

RedZone  
ROBOTICS

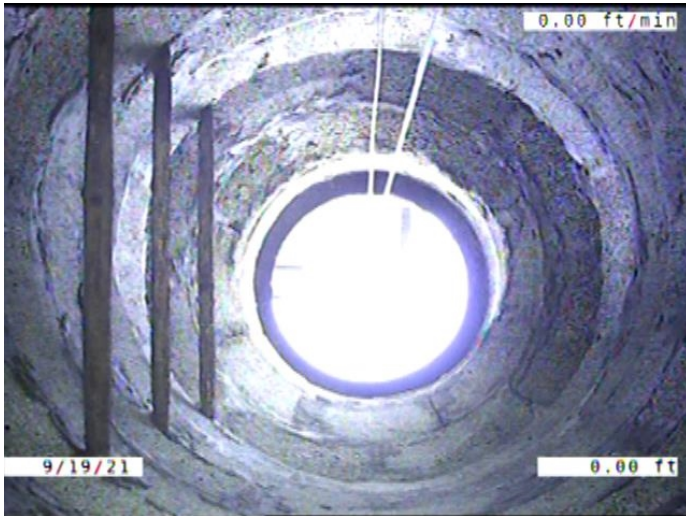
Street:	North Virginia Street		Flow Control:	Not Controlled	
City:	Hobart, IN		Year Renewed:		
Location:	Local rural streets with light traffic, t		Tape/Media #:		
Purpose:	Routine Assessment		Dia/Height:	10"	
Use:	Sanitary Sewage Pipe		Material:	PVC	
Drain Area:			Lining:	None	
Category:	NA				
Comment:					
Location Details:			Direction of Survey:	Downstream	
US MH:	M-503-011	DS MH:	M-503-012	Total Length Surveyed (ft):	197.3

O&M Index:	<b>2.02</b>	O&M Quick:	<b>352G</b>	O&M Rating:	<b>103.00</b>
Structural Index:	<b>3.78</b>	Structural Quick:	<b>514C</b>	Structural Rating:	<b>102.00</b>
Overall Index:	<b>2.63</b>	Overall Quick:	<b>514C</b>	Overall Rating:	<b>205.00</b>

**Tuesday, April 25, 2023**

116.6	MMC	Miscellaneous Material Change	1144	NA
116.6	FM(F02)	Fracture Multiple	1158	S 4
118.0	TF	Tap Factory	1180	NA
119.2	MMC	Miscellaneous Material Change	1231	NA
119.2	FM(S05)	Fracture Multiple	1243	S 4
146.5	TFD	Tap Factory Defective	1461	M 3
148.6	TFC	Tap Factory Capped	1495	NA
149.7	FM(F05)	Fracture Multiple	1523	S 4
157.6	FM	Fracture Multiple	1590	S 4
158.0	MWLS	Miscellaneous Water Level Sag	1613	S 2
159.6	CM	Crack Multiple	1649	S 3
165.7	FM	Fracture Multiple	1727	S 4
165.7	RFJ	Roots Fine Joint	1744	M 1
170.0	SSS	Surface Damage Surface Spalling	1784	S 2
179.7	FM(S06)	Fracture Multiple	1870	S 4
180.5	TFC	Tap Factory Capped	1892	NA
182.6	TFC	Tap Factory Capped	1931	NA
185.2	OBZ	Obstruction Other	1970	M 2
190.7	FM	Fracture Multiple	2030	S 4
191.0	TBI	Tap Break-in Intruding	2046	M 2
195.7	DSF(F01)	Deposits Settled Fine	2084	M 2
195.7	FM(F06)	Fracture Multiple	2092	S 4
197.3	AMH	Manhole	2174	NA

**M-503-012**



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-503-011**



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:

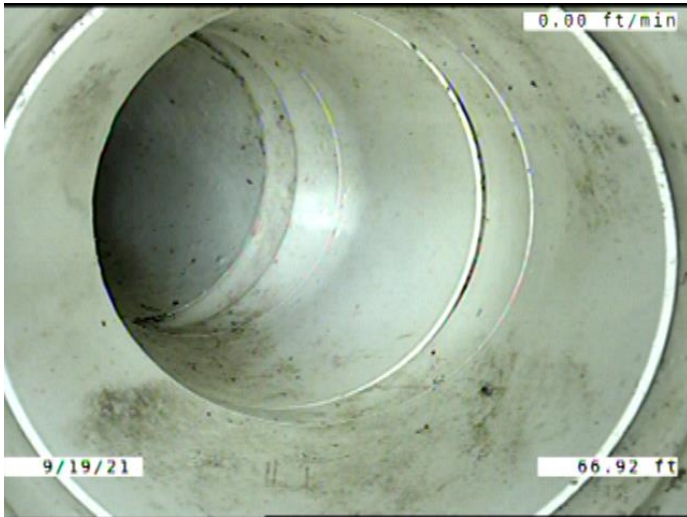
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Code: **DSF**  
Description: **Deposits Settled Fine**

Distance (ft): **2.8**  
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:

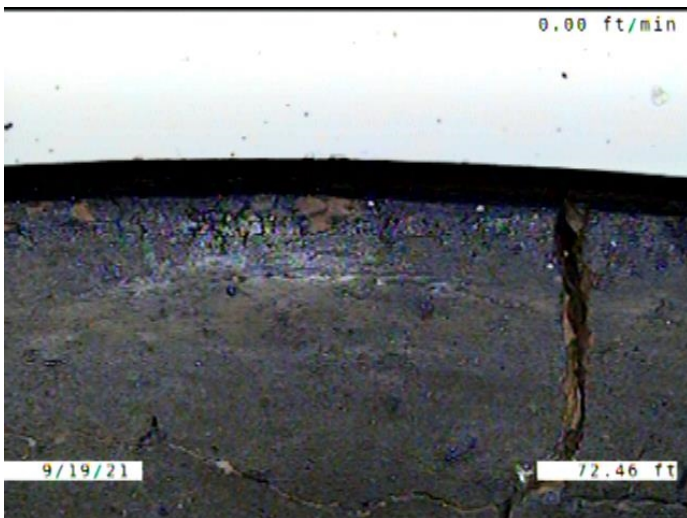
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Code: **TF**  
Description: **Tap Factory**

Distance (ft): **66.9**  
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:

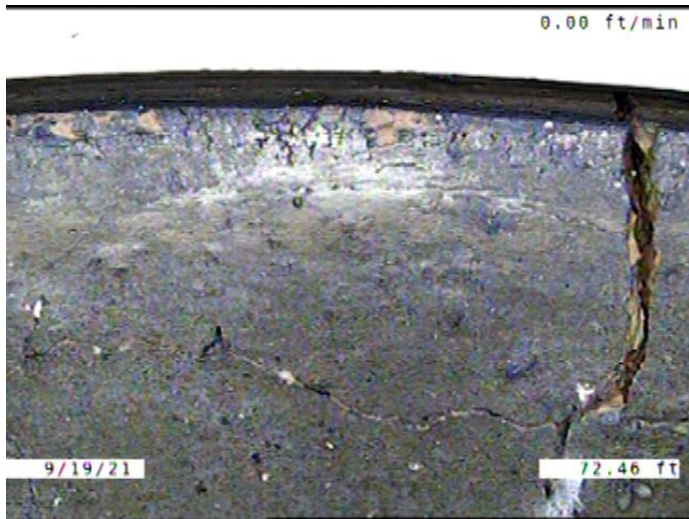
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Code: **MMC**  
Description: **Miscellaneous Material Change**

Distance (ft): **72.5**  
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**

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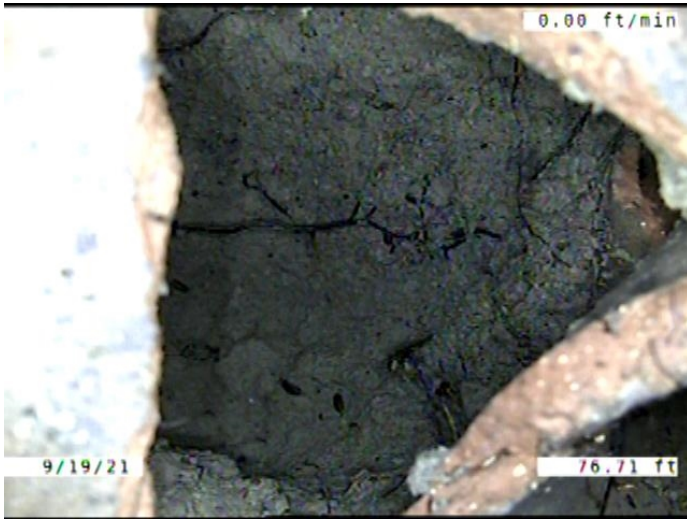
Code: **FM**  
 Description: **Fracture Multiple**

Distance (ft): **72.5**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **12**  
 Clock To: **12**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **S02**  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **74.5**  
 Structural Grade: **0**  
 O&M Grade: **1**  
 Clock Start/From: **12**  
 Clock To: **3**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



Code: **HVV**  
Description: **Hole Void Visible**

Distance (ft): **76.7**  
Structural Grade: **5**  
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: **SOIL VISIBLE TOO**

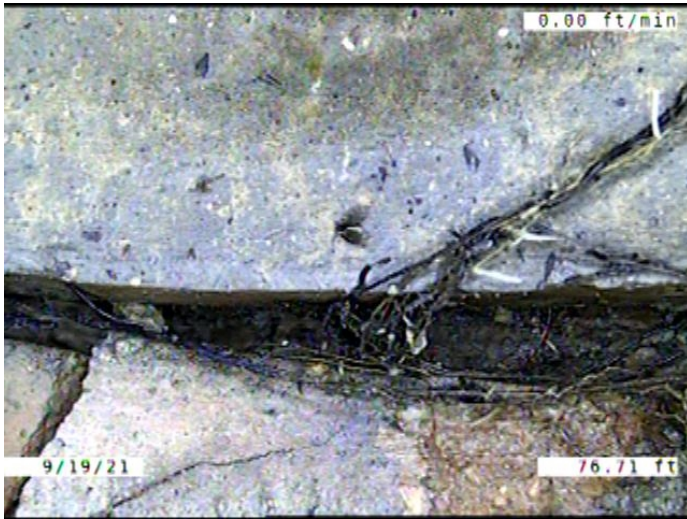
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Code: **B**  
Description: **Broken**

