

THE STATE OF SOUTH CAROLINA
In The Court of Appeals.

APPEAL FROM YORK COUNTY
Court of Common Pleas

D. Garrison Hill, Circuit Court Judge
S. Jackson Kimball, Special Circuit Court Judge

Case No. 2016-002118

Lucille H. Ray, Appellant,

v.

City of Rock Hill, South Carolina, a Municipal Corporation, and South
Carolina Department of Transportation, an agency of the State of South
Carolina, Defendants,

Of which City of Rock Hill is the Respondent.

RECORD ON APPEAL
Volume III

Richard B. Fennell
S.C. Bar No. 10467
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600 S. College Street, Charlotte, NC 28202

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Jeremy Daniel Melville
Spencer & Spencer, P.A.
226 East Main Street
P.O. Box 790, Rock Hill, SC 29731
Attorneys for Respondent

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S.C. SUPREME COURT

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SC Court of Appeals

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STATE OF SOUTH CAROLINA)

COUNTY OF YORK)

Lucille H. Ray,)

Plaintiff,)

vs.)

City of Rock Hill, South Carolina, a)
Municipal Corporation,)

Defendant.)

IN THE COURT OF COMMON PLEAS

AFFIDAVIT OF MICHAEL LEONARD

C.A. No. 2014 CP-46-4100

FILED-RECEIVED
2015 SEP 17 PM 3:16
DAVID HAMILTON
CLERK OF COURT
COURT OF COMMON PLEAS
ROCK HILL, SOUTH CAROLINA

Michael H. Leonard, being duly sworn, deposes and says:

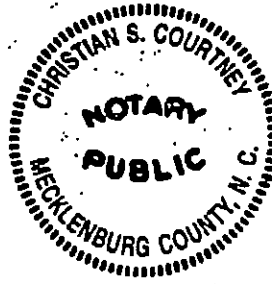
1. I am over the age of 18, am competent to testify as to these matters, and make this affidavit on personal knowledge.
2. I have reviewed my affidavit previously submitted in this action, and can reaffirm that it is accurate.
3. I am certain from the evidence that I have seen that the pipe which runs beneath Ms. Ray's house is leaking. The most conclusive evidence of this is a report generated by Bio-Nomic Services which was generated in connection with a video we had shot of the line in April, 2004. It reaffirms what I suspected. The pipe is old, and cannot do the job it is being forced to do. I have attached the Bio-Nomic Report as Exhibit 1.
4. I am certain from the evidence that I have seen that those leaks compromise the soils beneath her house, and their ability to support the structure.
5. I am certain from the evidence that I have seen that that fact has led to damage to Ms. Ray's house.
6. I did not see this house until March, 2012. I have to defer to Ms. Ray as to when internal damage first appeared, but I am certain that it has gotten worse, and appeared at new locations, since I first got involved.
7. As I mentioned in my last affidavit, there are other options for this water. I have experience with designing and installing storm drainage systems. I have seen plans that show that the City was, at least at one time, considering changing the flow so it went toward Lucas, instead of away from it. I admittedly don't know how much that would cost, but this situation should not continue.

This 11th day of September, 2015.

Michael H. Leonard
Michael H. Leonard

Sworn to and subscribed before me
this 11 day of September, 2015.

Christian S. Courtney
Notary Public, Christian S. Courtney
Commission expires: 07/01/2016





Bio-Nomic Services
 516 Rountree Road
 Charlotte NC 28217
 (704) 529-0000

Project Name: 330 COLLEGE AVENUE- ROCK HILL- SC									
US MH	DS MH	Prop ID	Date	Street	Material	Size	Total	Insp	
CB-01	MH-02	01	4/1/2014	330 COLLEGE ST	Vitrified Clay Pipe	24	149.2	149.2	

Pipe Size: 24

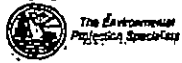
Total Ln.: 149.2

Inspected Ln.: 149.2

Project Total Ln.: 149.2

Project Inspected Ln.: 149.2





PSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		In Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use: Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey: Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58		
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.	Additional Info JAMES-McELROY- & DIEHL- PA					



CB-01

0.0 ft. Access Point Catch Basin



CB-01

0.0 ft. Water Level



0%

8.0 ft. Crack Multiple



8.0 ft. Joint Offset Medium



8.0 ft. Fracture Multiple



8.0 ft. Hole



9.2 ft. Fracture Multiple





PSR 01	Block No.	Pre Dir.	Street name and No: 330 COLLEGE ST		Street Typ.	Post Dir
US Manhole CB-01	Total Length 149.2	Material: Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	
SPR 195	MPR 7	W.O. Number		Purpose of Survey, Maintenance Related		
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806		
QSR 6444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401	Time of Insp 08:58		
US Rim-Inv.	DS Rim-Inv.	Location Details			Weather	Situation
SSO	Additional Info. JAMES-McELROY- & DIEHL- PA					

11.9 ft.	Fracture Longitudinal - S01		3	
11.9 ft.	Fracture Longitudinal		3	
11.9 ft.	Fracture Longitudinal		3	
11.9 ft.	Fracture Longitudinal		3	
14.4 ft.	Fracture Longitudinal Hinge, 2		4	
16.9 ft.	Fracture Longitudinal - S02		3	
18.5 ft.	Crack Multiple		3	
19.5 ft.	Crack Longitudinal		2	



PSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		M Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related		
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETMAR		Chart No. 06019806		
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58	
US Rim-Inv.	DS Rim-Inv.	Location Details			Weather	Situation
SSO	Additional Info JAMES-McELROY & DJEHL- PA					

24.4 ft.	Hole		3	
24.4 ft.	Crack Longitudinal Hinge, 2		4	
34.8 ft.	Hole		3	
34.8 ft.	Crack Longitudinal		2	
37.9 ft.	Crack Longitudinal		2	
40.0 ft.	Hole		3	
40.0 ft.	Infiltration Stain			
42.1 ft.	Crack Longitudinal		2	

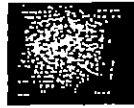


Bio-Nomic Services
 516 Rountree Road
 Charlotte NC 28217
 (704) 629-0000

PSR 01	Block No.	Pre Dir	Street name and No. 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58		
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.	Additional Info JAMES McELROY & DIEHL- PA					
SSO							

44.3 ft. Crack Longitudinal

2



47.7 ft. Hole

3



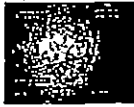
47.7 ft. Intruding Sealing Ring Broken

3



51.7 ft. Crack Longitudinal

2



53.1 ft. Fracture Longitudinal - F02

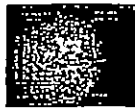
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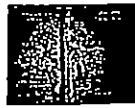
END OF FRACTURE AT 12 O'CLOCK

53.1 ft. Crack Longitudinal - S03

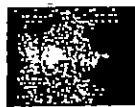
2



55.7 ft. Infiltration Stain



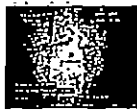
60.9 ft. Infiltration Stain - S04





PSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related			
SPRI 2.7	MRRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58		
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.	Additional Info JAMES-McELROY- & DIEHL- PA					

60.9 ft. Fracture Longitudinal - F01



3

END OF FRACTURE AT 6
CLOCK

60.9 ft. Crack Longitudinal - S05



2

66.0 ft. Infiltration Stain



73.9 ft. Crack Longitudinal - F05



2

END OF CRACK AT 6 CLOCK

81.4 ft. Infiltration Stain

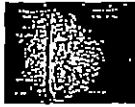


86.4 ft. Crack Longitudinal



2

86.6 ft. Infiltration Stain



89.2 ft. Infiltration Stain

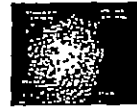




BSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ..	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	
SPR 185	MPR 7	W.O. Number		Purpose of Survey Maintenance Related		
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806		
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58	
US Rim-Inv.	DS Rim-Inv.	Location Details			Weather	Situation
SSO	Additional Info JAMES-McELROY- & DIEHL- PA					

89.7 ft. Crack Longitudinal

2



91.7 ft. Infiltration Stain



94.1 ft. Infiltration Stain - F04



94.1 ft. Crack Longitudinal - F03

2



96.8 ft. Infiltration Stain



99.3 ft. Crack Longitudinal

2

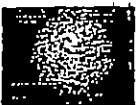


99.3 ft. Infiltration Stain



101.2 ft. Fracture Longitudinal

3





PSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related		
SPRU 2.7	MPRI 0.4	Surveyed By ALEX_TETTMAR		Cert. No. 06019806		
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58	
US Rim-Inv.	DS Rim-Inv.	Location Details			Weather	Situation
SSO	Additional Info JAMES-McELROY- & DIEHL- PA					

102.0 ft Infiltration Stain



102.0 ft Crack Longitudinal

2



103.5 ft Tap Break-In Intruding



2

103.5 ft Infiltration Stain



104.4 ft Crack Longitudinal



2

104.4 ft Infiltration Stain - S06



106.9 ft Crack Longitudinal

2



111.8 ft Crack Longitudinal

2





PSR 01	Block No.	Pre Dir	Street Name and No 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 196	MPR 7	W.O. Number		Purpose of Survey Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58		
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rtn-Inv.	DS Rtn-Inv.						
SSO	Additional Info JAMES-McELROY- & DIEHL- PA						

119.6 ft	Crack Longitudinal		2	
119.6 ft	Crack Longitudinal		2	
122.1 ft	Crack Longitudinal		2	
124.7 ft	Crack Longitudinal		2	
124.9 ft	Hole		3	
127.5 ft	Crack Longitudinal		2	
129.9 ft	Crack Longitudinal		2	
129.9 ft	Hole		3	



Biologic Services
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 Charlotte NC 28217
 (704) 529-0000

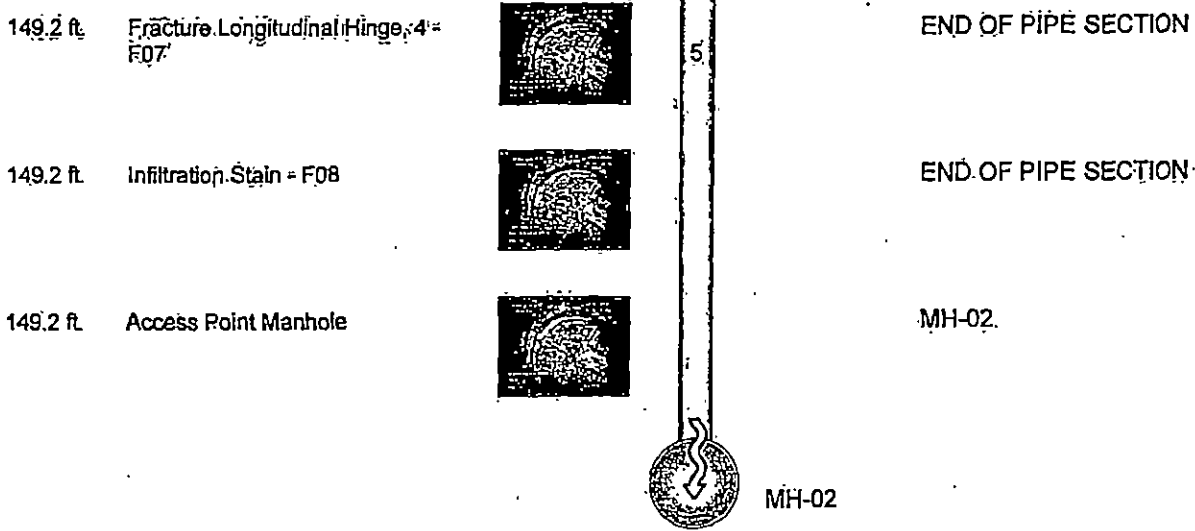
PSR 01	Block No.	Pre Dir	Street Name and No. 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A		
DS Manhole MH-02	Length surveyed 149.2'	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019805			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58		
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.	Additional Info JAMES-McELROY- & DIEHL- PA					
SSO							

129.9 ft	Fracture Longitudinal		3	
132.3 ft	Fracture Longitudinal Hinge, 4		5	
132.4 ft	Fracture Longitudinal Hinge, 4 - S07		5	
135.3 ft	Infiltration Stain - F06			END OF TYPICAL INFILTRATION STAIN
135.3 ft	Infiltration Stain			AT HINGE FRACTURES
137.7 ft	Infiltration Stain - S08			AT HINGE FRACTURES
145.5 ft	Fracture Circumferential		2	
146.1 ft	Hole		3	



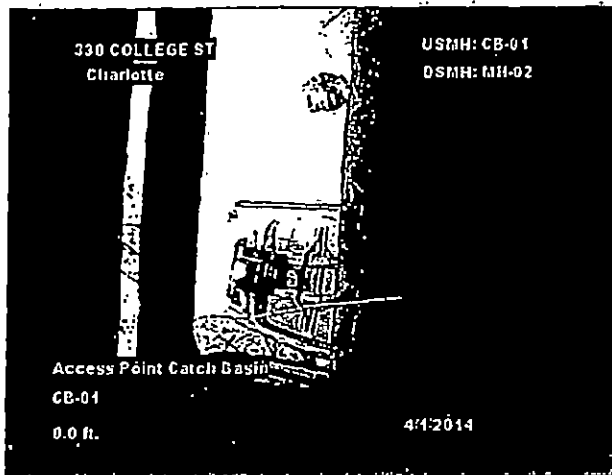
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PSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		M Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401	Time of Insp 08:58			
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.						
SSO	Additional Info JAMES-McELROY- & DIEHL- PA						

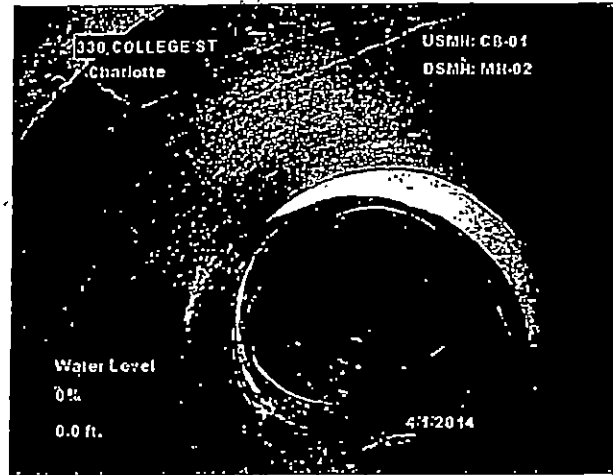




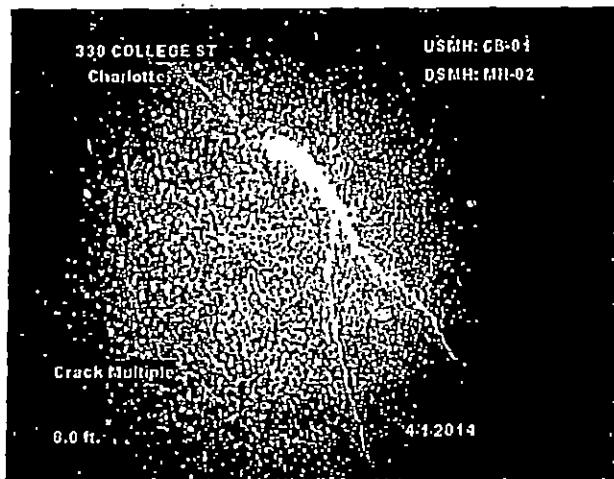
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US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular	I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater



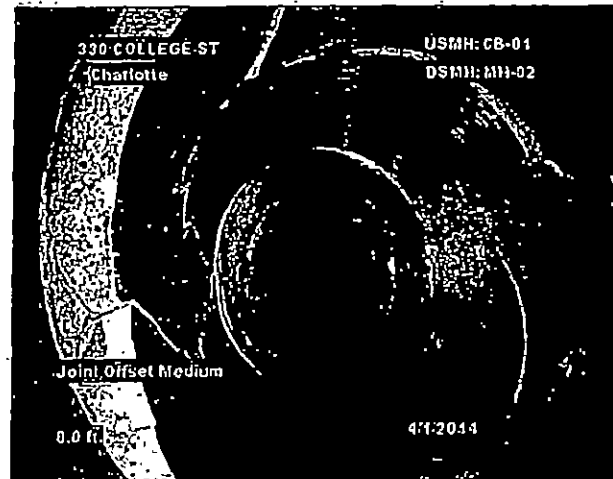
Distance: 0.0 ft. Grade: 0
 Condition: Access Point Catch Basin
 Remarks: CB-01



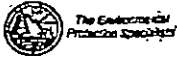
Distance: 0.0 ft. Grade: 2
 Condition: Water Level
 Remarks: 0%



Distance: 8.0 ft. Grade: 3
 Condition: Crack Multiple
 Remarks: N/A

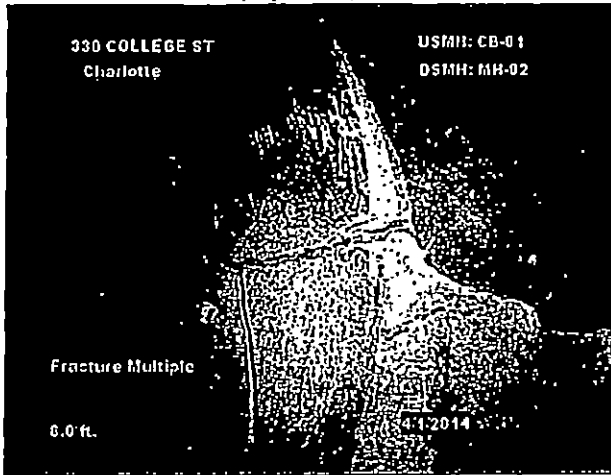


Distance: 8.0 ft. Grade: 1
 Condition: Joint Offset Medium
 Remarks: N/A

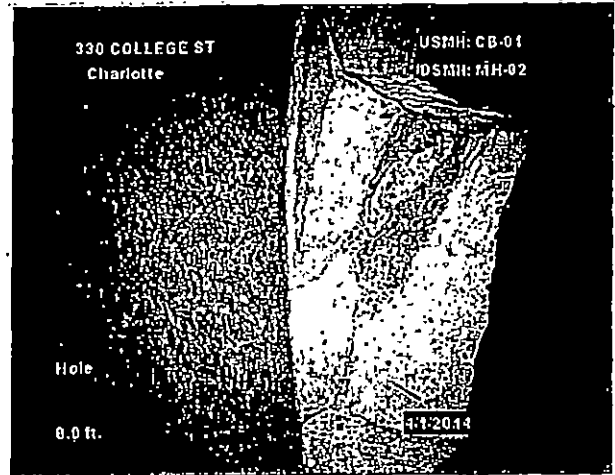


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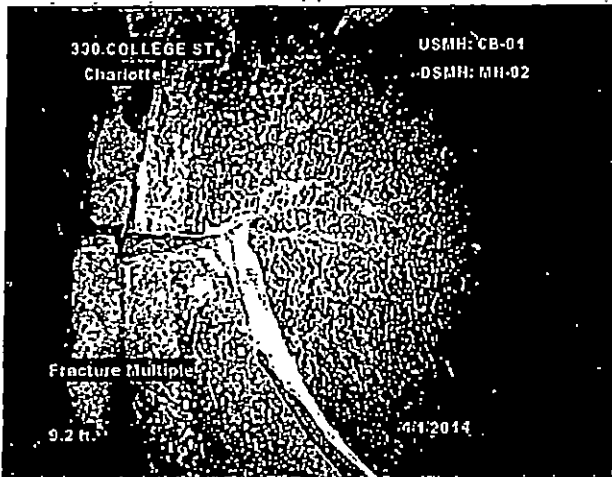
BSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		IN Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



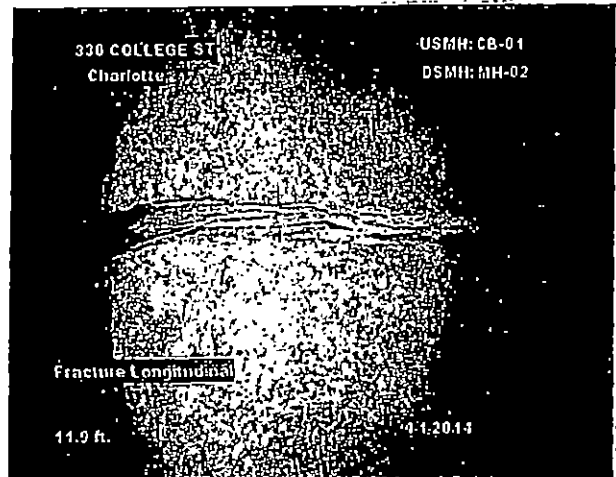
Distance: 8.0 ft. Grade: 4
 Condition: Fracture Multiple
 Remarks: N/A



Distance: 8.0 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



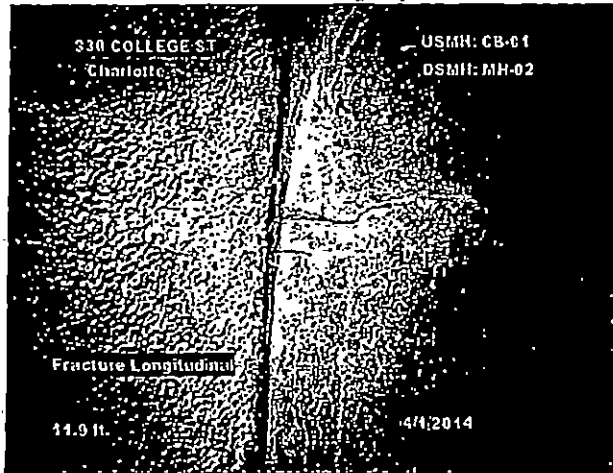
Distance: 9.2 ft. Grade: 4
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 Remarks: N/A



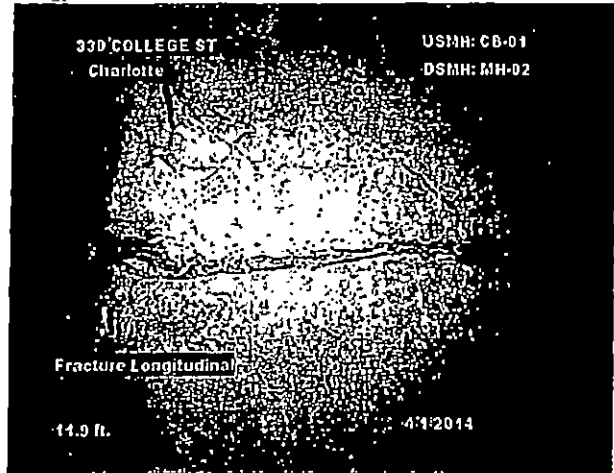
Distance: 11.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



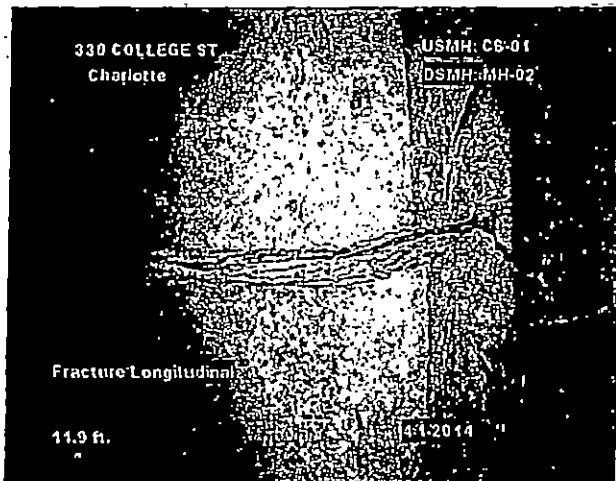
PSR 01	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	330 COLLEGE ST		Shape Circular	TI Value N/A
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use: Stormwater	



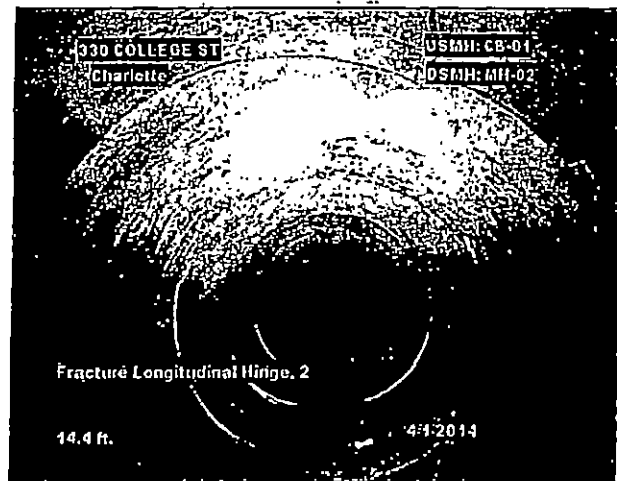
Distance: 11.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



Distance: 11.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



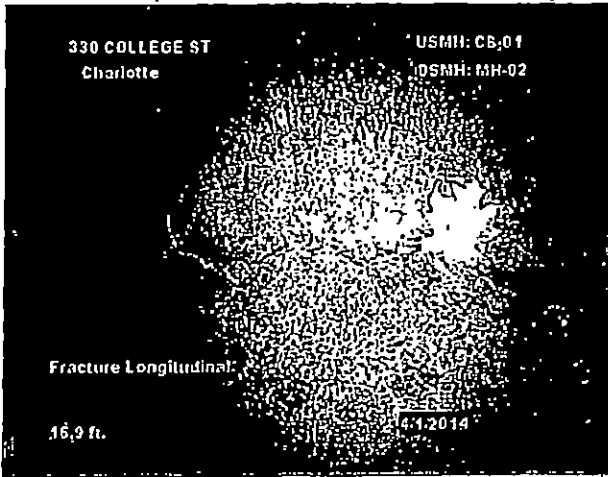
Distance: 11.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



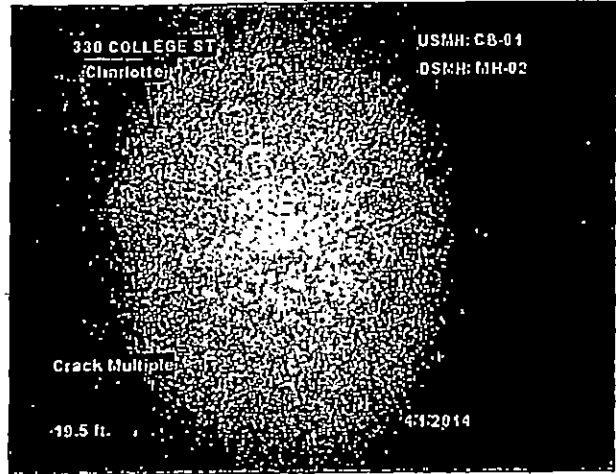
Distance: 14.4 ft. Grade: 4
 Condition: Fracture Longitudinal Hinge, 2
 Remarks: N/A



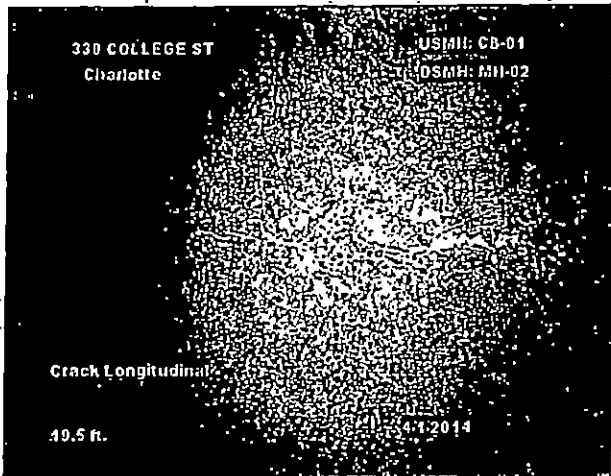
PSR#	Block No.	Pre. Dir.	Street name and No	Street Typ...	Post Dir
01			330 COLLEGE ST		
US Manhole#	Total Length	Material	Shape	In. Value	
CB-01	149.2	Vitrified Clay Pipe	Circular	N/A	
DS Manhole#	Length surveyed	Location	Height	City	Sewer Use
MH-02	149.2		24	ROCK HILL	Stormwater



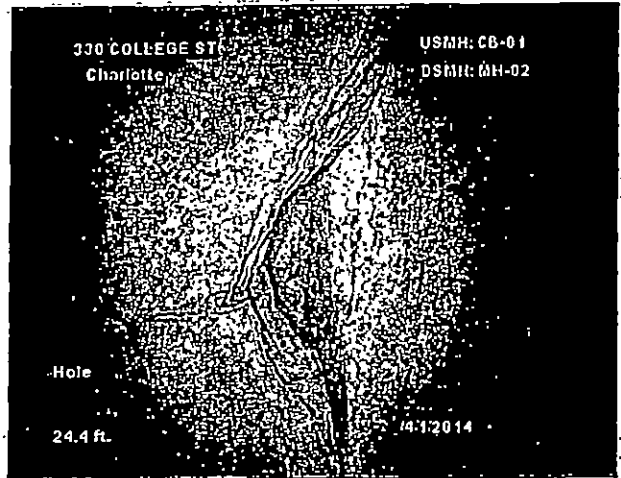
Distance: 16.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



Distance: 19.5 ft. Grade: 3
 Condition: Crack Multiple
 Remarks: N/A



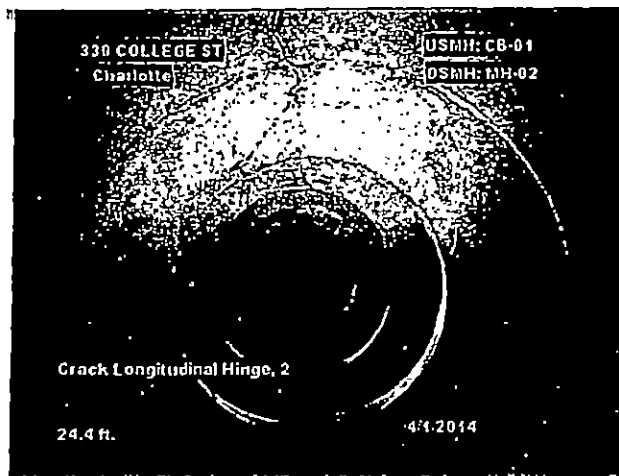
Distance: 19.5 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



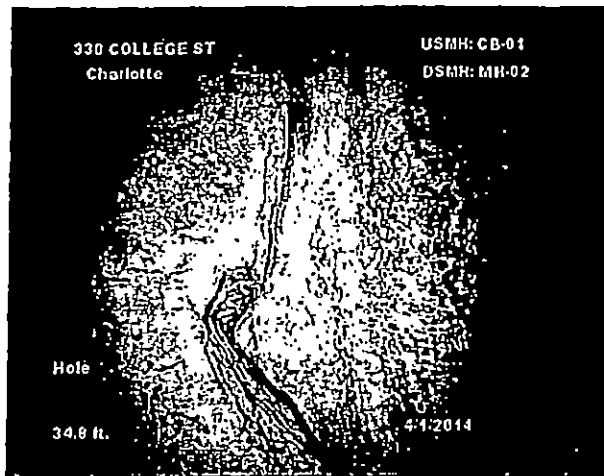
Distance: 24.4 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



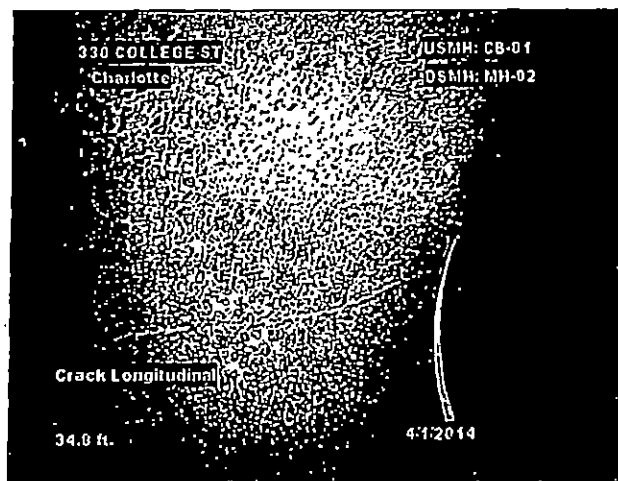
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



