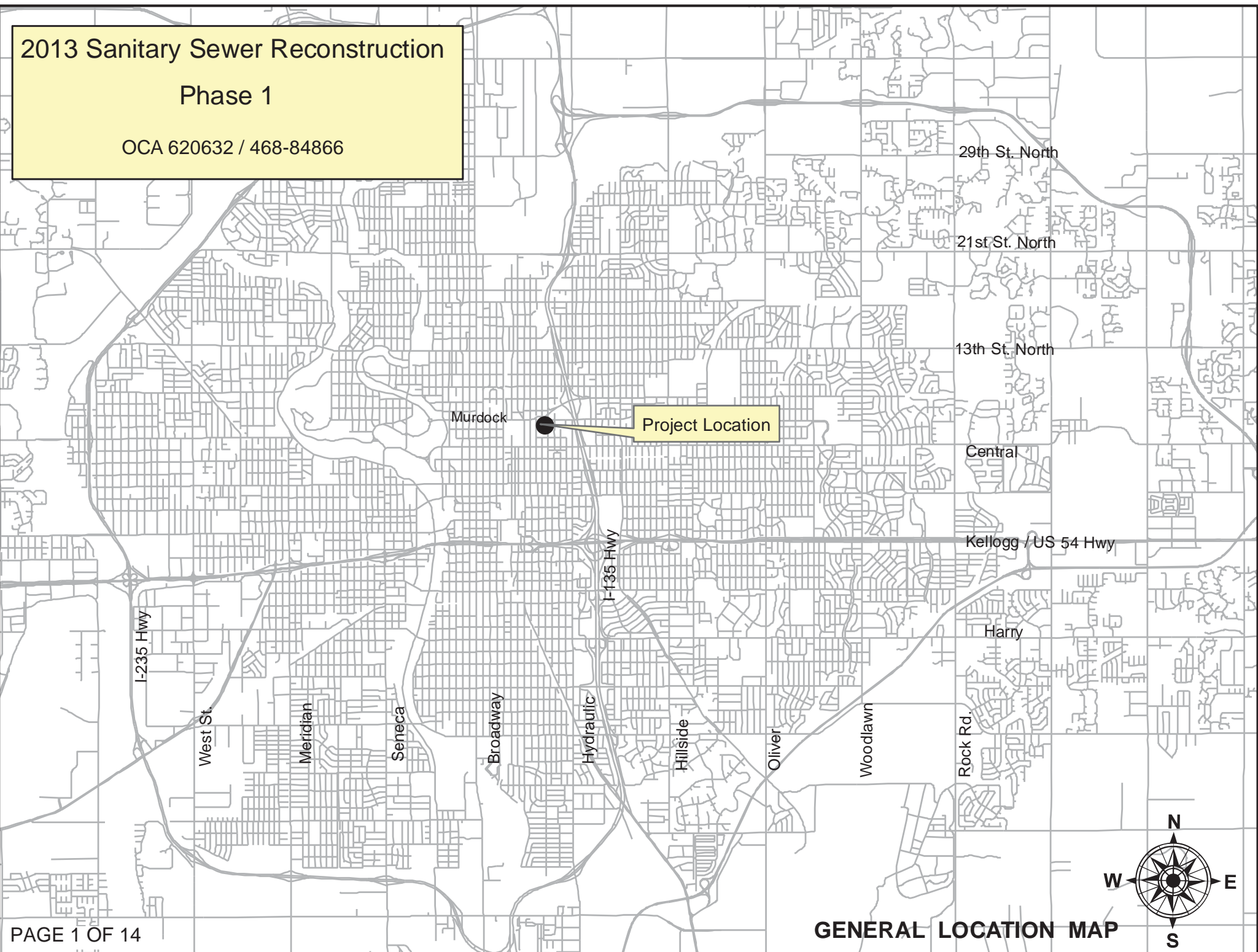