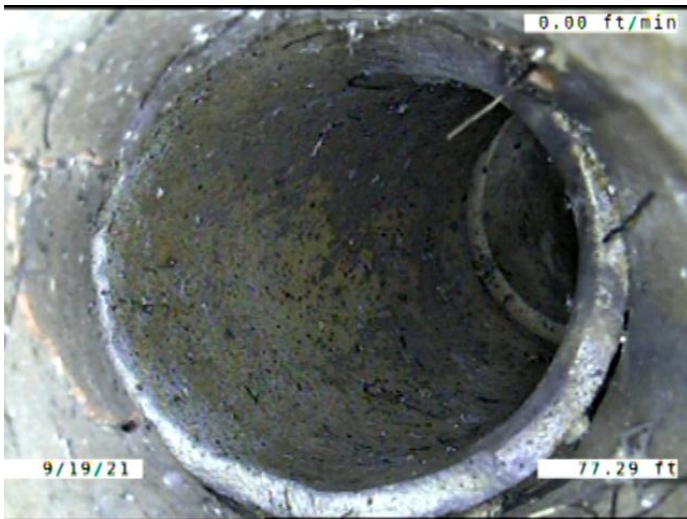
Distance (ft): **76.7**  
Structural Grade: **4**  
O&M Grade: **0**  
Clock Start/From: **2**  
Clock To: **4**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **NO**  
Remarks:

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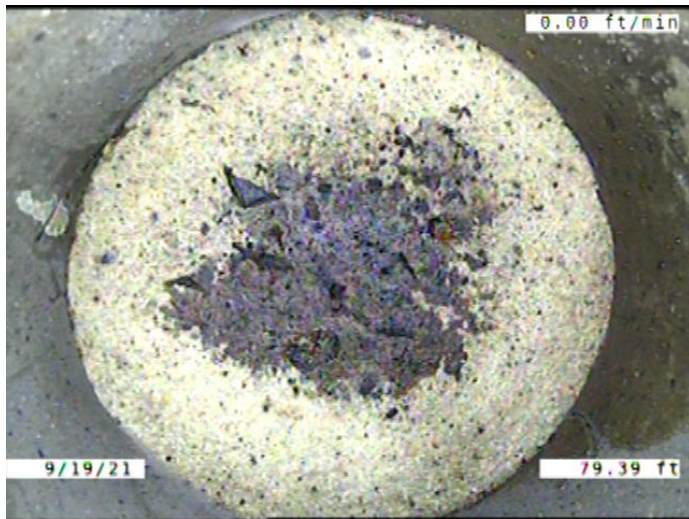
Code: **RFJ**  
Description: **Roots Fine Joint**

Distance (ft): **76.7**  
Structural Grade: **0**  
O&M Grade: **1**  
Clock Start/From: **12**  
Clock To: **3**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:



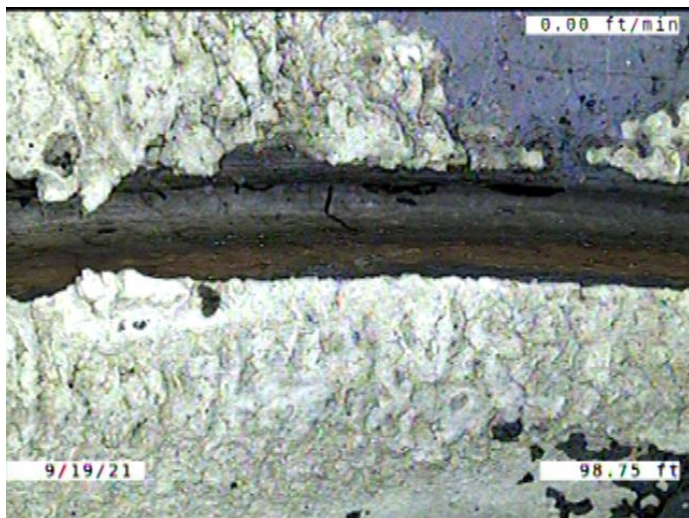
Code: **TFD**  
Description: **Tap Factory Defective**

Distance (ft): **77.3**  
Structural Grade: **0**  
O&M Grade: **3**  
Clock Start/From: **2**  
Clock To:  
1st Value: **4.000**  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks: **Defective**



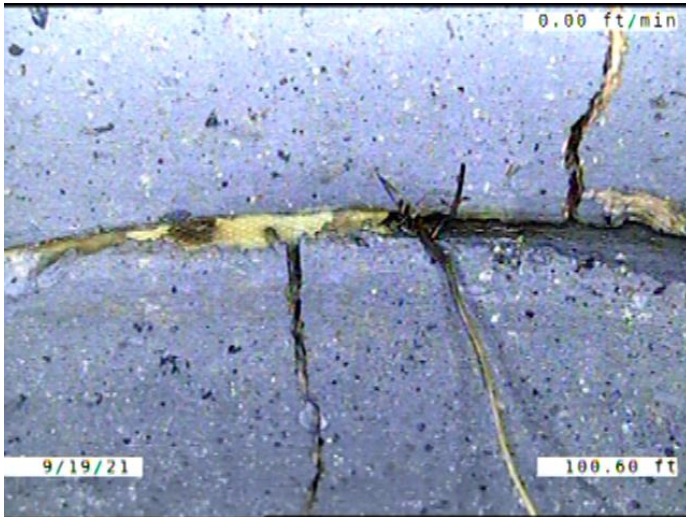
Code: **TFD**  
 Description: **Tap Factory Defective**

