

RedZone  
ROBOTICS

Street:	West 39th Avenue		Flow Control:	Not Controlled	
City:	Hobart, IN		Year Renewed:		
Location:	Alley		Tape/Media #:		
Purpose:	Routine Assessment		Dia/Height:	10"	
Use:	Sanitary Sewage Pipe		Material:	VCP	
Drain Area:			Lining:	None	
Category:	NA				
Comment:					
Location Details:			Direction of Survey:	Upstream	
US MH:	M-503-022	DS MH:	M-503-023	Total Length Surveyed (ft):	145.7

O&M Index:	<b>2.00</b>	O&M Quick:	<b>4134</b>	O&M Rating:	<b>84.00</b>
Structural Index:	<b>2.71</b>	Structural Quick:	<b>4439</b>	Structural Rating:	<b>65.00</b>
Overall Index:	<b>2.26</b>	Overall Quick:	<b>453A</b>	Overall Rating:	<b>149.00</b>

**Thursday, December 30, 2021**

74.6	FM	Fracture Multiple	883	S 4
76.8	CS	Crack Spiral	0	S 2
77.8	TFD	Tap Factory Defective	2	M 3
78.0	FM	Fracture Multiple	34	S 4
84.9	SSS	Surface Damage Surface Spalling	118	S 2
85.4	TBI	Tap Break-in Intruding	134	M 2
92.1	JOM	Joint Offset Medium	176	S 3
97.7	SSS	Surface Damage Surface Spalling	232	S 2
103.8	TFC	Tap Factory Capped	276	NA
106.6	SSS	Surface Damage Surface Spalling	306	S 2
108.9	CM	Crack Multiple	349	S 3
112.3	MMC	Miscellaneous Material Change	400	NA
113.5	TF	Tap Factory	427	NA
117.0	MMC	Miscellaneous Material Change	485	NA
118.8	CM(S02)	Crack Multiple	532	S 3
118.8	RFJ	Roots Fine Joint	564	M 1
123.7	SSS	Surface Damage Surface Spalling	623	S 2
125.1	RFJ	Roots Fine Joint	660	M 1
127.3	B	Broken	701	S 4
127.3	RFJ	Roots Fine Joint	732	M 1
129.3	RFJ(S03)	Roots Fine Joint	778	M 1
136.4	TF	Tap Factory	842	NA
138.3	TFD	Tap Factory Defective	869	M 3
144.3	CM(F02)	Crack Multiple	924	S 3
144.3	RFJ(F03)	Roots Fine Joint	939	M 1
144.3	DSF(F01)	Deposits Settled Fine	947	M 2
145.0	RBJ	Roots Ball Joint	973	M 4
145.7	MSA	Miscellaneous Survey Abandoned	989	NA

M-503-022



Code: **AMH**  
Description: **Manhole**

Distance (ft): **.0**  
Structural Grade: **0**  
O&M Grade: **0**  
Clock Start/From:  
Clock To:  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **NO**  
Remarks: **M-503-023**



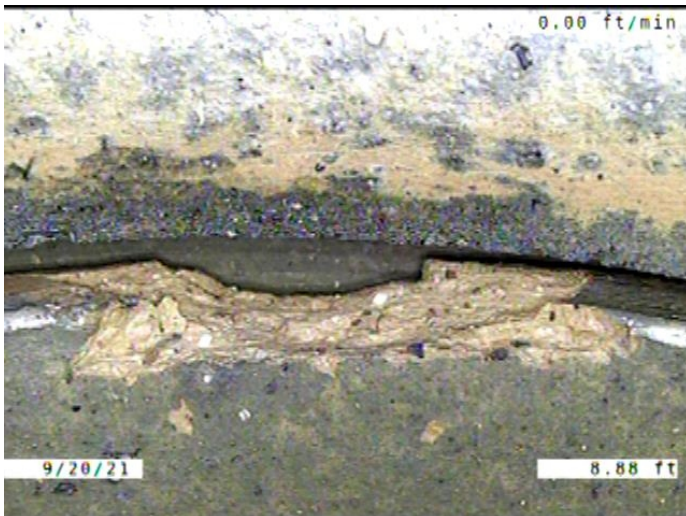
Code: **MWL**  
Description: **Miscellaneous Water Level**

Distance (ft): **.0**  
Structural Grade: **0**  
O&M Grade: **0**  
Clock Start/From:  
Clock To:  
1st Value:  
2nd Value:  
Value Percent: **5.000**  
Continuous Index:  
Within 8" of Joint: **NO**  
Remarks:



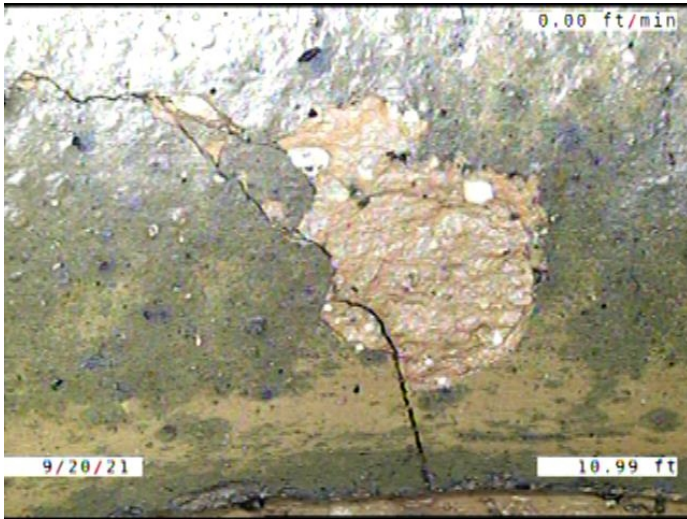
Code: **DSF**  
 Description: **Deposits Settled Fine**

Distance (ft): **.0**  
 Structural Grade: **0**  
 O&M Grade: **2**  
 Clock Start/From: **5**  
 Clock To: **7**  
 1st Value:  
 2nd Value:  
 Value Percent: **5.000**  
 Continuous Index: **S01**  
 Within 8" of Joint: **YES**  
 Remarks:



Code: **SZ**  
 Description: **Surface Damage Other**

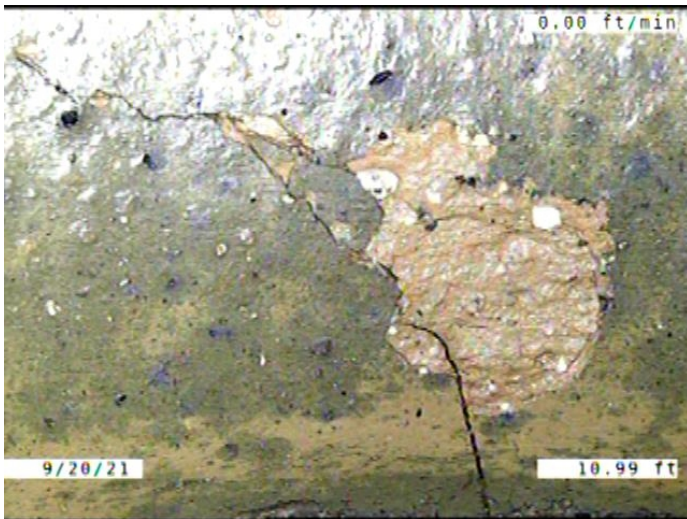
Distance (ft): **8.9**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **12**  
 Clock To: **1**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **A PIECE CHIPPED AWAY FROM THE JOINT**



Code: **SSS**  
Description: **Surface Damage Surface Spalling**

Distance (ft): **11.0**  
Structural Grade: **2**  
O&M Grade: **0**  
Clock Start/From: **9**  
Clock To:  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

