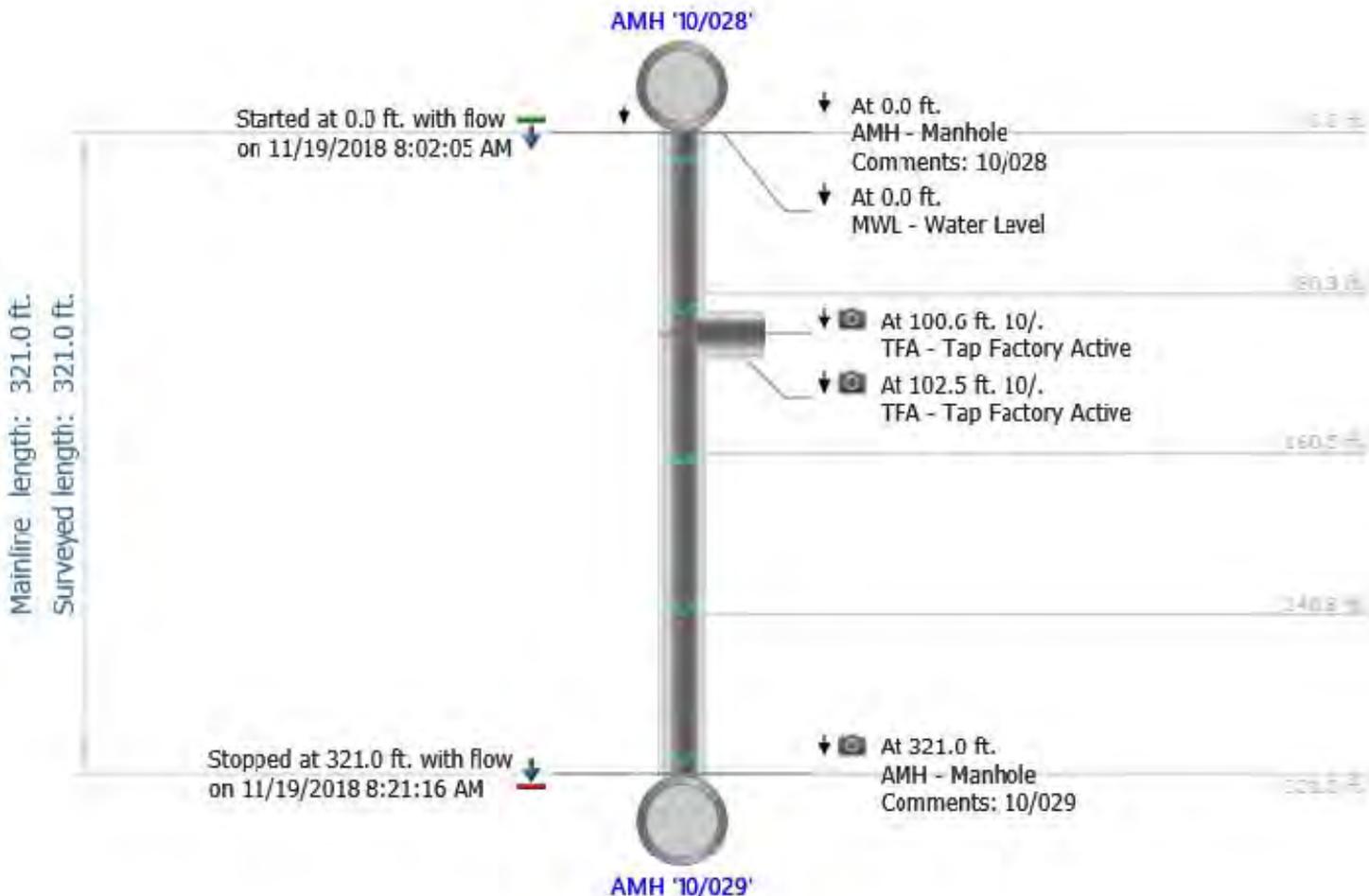
Photo: 10\_027-10\_028-20181119-075839.JPG  
At: 294.2 ft. AMH - Manhole  
Joint: No 10/028

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 08:02</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/028-10/029</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/028</b>	Downstream MH No: <b>10/029</b>	Direction: <b>D</b>	Total length: <b>321.0 ft.</b>	Length surveyed: <b>321.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181119 08:22</b>	Pipe segment ref.: <b>10/028-10/029</b>
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Photo: 10\_028-10\_029-20181119-080504.JPG  
At: 100.6 ft. 10/. TFA - Tap Factory Active  
Joint: No



Photo: 10\_028-10\_029-20181119-080524.JPG  
At: 102.5 ft. 10/. TFA - Tap Factory Active  
Joint: No



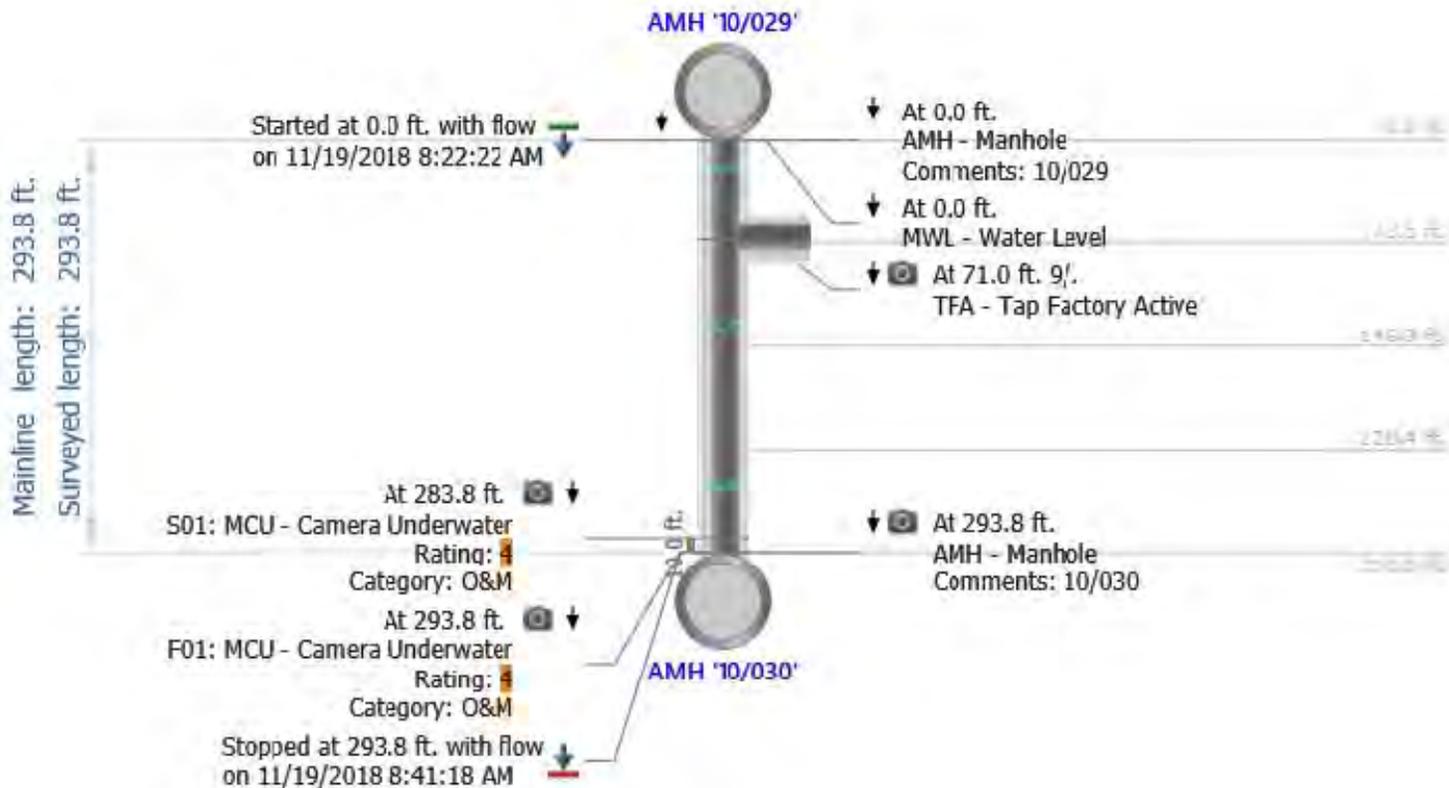
Photo: 10\_028-10\_029-20181119-082104.JPG  
At: 321 ft. AMH - Manhole  
Joint: No 10/029

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 08:22</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/029-10/030</b>
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>
City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area: <b>Not Controlled</b>
Upstream MH No: <b>10/029</b>	Downstream MH No: <b>10/030</b>	Direction: <b>D</b>	Total length: <b>293.8 ft.</b>	Length surveyed: <b>293.8 ft.</b>
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	8	4200	4.00	8	4.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	8							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181119 08:44</b>	Pipe segment ref.: <b>10/029-10/030</b>
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Distance: 71.0 ft.  
TFA - Tap Factory Active  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 10\_029-10\_030-20181119-082446.JPG  
At: 71 ft. 9/. TFA - Tap Factory Active  
Joint: No



Distance: 283.8 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:

Photo: 10\_029-10\_030-20181119-083809.JPG  
At: 283.8 ft. MCU - Camera Underwater  
Joint: No



Distance: 293.8 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

10/030

Photo: 10\_029-10\_030-20181119-084058.JPG  
At: 293.8 ft. AMH - Manhole  
Joint: No 10/030



Distance: 293.8 ft.  
MCU - Camera Underwater  
Clock from:  
Clock to:  
Rating: 4  
Dimension 1:  
Dimension 2:  
%:

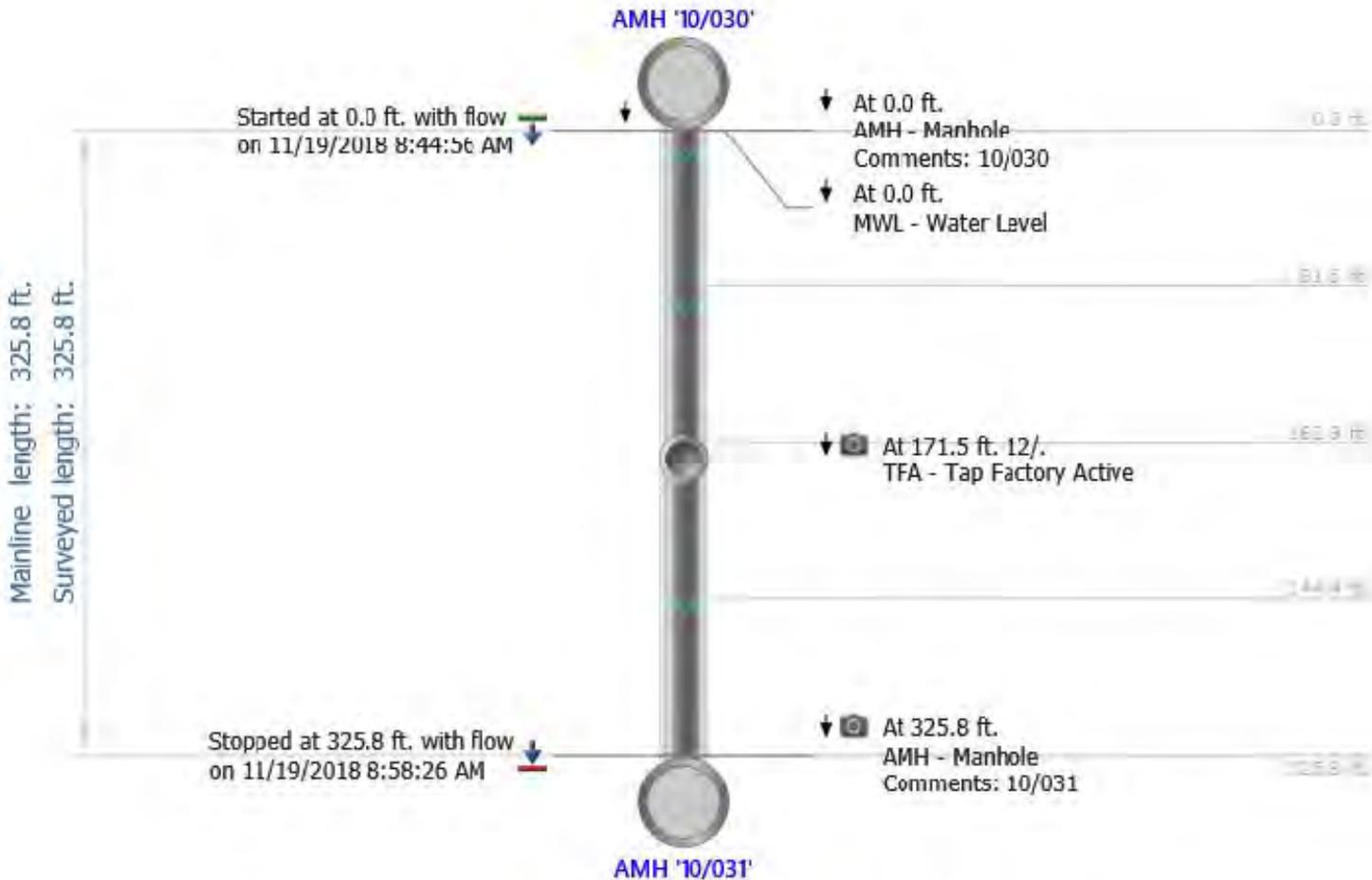
Photo: 10\_029-10\_030-20181119-084049.JPG  
At: 293.8 ft. MCU - Camera Underwater  
Joint: No

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 08:44</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/030-10/031</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>De-Watered using Jetter</b>
Upstream MH No: <b>10/030</b>	Downstream MH No: <b>10/031</b>	Direction: <b>D</b>	Total length: <b>325.8 ft.</b>	Length surveyed: <b>325.8 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>GAY ST</b>	Start date/time: <b>20181119 09:45</b>	Pipe segment ref.: <b>10/030-10/031</b>
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Distance: 171.5 ft.  
TFA - Tap Factory Active  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_030-10\_031-20181119-085042.JPG  
At: 171.5 ft. 12/. TFA - Tap Factory Active  
Joint: No



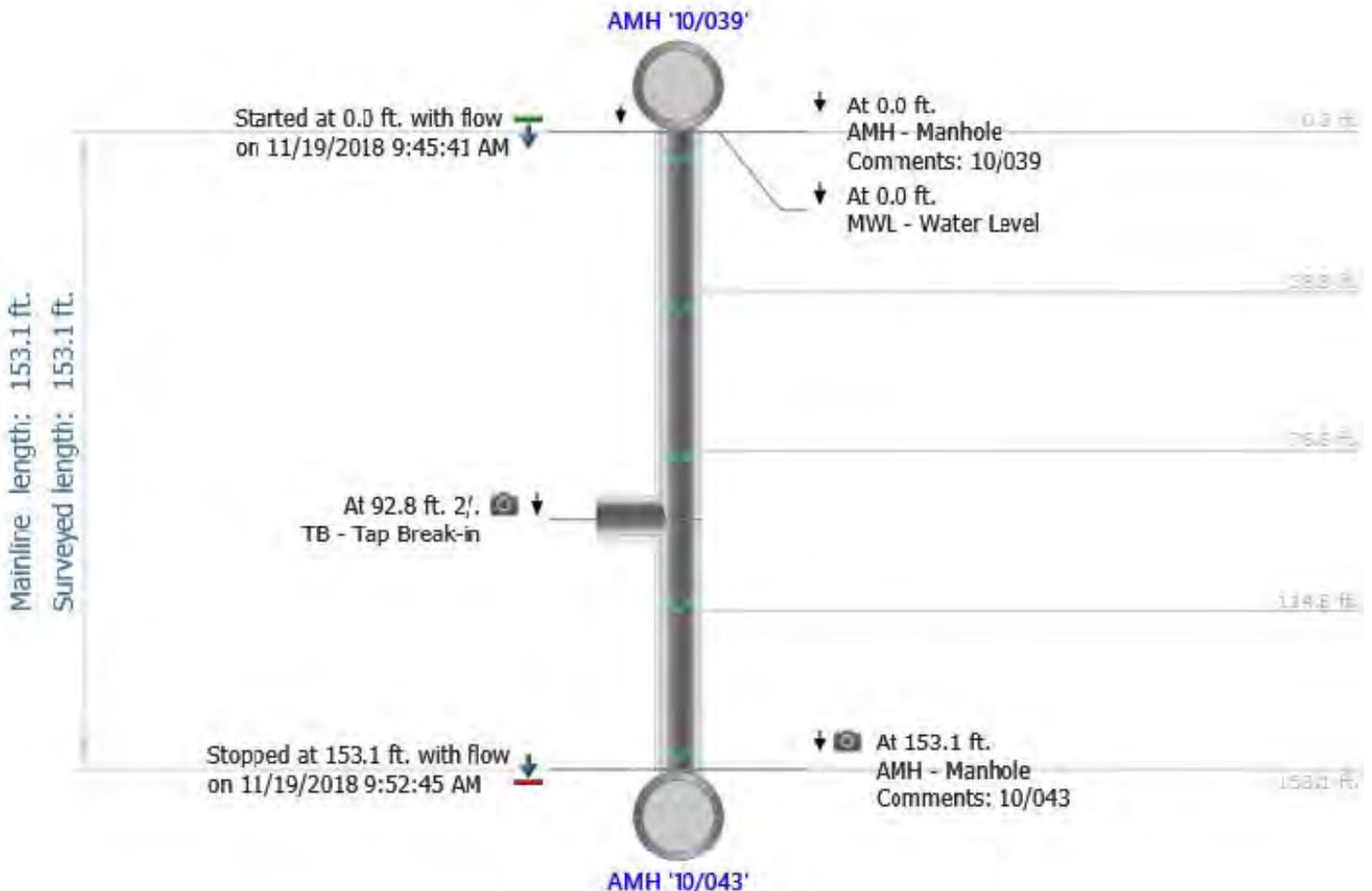
Distance: 325.8 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/031  
Photo: 10\_030-10\_031-20181119-085753.JPG  
At: 325.8 ft. AMH - Manhole  
Joint: No 10/031

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 09:45</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/039-10/043</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/039</b>	Downstream MH No: <b>10/043</b>	Direction: <b>D</b>	Total length: <b>153.1 ft.</b>	Length surveyed: <b>153.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Start date/time: <b>20181119 09:54</b>	Pipe segment ref.: <b>10/039-10/043</b>
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Photo: 10\_039-10\_043-20181119-095052.JPG  
At: 92.8 ft. 2/. TB - Tap Break-in  
Joint: No



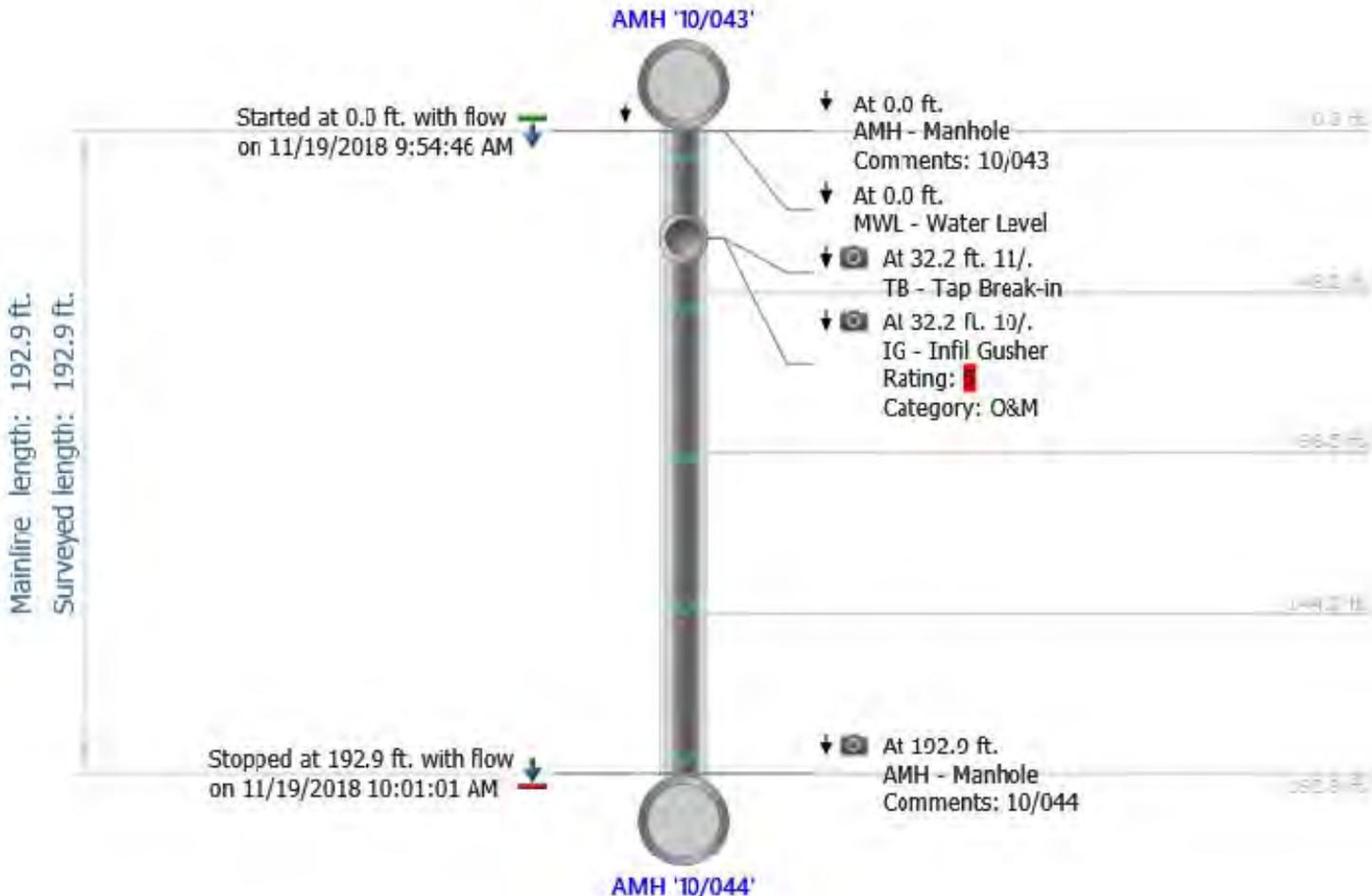
Photo: 10\_039-10\_043-20181119-095233.JPG  
At: 153.1 ft. AMH - Manhole  
Joint: No 10/043

