



4701 Northshore Drive
North Little Rock, AR 72118

TEL 501.376.3633
FAX 501.372.8042

www.GarverUSA.com

November 25, 2019

Ms. Bailey Taylor
Enforcement Coordinator, Office of Water Quality
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

Re: Mountain Home Corrective Action Plan
Wastewater Collection System Fourth Quarter Report
Permit #AR0021211
AFIN: 03-00039

Dear Ms. Taylor:

With this letter we are submitting the Mountain Home Wastewater Collection System Fourth Quarter Report addressing the continued maintenance and additional compliance efforts, as described in the Corrective Action Plan, dated December 14, 2018, for reducing Sanitary Sewer Overflows.

If you have any questions, please feel free to call me at Garver or Alma Clark at the City of Mountain Home.

Sincerely,

GARVER, LLC

Kirby B. Rowland, P.E.
Senior Project Manager

Cc: Honorable Mayor Hillrey Adams, City of Mountain Home
Alma Clark, City of Mountain Home
Terry Sanders, City of Mountain Home



Corrective Action Plan Mountain Home, Arkansas

WASTEWATER COLLECTION SYSTEM Fourth Quarter Report December 1, 2019

NPDES Permit Number AR0021211
AFIN: 03-00039



Mountain Home Corrective Action Plan Fourth Quarter Report

Engineer's Certification

I hereby certify that this Corrective Action Plan, Fourth Quarter Report dated December 1, 2019, was prepared by Garver under my direct supervision for the City of Mountain Home.

A handwritten signature in blue ink that reads "Kirby B. Rowland".

Kirby B. Rowland, PE
State of Arkansas PE License 5168



Garver LLC
Arkansas Certification of Authorization
Certificate Number 766
Expires 12/31/2020





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1. Third Quarter Report

This report covers the three-month period from August 2019 to October 2019. Because this report is due December 1, 2019, the information for November 2019 could not be compiled in time for inclusion by the December 1st deadline. Subsequent quarterly reports will also reflect the 3-month period that will end one month before the report deadline.

a. Wastewater System Maintenance

The following information updates items of equipment and work that has been done concerning the wastewater collection system maintenance to reduce sewer overflows.

- Work Crews

- Line Cleaning

Line cleaning records for this quarter are attached in APPENDIX A – LINE CLEANING RECORDS. Maps showing these areas that have been cleaned in the various parts of the City are highlighted and attached in APPENDIX B – LINE CLEANING MAPS.

- Closed Circuit Television (CCTV)

CCTV records for this quarter are attached in APPENDIX C – CCTV CAMERA EXAMINATION RECORDS.

- Repair / Maintenance

As problems are found through the inspections, work orders are produced to get the problems fixed. These work orders are attached in APPENDIX D – SEWER REPAIR AND REPLACEMENT RECORDS. These repairs reflect irregular sewer main conditions found during the line cleaning, CCTV, and smoke testing.

- Lift Stations

Lift station maintenance beyond the normal everyday inspections is typically done when a VACTOR truck is used to pump out wet wells when needed. No work was done this quarter. Included in APPENDIX E – LIFT STATION MAINTENANCE RECORDS is the lift station run times for each month.



(b) Additional Compliance Efforts to Reduce Sanitary Sewer Overflows (SSO's)

The following is an update on the efforts in addition to the current ongoing measures that are being done to address the SSO's, as noted in the Corrective Action Plan (CAP) dated December 14, 2018.

- **Additional Assets**

The new VACTOR truck was delivered on September 11, 2019 and is now in use.

The new CCTV Camera and flow measurement equipment are currently in use.

- **Fats, Oils, and Grease (FOG) Program**

The FOG outreach program is ongoing. A new letter was sent to all users concerning grease disposal and is included in APPENDIX F – FATS, OIL, AND GREASE (FOG) MANAGEMENT

- **Clearing Right of Way**

Maintenance mowing and Right of Way inspection work continues to be done on the sewer right of way. Updated maps showing these right of way areas that have been cleaned in the various parts of the City are highlighted and attached in APPENDIX G – EASEMENT RIGHT OF WAY CLEANING MAPS.

- **Smoke Testing**

Work order detail sheets from the smoke testing continues and are attached in APPENDIX D – SEWER REPAIR AND REPLACEMENT RECORDS.

This work is being placed on a 3-year schedule such that the entire system will again be smoked tested in 2022.

(c) Rainfall and Overflow Events

For informational purposes, daily rainfall records are included in APPENDIX H – RAINFALL RECORDS, that were examined for any infrequent rainfall amounts that might have occurred that would influent potential overflow events.

No overflows occurred this quarter.



2. Report Summary

The City continues to accomplish the work proposed in the Corrective Action Plan dated December 14, 2018 and the January 14, 2019 letter to the Arkansas Department of Environmental Quality (ADEQ).

The Fifth Quarter Report will be submitted by March 1, 2019, and will encompass the months of November, December 2019, and January 2020.

APPENDIX A
LINE CLEANING RECORDS

Sewer Maintenance Daily Information

Date: 8-1-19

Operator: James Ray
 Laborer: Garrett Bowling
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____
 Feet of sewer line cleaned due to stop-ups: _____
 Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	138-017	138-010			320	RS
2.	137-445	137-435			470	
3.	137-445	137-450			470	
4.	137-450	Dead end			470	
5.	137-450	137-455			470	
6.	138-045	138-025			470	
7.	137-460	137-470			470	
8.	137-455	137-460			250	
9.	137-455	138-060			280	
10.	121-320	121-325			440	
11.	121-310	121-320			470	
12.	121-310	121-315			470	
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-2-19

Operator: James
 Laborer: Garrett
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: _____

Portable VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____

Feet of sewer line cleaned due to stop-ups: _____

Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	137-410	137-395			470	
2.	137-415	137-410			100	
3.	137-050	137-040			450	
4.	137-050	137-160			470	
5.	137-025	137-020			320	
6.	137-025	DEAD END				
7.	137-160	137-150			320	
8.	137-155	137-145			400	
9.	137-185	137-186			200	
10.	137-060	137-185			470	
11.	137-060	137-055			470	
12.	137-065	137-060			470	
13.	137-070	137-065			470	
14.						4,290
15.						