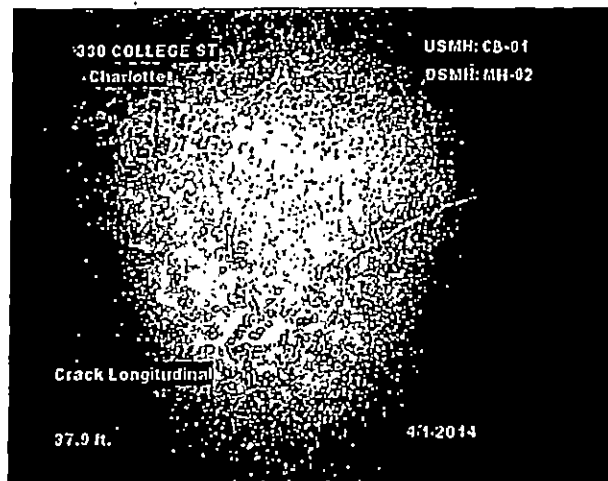
Distance: 24.4 ft. Grade: 4
 Condition: Crack Longitudinal Hinge, 2
 Remarks: N/A



Distance: 34.8 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



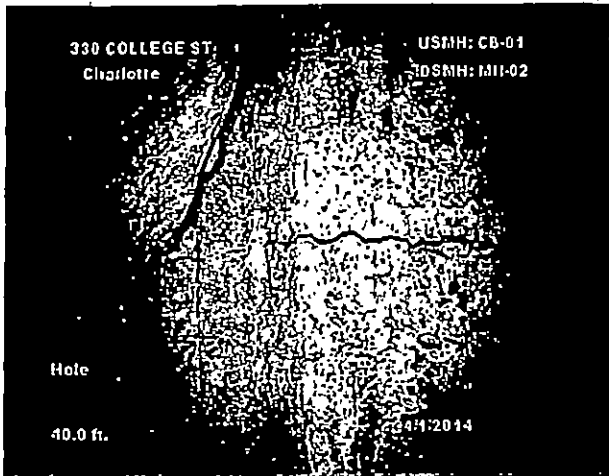
Distance: 34.8 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



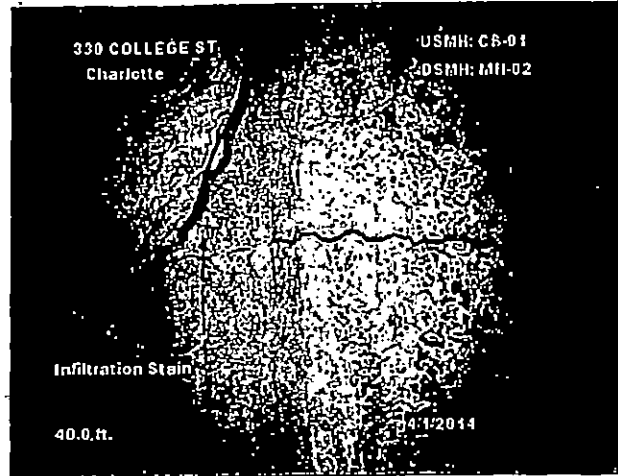
Distance: 37.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



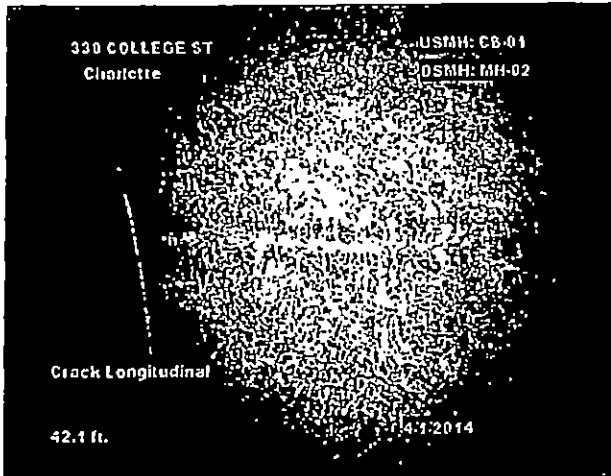
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		I/A Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



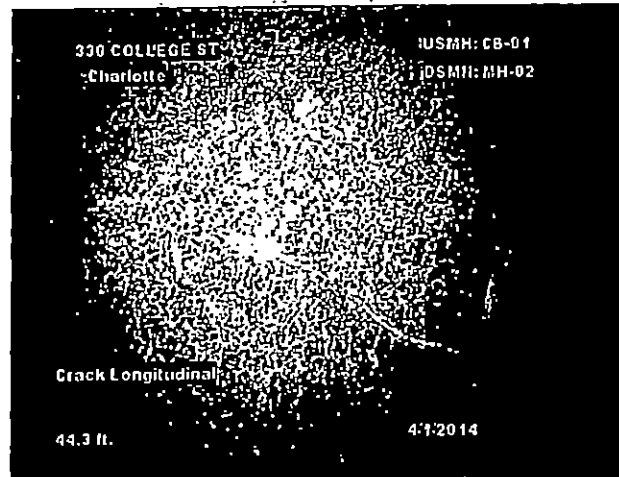
Distance: 40.0 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



Distance: 40.0 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



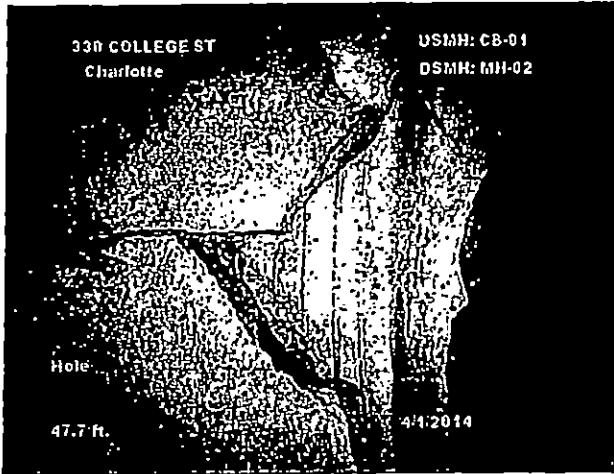
Distance: 42.1 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



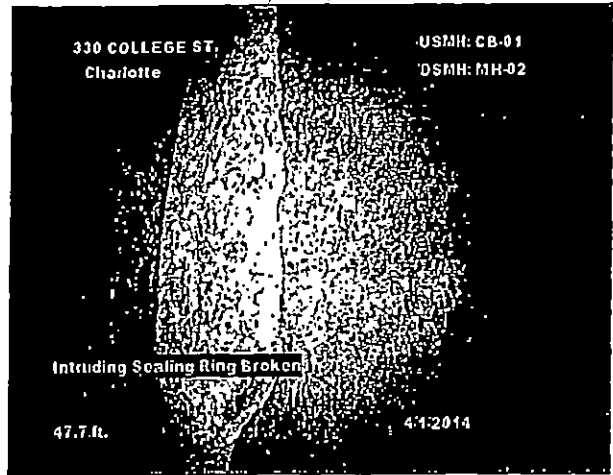
Distance: 44.3 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



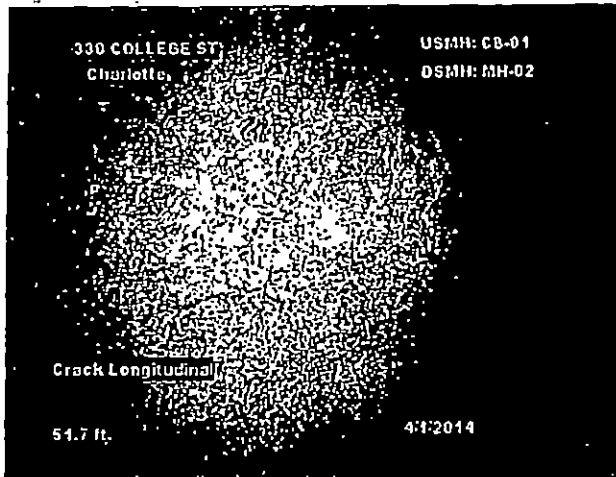
PSR	Block No.	Pre Dir	Street name and No.		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



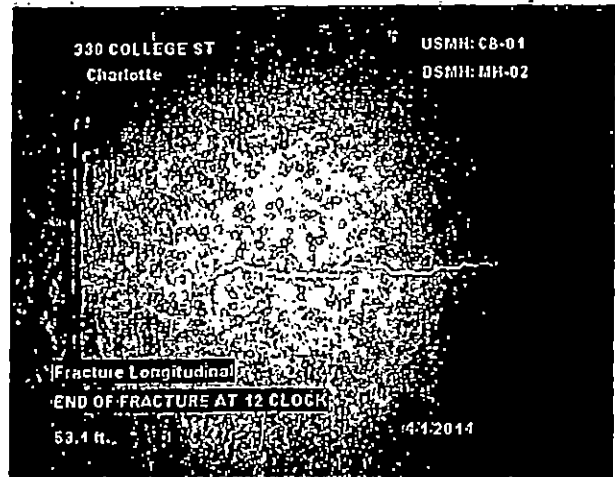
Distance: 47.7 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



Distance: 47.7 ft. Grade: 3
 Condition: Intruding Sealing Ring Broken
 Remarks: N/A



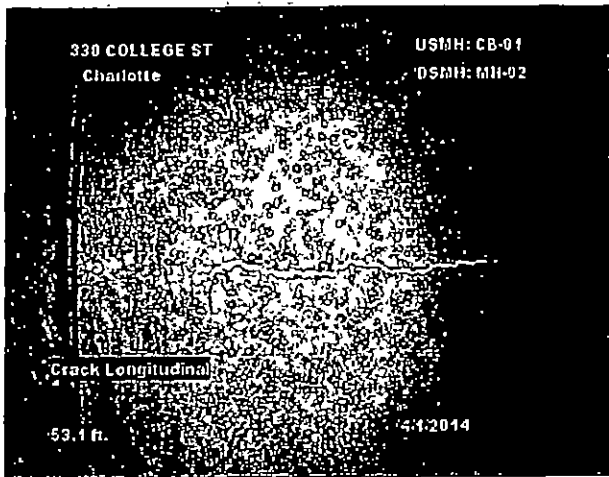
Distance: 51.7 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



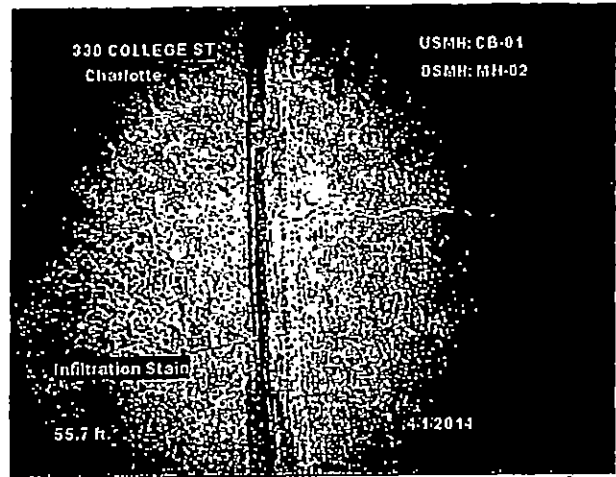
Distance: 53.1 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: END OF FRACTURE AT 12 O'CLOCK



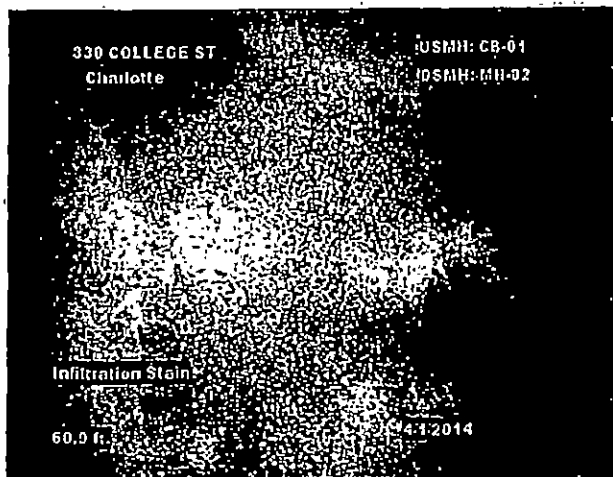
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		VI Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	(Sewer-Use)	
MH-02	149.2		24	ROCK HILL	Stormwater	



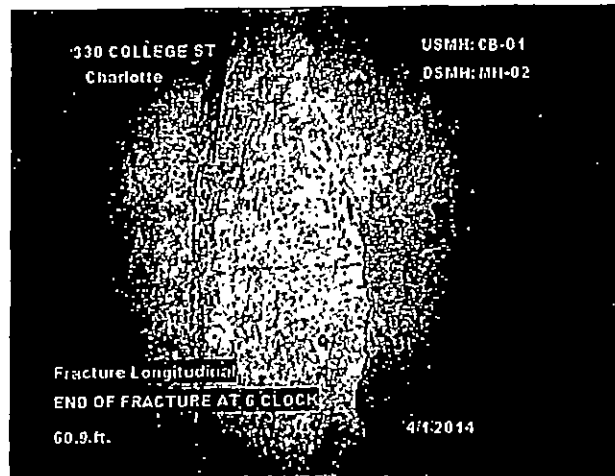
Distance: 53.1 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 55.7 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



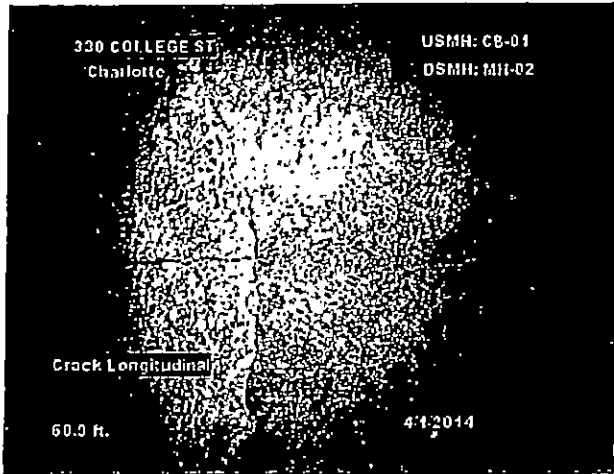
Distance: 60.9 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



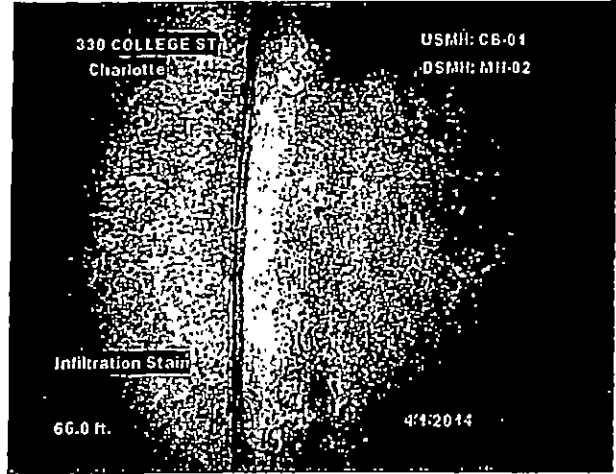
Distance: 60.9 ft Grade: 3
 Condition: Fracture Longitudinal
 Remarks: END OF FRACTURE AT 6 O'CLOCK



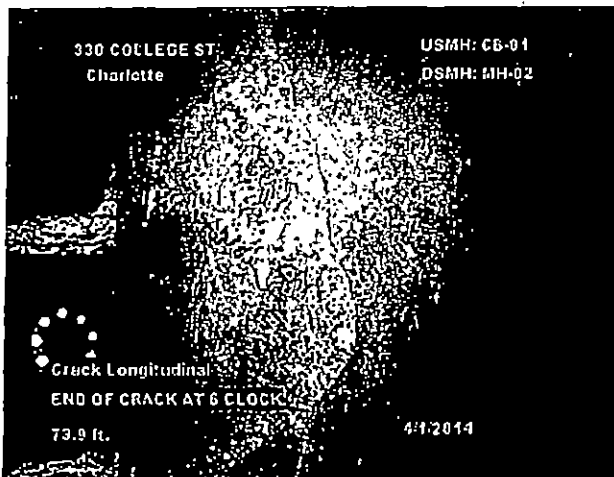
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		In Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use, Stormwater	



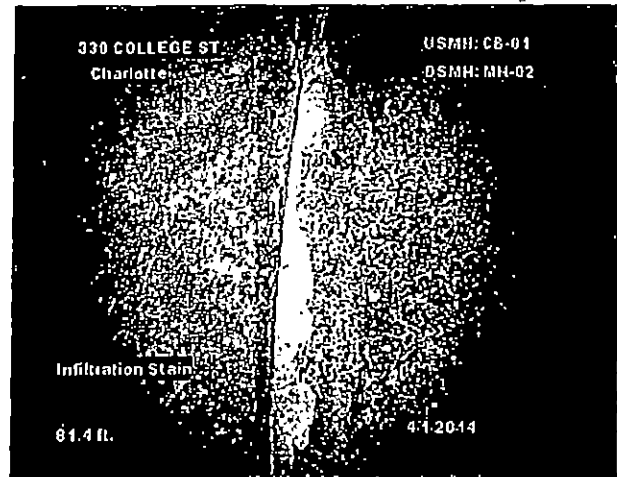
Distance: 60.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 66.0 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



Distance: 73.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: END OF CRACK AT 6 O'CLOCK

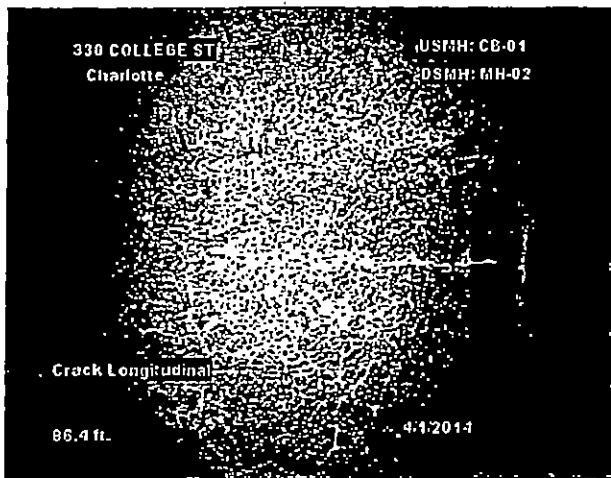


Distance: 81.4 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A

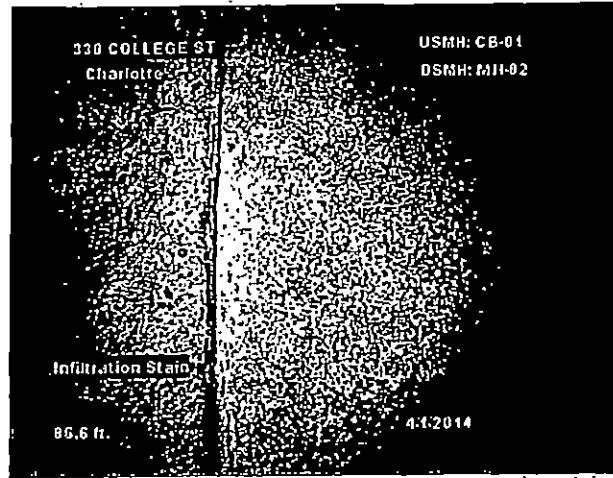


Bio-Nomic Services
 516 Rountree Road
 Charlotte NC 28217
 (704) 529-0000

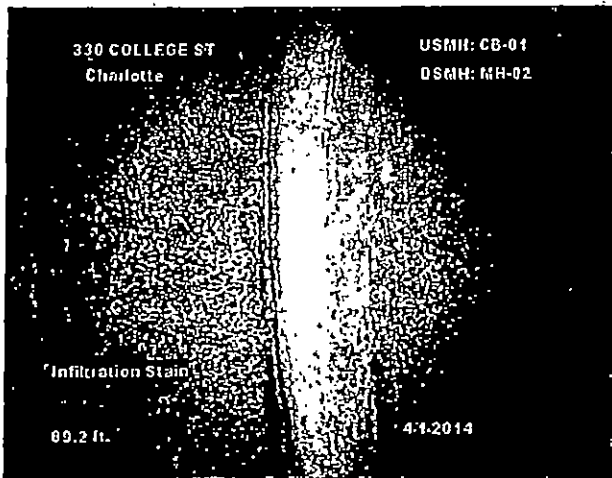
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



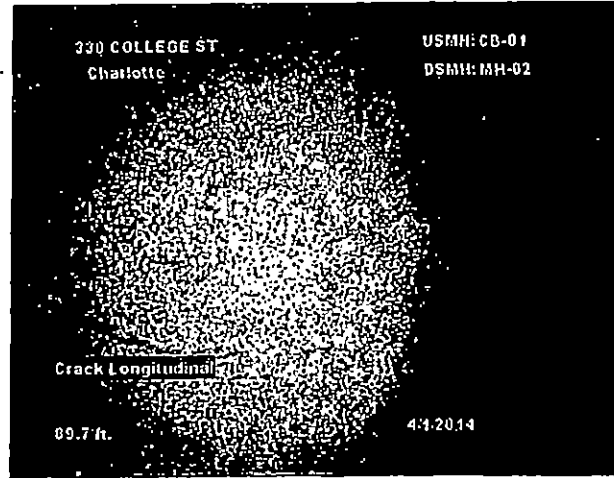
Distance: 86.4 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 86.6 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



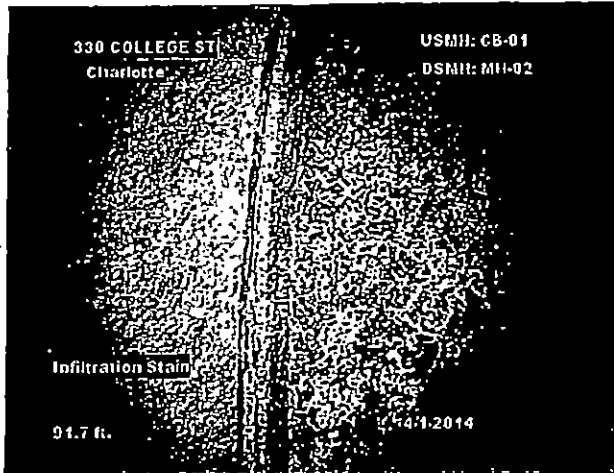
Distance: 89.2 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



Distance: 89.7 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



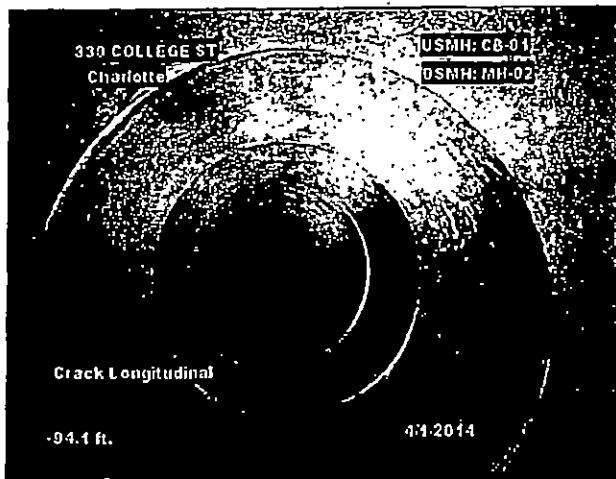
PSR-01	Block No.	Pro Dir	Street name and No. 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
IDS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



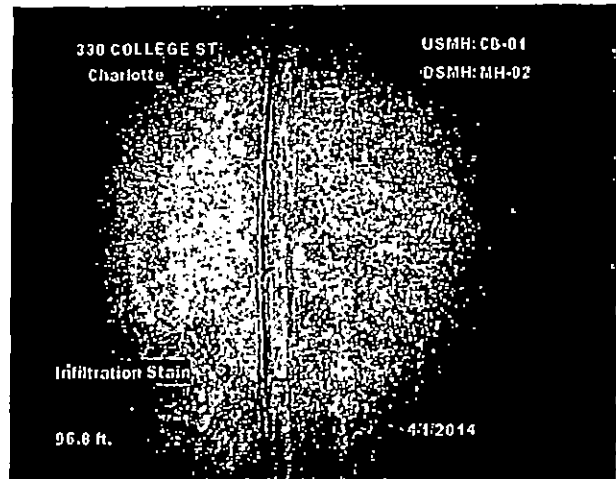
Distance: 91.7 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



Distance: 94.1 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



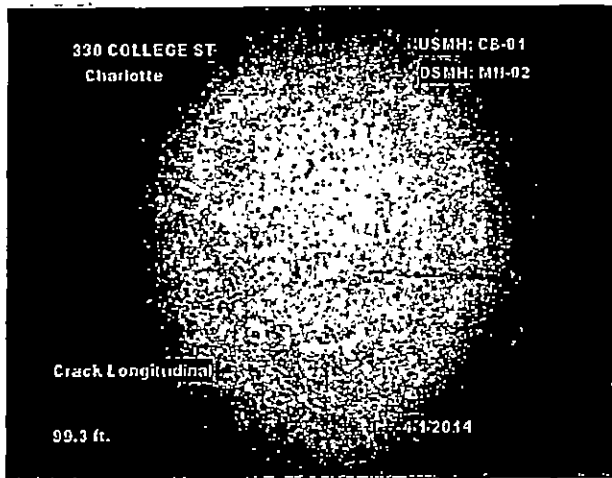
Distance: 94.1 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



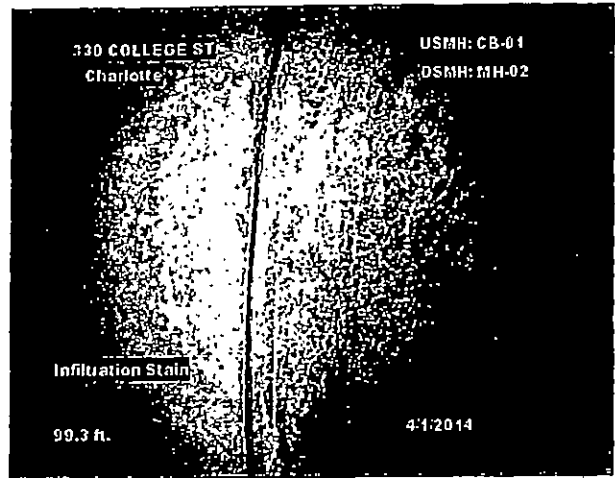
Distance: 96.8 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



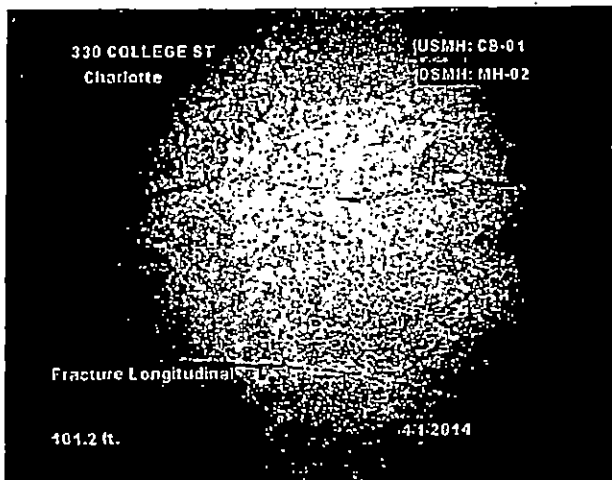
PSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	'Material' Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 148.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



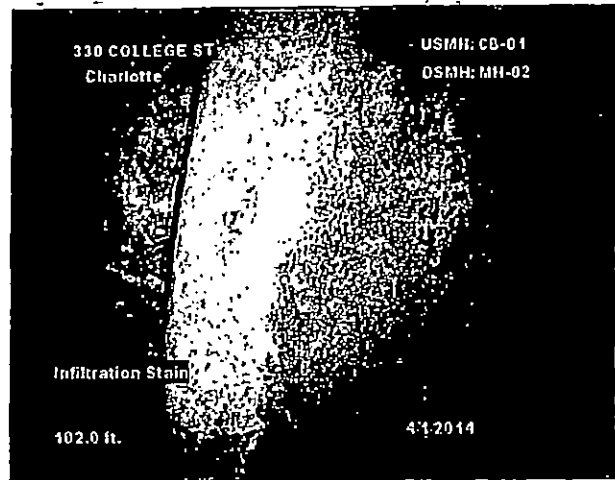
Distance: 99.3 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 99.3 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



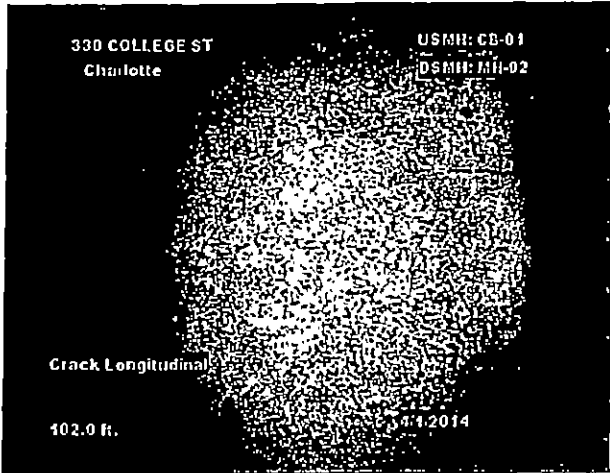
Distance: 101.2 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



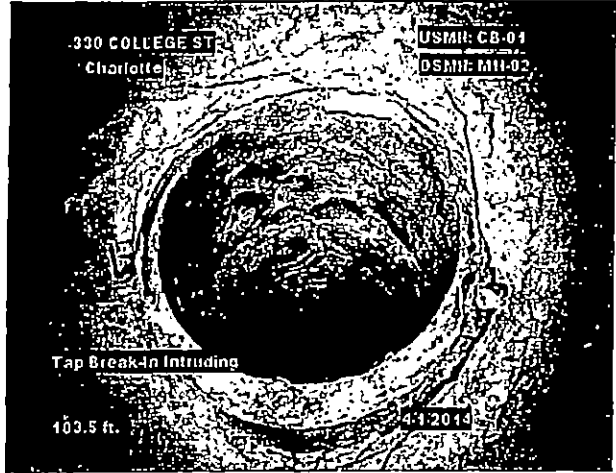
Distance: 102.0 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



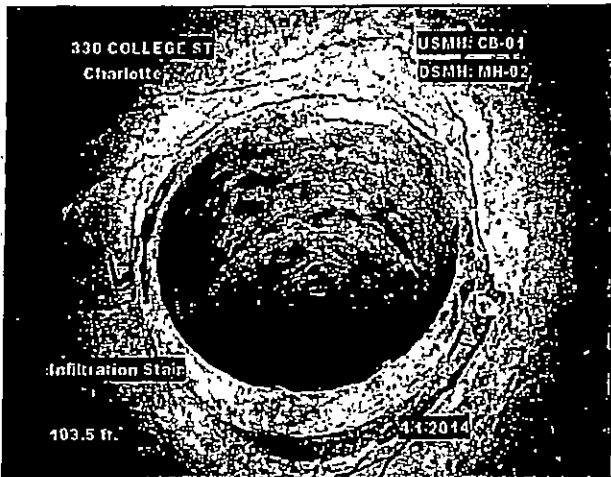
PSR	Block No.	Pre Dir	Street name and No.		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