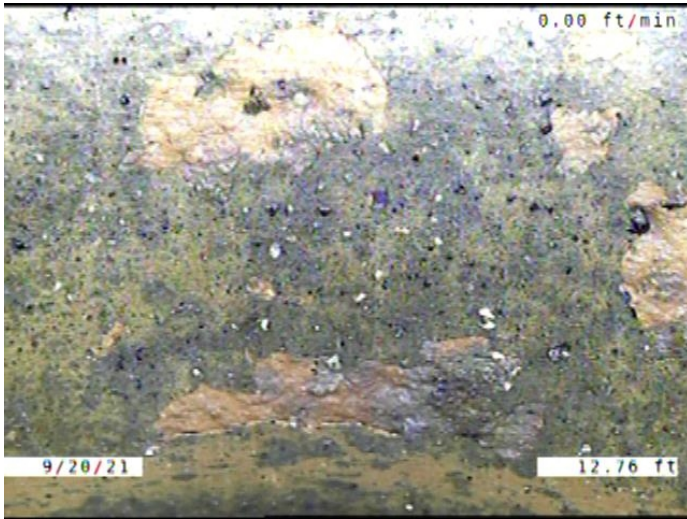
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Code: **CM**  
Description: **Crack Multiple**

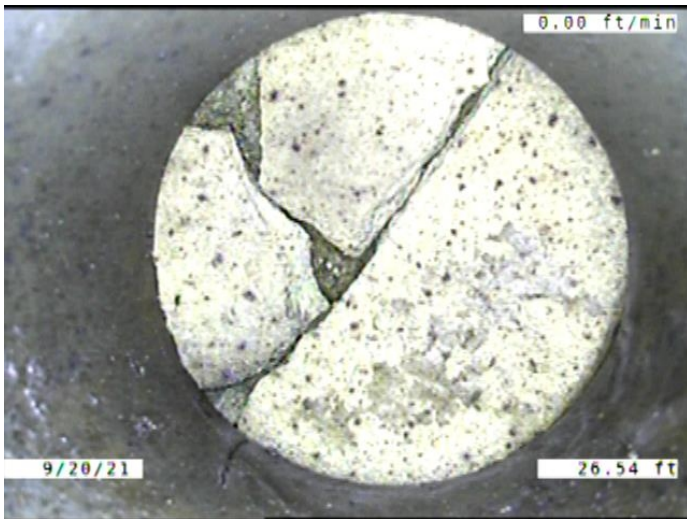
Distance (ft): **11.0**  
Structural Grade: **3**  
O&M Grade: **0**  
Clock Start/From: **8**  
Clock To: **9**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

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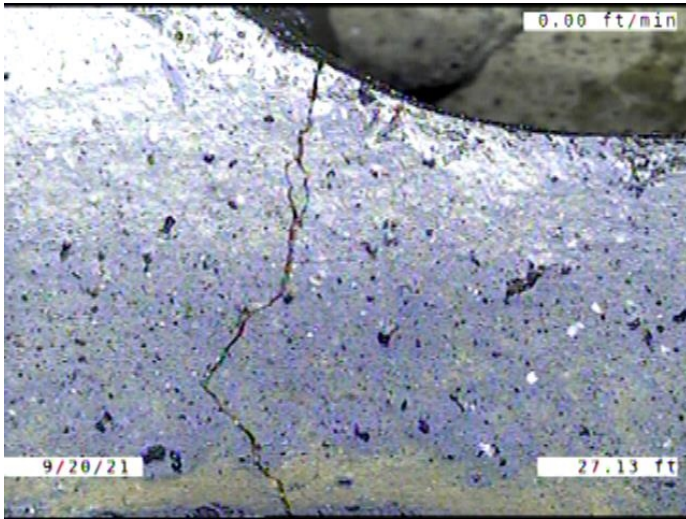
Code: **SSS**  
 Description: **Surface Damage Surface Spalling**

Distance (ft): **12.8**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **12**  
 Clock To: **2**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



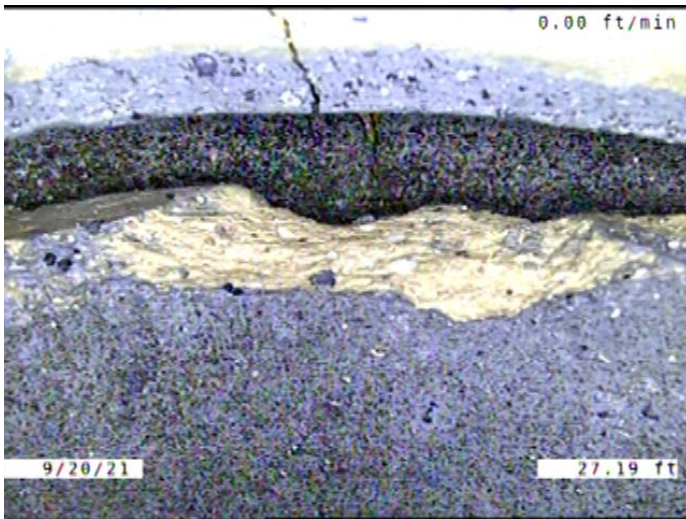
Code: **TFD**  
 Description: **Tap Factory Defective**

Distance (ft): **26.5**  
 Structural Grade: **0**  
 O&M Grade: **3**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **CAP BROKEN**



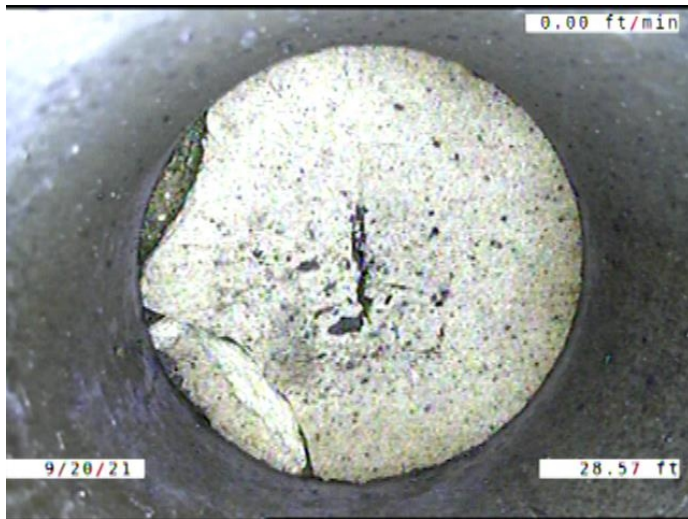
Code: **CL**  
 Description: **Crack Longitudinal**

Distance (ft): **27.1**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



Code: **SZ**  
 Description: **Surface Damage Other**

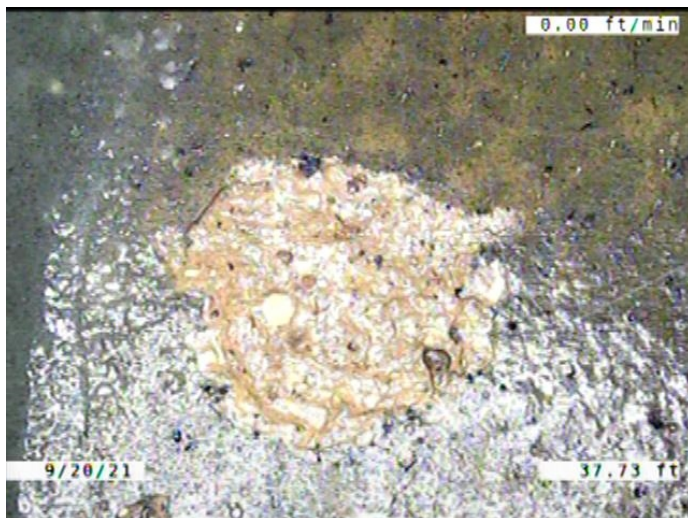
Distance (ft): **27.2**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **A PIECE CHIPPED AWAY FROM THE JOINT**



Code: **TFD**  
Description: **Tap Factory Defective**

Distance (ft): **28.6**  
Structural Grade: **0**  
O&M Grade: **3**  
Clock Start/From: **11**  
Clock To:  
1st Value: **4.000**  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks: **CAP BROKEN**