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 09:54</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/046-10/044</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/043</b>	Downstream MH No: <b>10/044</b>	Direction: <b>D</b>	Total length: <b>192.9 ft.</b>	Length surveyed: <b>192.9 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	5	5100	5.00	5	5.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	5							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Start date/time: <b>20181119 10:03</b>	Pipe segment ref.: <b>10/046-10/044</b>
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Distance: 32.2 ft.  
IG - Infil Gusher  
Clock from: 10 o'clock  
Clock to:  
Rating: 5  
Dimension 1:  
Dimension 2:  
%:  
Photo: 10\_043-10\_044-20181119-095654.JPG  
At: 32.2 ft. 10/. IG - Infil Gusher  
Joint: No



Distance: 32.2 ft.  
TB - Tap Break-in  
Clock from: 11 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_043-10\_044-20181119-095647.JPG  
At: 32.2 ft. 11/. TB - Tap Break-in  
Joint: No



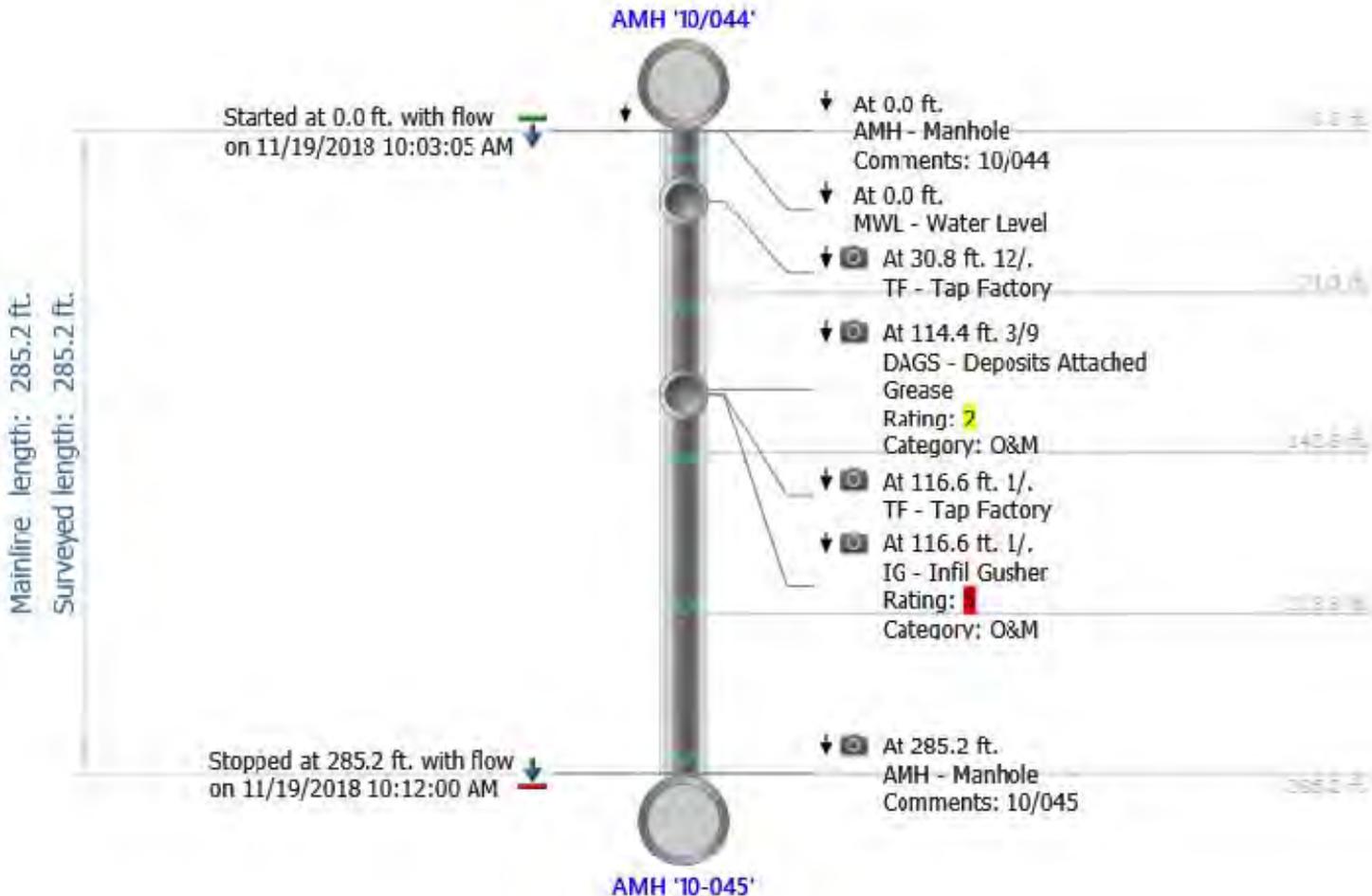
Distance: 192.9 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/044  
Photo: 10\_043-10\_044-20181119-100049.JPG  
At: 192.9 ft. AMH - Manhole  
Joint: No 10/044

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 10:03</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10-044-10/045</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/044</b>	Downstream MH No: <b>10-045</b>	Direction: <b>D</b>	Total length: <b>285.2 ft.</b>	Length surveyed: <b>285.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	7	5121	3.50	7	3.50		
2	0	0				0	2							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	5							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Start date/time: <b>20181119 10:13</b>	Pipe segment ref.: <b>10-044-10/045</b>
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Distance: 30.8 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_044-10-045-20181119-100417.JPG  
At: 30.8 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 114.4 ft.  
DAGS - Deposits Attached Grease  
Clock from: 3 o'clock  
Clock to: 9 o'clock  
Rating: 2  
Dimension 1:  
Dimension 2:  
%: 5 %  
Photo: 10\_044-10-045-20181119-100637.JPG  
At: 114.4 ft. 3/9 DAGS - Deposits Attached Grease  
Joint: No 5 %



Distance: 116.6 ft.  
IG - Infil Gusher  
Clock from: 1 o'clock  
Clock to:  
Rating: 5  
Dimension 1:  
Dimension 2:  
%:  
Photo: 10\_044-10-045-20181119-100705.JPG  
At: 116.6 ft. 1/. IG - Infil Gusher  
Joint: No



Distance: 116.6 ft.  
TF - Tap Factory  
Clock from: 1 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_044-10-045-20181119-100659.JPG  
At: 116.6 ft. 1/. TF - Tap Factory  
Joint: No



Photo: 10\_044-10-045-20181119-101141.JPG

At: 285.2 ft. AMH - Manhole

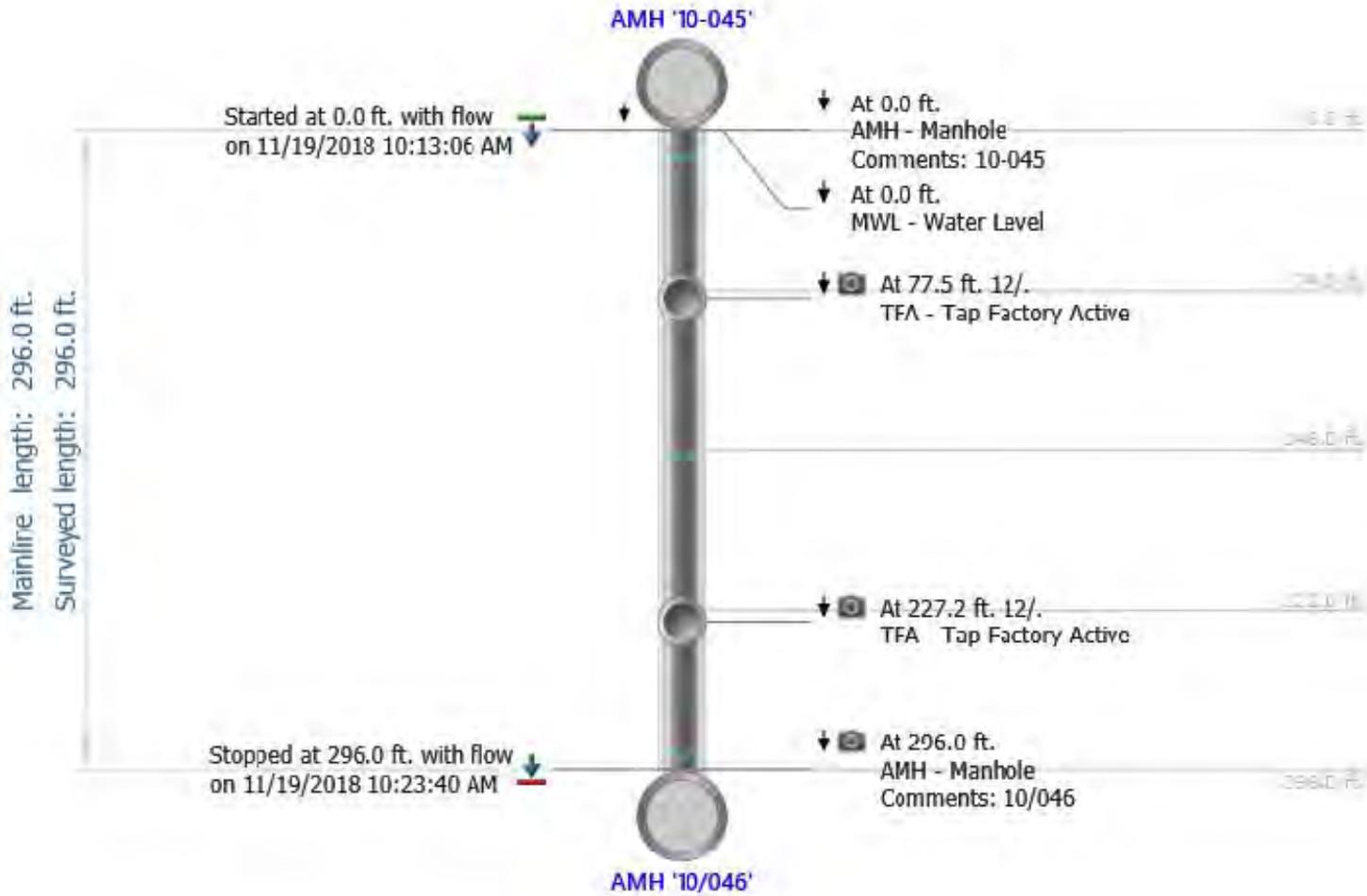
Joint: No 10/045

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 10:13</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/045-10/0456</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10-045</b>	Downstream MH No: <b>10/046</b>	Direction: <b>D</b>	Total length: <b>296.0 ft.</b>	Length surveyed: <b>296.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Start date/time: <b>20181119 10:25</b>	Pipe segment ref.: <b>10/045-10/0456</b>
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Photo: 10-045-10\_046-20181119-101542.JPG  
At: 77.5 ft. 12/. TFA - Tap Factory Active  
Joint: No



Photo: 10-045-10\_046-20181119-102023.JPG  
At: 227.2 ft. 12/. TFA - Tap Factory Active  
Joint: No



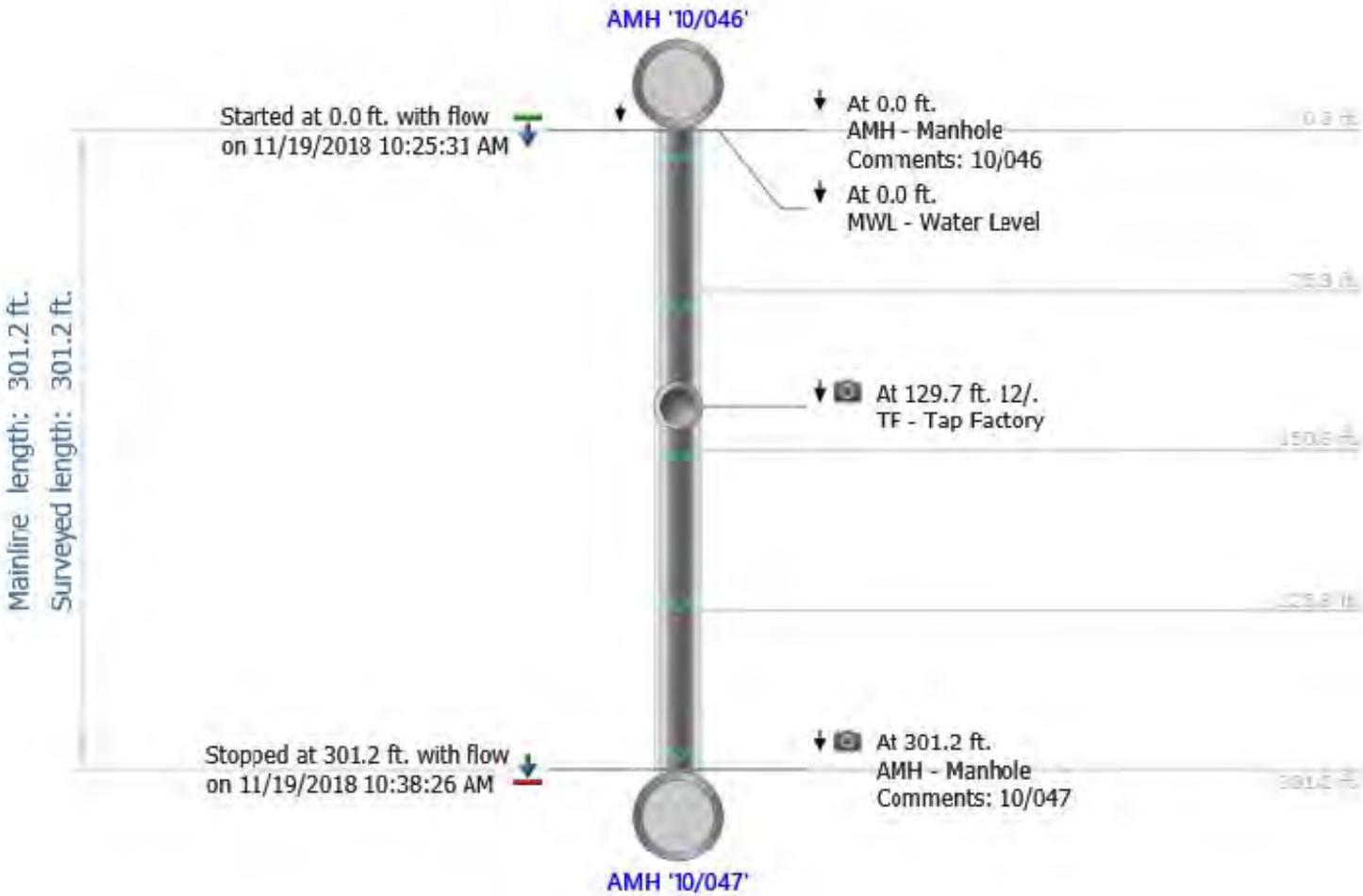
Photo: 10-045-10\_046-20181119-102306.JPG  
At: 296 ft. AMH - Manhole  
Joint: No 10/046

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 10:25</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/046-10/047</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/046</b>	Downstream MH No: <b>10/047</b>	Direction: <b>D</b>	Total length: <b>301.2 ft.</b>	Length surveyed: <b>301.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>16 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>THATCHER ST</b>	Start date/time: <b>20181119 11:35</b>	Pipe segment ref.: <b>10/046-10/047</b>
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Distance: 129.7 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 10\_046-10\_047-20181119-103054.JPG  
At: 129.7 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 301.2 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
10/047  
Photo: 10\_046-10\_047-20181119-103814.JPG  
At: 301.2 ft. AMH - Manhole  
Joint: No 10/047

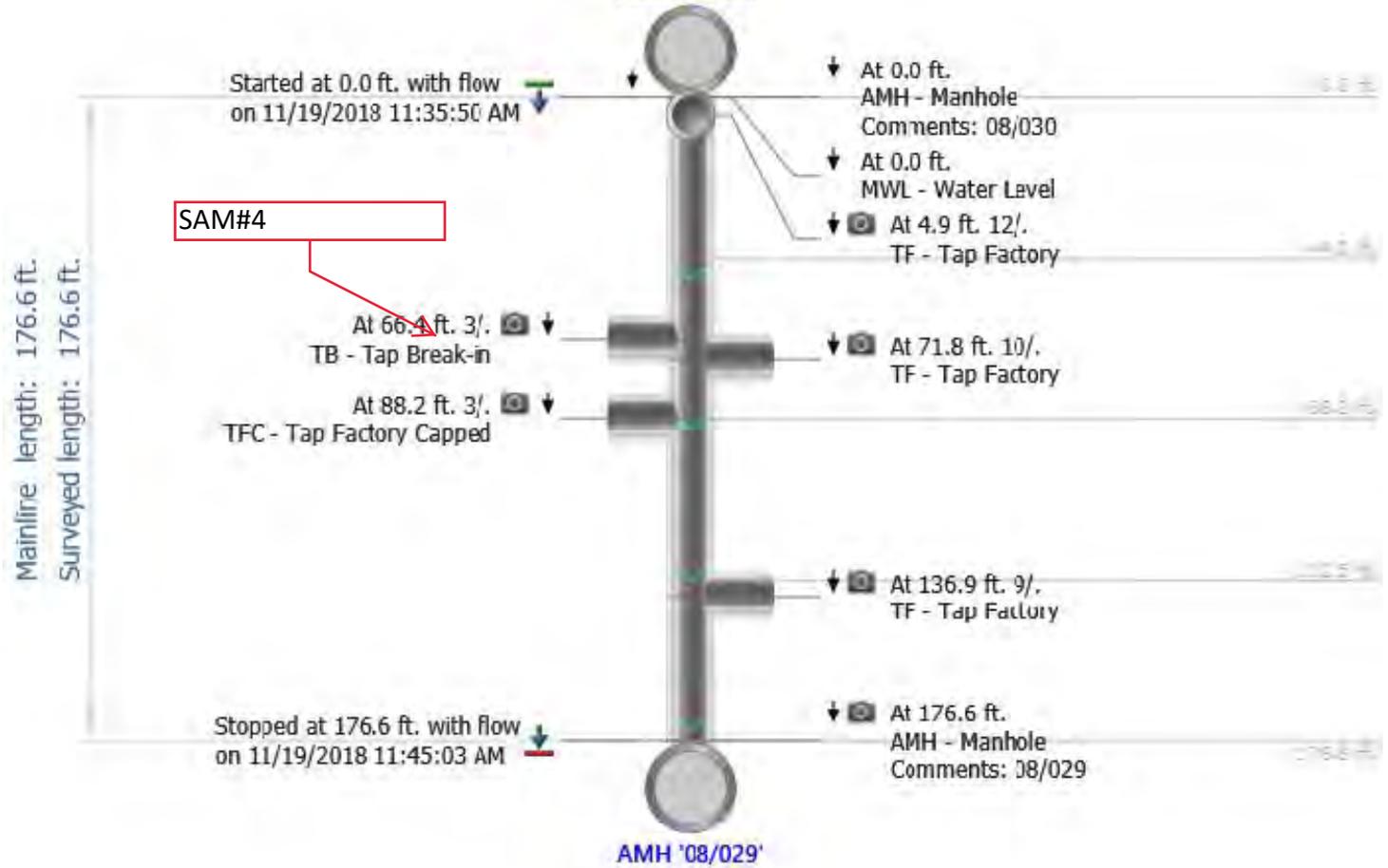
# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 11:35</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>08/030-08/029</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WSETWOOD MA</b>	Street: <b>SCHOOL ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>08/030</b>	Downstream MH No: <b>08/029</b>	Direction: <b>D</b>	Total length: <b>176.6 ft.</b>	Length surveyed: <b>176.6 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							

4100

AMH '08/030'


# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WSETWOOD MA</b>	Street: <b>SCHOOL ST</b>	Start date/time: <b>20181119 11:45</b>	Pipe segment ref.: <b>08/030-08/029</b>
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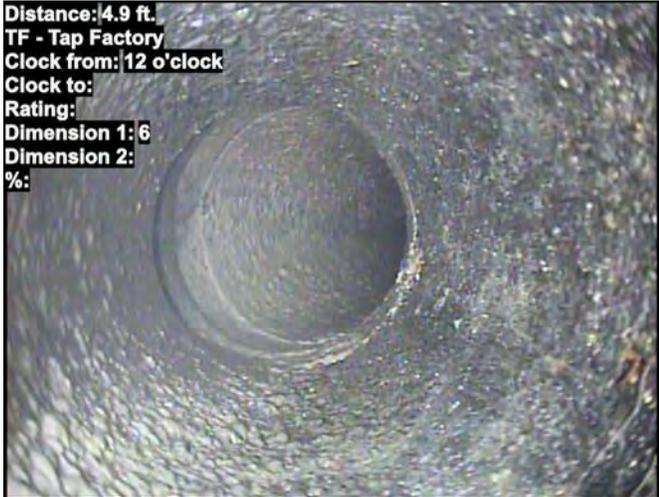


Photo: 08\_030-08\_029-20181119-113705.JPG  
At: 4.9 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 08\_030-08\_029-20181119-113855.JPG  
At: 66.4 ft. 3/. TB - Tap Break-in  
Joint: No

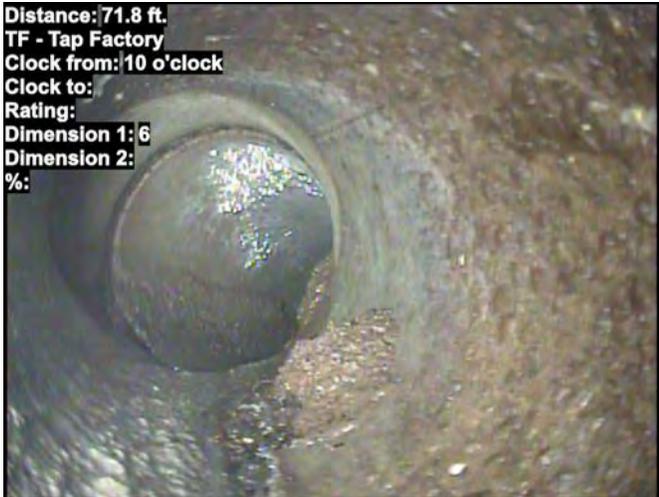


Photo: 08\_030-08\_029-20181119-113916.JPG  
At: 71.8 ft. 10/. TF - Tap Factory  
Joint: No



Photo: 08\_030-08\_029-20181119-113954.JPG  
At: 88.2 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Distance: 136.9 ft.  
TF - Tap Factory  
Clock from: 9 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 08\_030-08\_029-20181119-114126.JPG  
At: 136.9 ft. 9/. TF - Tap Factory  
Joint: No