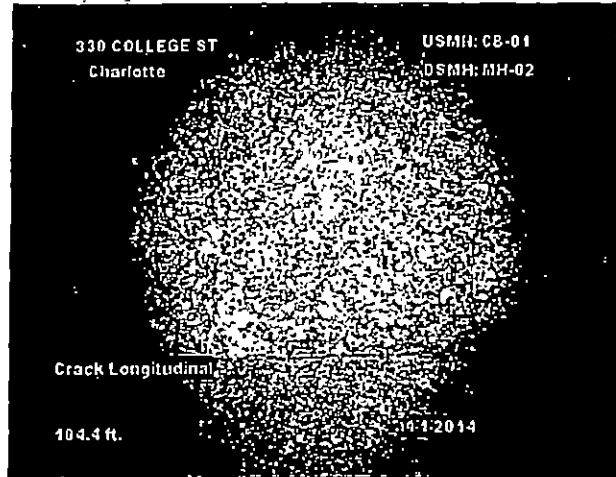
Distance: 102.0 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 103.5 ft. Grade: 2
 Condition: Tap Break-In Intruding
 Remarks: N/A



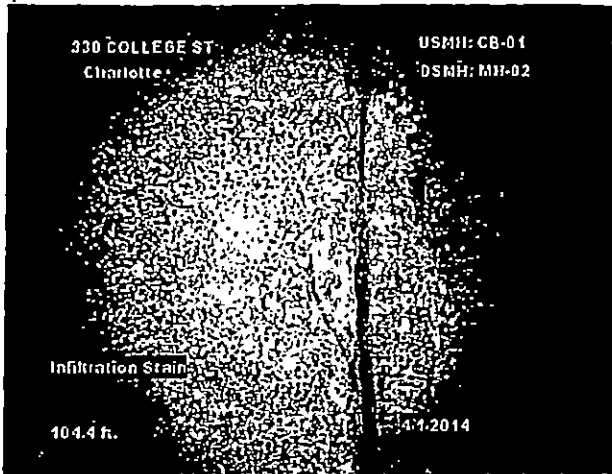
Distance: 103.5 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



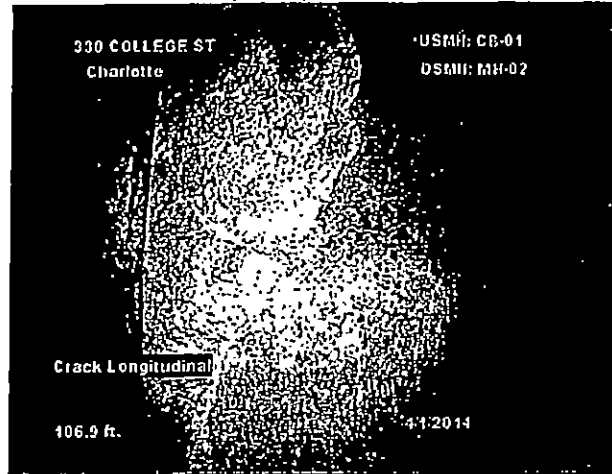
Distance: 104.4 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



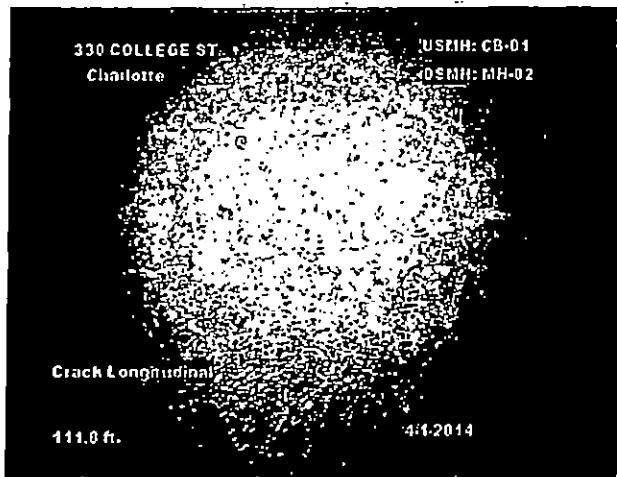
PSR	Block No.	Pre Dir	Street name and No	Street Typ...	Post Dir
01			330 COLLEGE ST		
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular	I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater



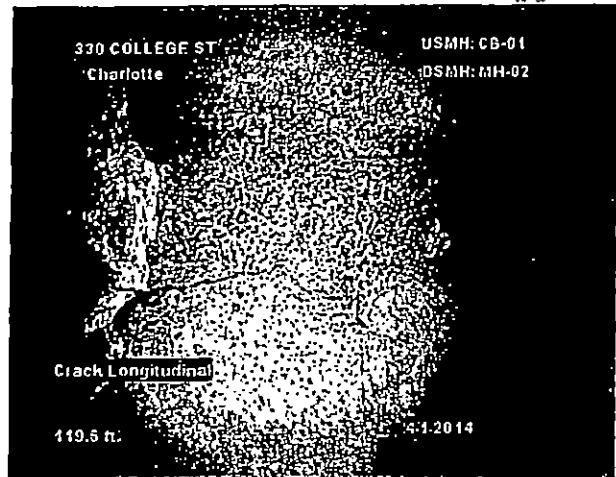
Distance: 104.4 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



Distance: 106.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



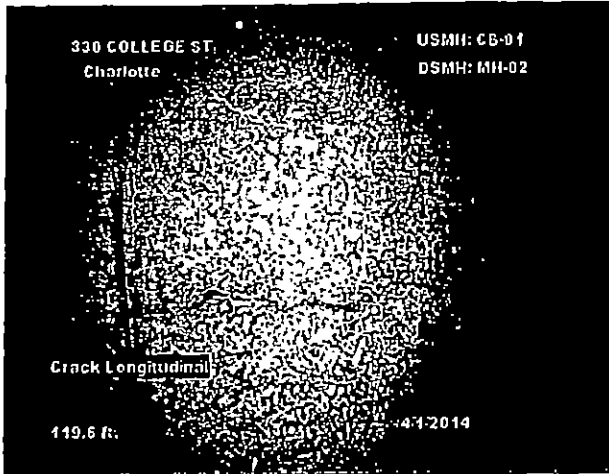
Distance: 111.8 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



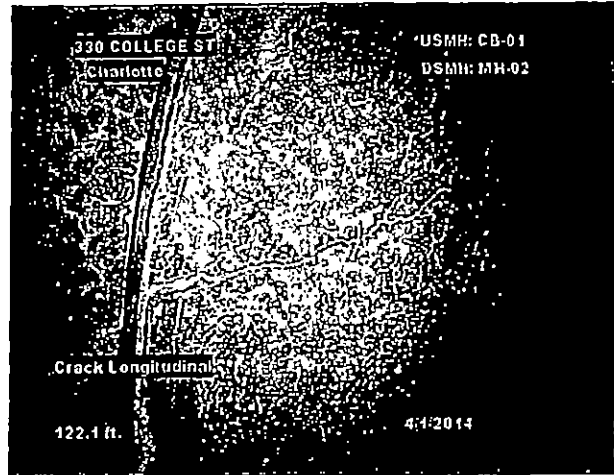
Distance: 119.6 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



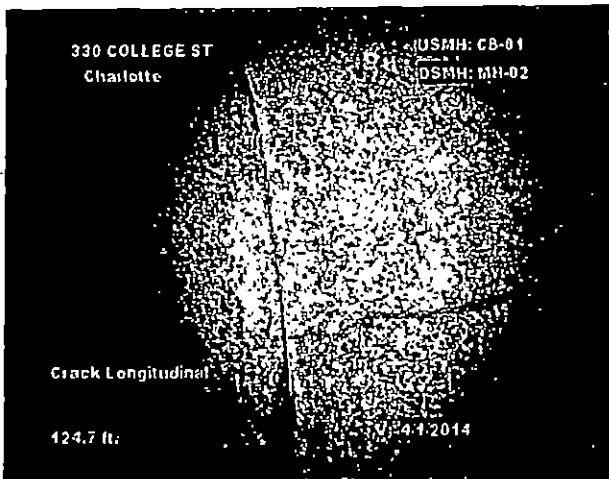
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		WI Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



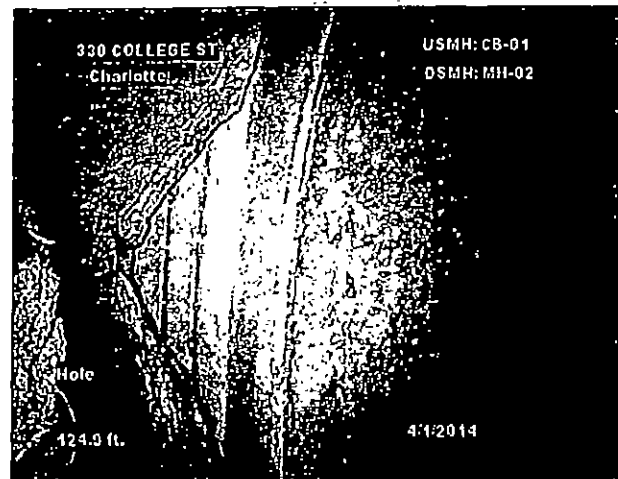
Distance: 119.6 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 122.1 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



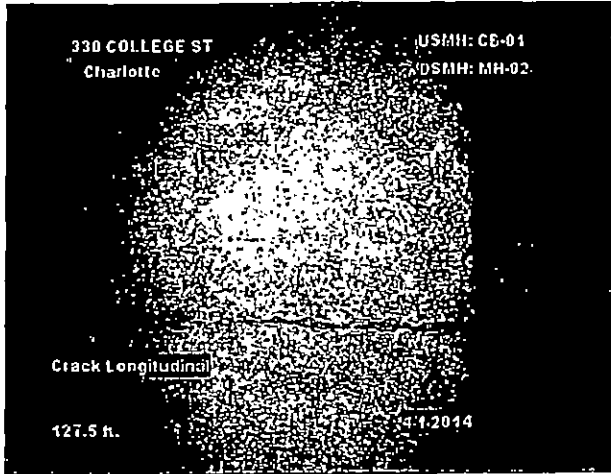
Distance: 124.7 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



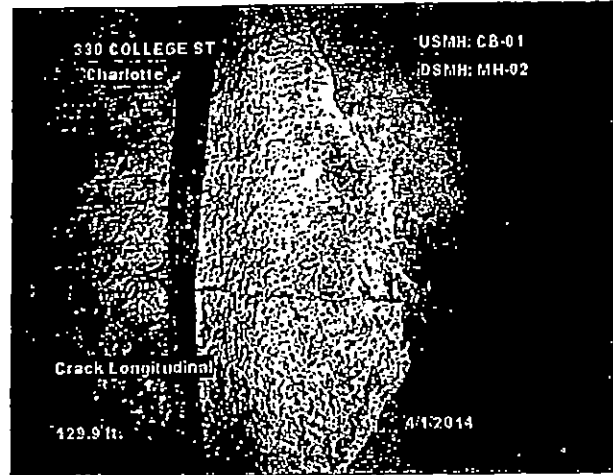
Distance: 124.9 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



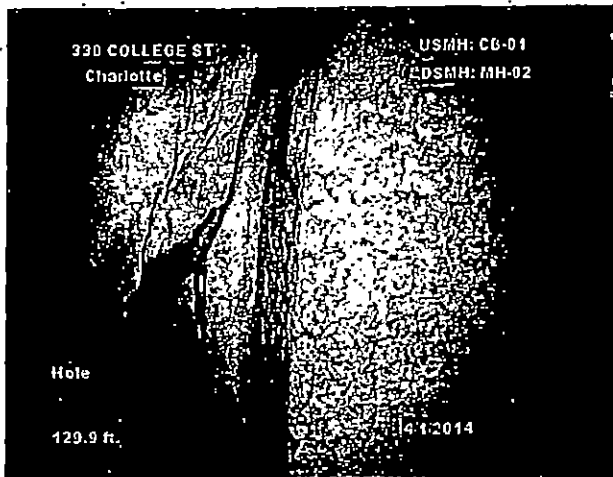
PSR:	Block No.	Pre Dir	Street name and No.		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	'Sewer Use' Stormwater	



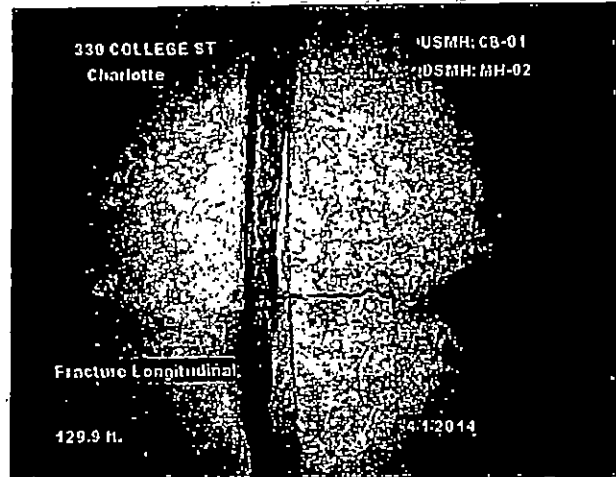
Distance: 127.5 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 129.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



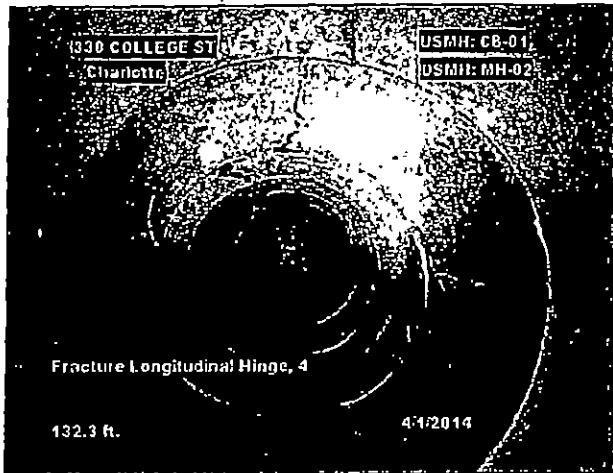
Distance: 129.9 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



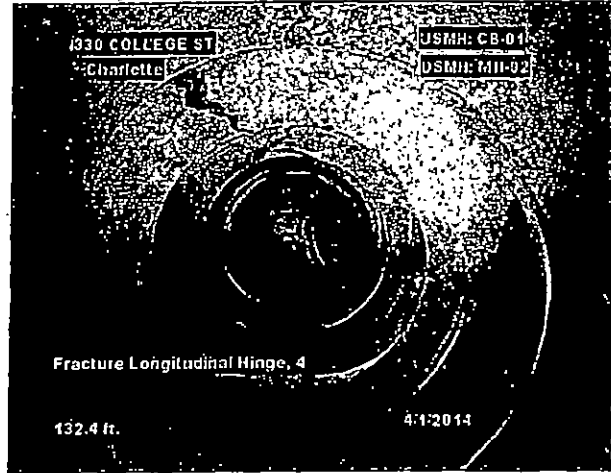
Distance: 129.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



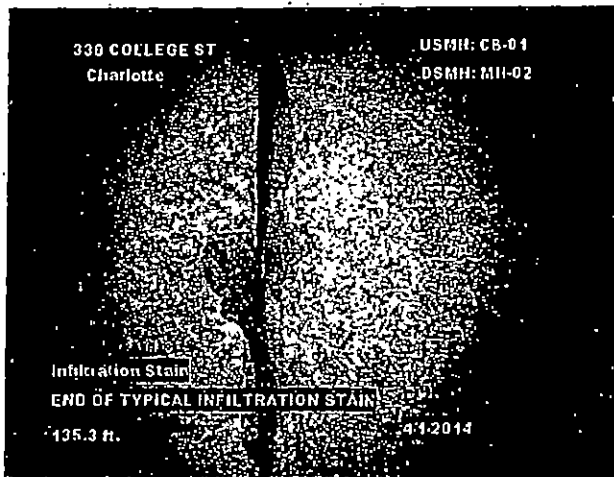
PSR#	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole: CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape: Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



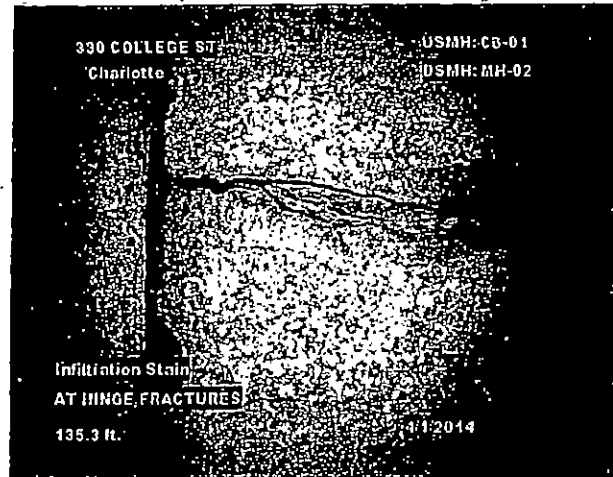
Distance: 132.3 ft. Grade: 5
 Condition: Fracture Longitudinal Hinge, 4
 Remarks: N/A



Distance: 132.4 ft. Grade: 5
 Condition: Fracture Longitudinal Hinge, 4
 Remarks: N/A



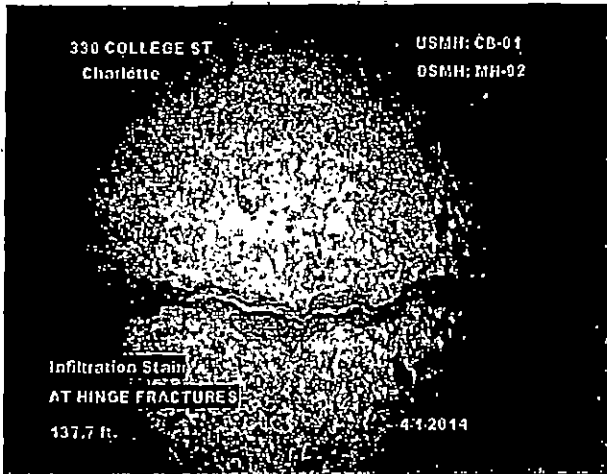
Distance: 135.3 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: END OF TYPICAL INFILTRATION STAIN



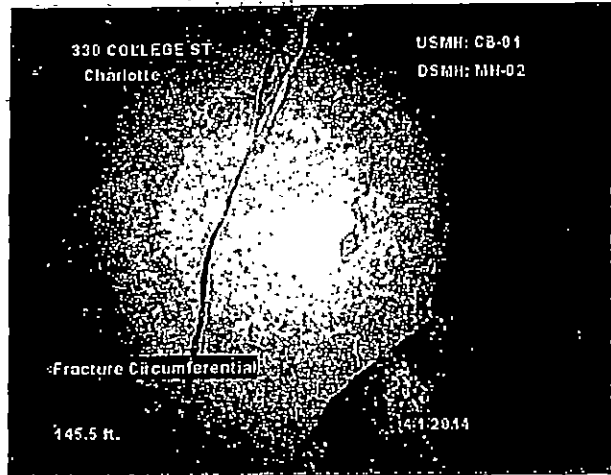
Distance: 135.3 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: AT HINGE FRACTURES



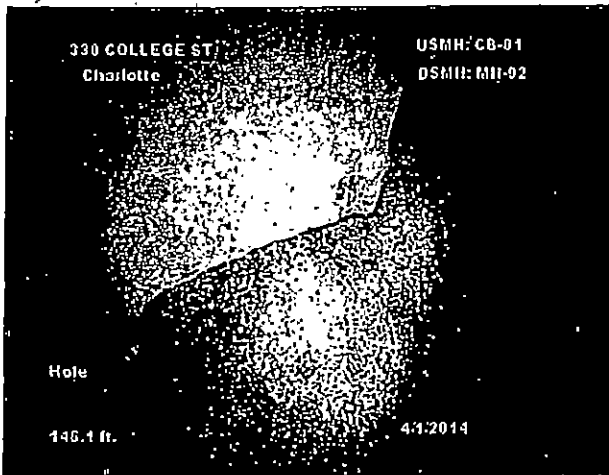
IPSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



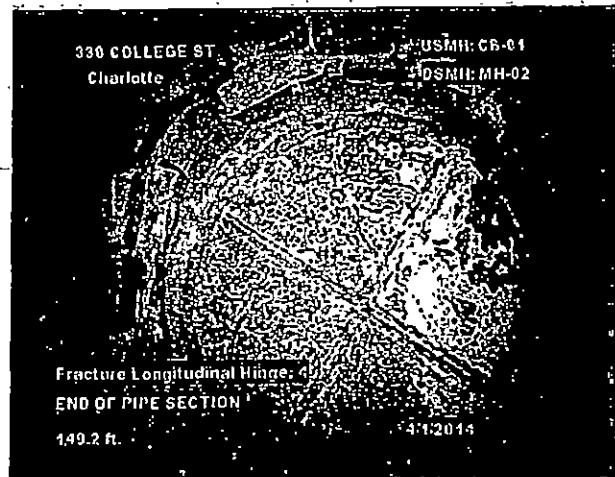
Distance: 137.7 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: AT HINGE FRACTURES



Distance: 145.5 ft. Grade: 2
 Condition: Fracture Circumferential
 Remarks: N/A



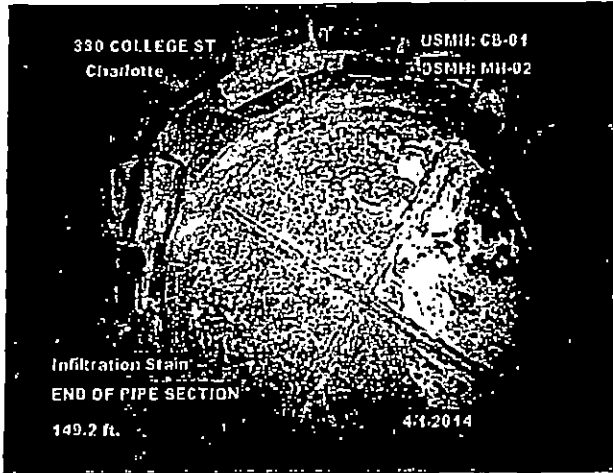
Distance: 146.1 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



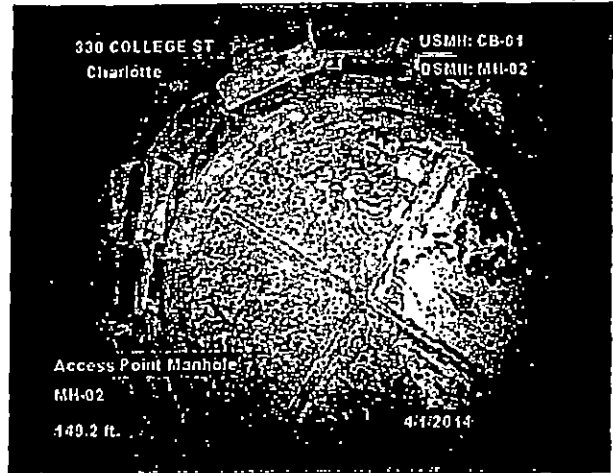
Distance: 149.2 ft. Grade: 5
 Condition: Fracture Longitudinal Hinge, 4
 Remarks: END OF PIPE SECTION



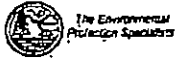
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole:	Total Length	Material	Shape:		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height:	City	Sewer Use:	
MH-02	149.2		24	ROCK HILL	Stormwater	



Distance: 149.2 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: END OF PIPE SECTION



Distance: 149.2 ft. Grade: 0
 Condition: Access Point Manhole
 Remarks: MH-02



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Project Name: 330 COLLEGE AVENUE- ROCK HILL- SC									
US MH	DS MH	Pipe ID	Date	Street	Material	Size	Total	Insp	
CB-01	MH-02	01	4/1/2014	330 COLLEGE ST	Vitrified Clay Pipe	24	149.2	149.2	

Pipe Size: 24

Total Ln.: 149.2

Inspected Ln.: 149.2

Project Total Ln.: 149.2

Project Inspected Ln.: 149.2



PSR: 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole: CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806			
QSR 6444	QMR 3122	Inspection Dir: Downstream	Insp Date 20140401		Time of Insp 08:58		
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.	Additional Info JAMES-McELROY- & DIEHL- PA					

			CB-01
0.0 ft.	Access Point Catch Basin		CB-01
0.0 ft.	Water Level:	2	0%
8.0 ft.	Crack Multiple	3	
8.0 ft.	Joint Offset Medium	1	
8.0 ft.	Fracture Multiple	4	
8.0 ft.	Hole	3	
9.2 ft.	Fracture Multiple	4	
11.9 ft.	Fracture Longitudinal - S01	3	
11.9 ft.	Fracture Longitudinal	3	
11.9 ft.	Fracture Longitudinal	3	
11.9 ft.	Fracture Longitudinal	3	
14.4 ft.	Fracture Longitudinal Hinge, 2	4	
16.9 ft.	Fracture Longitudinal - S02	3	
19.5 ft.	Crack Multiple	3	



PSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETMAR		Cert. No. 06019808			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58		
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.						
SSO	Additional Info JAMES-McELROY- & DIEHL- PA						

19.5 ft.	Crack Longitudinal	2
24.4 ft.	Hole	3
24.4 ft.	Crack Longitudinal Hinge, 2	4
34.8 ft.	Hole	3
34.8 ft.	Crack Longitudinal	2
37.9 ft.	Crack Longitudinal	2
40.0 ft.	Hole	3
40.0 ft.	Infiltration Stain	
42.1 ft.	Crack Longitudinal	2
44.3 ft.	Crack Longitudinal	2
47.7 ft.	Hole	3
47.7 ft.	Intruding Sealing Ring Broken	3
51.7 ft.	Crack Longitudinal	2
53.1 ft.	Fracture Longitudinal - F02	3
53.1 ft.	Crack Longitudinal - S03	2
55.7 ft.	Infiltration Stain	

END OF FRACTURE AT 12 O'CLOCK



PSR 01	Block No.	Pre Dir	Street name and No. 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related		
SPRI 2.7	MPRI 0.4	Surveyed By ALEX_TETTMAR		Cert. No. 06019806		
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401	Time of Insp 08:58		
US Rim-Inv.	DS Rim-Inv.	Location Details			Weather	Situation
SSO	Additional Info JAMES-McELROY- & DIEHL- PA					

60.9 ft.	Infiltration Stain - S04		
60.9 ft.	Fracture Longitudinal - F01	3	END OF FRACTURE AT 6 CLOCK
60.9 ft.	Crack Longitudinal - S05	2	
66.0 ft.	Infiltration Stain		
73.9 ft.	Crack Longitudinal - F05	2	END OF CRACK AT 6 CLOCK
81.4 ft.	Infiltration Stain		
86.4 ft.	Crack Longitudinal	2	
86.6 ft.	Infiltration Stain		
89.2 ft.	Infiltration Stain		
89.7 ft.	Crack Longitudinal	2	
91.7 ft.	Infiltration Stain		
94.1 ft.	Infiltration Stain - F04		
94.1 ft.	Crack Longitudinal - F03	2	
96.8 ft.	Infiltration Stain		
99.3 ft.	Crack Longitudinal	2	
99.3 ft.	Infiltration Stain		



PSR 01	Block No.	Pre Dir	Street name and No. 330 COLLEGE ST		Street Type	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX TETTMAR		Cert. No. 06019806			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401		Time of Insp 08:58		
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.	Additional Info JAMES- McELROY- & DIEHL- PA					

101.2 ft.	Fracture Longitudinal	3
102.0 ft.	Infiltration Stain	
102.0 ft.	Crack Longitudinal	2
103.5 ft.	Tap Break-In Intruding	2
103.5 ft.	Infiltration Stain	
104.4 ft.	Crack Longitudinal	2
104.4 ft.	Infiltration Stain - SOB	
106.9 ft.	Crack Longitudinal	2
111.8 ft.	Crack Longitudinal	2
119.6 ft.	Crack Longitudinal	2
119.6 ft.	Crack Longitudinal	2
122.1 ft.	Crack Longitudinal	2
124.7 ft.	Crack Longitudinal	2
124.9 ft.	Hole	3
127.5 ft.	Crack Longitudinal	2
129.9 ft.	Crack Longitudinal	2



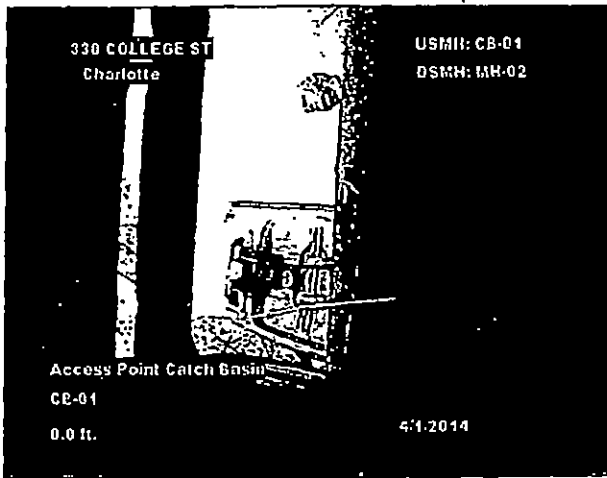
PSR 01	Block No.	Pre Dir	Street name and No. 330 COLLEGE ST		Street Typ...	Post Dir	
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A		
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater		
SPR 195	MPR 7	W.O. Number		Purpose of Survey: Maintenance Related			
SPRI 2.7	MPRI 0.4	Surveyed By ALEX_TETTMAR		Cert. No. 06019806			
QSR 5444	QMR 3122	Inspection Dir. Downstream	Insp Date 20140401	Time of Insp 08:58			
OPR 202	OPRI 2.2	Location Details			Weather	Situation	
US Rim-Inv.	DS Rim-Inv.	Additional Info JAMES-McELROY- & DIEHL- PA					
SSO							

129.9 ft.	Hole	3	
129.9 ft.	Fracture Longitudinal	3	
132.3 ft.	Fracture Longitudinal Hinge, 4	5	
132.4 ft.	Fracture Longitudinal Hinge, 4 - S07	5	
135.3 ft.	Infiltration Stain - F06		END OF TYPICAL INFILTRATION STAIN
135.3 ft.	Infiltration Stain		AT HINGE FRACTURES
137.7 ft.	Infiltration Stain - S08		AT HINGE FRACTURES
145.5 ft.	Fracture Circumferential	2	
146.1 ft.	Hole	3	
149.2 ft.	Fracture Longitudinal Hinge, 4 - F07	5	END OF PIPE SECTION
149.2 ft.	Infiltration Stain - F08		END OF PIPE SECTION
149.2 ft.	Access Point Manhole		MH-02
			MH-02

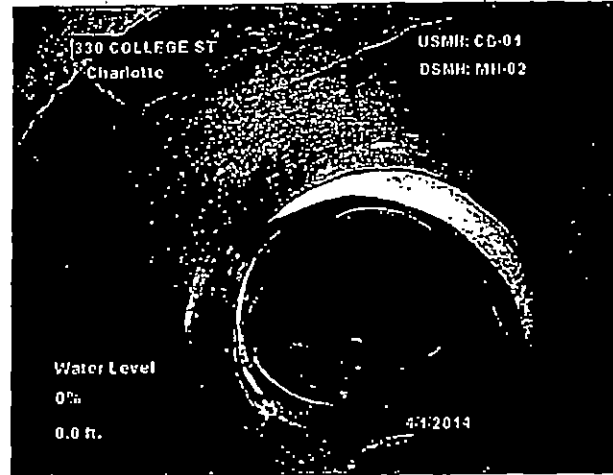




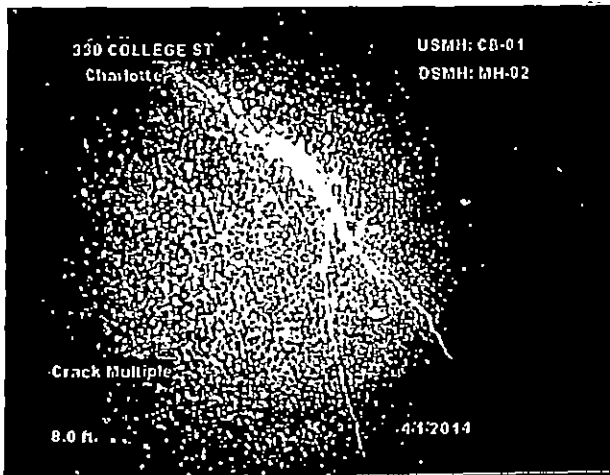
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole:	Total Length	Material	Shape:		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole:	Length surveyed	Location	Height	City	Sewer Use:	
MH-02	149.2		24	ROCK HILL	Stormwater	