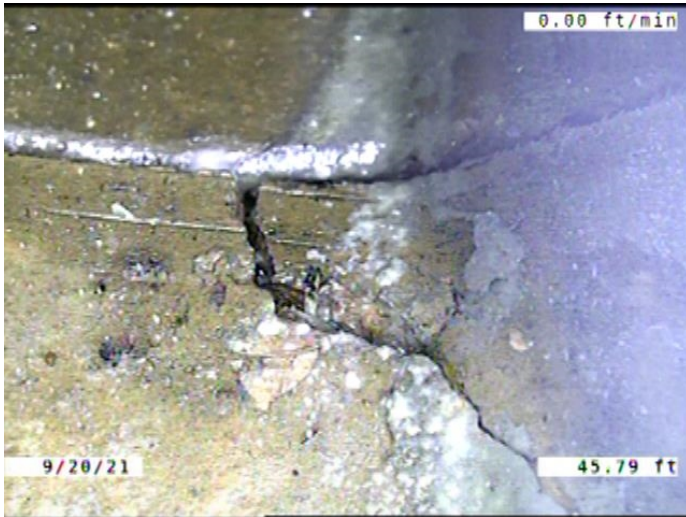
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Code: **SSS**  
Description: **Surface Damage Surface Spalling**

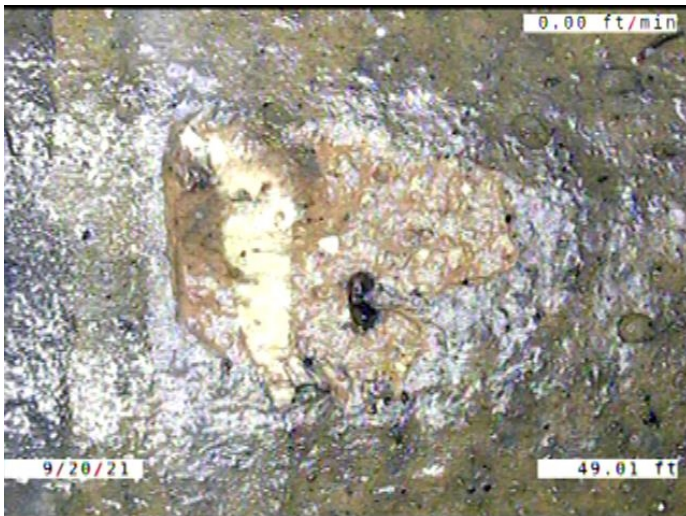
Distance (ft): **37.7**  
Structural Grade: **2**  
O&M Grade: **0**  
Clock Start/From: **4**  
Clock To:  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

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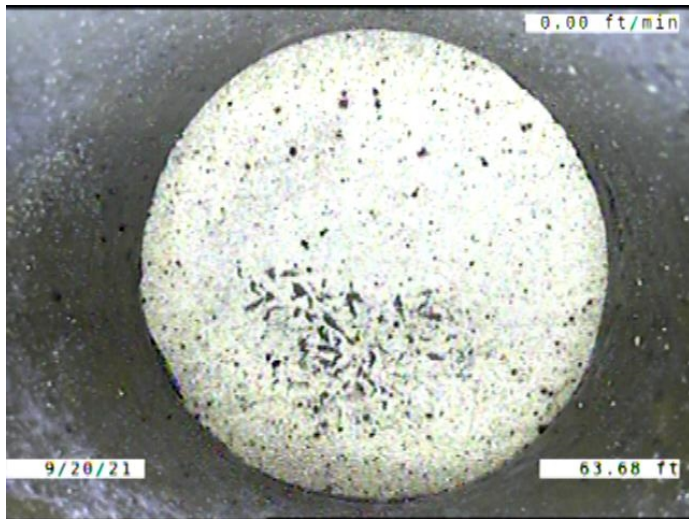
Code: **B**  
 Description: **Broken**

Distance (ft): **45.8**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **4**  
 Clock To: **8**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



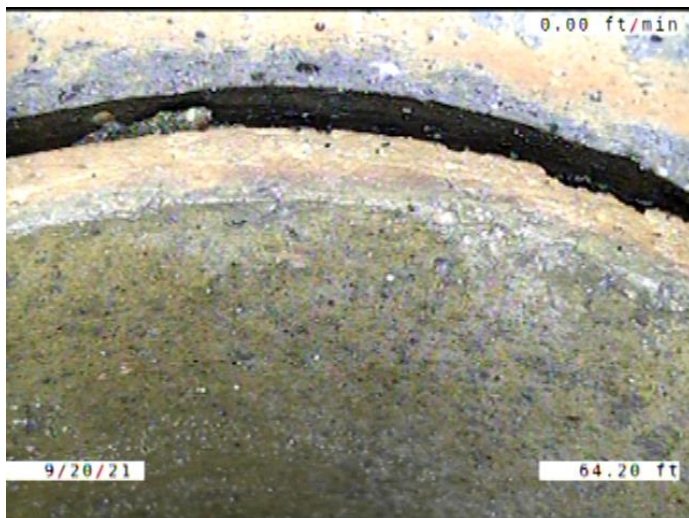
Code: **SSS**  
 Description: **Surface Damage Surface Spalling**

Distance (ft): **49.0**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **4**  
 Clock To: **5**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **NO**  
 Remarks:



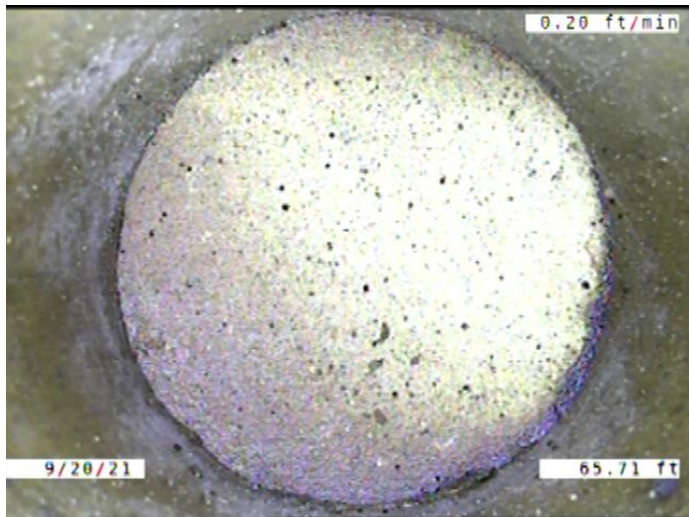
Code: **TFC**  
 Description: **Tap Factory Capped**

Distance (ft): **63.7**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



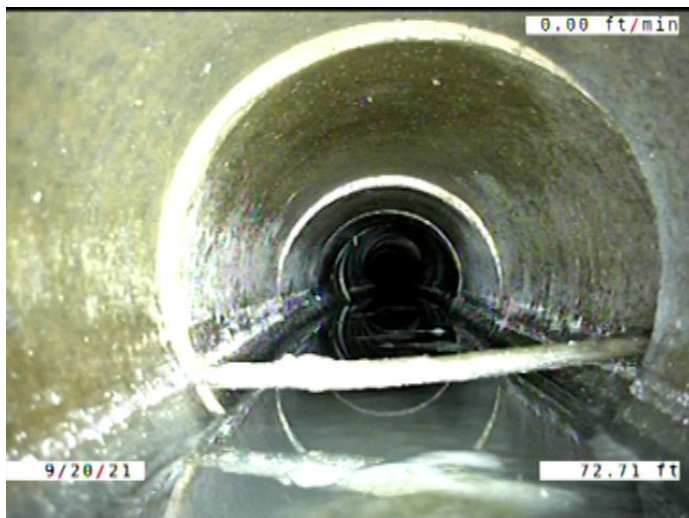
Code: **JOM**  
 Description: **Joint Offset Medium**

Distance (ft): **64.2**  
 Structural Grade: **3**  
 O&M Grade: **0**  
 Clock Start/From:  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **NO**  
 Remarks:



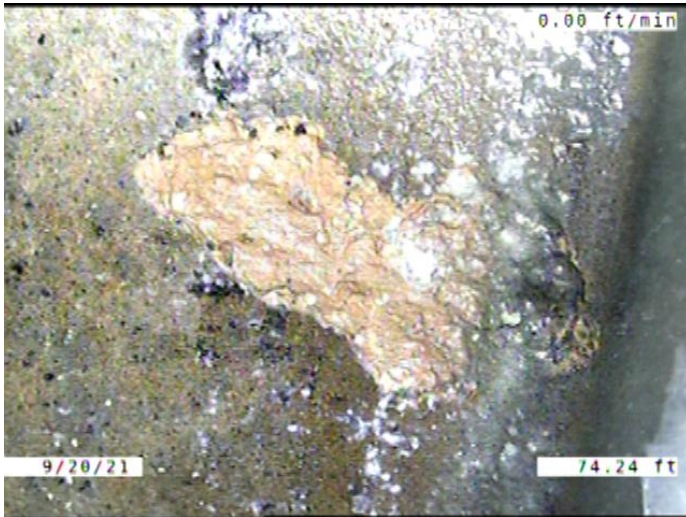
Code: **TFC**  
 Description: **Tap Factory Capped**

Distance (ft): **65.7**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **11**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



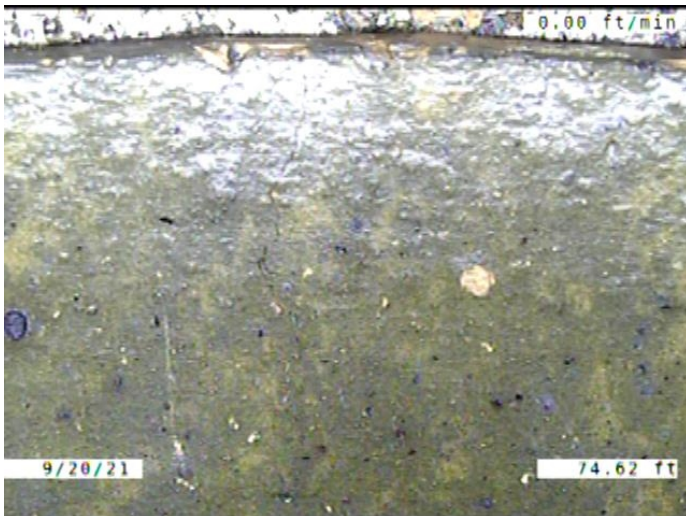
Code: **OBJ**  
 Description: **Obstruction Wedged In The Joint**

Distance (ft): **72.7**  
 Structural Grade: **0**  
 O&M Grade: **2**  
 Clock Start/From: **4**  
 Clock To: **8**  
 1st Value:  
 2nd Value:  
 Value Percent: **5.000**  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **STICK**



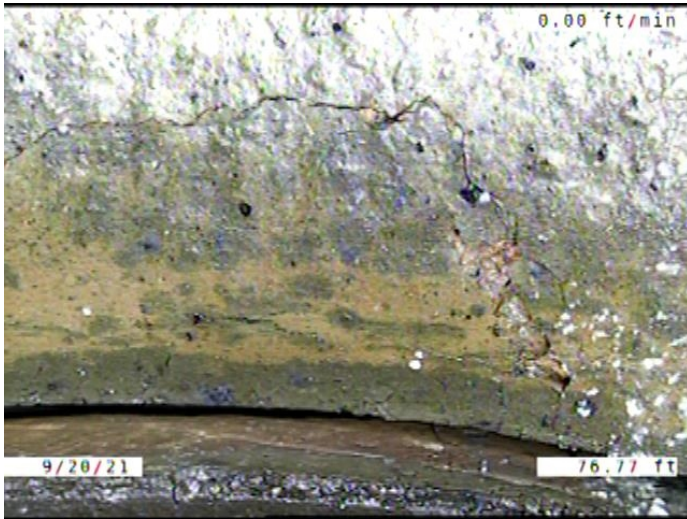
Code: **SSS**  
 Description: **Surface Damage Surface Spalling**

Distance (ft): **74.2**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **3**  
 Clock To: **4**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



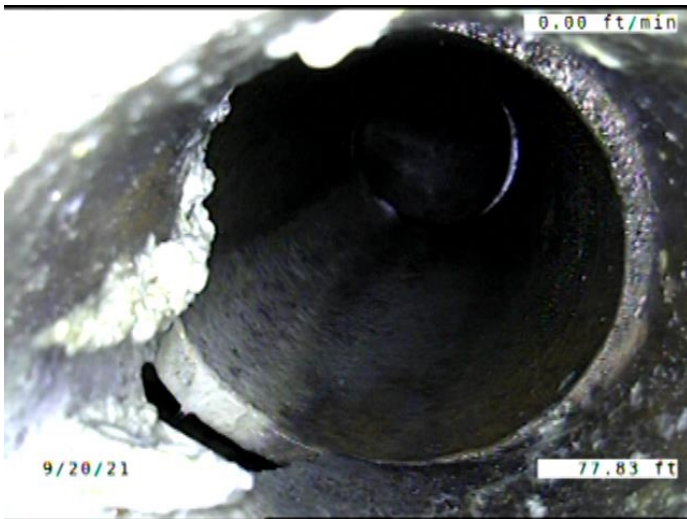
Code: **FM**  
 Description: **Fracture Multiple**

Distance (ft): **74.6**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **11**  
 Clock To: **1**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



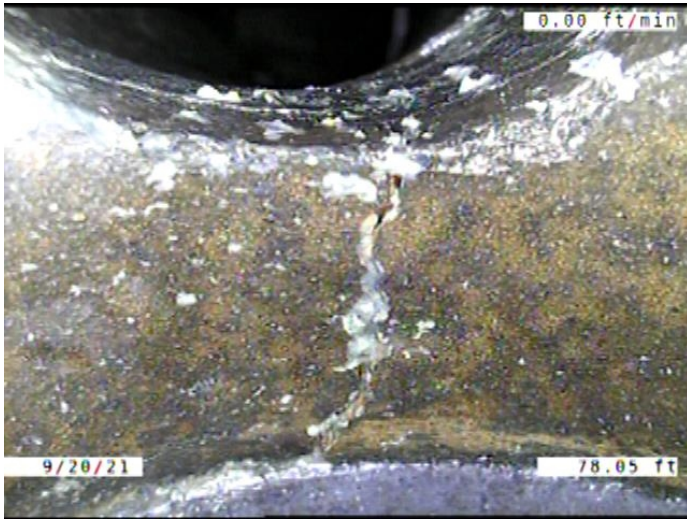
Code: **CS**  
 Description: **Crack Spiral**

Distance (ft): **76.8**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To: **4**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



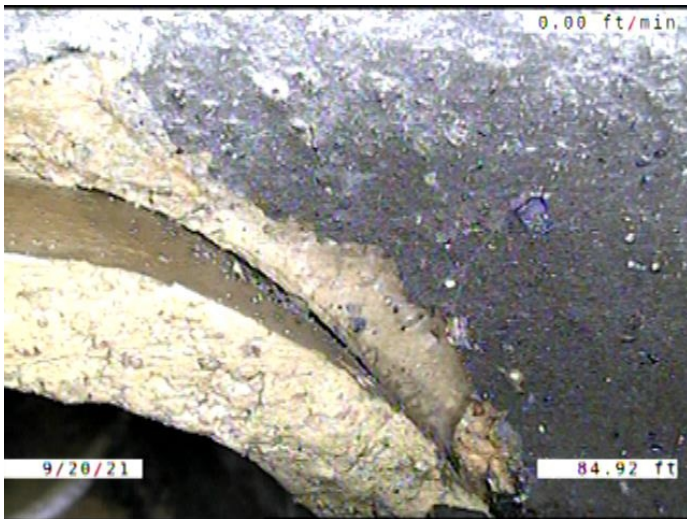
Code: **TFD**  
 Description: **Tap Factory Defective**