Distance (ft): **79.4**  
 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: **CAPPED**



Code: **DAE**  
 Description: **Deposits Attached Encrustation**

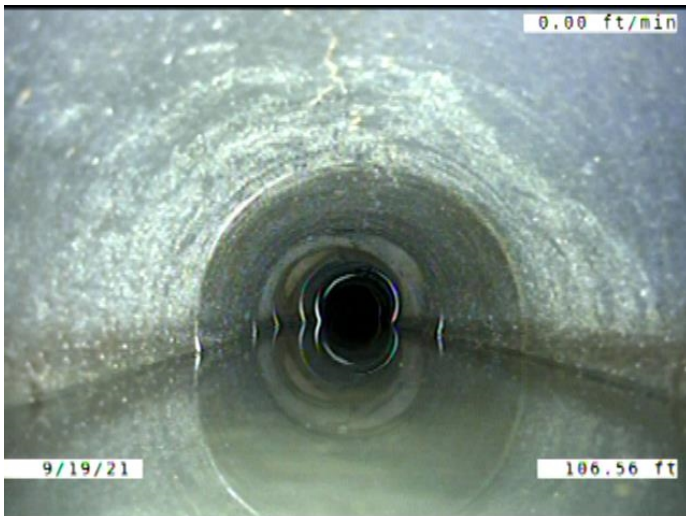
Distance (ft): **98.8**  
 Structural Grade: **0**  
 O&M Grade: **2**  
 Clock Start/From: **9**  
 Clock To: **11**  
 1st Value:  
 2nd Value:  
 Value Percent: **5.000**  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **100.6**  
Structural Grade: **0**  
O&M Grade: **1**  
Clock Start/From: **9**  
Clock To: **3**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index: **S03**  
Within 8" of Joint: **YES**  
Remarks:

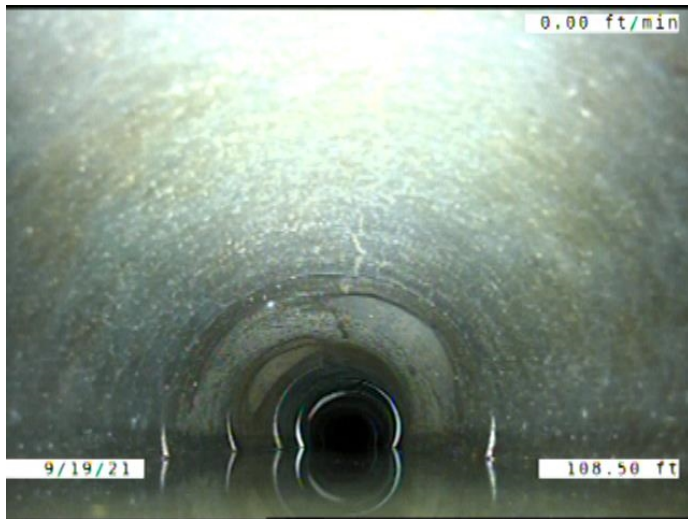
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Code: **RFJ**  
Description: **Roots Fine Joint**

Distance (ft): **106.6**  
Structural Grade: **0**  
O&M Grade: **1**  
Clock Start/From: **9**  
Clock To: **3**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index: **F03**  
Within 8" of Joint: **YES**  
Remarks:

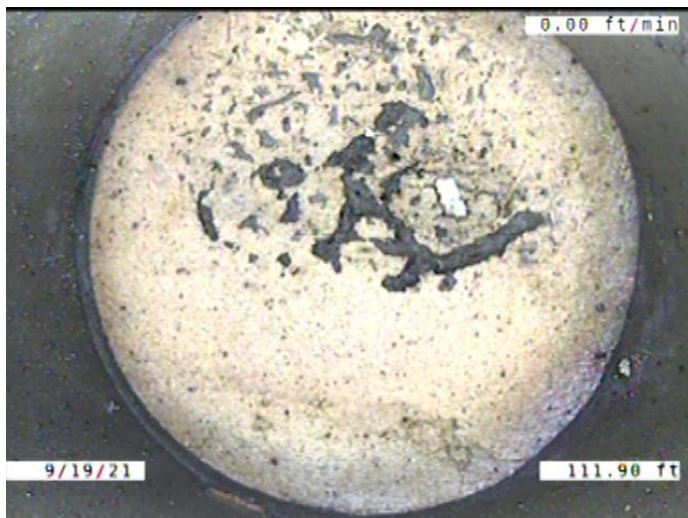
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Code: **MWLS**  
Description: **Miscellaneous Water Level Sag**

Distance (ft): **108.5**  
Structural Grade: **2**  
O&M Grade: **0**  
Clock Start/From:  
Clock To:  
1st Value:  
2nd Value:  
Value Percent: **15.000**  
Continuous Index: **S04**  
Within 8" of Joint: **NO**  
Remarks:

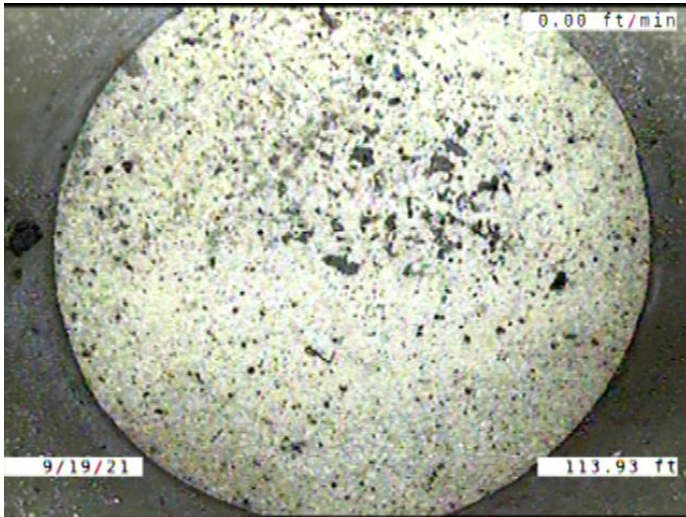
---



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

Distance (ft): **111.9**  
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: **CAPPED**

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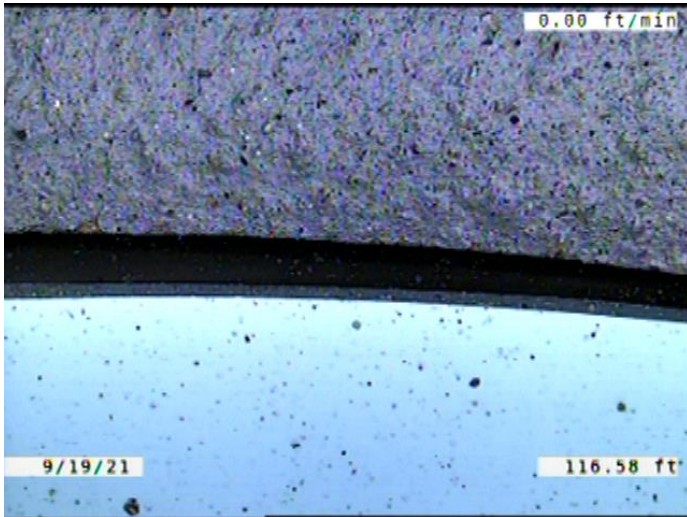
Code: **TFD**  
 Description: **Tap Factory Defective**

Distance (ft): **113.9**  
 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: **CAPPED**



Code: **MWLS**  
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **114.6**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From:  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent: **15.000**  
 Continuous Index: **F04**  
 Within 8" of Joint: **NO**  
 Remarks:



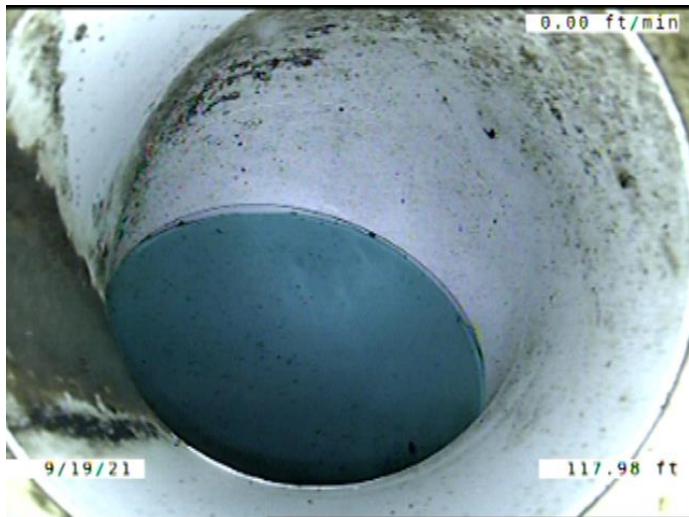
Code: **MMC**  
 Description: **Miscellaneous Material Change**

Distance (ft): **116.6**  
 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**



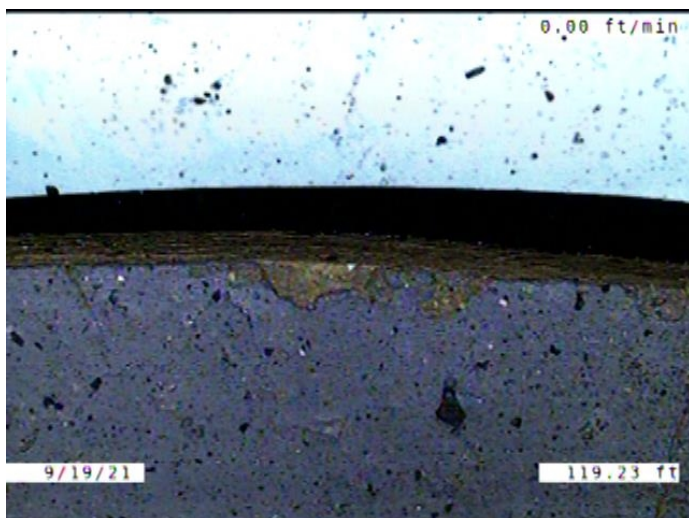
Code: **FM**  
 Description: **Fracture Multiple**