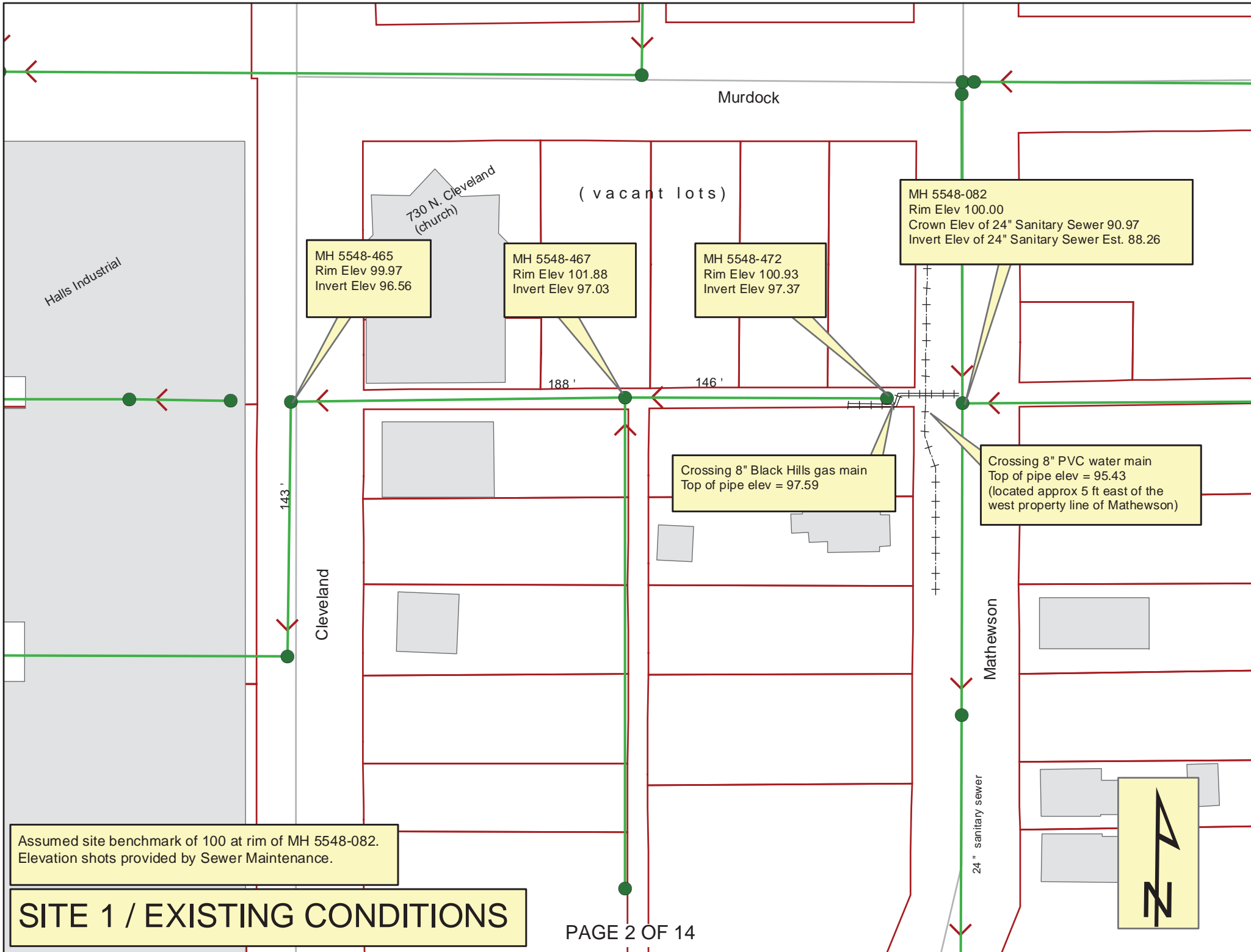