Comments (problem areas or customer info).

From MH # 137-155 to 137-145 we pulled a lot of
Rock and mud. Could be a break in the line.

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-5-19

Operator: James
 Laborer: Clawett
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____
 Feet of sewer line cleaned due to stop-ups: _____
 Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	Cleaned +	Picked up	Portapotties on		Square-	
2.	Cleaned	Portapotties on	Jobsites +		Parks.	
3.	121-225	121-207			370	
4.	154-130	154-120			350	
5.	154-135	154-130			470	
6.	154-140	154-135			470	
7.	134-142	155-144			450	
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-6-19

Operator: James
 Laborer: Cernitt
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____
 Feet of sewer line cleaned due to stop-ups: _____
 Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	156-125	156-135			250	
2.	156-120	156-125			230	
3.	156-120	156-140			470	
4.	MARKED OUT sewerlines		on the MAPS		FOR LANNIE	
5.	Ran Root Saw in sewer line		FOR KEVIN			
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-7-19

Operator: Sammy May
 Laborer: Garrett Rowley
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____

Feet of sewer line cleaned due to stop-ups: _____

Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	156-115	156-120			470	
2.	156-115	156-145			470	
3.	156-090	156-115			470	
4.	156-090	156-095 156-100			470	
5.	156-085	156-090			470	
6.	156-030	156-085			250	
7.	156-035	156-030			170	
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-9-19

Operator: James
 Laborer: Frank H
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____
 Feet of sewer line cleaned due to stop-ups: _____
 Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	154-225	154-222			470	
2.	154-235	154-225			430	
3.	154-240	154-235			470	
4.	154-250	154-245			470	
5.	154-245	154-240			200	
6.	154-250	154-200			470	
7.	Took Porta Potties to the Square					
8.	And filled them up.					
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-14-19

Operator: James
 Laborer: Ernie
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____

Feet of sewer line cleaned due to stop-ups: _____

Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	074-060	074-040			400	
2.	074-065	074-060			350	
3.	074-065	074-030			300	
4.	138-245	CLEAN OUT			200	
5.	074-070	074-065			300	
6.	074-010	074-012			400	
7.	074-025	074-010			350	
8.	074-030	074-015			470	
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-11-17

Operator: John Beebe
 Laborer: CADE
 Laborer: _____

Hours Worked 8
 Hours Worked 4.5
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1000
 Feet of sewer line cleaned due to stop-ups: 8
 Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

MH #	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	FINISH VILLAGE	GREEN LINE	0700	0930	500 + 500	NV
2.	2005 9A1	1ST				
3.						
4.	PBT P/T S	ON SQ	1000	1100		
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-12-19

Operator: James
 Laborer: Garrett
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: _____

Portable VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____
 Feet of sewer line cleaned due to stop-ups: _____
 Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	Cleaned Portapotties on square + brought back to shop.					
2.	Helped Kevin with a dig up					
3.	Cleaned Portapotties at Parks + for Street Dept.					
4.	120-045	120-047			400	
5.	120-055	120-045			300	
6.	120-045	12040			470	
7.	Fixed leak at 503 Newton St.					
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 8-13-19

Operator: James
 Laborer: Garrett
 Laborer: _____

Hours Worked _____
 Hours Worked _____
 Hours Worked _____

Location / Address: Parkwood Estates

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____

Feet of sewer line cleaned due to stop-ups: _____

Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	074-035	074-037			150	
2.	074-035	074-045			250	
3.	074-050	074-035			200	
4.	074-060	074-050			470	
5.	Helped Randal with a leak					
6.	Cut limbs + bushes away from manholes					
7.	Picked up limbs threw them out					
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9 4 19

Operator: John Beebe
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 0
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

MH #	MH #	Time	Time	Footage	* Device
From	To	Started	Ended		
1.	TRAIN w/NEW TRK	0700	1500		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-5-19

Operator: John Beebe
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____

Feet of sewer line cleaned due to stop-ups: _____

Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	TRAWING	NEW TRK	0700	1500		
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-6-15

Operator: John Beebe

Hours Worked 8

Laborer: Stirling

Hours Worked 8

Laborer: _____

Hours Worked _____

Location / Address: LEONARD MEADOW BROOK

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1100

Feet of sewer line cleaned due to stop-ups: 0

Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	154-170	154-160	0700	0800	600	ST
2.	154-275	154-360	0800	0900	600	ST
3.	154-270	154-355	0900	1000	300	ST
4.	1000 gal	62	1000	1015		
5.	154-270	154-260	1015	1200	600	
6.	1000 gal	62	1230	1245		
7.	WORK ON	320 HOSE	1245	1415		
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-9-13

Operator: _____
 Laborer: STIRLING
 Laborer: _____

Hours Worked _____
 Hours Worked 8
 Hours Worked _____

Location / Address: _____

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____
 Feet of sewer line cleaned due to stop-ups: _____
 Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	<u>GET USED TO DRIVING</u>		<u>3:20</u>	<u>07:00</u>	<u>1500</u>	
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-10-19 Operator: BECKE Hours Worked 8
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: MEADOWBROOK

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1550
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

MH #	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	154-125	154-175	0700	0830	350	ST
2.	154-280	154-370	0830	0930	600	ST
3.	154-280	154-270	0930	1030	600	ST
4.	CLEAN TRK		1230	1330		
5.	1000 9A1	602	1330	1345		
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9 11 19

Operator: BEEBE
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: SHOP

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: _____
 Feet of sewer line cleaned due to stop-ups: _____
 Number of stop-ups: _____

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	CLEAN	PTB	0700	1200		
2.	WORK ON	PTB FOR ASD	1230	1500		
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-12-19