Distance (ft): **116.6**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **12**  
 Clock To: **12**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **F02**  
 Within 8" of Joint: **YES**  
 Remarks:



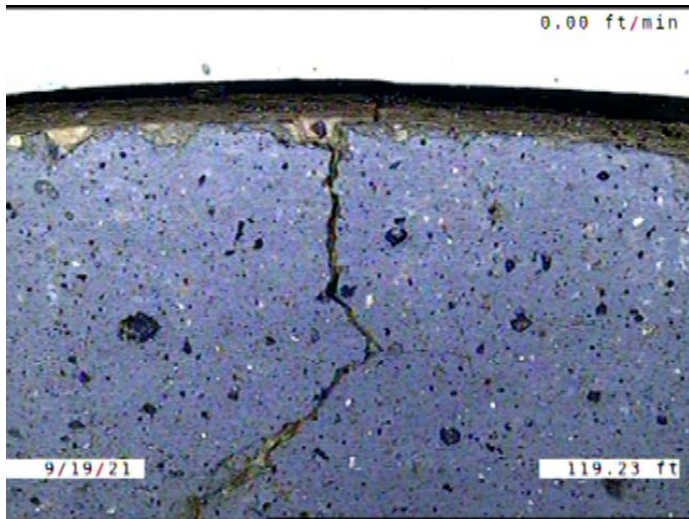
Code: **TF**  
 Description: **Tap Factory**

Distance (ft): **118.0**  
 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: **MMC**  
 Description: **Miscellaneous Material Change**

Distance (ft): **119.2**  
 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**



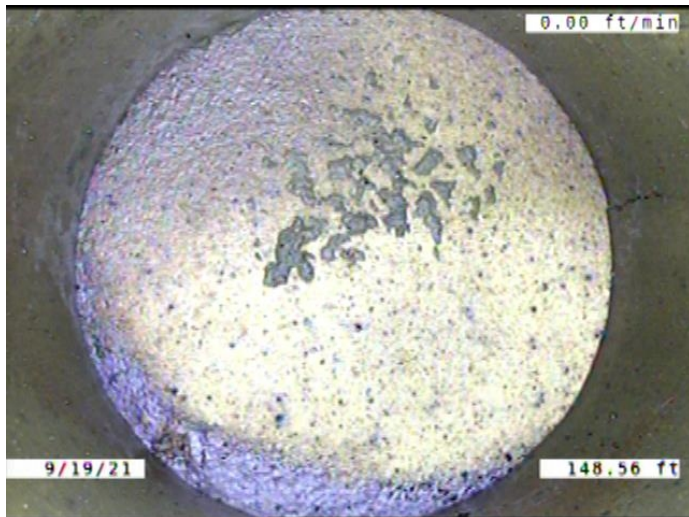
Code: **FM**  
Description: **Fracture Multiple**

Distance (ft): **119.2**  
Structural Grade: **4**  
O&M Grade: **0**  
Clock Start/From: **12**  
Clock To: **12**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index: **S05**  
Within 8" of Joint: **YES**  
Remarks:



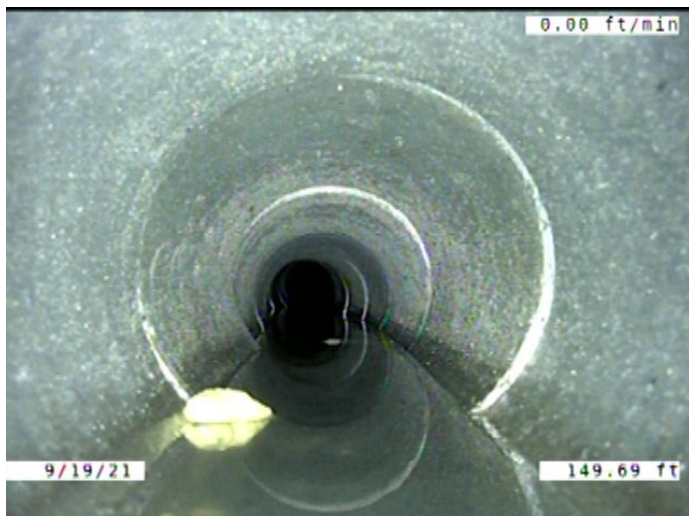
Code: **TFD**  
Description: **Tap Factory Defective**

Distance (ft): **146.5**  
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: **CONSTANTLY RUNNING WATER**