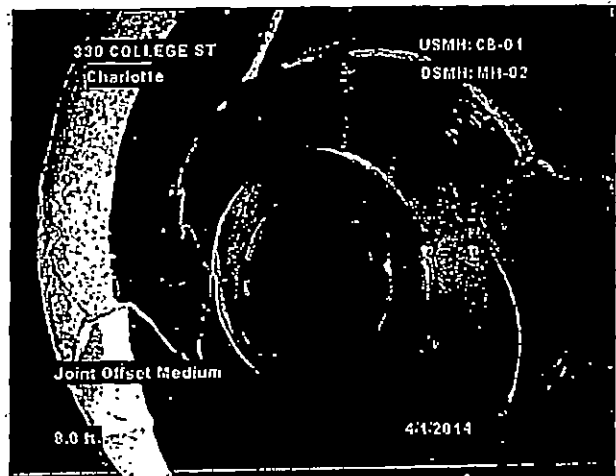
Distance: 0.0 ft. Grade: 0
 Condition: Access Point Catch Basin
 Remarks: CB-01



Distance: 0.0 ft. Grade: 2
 Condition: Water Level
 Remarks: 0%



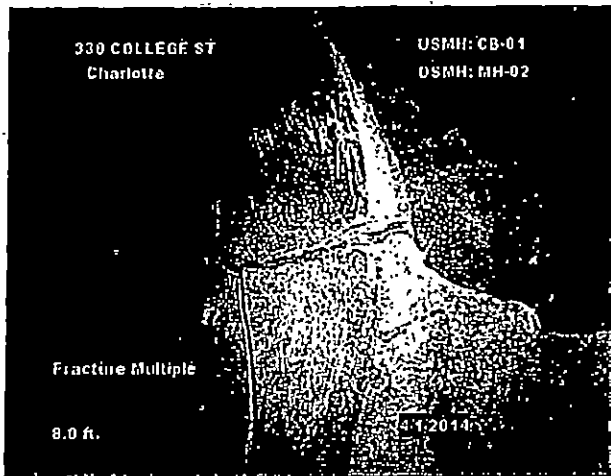
Distance: 8.0 ft. Grade: 3
 Condition: Crack Multiple
 Remarks: N/A



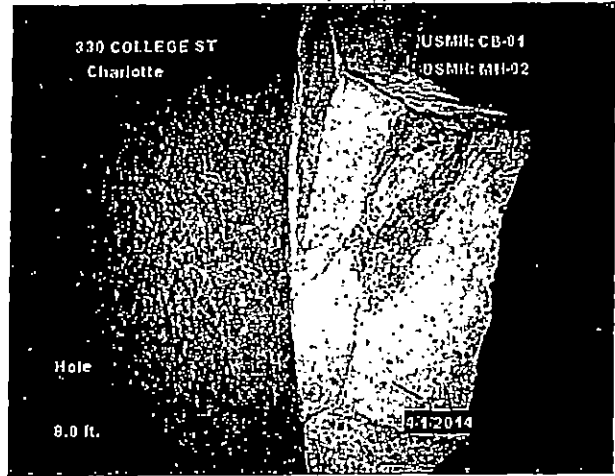
Distance: 8.0 ft. Grade: 1
 Condition: Joint Offset Medium
 Remarks: N/A



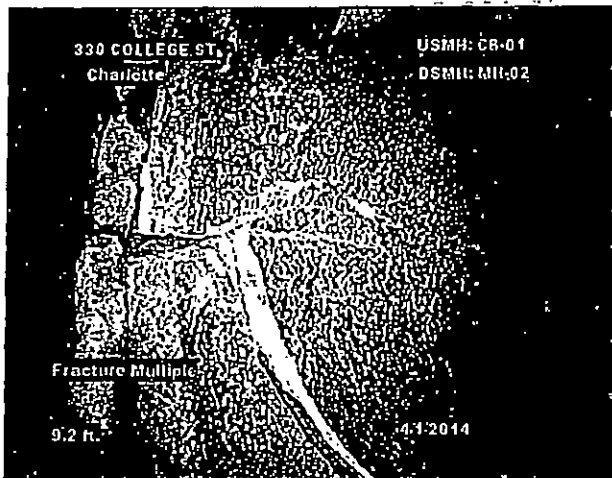
PSR 01	Block No.	Pre Dir	Street name and No. 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



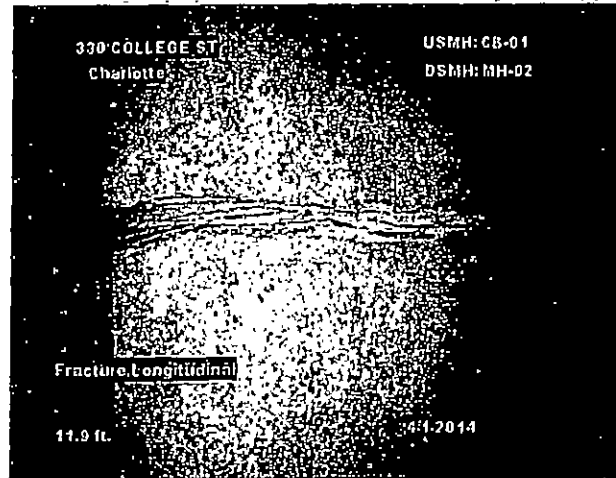
Distance: 8.0 ft Grade: 4
 Condition: Fracture Multiple
 Remarks: N/A



Distance: 8.0 ft Grade: 3
 Condition: Hole
 Remarks: N/A



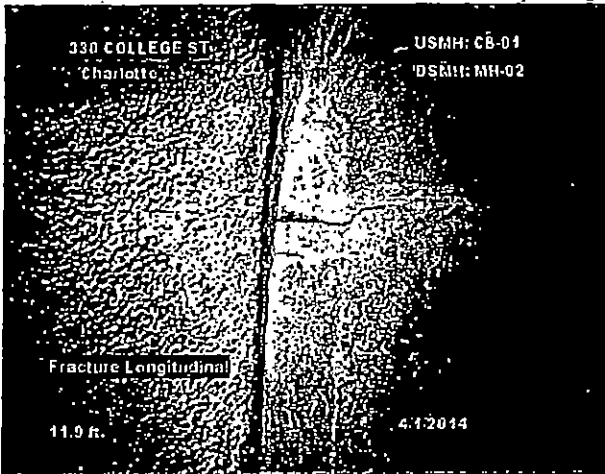
Distance: 9.2 ft Grade: 4
 Condition: Fracture Multiple
 Remarks: N/A



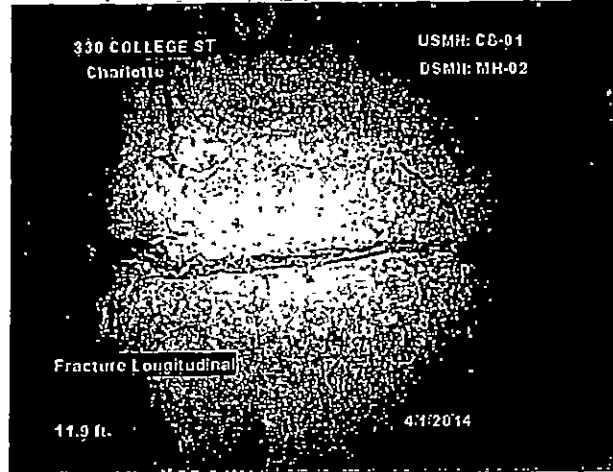
Distance: 11.9 ft Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



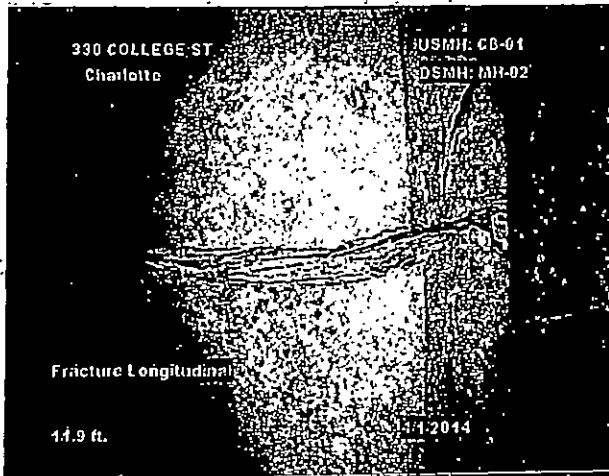
PSR: 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



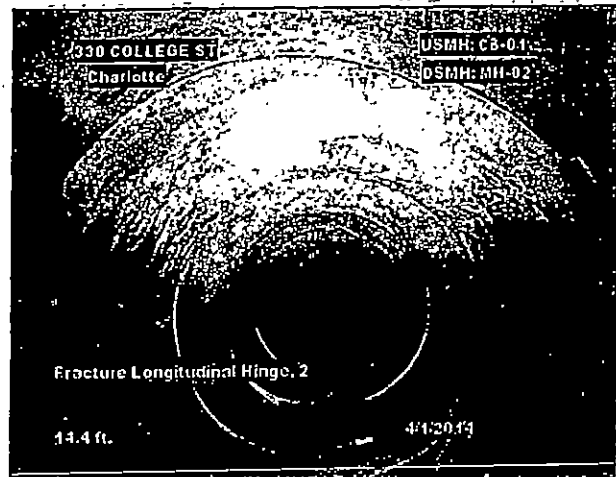
Distance: 11.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



Distance: 11.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



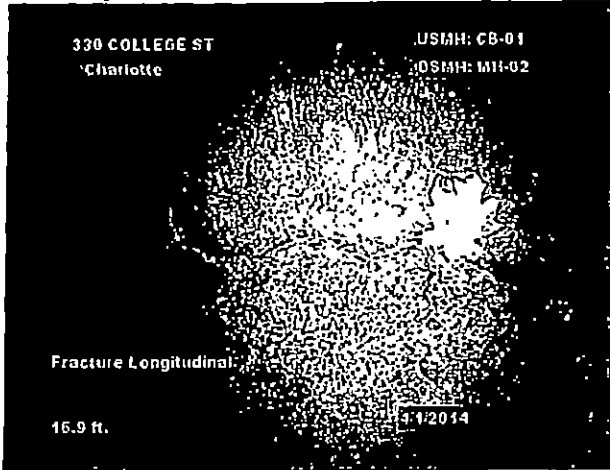
Distance: 11.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



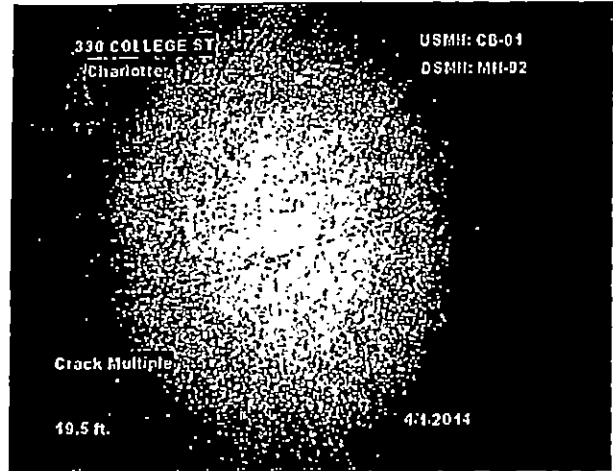
Distance: 14.4 ft. Grade: 4
 Condition: Fracture Longitudinal Hinge, 2
 Remarks: N/A



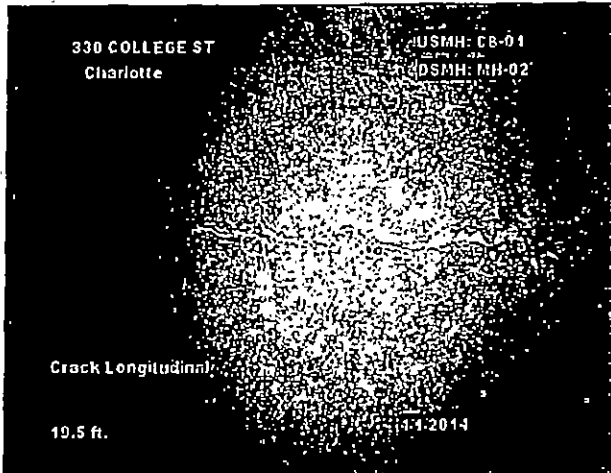
PSR: 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST	Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular	I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater



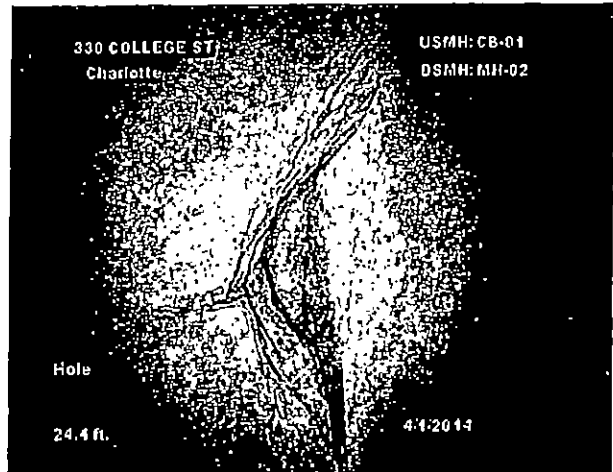
Distance: 16.9 ft Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A



Distance: 19.5 ft Grade: 3
 Condition: Crack Multiple
 Remarks: N/A



Distance: 19.5 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A

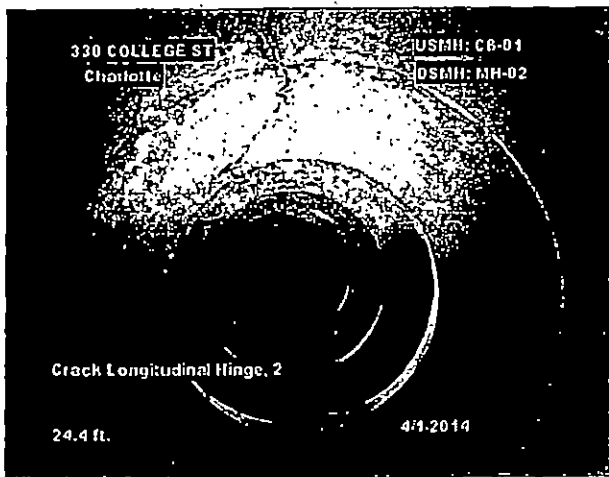


Distance: 24.4 ft Grade: 3
 Condition: Hole
 Remarks: N/A

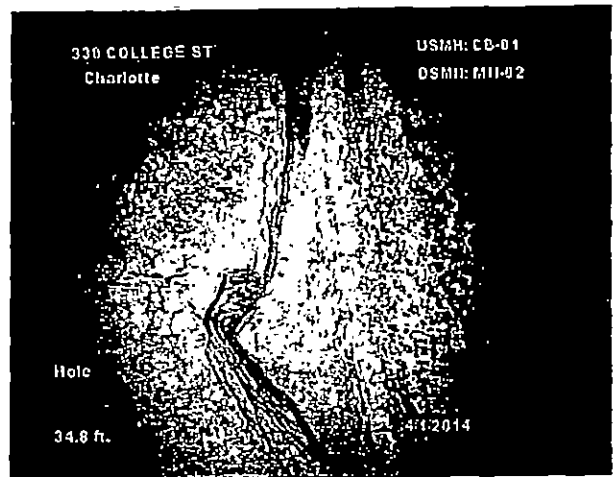


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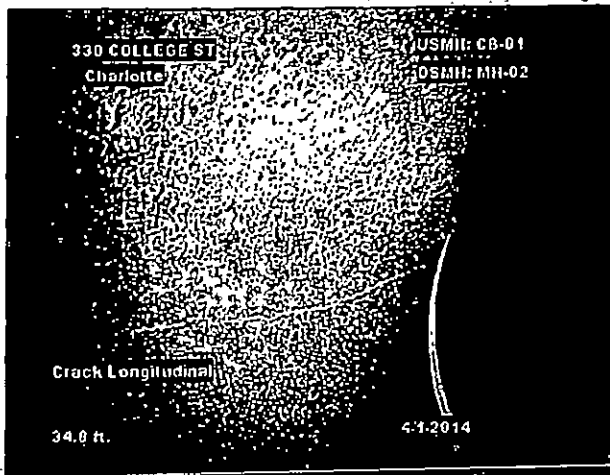
PSR	Block No.	Pre Dir	Street name and No		Street Typ..	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		VI Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



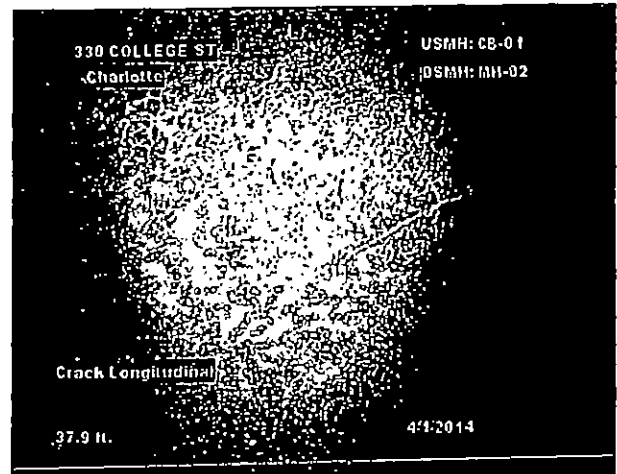
Distance: 24.4 ft. Grade: 4
 Condition: Crack Longitudinal Hinge, 2
 Remarks: N/A



Distance: 34.8 ft. Grade: 3
 Condition: Hole
 Remarks: N/A



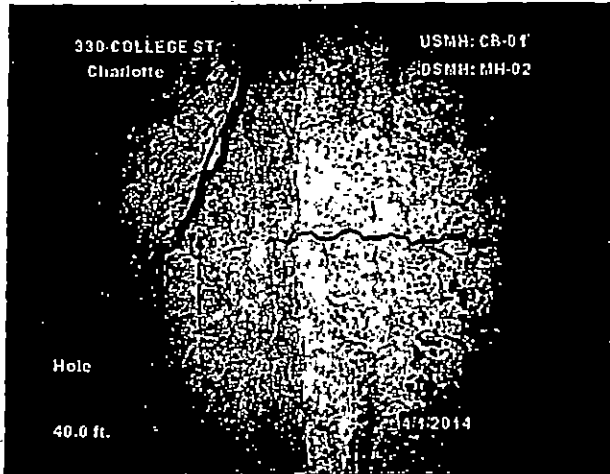
Distance: 34.8 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



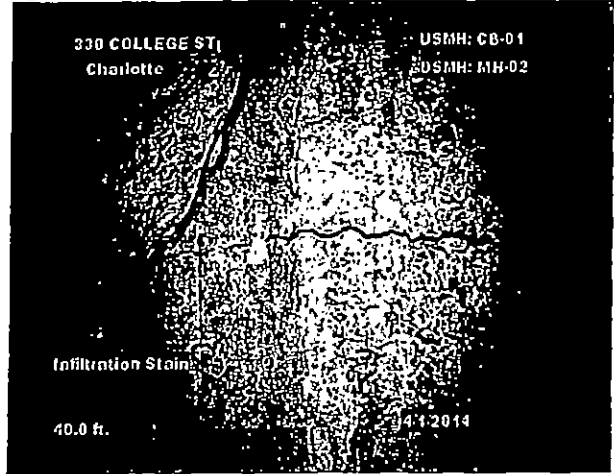
Distance: 37.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



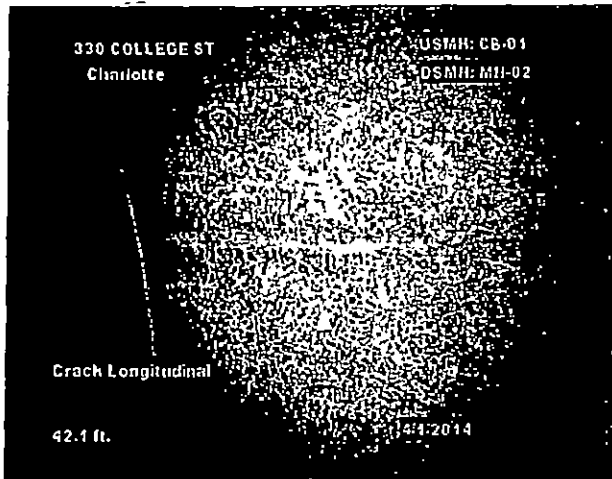
RSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



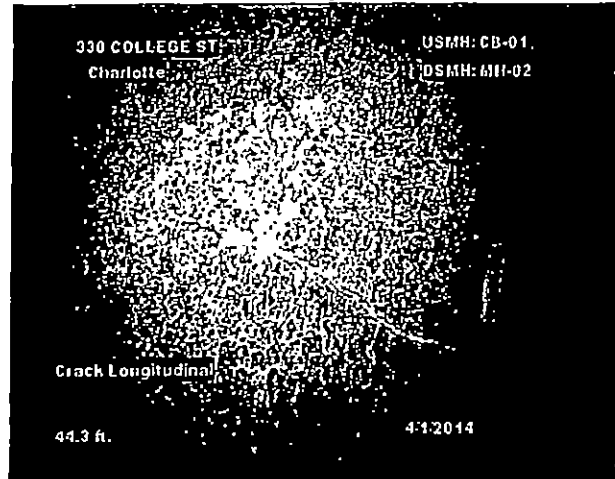
Distance: 40.0 ft Grade: 3
 Condition: Hole
 Remarks: N/A



Distance: 40.0 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



Distance: 42.1 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A

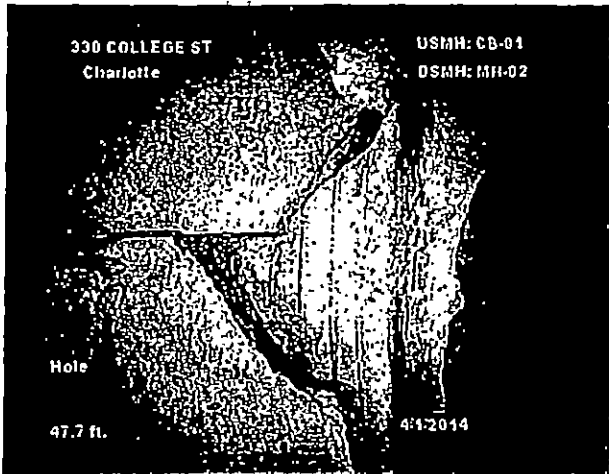


Distance: 44.3 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A

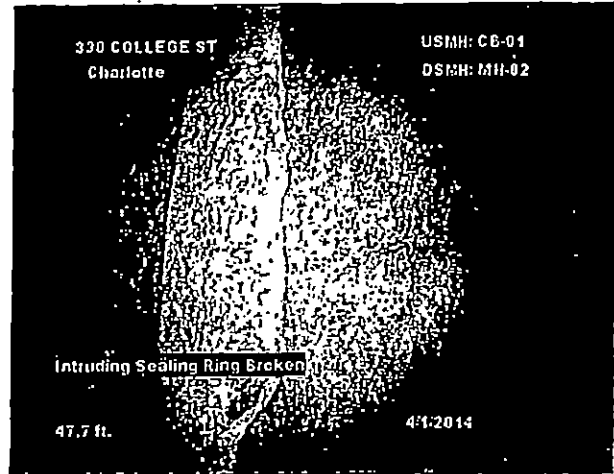


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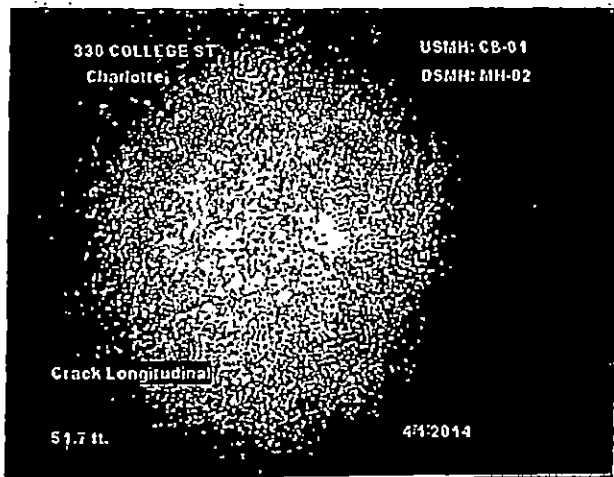
PSR:	Block No.	Pre Dr	Street name and No.	Street Typ...	Post Dr
01			330 COLLEGE ST		
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular	I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater



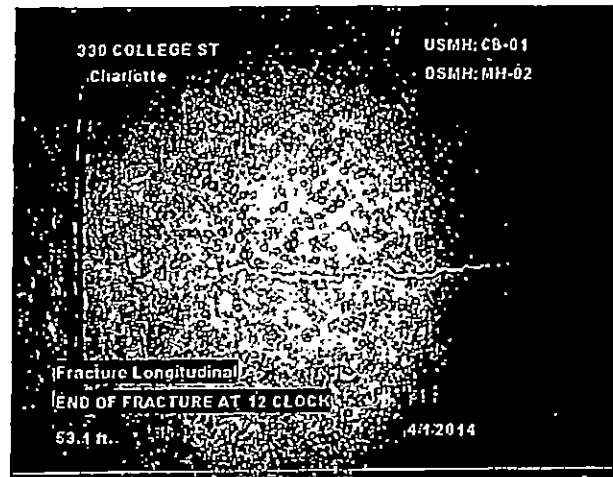
Distance: 47.7 ft Grade: 3
 Condition: Hole
 Remarks: N/A



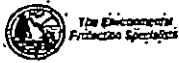
Distance: 47.7 ft Grade: 3
 Condition: Intruding Sealing Ring Broken
 Remarks: N/A



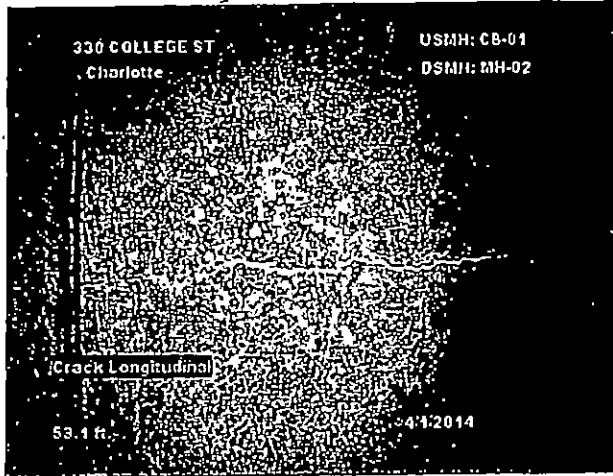
Distance: 51.7 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



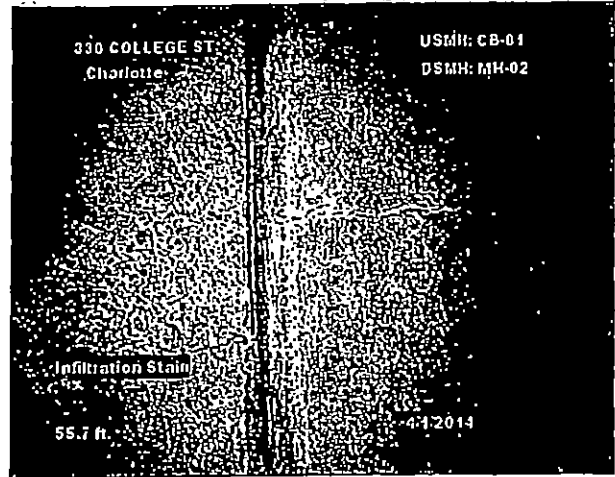
Distance: 53.1 ft Grade: 3
 Condition: Fracture Longitudinal
 Remarks: END OF FRACTURE AT 12 O'CLOCK



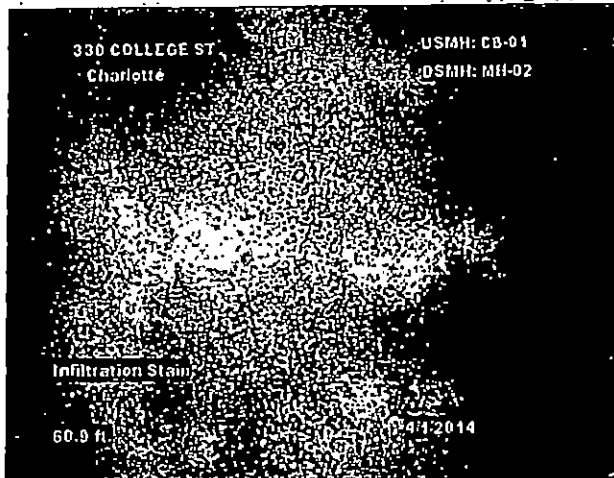
PSRI	Block No.	Pre Dir	Street name and No.	Street Typ...	Post Dir
01			330 COLLEGE ST		
US Manhole	Total Length	Material	Shape	M Value	
CB-01	149.2	Vitrified Clay Pipe	Circular	N/A	
OS Manhole	Length surveyed	Location	Height	City	Sewer Use
MH-02	149.2		24	ROCK HILL	Stormwater



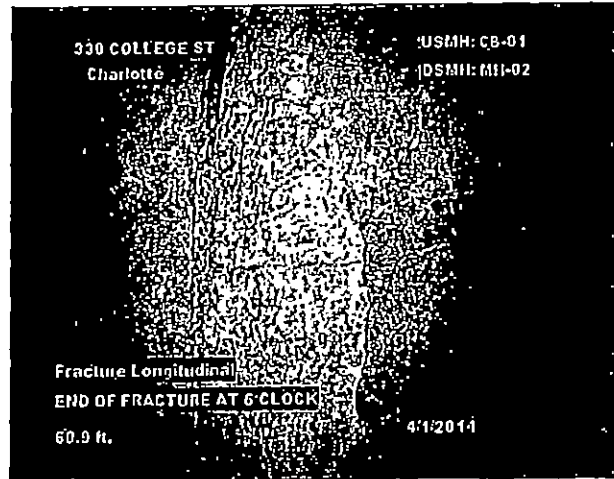
Distance: 53.1 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 55.7 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



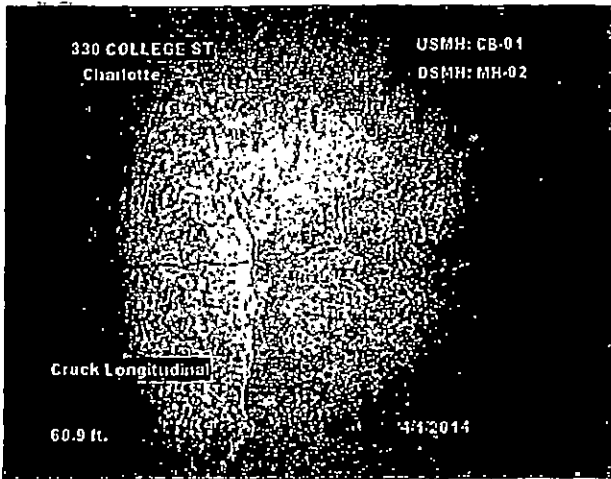
Distance: 60.9 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