Operator: BEEBE
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: BAKER

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1000
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

#	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	TRAN STIRLING ON TRK		0700	1200		
2.	137-460	137-470	1200 1230	1300	400	ST
3.	137-475	137 END	1300	1330	100	ST
4.	1000 9A	1 2ND	1330	1345		
5.	138-005	138 475	1345	1400	100	ST
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-13-19

Operator: BEEBE
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: BAKER 2ND

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1700
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

#	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	138-010	138-005	0700	0800	300	ST
2.	138-010	138-015	0800	0900	300	ST
3.	1000 GAL	SOUTH	0900	0915		
4.	138-025	END	0915	1015	500	ST
5.	138-025	138-012	1015	1100	200	ST
6.	1000 GAL	62	1100	1115		
7.	138-070	END	1230	1400	400	ST
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-16-19

Operator: John Beebe
 Laborer: [REDACTED]
 Laborer: STIRLING

Hours Worked 8
 Hours Worked 8
 Hours Worked 8

Location / Address: N CHURCH

Portable / (VacCon) (circle)

Feet of sewer line cleaned regular maintenance: 750
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	Dig up	N CHURCH	0700	0830		
2.	1000 GAL	17th	0830	0845		
3.	1000 GAL	ARK	0845	0900		
4.	WASH DOWN	AFTER	0900	1100		
5.						
6.						
7.						
8.	074-015	074 005	1230	1330	300	
9.	074-015	074-020	1330	1400	350	
10.	074-015	074-005	1400	1430	100	ST
11.	1000 GAL	62	1430	1500		
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-17-19 Operator: BEEBE Hours Worked 8
 Laborer: NICK Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: GENTRY BOGEY SHADOW OAK

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1610'
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	1000 9A1	62	0700	0730		
2.	106-060	106-083	0730	1330-1430	500	WH
3.	106-030	END	0800	0830	160	WH
4.	1000 9A1	FARWAY	0830	0845		
5.	109-070	109-075	0845	0945	300	WH ^{SEE} _{COPPER}
6.	1000 9A1	BOGEY	0945	1000		
7.	CK CENTER	AT COPPER	1000	1100	NOT	US
8.	1000 9A1	EAGLE	1100	1115		
9.	109-080	109-070	1115	1200	400	WH
10.	1000 9A1	SHADOW OAK	1245	1300		
11.	125-090	125-080	1300	1330	250	WH
12.	1000 9A1	62	1430	1445		
13.						
14.						
15.						

Comments (problem areas or customer info).
109-070 109-075 GOT MUD + CLAY BACK ON NOZZLE
GOT BACK LARGE ROCKS LINE MAY BE BROKEN

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-20-19 Operator: BEEBE Hours Worked 8
 Laborer: STRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: FULLER ARBOR

Portable VacCon (circle) (circle)

Feet of sewer line cleaned regular maintenance: 1900
 Feet of sewer line cleaned due to stop-ups: _____
 Number of stop-ups: 8

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	168-195	168-185	0800	0830	500	WH
2.	168-195	168-165	0830	0900	350	WH
3.	1000 9A1	GREEN BRIER	0900	0915		
4.	168-020	168-010	0915	1000	465	WH
5.	168-025	168-020	1000	1030	100	WH
6.	1000 9A1	GREEN BRIER	1030	1045		
7.	168-070	168-075	1300	1400	350	WH
8.	1000 9A1	102	1400	1430		
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-24-19 Operator: BEEBE Hours Worked 8
 Laborer: STRIKING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: GREGG RD HALL MARK

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 4650
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	189-065	189-070	0700	0730	500	ST
2.	189-065	189-207	0730	0745	100	ST
3.	189-010	189-065	0745	0830	350	ST
4.	1000 GAL	JOHNS	0830	0845		
5.	189-005	189-010	0845	0915	250	ST
6.	188-005	189-005	0915	0945	300	ST
7.	188-010	188-005	0945	1000	50	ST
8.	1000 GAL	JOHNS	1000	1015		
9.	188-015	188-010	1015	1045	350	ST
10.	188-015	188-250	1045	1100	250	ST
11.	188-020	188-015	1100	1130	350	ST
12.	188-025	188-020	1130	1145	250	ST
13.	1000 GAL	62	1145	1200		
14.	156-030	156-085	1300	1330	300	ST
15.	156-024	156-030	1320	1345	200	ST
	156-016	156-024	1345	1415	400	ST
	156-016	156-020	1415	1430	100	ST
Comments (problem areas or customer info).						
	1000 GAL	MCCLURE	1430	1445		
	156-010	156-016	1445	1500	400	ST
	156-010	156-170	1445	1515	500	ST
	1000 GAL	MCCLURE	1515	1530		

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9-25-19

Operator: BEEBE
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: HALLMARK CIR

Portable VacCon (circle)

Feet of sewer line cleaned regular maintenance: 2500
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	156-125	156-135	0800	0830	250	ST
2.	156-120	156-125	0830	0900	150	150 ST
3.	156-120	156-140	0900	0930	400	400 ST
4.	1000 gal	62	0930	0945		
5.	156-115	156-145	0945	1015	400	ST
6.	156-115	156-120	1015	1030	300	ST
7.	1000 gal	HALLMARK	1030	1045		
8.	156-090	156-100	1045	1115	600	ST
9.	156-090	156-115	1115	1130	300	ST
10.	156-085	156-090	1130	1145	100	ST
11.	1000 gal	MCCLURE	1145	1200		
12.	CLEAN PUMP STATIONS FOR TY10R				1300-1400	
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9 27 19 Operator: Beebe Hours Worked 8
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: LEONARD 2ND LANGSTON LUCERNE 1ST
OVERLOOK 2ND

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 2900
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	154-170	154-160	0700	0800	600	P
2.	1000 9A1	LEONARD	0800	0815		
3.	138- 370	END	0815	0845	300	P
4.	122-225	122-220	0845	0900	150	P
5.	1000 9A1	REDBUD	0900	0915		
6.	122-390	123-360	0915	1000	400	P
7.	1000 9A1	LOCUST	1000	1015		
8.	122-520	122-223	1015	1030	250	P
9.	123-240	123-290	1030	1100	350	P
10.	1000 9A1	OVERLOOK	1115	1130		
11.	138-390	138-405	1230	1300	350	P
12.	138-390	138-380	1300	1330	500	P
13.	1000 9A1	2ND	1330	1345		
14.						
15.						