Distance: 176.6 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

08/029

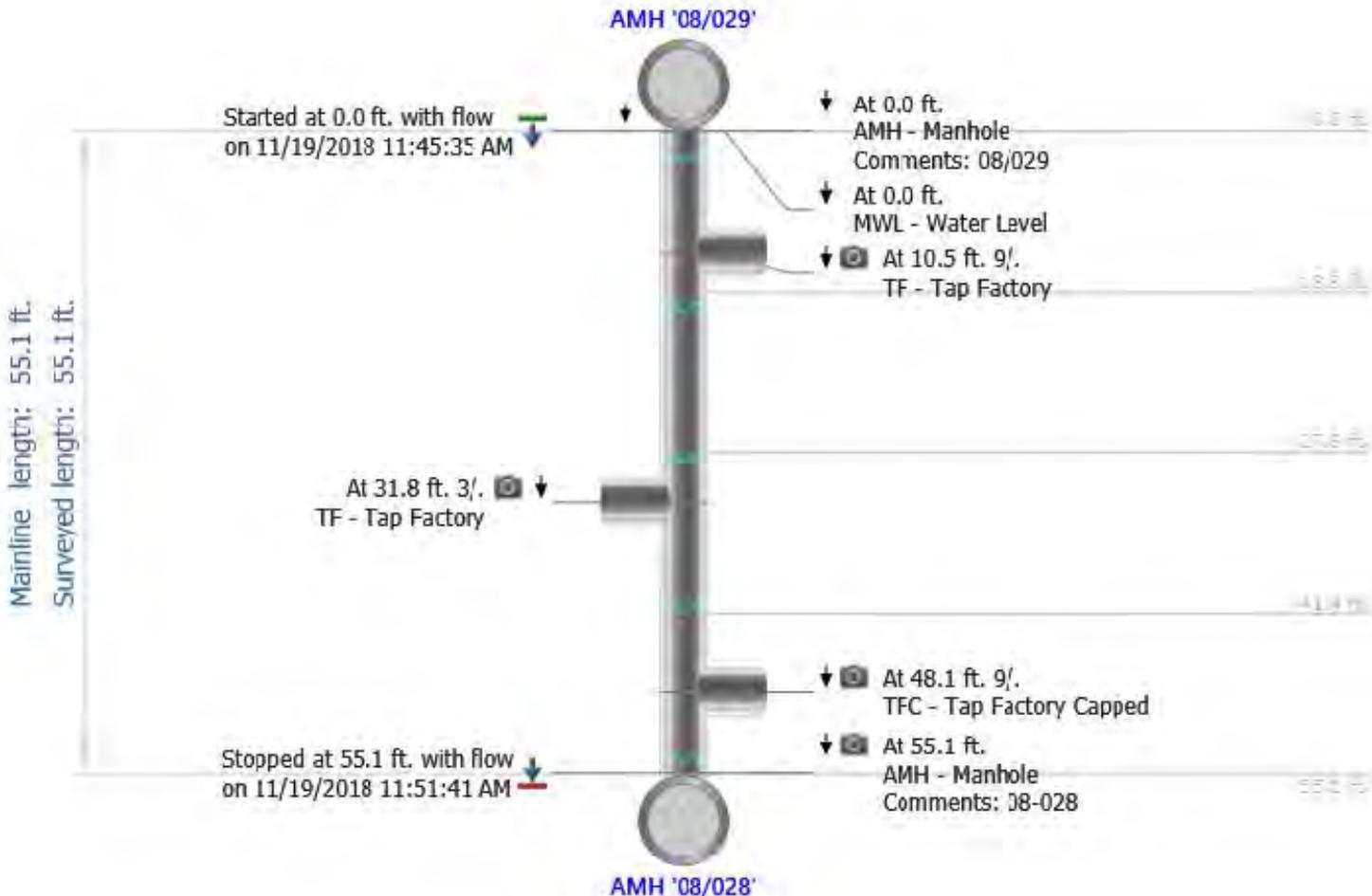
Photo: 08\_030-08\_029-20181119-114451.JPG  
At: 176.6 ft. AMH - Manhole  
Joint: No 08/029

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 11:45</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>08/029-08/028</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WSETWOOD MA</b>	Street: <b>SCHOOL ST</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>08/029</b>	Downstream MH No: <b>08/028</b>	Direction: <b>D</b>	Total length: <b>55.1 ft.</b>	Length surveyed: <b>55.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WSETWOOD MA</b>	Street: <b>SCHOOL ST</b>	Start date/time: <b>20181119 12:49</b>	Pipe segment ref.: <b>08/029-08/028</b>
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Photo: 08\_029-08\_028-20181119-114856.JPG  
At: 10.5 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 08\_029-08\_028-20181119-114947.JPG  
At: 31.8 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 08\_029-08\_028-20181119-115020.JPG  
At: 48.1 ft. 9/. TFC - Tap Factory Capped  
Joint: No



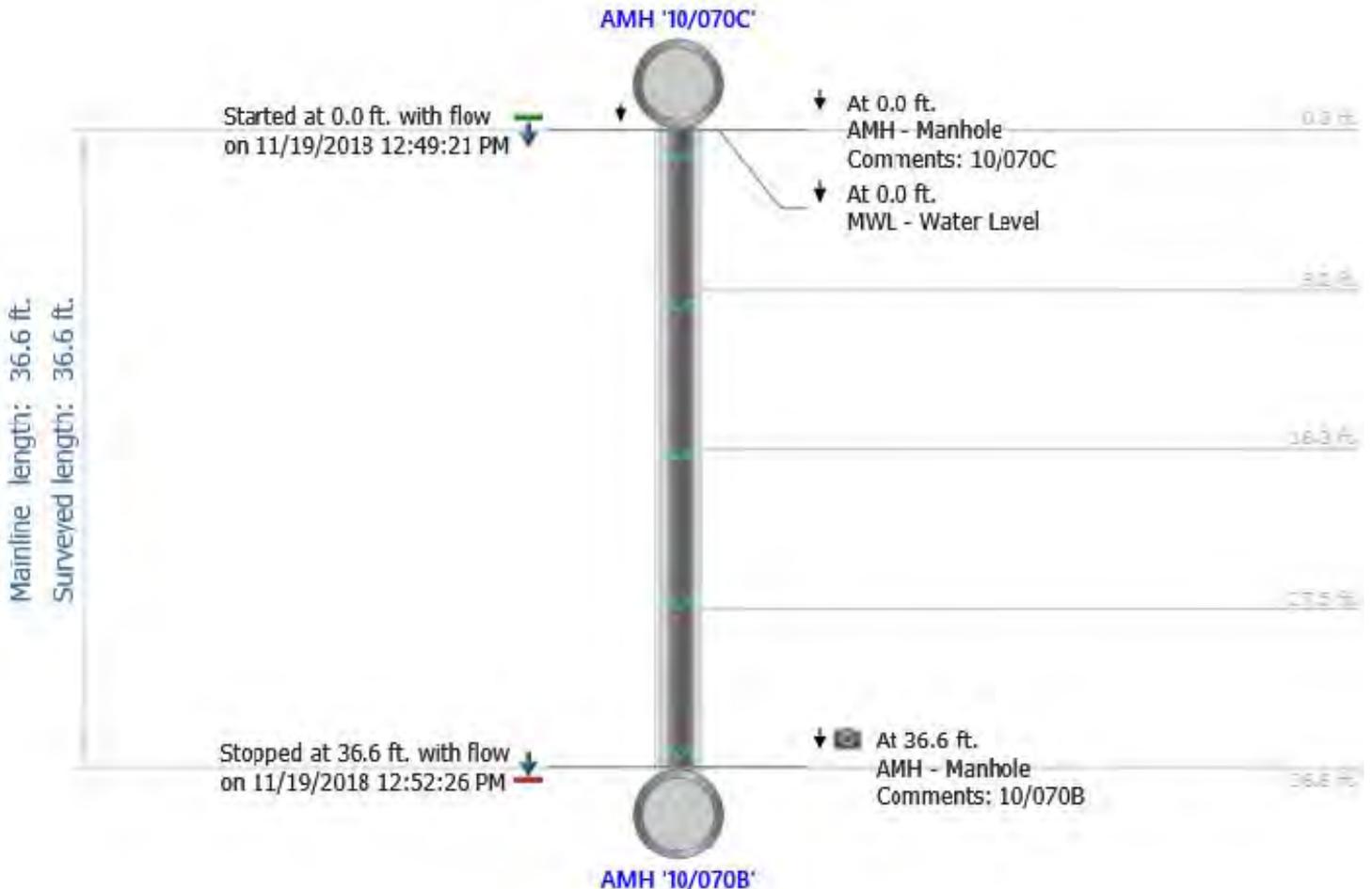
Photo: 08\_029-08\_028-20181119-115130.JPG  
At: 55.1 ft. AMH - Manhole  
Joint: No 08-028

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 12:49</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/070C-10/070B</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/070C</b>	Downstream MH No: <b>10/070B</b>	Direction: <b>D</b>	Total length: <b>36.6 ft.</b>	Length surveyed: <b>36.6 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181119 12:55</b>	Pipe segment ref.: <b>10/070C-10/070B</b>
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Photo: 10\_070C-10\_070B-20181119-125145.JPG

At: 36.6 ft. AMH - Manhole

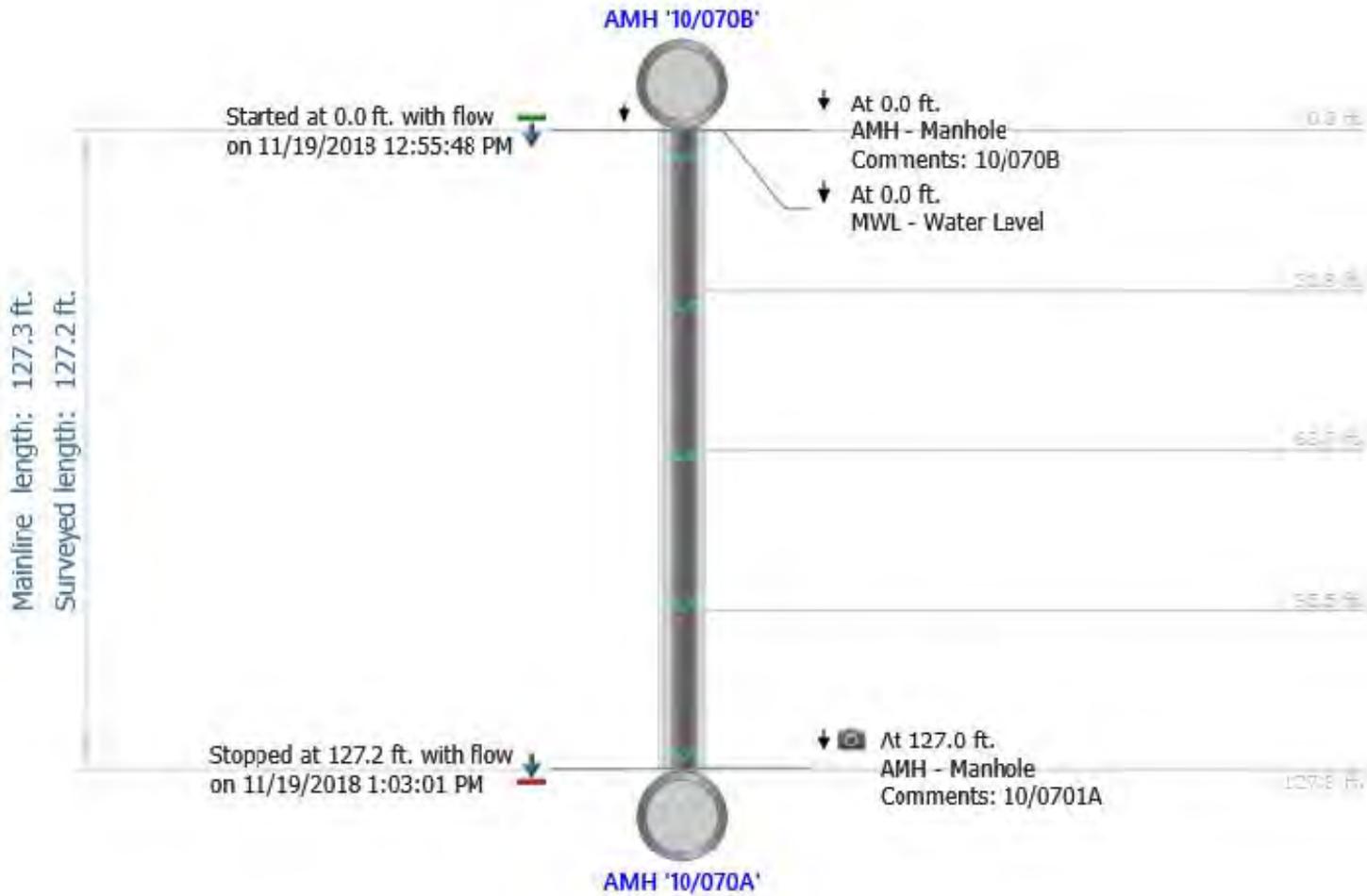
Joint: No 10/070B

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 12:55</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/070B-10/070A</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/070B</b>	Downstream MH No: <b>10/070A</b>	Direction: <b>D</b>	Total length: <b>127.3 ft.</b>	Length surveyed: <b>127.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181119 13:05</b>	Pipe segment ref.: <b>10/070B-10/070A</b>
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Photo: 10\_070B-10\_070A-20181119-130051.JPG

At: 127 ft. AMH - Manhole

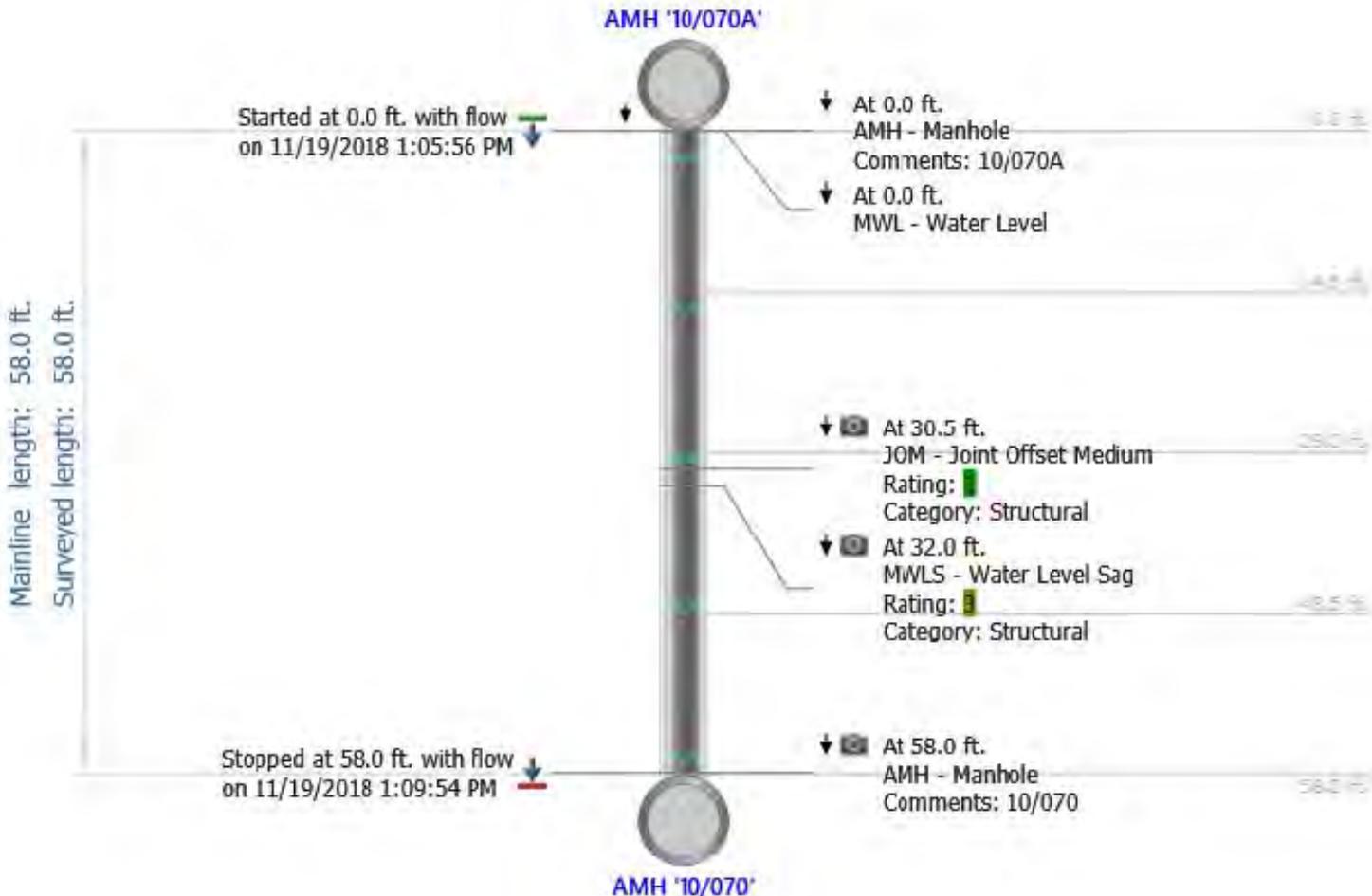
Joint: No 10/0701A

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 13:05</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/070A-10/070</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/070A</b>	Downstream MH No: <b>10/070</b>	Direction: <b>D</b>	Total length: <b>58.0 ft.</b>	Length surveyed: <b>58.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	1	4	3111	2.00	0	0	0	0000	0.00	4	2.00		
2	0	0				0	0							
3	0	3				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181119 13:24</b>	Pipe segment ref.: <b>10/070A-10/070</b>
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Distance: 30.5 ft.  
JOM - Joint Offset Medium  
Clock from:  
Clock to:  
Rating: 1  
Dimension 1:  
Dimension 2:  
%:

Photo: 10\_070A-10\_070-20181119-130811.JPG  
At: 30.5 ft. JOM - Joint Offset Medium  
Joint: No



Distance: 32.0 ft.  
MWLS - Water Level Sag  
Clock from:  
Clock to:  
Rating: 3  
Dimension 1:  
Dimension 2:  
%: 50 %

Photo: 10\_070A-10\_070-20181119-130834.JPG  
At: 32 ft. MWLS - Water Level Sag  
Joint: No 50 %



Distance: 58.0 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

10/070

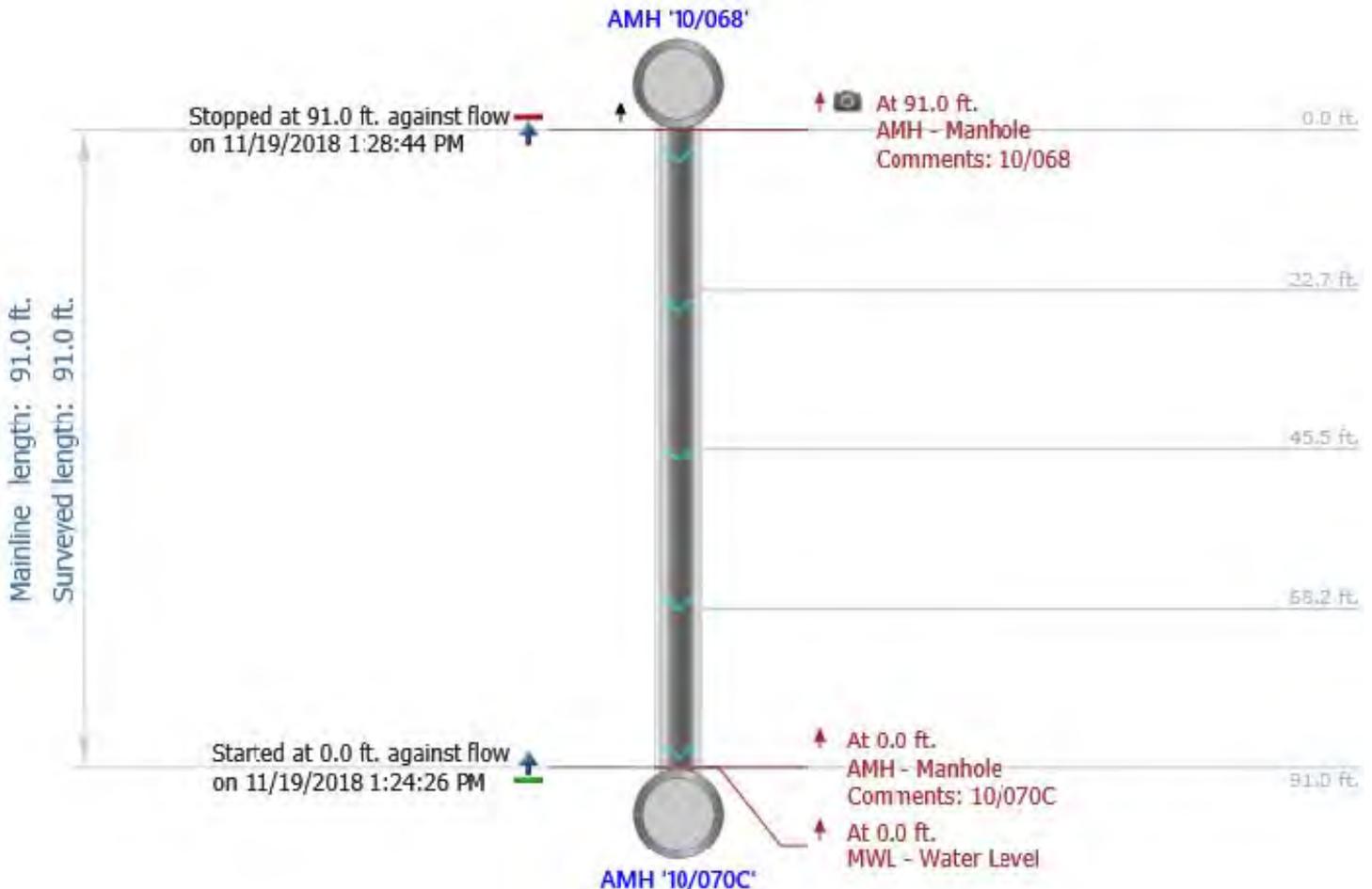
Photo: 10\_070A-10\_070-20181119-130945.JPG  
At: 58 ft. AMH - Manhole  
Joint: No 10/070

# NWMCC INSPECTION REPORT

Start date/time: <b>20181119 13:24</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/068-10/070C</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>DEERFIELD AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/068</b>	Downstream MH No: <b>10/070C</b>	Direction: <b>U</b>	Total length: <b>91.0 ft.</b>	Length surveyed: <b>91.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181120 07:43</b>	Pipe segment ref.: <b>10/068-10/070C</b>
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Photo: 10\_068-10\_070C-20181119-132830.JPG

