Profile/Ph	oto Observatio	n Report			RedZon ROBOTICS
Date:	03/19/2018	Weather:		Coding:	PACP 6.0
Pipe Length (ft	:): <b>295.2</b>	Owner:	NA	Pre Clean:	No Pre-Cleaning
P.O.#:		Surveyor:	John Kuglmaier	PSR:	P-209-020-024
Customer:		Clean Date:	01/01/1900	Shape:	С
Street:	FOXCROFT STREE	Г	Flow Control:	Not Controlle	d
City:	Hobart, IN		Year Renewed:		
Location:	Light Highway		Tape/Media #:		
Purpose:	Routine Assessme	ent	Dia/Height:	12"	
Use:	Sanitary		Material:	VCP	
Drain Area:	NA		Lining:		
Category:	NA				
Comment:	P_C at 323 ft debr	ris past MH at 296 .	Flow direction wro	ng	
Location Detai	ls:		Direction of Surve	y: Upstream	
US MH:	M-209-024	DS MH: N	/I-209-020	Total Length Surveyed (ft	:): <b>322.6</b>
D&M Index:	2.25	O&M Quick:	4236	O&M Rating:	45.00
Structural Index:	2.00	Structural Quid	ck: 2200	Structural Rating	4.00
Overall Index:	2.23	Overall Quick:	4236	Overall Rating:	49.00

	Position	Code	Observation	Video (sec)	Grade
1(209-)02	20				
$\square$	.0	AMH	Manhole	10	NA
	.0	MWL	Water Level	21	NA
	5.7	MWL	Water Level	44	NA
	13.9	RFJ	Roots Fine Joint	72	M 1
	17.7	MGO	General Observation	93	NA
	23.3	MGO	General Observation	118	NA
	34.4	RFJ	Roots Fine Joint	156	M 1
	39.3	RMJ(S01)	Roots Medium Joint	181	M 3
	45.3	TFD	Tap Factory Defective	209	M 2
	45.3	RML	Roots Medium Lateral	221	M 3
	46.6	CS	Crack Spiral	239	S 2
	51.6	RMJ(F01)	Roots Medium Joint	265	M 3
	61.7	RFJ	Roots Fine Joint	301	M 1
	77.0	RFJ	Roots Fine Joint	348	M 1
	114.8	CL	Crack Longitudinal	439	S 2
	116.1	TFD	Tap Factory Defective	457	M 2
	117.2	RFJ	Roots Fine Joint	475	M 1
	188.6	TFD	Tap Factory Defective	634	M 2
	188.6	RML	Roots Medium Lateral	645	M 3
	251.5	TF	Tap Factory	786	NA
	252.7	RMJ	Roots Medium Joint	805	M 3
	253.7	DAGS(S02)	Deposits Attached Grease	823	M 2
	/ 257.9	MWL	Water Level	847	NA
	272.6	DAGS(F02)	Deposits Attached Grease	892	M 2
$\square$	/ 273.3	MGO	General Observation	907	NA
	280.4	MCU	Camera Underwater	933	M 4
	284.3	RMJ	Roots Medium Joint	953	M 3
	287.4	MCU	Camera Underwater	971	M 4
	288.9	MGO	General Observation	988	NA
	294.3	AMH	Manhole	1015	NA



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-209-020

Code:

Description:



Distance (ft):	.0
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	25.000
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	

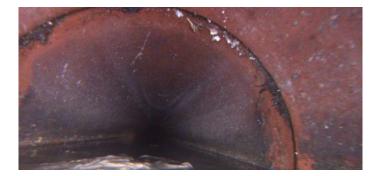
MWL

Water Level



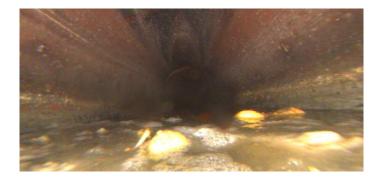
Code: MWL Description: Water Level

Distance (ft):	5.7
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	35.000
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	



Code:	RFJ
Description:	<b>Roots Fine Joint</b>

Distance (ft):	13.9	
Structural Grade:	0	
O&M Grade:	1	
Clock Start/From:	2	
Clock To:		
1st Value:		
2nd Value:		
Value Percent:		
Continuous Index:		
Within 8" of Joint:	YES	
Remarks:		



Code:MGODescription:General Observation

17.7 Distance (ft): 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: Switching to rear camera

Code:

Description:



Distance (ft):	23.3
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:	Switching to front camera

MGO

**General Observation** 



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

Distance (ft):	34.4
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:	RMJ
Description:	Roots Medium Joint
$D_{i+1} = (f_{i+1})$	20.2

Distance (ft):	39.3
Structural Grade:	0
O&M Grade:	3
Clock Start/From:	2
Clock To:	4
1st Value:	
2nd Value:	
Value Percent:	5.000
Continuous Index:	S01
Within 8" of Joint:	YES
Remarks:	



Code:TFDDescription:Tap Factory Defective

Distance (ft):	45.3
Structural Grade:	0
O&M Grade:	2
Clock Start/From:	1
Clock To:	
1st Value:	4.000
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	
Remarks:	RMC

Code:

Description:



Distance (ft):	45.3
Structural Grade:	0
O&M Grade:	3
Clock Start/From:	12
Clock To:	2
1st Value:	
2nd Value:	
Value Percent:	20.000
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	

RML

**Roots Medium Lateral** 

Tuesday, December 8, 2020



Code: CS Description: Crack Spiral

Distance (ft):	46.6
Structural Grade:	2
O&M Grade:	0
Clock Start/From:	5
Clock To:	7
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	

Code:

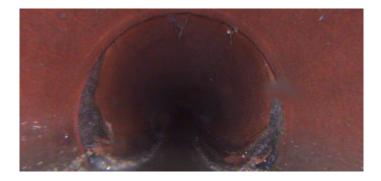
Remarks:



Description:	<b>Roots Medium Joint</b>
Distance (ft):	51.6
Structural Grade:	0
O&M Grade:	3
Clock Start/From:	2
Clock To:	4
1st Value:	
2nd Value:	
Value Percent:	5.000
Continuous Index:	F01
Within 8" of Joint:	YES

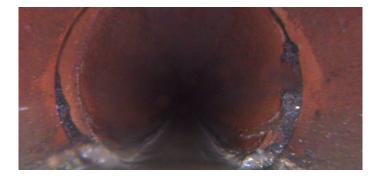
**Clock positions vary** 

RMJ



Code:RFJDescription:Roots Fine Joint

Distance (ft):	61.7
Structural Grade:	0
O&M Grade:	1
Clock Start/From:	7
Clock To:	5
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	



Code:	RFJ
Description:	Roots Fine Joint
Distance (ft):	77.0
Structural Grade:	0
O&M Grade:	1
Clock Start/From:	2
Clock To:	8
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	



Code: Description: CL Crack Longitudinal

Distance (ft):	114.8
Structural Grade:	2
O&M Grade:	0
Clock Start/From:	2
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	



Code:	TFD
Description:	<b>Tap Factory Defective</b>
Distance (ft):	116.1
Structural Grade:	0
O&M Grade:	2
Clock Start/From:	1
Clock To:	
1st Value:	4.000
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	
Remarks:	RMC



Code:RFJDescription:Roots Fine Joint

Distance (ft):	117.2
Structural Grade:	0
O&M Grade:	1
Clock Start/From:	2
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	

Code:



Description:	<b>Tap Factory Defective</b>
Distance (ft):	188.6
Structural Grade:	0
O&M Grade:	2
Clock Start/From:	1
Clock To:	
1st Value:	4.000
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	
Remarks:	RMC

TFD



Code:RMLDescription:Roots Medium Lateral

Distance (ft):	188.6
Structural Grade:	0
O&M Grade:	3
Clock Start/From:	2
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	5.000
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	



Code: Description:	TF Tap Factory
Distance (ft):	251.5
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:	
Remarks:	



Code:RMJDescription:Roots Medium Joint

Distance (ft):	252.7
Structural Grade:	0
O&M Grade:	3
Clock Start/From:	9
Clock To:	3
1st Value:	
2nd Value:	
Value Percent:	15.000
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	



Code:	DA
Description:	Dej

DAGS Deposits Attached Grease

Distance (ft):	253.7
Structural Grade:	0
O&M Grade:	2
Clock Start/From:	3
Clock To:	9
1st Value:	
2nd Value:	
Value Percent:	5.000
Continuous Index:	S02
Within 8" of Joint:	NO
Remarks:	



Code: MWL Description: Water Level

Distance (ft):	257.9
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	50.000
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	

Code:

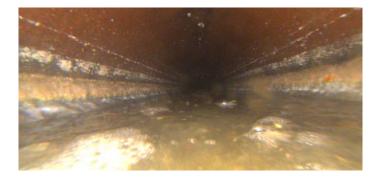
Remarks:



coue.	DAGS
Description:	Deposits Attached Grease
Distance (ft):	272.6
Distance (it).	272.0
Structural Grade:	0
O&M Grade:	2
Clock Start/From:	3
Clock To:	9
1st Value:	
2nd Value:	
Value Percent:	5.000
Continuous Index:	F02
Within 8" of Joint:	NO

**Clock positions vary** 

DAGS



Code:MGODescription:General Observation

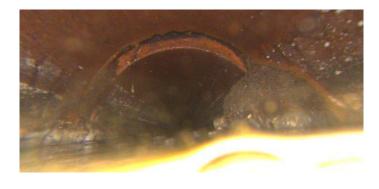
Distance (ft):	273.3
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	Switching to rear camera



Code:	
Description:	

MCU Camera Underwater

Distance (ft):	280.4
Structural Grade:	0
O&M Grade:	4
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	



Code: Description: RMJ Roots Medium Joint

Distance (ft):	284.3
Structural Grade:	0
O&M Grade:	3
Clock Start/From:	9
Clock To:	10
1st Value:	
2nd Value:	
Value Percent:	20.000
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	



Code:	MCU
Description:	Camera Underwater

Distance (ft):	287.4
Structural Grade:	0
O&M Grade:	4
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	



Code: MGO Description: **General Observation** 

Distance (ft): 288.9 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:

Switching to front camera



Code: Description: AMH Manhole

Distance (ft):	294.3
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-209-024