Comments (problem areas or customer info).

801 2ND GOT TOILET BLOWN VERY MAD NO 40
NO BACK FLOW WANTS CITY TO PAY WATER DAMAGE
REFER HIM TO WATER DEPT MAIN OFFICE TO DISCUSS
HIS OPTIONS

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 9 30 1st

Operator: BEEBE
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: MIMOSA PARKWOOD SEWER PLANT

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1150
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	168-125	168-025	0800	0830	300	RT
2.	168-130	168-125	0830	0900	300	RT
3.	1500 9A1	1V4	0900	0915		
4.	168-135	168-130	0915	1030	300	RT
5.	074-035	074-045	1030	1100	250	ST
6.	CLEAN 5 COM PITS		1200	1430		
7.	GET TRACK REEL BACK TO SHOP			1430-1500		
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

HAD MADE TV AS I GOT CLEAN SAND OUT BORING CREW
MAY HAVE BORED THROUGH 200 PARKWOOD'S SERVICE
NOTHING WRONG W/ OUR LINE

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-1-19 Operator: BEEBE Hours Worked 8
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: HICKORY, PINE TREE, PLANTATION

Portable / (VacCon) (circle)

Feet of sewer line cleaned regular maintenance: 2500'
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

1.	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	1000 9A1	Lez	0730	0745		
2.	REPAIR HOSE		0745	0800		
3.	CLEAN TRK		0800	0930		
4.	137-195	137-190	0930	1000	400	ST
5.	137-200	137-195	1000	1015	300	ST
6.	137-200	137-210	1015	1030	400	ST
7.	1000 9A1	HICKORY	1030	1045		
8.	152-185	152-180	1230	1300	200	ST
9.	152-195	152-185	1300	1330	600	ST
10.	1000 9A1	PINE TREE	1330	1345		
11.	152-115	152-105	1345	1415	600	ST
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10 2 19

Operator: BEEBE
 Laborer: Stirling
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: WALMART BRADLY

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1400
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	CLEAN PTS		0700	1230		
2.	1000 9A1	102	1230	1245		
3.	HELP TAYLOR		1245	1315		
4.	108-200	MH NO #	1315	1345	450	ST
5.	108-195	108-200	1345	1415		
6.	1000 9A1	BRADLEY	1415	1430	300	ST
7.	108-115	108-098	1430	1445	550	ST
8.	108-115	108-120	1430	1500	100	ST
9.	1000 9A1	BRADLY	1500	1510		
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-3-19

Operator: BEEBE
 Laborer: STURLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: WADE FAIRGROUNND NICKERSY MAPLE
BRYANT

Portable / (VacCon) (circle)

Feet of sewer line cleaned regular maintenance: 4500
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	170-020	170-010	0700	0745	250	ST
2.	170-025	170 -154-200	0745	0815	500	ST
3.	1000 9A1	NELSON	0815	0830		
4.	149-295	170-025	0830	0900	450	ST
5.	1000 9A1	PAUL	0900	0915		
6.	137-205	137-200	0915	0945	350	ST
7.	137-245	137-205	0945	1000	200	ST
8.	1000 9A1	4 TH	1000	1015		
9.	137-250	137-245	1015	1045	450	ST
10.	137-260	137-250	1045	1115	600	ST
11.	1000 9A1	DRYER	1115	1130		
12.	154-225	154-220	1230	1300	400	ST
13.	154-225	154-222	1300	1315	400	ST
14.	1000 9A1	MAPLE	1315	1330		
15.	154-250	154-240	1330	1400	500	ST
	1000 9A1	LARK	1400	1415		
Comments (problem areas or customer info).	106-130	106-055	1415	1500	600	ST
	1000 9A1	62	1500	1515		

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-4-19

Operator: BEERS

Hours Worked 5

Laborer: STIRLING

Hours Worked 8

Laborer: _____

Hours Worked _____

Location / Address: COLEYS GENTRY

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 950

Feet of sewer line cleaned due to stop-ups: 0

Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	106-005	106-015	0700	0730	600	ST
2.	106-025	106-005	0730	0800	350	ST
3.	1000 9A1	62	0800	0815		
4.	WORK FOR	CADE	0815	1500		
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-9-19 Operator: BEEBE Hours Worked 8
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: COLLAGE HICKORY ROSSSELL MARKET

Portable VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1500
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	90 DUMP		0700	0800		
2.	122-491	122-490	0800	0830	150	ST
3.	122-498	122-491	0830	0845	250	ST
4.	10009A1	62	0845	0900		
5.	137-263	137-260	0900	0930	350	ST
6.	122-350	122-345				
7.	122-498					
8.	122-350	122-345	0930	1045	250	RTC
9.	1000 9A1	62	1045	1100		
10.	122-135	122-130	1100	1115	100	ST
11.	122-135	END	1115	1145	150	ST
12.	CK 1114 COLLAGE		1145	1215		
13.	122-372	122-498	1230	1315		
14.	122-355	122-350	1315	1330	150	ST
15.	122-355	END	1330	1345	150	ST
	1000 9A1	SPRING	1345	1400		

1000 9A1
62

Comments (problem areas or customer info).
1114 COLLAGE REPORT SEWER BACK UP OUR LINES CLEAR CLOG
AND CUSTOMER SERVICE

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-8-19 Operator: BEEBE Hours Worked 8
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: CHERRY CARDINAL RAY