# 2013 Sanitary Sewer Reconstruction

## Phase 1

OCA 620632 / 468-84866





Murdock

(vacant lots)

730 N. Cleveland  
(church)

Halls Industrial

MH 5548-465  
Rim Elev 99.97  
Invert Elev 96.56

MH 5548-467  
Rim Elev 101.88  
Invert Elev 97.03

MH 5548-472  
Rim Elev 100.93  
Invert Elev 97.37

MH 5548-082  
Rim Elev 100.00  
Crown Elev of 24" Sanitary Sewer 90.97  
Invert Elev of 24" Sanitary Sewer Est. 88.26

188'

146'

Crossing 8" Black Hills gas main  
Top of pipe elev = 97.59

Crossing 8" PVC water main  
Top of pipe elev = 95.43  
(located approx 5 ft east of the west property line of Mathewson)

143'

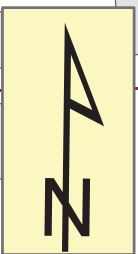
Cleveland

Mathewson

24" sanitary sewer

Assumed site benchmark of 100 at rim of MH 5548-082.  
Elevation shots provided by Sewer Maintenance.

**SITE 1 / EXISTING CONDITIONS**



**PROJECT:**  
Reverse the flow on the sanitary sewer located in the east/west alley. Adjust pipe and manhole elevations as necessary to accomplish this.

MH 5548-465  
Abandon Manhole  
(cost of pavement removal and replacement shall be subsidiary)

Sta 1+89  
MH 5548-467  
Remove Manhole (precast MH)  
Construct Shallow Manhole  
Approx flowline elevation east = 95.3  
Approx flowline elevation west = 95.3  
(pipe from south will be higher)

Sta 0+43  
MH 5548-472  
Remove Manhole  
Construct Standard Manhole  
Approx flowline elevation east = 92.5  
Approx flowline elevation west = 94.5

Sta 0+00  
MH 5548-082  
Connect to existing manhole.  
Approx flowline elevation west = 92.0  
(See General Notes for specific information on connection to manhole)

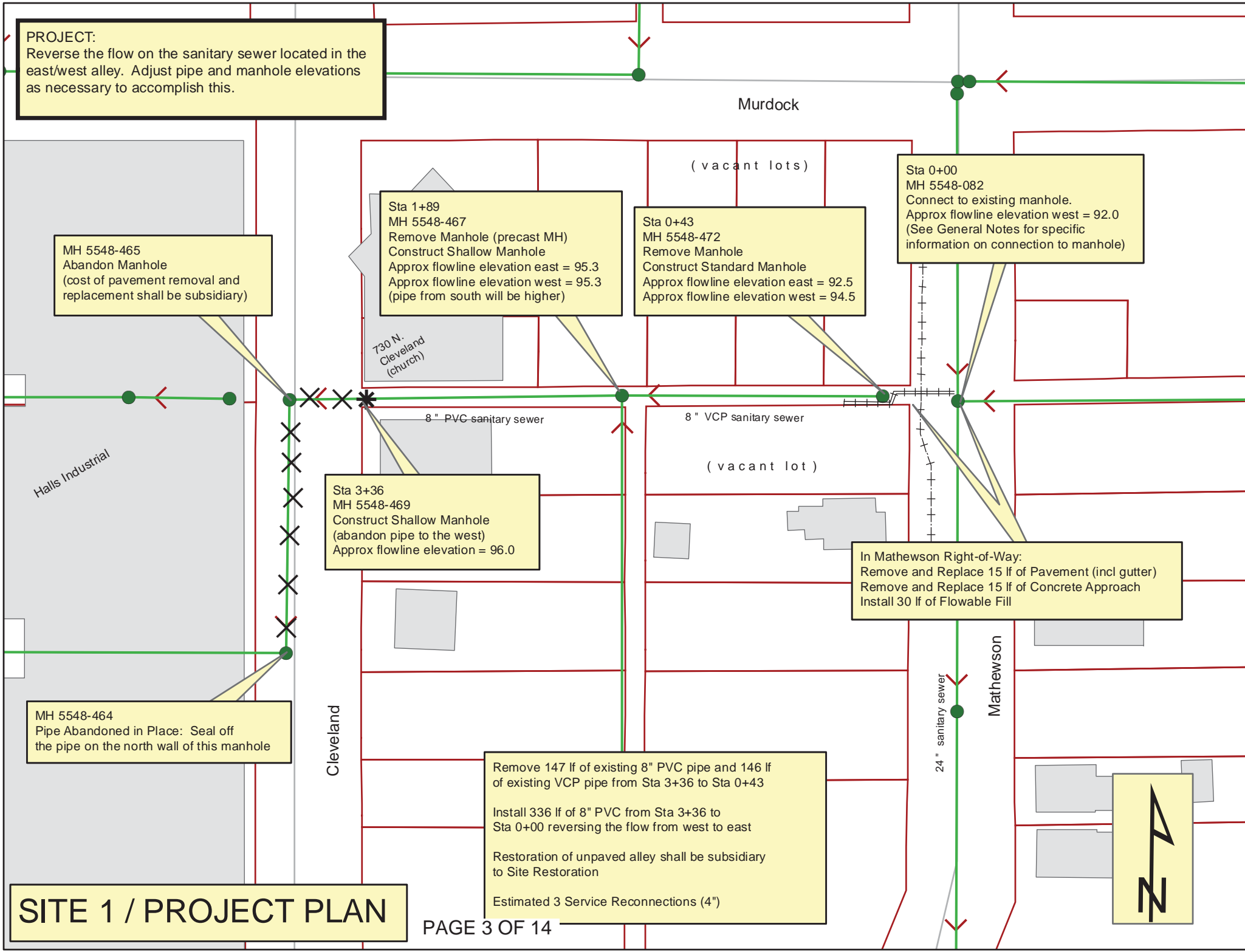
Sta 3+36  
MH 5548-469  
Construct Shallow Manhole  
(abandon pipe to the west)  
Approx flowline elevation = 96.0