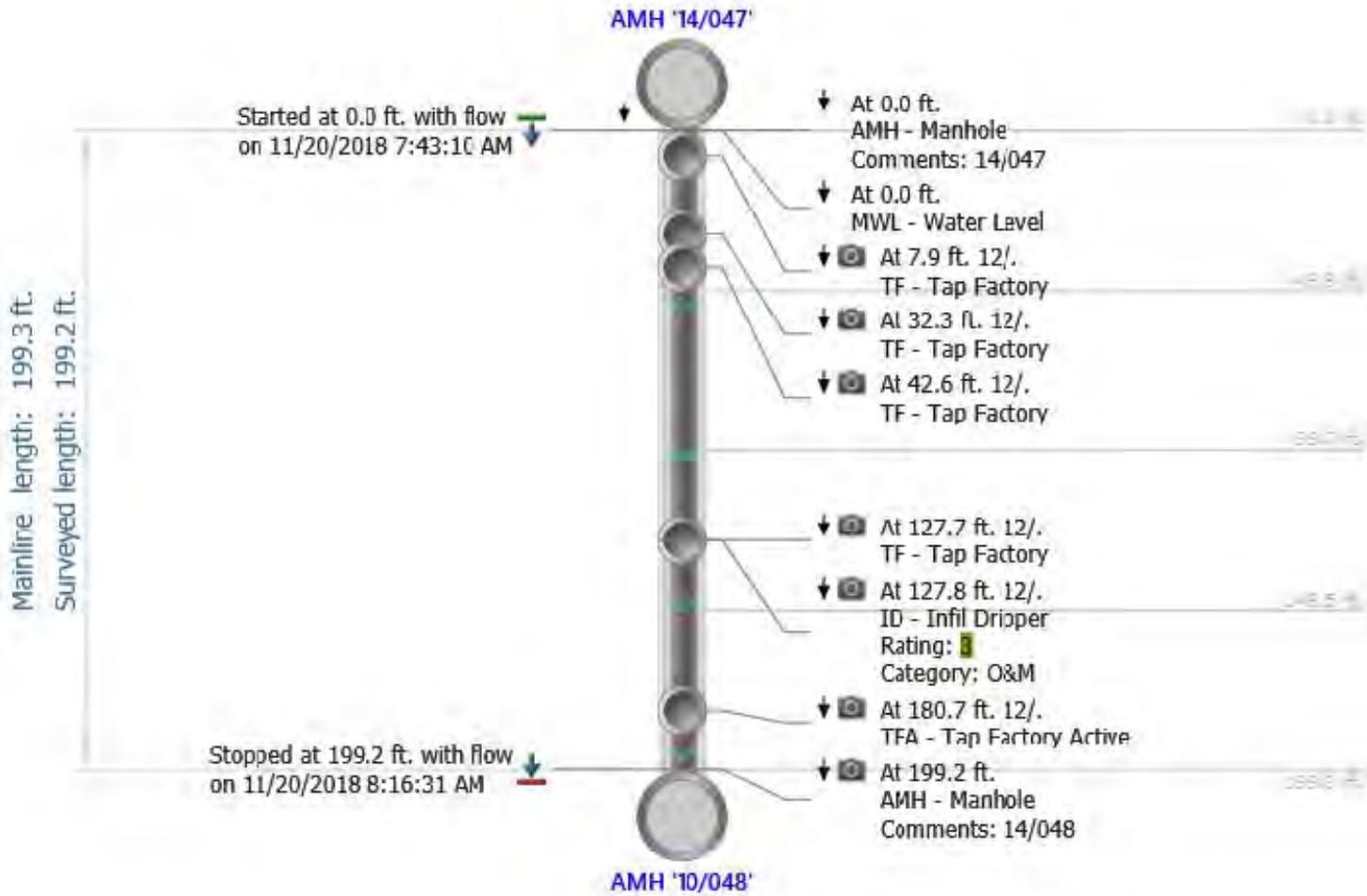
At: 91 ft. AMH - Manhole  
Joint: No 10/068

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 07:43</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/047-10/048</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/047</b>	Downstream MH No: <b>10/048</b>	Direction: <b>D</b>	Total length: <b>199.3 ft.</b>	Length surveyed: <b>199.2 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	3	3100	3.00	3	3.00		
2	0	0				0	0							
3	0	0				0	3							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181120 08:33</b>	Pipe segment ref.: <b>14/047-10/048</b>
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Photo: 14\_047-10\_048-20181120-074643.JPG  
At: 7.9 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_047-10\_048-20181120-074856.JPG  
At: 32.3 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_047-10\_048-20181120-074924.JPG  
At: 42.6 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_047-10\_048-20181120-075142.JPG  
At: 127.7 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 127.8 ft.  
ID - Infil Dripper  
Clock from: 12 o'clock  
Clock to:  
Rating: 3  
Dimension 1:  
Dimension 2:  
%:  
Photo: 14\_047-10\_048-20181120-075224.JPG  
At: 127.8 ft. 12/. ID - Infil Dripper  
Joint: No



Distance: 180.7 ft.  
TFA - Tap Factory Active  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:  
Photo: 14\_047-10\_048-20181120-081521.JPG  
At: 180.7 ft. 12/. TFA - Tap Factory Active  
Joint: No



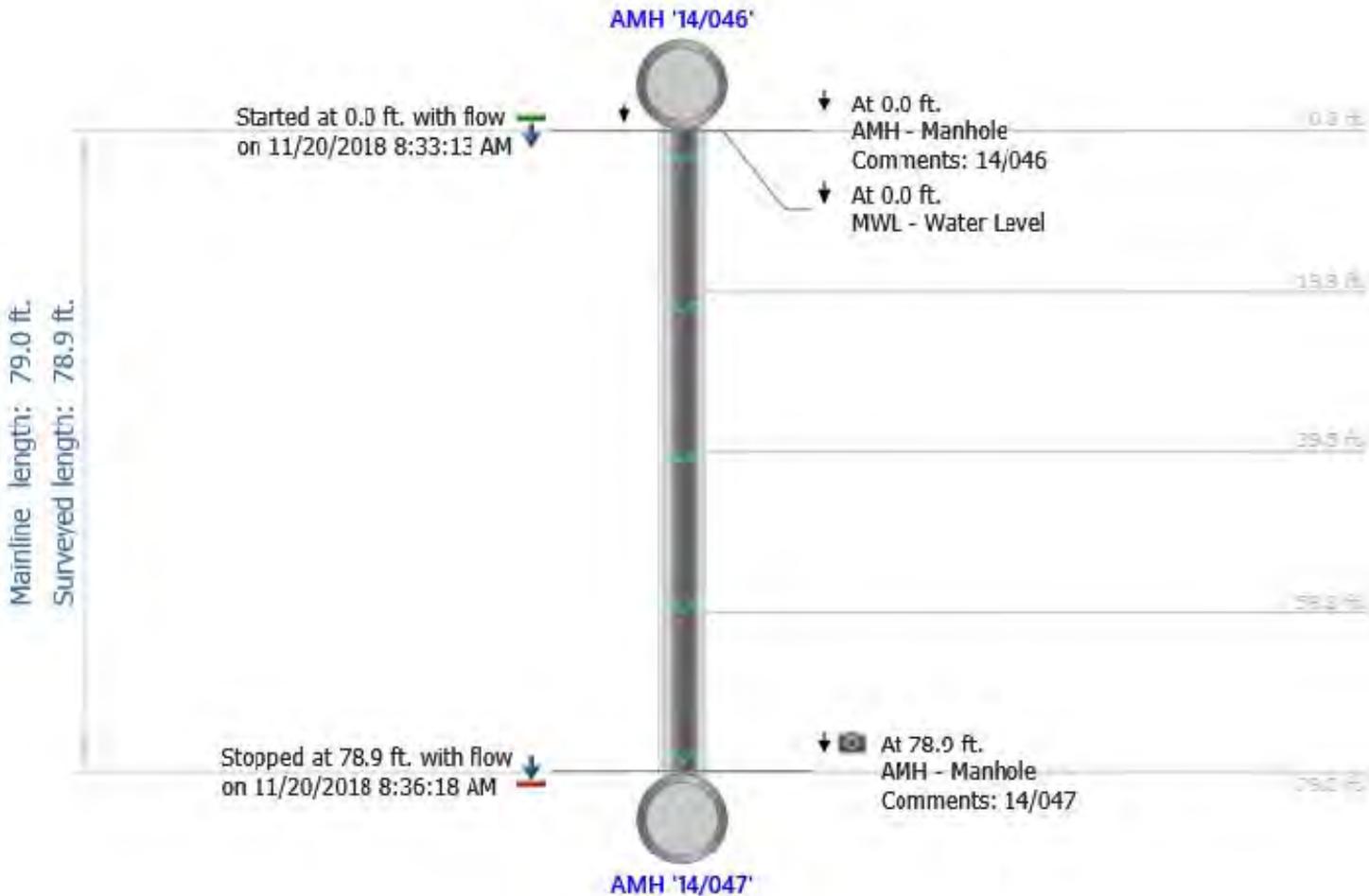
Distance: 199.2 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:  
14/048  
Photo: 14\_047-10\_048-20181120-081612.JPG  
At: 199.2 ft. AMH - Manhole  
Joint: No 14/048

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 08:33</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/046-14/047</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/046</b>	Downstream MH No: <b>14/047</b>	Direction: <b>D</b>	Total length: <b>79.0 ft.</b>	Length surveyed: <b>78.9 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181120 09:04</b>	Pipe segment ref.: <b>14/046-14/047</b>
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Photo: 14\_046-14\_047-20181120-083608.JPG

At: 78.9 ft. AMH - Manhole

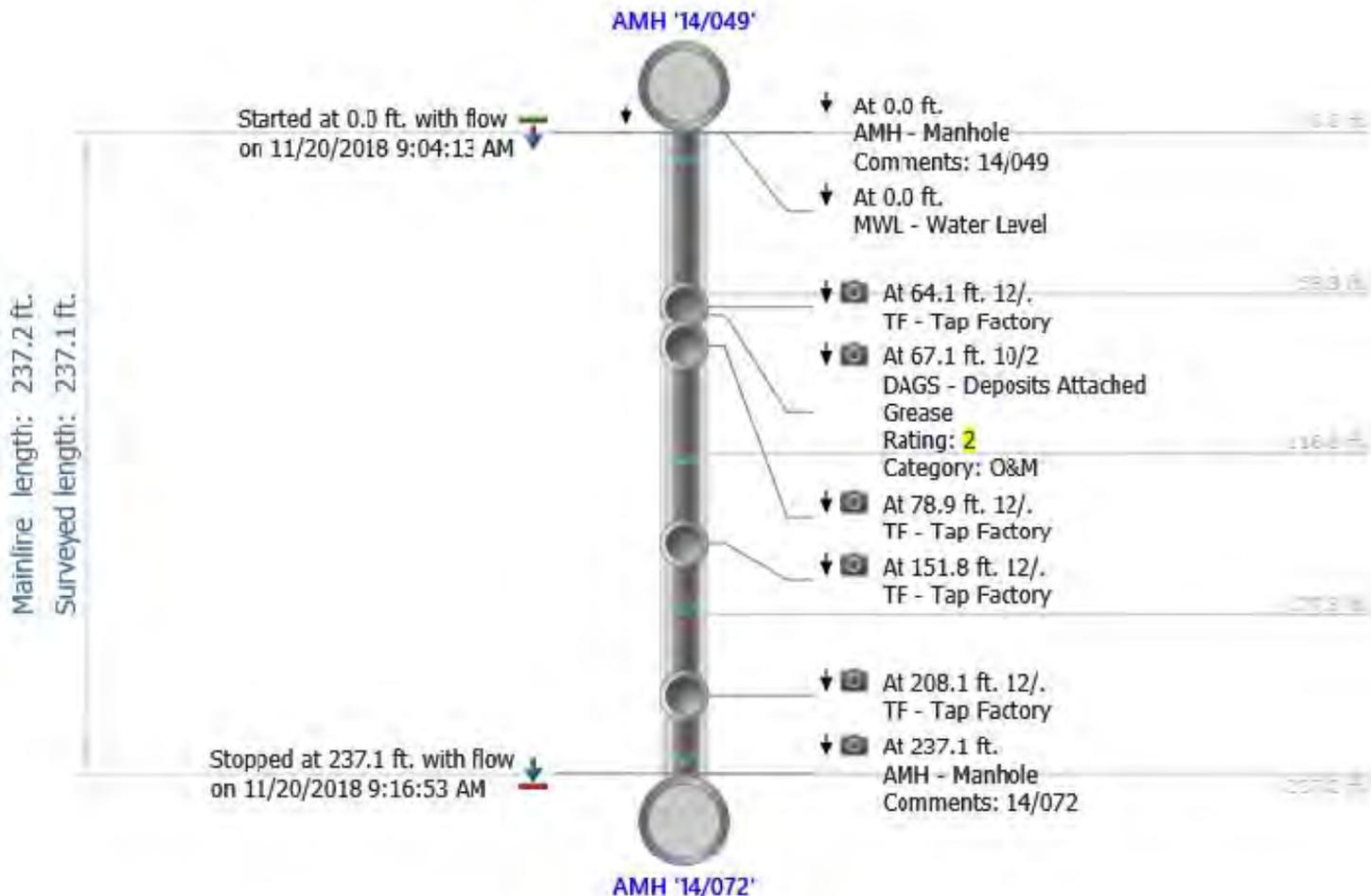
Joint: No 14/047

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 09:04</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/049-14/072</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/049</b>	Downstream MH No: <b>14/072</b>	Direction: <b>D</b>	Total length: <b>237.2 ft.</b>	Length surveyed: <b>237.1 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	2	2100	2.00	2	2.00		
2	0	0				0	2							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>LAKE SHORE DR</b>	Start date/time: <b>20181120 09:51</b>	Pipe segment ref.: <b>14/049-14/072</b>
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Photo: 14\_049-14\_072-20181120-091130.JPG  
At: 64.1 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_049-14\_072-20181120-091139.JPG  
At: 67.1 ft. 10/2 DAGS - Deposits Attached Grease  
Joint: No 5 %

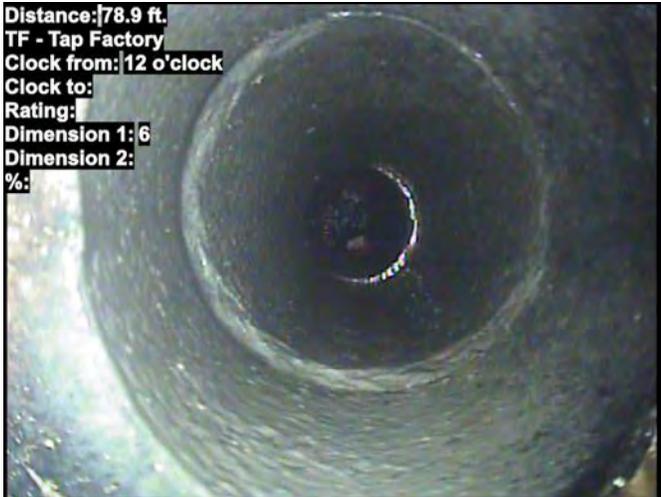


Photo: 14\_049-14\_072-20181120-091216.JPG  
At: 78.9 ft. 12/. TF - Tap Factory  
Joint: No



Photo: 14\_049-14\_072-20181120-091410.JPG  
At: 151.8 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 208.1 ft.  
TF - Tap Factory  
Clock from: 12 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 14\_049-14\_072-20181120-091543.JPG  
At: 208.1 ft. 12/. TF - Tap Factory  
Joint: No



Distance: 237.1 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

14/072

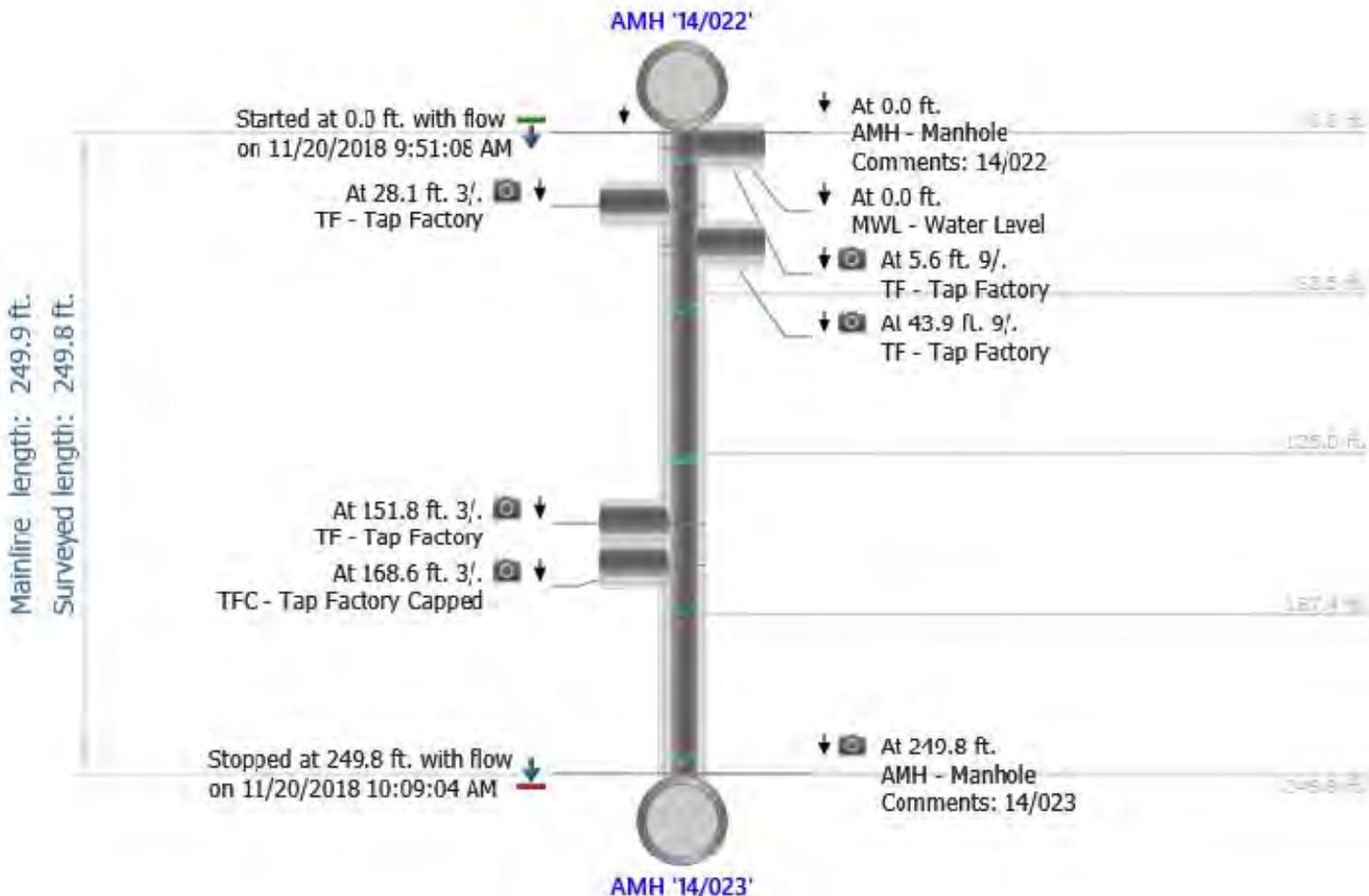
Photo: 14\_049-14\_072-20181120-091633.JPG  
At: 237.1 ft. AMH - Manhole  
Joint: No 14/072

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 09:51</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/022-14/023</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>WESTVIEW TER</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/022</b>	Downstream MH No: <b>14/023</b>	Direction: <b>D</b>	Total length: <b>249.9 ft.</b>	Length surveyed: <b>249.8 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>WESTVIEW TER</b>	Start date/time: <b>20181120 10:30</b>	Pipe segment ref.: <b>14/022-14/023</b>
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Photo: 14\_022-14\_023-20181120-095217.JPG  
At: 5.6 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 14\_022-14\_023-20181120-095301.JPG  
At: 28.1 ft. 3/. TF - Tap Factory  
Joint: No



Photo: 14\_022-14\_023-20181120-095333.JPG  
At: 43.9 ft. 9/. TF - Tap Factory  
Joint: No



Photo: 14\_022-14\_023-20181120-095642.JPG  
At: 151.8 ft. 3/. TF - Tap Factory  
Joint: No



Distance: 168.6 ft.  
TFC - Tap Factory Capped  
Clock from: 3 o'clock  
Clock to:  
Rating:  
Dimension 1: 6  
Dimension 2:  
%:

Photo: 14\_022-14\_023-20181120-095742.JPG  
At: 168.6 ft. 3/. TFC - Tap Factory Capped  
Joint: No



Distance: 249.8 ft.  
AMH - Manhole  
Clock from:  
Clock to:  
Rating:  
Dimension 1:  
Dimension 2:  
%:

14/023

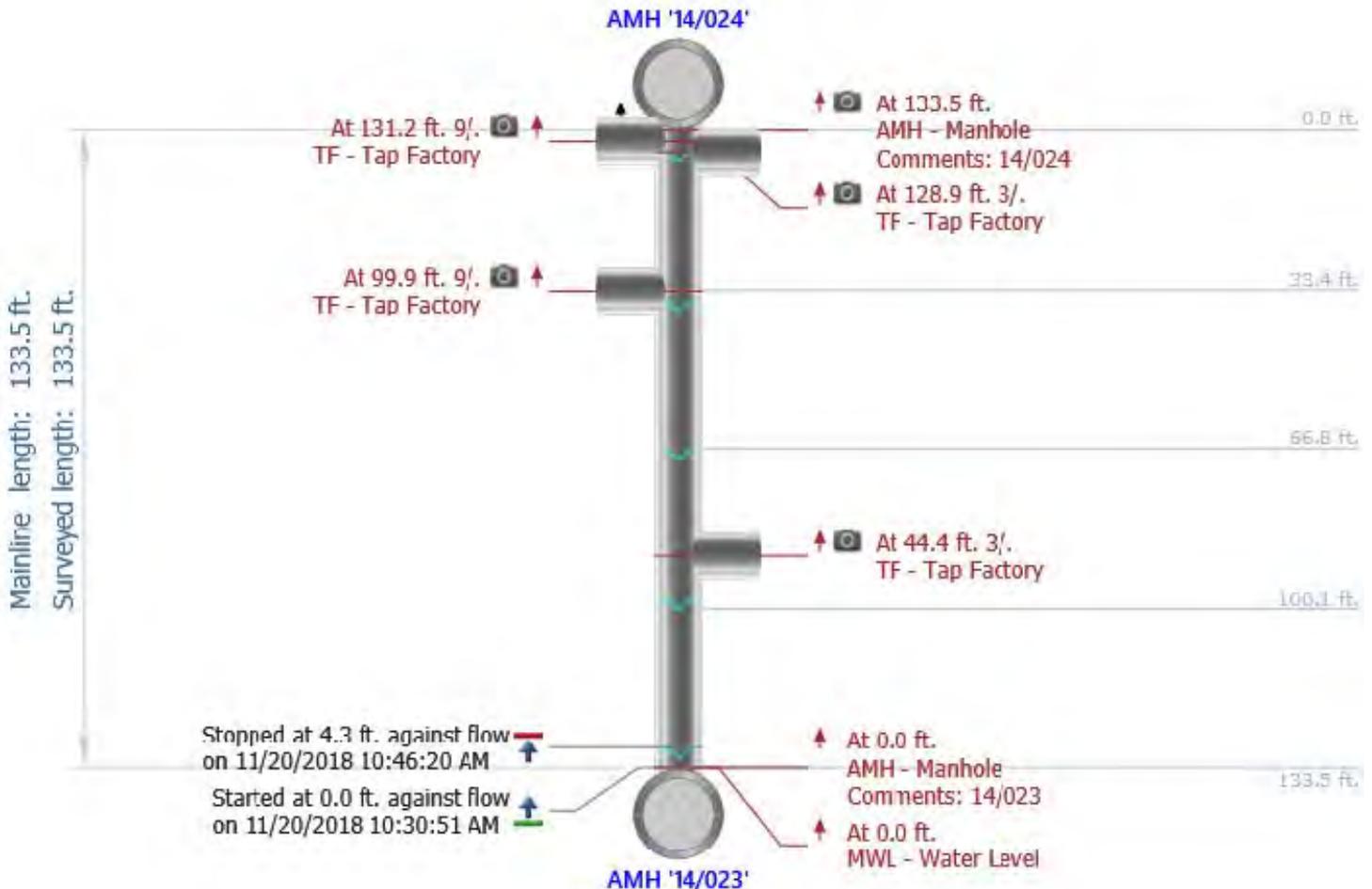
Photo: 14\_022-14\_023-20181120-100850.JPG  
At: 249.8 ft. AMH - Manhole  
Joint: No 14/023

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 10:30</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/024-14/023</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/024</b>	Downstream MH No: <b>14/023</b>	Direction: <b>U</b>	Total length: <b>133.5 ft.</b>	Length surveyed: <b>133.5 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD</b>	Start date/time: <b>20181120 10:51</b>	Pipe segment ref.: <b>14/024-14/023</b>
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Photo: 14\_024-14\_023-20181120-103328.JPG

At: 44.4 ft. 3/. TF - Tap Factory

Joint: No



Photo: 14\_024-14\_023-20181120-103511.JPG

At: 99.9 ft. 9/. TF - Tap Factory

Joint: No



Photo: 14\_024-14\_023-20181120-103619.JPG

At: 128.9 ft. 3/. TF - Tap Factory

Joint: No



Photo: 14\_024-14\_023-20181120-103631.JPG

At: 131.2 ft. 9/. TF - Tap Factory

Joint: No



Photo: 14\_024-14\_023-20181120-103642.JPG

At: 133.5 ft. AMH - Manhole

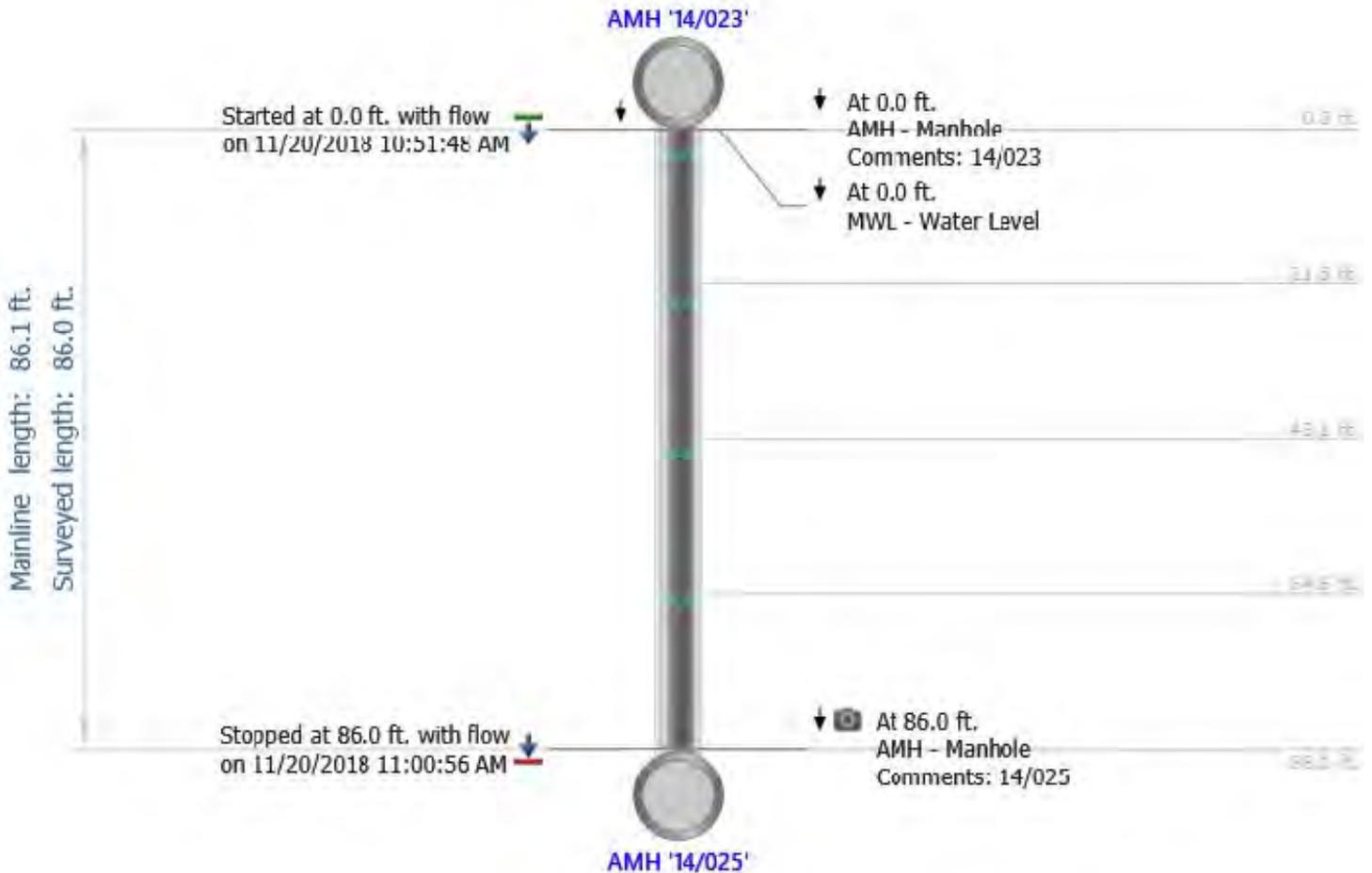
Joint: No 14/024

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 10:51</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/023-14/025</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Location code: <b>Easement/Right of way</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Lift Station</b>
Upstream MH No: <b>14/023</b>	Downstream MH No: <b>14/025</b>	Direction: <b>D</b>	Total length: <b>86.1 ft.</b>	Length surveyed: <b>86.0 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Start date/time: <b>20181120 11:10</b>	Pipe segment ref.: <b>14/023-14/025</b>
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Photo: 14\_023-14\_025-20181120-110044.JPG

At: 86 ft. AMH - Manhole

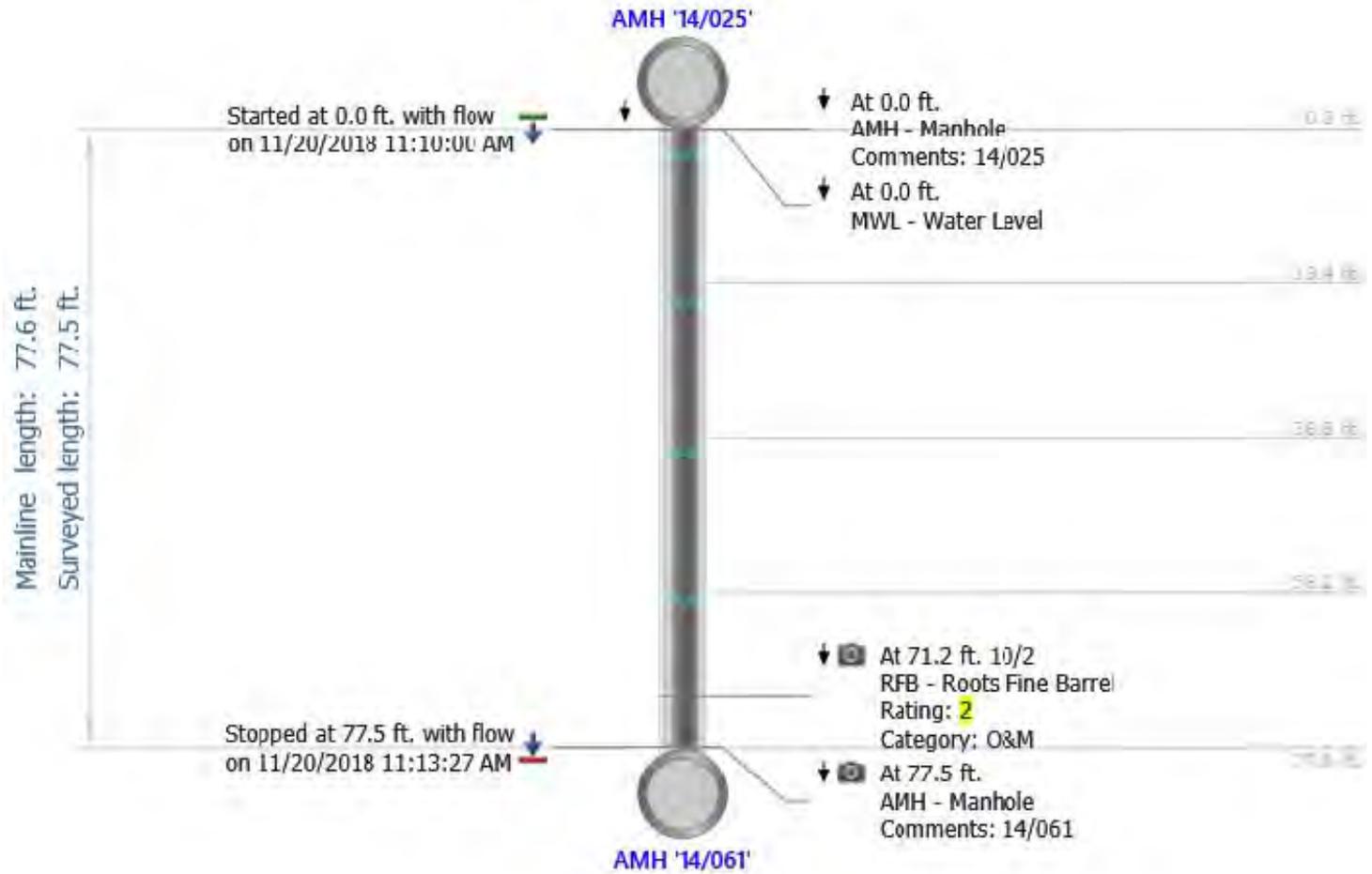
Joint: No 14/025

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 11:10</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/025-14/061</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Location code: <b>Easement/Right of way</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/025</b>	Downstream MH No: <b>14/061</b>	Direction: <b>D</b>	Total length: <b>77.6 ft.</b>	Length surveyed: <b>77.5 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	2	2100	2.00	2	2.00		
2	0	0				0	2							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Start date/time: <b>20181120 11:14</b>	Pipe segment ref.: <b>14/025-14/061</b>
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Photo: 14\_025-14\_061-20181120-111242.JPG  
At: 71.2 ft. 10/2 RFB - Roots Fine Barrel  
Joint: No



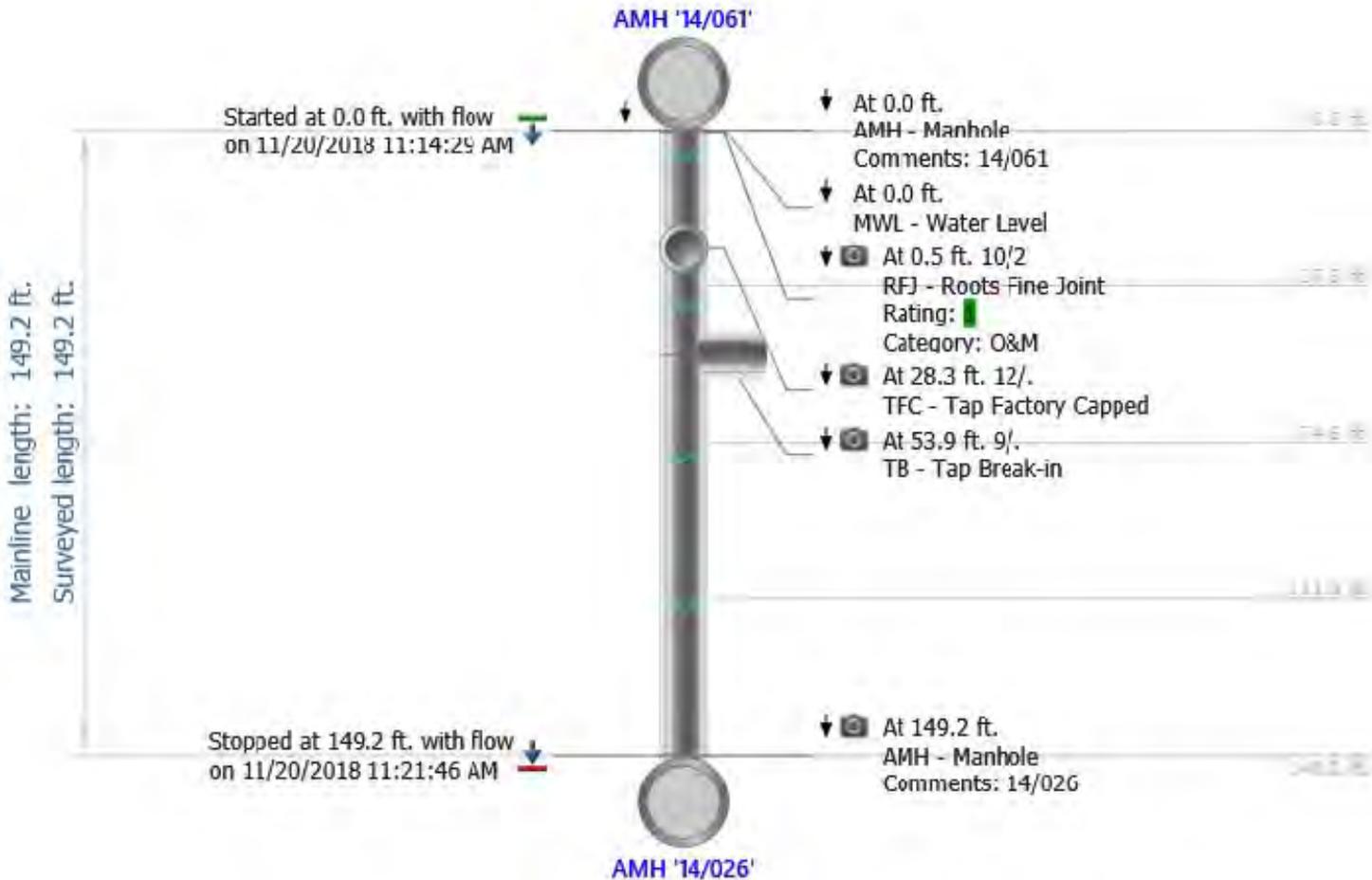
Photo: 14\_025-14\_061-20181120-111311.JPG  
At: 77.5 ft. AMH - Manhole  
Joint: No 14/061

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 11:14</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/061-14/026</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Location code: <b>Easement/Right of way</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/061</b>	Downstream MH No: <b>14/026</b>	Direction: <b>D</b>	Total length: <b>149.2 ft.</b>	Length surveyed: <b>149.2 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	1	1	1100	1.00	1	1.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Start date/time: <b>20181120 11:24</b>	Pipe segment ref.: <b>14/061-14/026</b>
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Photo: 14\_061-14\_026-20181120-111450.JPG  
At: 0.5 ft. 10/2 RFJ - Roots Fine Joint  
Joint: Yes



Photo: 14\_061-14\_026-20181120-111557.JPG  
At: 28.3 ft. 12/. TFC - Tap Factory Capped  
Joint: No



Photo: 14\_061-14\_026-20181120-111708.JPG  
At: 53.9 ft. 9/. TB - Tap Break-in  
Joint: No



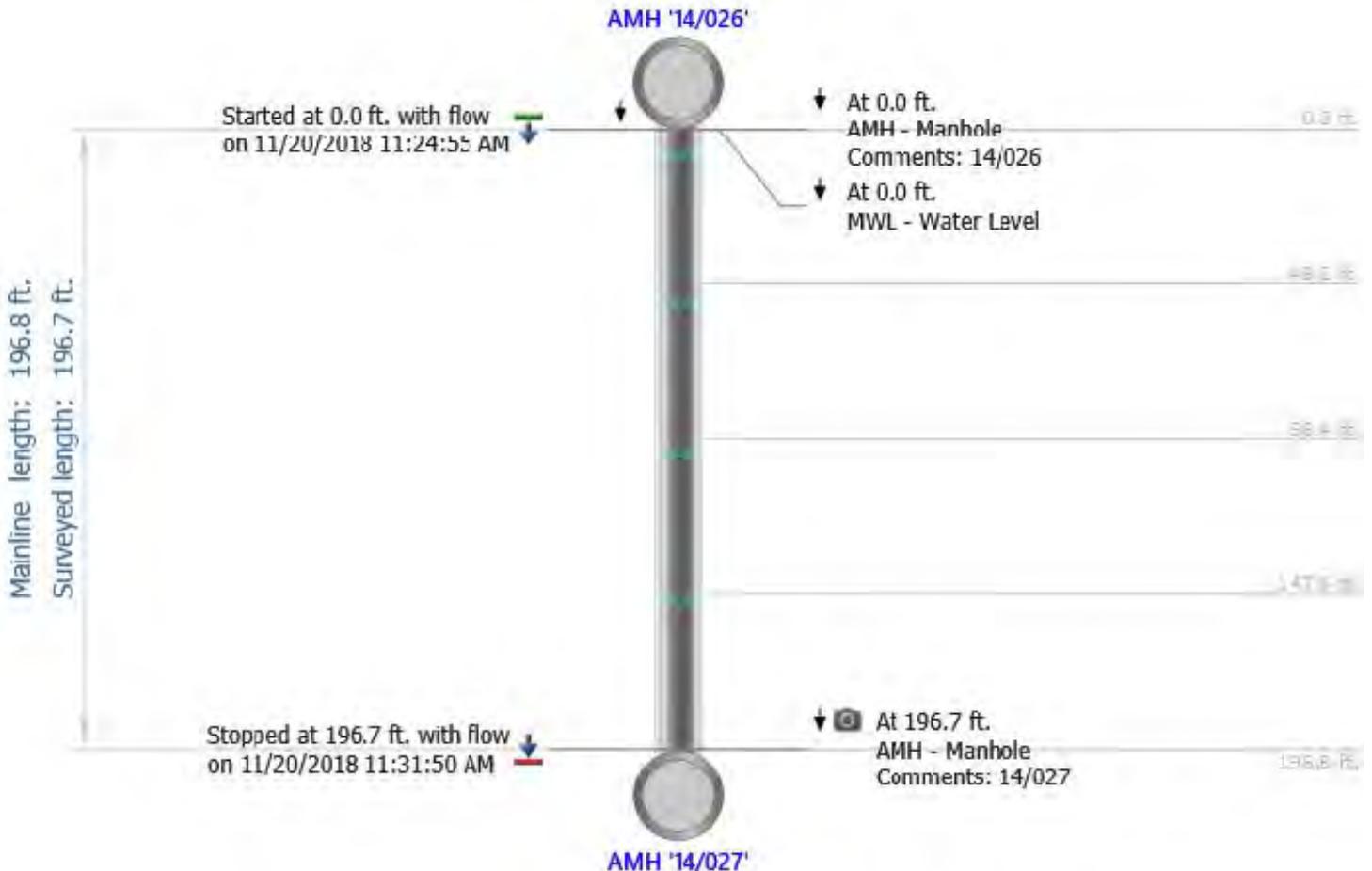
Photo: 14\_061-14\_026-20181120-112132.JPG  
At: 149.2 ft. AMH - Manhole  
Joint: No 14/026

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 11:24</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/026-14/027</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Location code: <b>Easement/Right of way</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/026</b>	Downstream MH No: <b>14/027</b>	Direction: <b>D</b>	Total length: <b>196.8 ft.</b>	Length surveyed: <b>196.7 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Start date/time: <b>20181120 11:39</b>	Pipe segment ref.: <b>14/026-14/027</b>
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Photo: 14\_026-14\_027-20181120-113049.JPG