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1900
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	139-205	139-195	0700	0800	600	N ST
2.	1000 9A1	PARKVIEW	0800	0815		
3.	WORK AT SEWER PLANT 0815					
4.	139-045	139-150	0815	1030	300	N P
5.	1000 9A1	ARK	1030	1045		
6.	WORK SEW	PLANT	1045	1230		
7.	1000 9A1	11TH	1300	1315		
8.	122-374	122-372	1315	1325	400	ST
9.	122-380	122-374	1325	1400	600	ST
10.	1000 9A1	RAY	1400	1415		
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-14-19

Operator: BEEBE

Hours Worked 8

Laborer: STIRLING

Hours Worked 8

Laborer: _____

Hours Worked _____

Location / Address: TERRINGTON HIGH FILTER NICKS CREEK RD
CHURCH MORRIS NORTH COLUMBIA

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 4500

Feet of sewer line cleaned due to stop-ups: 0

Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	169-060	169-090	0700	0730	600	ST
2.	169-065	169 -060	0730	0800	300	ST
3.	169-020	169-015	0800	0830	250	ST
4.	1000 gal	11 th	0830	0845		
5.	168-035	168-200	0845	1000	350	ST
6.	170-195	170-235	1000	1030	500	ST
7.	170-195	170-190	1030	1045	250	ST
8.	1000 gal	62	1045	1100		
9.	121-320	121-325	1100	1130	350	ST
10.	121-350	121-355	1230	1245	150	ST
11.	121-345	121-350	1245	1300	150	ST
12.	121-335	121-345	1300	1315	300	ST
13.	1000 gal	CHURCH	1315	1330		
14.	121-330	121-335	1330	1400	450	ST
15.	121-315	121-330	1400	1415	450	ST
	1000 gal	62	1415	1430		

Comments (problem areas or customer info).

168-035 TO 168-030 BLOCKED CANT SHOOT HAS good Flow
088-290 088-285 1500 1530 400 ST (S)

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-15-19 Operator: BEEBE Hours Worked 8
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: 6TH COLEWOOD NORTH COLLEGE LAKE
GENTRY

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 2350
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	CLEAN PT		0700	0800		
2.	Dig up KEVIN		0800	0930		
3.	Dig up METER READERS		0930	1100		
4.	1000 GAL	62	1100	1115		
5.	121-310	121-315	1115	1130	350	ST
6.	121-310	121-320	1130	1145	350	ST
7.	1000 GAL	62	1145	1200		
8.	122-240	122-310	1230	1300	450	ST
9.	122-244	122-240	1300	1315	350	ST
10.	122-245	122-244	1315	1330	250	ST
11.	122-250	122-245	1330	1345	200	ST
12.	122-250	122-235	1345	1400	50	ST
13.	1000 GAL	62	1400	1415		
14.	122-170	122-135	1415	1445	350	ST
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10 16 19

Operator: BEEBE
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: LEO DAVIS DIXIE ARK

Portable / VacCov (circle)

Feet of sewer line cleaned regular maintenance: 1500
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	DIG UP JAMES		0700	0930		
2.	1000 gal	62				
3.	WATER BLAST	MH FOR ROOTS	139-001	0930	1030	
4.	105-005	089-120	1030	1100	600	ST
5.	1000 gal	ARK	1100	1115		
6.	DIG UP Tylor		1200	1245		
7.	105-012	089-030	1245	1330	600	ST
8.	1000 gal	ARK	1330	1345		
9.	105-015	089-132	1345	1415	600	ST
10.	1000 gal	ARK	1415	1430		
11.	DIG UP TYLOR		1430	1500		
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10 17 19

Operator: BEEBE
 Laborer: STIRLING
 Laborer: _____

Hours Worked 8
 Hours Worked 8
 Hours Worked _____

Location / Address: 6th

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 1300
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	CLEAN PTS		0900	1100		
2.	139-325	139-300	1300	1330	400	ST
3.	139-325	139-320	1330	1345	300	ST
4.	1000 GAL	6th	1345	1400		
5.	137-035	END	1400	1430	600	ST
6.	1000 GAL	DYER	1430	1445		
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-18 Operator: BEEBE Hours Worked 7
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: 2ND 6TH GLENSTON

Portable VacCon (circle)

Feet of sewer line cleaned regular maintenance: 3350
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	121-260	END	0830	1000	300	ST
2.	1000 9A1	4th	1000	1015		
3.	138-315	138-295	1015	1030	600	ST
4.	1000 9A1	6th	1030	1045		
5.	139- 330	139-315	1045	1100	500	ST
6.	139- 320	139- 325	1100	1115	200	ST
7.	1000 9A1	6th	1115	1130		
8.	121-005	121-004	1230	1300	100	ST
9.	121-015	121-005	1300	1330	400	ST
10.	1000 9A1	4th	1330	1345		
11.	139-335	139-330	1345	1400	400	ST
12.	139-335	END	1400	1415	150	ST
13.	139-340	138-139	1415	1430	400	ST
14.	139-340	139-335	1430	1445	300	ST
15.	1000 9A1	6th	1445	1500		

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-22-19 Operator: BEERBE Hours Worked 8
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: BRYANT JUSTIS^N CHURCH HARGRAVE
RED BUD

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 3500
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	138-340	138-335	0700	0730	350	N
2.	138-340	138-345	0730	0800	450	N
3.	1000 gA1	MAPLE	0800	0815		
4.	139-345	138-340	0815	0845	400	N
5.	139-345	139-337	0845	0900	400	N
6.	1000 gA1	STOP	0900	0915		
7.	121-110	121-115	0915	0945	350	ST TRK
8.	121-110	121-074	0945	1000	400	ST TRK
9.	1000 gA1	62	1000	1015		
10.	121-105	121-082	1015	1045	150	ST TRK
11.	122-115	122-117	1045	1115	150	ST TRK
12.	122-115	122-110	1115	1145	300	ST TRK
13.	OK 116	HARGRAVE	1230	1330	NOT	USE
14.	1000 gA1	62	1330	1345		
15.	123-305	123-330	1345	1400	150	N
	123-210	123-203	1400	1430	50	N
	123-210	123-180	1430	1500	350	N
	1000 gA1	62	1500	1515		