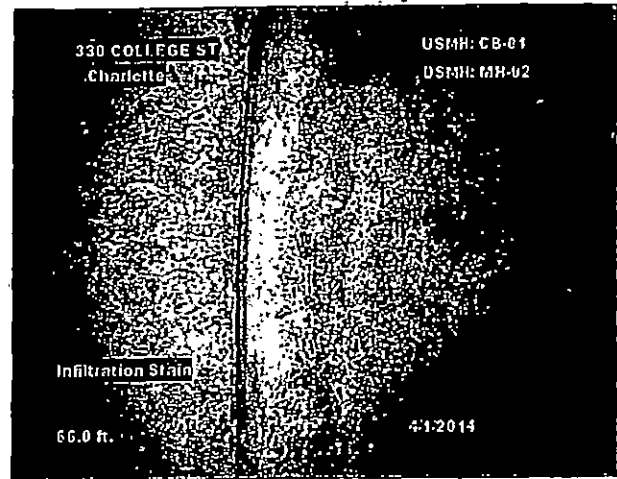
Distance: 60.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: END OF FRACTURE AT 6 O'CLOCK



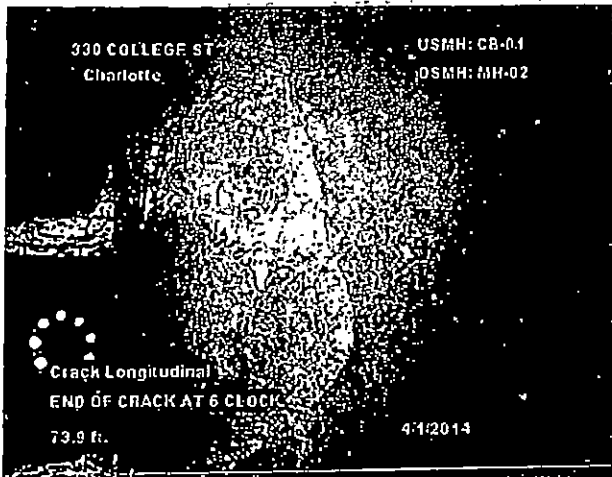
PSR: 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole: CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole: MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



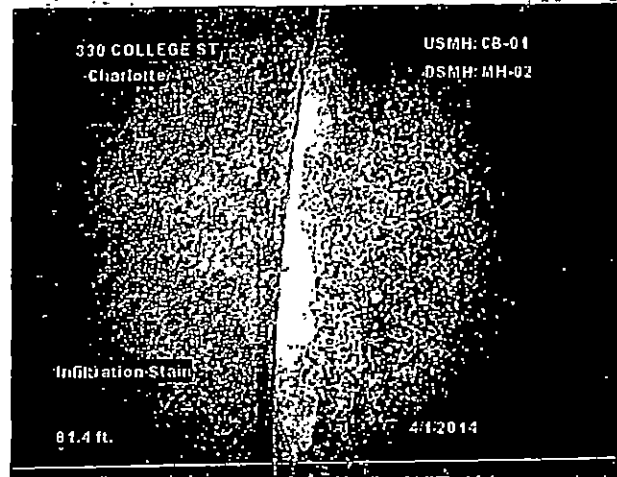
Distance: 60.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



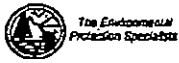
Distance: 66.0 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



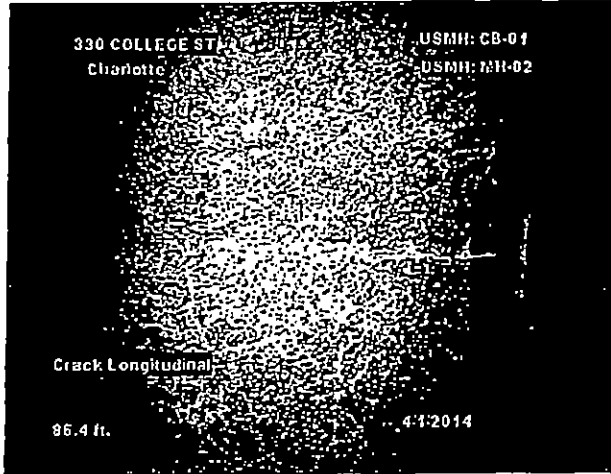
Distance: 73.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: END OF CRACK AT 6 O'CLOCK



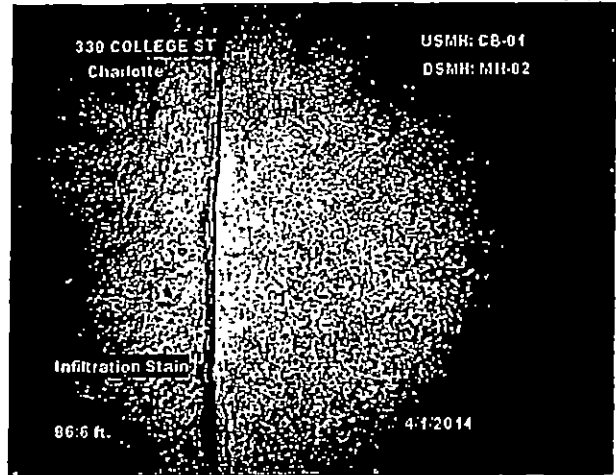
Distance: 81.4 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



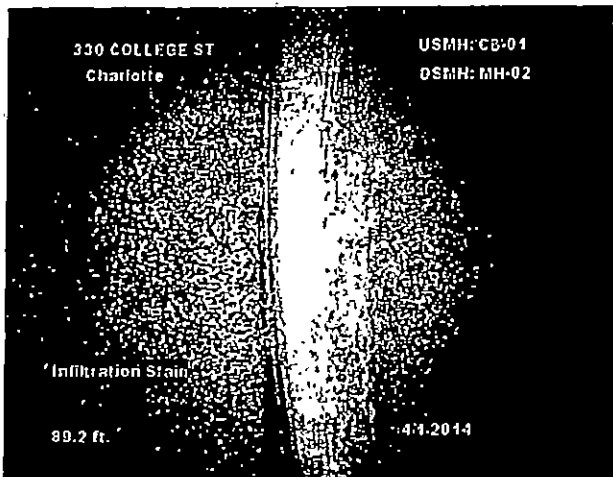
ESR:	Block No.	Pre Dir	Street name and No.		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



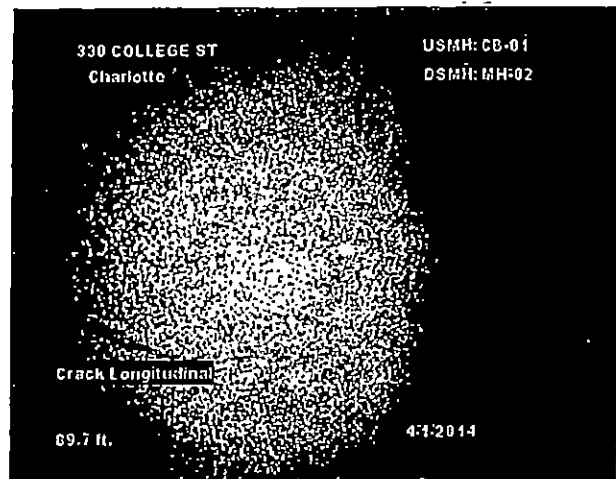
Distance: 86.4 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 86.6 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



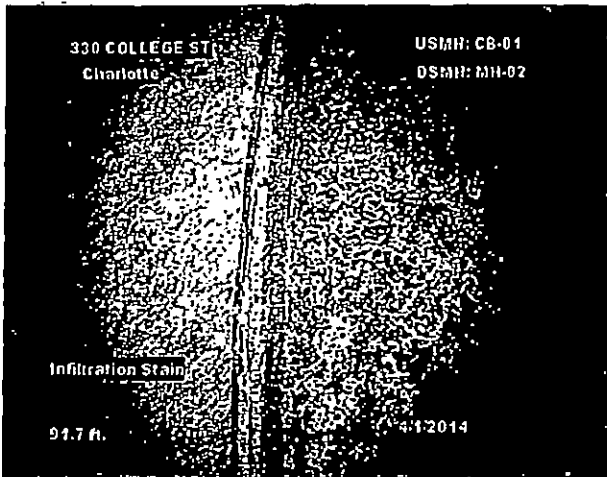
Distance: 89.2 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



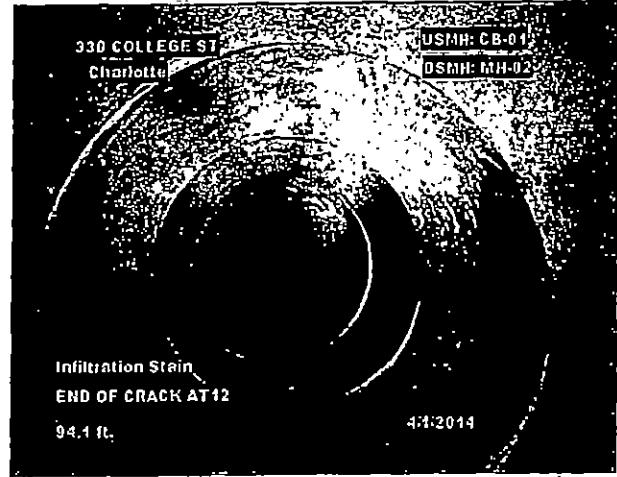
Distance: 89.7 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



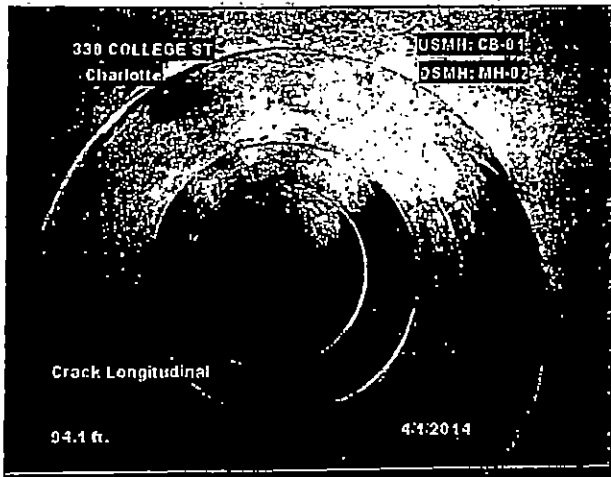
PQR	Block No.	Pre Dir	Street name and No	Street Typ...	Post Dir
01			330 COLLEGE ST		
US Manhole	Total Length	Material	Shape	I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular	N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use
MH-02	149.2		24	ROCK HILL	Stormwater



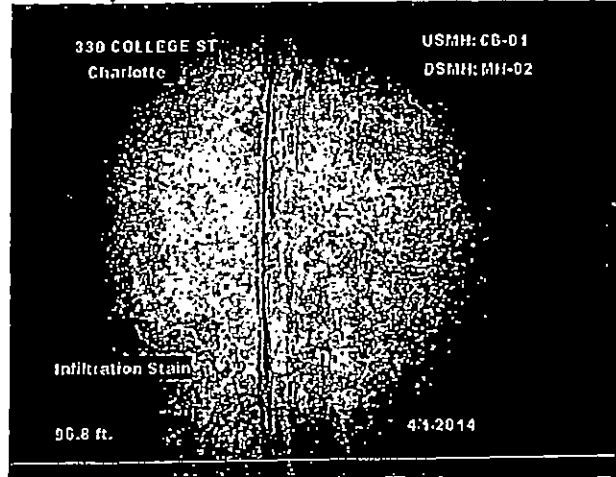
Distance: 91.7 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



Distance: 94.1 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



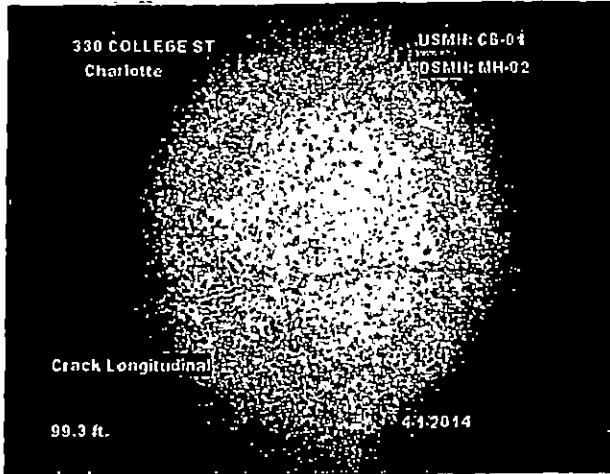
Distance: 94.1 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



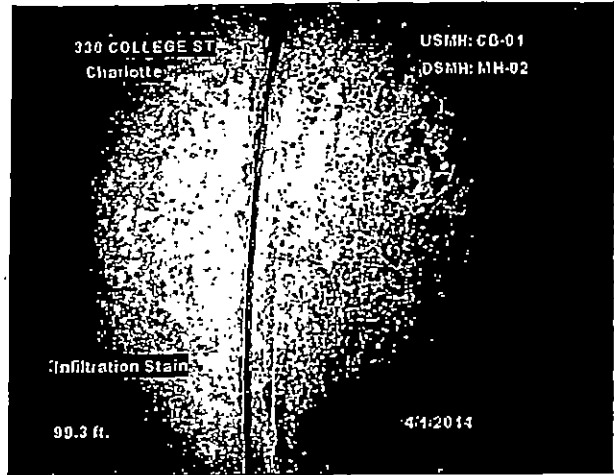
Distance: 96.8 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



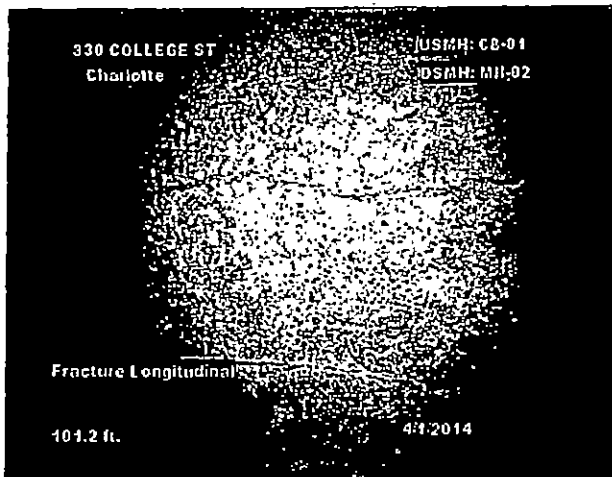
PSR	Block No.	Pre Dir	Street name and No.		Street Typ.	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		VI Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



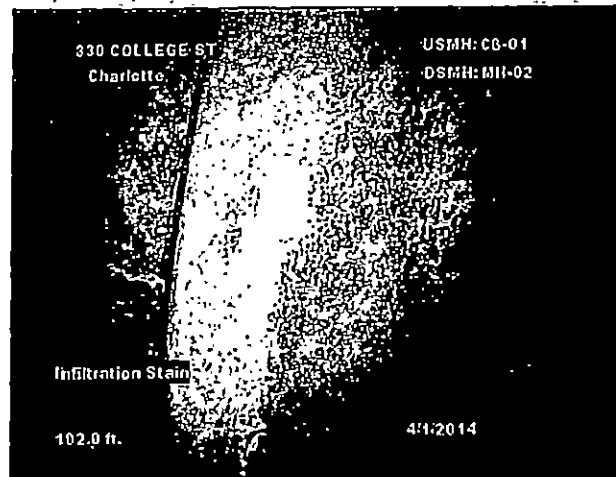
Distance: 99.3 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 99.3 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



Distance: 101.2 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A

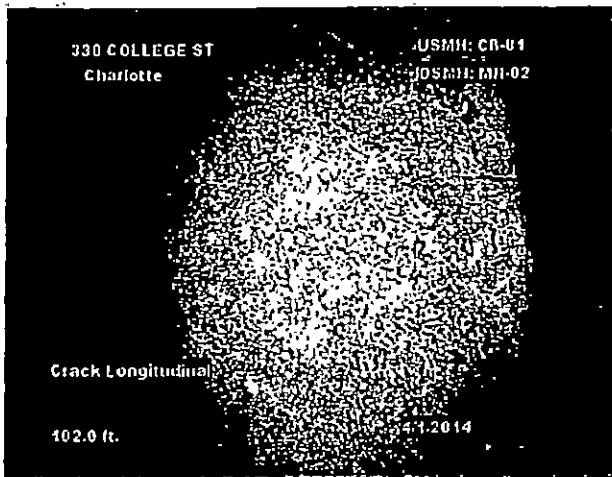


Distance: 102.0 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A

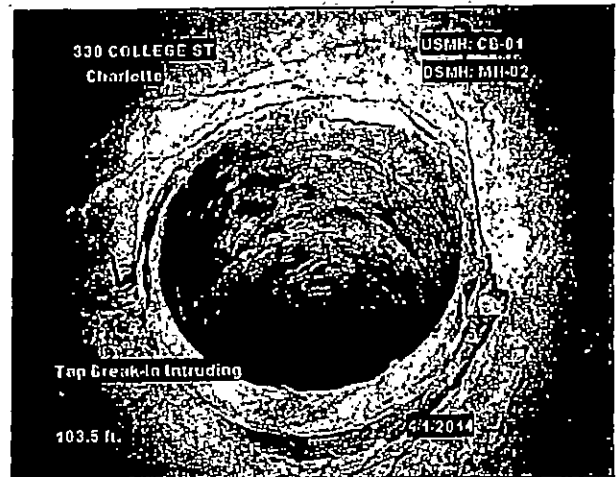


Bio-Normic Services
 516 Rountree Road
 Charlotte NC 28217
 (704) 529-0000

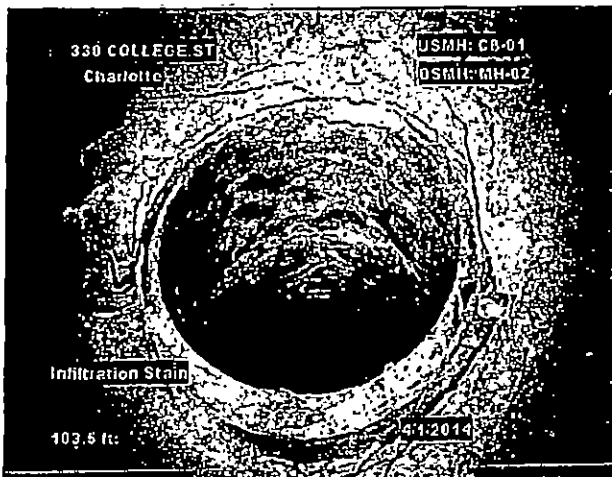
PSR-01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height: 24	City ROCK HILL	Sewer Use Stormwater	



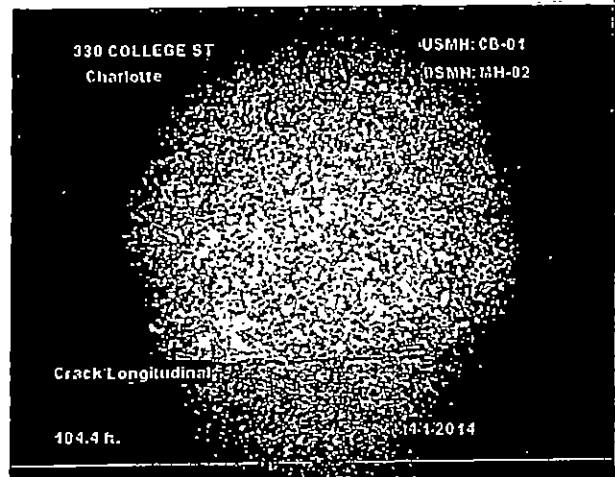
Distance: 102.0 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 103.5 ft. Grade: 2
 Condition: Tap Break-In Intruding
 Remarks: N/A



Distance: 103.5 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A

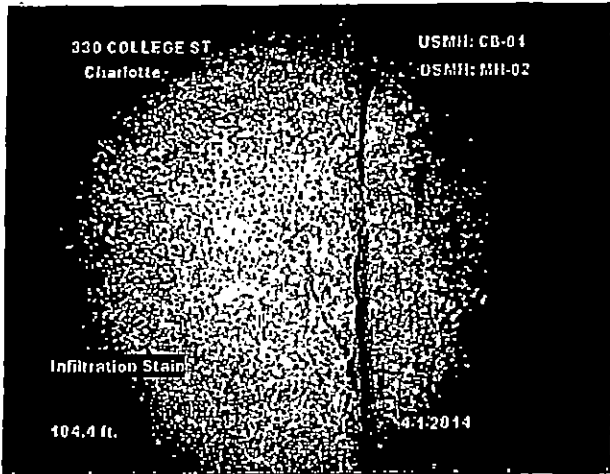


Distance: 104.4 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A

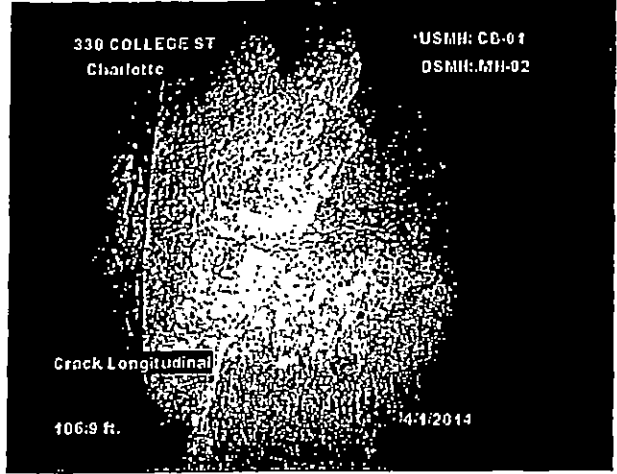


Bio-Nomic Services
 516 Rounree Road
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 (704) 529-0000

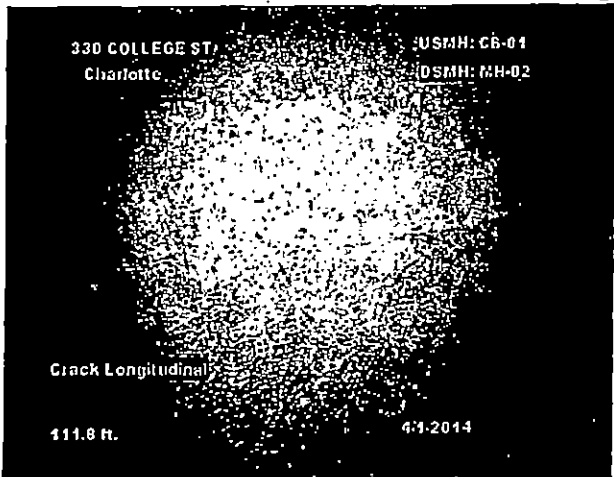
PSR	Block No.	Pre Dir	Street name and No.		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



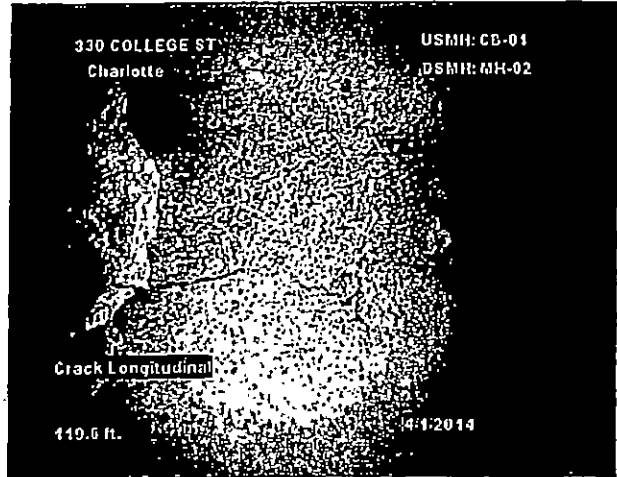
Distance: 104.4 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: N/A



Distance: 106.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 111.8 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A

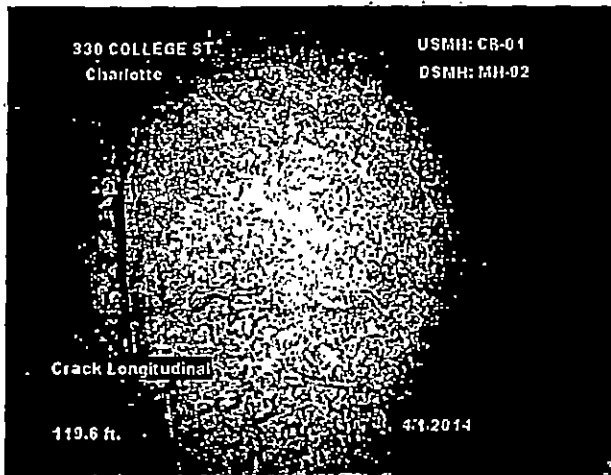


Distance: 119.6 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A

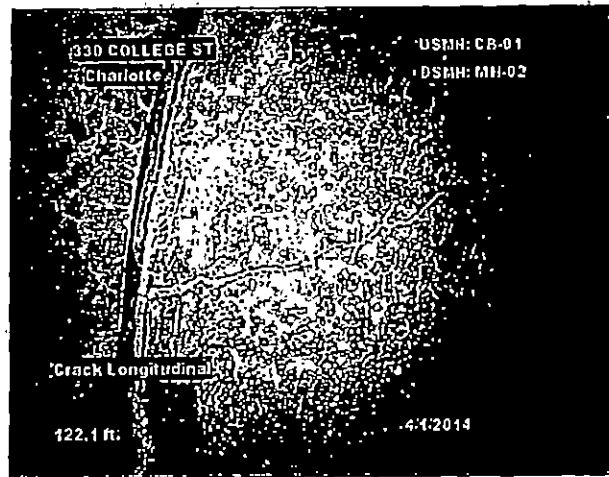


Bio-Namic Services
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 (704) 528-0000

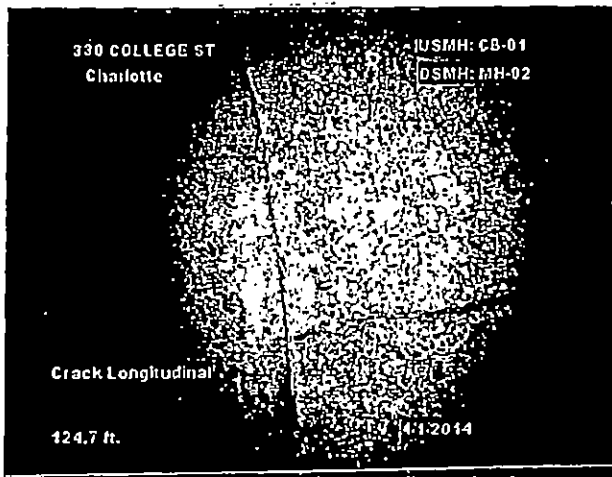
PSR#	Block No.	Pre Dir	Street name, and No	Street Typ...	Post Dir
01			330 COLLEGE ST		
US Manhole	Total Length	Material	Shape	I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular	N/A	
IDS Manhole	Length surveyed	Location	Height	City	Sewer Use
MH-02	149.2		24	ROCK HILL	Stormwater



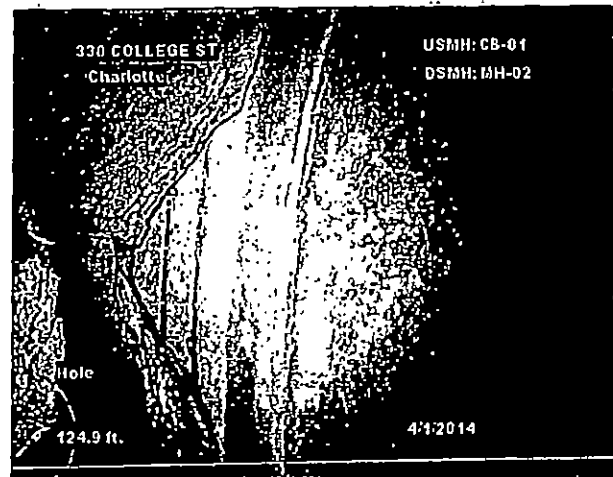
Distance: 119.6 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 122.1 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



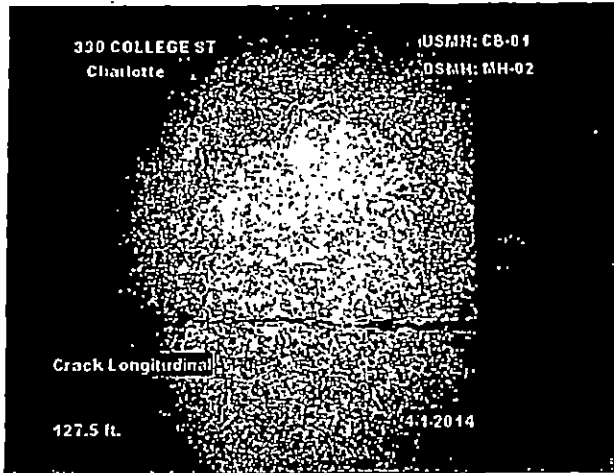
Distance: 124.7 ft Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



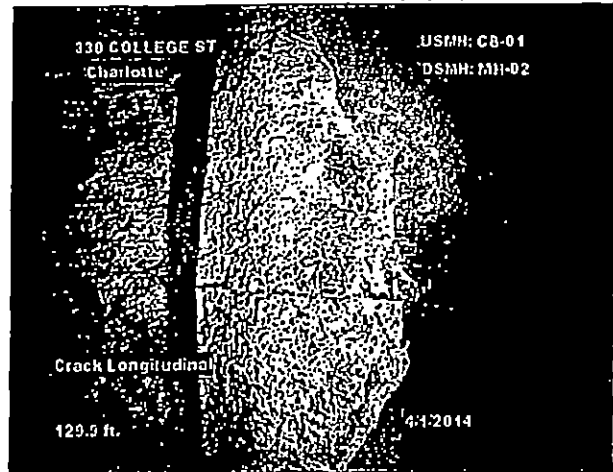
Distance: 124.9 ft Grade: 3
 Condition: Hole
 Remarks: N/A



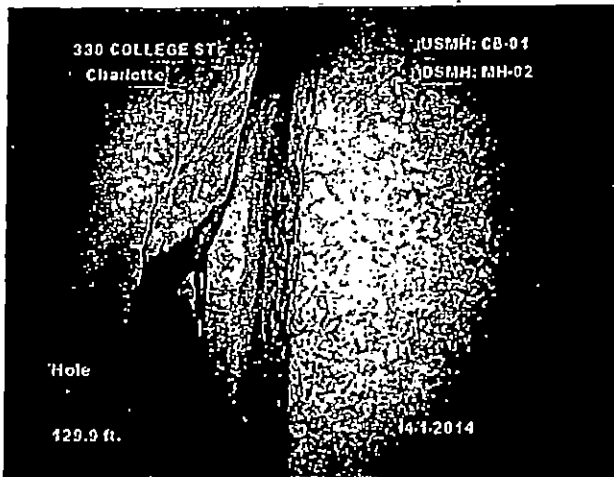
PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole	Total Length	Material	Shape		I/I Value	
CB-01	149.2	Vitrified Clay Pipe	Circular		N/A	
DS Manhole	Length surveyed	Location	Height	City	Sewer Use	
MH-02	149.2		24	ROCK HILL	Stormwater	