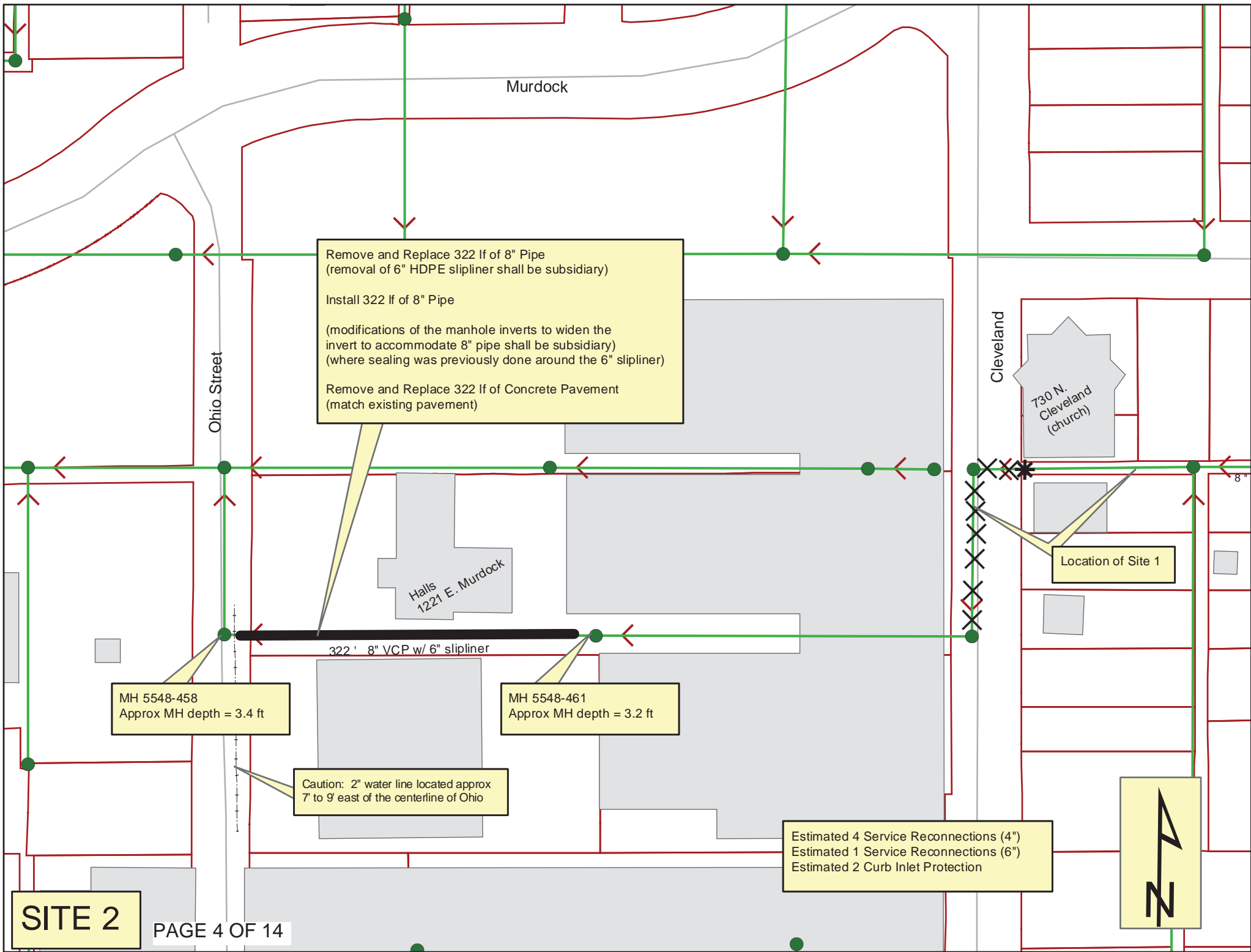
In Mathewson Right-of-Way:  
Remove and Replace 15 lf of Pavement (incl gutter)  
Remove and Replace 15 lf of Concrete Approach  
Install 30 lf of Flowable Fill