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10-25-19 Operator: BEEBE Hours Worked 8
 Laborer: STIRLING Hours Worked 8
 Laborer: _____ Hours Worked _____

Location / Address: 62 201 BUSARD RD COST OVERLOOK

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 3500
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)
 * Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	122-555	123-170	0700	0730	600	ST
2.	122-555	106-160	0730	0745	150	ST
3.	106-175	107-150	0745	0830	200	ST
4.	1000 9A1	62	0830	0845		
5.	DIG FOR TYLOR		0845	0930		
6.	WORK FOR KEVIN		0930	1000		
7.	WORK FOR JUSTIN		1000	1030		
8.	1000 9A1	62	1030	1045		
9.	123-310	123-305	1045	1115	400	ST
10.	1000 9A1	62	1230	1245		
11.	123-320	END	1245	1315	350	ST
12.	123-320	123-330	1315	1330	350	ST
13.	123-320	122-577	1330	1345	600	ST
14.	1000 9A1	LOCUST	1345	1400		
15.	094-102	094-108	1400	1415	250	ST
	094-057	094-102	1415	1445	600	ST
	1000 9A1	62	1445	1500		

Comments (problem areas or customer info).

Turn this in to your foreman each morning.

Sewer Maintenance Daily Information

Date: 10 29 19

Operator: DEEBE

Hours Worked 8

Laborer: STIRLING

Hours Worked 8

Laborer: _____

Hours Worked _____

Location / Address: COLE KATHLEEN WAVERLY JR HIGH
POWERS

Portable / VacCon (circle)

Feet of sewer line cleaned regular maintenance: 2800
 Feet of sewer line cleaned due to stop-ups: 0
 Number of stop-ups: 0

Location of manholes cleaned (put "s" next to stopped up manholes)

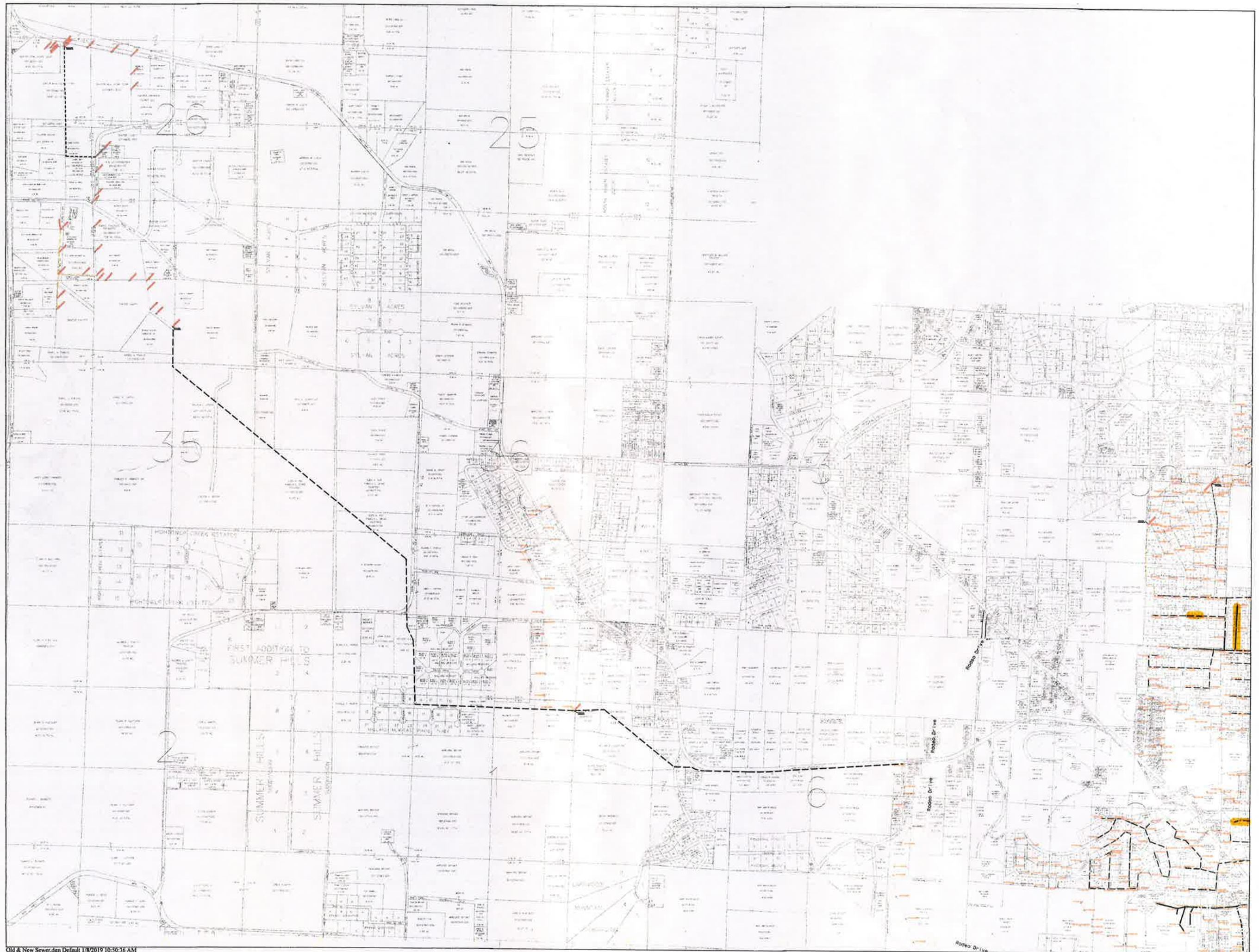
* Device - (RS for Root Saw / N for Nozzle / Etc).