Distance (ft): **77.8**  
 Structural Grade: **0**  
 O&M Grade: **3**  
 Clock Start/From: **11**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **SOIL VISIBLE**



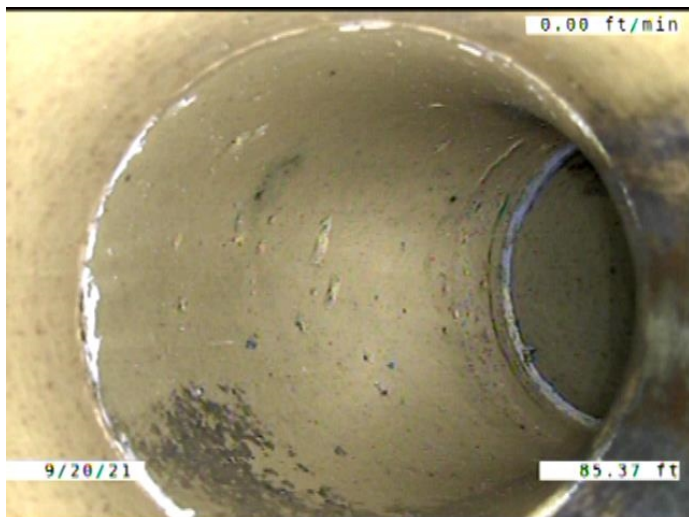
Code: **FM**  
 Description: **Fracture Multiple**

Distance (ft): **78.0**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **10**  
 Clock To: **11**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



Code: **SSS**  
 Description: **Surface Damage Surface Spalling**

Distance (ft): **84.9**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To: **3**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



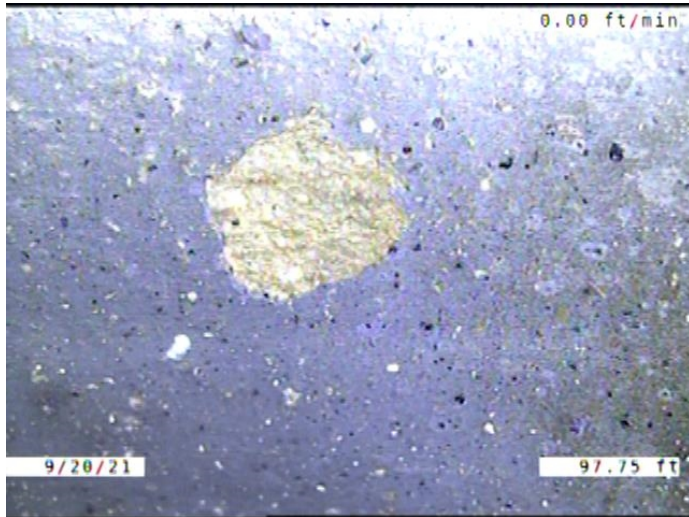
Code: **TBI**  
 Description: **Tap Break-in Intruding**

Distance (ft): **85.4**  
 Structural Grade: **0**  
 O&M Grade: **2**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value: **1.000**  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



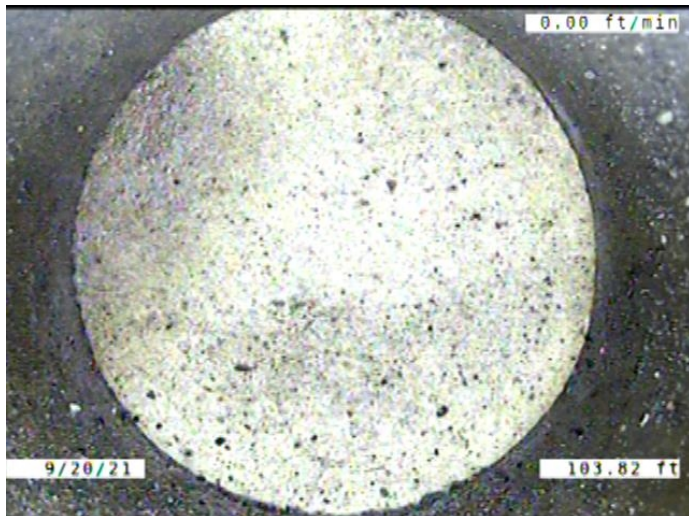
Code: **JOM**  
 Description: **Joint Offset Medium**

Distance (ft): **92.1**  
 Structural Grade: **3**  
 O&M Grade: **0**  
 Clock Start/From:  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **NO**  
 Remarks:



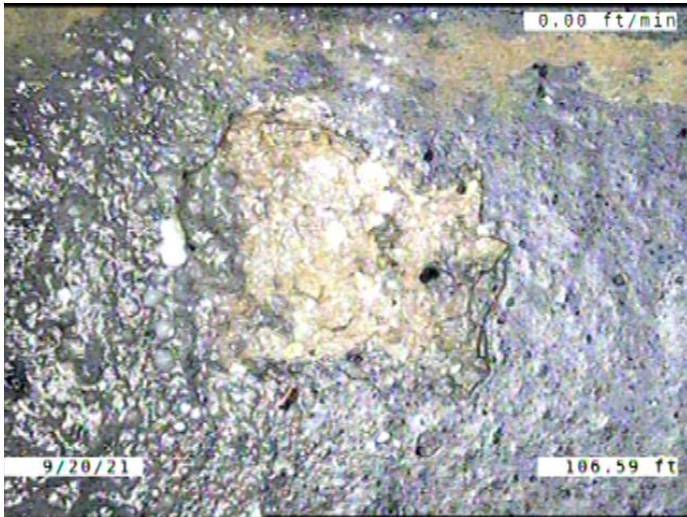
Code: **SSS**  
 Description: **Surface Damage Surface Spalling**

Distance (ft): **97.7**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **3**  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



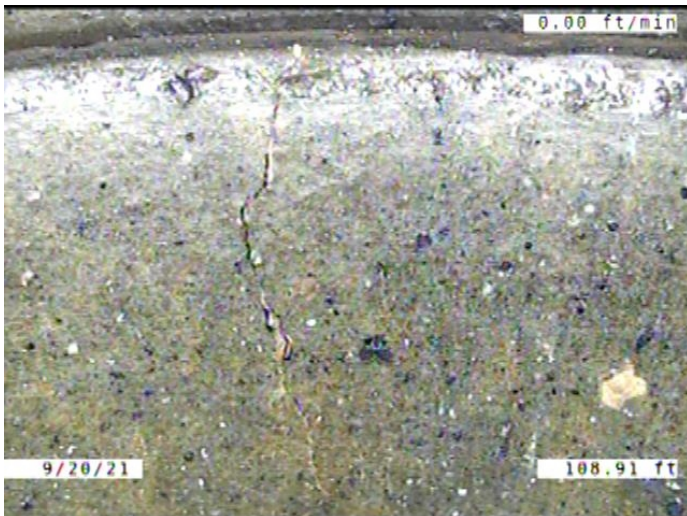
Code: **TFC**  
 Description: **Tap Factory Capped**

Distance (ft): **103.8**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



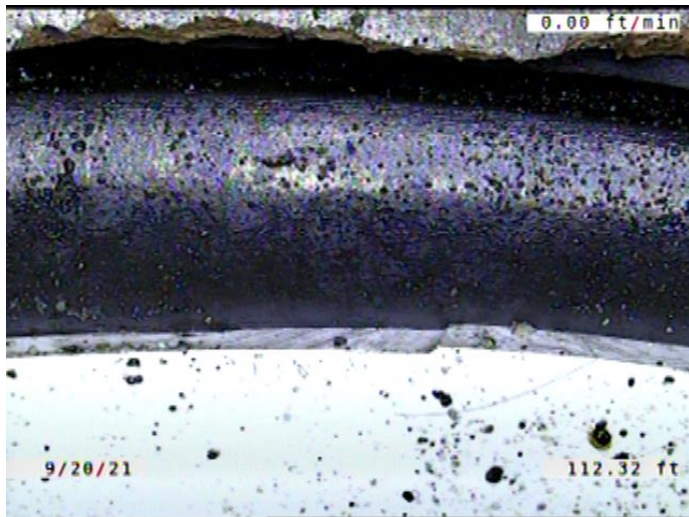
Code: **SSS**  
 Description: **Surface Damage Surface Spalling**