MH 5548-464  
Pipe Abandoned in Place: Seal off the pipe on the north wall of this manhole

Remove 147 lf of existing 8" PVC pipe and 146 lf of existing VCP pipe from Sta 3+36 to Sta 0+43  
  
Install 336 lf of 8" PVC from Sta 3+36 to Sta 0+00 reversing the flow from west to east  
  
Restoration of unpaved alley shall be subsidiary to Site Restoration  
  
Estimated 3 Service Reconnections (4")

**SITE 1 / PROJECT PLAN**





Remove and Replace 322 lf of 8" Pipe  
 (removal of 6" HDPE slipliner shall be subsidiary)

Install 322 lf of 8" Pipe

(modifications of the manhole inverts to widen the invert to accommodate 8" pipe shall be subsidiary)  
 (where sealing was previously done around the 6" slipliner)

Remove and Replace 322 lf of Concrete Pavement  
 (match existing pavement)

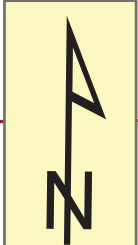
MH 5548-458  
 Approx MH depth = 3.4 ft

MH 5548-461  
 Approx MH depth = 3.2 ft

Caution: 2" water line located approx  
 7' to 9' east of the centerline of Ohio

Estimated 4 Service Reconnections (4")  
 Estimated 1 Service Reconnections (6")  
 Estimated 2 Curb Inlet Protection

**SITE 2**



Location of Site 1

730 N. Cleveland  
 (church)

Halls  
 1221 E. Murdock

Ohio Street

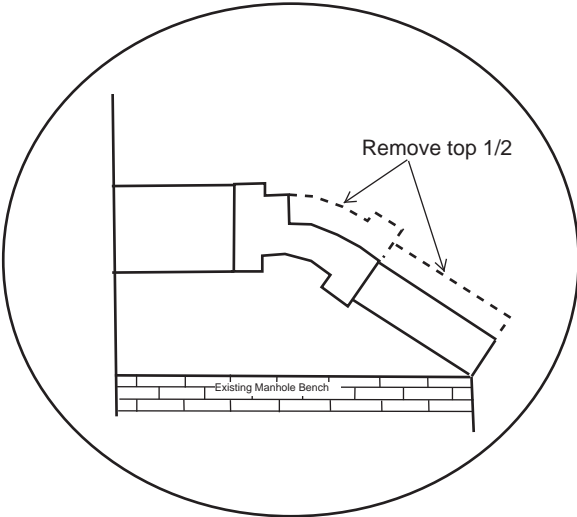
Murdock

Cleveland

# General Notes

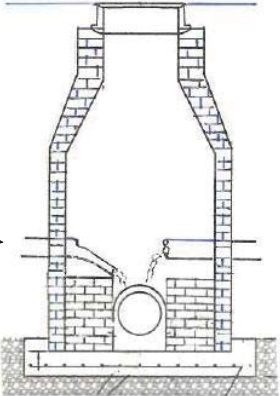
Site 1: Bid item "Connect to Existing Manhole":