At: 196.7 ft. AMH - Manhole

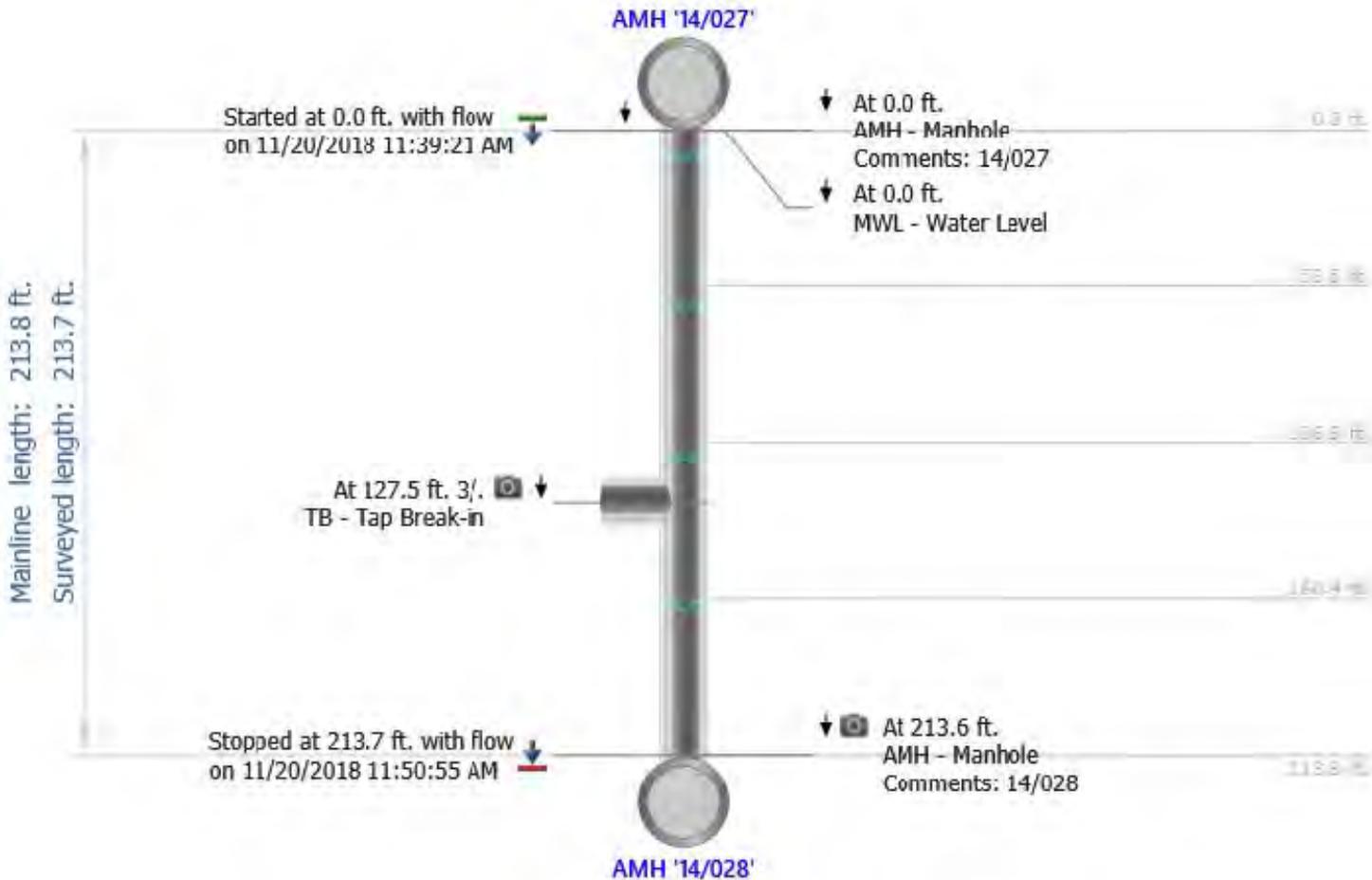
Joint: No 14/027

# NWMCC INSPECTION REPORT

Start date/time: <b>20181120 11:39</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/027-14/028</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Location code: <b>Easement/Right of way</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/027</b>	Downstream MH No: <b>14/028</b>	Direction: <b>D</b>	Total length: <b>213.8 ft.</b>	Length surveyed: <b>213.7 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>SYLVAN RD EASMENT</b>	Start date/time: <b>20181121 08:49</b>	Pipe segment ref.: <b>14/027-14/028</b>
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Photo: 14\_027-14\_028-20181120-114439.JPG  
At: 127.5 ft. 3/. TB - Tap Break-in  
Joint: No



Photo: 14\_027-14\_028-20181120-115039.JPG  
At: 213.6 ft. AMH - Manhole  
Joint: No 14/028

# NWMCC INSPECTION REPORT

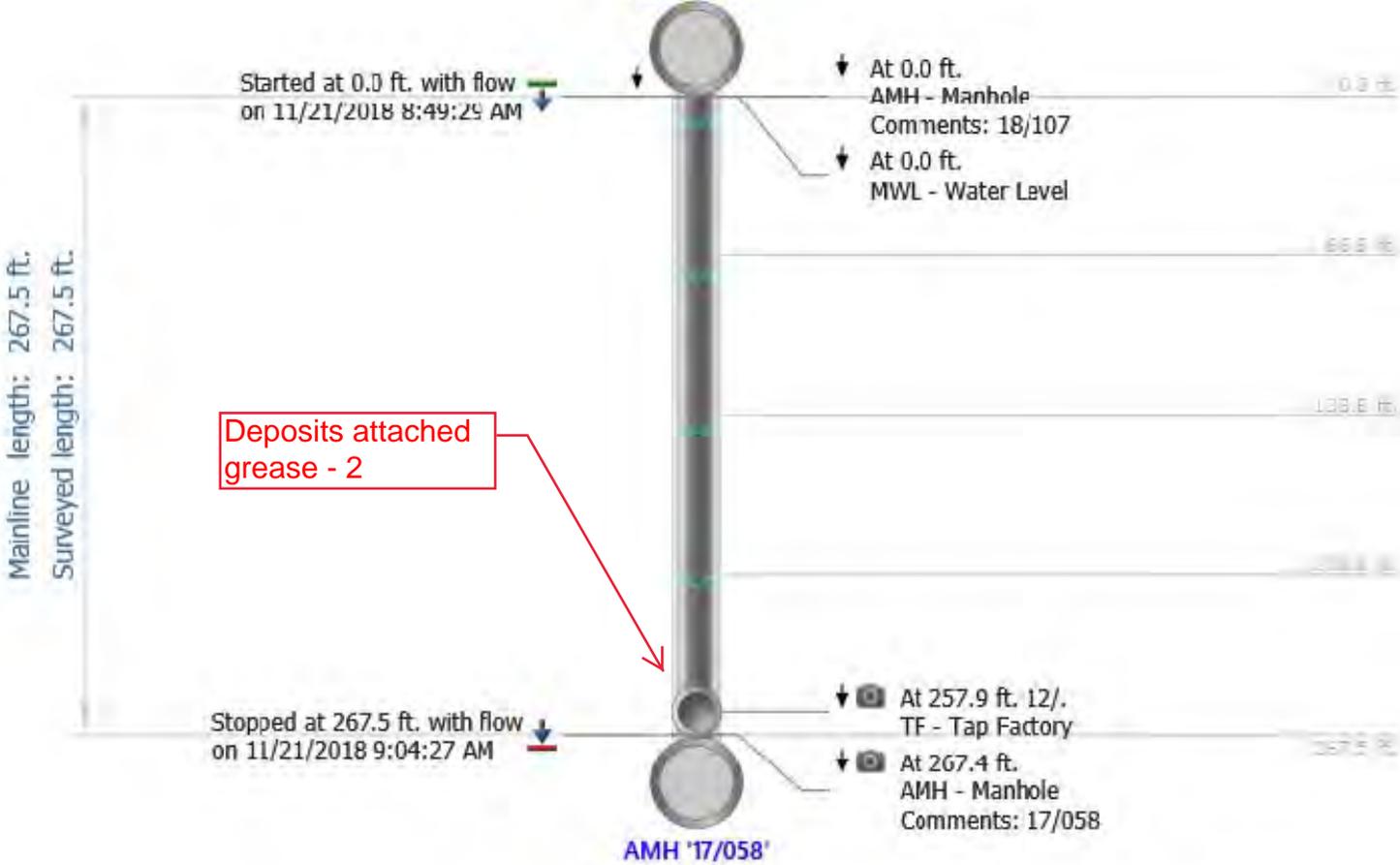
Start date/time: <b>20181121 08:49</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>18/107-174/058</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>OAK ST</b>	Location code: <b>Easement/Right of way</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>18/107</b>	Downstream MH No: <b>17/058</b>	Direction: <b>D</b>	Total length: <b>267.5 ft.</b>	Length surveyed: <b>267.5 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>15 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:			O&M:			Overall:							
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							

2100

AMH '18/107'



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>OAK ST</b>	Start date/time: <b>20181121 09:04</b>	Pipe segment ref.: <b>18/107-174/058</b>
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Photo: 18\_107-17\_058-20181121-090320.JPG  
At: 257.9 ft. 12/. TF - Tap Factory  
Joint: No



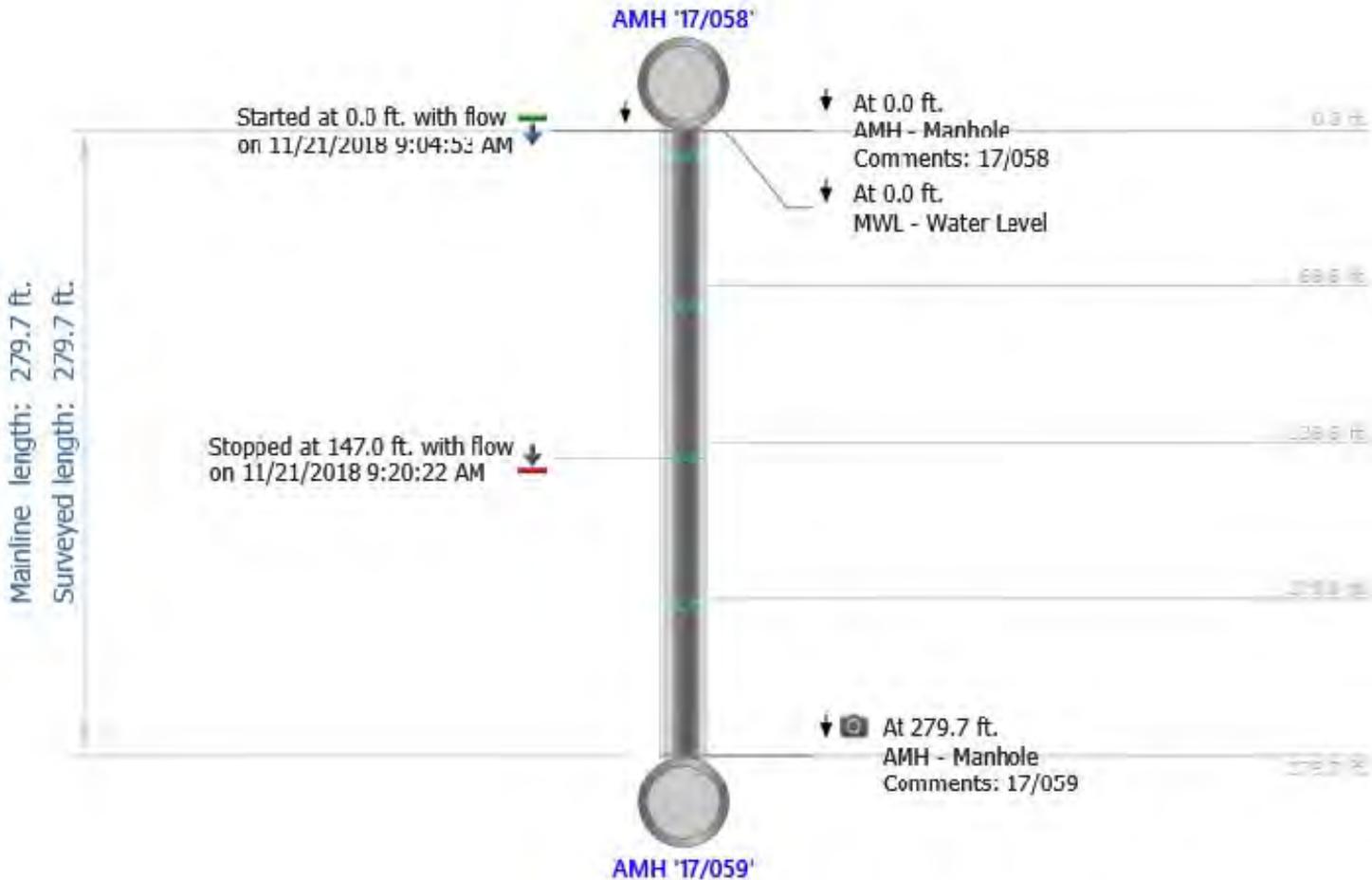
Photo: 18\_107-17\_058-20181121-090356.JPG  
At: 267.4 ft. AMH - Manhole  
Joint: No 17/058

# NWMCC INSPECTION REPORT

Start date/time: <b>20181121 09:04</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>17/058-17/059</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>OAK ST</b>	Location code: <b>Easement/Right of way</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>17/058</b>	Downstream MH No: <b>17/059</b>	Direction: <b>D</b>	Total length: <b>279.7 ft.</b>	Length surveyed: <b>279.7 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>15 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD MA</b>	Street: <b>OAK ST</b>	Start date/time: <b>20181113 14:33</b>	Pipe segment ref.: <b>17/058-17/059</b>
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Photo: 17\_058-17\_059-20181121-091627.JPG

At: 279.7 ft. AMH - Manhole

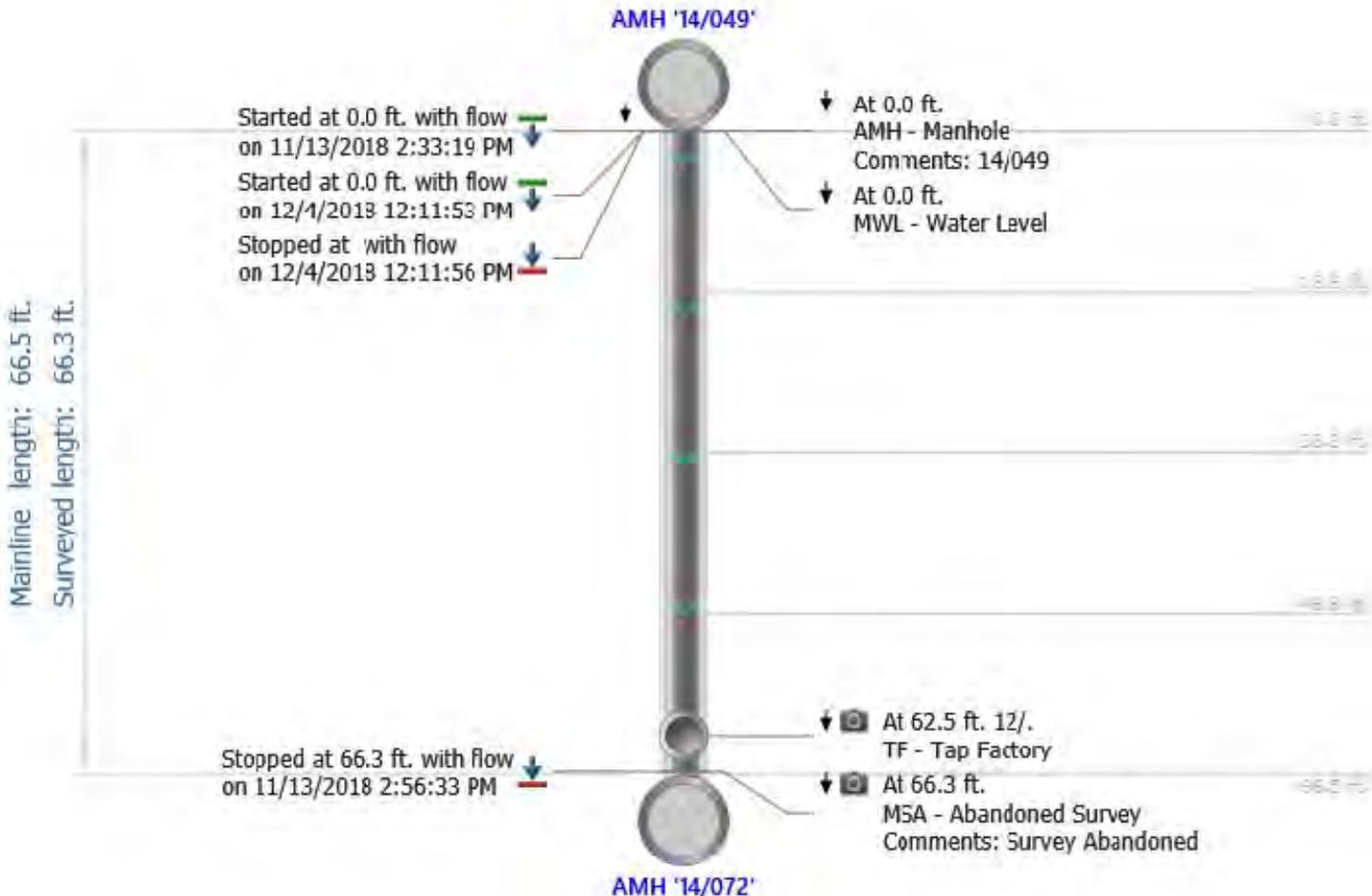
Joint: No 17/059

# NWMCC INSPECTION REPORT

Start date/time: <b>20181113 14:33</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/049-14/072</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>LAKE SHORE RD</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/049</b>	Downstream MH No: <b>14/072</b>	Direction: <b>D</b>	Total length: <b>66.5 ft.</b>	Length surveyed: <b>66.3 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>10 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>LAKE SHORE RD</b>	Start date/time: <b>20181115 09:25</b>	Pipe segment ref.: <b>14/049-14/072</b>
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Photo: 14\_049-14\_072-20181113-145545.JPG

At: 62.5 ft. 12/. TF - Tap Factory

Joint: No



Photo: 14\_049-14\_072-20181113-094604.JPG

At: 66.3 ft. MSA - Abandoned Survey

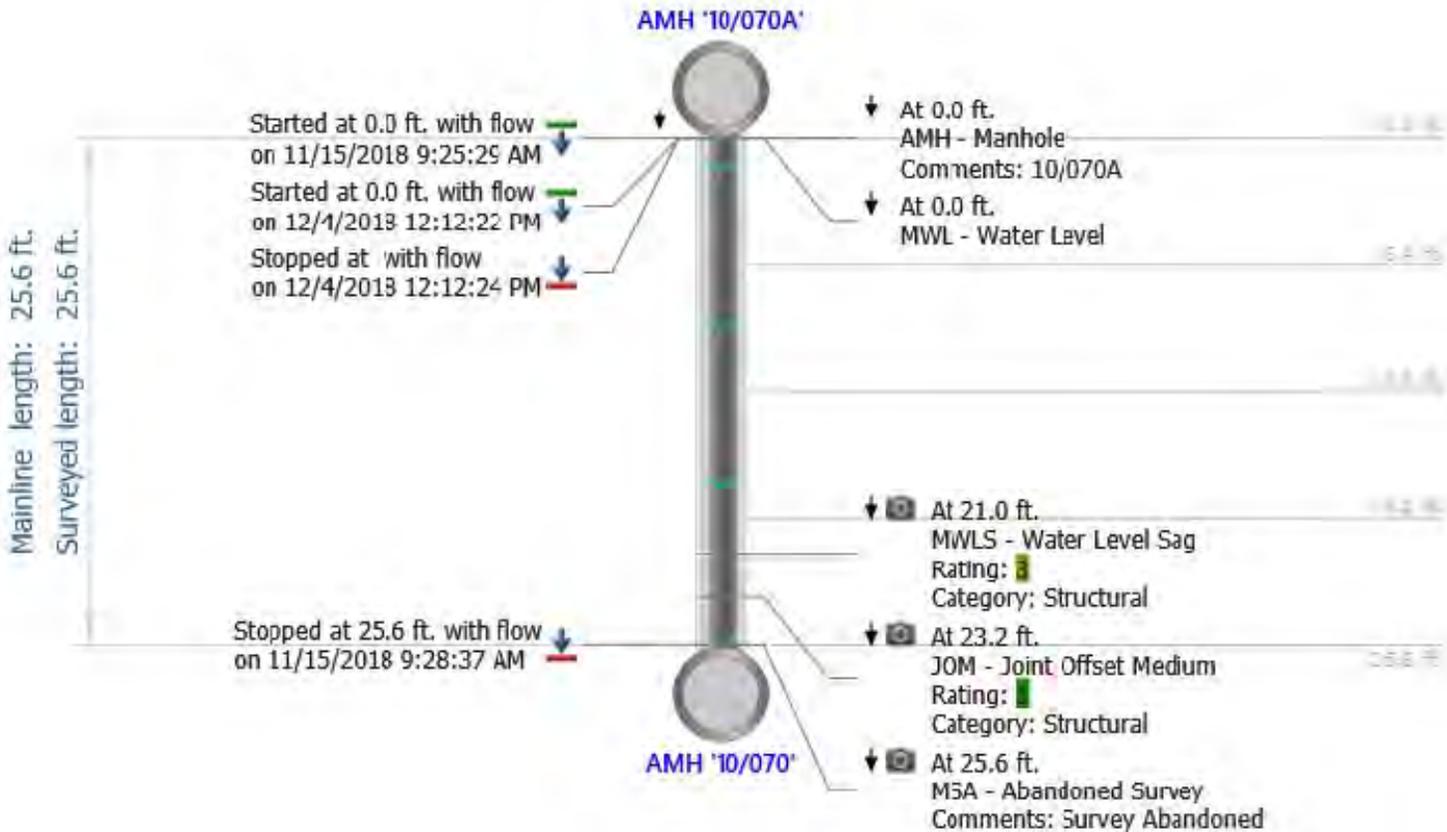
Joint: No Survey Abandoned

# NWMCC INSPECTION REPORT

Start date/time: <b>20181115 09:25</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/070A-10/070</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DERRFIELD AVE</b>	Location code: <b>Parking lot</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>10/070A</b>	Downstream MH No: <b>10/070</b>	Direction: <b>D</b>	Total length: <b>25.6 ft.</b>	Length surveyed: <b>25.6 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Polyvinyl Chloride</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	1	4	3111	2.00	0	0	0	0000	0.00	4	2.00		
2	0	0				0	0							
3	0	3				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DERRFIELD AVE</b>	Start date/time: <b>20181116 10:15</b>	Pipe segment ref.: <b>10/070A-10/070</b>
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Photo: 10\_070A-10\_070-20181115-092723.JPG  
At: 21 ft. MWLS - Water Level Sag  
Joint: No 50 %



Photo: 10\_070A-10\_070-20181115-092752.JPG  
At: 23.2 ft. JOM - Joint Offset Medium  
Joint: No



Photo: 10\_070A-10\_070-20181115-100101.JPG  
At: 25.6 ft. MSA - Abandoned Survey  
Joint: No Survey Abandoned

# NWMCC INSPECTION REPORT

Start date/time: <b>20181116 10:15</b>	Weather: <b>Light Rain</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>14/018-14/017</b>	
Owner:	Customer:	Pre-cleaning: <b>Jetting</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD MA</b>	Street: <b>NORFOLK AVE</b>	Location code: <b>Light highway</b>	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control: <b>Not Controlled</b>
Upstream MH No: <b>14/017</b>	Downstream MH No: <b>14/018</b>	Direction: <b>U</b>	Total length: <b>163.5 ft.</b>	Length surveyed: <b>43.5 ft.</b>	
Purpose: <b>Infiltration/Inflow Investigation</b>	Pipe joint length:	Height: <b>8 in.</b>	Material: <b>Asbestos Cement</b>	Additional info:	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City:

**WESTWOOD MA**

Street:

**NORFOLK AVE**

Start date/time:

**20181204 13:59**

Pipe segment ref.:

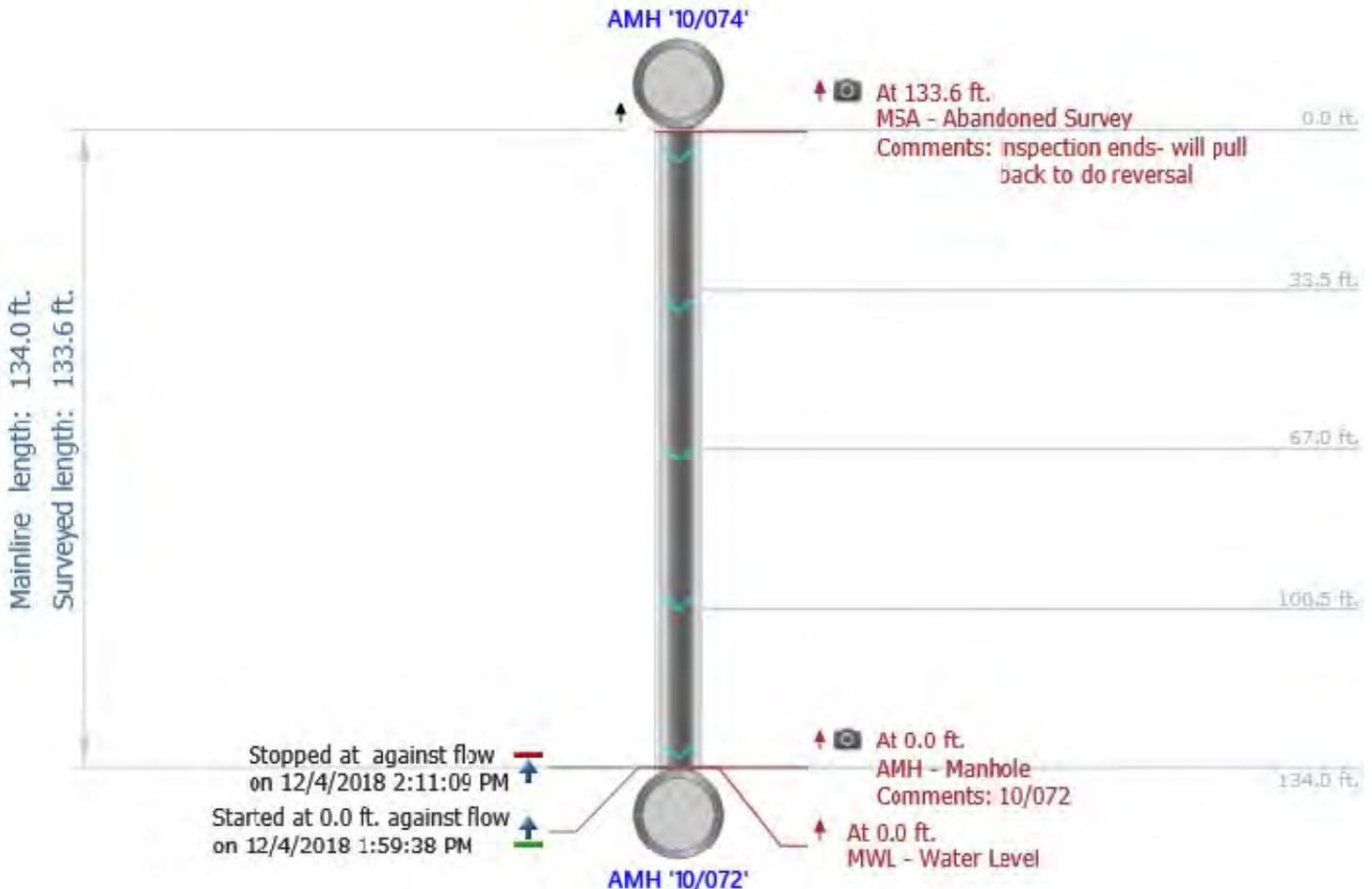
**14/018-14/017**

# NWMCC INSPECTION REPORT

Start date/time: <b>20181204 13:59</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10-072-10-074</b>	
Owner:	Customer:	Pre-cleaning: <b>No Pre-Cleaning</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Location code:	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control:
Upstream MH No: <b>10/074</b>	Downstream MH No: <b>10/072</b>	Direction: <b>U</b>	Total length: <b>134.0 ft.</b>	Length surveyed: <b>133.6 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>5 in.</b>	Material: <b>Asbestos Cement</b>	Additional info: <b>PUSH-CAM</b>	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD AVE</b>	Start date/time: <b>20181204 14:16</b>	Pipe segment ref.: <b>10-072-10-074</b>
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Photo: 10\_074-10\_072-20181204-140255.JPG

At: 0 ft. AMH - Manhole

Joint: No 10/072



Photo: 10\_074-10\_072-20181204-140818.JPG

At: 133.6 ft. MSA - Abandoned Survey

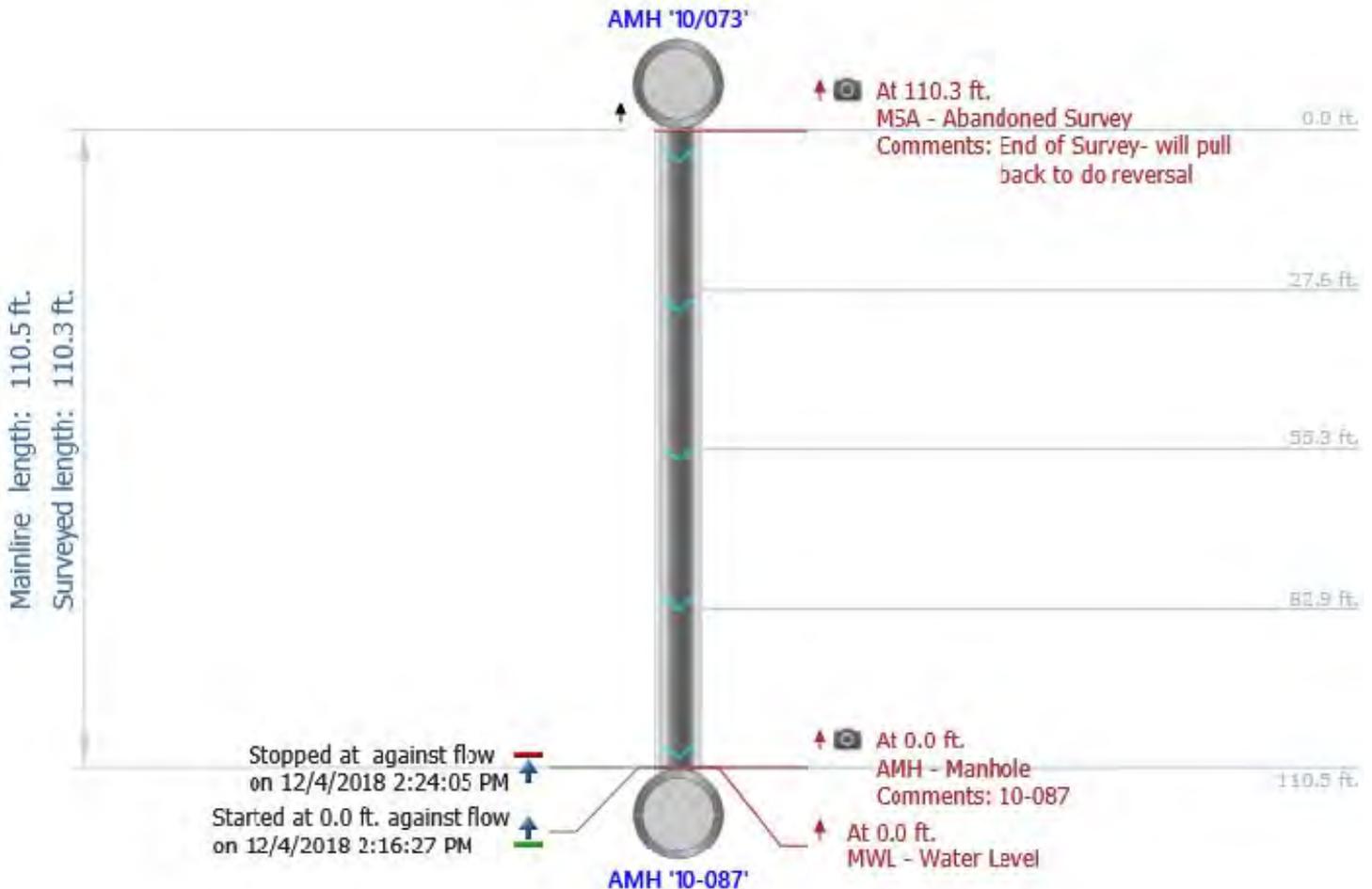
Joint: No inspection ends- will pull back to do reversal

# NWMCC INSPECTION REPORT

Start date/time: <b>20181204 14:16</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/073-10/087</b>	
Owner:	Customer:	Pre-cleaning: <b>No Pre-Cleaning</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFEILD AVE</b>	Location code:	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control:
Upstream MH No: <b>10/073</b>	Downstream MH No: <b>10-087</b>	Direction: <b>U</b>	Total length: <b>110.5 ft.</b>	Length surveyed: <b>110.3 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>5 in.</b>	Material: <b>Asbestos Cement</b>	Additional info: <b>PUSH-CAM</b>	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFEILD AVE</b>	Start date/time: <b>20181204 14:26</b>	Pipe segment ref.: <b>10/073-10/087</b>
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Photo: 10\_074-10\_075-20181204-142834.JPG

At: 0 ft. AMH - Manhole

Joint: No 10/075



Photo: 10\_074-10\_075-20181204-142907.JPG

At: 10.5 ft. AMH - Manhole

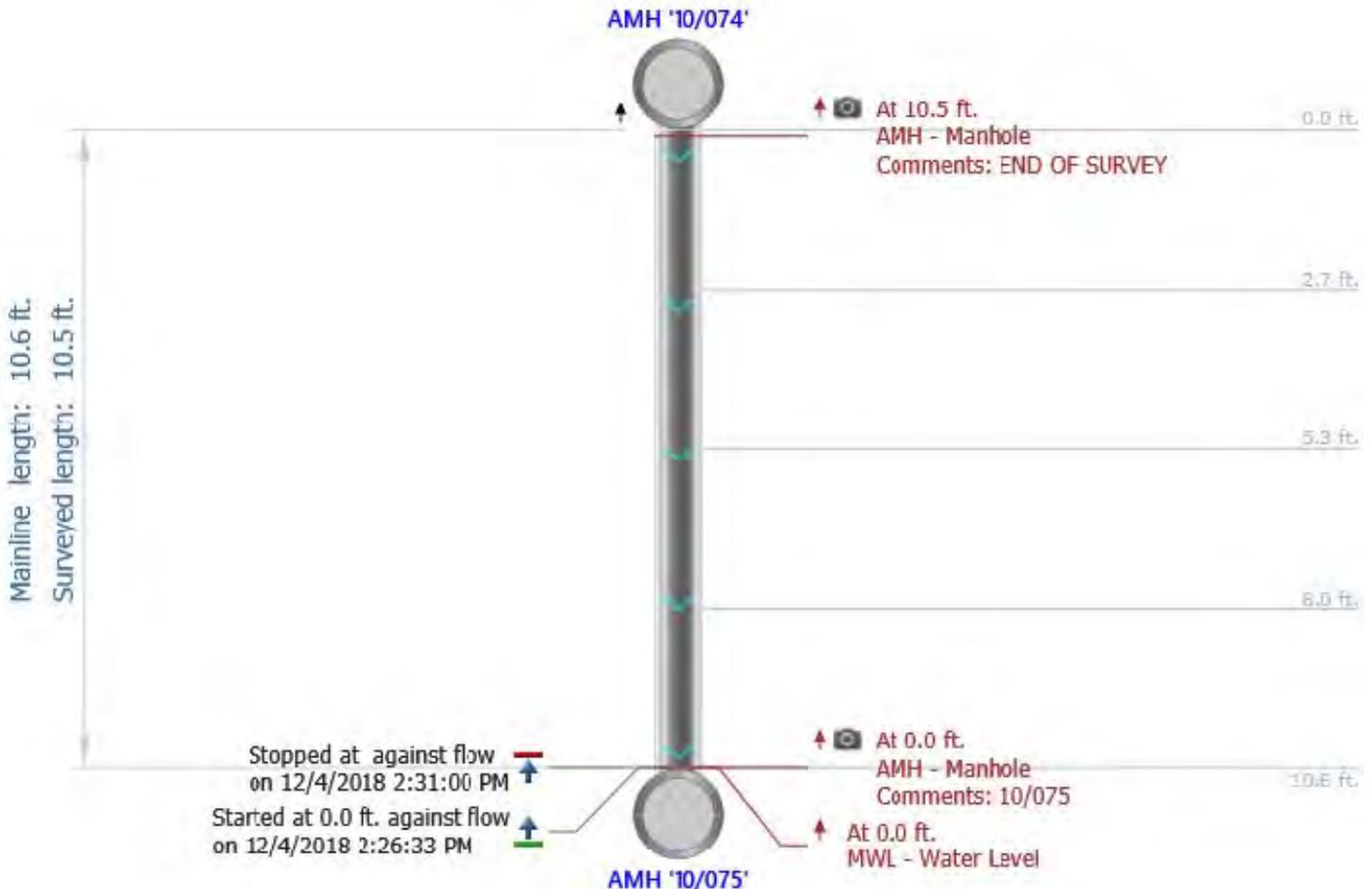
Joint: No END OF SURVEY

# NWMCC INSPECTION REPORT

Start date/time: <b>20181204 14:26</b>	Weather: <b>Dry</b>	Surveyed by: <b>G. Deluca</b>	Certificate number: <b>U-311-12216</b>	Pipe segment ref.: <b>10/074-10/075</b>	
Owner:	Customer:	Pre-cleaning: <b>No Pre-Cleaning</b>	Date cleaned:	Project name: <b>ENV017-7</b>	
City: <b>WESTWOOD</b>	Street: <b>DEERFIELD</b>	Location code:	Sewer use: <b>Sanitary</b>	Drainage area:	Flow control:
Upstream MH No: <b>10/074</b>	Downstream MH No: <b>10/075</b>	Direction: <b>U</b>	Total length: <b>10.6 ft.</b>	Length surveyed: <b>10.5 ft.</b>	
Purpose: <b>Maintenance Related</b>	Pipe joint length:	Height: <b>5 in.</b>	Material: <b>Asbestos Cement</b>	Additional info: <b>PUSH-CAM</b>	

## Pipe Ratings

Grade	Structural:					O&M:					Overall:			
	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Defects	Segment Grade	Pipe Rating	Quick Rating	Pipe Rating Index	Pipe Rating	Pipe Rating Index	LoF	Risk
1	0	0	0	0000	0.00	0	0	0	0000	0.00	0	0.00		
2	0	0				0	0							
3	0	0				0	0							
4	0	0				0	0							
5	0	0				0	0							



# NWMCC INSPECTION REPORT

## Inspection Photos

City: <b>WESTWOOD</b>	Street: <b>DEERFIELD</b>	Start date/time: <b>20181204 14:26</b>	Pipe segment ref.: <b>10/074-10/075</b>
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Photo: 10\_074-10\_075-20181204-142834.JPG  
At: 0 ft. AMH - Manhole  
Joint: No 10/075



Photo: 10\_074-10\_075-20181204-142907.JPG  
At: 10.5 ft. AMH - Manhole  
Joint: No END OF SURVEY



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*APPENDIX C*

*MANHOLE INSPECTION  
REPORTS*

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## 10/072

Created	2018-11-02 17:35:15 UTC by Vern Lincoln
Updated	2018-11-15 15:08:36 UTC by EPField 05
Location	42.226999576448, -71.2194899061406
Inspection Status	<span style="color: green;">■</span> Inspection Complete

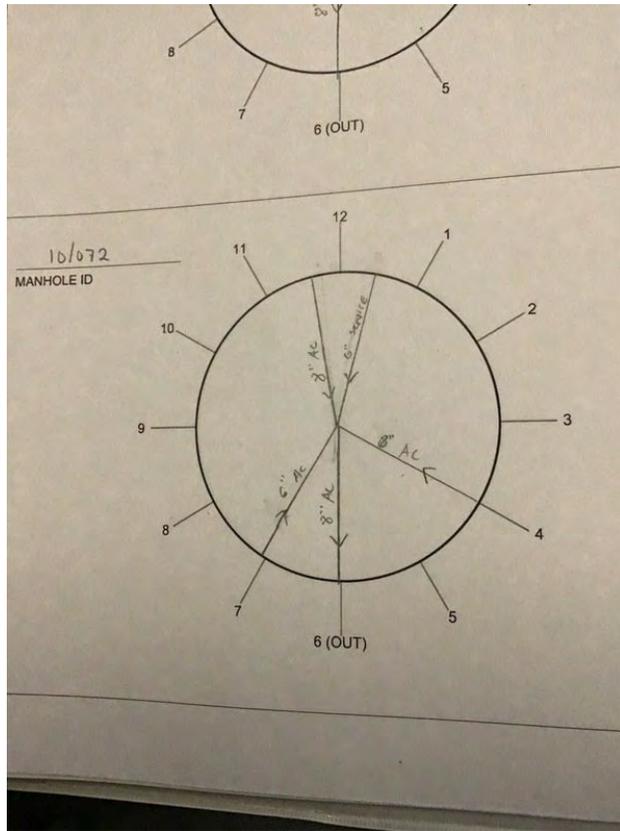
### Manhole Information

Manhole ID Number	10/072
Street	DEERFIELD SCHOOL
Address	66-88 Deerfield Ave Westwood, MA 02090
Surveyor	Bill Watts
Date	2018-11-15
Time	09:52
Rim to Invert	8.83
Inner Diameter	4
Material	Concrete
Cover Condition	Sound
Frame Condition	Sound

### Infiltration, Runner, Barrel

Defect Type	Infiltration, Runner, Barrel
Location	Bench
Defect Depth Start	8.33
Defect Clock Start	1
Defect Comment	Crack in brick of bench that water is coming out of
Additional Comments	Brick bench is overall in poor condition

Sketch Photos



Overview Photos



## 10/077

Created	2018-11-02 17:35:15 UTC by Vern Lincoln
Updated	2018-11-15 16:00:02 UTC by EPField 05
Location	42.2260492893212, -71.2187402577221
Inspection Status	<span style="color: green;">■</span> Inspection Complete

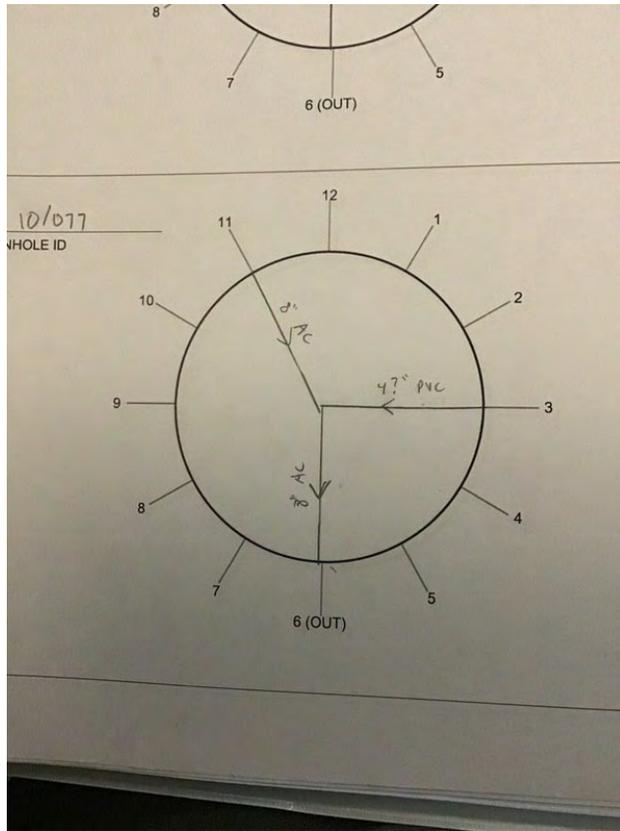
### Manhole Information

Manhole ID Number	10/077
Street	DEERFIELD AVE
Address	54-64 Deerfield Ave Westwood, MA 02090
Surveyor	Bill Watts
Date	2018-11-15
Time	10:52
Rim to Invert	8.66
Inner Diameter	4
Material	Concrete
Cover Condition	Sound
Frame Condition	Sound

### Infiltration, Runner, Barrel

Defect Type	Infiltration, Runner, Barrel
Location	Bench
Defect Depth Start	8.08
Defect Clock Start	2
Defect Comment	Leaking where wall meets bench

Sketch Photos



Overview Photos



## 10/020

Created	2018-11-02 17:35:15 UTC by Vern Lincoln
Updated	2018-11-30 15:25:18 UTC by EPField 05
Location	42.2246010761829, -71.2208942781446
Inspection Status	<span style="color: green;">■</span> Inspection Complete

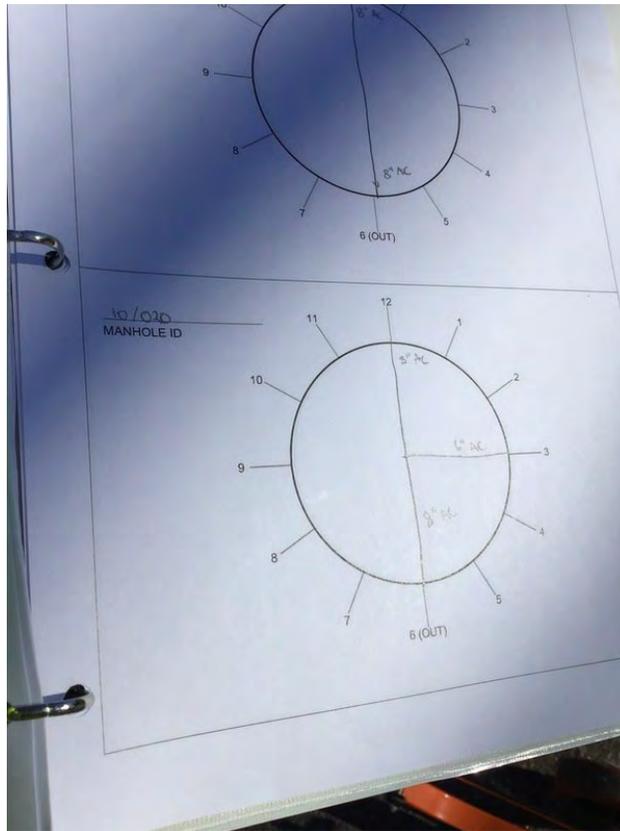
### Manhole Information

Manhole ID Number	10/020
Street	GAY ST
Address	39 Gay St Westwood, MA 02090
Surveyor	Bill Watts
Date	2018-11-30
Time	10:20
Rim to Invert	9.5
Inner Diameter	4
Material	Concrete
Cover Condition	Sound
Frame Condition	Sound