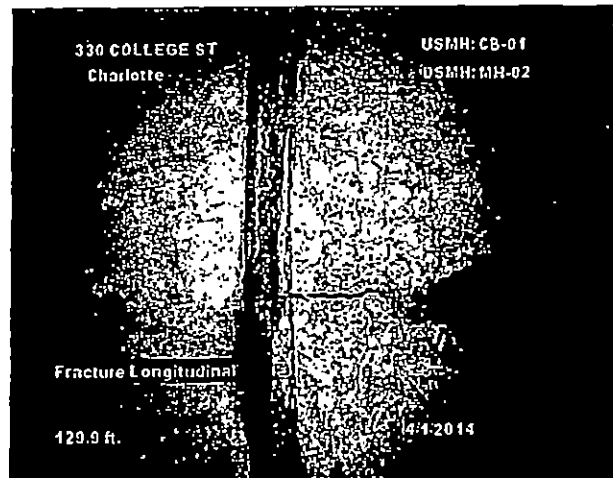
Distance: 127.5 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 129.9 ft. Grade: 2
 Condition: Crack Longitudinal
 Remarks: N/A



Distance: 129.9 ft. Grade: 3
 Condition: Hole
 Remarks: N/A

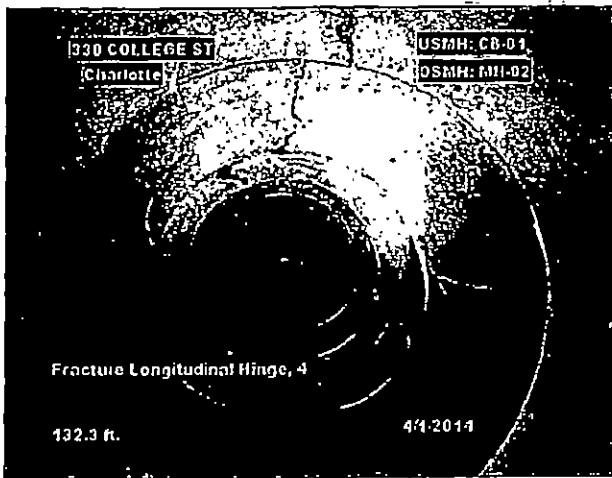


Distance: 129.9 ft. Grade: 3
 Condition: Fracture Longitudinal
 Remarks: N/A

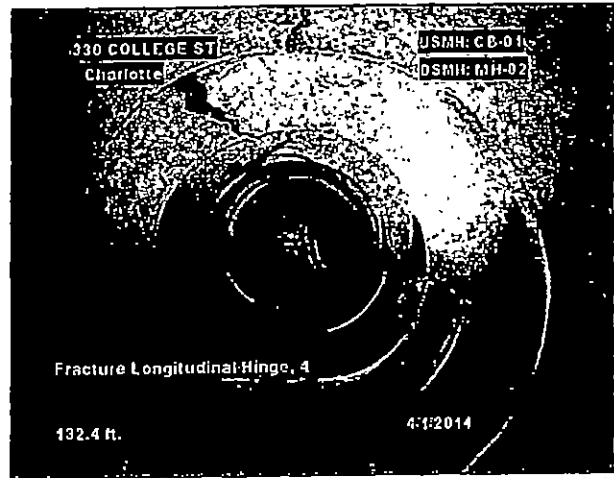


Bio-Nomic Services
 616 Rountree Road
 Charlotte NC 28217
 (704) 529-0000

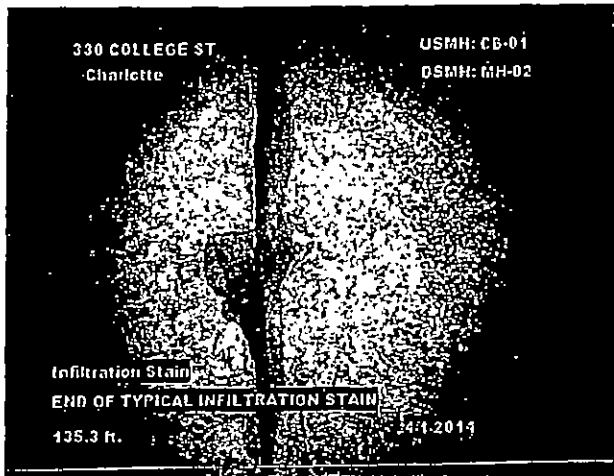
PSR: 01	Block No.	Pre Dir.	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole: CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape: Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



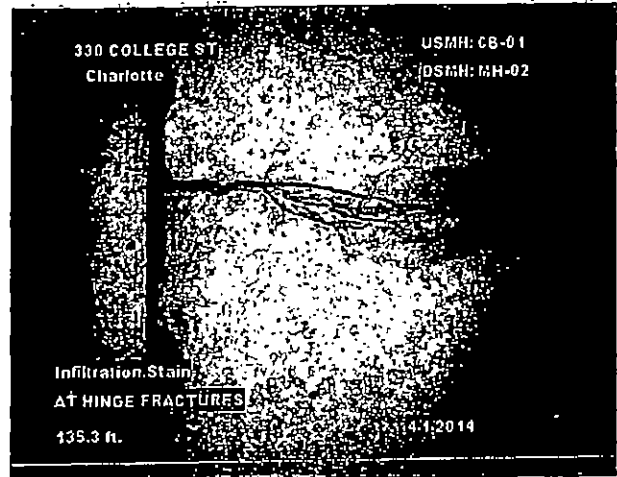
Distance: 132.3 ft. Grade: 5'
 Condition: Fracture Longitudinal Hinge, 4
 Remarks: N/A



Distance: 132.4 ft. Grade: 5'
 Condition: Fracture Longitudinal Hinge, 4
 Remarks: N/A



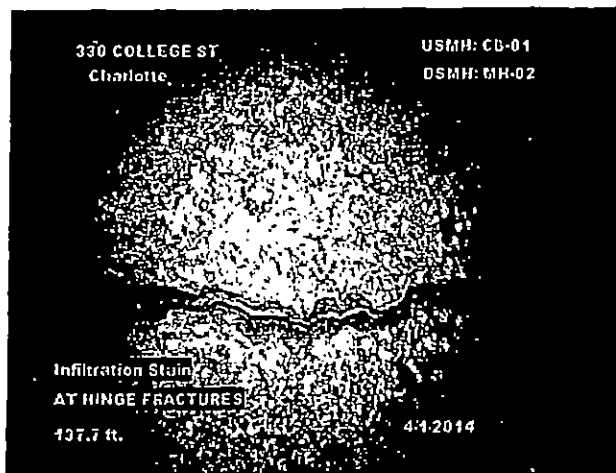
Distance: 135.3 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: END OF TYPICAL INFILTRATION STAIN



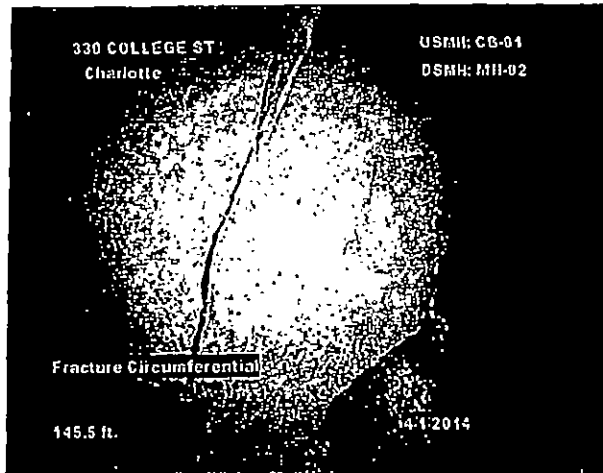
Distance: 135.3 ft. Grade: 0
 Condition: Infiltration Stain
 Remarks: AT HINGE FRACTURES



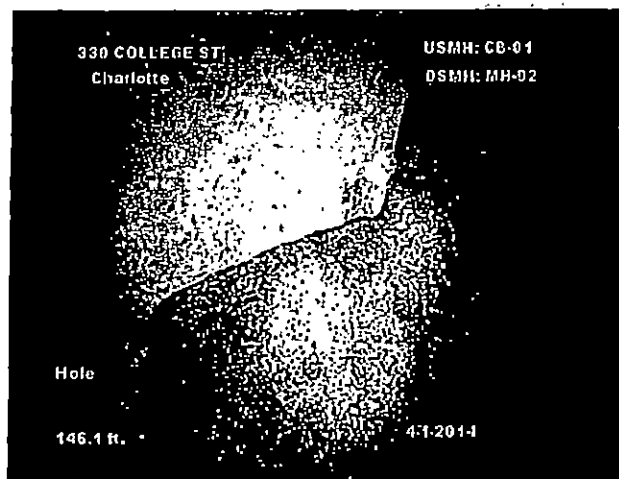
PSR 01	Block No.	Pre Dir	Street name and No 330 COLLEGE ST		Street Typ...	Post Dir
US Manhole CB-01	Total Length 149.2	Material: Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



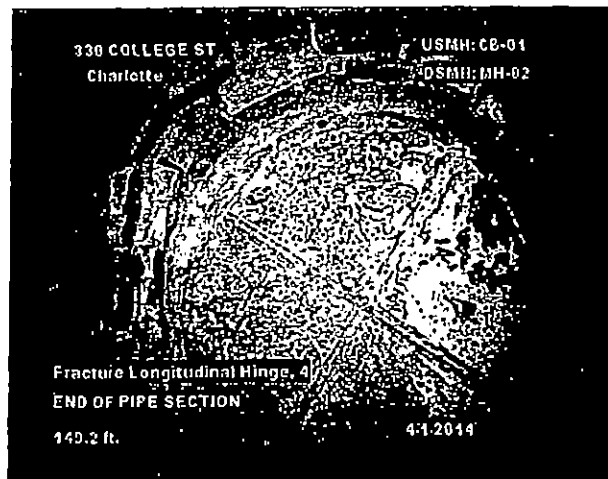
Distance: 137.7 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: AT HINGE FRACTURES



Distance: 145.5 ft Grade: 2
 Condition: Fracture Circumferential
 Remarks: N/A



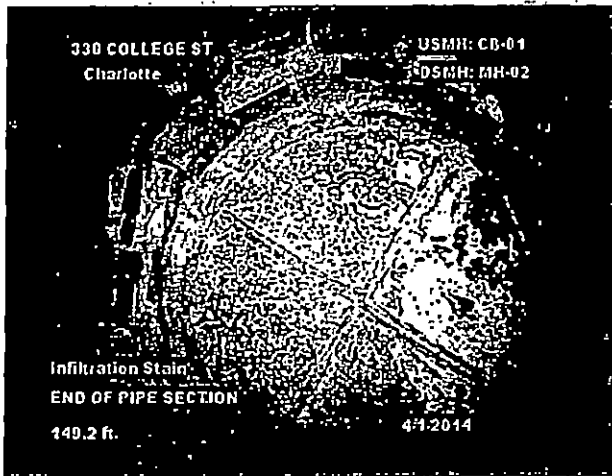
Distance: 146.1 ft Grade: 3
 Condition: Hole
 Remarks: N/A



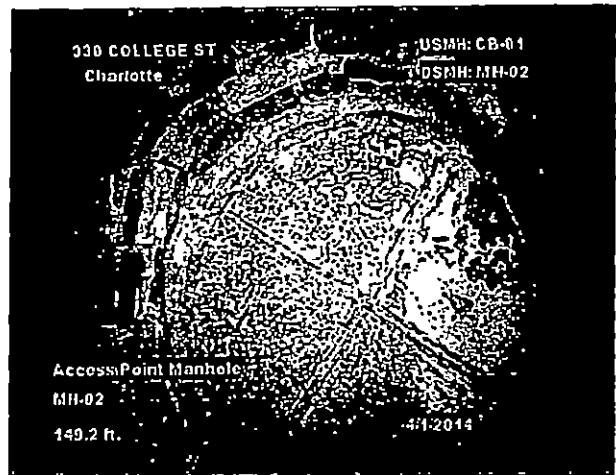
Distance: 149.2 ft Grade: 5
 Condition: Fracture Longitudinal Hinge, 4
 Remarks: END OF PIPE SECTION



PSR	Block No.	Pre Dir	Street name and No		Street Typ...	Post Dir
01			330 COLLEGE ST			
US Manhole CB-01	Total Length 149.2	Material Vitrified Clay Pipe	Shape Circular		I/I Value N/A	
DS Manhole MH-02	Length surveyed 149.2	Location	Height 24	City ROCK HILL	Sewer Use Stormwater	



Distance: 149.2 ft Grade: 0
 Condition: Infiltration Stain
 Remarks: END OF PIPE SECTION



Distance: 149.2 ft Grade: 0
 Condition: Access Point Manhole
 Remarks: MH-02

STATE OF SOUTH CAROLINA

IN THE COURT OF COMMON PLEAS

COUNTY OF YORK

Civil Action No. 12-CP-46-3928

LUCILLE H. RAY,)

Plaintiff,)

vs.)

**CORRECTION TO AFFIDAVIT
OF MICHAEL H. LEONARD**

CITY OF ROCK HILL, SOUTH)

CAROLINA, A Municipal)

Corporation, and SOUTH)

CAROLINA DEPARTMENT OF)

TRANSPORTATION, an agency)

Of the State of South Carolina,)

Defendants.)

DAVID HAMILTON
C.C. P. & G.S.
YORK COUNTY, SC

2014 JUN 13 PM 4:20

FILED-RECEIVED


Plaintiff files the following correction to the Affidavit of Michael H. Leonard, and shows as follows:

1. Michael H. Leonard's affidavit was filed and served on opposing counsel on May 30, 2014.

2. The affidavit has the correct Civil Action Number. The caption, however, is in error. It should read Lucille H. Ray, Plaintiff v. City of Rock Hill, a Municipal Corporation, and the South Carolina Department of Transportation, an agency of the State of South Carolina Defendants.

3. The affidavit should remain, in all respects, the same.

JAMES, McELROY & DIEHL, P.A.

By: 

Richard B. Fennell
S.C. Bar No. 10467
rfennell@jmdlaw.com
600 South College Street
Charlotte, NC 28202
(704) 372-9870
(704) 333-5508 (facsimile)

Dated: June 13, 2014
Charlotte, North Carolina

THE STATE OF SOUTH CAROLINA
In The Court of Appeals

APPEAL FROM YORK COUNTY
Court of Common Pleas

D. Garrison Hill, Circuit Court Judge
S. Jackson Kimball, Special Circuit Court Judge

RECEIVED

OCT 12 2016

SC Court of Appeals

Case No. 2014-CP-4604100

Case No. 2012-CP-4603928

Lucille H. Ray,

Appellant,

v.

City of Rock Hill, South Carolina
a Municipal Corporation


Respondent.

NOTICE OF APPEAL

Pursuant to S.C. Code Ann. §§ 14-3-330(1) and 14-4-330(2), Lucille H. Ray appeals the Order Granting Defendant's Motion *in Limine* and Directed Verdict against Plaintiff of the Honorable D. Garrison Hill, announced in open court on September 12, 2016 and entered on September 13, 2016.

Pursuant to S.C. Code Ann. §§ 14-3-330(1) and 14-4-330(2), Lucille H. Ray also appeals the Order Granting Partial Summary Judgment to the City of Rock Hill of the Honorable S. Jackson Kimball, dated August 8, 2014 and entered on August 12, 2014, and the Order Denying Plaintiff's and Defendant's Motions for Reconsideration of the Honorable S. Jackson Kimball, dated April 17, 2015 and entered on April 21, 2015.

October 12, 2016


Richard B. Fennell
S.C. Bar No. 10467
James, McElroy & Diehl, P.A.
600 S. College Street, Charlotte, NC 28202
(704) 372-9870

Charles S. Bradford, S.C. Bar No. 0840
Charles S. Bradford, P.A.
P.O. Box 977
York, SC 29745
Attorneys for Appellant

Other Counsel of Record:
W. Mark White
Spencer & Spencer, P.A.
226 East Main Street
P.O. Box 790
Rock Hill, SC 29731
Attorneys for Respondent

THE STATE OF SOUTH CAROLINA
In The Court of Appeals

APPEAL FROM YORK COUNTY
Court of Common Pleas

D. Garrison Hill, Circuit Court Judge
S. Jackson Kimball, Special Circuit Court Judge

Case No. 2014-CP-4604100
Case No. 2012-CP-4603928

RECEIVED

OCT 12 2016

SC Court of Appeals

Lucille H. Ray,

Appellant,

v.


City of Rock Hill, South Carolina
a Municipal Corporation

Respondent.

PROOF OF SERVICE

I, Richard B. Fennell, certify that I have this day served the Notice of Appeal upon the Respondent by depositing a copy in the United States Mail, postage prepaid, addressed to their attorneys of record, W. Mark White of Spencer & Spencer, P.A., 226 East Main Street, P.O. Box 790, Rock Hill, SC 29731.

October 12, 2016


Richard B. Fennell
S.C. Bar No. 10467
James, McElroy & Diehl, P.A.
600 S. College Street, Charlotte, NC 28202
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Charles S. Bradford
S.C. Bar No. 0840
Charles S. Bradford, P.A.
P.O. Box 977
York, SC 29745
Attorneys for Appellant

FORM 4

STATE OF SOUTH CAROLINA
 COUNTY OF YORK
 IN THE COURT OF COMMON PLEAS

JUDGMENT IN A CIVIL CASE
 CASE NUMBER 2014CP480107

RECEIVED

Lucille H Ray Rock Hill City Of

OCT 12 2016

PLAINTIFF(S) DEFENDANT(S)
 Submitted by: Attorney for: Plaintiff Defendant
 Self-Represented Litigant

SC Court of Appeals

DISPOSITION TYPE (CHECK ONE)

- JURY VERDICT. This action came before the court for a trial by jury. The issues have been tried and a verdict rendered.
- DECISION BY THE COURT. This action came to trial or hearing before the court. The issues have been tried or heard and a decision rendered. See Page 2 for additional information.
- ACTION DISMISSED (CHECK REASON): Rule 12(b), SCRPC; Rule 41(a), SCRPC (Vol. Nonsuit);
 Rule 43(k), SCRPC (Settled); Other: _____
- ACTION STRICKEN (CHECK REASON): Rule 40(j) SCRPC; Bankruptcy; Other: _____
 Binding arbitration, subject to right to restore to confirm, vacate or modify arbitration award; Other: _____
- DISPOSITION OF APPEAL TO THE CIRCUIT COURT (CHECK APPLICABLE BOX):
 Affirmed; Reversed; Remanded; Other: _____

2016 SEP 13 PM 1:08
 RECEIVED
 DAVID HARTMAN
 C.C.P. & G.S.C.
 YORK COUNTY, SC

NOTE: ATTORNEYS ARE RESPONSIBLE FOR NOTIFYING LOWER COURT, TRIBUNAL, OR ADMINISTRATIVE AGENCY OF THE CIRCUIT COURT RULING IN THIS APPEAL.

IT IS ORDERED AND ADJUDGED: See attached order; (formal order to follow) Statement of Judgment by the Court:

ORDER INFORMATION

This order ends does not end the case.
 Additional Information for the Clerk: _____

INFORMATION FOR THE JUDGMENT INDEX

Complete this section below when the judgment affects title to real or personal property or if any amount should be enrolled. If there is no judgment information, indicate "N/A" in one of the boxes below.

Judgment in Favor of (List name(s) below)	Judgment Against (List name(s) below)	Judgment Amount To be Enrolled (List amount(s) below)

If applicable, describe the property, including tax map information and address, referenced in the order:

The judgment information above has been provided by the submitting party. Disputes concerning the amounts contained in this form may be addressed by way of motion pursuant to the SC Rules of Civil Procedure. Amounts to be computed such as interest or additional taxable costs not available at the time the form and final order are submitted to the judge may be provided to the clerk. Note: Title abstractors and researchers should refer to the official court order for judgment details.

D. Garrison Hill 2138 9-13-16
 Circuit Court Judge Judge Code Date

For Clerk of Court Office Use Only

This judgment was entered on September 13th, 2016, and a copy mailed first class or placed in the appropriate attorney's box on September 15th, 2016, to attorneys of record or to parties (when appearing pro se) as follows:

Charles S. Bradford PO Box 977 York, SC 29745
Richard B. Fennell James, Mcelroy & Diehl, PA 600 S.
College Street Charlotte, NC 28202

William Mark White PO Box 790 Rock Hill, SC 29731

ATTORNEY(S) FOR THE PLAINTIFF(S)

ATTORNEY(S) FOR THE DEFENDANT(S)

David Hamilton

Court Reporter: Aileen Butler

David Hamilton - Clerk of Court

ADDITIONAL INFORMATION REGARDING DECISION BY THE COURT AS REFERENCED ON PAGE 1.

This action came to trial or hearing before the court. The issues have been tried or heard and a decision rendered.

At the call of the case, and after the court's ruling on the City's motion in limine, the Plaintiff acknowledged that it would not be possible to meet her burden of proof, and the court, concurring, granted directed verdict in Defendant's favor. Given Judge Kimball's ruling on summary judgment, only an abatable trespass remained as a viable cause of action. Because the court excluded Plaintiff expert Leonard's opinion testimony as unreliable concerning abatement, the trespass cause of action became unviable, and with no genuine issue of material fact remaining, City was entitled to judgment as a matter of law.

FORM 4

STATE OF SOUTH CAROLINA
 COUNTY OF YORK
 IN THE COURT OF COMMON PLEAS

JUDGMENT IN A CIVIL CASE
 CASE NUMBER 2012CP4603928

Lucille H Ray Marshall A Rogers

Rock Hill City Of

RECEIVED

OCT 12 2016

SC Court of Appeals

PLAINTIFF(S)	DEFENDANT(S)
Submitted by: W. Mark White	Attorney for: <input type="checkbox"/> Plaintiff <input checked="" type="checkbox"/> Defendant <input type="checkbox"/> Self-Represented Litigant

DISPOSITION TYPE (CHECK ONE)

- JURY VERDICT. This action came before the court for a trial by jury. The issues have been tried and a verdict rendered.
- DECISION BY THE COURT. This action came to trial or hearing before the court. The issues have been tried or heard and a decision rendered. See Page 2 for additional information.
- ACTION DISMISSED (CHECK REASON): Rule 12(b), SCRPC; Rule 41(a), SCRPC (Vol. Nonsuit);
 Rule 43(k), SCRPC (Settled); Other: _____
- ACTION STRICKEN (CHECK REASON): Rule 40(j) SCRPC; Bankruptcy;
 Binding arbitration, subject to right to restore to confirm, vacate or modify arbitration award; Other: _____
- DISPOSITION OF APPEAL TO THE CIRCUIT COURT (CHECK APPLICABLE BOX):
 Affirmed; Reversed; Remanded; Other: _____

NOTE: ATTORNEYS ARE RESPONSIBLE FOR NOTIFYING LOWER COURT, TRIBUNAL, OR ADMINISTRATIVE AGENCY OF THE CIRCUIT COURT RULING IN THIS APPEAL.

IT IS ORDERED AND ADJUDGED: See attached order; (formal order to follow) Statement of Judgment by the Court:

ORDER INFORMATION

ORDER GRANTING PARTIAL SUMMARY JUDGMENT AS TO THE CITY OF ROCK HILL

This order ends does not end the case.

Additional Information for the Clerk: _____

INFORMATION FOR THE JUDGMENT INDEX

Complete this section below when the judgment affects title to real or personal property or if any amount should be enrolled. If there is no judgment information, indicate "N/A" in one of the boxes below.

Judgment in Favor of (List name(s) below)	Judgment Against (List name(s) below)	Judgment Amount To be Enrolled (List amount(s) below)

If applicable, describe the property, including tax map information and address, referenced in the order:

The judgment information above has been provided by the submitting party. Disputes concerning the amounts contained in this form may be addressed by way of motion pursuant to the SC Rules of Civil Procedure. Amounts to be computed such as interest or additional taxable costs not available at the time the form and final order are submitted to the judge may be provided to the clerk. Note: Title abstractors and researchers should refer to the official court order for judgment details.

RECEIVED 8/13/14
 JAMES...

of S. Jackson Kimball
Special Circuit Court Judge

3063
Judge Code

8/12/2014
Date

For Clerk of Court Office Use Only

This Judgment was entered on August 12, 2014, and a copy mailed first class or placed in the appropriate attorney's box on August 12, 2014, to attorneys of record or to parties (when appearing pro se) as follows:

Charles S. Bradford
PO Box 977
York, SC 29745

William Mark White
PO Box 790
Rock Hill, SC 29731

Richard B. Fennell
James, Mcelroy & Diehl, PA
600 S. College Street
Charlotte, NC 28202

John Robert Devlin Jr.
PO Box 10387
Greenville, SC 29603-0387

Marshall A Rogers
328 College Avenue
Rock Hill, SC 29730

ATTORNEY(S) FOR THE PLAINTIFF(S)

ATTORNEY(S) FOR THE DEFENDANT(S)

David Hamilton

Court Reporter

David Hamilton - Clerk of Court

ADDITIONAL INFORMATION REGARDING DECISION BY THE COURT AS REFERENCED ON PAGE 1.

This action came to trial or hearing before the court. The issues have been tried or heard and a decision rendered.

STATE OF SOUTH CAROLINA)
)
 COUNTY OF YORK)
)
 Lucille H. Ray,)
)
 Plaintiff,)
)
 vs.)
)
 City of Rock Hill, South Carolina, a)
)
 Municipal Corporation, and South)
)
 Carolina Department of Transportation, an)
)
 agency of the State of South Carolina,)
)
 Defendants.)

IN THE COURT OF COMMON PLEAS
 CASE NO. 2012-CP-46-03928

ORDER GRANTING PARTIAL
 SUMMARY JUDGMENT TO
 THE CITY OF ROCK HILL

RECEIVED
 OCT 12 2016
 SC Court of Appeals

FILED-RECEIVED
 2014 AUG 12 9:30 AM
 CLERK OF COURT
 YORK COUNTY, SC

This matter came before me on June 18, 2014, upon the Motion for Summary Judgment of the Defendant City of Rock Hill ("City"). Representing Plaintiff were Richard B. Fennell and Charles S. Bradford, and representing the City was W. Mark White. Based on the record presented, I make the following findings and conclusions.

FACTUAL BACKGROUND

Plaintiff, Lucille Ray ("Mrs. Ray"), is a resident of the City of Rock Hill ("City"). She lives on College Avenue, a City maintained street, in a house approximately eighty years of age. This action stems from the fact that a 24" storm drain pipe extends from College Avenue directly underneath Mrs. Ray's house and through her property. No evidence has been presented from any party concerning who may have originally installed the pipe, who owns the pipe, or the existence of any easement for piping water across Mrs. Ray's property.

The portion of the City's storm drain system pertinent to this action collects, or receives from collection by others, storm water from an area comprising approximately 29 acres. The water so collected ultimately drains into the 24" pipe running under Mr. Ray's house, and to the rear of her property. The pipe begins at a City maintained catch basin on College Avenue directly in front of Mrs. Ray's property. The applicable portion of the City's system, showing the location of the streets and drainage pipes, is depicted on a map provided the Court as an exhibit in connection with the motion.

STATEMENT OF THE CASE

Mrs. Ray brought suit against the City on November 6, 2012, alleging it to be liable for

trespass and inverse condemnation. She amended her complaint in 2013 to include claims for injunctive relief, and for attorney's fees under S.C. Code Ann. §15-77-300 (1976, as amended). Mrs. Ray alleged that damage had begun to occur to her house as a result of the pipe underneath the house, and the stormwater which flowed through it. She alleged, and it is not disputed, that no easement of record exists giving any party the right to flow water across her property and under her house. Although Mrs. Ray alleged in her Complaint that the City installed the pipe under her house, no evidence supports that allegation. However, the City acknowledges discharging its collected storm water into the pipe.

In 2008, Mrs. Ray and City employees began to communicate on the subject of the storm water pipe on her property. Also, in 2008, Mrs. Ray noticed that her front steps appeared to be sinking, and asked for the City's assistance. She testified that she feared that a storm water pipe was running underneath her house. This action was not filed until 2012.

In response to Mrs. Ray's claims against it, the City's motion asserts that no genuine issue of material fact existed demonstrating a positive aggressive act causing damage to Mrs. Ray's property upon which to base an inverse condemnation claim, that the statute of limitations bars any claim, including the trespass claim, against the City, and that Mrs. Ray is not entitled to injunctive relief based on the facts of the case, as a matter of law.

SUMMARY JUDGMENT STANDARD

Summary judgment is appropriate where there is no genuine issue of material fact, and it is clear that the moving party is entitled to a judgment as a matter of law. Rule 56(c) SCRPC. "In determining whether any triable issues of fact exists, the evidence and all inferences which can be reasonable draw from the evidence must be viewed in the light most favorable to the non-moving party. . . . In cases applying the preponderance of the evidence burden of proof, the non-moving party is only required to submit a mere scintilla of evidence in order to withstand a motion for summary judgment." *Hancock v. Mid-South Management Company, Inc.*, 381 S.C. 326, 329-330, 673 S.E.2d 801 (2009).

DISCUSSION

A. Inverse Condemnation Claim.

"To establish an inverse condemnation claim, a plaintiff must show (1) an affirmative, positive, aggressive act on the party of the governmental agency; (2) a taking; (3) the taking is for a public use; and (4) the taking has some degree of permanence." *Hawkins v. City of Greenville*, 358 S.C. 280, 290, 594 S.E.2d 557, 562 (Ct.App. 2004). The only claim of a positive

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aggressive act by the City is that it has “. . . taken affirmative actions . . .” to collect stormwater into its stormwater system and channel it under her house. It does not allege the construction of any new improvements producing that result.

Hawkins, supra, is dispositive of Mrs. Ray’s inverse condemnation claim. In *Hawkins*, the trial court granted summary judgment to the City of Greenville, ruling that *Hawkins*’ allegations of affirmative acts would be appropriately characterized as failures to act, and therefore not actionable as inverse condemnation. The Court stated:

Hawkins has failed to allege any affirmative acts by the City which damaged the [plaintiff’s] property or otherwise diminished his rights in the property. Most of the City’s ‘acts’ he avers support his inverse condemnation claim are merely failures to act. Specifically, Hawkins asserts the City improperly allowed the development of neighboring parcels of commercial property which altered the elevation of the area and added strain to the Laurel Creek drainage pipes beyond their capacity and then failed to replaced these pipes. . . . Allegations of mere failure to act are insufficient.” *Id.*, 358 S.C. at 291, 594 S.E.2d at 562-563.

Here, no positive, aggressive act was committed. Mrs. Ray merely claims that the City collects water and causes it to go under her house. Standing alone, such an act does not support a claim of inverse condemnation. Mrs. Ray has pointed to no case which would categorize maintenance of the storm water system as a positive, aggressive act.

B. Trespass Claim.

“To constitute actionable trespass . . . there must be an affirmative act, the invasion of land must be intentional, and harm caused must be the direct result of that invasion.” *Hawkins, supra*, 358 S.C. at 296, 594 S.E.2d at 565-566. I find and conclude that the collection and discharge of water under Mrs. Ray’s house may be considered an affirmative, intentional act, causing damage to Mrs. Ray, leaving a genuine issue for trial as to the trespass claim. This finding is subject to my ruling on the City’s statute of limitations defense, which follows.

C. Statute of Limitations.

I find and conclude that in 2008, Mrs. Ray had sufficient knowledge or notice of the facts pertaining to the pipe under her house, and the City’s use of it, such that she knew, or should have known, of the existence of a claim for her damages against the City. Thus, the three year statute of limitations began to run at some time in 2008. See *Dean v. Ruscon Corp.*, 321 S.C. 360, 468 S.E.2d 645 (1996); and, *Hedgepath v. American Tel. & Tel. Co.*, 348 S.C. 340, 559 S.E.2d 327 (Ct.App. 2001). This action was not commenced until November 6, 2012.