MH 5548-082 is a brick manhole with tall, flat brick benches. The new pipe should stick into the manhole all the way to the edge of the brick bench. Do not match what has been done with the pipe from the east, as that would not allow room to get maintenance equipment into either of the 8 inch pipes. Contractor shall install fittings inside the manhole as necessary to lower the new pipe inside the manhole and get the flow line down to the top of the existing brick bench. Contractor shall then cut the top 1/2 off the new pipe and fittings within the manhole. Below is an example:



Example

Use one or more fittings as necessary to carry the flow past the bench while allowing maintenance access.



Existing pipe entering manhole from the east

Not to Scale



N OHIO AVE

E MURDOCK AVE

E 8TH ST N

E MURDOCK AVE

N OHIO AVE

N CLEVELAND AVE

730

N MATHEWSON AVE



## Video Inspection Master Report

1/7/2013  
8:25 AM

US Structure: 5548-461      1221 E MURDOCK AVE      Date Insp: 1/7/2008      Basin: C03C  
 DS Structure: 5548-458      724 N WABASH ST      Dir Televised:      Upstream To Downstream

**Pipe Information**  
 Project No. : B-117A      Material: 8" VCP with 6" HDPE slipliner      Length: 320.0

Obs. #	VTR Counter	Distance	Location	Description	Rating	Ratings			
						Obsrvd (gpm)	Est. (gpm)	Struct Clean	Remain (gpm)
1		0.0	Start	Sag begins	2				
2		0.0	US Manhole	5548-461	1	0.000	0	0	0.000
3		17.3	End	Sag ends	1	0.000	1	0	0.000
4		23.0		Point Repair Starts - Material Changes to PVC	1	0.000	0	0	0.000
5		25.4		PR Ends - Mat. Chngs to HDPE	1	0.000	0	0	0.000
6		47.4		PR Starts - Mat. Chngs to PVC	1	0.000	0	0	0.000
7		49.9	South	Break-In Conn 6" PVC Saddle "T" Conn	1	0.001	0	0	0.001
8		52.1		PR Ends - Mat. Chngs to HDPE	1	0.000	0	0	0.000
9		104.3	North	Break-In Conn 4" Predco Saddle	1	0.001	0	0	0.001
10		154.9	North	Break-In Conn 4" Predco Saddle	1	0.001	0	0	0.001
11		162.6	South	Break-In Conn 4" Predco Saddle	1	0.001	0	0	0.001
12		249.9	South	Break-In Conn 4" Predco Saddle	1	0.001	0	0	0.001
13		321.6	DS Manhole	5548-458	1	0.000	0	0	0.000

CONNECTION RECORDS FOR SITE 2  
 (INSIDE THE HALL'S PROPERTY)



## Video Inspection Master Report

1/16/2013  
12:58 PM

**US Structure:** 5548-467      1419 E MURDOCK ST      Date Insp: 1/7/2010      Basin: C03C  
**DS Structure:** 5548-465      730 N CLEVELAND ST      Dir Televised: Upstream To Downstream

Pipe Information

**Project No. :** B-1177A      **Material:** 8" PVC      **Index:** 620547      **Length:** 188.7      **DVD #**0546

Obs. #	VTR Counter	Distance	Location	Description	Rating	Ratings			Remain (gpm)
						Obsrvd (gpm)	Est. (gpm)	Struct Clean	
1		0.0	5548-467	US Manhole	1	0.000	0	0	0.000
2		82.3	728 N CLEVELAND AVE	PVC Break-In Conn	1	0.001	0	0	0.001
3		137.5	728 N CLEVELAND AVE	PVC Break-In Conn	1	0.001	0	0	0.001
4		147.3	730 N CLEVELAND AVE	PVC Break-In Conn	1	0.001	0	0	0.001
				Pipe seal on this connection is loose	4	0.000	0	0	0.000
6		189.1	5548-465	DS Manhole	1	0.000	0	0	0.000

CONNECTION RECORDS FOR SITE 1  
 (IN THE ALLEY SOUTH OF THE CHURCH)