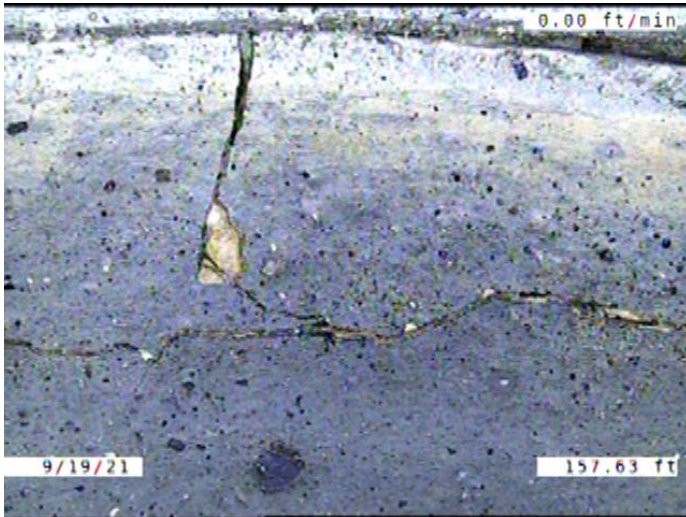
Code: **TFC**  
 Description: **Tap Factory Capped**

Distance (ft): **148.6**  
 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: **CRACKED BACK BY THE CAP**



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

Distance (ft): **149.7**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **12**  
 Clock To: **12**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **F05**  
 Within 8" of Joint: **YES**  
 Remarks:



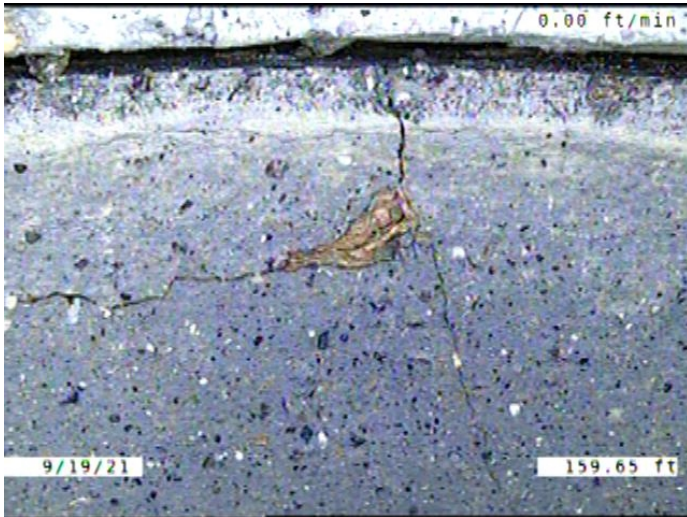
Code: **FM**  
 Description: **Fracture Multiple**

Distance (ft): **157.6**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **10**  
 Clock To: **2**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



Code: **MWLS**  
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **158.0**  
 Structural Grade: **2**  
 O&M Grade: **0**  
 Clock Start/From:  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent: **10.000**  
 Continuous Index:  
 Within 8" of Joint: **NO**  
 Remarks:



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

Distance (ft): **159.6**  
 Structural Grade: **3**  
 O&M Grade: **0**  
 Clock Start/From: **10**  
 Clock To: **12**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **165.7**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **7**  
 Clock To: **8**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **165.7**  
Structural Grade: **0**  
O&M Grade: **1**  
Clock Start/From: **4**  
Clock To: **5**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

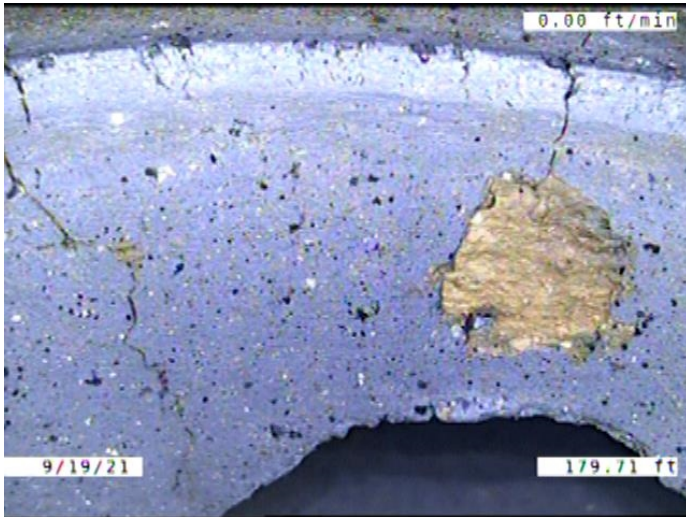
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Code: **SSS**  
Description: **Surface Damage Surface Spalling**

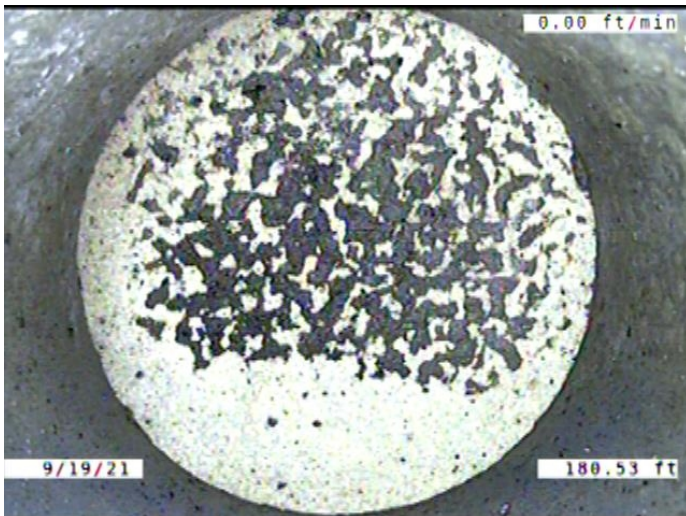
Distance (ft): **170.0**  
Structural Grade: **2**  
O&M Grade: **0**  
Clock Start/From: **4**  
Clock To:  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