### Infiltration, Dripper, Connection

Defect Type	Infiltration, Dripper, Connection
Location	Channel
Defect Depth Start	8.83
Defect Clock Start	3
Defect Comment	Infiltration at pipe from Russell Ave, detected with cctv

Sketch Photos



Overview Photos



## 12/116

Created	2018-11-02 17:36:01 UTC by Vern Lincoln
Updated	2018-11-28 15:57:13 UTC by EPField 05
Location	42.2242159647872, -71.2256752142665
Inspection Status	<span style="color: green;">■</span> Inspection Complete

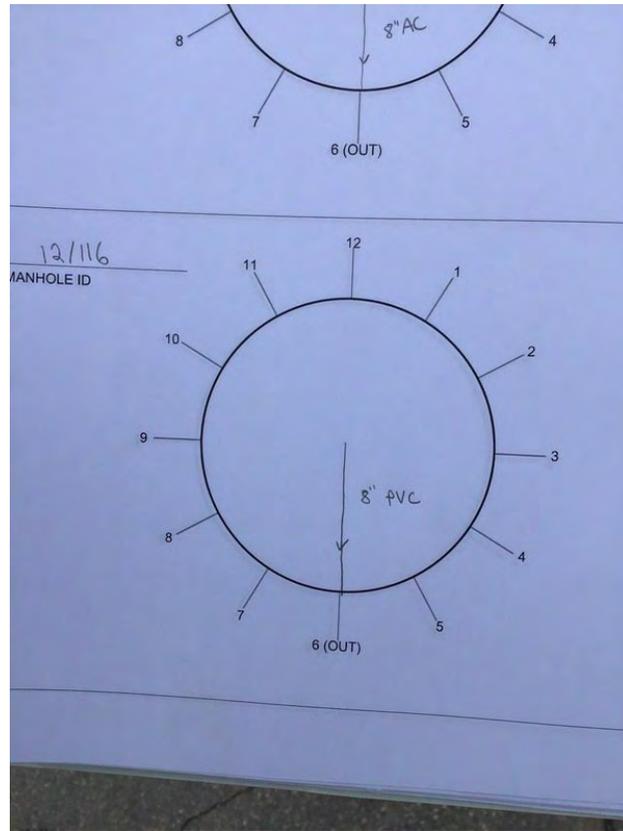
### Manhole Information

Manhole ID Number	12/116
Street	OXFORD TER
Address	17 Oxford Ter Westwood, MA 02090
Surveyor	Bill Watts
Date	2018-11-28
Time	10:48
Rim to Invert	8.83
Inner Diameter	4
Material	Concrete
Cover Condition	Sound
Frame Condition	Sound

### Hole, Void Visible

Defect Type	Hole, Void Visible
Location	Wall
Defect Depth Start	8.67
Defect Clock Start	5
Defect Comment	Water consistently flowing out 1" hole

Sketch Photos



Overview Photos



## 14/047

Created	2018-11-02 17:36:30 UTC by Vern Lincoln
Updated	2018-11-29 17:57:57 UTC by EPField 05
Location	42.2102034806799, -71.2295275925194
Inspection Status	<span style="color: green;">■</span> Inspection Complete

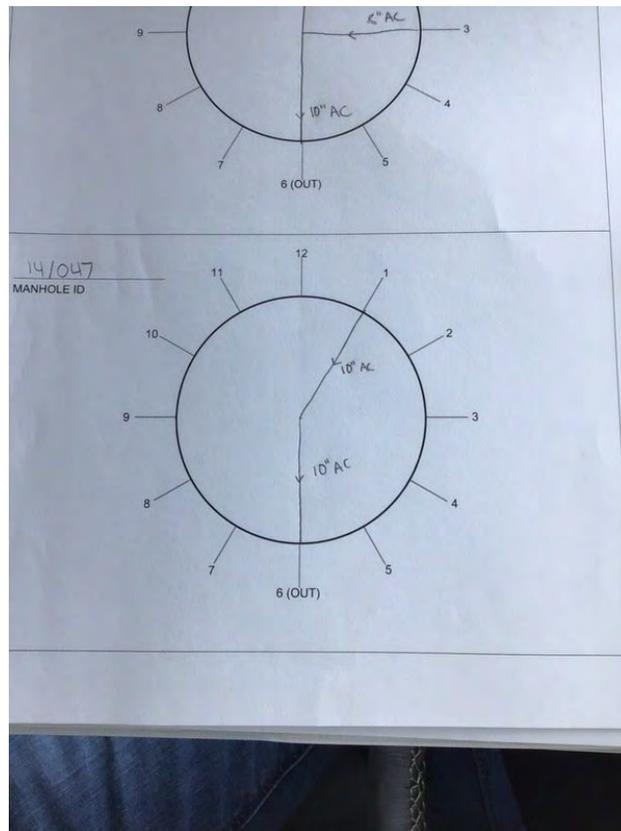
### Manhole Information

Manhole ID Number	14/047
Street	LAKESHORE DR
Address	111 Lake Shore Dr Westwood, MA 02090
Surveyor	Bill Watts
Date	2018-11-29
Time	11:22
Rim to Invert	13.08
Inner Diameter	4
Material	Concrete
Cover Condition	Sound
Frame Condition	Sound

### Hole, Void Visible

Defect Type	Hole, Void Visible
Location	Wall
Defect Depth Start	12.33
Defect Clock Start	1
Defect Comment	No signs of infiltration

Sketch Photos



Overview Photos





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*APPENDIX D*

*SECTIONS OF MASSACHUSETTS GENERAL LAWS*

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## **CHAPTER 30. GENERAL PROVISIONS RELATIVE TO STATE DEPARTMENTS, COMMISSIONS, OFFICERS AND EMPLOYEES**

### **Chapter 30: Section 39F. Construction contracts; assignment and subrogation; subcontractor defined; enforcement of claim for direct payment; deposit, reduction of disputed amounts**

Section 39F. (1) Every contract awarded pursuant to sections forty-four A to L, inclusive, of chapter one hundred and forty-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

(a) Forthwith after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) Not later than the sixty-fifth day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the

subcontractor may demand direct payment of that balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by decree of a court of competent jurisdiction.

(g) All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the general contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors.

All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of such payment.

(h) The awarding authority shall deduct from payments to a general contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

(i) If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by following the procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g) and (h).

(2) Any assignment by a subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of section twenty-nine of chapter one hundred forty-nine shall be invalid. The assignment and subrogation rights of the surety to amounts included in a demand for direct payment which are in the possession of the awarding authority or which are on deposit pursuant to subparagraph (f) of paragraph (1) shall be subordinate to the rights of all subcontractors who are entitled to be paid under this section and who have not been paid in full.

(3) "Subcontractor" as used in this section (i) for contracts awarded as provided in sections forty-four A to forty-four H, inclusive, of chapter one hundred forty-nine shall mean a person who files a sub-bid and receives a subcontract as a result of that filed sub-bid or who is approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, (ii) for contracts awarded as provided in paragraph (a) of section thirty-nine M of chapter thirty shall mean a person approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, and (iii) for contracts with the commonwealth not awarded as provided in forty-four A to forty-four H, inclusive, of chapter one hundred forty-nine shall also mean a person contracting with the general contractor to supply materials used or employed in a public works project for a price in excess of five thousand dollars.

(4) A general contractor or a subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposited as provided in subparagraph (f) of

paragraph 1 by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the awarding authority and the general contractor shall not be a necessary party. Upon motion of any party the court shall advance for speedy trial any petition filed as provided in this paragraph. Sections fifty-nine and fifty-nine B of chapter two hundred thirty-one shall apply to such petitions. The court shall enter an interlocutory decree upon which execution shall issue for any part of a claim found due pursuant to sections fifty-nine and fifty-nine B and, upon motion of any party, shall advance for speedy trial the petition to collect the remainder of the claim. Any party aggrieved by such interlocutory decree shall have the right to appeal therefrom as from a final decree. The court shall not consolidate for trial the petition of any subcontractor with the petition of one or more subcontractors or the same general contract unless the court finds that a substantial portion of the evidence of the same events during the course of construction (other than the fact that the claims sought to be consolidated arise under the same general contract) is applicable to the petitions sought to be consolidated and that such consolidation will prevent unnecessary duplication of evidence. A decree in any such proceeding shall not include interest on the disputed amount deposited in excess of the interest earned for the period of any such deposit. No person except a subcontractor filing a demand for direct payment for which no funds due the general contractor are available for direct payment shall have a right to file a petition in court of equity against the awarding authority claiming a demand for direct payment is premature and such subcontractor must file the petition before the awarding authority has made a direct payment to the subcontractor and has made a deposit of the disputed portion as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1).

(5) In any petition to collect any claim for which a subcontractor has filed a demand for direct payment the court shall, upon motion of the general contractor, reduce by the amount of any deposit of a disputed amount by the awarding authority as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1) any amount held under a trustee writ or pursuant to a restraining order or injunction.

### **Chapter 30: Section 39K. Public building construction contracts; payments**

Section 39K. Every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, shall contain the following paragraph:— Within fifteen days (30 days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work

performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances, but less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five per cent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one per cent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate than charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

The awarding authority may make changes in any periodic estimate submitted by the contractor and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven days after receipt, return to the contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction,

reconstruction, alteration, remodeling, repair or demolition of any public building to which this section applies.

All periodic estimates shall be submitted to the awarding authority, or to its designee as set forth in writing to the contractor, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed subtrade and each sub-subtrade listed in sub-bid form as required by specifications and a column listing the amount paid to each subcontractor and sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

A certificate of the architect to the effect that the contractor has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.

Notwithstanding the provisions of this section, at any time after the value of the work remaining to be done is, in the estimation of the awarding authority, less than 1 per cent of the adjusted contract price, or the awarding authority has determined that the contractor has substantially completed the work and the awarding authority has taken possession for occupancy, the awarding authority may send to the general contractor by certified mail, return receipt requested, a complete and final list of all incomplete and unsatisfactory work items, including, for each item on the list, a good faith estimate of the fair and reasonable cost of completing such item. The general contractor shall then complete all such work items within 30 days of receipt of such list or before the contract completion date, whichever is later. If the general contractor fails to complete all incomplete and unsatisfactory work items within 45 days after receipt of such items furnished by the awarding authority or before the contract completion date, whichever is later, subsequent to an additional 14 days' written notice to the general contractor by certified mail, return receipt requested, the awarding authority may terminate the contract and complete the incomplete and unsatisfactory work items and charge the cost of same to the general contractor and such termination shall be without prejudice to any other rights or remedies the awarding authority may have under the contract. The awarding authority shall note any such termination in the evaluation form to be filed by the awarding authority pursuant to the provisions of section 44D of chapter 149.

### **Chapter 30: Section 39N. Construction contracts; equitable adjustment in contract price for differing subsurface or latent physical conditions**

Section 39N. Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M of chapter thirty shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or

regulations in conformity with that paragraph concerning the filing, investigation and settlement of such claims:

If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.

**Chapter 30: Section 39O. Contracts for construction and materials; suspension, delay or interruption due to order of awarding authority; adjustment in contract price; written claim**

Section 39O. Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act

to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim.

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*APPENDIX E*

*MWRA DISCHARGE PERMIT*

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**MASSACHUSETTS WATER RESOURCES AUTHORITY  
TOXIC REDUCTION AND CONTROL  
2 GRIFFIN WAY  
CHELSEA, MASSACHUSETTS 02150-3334**

**One-Time-Only Discharge Request**

**To discharge from a Cured-in-Place Pipe (CIPP) Lining process as part of a sewer rehabilitation project into the Municipality or Authority sewerage system**

*Please, allow three weeks for processing this request*

Name of Municipality: Town of Westwood, MA

Project Name: FY19 Sewer System Rehabilitation

**Name of the person from the Municipality to contact concerning the information provided herein.** *(Please, sign the signature page of this questionnaire, without a signature from the Municipality the MWRA will not be able to process this request.)*

Name: Todd S. Korchin

Title: Director, Department of Public Works

Address: 50 Carby Street, Westwood, MA 02090

Telephone No.: 781 251-2578 Facsimile No.: \_\_\_\_\_

E Mail: tkorchin@townhall.westwood.ma.us

**Contractor designated by the Municipality to conduct the project.**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Facsimile No.: \_\_\_\_\_

E Mail: \_\_\_\_\_

MWRA Permit Number: \_\_\_\_\_

---

**Person designated by the Municipality to receive correspondence from the MWRA regarding this project.**

Name: Ryan J. Paul, P.E.

Title: Senior Project Engineer

Company: Environmental Partners Group, Inc.

Address: 1900 Crown Colony Drive, STE 402, Quincy MA 02169

Telephone No.: 617-657-0200 Facsimile No.:

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**GENERAL INFORMATION:**

**Please answer all of the questions**

*(If more space is needed, attach additional pages).*

*a) Cured-in-Place Pipe (CIPP)Liner is defined as a woven or non-woven or combination of woven and non-woven material surrounded or impregnated with resin which when installed and processed, forms to the shape and size of the interior walls of the host conduit as defined in ASTM Standard F1216.*

*b) Host Conduit is defined as the existing pipeline to be rehabilitated by CIPP Lining. The host conduit for this project must be indicated on the Contract Drawings.*

**1. Indicate the project scope. Provide pipe location and pipe length and diameter of each pipe to be treated. Use a pipe identification naming scheme that references the drawings and that will be recognizable by all parties. Identify all of the connection (using the name provide in Attachment A of the MWRA Municipal Discharge Permit) of the receiving MWRA interceptor and submit a diagram and drawing that will trace the flow from the project pipe to the MWRA interceptor.**

Project scope and location: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

<b>Pipe Location</b> <b>Sewer Connection of the receiving MWRA interceptor</b> <i>(Provide name in Attachment A of the MWRA Municipal Discharge Permit)</i>	<b>Pipe Length</b> <b>(Feet)</b>	<b>Pipe Diameter</b> <b>(Inches)</b>
_____ _____	_____ _____	_____ _____

2. Indicate how you will conduct the pipe cleaning process prior to the lining process.

3. Indicate the proposed installation method that you will employ for the CIPP liner into the existing pipe.

4. Indicate all of the appropriate Federal, state, and local permits and approvals obtained for this CIPP project.

5. Submit the Materials Safety Data Sheet(s) for the CIPP lining materials.

6. Indicate all source(s) of wastewater curing/lining process wastewater, cooling water, rinse water, pre-clean water, post-clean water, and, etc to be discharged into MWRA sewer system from this project.

Wastewater Type(s)	Source(s)
<b>Curing water</b>	<hr/> <hr/>
<b>Cooling water</b>	<hr/> <hr/>
<b>Rinsing water</b>	<hr/> <hr/>
<b>Pre-cleaning water</b>	<hr/> <hr/>
<b>Post-cleaning water</b>	<hr/> <hr/>
<b>Other (Describe)</b> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
<b>Other (Describe)</b> <hr/> <hr/>	<hr/> <hr/>

7. Describe the proposed pretreatment for the wastewater curing\lining process wastewater, cooling water, rinse water, pre-clean water, post-clean water, and, etc and provide equipment/flow diagram(s).

8. Indicate the storage method for treated and/or untreated curing\lining process wastewater, cooling water, rinse water, pre-clean water, post-clean water, etc, and provide its capacity in gallons prior to discharge into the MWRA sanitary sewer system.

Wastewater Type(s)	Storage method prior to discharge into MWRA sanitary sewer system.	Storage capacity (gallons)
Curing\lining process water		
Cooling water		
Rinsing water		
Pre-cleaning water		
Post-cleaning water		
<b>Other (<i>Describe</i>)</b> _____ _____		

9. Indicate proposed volume of wastewater (curing/lining process wastewater, cooling water, rinse water, pre-clean water, post-clean water, and, etc..) flow into the MWRA sewer system per day gallons per day (GPD).

Wastewater Type(s)	Volume(GPD) Discharge into MWRA sanitary sewer system	Pretreatment Yes/No	Pretreatment Type(s)
Curing/lining process water		Yes <input type="checkbox"/> No <input type="checkbox"/>	
Cooling water		Yes <input type="checkbox"/> No <input type="checkbox"/>	
Rinsing water		Yes <input type="checkbox"/> No <input type="checkbox"/>	
Pre-cleaning water		Yes <input type="checkbox"/> No <input type="checkbox"/>	
Post-cleaning water		Yes <input type="checkbox"/> No <input type="checkbox"/>	
Other ( <i>Describe</i> ) _____ _____		Yes <input type="checkbox"/> No <input type="checkbox"/>	

10. Describe other method(s) for the collection and disposal for the curing\lining process wastewater, cooling water, and/or rinse water if pretreatment is not viable, and the discharge to the MWRA sanitary sewer system is not authorized.

11. Indicate if solids will be generated from the treatment process, including solidified styrene and other solid byproducts. All solids must be removed from the cure water and subsequent cooling and rinsing operations, prior to discharge into MWRA sewer system, pursuant 360 C.M.R. 10.023(8).

12. Indicate proposed date(s) of discharge into the MWRA sewer system.

**Anticipated first day of discharge:** \_\_\_\_\_

**Anticipated last day of discharge:** \_\_\_\_\_

**Proposed hours of discharge into MWRA sewer system:** \_\_\_\_\_

13. Provide the construction schedule for the project including specific proposed date(s) and start and end times. If specific dates are not known, please use Day 1 (one) for taking the pipe out of service and count forward from there. If individual operating time will take less than twenty-four hours, specify start and end times in military time.

Action(s)	Date (mm/dd/yyyy)	Operating Time (hrs:min:sec)	Comments(s)
Taking pipe out of service			
Pre-cleaning of pipe (Start)			
Pre-cleaning of pipe (End)			
Line installation (Start)			
Line installation (End)			
Curing process (Start)			
Curing process (End)			
Cooling process (Start)			
Cooling process (End)			
Rinsing (Start)			
Rinsing (End)			
Return pipe to service			
Other ( <i>Describe</i> )			

14. Indicate how you will ensure that sufficient capacity (gallons) at the construction zone in the event of a storm event. Describe how flow through the pipe will be diverted around the construction zone and provide rerouting plans, and pipe blockage techniques that you will employ. Specify materials that will be used and storage measures that will be employed.

**15. CERTIFICATION STATEMENT AND SIGNATURE:**

The questionnaire for a One-Time-Only Discharge Request must be signed and dated by an authorized representative. If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the sewer system, a new authorization satisfying the requirements of this section must be submitted to the MWRA prior to or together with any reports to be signed by an authorized representative.

An authorized representative of a municipality includes:

- a) a responsible public official, including a Mayor, City Manager, Town Administrator, Chair of the Board of Selectman, District Manager, or any other person who performs similar policy or decision-making functions for the municipality, or the director, manager, or superintendent of the department responsible for operating or overseeing the operation of the sewer system, if authority to sign documents has been assigned or delegated to the individual in accordance with the municipality's procedures.
- b) the duly authorized representative of the individual designated in (a) of this section if:
  - i) the authorization is made in writing by the individual described in (a);
  - ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the sewer system from which the discharge originates, such as the position of superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the municipality;
  - iii) the written authorization is submitted to the MWRA.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the sewer system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Please Print Name of Authorized Representative

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**PLEASE, ALLOW THREE WEEKS FOR PROCESSING THIS REQUEST**  
*Do not alter this form*

To discharge wastewater from a sewer pipe lining/curing project into the Authority sewer system. Submit the completed form to:

Massachusetts Water Resources Authority  
Toxic Reduction and Control  
2 Griffin Way, Chelsea MA 02150-3334  
Attention: Kattia Thomas, Project Manager, Permitting

If you have any questions regarding the approval process, you may contact Kattia Thomas, at 617-305-5667.

ATTACHMENT B

MWRA ROOT CONTROL REQUEST PERMIT



MASSACHUSETTS WATER RESOURCES AUTHORITY  
TOXIC REDUCTION AND CONTROL  
2 GRIFFIN WAY  
CHELSEA, MASSACHUSETTS 02150-3334

Request To Conduct  
A Root Control Project

Name of Municipality: \_\_\_\_\_

Name of the person from the Municipality to contact concerning the information provided herein. *(Please, sign page 2 of this questionnaire, without a signature from the municipality the MWRA will not be able to process this request.)*

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Facsimile No.: \_\_\_\_\_

Person designated by the Municipality to receive correspondence from the MWRA regarding this project.

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Facsimile No.: \_\_\_\_\_

---

1. Provide a description of the project.

2. Indicate the location and length (linear feet) of pipe to be treated?  
*Provide street name(s) and provide a map if applicable.*

3. Indicate the name of the active ingredient that will be used each day.  
*Provide the MSDS(s) for the chemical(s) that will be used.*

4. Indicate the name and volume (gallons) of the solvent or water and the active ingredient to be used each day.

\_\_\_\_\_

Solvent Name (provide the name)

\_\_\_\_\_

Volume (gallons/day)

\_\_\_\_\_

Active Ingredient Name

\_\_\_\_\_

Volume (gallons/day)

5. The total pounds of solution (the active ingredient) to be used each day?

6. The total pounds of solution (the active ingredient) to be used for the entire project?

7. The total number of days the pipes will be treated?

Anticipated first day of the project: \_\_\_\_\_

Anticipated last day of the project: \_\_\_\_\_

8. The time of day for the treatment?

9. The amount of time (hours) the active ingredient will remain in the sewer pipe after the treatment process?

\_\_\_\_\_

Signature (Municipality)

\_\_\_\_\_

Date

**FAX this page to Kattia Thomas, Proj. Mgr, Permitting, TRAC, the fax number is 617-371-1604.**

PLEASE, ALLOW THREE WEEKS FOR PROCESSING THIS REQUEST

Submit your request for approval to use the foaming root control herbicide to Kattia Thomas, Project Manager, Permitting, Massachusetts Water Resources Authority, Toxic Reduction and Control, 2 Griffin Way, Chelsea MA 02150-3334. Also, you may fax the request to Ms. Thomas, the fax number is 617-371-1604.

If you have any questions regarding the approval process, you may contact Kattia Thomas, at 617-305-5667.