Distance (ft): **106.6**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **3**  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



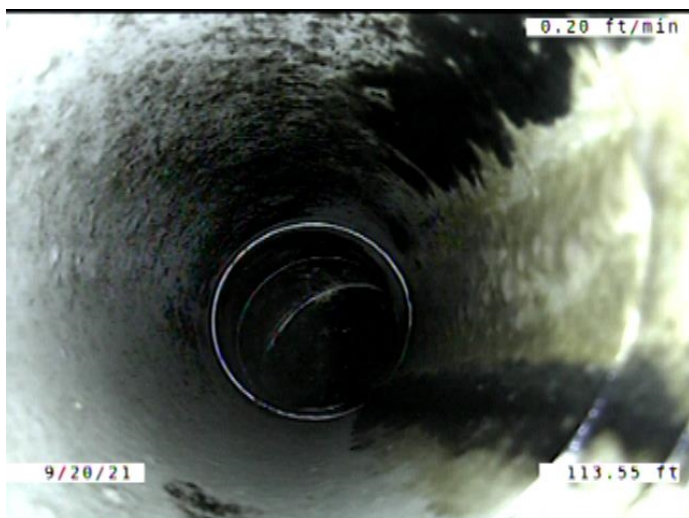
Code: **CM**  
 Description: **Crack Multiple**

Distance (ft): **108.9**  
 Structural Grade: **3**  
 O&M Grade: **0**  
 Clock Start/From: **11**  
 Clock To: **12**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



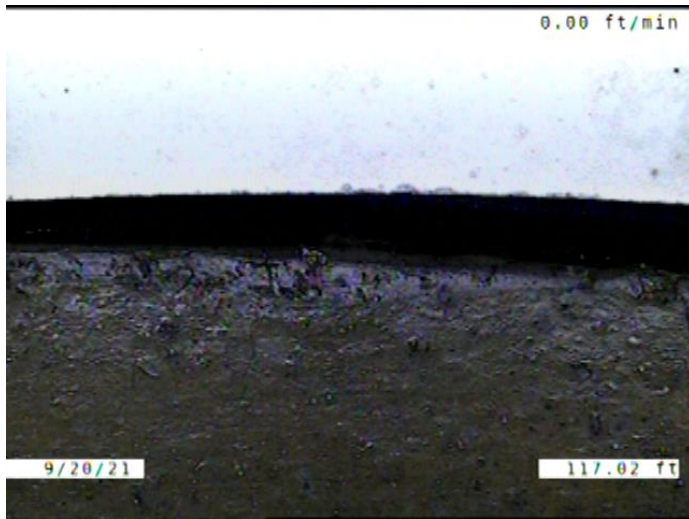
Code: **MMC**  
 Description: **Miscellaneous Material Change**

Distance (ft): **112.3**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From:  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **NO**  
 Remarks: **VCP TO PVC**



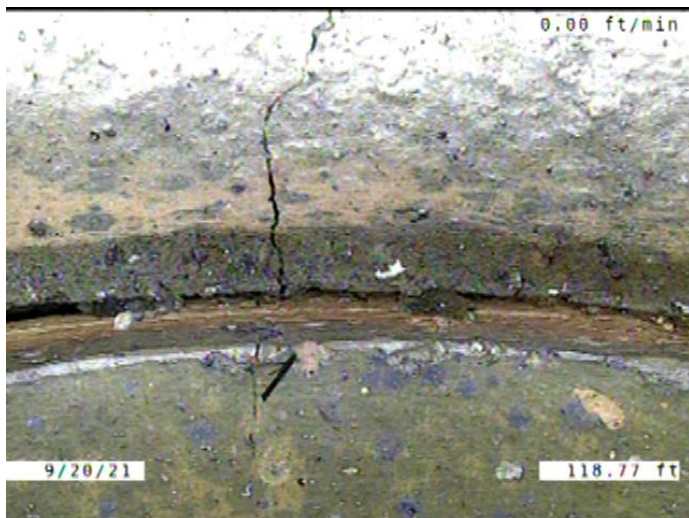
Code: **TF**  
 Description: **Tap Factory**

Distance (ft): **113.5**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



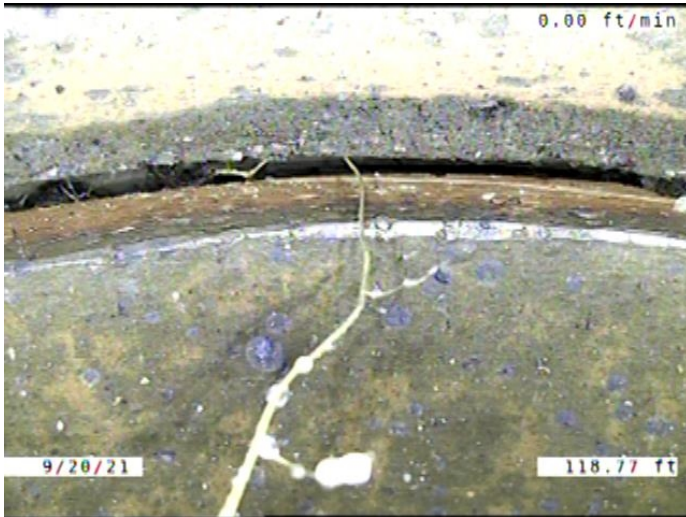
Code: **MMC**  
 Description: **Miscellaneous Material Change**

Distance (ft): **117.0**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From:  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **NO**  
 Remarks: **PVC TO VCP**



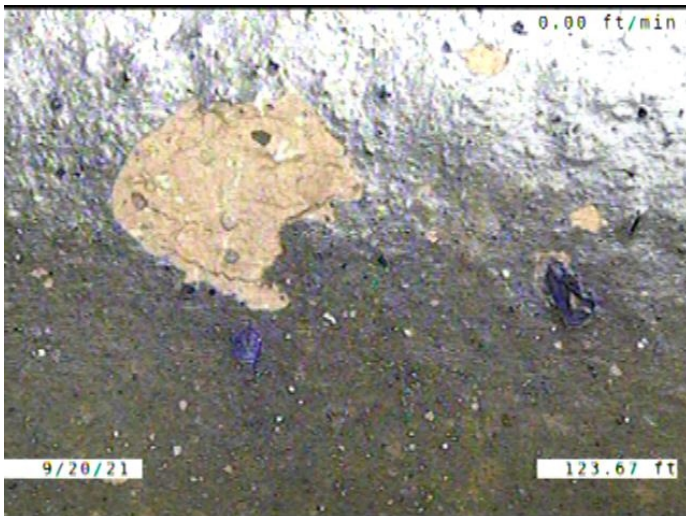
Code: **CM**  
 Description: **Crack Multiple**

Distance (ft): **118.8**  
 Structural Grade: **3**  
 O&M Grade: **0**  
 Clock Start/From: **11**  
 Clock To: **1**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **S02**  
 Within 8" of Joint: **YES**  
 Remarks:



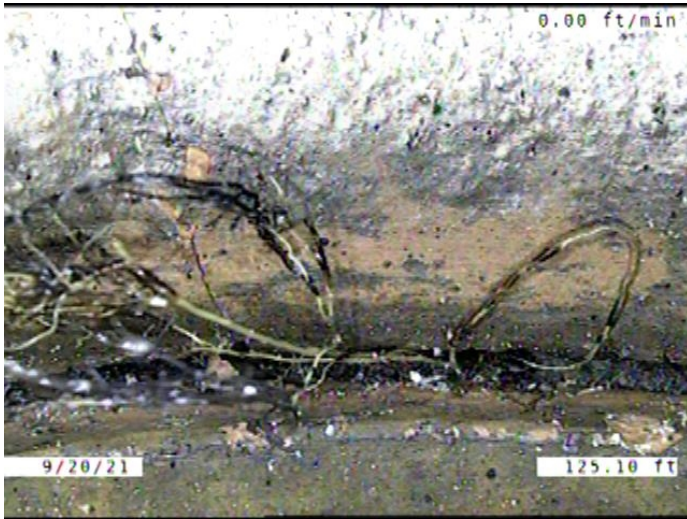
Code: **RFJ**  
 Description: **Roots Fine Joint**

Distance (ft): **118.8**  
 Structural Grade: **0**  
 O&M Grade: **1**  
 Clock Start/From: **10**  
 Clock To: **4**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



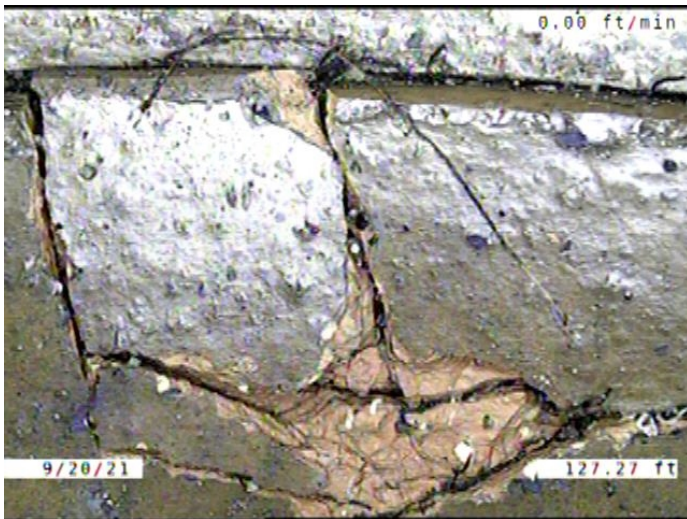
Code: **SSS**  
 Description: **Surface Damage Surface Spalling**

Distance (ft): **123.7**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From: **3**  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



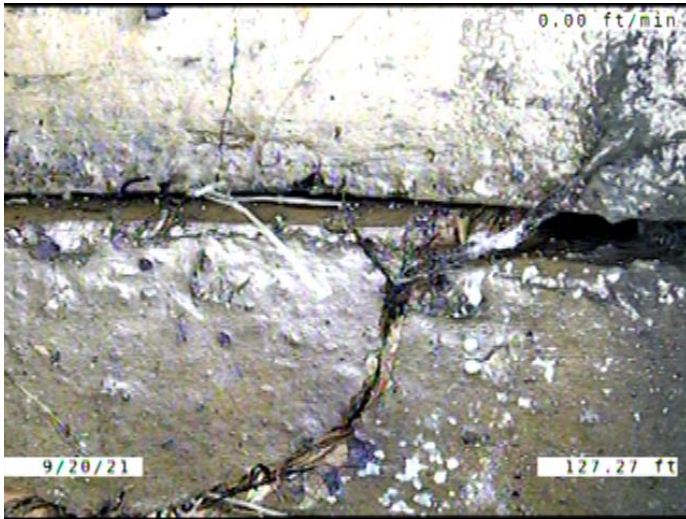
Code: **RFJ**  
 Description: **Roots Fine Joint**

Distance (ft): **125.1**  
 Structural Grade: **0**  
 O&M Grade: **1**  
 Clock Start/From: **9**  
 Clock To: **11**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



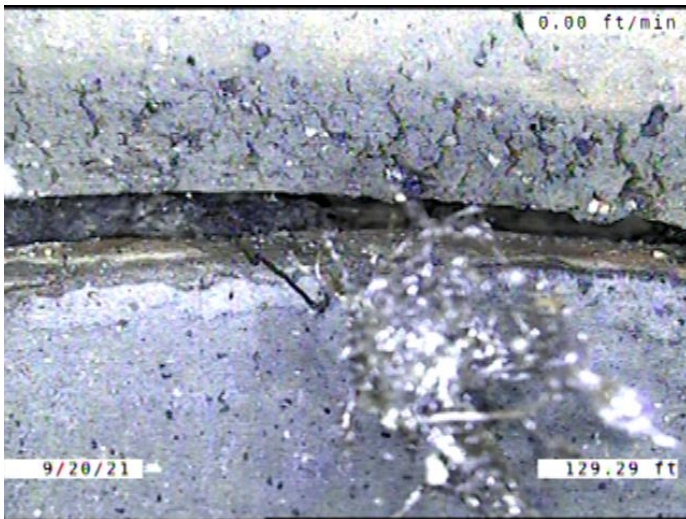
Code: **B**  
 Description: **Broken**

Distance (ft): **127.3**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **2**  
 Clock To: **4**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



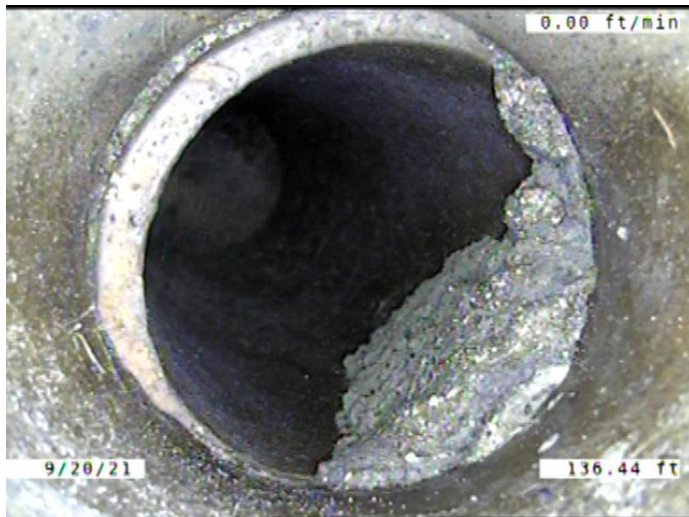
Code: **RFJ**  
 Description: **Roots Fine Joint**

Distance (ft): **127.3**  
 Structural Grade: **0**  
 O&M Grade: **1**  
 Clock Start/From: **2**  
 Clock To: **4**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



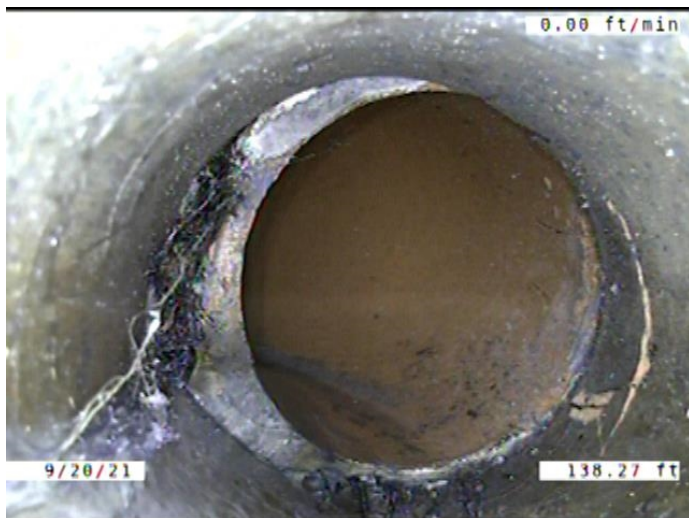
Code: **RFJ**  
 Description: **Roots Fine Joint**

Distance (ft): **129.3**  
 Structural Grade: **0**  
 O&M Grade: **1**  
 Clock Start/From: **8**  
 Clock To: **3**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **S03**  
 Within 8" of Joint: **YES**  
 Remarks:



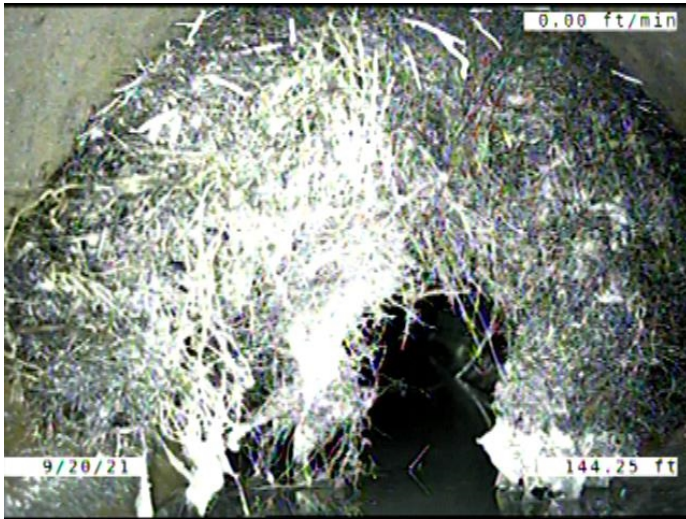
Code: **TF**  
 Description: **Tap Factory**

Distance (ft): **136.4**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **LOOKS LIKE IT MIGHT BE CAPPED**



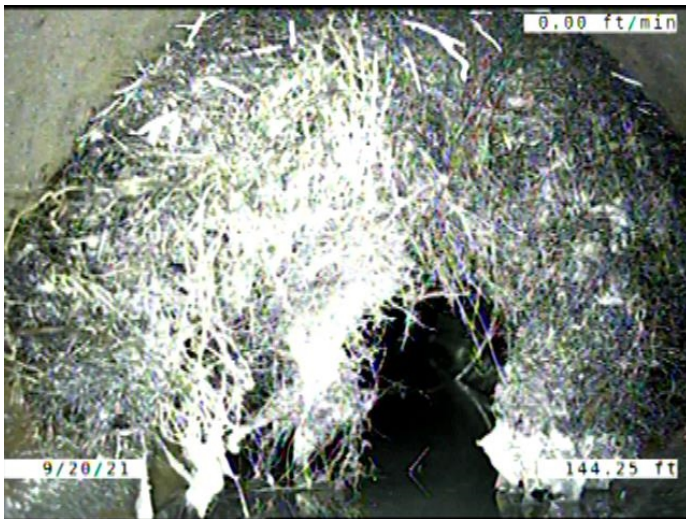
Code: **TFD**  
 Description: **Tap Factory Defective**

Distance (ft): **138.3**  
 Structural Grade: **0**  
 O&M Grade: **3**  
 Clock Start/From: **11**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **ROOTS GROWING IN THE JOINT**



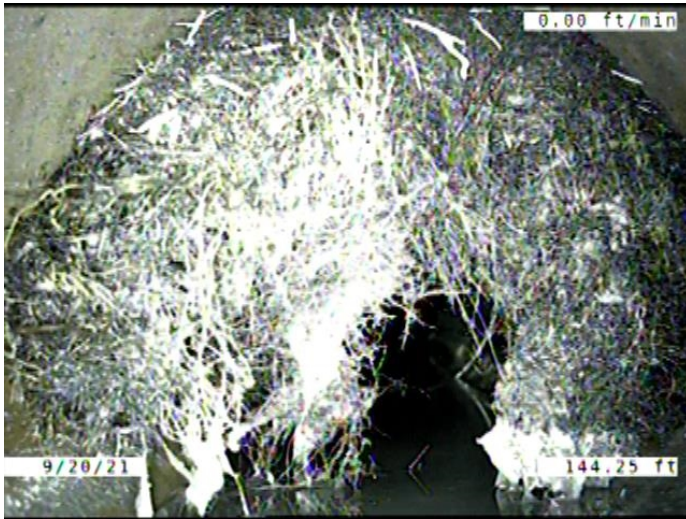
Code: **CM**  
 Description: **Crack Multiple**

Distance (ft): **144.3**  
 Structural Grade: **3**  
 O&M Grade: **0**  
 Clock Start/From: **11**  
 Clock To: **1**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **F02**  
 Within 8" of Joint: **YES**  
 Remarks:



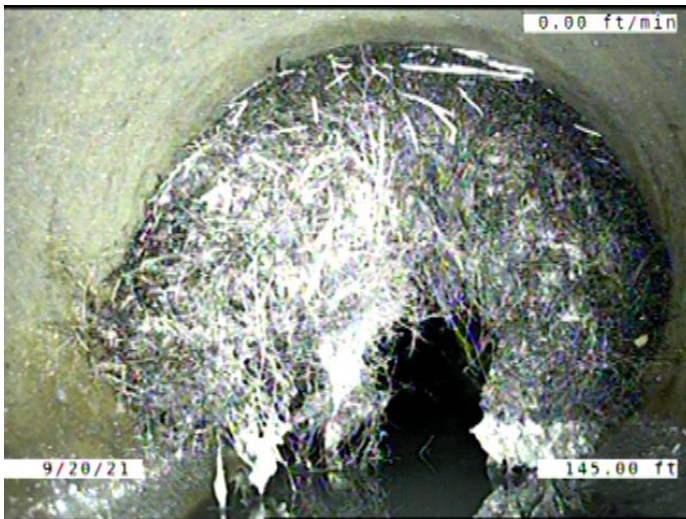
Code: **RFJ**  
 Description: **Roots Fine Joint**

Distance (ft): **144.3**  
 Structural Grade: **0**  
 O&M Grade: **1**  
 Clock Start/From: **8**  
 Clock To: **3**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **F03**  
 Within 8" of Joint: **YES**  
 Remarks:



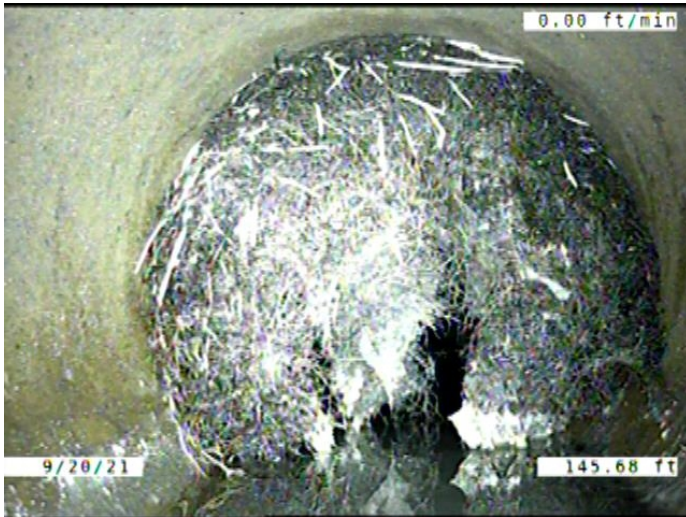
Code: **DSF**  
 Description: **Deposits Settled Fine**

Distance (ft): **144.3**  
 Structural Grade: **0**  
 O&M Grade: **2**  
 Clock Start/From: **5**  
 Clock To: **7**  
 1st Value:  
 2nd Value:  
 Value Percent: **5.000**  
 Continuous Index: **F01**  
 Within 8" of Joint: **YES**  
 Remarks:



Code: **RBJ**  
 Description: **Roots Ball Joint**

Distance (ft): **145.0**  
 Structural Grade: **0**  
 O&M Grade: **4**  
 Clock Start/From: **8**  
 Clock To: **5**  
 1st Value:  
 2nd Value:  
 Value Percent: **95.000**  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



Code:

**MSA**

Description:

**Miscellaneous Survey Abandoned**

Distance (ft):

**145.7**

Structural Grade:

**0**

O&M Grade:

**0**

Clock Start/From:

Clock To:

1st Value:

2nd Value:

Value Percent:

Continuous Index:

Within 8" of Joint:

**NO**

Remarks:

**CAMERA CANT MAKE IT PAST  
ROOTS. MADE IT TO THE POINT OF**