	MH # From	MH # To	Time Started	Time Ended	Footage	* Device
1.	139-430	140-350	0700	0745	400	ST
2.	139-430	139-437	0745	0830	450	ST
3.	1000 gal	LODANN	0830	0845		
4.	139-425	139-430	0845	0915	300	ST
5.	139-445	139-455	0915	0945	800	ST
6.	1000 gal	LODANN	0945	1000		
7.	139-415	139-425	1000	1030	400	ST
8.	139-405	139-410	1030	1045	150	ST
9.	139-405	139-475	1045	1115	600	ST
10.	WORK FOR	JUSTIN	1115	1145		
11.	1000 gal	62	1230	1245		
12.	WORK FOR	DEWEE	1245	1430		
13.	1000 gal	POWERS	1430	1445		
14.						
15.						

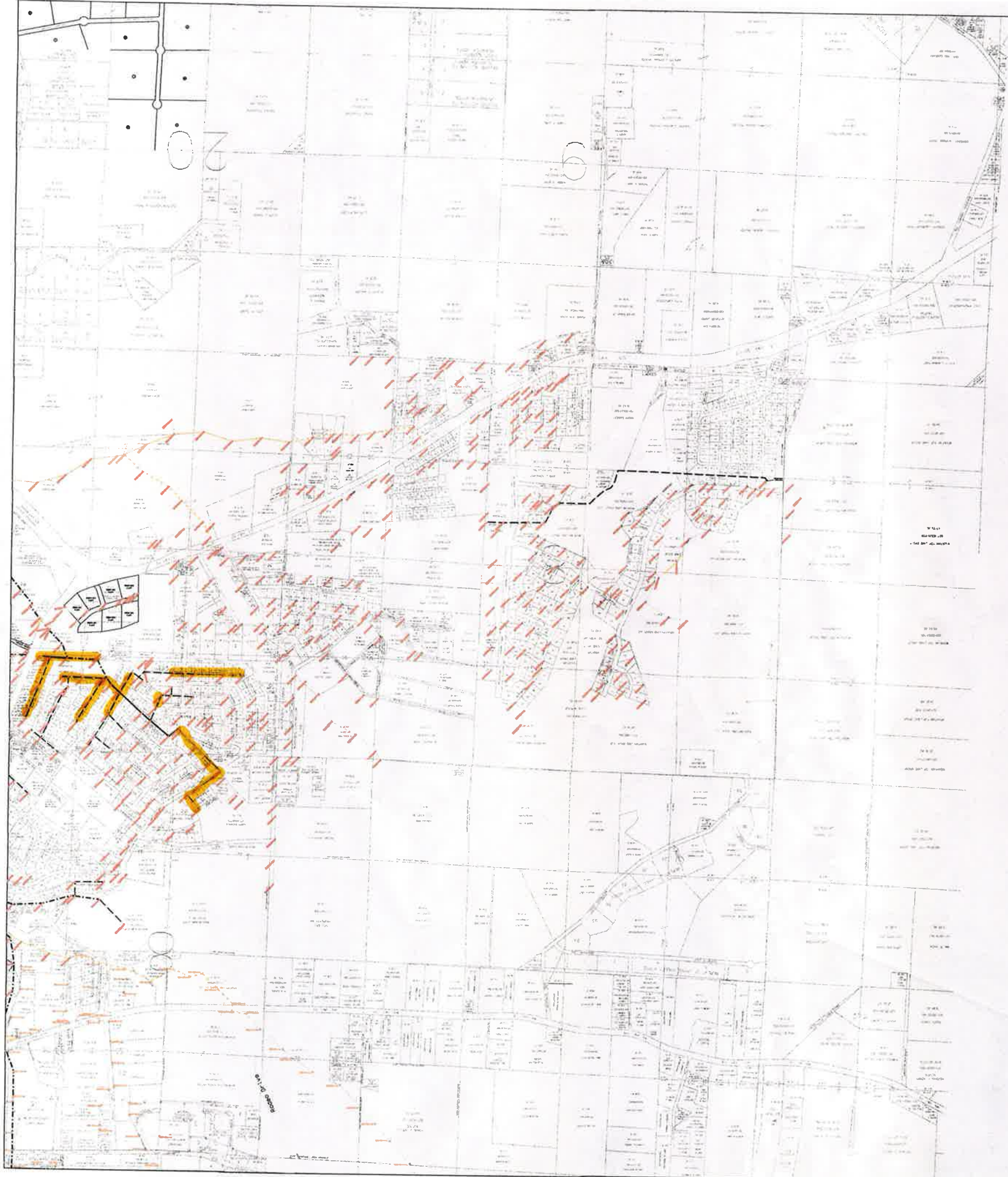
Comments (problem areas or customer info).

Turn this in to your foreman each morning.