Nevertheless, I also find and conclude, under the standard for consideration of summary

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judgment, that the asserted trespass in this action presents a genuine issue of fact concerning whether it is abatable. Where the offending conduct or injury is abatable, the statute of limitations begins to run with each new invasion of a plaintiff's property. *Hedgepath, supra*. Since abatability is an issue of fact, Mrs. Ray's trespass claim survives as to each new invasion for the three years prior to November 6, 2009.

D. Injunctive Relief Claim.

Mrs. Ray's claim for injunctive relief against the City must fail as a matter of law. A threshold requirement for the right to injunctive relief is the lack of an adequate remedy at law. See *Levine v. Spartanburg Regional Services Dist., Inc.*, 367 S.C. 458, 626 S.E.2d 38 (Ct.App. 2005); and, *MailSource, LLC v. M.A. Bailey & Associates*, 356 S.C. 363, 588 S.E.2d 635 (Ct.App. 2003). The claim against the City for trespass represents an adequate remedy at law. Plaintiff could be made whole by a damage award on the trespass claim.

E. Attorneys' Fees and Costs.

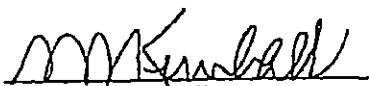
S.C. Code Ann. §15-77-300 (1976, as amended) provides that in actions brought by an agency of government, a party against whom suit is commenced may recover attorneys' fees and costs from the governmental agency, if the agency does not prevail. In this case, Mrs. Ray is the Plaintiff, and the governmental entities are Defendants. Thus, the statute is inapplicable to the posture of the parties in this case. It follows that the cause of action based on §15-77-300 must be dismissed.

CONCLUSION

For the reasons set forth herein, the City's Motion for Summary Judgment is granted as to Mrs. Ray's causes of action for inverse condemnation, injunctive relief, and statutory attorneys' fees and costs, and the same are dismissed with prejudice. As to the cause of action for trespass, the City's motion is denied; however, such ruling is subject to the limits imposed due to the application of the statute of limitations, as set forth above.

AND IT IS SO ORDERED.

August 8, 2014


S. Jackson Kimball
Special Circuit Court Judge
York County

#4

STATE OF SOUTH CAROLINA
COUNTY OF YORK
IN THE COURT OF COMMON PLEAS

JUDGMENT IN A CIVIL CASE
CASE NUMBER 2012CP4603928

RECEIVED

Lucille H Ray

Marshall A Rogers

FILED

APR 21 2015

Rock Hill City Of

OCT 12 2016

SC Court of Appeals

PLAINTIFF(S)

DEFENDANT(S)

Submitted by:

Attorney for: Plaintiff Defendant
 Self-Represented Litigant

DISPOSITION TYPE (CHECK ONE)

- JURY VERDICT. This action came before the court for a trial by jury. The issues have been tried and a verdict rendered.
- DECISION BY THE COURT. This action came to trial or hearing before the court. The issues have been tried or heard and a decision rendered. See Page 2 for additional information.
- ACTION DISMISSED (CHECK REASON): Rule 12(b), SCRCP; Rule 41(a), SCRCP (Vol. Nonsuit);
 Rule 43(k), SCRCP (Settled); Other: _____
- ACTION STRICKEN (CHECK REASON): Rule 40(j) SCRCP; Bankruptcy;
 Binding arbitration, subject to right to restore to confirm, vacate or modify arbitration award; Other: _____
- DISPOSITION OF APPEAL TO THE CIRCUIT COURT (CHECK APPLICABLE BOX):
 Affirmed; Reversed; Remanded; Other: _____

NOTE: ATTORNEYS ARE RESPONSIBLE FOR NOTIFYING LOWER COURT, TRIBUNAL, OR ADMINISTRATIVE AGENCY OF THE CIRCUIT COURT RULING IN THIS APPEAL.

IT IS ORDERED AND ADJUDGED: See attached order; (formal order to follow) Statement of Judgment by the Court:

This matter came before me on April 15, 2015, upon motion of both Plaintiff and Defendant City of Rock Hill pursuant to Rule 59(e), SCRCP, asking the Court to alter or amend the Court's Order filed August 12, 2014. Representing the parties were: Richard B. Fennell and Charles S. Bradford for Plaintiff; and, W. Mark White for Defendant City of Rock Hill.

The purpose of Rule 59(e), SCRCP, to alter or amend the judgment is to request the trial judge to "reconsider matters properly encompassed in a decision on the merits." *Arnold v. State*, 309 S.C. 157, 420 S.E.2d 834 (1992) (Citations omitted).

Upon reviewing the record presented, and considering the memoranda and arguments of counsel, I find no matter presented that was not addressed expressly or by clear implication in the prior order. I further find no basis for reconsideration or amendment of the court's rulings in the prior order. Therefore, it is ordered that both Plaintiff's and Defendant's motion pursuant to Rule 59(e), SCRCP, be denied.

AND IT IS SO ORDERED.

ORDER INFORMATION

This order ends does not end the case.

Additional Information for the Clerk: _____

INFORMATION FOR THE JUDGMENT INDEX

Complete this section below when the judgment affects title to real or personal property or if any amount should be enrolled. If there is no judgment information, indicate "N/A" in one of the boxes below.

Judgment In Favor of (List name(s) below)	Judgment Against (List name(s) below)	Judgment Amount To be Enrolled (List amount(s) below)

Handwritten initials and a dollar sign.

STATE OF SOUTH CAROLINA
COUNTY OF YORK

IN THE COURT OF COMMON PLEAS
Civil Action No. 12-CP-46-3928

LUCILLE H. RAY,)
)
Plaintiff,)
)
vs.)
)
CITY OF ROCK HILL, SOUTH)
CAROLINA, A Municipal)
Corporation, and SOUTH)
CAROLINA DEPARTMENT OF)
TRANSPORTATION, an agency)
Of the State of South Carolina,)
)
Defendants.)
_____)

**PLAINTIFF'S OBJECTIONS AND
RESPONSES TO DEFENDANT
SOUTH CAROLINA DEPARTMENT
OF TRANSPORTATION'S FIRST
SET OF INTERROGATORIES**

Plaintiff objects and responds to Defendant South Carolina Department of Transportation's First Set of Interrogatories as follows:

GENERAL OBJECTIONS

1. Plaintiff objects to Defendant South Carolina Department of Transportation's First Set of Interrogatories to the extent that they purport to require the disclosure of information or documents which are protected by the attorney-client privilege or work product doctrine. Any document produced which would otherwise be privileged is not a waiver of any remaining privilege or protection from discovery.

2. Plaintiff objects to these discovery requests to the extent that they purport to expand the requirements of the South Carolina Rules of Civil Procedure.

3. All documents will be available for inspection at the law offices of James, McElroy & Diehl, P.A. 600 South College Street, Charlotte, North Carolina or will be alternatively produced in a fashion and at such time to be agreed upon.

4. As this case is still in the early stages of discovery, Plaintiff will supplement these responses when further information warrants it.

INTERROGATORIES

1. Give the names and addresses of persons known to the Plaintiff or Plaintiff's counsel to be witnesses concerning the facts of the case and indicate whether or not written or recorded statements have been taken from the witnesses and indicate who has possession of such statements.



RESPONSE: Donna Givens
786 Summerwood Drive
Rock Hill, SC 29732

Bob Maycock
335 College Avenue
Rock Hill, SC 29730

Leslie Maycock
335 College Avenue
Rock Hill, SC 29730

Paul Carlisle

Marshall Rogers
803-370-0682
College Avenue
Rock Hill, SC 29730

Betty Caughman
310 College Avenue
Rock Hill, SC 29730

James Werrell
319 College Avenue
Rock Hill, SC 29730

Bobby Banks

Hal Murray

Jason Tinkler
803-324-3740
213 Thornfield Lane
Rock Hill, SC 29730

2. For each person known to the Plaintiffs or Plaintiff's counsel to be a witness concerning the facts of the case, set forth either a summary sufficient to inform the other party of the important facts known to or observed by such witness, or provide a copy of any written or recorded statements taken from such witnesses.

RESPONSE: Donna Givens witnessed a stormwater test on the drains in close proximity to Plaintiff's home on May 25, 2012.

Bob Maycock witnessed a stormwater test on the drains in close proximity to Plaintiff's home on May 25 and May 26, 2012.

Leslie Maycock witnessed a stormwater test on the drains in close proximity to Plaintiff's home on May 26, 2012.

Paul Carlisle is, upon information and belief, the head of public works for the City of Rock Hill.

Marshall Rogers witnessed a conversation with Jason Tinkler in which Mr. Tinkler claimed there was not a stormwater pipe that ran beneath Plaintiff's home.

Betty Caughman and James Werrell can both testify to the drainage problems on College Avenue.

Bobby Banks supervised Jason Tinkler.

Jason Tinkler was the representative of the City with whom Plaintiff most frequently dealt.

Hal Murray is a representative of the City of Rock Hill with whom Plaintiff has had multiple business conversations. He witnessed broken water lines.

Cindy Wilkinson witnessed a conversation with South Carolina Department of Transportation acknowledging the ownership of the storm water lines and drains on Oakland Avenue.

3. Set forth a list of photographs, videotapes, audiotapes, plats, sketches or other prepared documents in possession of the Plaintiffs or Plaintiff's counsel that relate to any claims or defense in this case.

RESPONSE: Plaintiff has a large number of photos and tapes and will produce them, rather than attempt to list them.

4. Please identify in complete detail each person whom the Plaintiff may call as an expert witness at the trial, and for each such person provide the following information:

- (a) Name, occupation, title, business address, area of specialization, if any, and professional relationship to the Plaintiffs; and
- (b) The manner in which such person became familiar with the facts of this case.

RESPONSE: Michael Leonard with MH Leonard Consulting Engineers, PA, 447 South Sharon Amity Road, Suite 201 Charlotte, NC 28211.

M.H. Leonard provides a variety of consulting services to the building industry, including diagnosis and repair of structural problems. Mr. Leonard was first contacted by Lucille Ray on March 20, 2012.

Edward Cummings with CESI Land Development Services
45 Spring Street
Concord, NC 28026

CESI provides a variety of consulting services to the building industry relating primarily to geotechnical issues. Mr. Cummings was first contacted by Michael Leonard in August 2012.

5. As to each person who the Plaintiff has identified or intends to identify as an expert witness in this matter, please provide the following information:

- (a) The subject matter or area in which such person is to testify;
- (b) A statement of each opinion held by such person; and
- (c) A summary of the grounds or basis for each opinion.

RESPONSE: Plaintiff is producing the reports generated by each expert in which this information is summarized.

6. Set forth an itemized, and individualized, statement of all damages claimed by the Plaintiff in this civil action. Please provide an explanation of the methodology used to calculate the damages and identify by name and address the person(s) who performed the calculation of damages and/or who are expected to testify at trial regarding the calculation of damages.

RESPONSE: Plaintiff believes that the only damages consist of the physical damage to her house. These are summarized in the report of MH Leonard, which is being produced. The current estimate is \$147,711. Plaintiff has also made a claim for attorney's fees and engineering fees of plaintiff's expert witnesses.

7. Please identify with specificity all acts or omissions that the Plaintiff contends were committed by DOT. For each such act or omission, please provide the following information:

- (a) The date that the act or omission occurred;
- (b) The employee(s) of DOT who committed the act or omission; and
- (c) The damages that the Plaintiff alleges were proximately caused to by the act or omission identified.

RESPONSE: Plaintiff's claim is for trespass and inverse condemnation. Essentially, she contends that DOT has been channeling storm water runoff beneath her

property without her knowledge or permission. Plaintiff cannot identify a particular individual who "committed the act," or the dates on which the pipes were planned and installed. Her resulting damages are described in response to interrogatory 6.

8. Please identify by name and address all persons or entities who have conducted any investigation or analysis of any construction issues and/or drainage/water intrusion issues at the Plaintiff's property located at 330 College Avenue, Rock Hill, South Carolina.

RESPONSE: The City of Rock Hill has performed occasional investigations, which are described in Plaintiff's response to interrogatory 12.

9. If the Plaintiff contends that any industry or regulatory standards were violated by any of the alleged acts or omissions on the part of DOT as set forth in the Complaint, please identify the specific industry or regulatory standards violated, the party/entity who violated those industry standards, and describe in detail the nature of each violation.

RESPONSE: Plaintiff objects to this request on the grounds that it is vague. She does not claim at this point that DOT has performed any work in violation of an industry standard. She contends that DOT has been trespassing, and has for all practical purposes taken her property by channeling excessive amounts of water beneath her property into a pipe she never knew about and which is insufficient to perform the task and for which Defendants had no legal right to use or have upon Plaintiff's property. A description of the deficiencies with the stormwater pipes is contained in the MH Leonard reports. Her investigation into how that came to be is continuing, and this interrogatory response will be supplemented if that becomes necessary.

10. For each violation of industry or regulatory standards identified in response to Interrogatory #9, please identify the name and address of each witness who is expected to testify regarding that alleged violation of industry standards.

RESPONSE: Plaintiff objects to this request on the grounds that it is vague. She does not claim at this point that DOT has performed any work in violation of an industry standard. She contends that DOT has been trespassing, and has for all practical purposes taken her property by channeling excessive amounts of water beneath her property into a pipe she never knew about and which is insufficient to perform the task. A description of the deficiencies with the stormwater pipes is contained in the MH Leonard reports. Her investigation into how that came to be is continuing, and this interrogatory response will be supplemented if that becomes necessary.

11. Please set forth all dates on which the Plaintiff's property has experienced flooding as alleged in the Complaint.

RESPONSE: There has not been flooding in the house to any appreciable extent. The back of her property floods periodically, but she does not have dates. Water flows beneath her property at what appears to be excessive rates during most rain storms of any significance. The streets flood frequently within the last two (2) years. Plaintiff particularly recalls flooding on the streets in mid July 2011. This continued to occur. She called Trudy Amick about another flooding event on July 9, 2012.

12. Set forth the date that the Plaintiff first complained to or otherwise contacted the City of Rock Hill, or any other entity, about the alleged drainage or water intrusion problem at the Plaintiff's property and state how the complaint was made (e.g., in writing, by telephone, etc.), who actually made the complaint, to whom the complaint was made, and the nature of the complaint made. If the complaint was made in writing, please produce a copy of the written complaint.

RESPONSE: First contact was with Trudy Amick. She came to Plaintiff's home, but did not return calls. Plaintiff met Jason Tinkler in April or May of 2011 after a particularly heavy rain and a flooding event on College. Mr. Tinkler claimed that there was not a storm water pipe beneath her house. Plaintiff met with Paul Carlisle later that month who told her that regardless of the ultimate determination as to the pipe's location, it would not be moved.

The City came to the property and filmed the line on June 3, 2011. Paul Carlisle acknowledged that a pipe ran beneath her house, but claimed it was connected to the house. Plaintiff demonstrated that that was not the case by running water from every potential source in the home. Nothing showed in the line. Jason Tinkler contended that there was no problem with the pipe and that he did not believe it was causing any harm to the house. He then disappeared. Trudy Amick resurfaced. The City became non-communicative, and Plaintiff hired counsel and Mike Leonard. The City would not provide any information to Mr. Leonard until Plaintiff contacted Jim Reno, who is a member of Rock Hill's City Council. Mr. Leonard outlines the inadequacies of what was produced to him in his report.

13. For each subsequent contact or communication by the Plaintiff to any employees of the city of Rock Hill or DOT regarding, in any respect, the alleged drainage or water intrusion problem, please provide the following:

- (a) The date of the communication;
- (b) Who actually made the communication;
- (c) The person(s) to whom the communication was made;
- (d) The substance of the communication;
- (e) How the communication was made (e.g.; in writing, by telephone, etc.); and

- (f) The response received regarding said communication.

RESPONSE: Plaintiff cannot recall each communication, particularly to the level of detail requested. She has outlined the major communications she can recall in response to interrogatory 12. Any written correspondence will be produced.

14. Has the Plaintiff ever attempted to sell the property located at 330 College Avenue, Rock Hill, South Carolina? If so, please provide the following for each separate attempt to sell the property:

- (a) The dates that the property was for sale;
- (b) The reason(s) that the property was placed on the market;
- (c) The name and address of any realtors retained or used to sell the property;
- (d) The sales price sought by the Plaintiff, and if that price changed, state each change in the sales price and when that change occurred;
- (e) Whether any sales contracts with prospective purchasers were executed and if so, please give the names and addresses of those prospective purchasers; and
- (f) If any sales contracts were voided, please state the reason(s) for that action.

RESPONSE: N/A

15. Please describe all efforts undertaken by the Plaintiff to mitigate the damages alleged in the Complaint.

~~RESPONSE: Plaintiff has called upon experts when physical damage was manifested in an effort to determine the cause and perform repairs that were feasible.~~

16. Please set forth the date of birth, social security number, and home address for the Plaintiff.

RESPONSE: Plaintiff objects to providing her social security number on the grounds that it is private information which has no bearing on this lawsuit. Her street address is 330 College Avenue, Rock Hill, SC. Her date of birth is August 26, 1951.

17. Please set forth a complete criminal history for the Plaintiff, including the date of each charge, the nature of each charge, how each charge was resolved, and the sentence or other punishment received.

RESPONSE: None.

18. Please give the names and addresses of all persons related by blood or marriage to the Plaintiff who are eighteen years of age or older and who reside in York County.

RESPONSE: Philip and Fannie Ray
202 Fairway Drive
Fort Mill, SC

19. Please set forth the policy number for the homeowner's insurance policy for the property owned by the Plaintiff located at 330 College Avenue, Rock Hill, South Carolina. Please include in this answer the name of the company, agent, and/or broker that wrote the policy at issue.

RESPONSE: Current:

Cincinnati Insurance Policy
Policy No.: D01 0638891

Aug 2009 – Aug 2011:

Encompass Insurance
Policy No.: US 281282031

Aug 2007 – Aug 2009:

Houston General Insurance
Policy No.: DH1C10670

All policies were sold through
People's First
466 Hood Center Drive
Rock Hill, SC

JAMES, MCELROY & DIEHL, P.A.

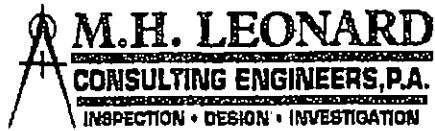
By: 

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This 14 day of June, 2013.



ENGINEERING EVALUATION

**STRUCTURAL DAMAGES AND
RECOMMENDED REPAIRS**

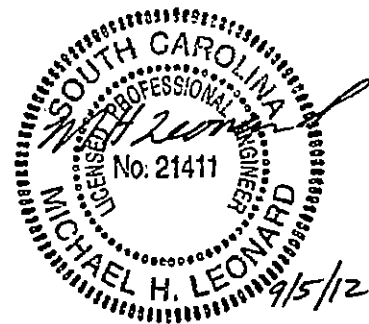
Residence of:

**Ms. Lucille Ray
330 College Ave
Rock Hill, SC**

MHLCE Project # 12E9555.F

Date: September 5, 2012

By: Michael H. Leonard, PE



1. Purpose

The purposes of this study include the following:

- To provide an engineering assessment of private residence to determine cause(s) of progressive structural damages.
- To determine the most feasible structural repairs of the dwelling and subgrade conditions now affecting the foundation.
- To estimate the costs of structural repairs and other remedial work.
- To determine the risks of long-term, progressive damages if remedial work is delayed or not done.

2. Timeline Summary

Ms. Lucille Ray has owned the home at 330 College Ave, Rock Hill, South Carolina since 1985. She has lived there and maintained the single-family residence continuously for 27 years. Over that time, various events or findings have led her to launch this investigation.

This is a timeline summary based on information provided:

- In about 1992, while doing yard work in the rear yard, a gardener stepped into a hole up to his waist within 10 feet of the rear house foundation wall. It had developed suddenly. It was filled and considered surface erosion at that time.
- In 1995, Ms. Ray first found bending in her roof frame while in her attic and proceeded to add bracing in an attempt to stop it.
- In 2001 she renovated the home and added a kitchen, garage, and covered porch on the left side. She noticed unexplained settling of the front patio during construction, requiring additional work and expense.
- In 2007, she noticed separation in her roof frame between adjacent slopes and proceeded to add cross-bracing at the ridge level in an attempt to stop it.
- In 2008, she first noticed that her front entry steps were sinking. At that time she tried to determine potential causes and found that a city storm-water pipe extended (from public city street in front of her home) directly under the front entry of the dwelling. She requested City assistance to review the concern and after multiple attempts, she was finally put in contact with Rock Hill's Mr. Jason Tinkler. A pipeline study was done without shared results. After repeated calls over the next few months (to Tinkler), she was told that the video tape had been lost. He also told her the front steps were simply settling.
- In 2011, after repeated calls to the City, the camera study was done again on June 2 and 3, 2011. Ms. Ray watched the study and video results as the City confirmed that the storm water line extended directly under her home, although they never did excavate to find the rear-yard manhole found during video work. Tinkler informed her then that the pipeline was not a problem but that he would get back to her about it.
- Later in June 2011, Ms. Ray called Tinkler to discuss street flooding but he never called her back. Finally, in August 2011, she discovered that Mr. Tinkler did not work for the City any longer. No other City official has ever contacted Ms. Ray about the known pipeline problem despite repeated calls from her.
- In early 2012, the lack of responses and progress from the City led her to start an owner-investigation at her expense.

3. Executive Summary

On March 20, 2012, Ms. Lucille Ray contacted M.H. Leonard Consulting Engineers, PA to request engineering assistance regarding the problem. She shared her findings and a brief history of the property. We have proceeded to study the dwelling, the site, and the soil conditions around and under the home. We have also conducted simple water flow tests of the storm water piping that extends from Oakland Ave, along Strait Street, to College Avenue, and over to Lucas Street after passing directly under Ms. Ray's house.

After 3 site inspections, a geotechnical evaluation, and limited responses from City officials, this report will summarize our findings.

The investigation has provided evidence of the following facts and opinions:

1. There is a pattern of structural damage in the subject dwelling frame and foundation caused by foundation movement at ground level. These damages appear progressive and we consider them active.
2. An underground 24-inch public storm water pipe extends from the street in front of the home in a line directly under the specific zone of structural damages. There is evidence of multiple foundation piers dropping and leaning along the pipeline route.
3. The public storm water system records for this neighborhood have not been available despite requests to the City of Rock Hill. Those may not be accurate based on one small map obtained by the owner prior to our investigation. That does not show a public pipe on the subject site. **See Attachment #2.** Regardless, the old terra-cotta clay pipe is there and confirmed. It appears aged with cracks and is probably leaking. Those conditions are verified by the videos provided.
4. The storm water system serving this and surrounding lots appears to include a substantial area based on informal water testing completed. We determined that catch basins on Oakland Avenue and beyond are part of the network upstream from the pipe extending under the home. Unconfirmed estimates of the watershed size are 14 acres or more. The flow from that large an area is substantial and increases our concerns with the pipe capacity, flow leakage, and lack of serviceability (being under a private residence).
5. A geotechnical evaluation of on-site soil along the pipe route and under the home confirms that foundation piers and the front stoop, steps, and sidewalk have settled as the result of soft pipe fill soil. Further testing would be needed along the entire pipe route to determine if there are wash outs and voids around the pipe.
6. There are current and long-term risks that pipe failure will lead to soil erosion and substantial structural damages. If pipe failure is rapid enough, structural failure (sinking and partial collapse) is likely.
7. Public utilities require routine maintenance and access, which is why they typically align in public right-of-ways or dedicated easements on private property. Apparently this storm water pipe is not even known or recorded in public documents. The less known about the pipe and its maintenance record, the higher the risks that it is failing now.

Three options were considered to eliminate risks of further failure and to repair structural damages to date. In the best interests of Ms. Ray as property owner, the most feasible remedy includes the following:

- a. re-route of the storm water pipe away from her property (requires independent storm water and hydrology study as City improvement),
- b. abandonment of the existing storm pipe and filling it with a flowable slurry grout,
- c. structural shoring of the existing foundation in pipe trench zone,
- d. framing repairs to floor and roof systems,
- e. replacement of front stoop, including steps and sidewalk,
- f. interior and exterior repairs caused by structural settlement to date,
- g. all general conditions, cleaning, building permits, and construction management.

We estimated the costs of those repairs based on local, prevailing rates of the region. That study was based on our experience as a General Contractor in new construction, renovations, and structural repairs.

The estimated cost to complete the remedial work described is

\$147,711

Although there are alternative methods to shore the dwelling, the costs may vary by 2.5%, based on experience with other structural repair projects of this type.

Time is a critical factor moving forward.

- ⇒ If the existing pipe develops further leaks affecting soil conditions or causing subgrade damages below the home, the extent of structural repairs will rise substantially.
- ⇒ Although the house is nearly 90 years old, structural damages have developed since 1985 (estimated based on owner observations and existing site inspection). The damage appears to be active and risks are high that it is increasing at an unknown rate.
- ⇒ Based on site observations now, we believe the pattern of structural distress is relatively young. Based on video evidence of the storm water pipe in place, risks are high that it will degrade and eventually fail. Between now and then, leaking and effects of further pipe degradation will further damage the house foundation and frame.

The storm water design to re-route the system around this property will require expedited attention from public utilities. Since planning of that type utility project typically takes more than 12 months, risks of structural damage is substantial enough that we recommend a temporary pipe repair and re-lining of the 24-inch clay pipe as soon as possible.

The costs of temporary pipe repairs to reduce risks of short-term structural damages to the dwelling are NOT included in this report.

4. Property and Project History

Ms. Lucille Ray owns the current properties at 330 and 340 College Ave, Rock Hill, South Carolina. The 330 (subject) site includes a one-story, single-family home, including a 2-car garage, partial rear daylight basement, and two covered porch spaces. She purchased the property in 1985, approximately 27 years prior to the date of this report. See Attachment #1: W.C. White, RLS Survey of 330 College Ave, Rock Hill, SC dated May 23, 1985.

The house is built with a masonry foundation, conventional wall, floor, and roof framing, and an asphalt/fiberglass shingle roof. The exterior walls are clad in wood and vinyl siding with a pier and curtain foundation wall, 8-inch all-brick foundation, and CMU foundation. The house includes a front masonry covered stoop and a left-rear covered porch.

Ms. Ray renovated the home in approximately 2001 with a kitchen, garage, and left-rear porch addition. Those areas bear on new foundation systems independently of the main, original home. None of those areas are within the concerns of this report.

In about 2008, Ms. Ray first observed evidence of structural distress in her home. The ceiling and roof frames visible in the attic had separated. She had braces added to prevent further separation. Ms. Ray also recalls similar roof frame repairs were necessary in 1995. She also indicated that a man stepped into a shallow hole in her back yard in about 1985 while helping her – sinking up to his waist. At that time, she did not suspect structural or soil concerns. She did recall the position of the ground hole noted within this report.

On March 20, 2012, Ms. Ray contacted M.H. Leonard Consulting Engineers, PA to evaluate the cause and extent of structural damages further. Since then, this firm has progressed as itemized below:

April 4, 2012

Initial site review – field notes, investigation plan

April to June 2012

City of Rock Hill, requests for storm water system mapping, information – log of inquiries

June 6 – DVD review of pipe camera studies through Ms. Ray

June to July 2012

Plan geotechnical study, quotes – CESI Ed Cummings, PE

July 6 – MHLCE comprehensive site study of structure, damages, water hose test in storm pipes

August 2012

CESI/Cummings geotechnical study

CESI and MHLCE pipeline location under house - confirmation

5. Findings of Engineering Inspections

House Frame and Foundation:

Our investigation has included a structural inspection of the house frame and foundation, finding that there are patterns of distress caused by active structural movement. The roof frame has separated in two locations, the main level floor system is sloping where foundation piers have dropped from original support positions, and a geotechnical study has verified that the foundation movement has been caused by the excavation zone along the public storm water pipe route.

We observed the following specific damages:

Roof Frame Damages:

- ⇒ Separation of ridge and rafters at ridge beam spanning front-rear near front ridge spanning left-right. A metal cap was installed there to span over a 2-inch gap.
- ⇒ Separation of ceiling joists at ceiling girder beam – about 1¼ inch near middle of original house frame.

Interior Wall/Floor Conditions:

- ⇒ Floor distortion at front living room, center breakfast room, center hall. Slope varies from ¼ to 5/8 inch in 4 feet along axis extended to front entry door.
- ⇒ Corresponding wall and door distortion with cased opening headers or jambs ¼ to ¾ inch out of level and/or ½ to 5/8 inch out of plumb.
- ⇒ Stress cracking on hall walls and baseboard trim.
- ⇒ Stress cracking with shear pattern in center left bedroom, front wall.
- ⇒ Master bath/bedroom area – garden tub deck out of level with separation at floor.
- ⇒ Front door out of plumb/square.

Exterior Damages:

- ⇒ Front stoop and steps with masonry shear cracking. Front step dropping/settlement ¾ to 1¼ inches with shear zone near middle.
- ⇒ Front sidewalk – settlement and tilt to left side near front steps.
- ⇒ Rear yard open hole, approximately 14 inches deep near centerline of known storm-water pipe location.

Foundation Damages:

- ⇒ Miscellaneous stress cracks in front foundation wall.
- ⇒ 7 interior piers with separation at top or leaning from plumb.
- ⇒ 4 interior piers that have been shimmed with wood shims more than 1 inch in depth (multiple re-shimming).

The laundry cellar (forward of rear basement area) includes a slab elevated above the basement level, crawl space, and adjacent furnace cellar. We estimate that slab was used to cap over the known storm water line that appears to be within 32 inches of the top of slab. The pipe depth and clearances are only estimated except those verified during the geotechnical evaluation.

Storm Water System:

We studied a pipeline video camera recording ^{from 2008} obtained by Ms. Ray in ²⁰¹⁹ 2008 and determined that 1 of the 3 segments of that recording were of the subject pipeline. The recording revealed that the 24-inch terra-cotta clay pipe is old with random stress cracking, joining a manhole directly behind Ms. Ray's home where a 24-inch RCP pipe extends further East and toward the right rear of her property and beyond.

The City of Rock Hill has denied our requests for access or copies of the public storm-water utility information regarding this location on 3 occasions (attempts logged). The only storm water map we were able to obtain in this study was provided by Ms. Ray (Attachment #2: City of Rock Hill, Department of Planning & Development, dated 09 Dec 1998). That map does not show the pipe that extends under 330 College Ave or across to Lucas St.

It does not reflect other pipe routes and pipe sizes observed during this study.

Ms. Ray also owns the property at 340 College Avenue (immediately west of the subject site). The map shows a 10-inch diameter pipe extending diagonally across and under that dwelling. In fact, the pipe is 30-inch dia clay with a partially collapsed catch basin in the rear yard of that site. There is no doubt that it does extend under the northeast corner (rear left) of that structure. *The effects and condition of this storm-water pipe line are not part of this study.*

Geotechnical Evaluation:

Concord Engineering Services Incorporated (CESI) performed a geotechnical evaluation at the site at our request. Mr. Ed Cummings, PE and Mr. Harold Eaves met us on site on August 2, 2012. Their work included confirmation of the existing storm water line under the house, locating and documentation of the rear yard manhole, effects of soil settlement at the front stoop, and the soil investigation under the home. Their findings are documented in a report (Attachment #3: CESI Geotechnical Engineering Evaluation, Ray Residence, 330 College Ave, Rock Hill SC, dated August 8, 2012).

6. Engineering Summary and Opinions

Based on our site study and the accompanying geotechnical evaluation, evidence indicates that the residential dwelling is in an active state of structural settlement caused by an active public storm water terra cotta pipe buried directly below the home. The 24-inch diameter pipe system is confirmed there and soil conditions in the trench in which it was placed are affecting the foundation elements of the structure. Movement of piers and other foundation elements is causing floor distortion, wall and door distortion, roof frame separation, and settlement of steps, patios, and other functional features. These damages are active and appear progressive based on owner input and historical information back to 1985. The causes of structural damages must be addressed soon to limit the magnitude of damage and costs to repair and restore the dwelling.