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

Distance (ft): **179.7**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **5**  
 Clock To: **1**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **S06**  
 Within 8" of Joint: **YES**  
 Remarks:



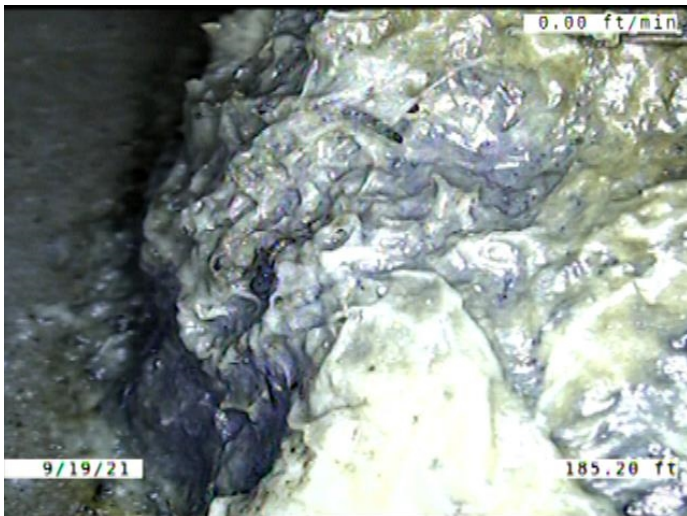
Code: **TFC**  
 Description: **Tap Factory Capped**

Distance (ft): **180.5**  
 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: **TFC**  
 Description: **Tap Factory Capped**

Distance (ft): **182.6**  
 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:



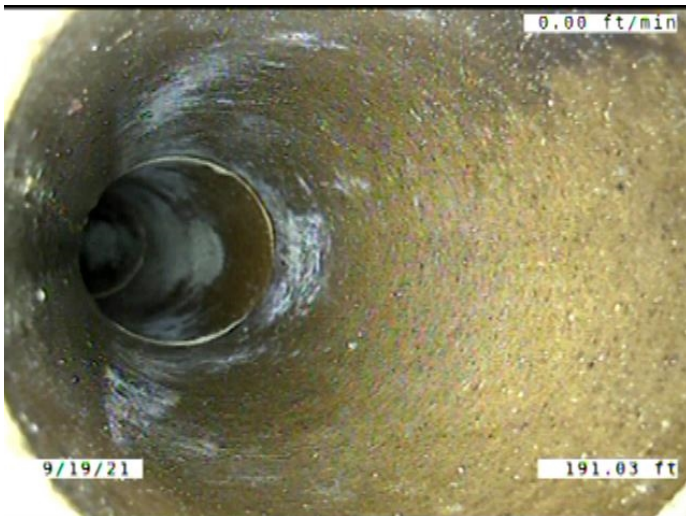
Code: **OBZ**  
 Description: **Obstruction Other**

Distance (ft): **185.2**  
 Structural Grade: **0**  
 O&M Grade: **2**  
 Clock Start/From: **6**  
 Clock To: **8**  
 1st Value:  
 2nd Value:  
 Value Percent: **10.000**  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **TP, RAGS, AND SEWER DEBRIS**



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

Distance (ft): **190.7**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **9**  
 Clock To: **12**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **191.0**  
 Structural Grade: **0**  
 O&M Grade: **2**  
 Clock Start/From: **10**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value: **1.000**  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



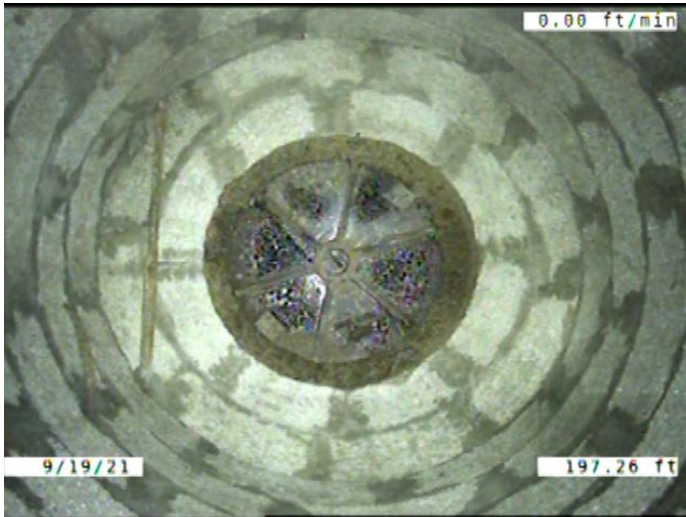
Code: **DSF**  
 Description: **Deposits Settled Fine**

Distance (ft): **195.7**  
 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: **FM**  
 Description: **Fracture Multiple**

Distance (ft): **195.7**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **5**  
 Clock To: **1**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index: **F06**  
 Within 8" of Joint: **YES**  
 Remarks:



Code:	AMH
Description:	Manhole
Distance (ft):	197.3
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:	M-503-012