The storm pipe under the house serves a significant surface area by current estimates. However, City information has not been available for confirmation of actual drainage system fixtures and the general watershed area. By a limited topographical study, we have estimated that the subject 24-inch pipe is handling flow from up to 14 acres to the South of the subject property. Regardless of the flow rate, the presence of a public storm water pipe under a private residence is unusual – preventing public access for maintenance and repairs. Videos of the pipe indeed show it is old with cracking and other concerns that it may be leaking (not confirmed by this study). If it is leaking now, or in the future, the risks are substantial that it will damage the private dwelling further, eventually leading to partial catastrophic failure if certain conditions develop.

Repairs and stabilization of the building foundation must be considered soon to limit damage. Temporarily, the pipe must be maintained to control risks of leaks and related damage. An epoxy lining should be considered. Ultimately, the line must be moved or re-routed and the effects on the house foundation must be remediated to restore the structural integrity and value of the property. If not, the value and function of the home may be jeopardized – including the risk of full loss of value.

Limited responses from the City of Rock Hill seem to suggest the pipe does not belong to the City (***Attachment #4: Letter – Spencer & Spencer, Mr. Paul Dillingham to Mr. Charles S. Bradford, dated May 18, 2012***). We cannot verify ownership of the pipeline, but there is no doubt that it is not a private drain system. Since the City maintains the streets and other utilities from which the subject storm water pipe originates (recent addition of catch basins near Strait Street by City confirm this), and since the discharge and management of the water in this system are managed by the City, then it appears certain that they have overlooked a buried, old storm water pipeline that pre-dates the construction of the house on this site (estimated to be 90 years old).

7. Recommendations

Options to remedy the problem include:

- A. Removal of home and foundation for adequate ROW for the pipe and to allow access and maintenance.
- B. Re-route the storm water pipe away from the property, abandoning the existing pipe and repairing the dwelling and foundation. At this stage, the magnitude of damage allows this option. As the pipe continues to degrade and if soil erosion in the underground trench is compromised, this option will become less feasible.
- C. Reline the pipe, maintain it as positioned, shore and repair the foundation and frame of the dwelling, and confirm the pipe capacity for further risk assessment regarding the home.

- ⇒ Option C is NOT recommended from a structural engineering view point. Risks remain for pipe failure despite any maintenance practices adapted. There may also be substantial legal concerns with a private structure located atop a public utility.
- ⇒ Option B is considered the most feasible and only option if the house remains over the current pipe section.

We recommend the following scope of repairs to re-route of the storm water pipe, cap and fill the abandoned pipe, and restore the structural integrity and function of the dwelling and foundation.

1. Excavation and cap of pipe at front and rear exterior of home footprint. Structural fill of the pipe cavity with slurry mix flowable fill.
2. Deep foundation shoring devices under house foundation walls and interior foundation piers along pipeline route, any elements within 10 feet of the trench zone. (* See alternative soil densification.)
3. Re-build foundation walls, piers, and front stoop as needed to restore function and integrity.
4. Jacking and leveling of main level floor system with reinforcement of frame girders affected by damages to date.
5. Repair and brace of roof frame, including installation of structural cross-ties and rafter tie-downs.
6. Interior repairs of plaster walls, millwork, trim, and flooring affected by structural damages to date.

The general conditions, cleaning, debris hauling, building permits, insurances, and construction management must be included. Engineering design of structural repairs will be required. A reasonable General Contractor's fee must also be included.

We have estimated the costs of this work as itemized in **Attachment #5: MHLCE Cost Estimate – Structural Repair, Shoring, and Restoration of Ray Residence, 330 College Ave, Rock Hill, SC, dated August 21, 2012.**

We estimate the costs to cap and fill the pipe, to shore and repair the house foundations, and to repair the house frame is \$ 147,711, including Contractor overhead and profit margins and a 2.5% contingency budget.

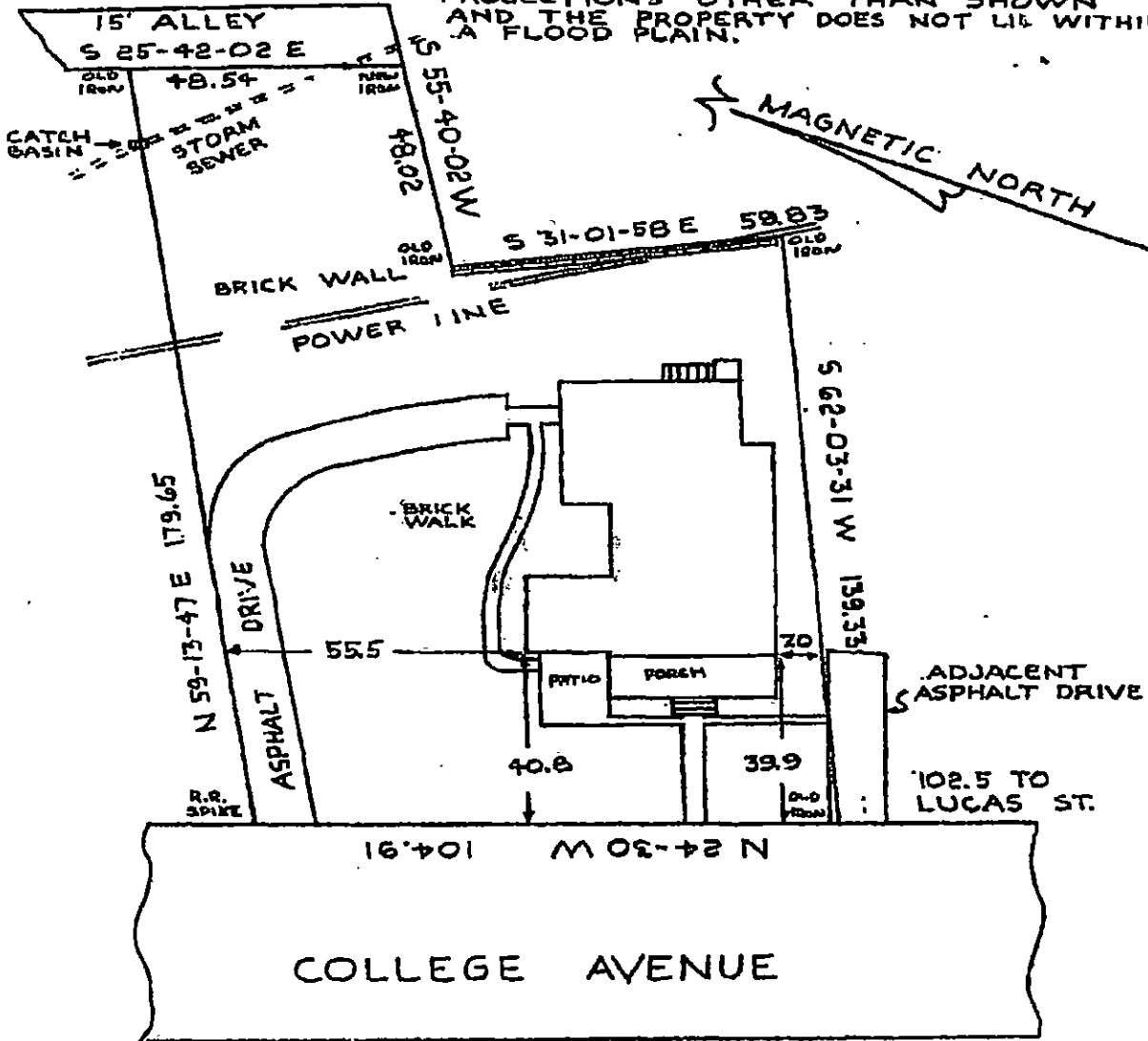
This scope and cost estimate is based on assumptions and conditions as follows:

- ⇒ Repair work is based on status of damages as of August 2, 2012. Time may allow more damage and add to costs.
- ⇒ The cost for engineering includes structural repairs and pipe capping and fill on the subject property. No other part of the existing pipe or future pipe is included.
- ⇒ The pipe fill is only between the existing catch basin at the front and the existing buried manhole at the rear of 330 College Ave. The existing 24-inch diameter RCP that extends between the buried manhole behind the subject house and Lucas Street is not part of this cost estimate for capping and fill.
- ⇒ Existing storm water piping has been re-routed and completed prior to this scope.
- ⇒ Costs for temporary pipe repairs, linings, and/or provisions prior to this scope are not included.
- ⇒ Transportation and fuel costs are included based on rates in place at the time of the estimate.
- ⇒ Water and electricity are provided by the owner during construction work.
- ⇒ A landscape repair allowance is included (\$1200).

Dated May 23, 1985

THIS BEING SHOWN AS LOT 10 AND PART OF 11 & 12 IN
BLOCK 28 OF MAP OF PROPERTY OF ROCK HILL BUGGY
CO., MADE BY J.L. STACY AND DATED APRIL, 1924, RECORDED
IN PLAT BOOK 2, PAGE 200.

THIS IS TO CERTIFY THAT THIS IS A TRUE AND ACCURATE
SURVEY AND THAT THERE ARE NO ENCROACHMENTS OR
PROJECTIONS OTHER THAN SHOWN
AND THE PROPERTY DOES NOT LIE WITHIN
A FLOOD PLAIN.

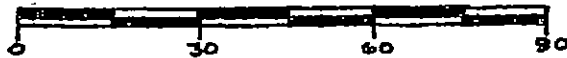


COLLEGE AVENUE

MAP OF PROPERTY OF
LUCILLE RAY
330 COLLEGE AVENUE
ROCK HILL, S.C.

MAY 23, 1985

SCALE 1" = 30'



N.T.S.

W.C. White
W.C. WHITE R.L.S. #1037
ROCK HILL S.C.

CITY OF ROCK HILL

DEPARTMENT OF
PLANNING & DEVELOPMENT

City Information Systems

THE CITY OF ROCK HILL AND ITS MAPPING
CONTRACTORS ASSUME NO LEGAL
RESPONSIBILITY FOR THE INFORMATION
CONTAINED ON THIS MAP.
THIS MAP IS NOT A LEGAL SURVEY.

BASED ON THE SOUTH CAROLINA STATE
PLANE COORDINATE SYSTEM 1983 DATUM

DATE 09 Dec 98 11:04:30 Wednesday
SCALE 1 inch = 50 feet

CITY OF ROCK HILL INFORMATION

Utility name:
Sequence number: 28746
Address: 338 COLLEGE AVE
Zip + 4: 29730-4008
Zoning: RS-3
Calculated acres: 0.23
(NOT OFFICIAL ACRES, DO NOT USE)

YORK COUNTY PARCEL INFORMATION

Parcel number: 6290702008
Owner/Address:
RAY LUCILLE H

330 COLLEGE AVE
ROCK HILL S.C. 29730
Location: COLLEGE AVE
LU code 1: RIO
Lot 1: 1
Acres 1: 0
Appraisal Land 1: 12008
Appraisal Bldg 1: 85500

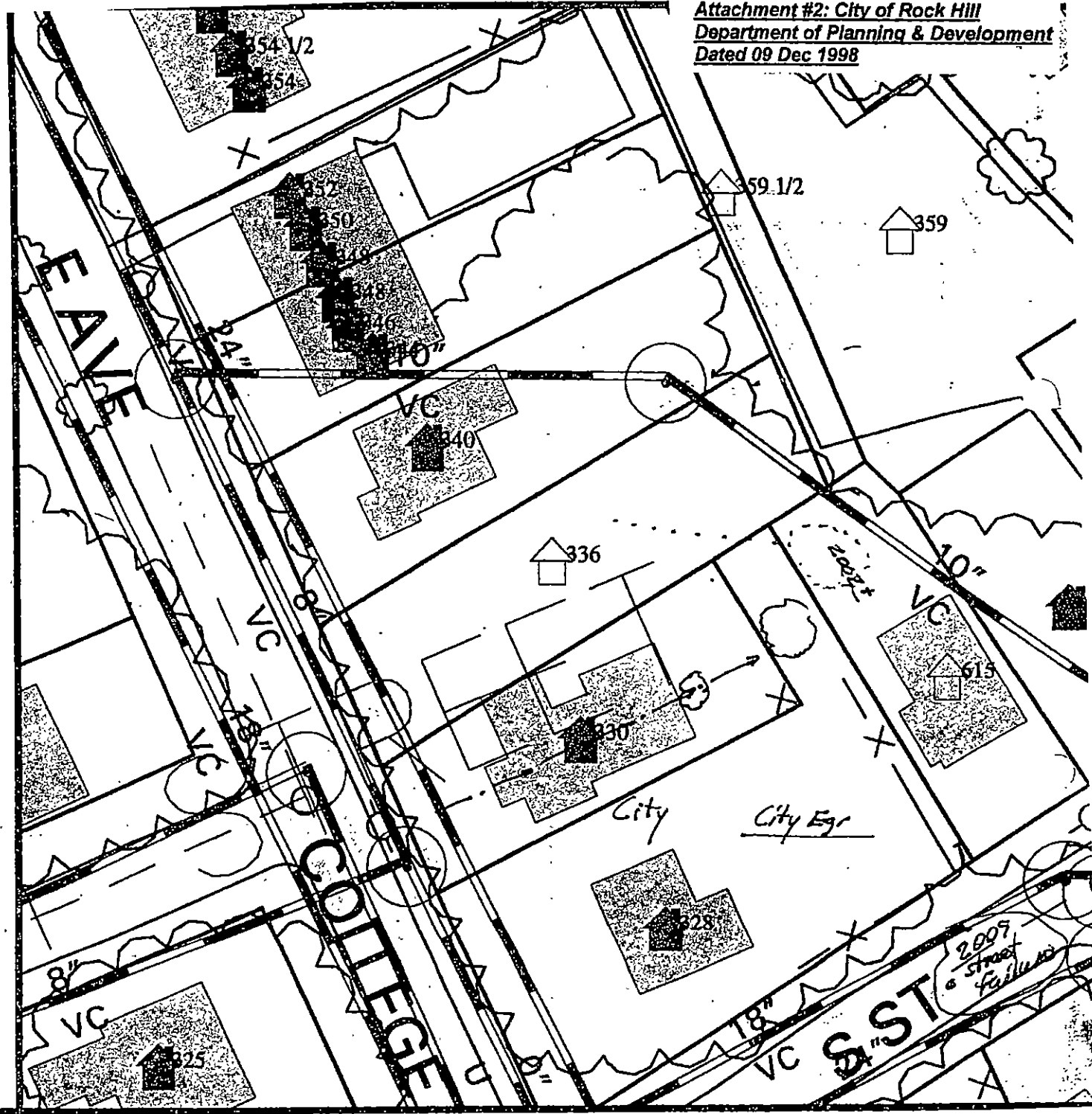
*Neighborhood
Marshall Rogers
1988*

LEGEND

- Parcel(s) Selected
- YU Zoning District
- YR Zoning Districts
- Fire Zoning District
- Historic Districts
- Zoning Districts
- 1990 Census Tracts
- 1990 Census Block Groups
- Transportation Analysis Zones
- Soil Survey
- Point Addresses
- Street Addresses



Attachment #2: City of Rock Hill
Department of Planning & Development
Dated 09 Dec 1998



1044



Land Development Services

August 8, 2012

Mr. Mike Leonard P.E.
M.H. Leonard Consulting Engineers, PA
447 South Sharon Amity Road
Suite 201
Charlotte, North Carolina 28211

Reference: Geotechnical Engineering Evaluation
Ray Residence
330 College Avenue
Rock Hill, South Carolina
CESI Project Number 120755.000

Mr. Leonard:

CESI has performed a geotechnical engineering evaluation of the storm drain under the Ray Residence in Rock Hill, South Carolina. We completed these services in accordance with your verbal authorization. This report summarizes our Findings, Conclusions and Recommendations.

FINDINGS

On August 2, 2012, CESI's Geotechnical Engineer, Edward S. Cummings III P.E., met Michael Leonard P.E. and Ms. Lucille Ray at her residence in Rock Hill, South Carolina. Ms. Ray indicated her observation of the settlement of the brick sidewalk and stairs at the front porch initiated the structural investigation of the house by Mike Leonard. The purpose of the meeting was to allow our Geotechnical Engineer to observe the storm drain under Ms. Ray's home and the resulting settlement problems as observed by Mr. Leonard and Ms. Ray. Ms. Ray said her residence is 90 years old and was purchased in 1985.

The following specific areas were observed:

- Storm drain catch basin in College Avenue;
- Storm drain manhole in rear yard;
- Loose brick piers in crawl space;
- Settlement of front brick sidewalk and stairs;
- Previous hardwood floor repair by former owner (pre 1985) in entrance foyer directly above and inline with the storm drain.

Facing the Ray Residence, a 24" terra cotta pipe was observed leaving the catch basin and heading toward the center of Ms. Ray's house. See photographs 6 and 7. A 36" terra cotta pipe enters the

catch basin from across College Avenue. An 18" reinforced concrete pipe enters the catch basin from the right. See Photograph 8. A video survey of the 24" terra cotta storm drain pipe was previously performed under Mike Leonard's direction. Mr. Leonard indicated the terra cotta pipe under the residence has cracks.

The geotechnical investigation began with removal of 2.5 feet of fill soil over the storm drain manhole lid in the rear yard. The lid was removed exposing the manhole. See Photographs 1 and 2 in the Appendix. A cracked 24" terra cotta pipe was observed entering the catch basin from the direction of the house. See Photographs 3 and 4. A 24" reinforced concrete pipe was observed leaving the catch basin to the east. See Photograph 5. A drain test was performed by Mike Leonard by placing water in the catch basin on College Avenue in front of the Ray Residence with a garden hose. See photographs 6 and 7. A few minutes later water was observed flowing through the storm drain manhole in the rear yard. See Photograph 4. Mike Leonard pointed out voids in the rear yard along the subject storm drain alignment.

Next, CESI's Geotechnical Engineer entered the crawlspace area to observe the brick piers supporting the wood framed floor system. The brick piers were tapped and observed for looseness between the top of the pier and the floor system. Piers "B", "C", "D", "E", "I", "J" and "K" (as noted in our Hand Auger Location Plan) are in contact with the floor system. The following piers have the observed conditions:

- Brick pier "A" is loose and appears to have been shimmed with a 2"x2" piece of wood at the interface with the floor joist system;
- Brick pier "F" is tilting toward the storm drain line. The pier has been shimmed with a 2"x2" wood shim at the interface with the floor joist system. The wood shim is under great stress. It was also noted that additional wood framing was installed to resist pier overturning;
- Brick piers "G" and "H" are loose and appear to be a retrofit. A 4"x6" wood beam has been placed on and spanning slightly past piers "G" and "H". The wood beam is also loose.

CESI's geotechnical engineer began the subsurface exploration by excavating adjacent to brick pier "A" to determine the footing bearing level and the storm drain location. No concrete footing was observed for the brick pier, however, a brick footing larger than the pier was present. Next, a hand auger boring, HA-1, along with dynamic cone penetrometer (DCP) testing was performed to determine the soil bearing conditions directly beneath the brick pier. The brick pier is bearing on red fine sandy silt (ML) residual soil at HA-1. Soil consistency as measured by DCP testing was stiff 2" below the bearing surface of the brick pier "A" and very stiff 14" below brick pier "A".

The dynamic cone penetrometer is a portable testing device used to estimate penetration resistance of the soil samples, as outlined in Sowers and Hedges paper "Dynamic Cone for Shallow In-Situ Penetration Testing". The device has a 1.5-inch diameter, 45-degree cone point with a surface area of 3.9 inches which is driven with a 15-pound steel weight on a guide rod. After the cone point was completely embedded at the test depth it was driven an additional 1³/₄ inches by the steel weight falling 20 inches onto a steel anvil. The number of hammer blows required to drive the cone the 1³/₄-inch increment was recorded as the "penetration resistance" in units of blows per increment. Penetration resistance, when properly evaluated, is an index to the soil's strength.

Hand auger boring HA-2 was located and performed approximately 22" from the centerline of brick pier "A" and 19'-3" from the right sidewall of residence. This is also the location of the 24" terra cotta storm drain line coming from College Avenue. See Photograph 6. Soft fill soils were observed at 28"

and 48" below the bearing surface of the brick pier. The 24" terra cotta storm drain pipe was encountered at 58" below the bottom of the pier. See Photographs 9 and 10. Brick pier "A" is bearing on the transition zone between residual soils and the storm drain backfill soils. The pier appears to be settling as a result of the soft storm drain back fill soils.

The brick sidewalk and stairs at the front of the residence have settled. Horizontal measurements indicate that the settlement is directly above the storm drain line. See Photographs 11, 12, 13, 14 and 15. The front stairs have settled approximately 1-1/8". The stairs have horizontally displaced 1-1/2" by the consolidation of the storm drain backfill soils. Michael Leonard indicated that he observed in the attic separation in the front porch framing members. Ms. Ray understood the former owner had replaced the brick front stairs prior to 1985.

CONCLUSIONS

Based on our site observations and geotechnical findings, the 24" terra cotta storm drain pipe under the subject residence and the soft storm drain back fill soils have caused the following conditions:

- The settlement of brick pier "A";
- The settlement of brick pier "F";
- The settlement of the front brick sidewalk and stairs;
- Any wall or pier footing within 6 feet of the storm drain pipe is subject to long term settlement due to the consolidation of the underlying storm drain backfill soils.
- The cause of the looseness of the brick piers "G" and "H" at the 4"x6" wood beam interface cannot be explained at this time.

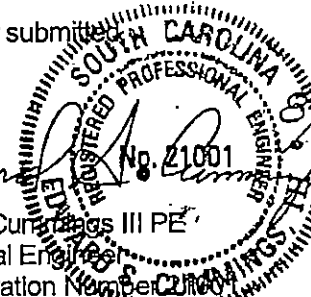
RECOMMENDATIONS


CESI recommends the following:

- Pier and wall footings within 10 feet of the storm drain should be underpinned to adequate bearing soils;
- The 24" terra cotta pipe should be lined underneath the subject residence.

Please contact us if you have any questions regarding this report or if we may be of further service.

Respectfully submitted,
CESI


Edward S. Cummings III PE
Geotechnical Engineer
S.C. Registration Number 21001


James G. Eaves III, PE
Division Manager
S.C. Registration Number 25575

Enclosures: Hand Auger Location Plan
Log of Hand Auger Borings (HA-1, HA-2)
Site Photographs



Photo 1: Manhole in rear yard



Photo 2: Manhole in rear yard



Photo 3: Manhole in rear yard

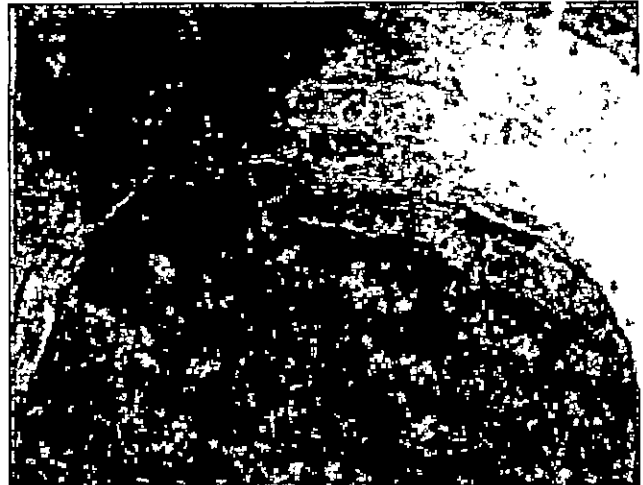


Photo 4: Manhole in rear yard

CESI
...exceeding our clients' expectations
 45 Spring Street SW
 PO Box 268
 Concord, North Carolina, 28026
 Phone: (704) 786-6404
 Fax: (704) 786-7454
<http://www.cesi-sc.com>

SITE PHOTOGRAPHS
RAY RESIDENCE
 330 College Avenue
 Rock Hill, South Carolina
 CESI SC License C-00591

DATE:	08-06-12
PHOTOS BY:	ESC
PROJ. NO.:	120755.000
SCALE:	N/A
SHEET NO.:	1

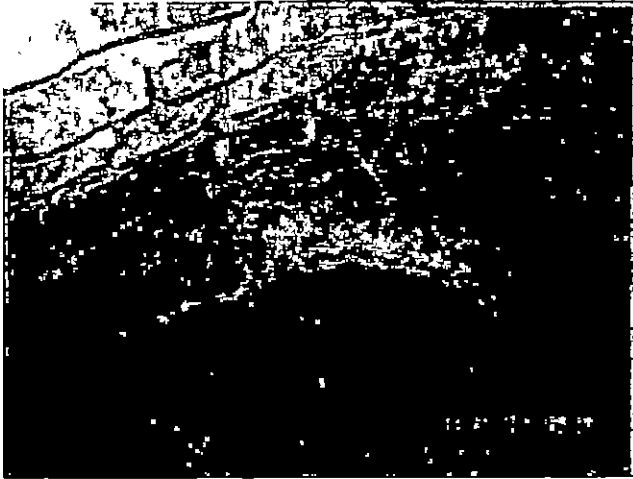


Photo 5: Manhole in rear yard



Photo 6: Catch basin at College Avenue



Photo 7: Catch basin at College Avenue

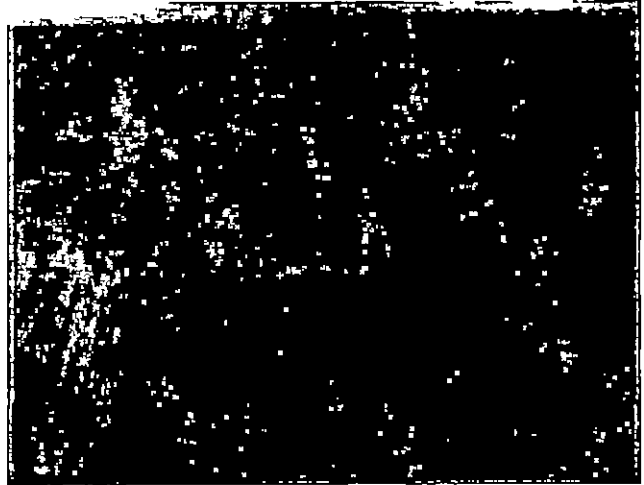


Photo 8: Catch basin at College Avenue

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SITE PHOTOGRAPHS
RAY RESIDENCE
 330 College Avenue
 Rock Hill, South Carolina
 CESI SC License C-00591

DATE:	08-06-12
PHOTOS BY:	ESC
PROJ. NO.:	120755.000
SCALE:	N/A
SHEET NO.:	2



Photo 9: Hand auger HA-2 at brick pier 'A'



Photo 10: Hand auger HA-2 at brick pier 'A'



Photo 11: Front sidewalk and steps - Probe rod represents measured alignment of storm drain line.



Photo 12: Front sidewalk and steps

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SITE PHOTOGRAPHS
RAY RESIDENCE
 330 College Avenue
 Rock Hill, South Carolina
 CESI SC License C-00591

DATE:	08-06-12
PHOTOS BY:	ESC
PROJ. NO.:	120755.000
SCALE:	N/A
SHEET NO.:	3



Photo 13: Front sidewalk and steps

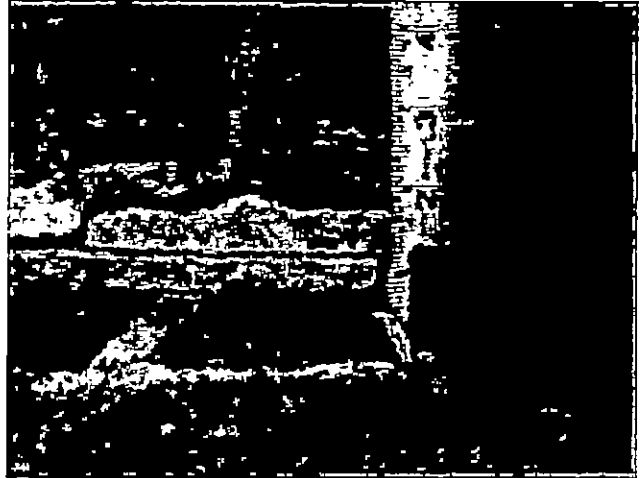


Photo 14: Settlement at front steps



Photo 15: Horizontal movement at front steps


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SITE PHOTOGRAPHS
RAY RESIDENCE
330 College Avenue
Rock Hill, South Carolina
CESI SC License C-00591

DATE:	08-06-12
PHOTOS BY:	ESC
PROJ. NO.:	120755.000
SCALE:	N/A
SHEET NO.:	4

SPENCER & SPENCER

PROFESSIONAL ASSOCIATION

Attorneys and Counselors at Law

Attachment #4 Letter
Spencer & Spencer, Mr. Paul Dillingham to
Mr. Charles S. Bradford
Dated May 18, 2012

C.E. SPENCER (1849-1921)
C.W.F. SPENCER (1876-1956)
C.W.F. SPENCER, JR. (1911-1985)
W.C. SPENCER †
WILLIAM L. "RED" FERGUSON †
EMIL W. WALD †
PAUL W. DILLINGHAM
W. MARK WHITE*
W. CHAPLIN SPENCER, JR.*
R. ALEXANDER SULLIVAN*
R. BRENT THOMPkins*
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† Of Counsel
* Also admitted in NC

SUITE 200
226 EAST MAIN STREET
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ROCK HILL, S.C. 29731-6790
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Telephone
803-327-7191
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Telecopier
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Email Address
pauldillingham@spencerfirm.com

May 18, 2012

Charles S. Bradford
P. O. Box 977
York, SC 29745

RE: Lucille H. Ray
330 College Avenue ("Property")

Dear Charles:


I represent the City of Rock Hill ("City"); which has forwarded your letter dated February 24, 2012, to me for a response.

Our firm has also completed a title search of the Property taking the chain back to the deed recorded June 18, 1920 from the Estate of W. E. Lucas to the Rock Hill Buggy Company to confirm the information in your letter. We did not find a right-of-way or easement in favor of the City for the stormwater line running across the Property. My understanding is that the City does not wish to accept this line as a City maintained utility. Do you have any evidence to suggest that the City owns this line?

Thank you for bringing this to my attention.

Sincerely,

SPENCER & SPENCER, P.A.



Paul W. Dillingham

100101.1

Section 5 Roof Frame Repairs						
a	Ridge Bracing, joining	mtl	450	12	35	870
b	Rafter Cross-ties	mtl	200	6	35	410
c	Rafter Tie-downs	mtl	780	15	35	1305
d	Shingle damage/repairs	12 sq		12	180	2160
e	Venting, repairs	90 lf		90	12	1080
						5825
Section 6 Interior Restoration						
a	Door, C/O repairs	8 units		24	45	1080
b	Millwork removal, reset ref, floor leveling	240 lf		18	45	810
c	Wall, ceiling repairs - plaster, GWB			80	38	3040
d	Hardware adjustments	12 units		18	45	810
e	Painting, cleaning			72	28	2016
f	Floor finishes	1850 sf	1850	4.75		8788
g	Final Cleaning		3200	1.15		3680
h	Trim Mt					950
						21174
Section 7 General Conditions						
a	Design, Drawings - engineering	24 hr S/E		24	160	3840
b	Building Permits					400
c	Sanitary Facilities			3	150	450
d	Debris - hauling, disposal	loads		4	350	1400
e	Transportation	10 weeks		10	180	1800
f	Tools & Equipment			10	120	1200
g	Communication			3	65	195
h	Site Supervision	12 wk, 38	456	36		16416
i	General Labor	10 weeks		8	25	200
						25901
SUBTOTAL						115852
CONTRACTORS FEES						
	GENERAL OVERHEAD			15%		17378
	PROFIT			10%		11585
CONTINGENCY				3%		2896
TOTAL COST ESTIMATE						147711