APPENDIX B
LINE CLEANING MAPS





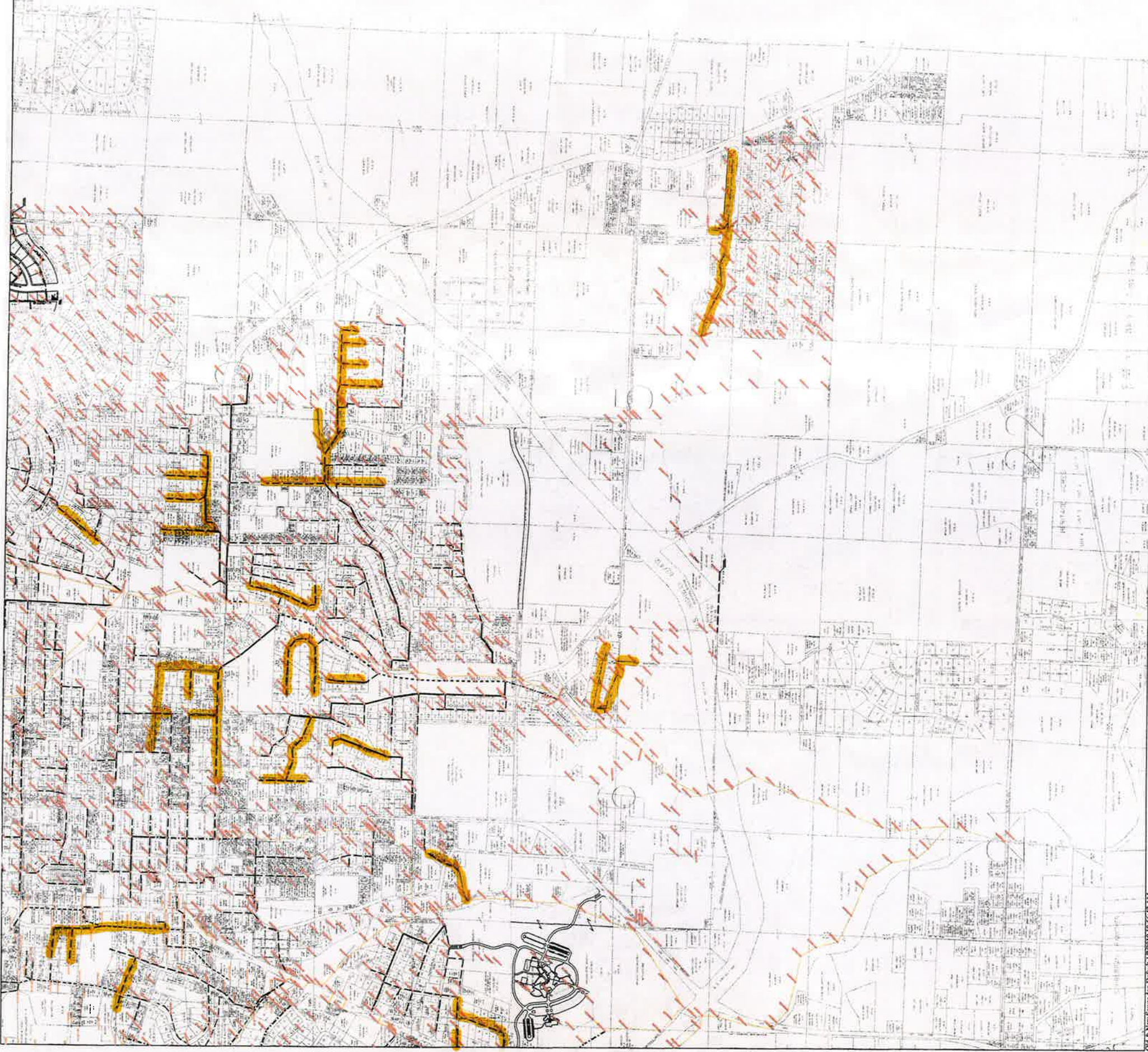


20

9



C900_2
 C900_4
 C900_6
 Clay_8
 Concrete_6
 Concrete_8
 Concrete_10
 Concrete_12
 Concrete_14
 D1_8
 D1_10
 D1_12
 D1_14
 D1_16
 D1_18
 D1_24
 D1_30
 D1_36
 SDR_6
 SDR_8
 SDR_10
 SDR_12
 Liff Station (GPS)
 Manholes (Not GPS)
 Manholes (GPS)
 Cleanout (GPS)
 Dead End (GPS)



APPENDIX C
CCTV CAMERA EXAMINATION RECORDS

w/o # 155033

TV VAN E333 DAILY Date: 8-1-19 Time in: 2:00 Time out: 3:30			
Time:	MH From:	MH To:	Feet:
7:00 - 8:00	in cage letting	Brent know what all went on in there	
8:00 - 9:00	121-095	121-090	19' traced & marked out MH
9:00 - 10:00	120-180	120-185	104' traced & found MH
10:00 - 10:15	Break		
10:15 - 11:30	at Ozark eye center	walked yard to make sure	no sprinkler heads
11:30 - 12:00	print out map		
12:00 - 12:30	Lunch		
12:30 - 1:30	change wheel	set up from 6" to 8" pvc for MH	
	MH 121-225	@ Ozark eye center	
1:30 - 2:00	clean van of trash	and get fuel	
2:00 - 2:15	break		
2:15 - 2:30	print out and burn DVD	and batteries for my locator	
2:30 - 3:30	in case framing		

Break & Lunch

Comments/Observations

All of these are from Johnny Dewey to be traced out and located.

W/O # 155033, 155035

TV VAN E333 DAILY Date: 8-2-19 Time in: 9:00 Time out: 3:30

Time:	MH From:	MH To:	Feet:
9:00 - 10:30	121-225	121-207	162 line needs cleaned
10:30 - 10:45	Break		
10:45 - 12:30	137-005	???	204 Intruding service
12:30 - 1:00	Lunch		
1:00 - 2:10	Measure out intruding service, and try to metal detect a clean out lid		
2:10 - 2:25	Break		
2:25 - 3:00	Set up camera for TV MH 121-225 to MH 121-245 and print out map		
3:00 - 3:30	Print outs		

Break & Lunch

Comments/Observations		

- MH 121-225 to MH 121-207 → need to be clean so I can make it to the MH and trace it out and locate missing MH 121-207. Per Dewey

MH 137-005 to ??? → at 204' an intruding service is coming in the main low and almost half the pipe. ~~It~~ Not enough room even for the small camera, needs to be fixed so I can get to the end of line and locate it. Per Dewey

TV VAN E333 DAILY Date: 8-13-19 Time in: 7:00 Time out: 3:30

Time:	MH From:	MH To:	Feet:
7:00 - 10:00	120-045	CO 120-047	122 Can change over from big camera to the small one Due to off set repair. No clean out
10:00 - 10:15	Break		
10:15 - 12:00	120-130	CO 120-135	Went and metal detect and dug a spot and found nothing. Need to have Wes clean to trace li
12:00 - 12:30	Lunch		
12:30 - 2:00	121-260	???	tried to look for C/O and resident has a pile of brush were possible C/O's. Need cleaned
2:00 - 2:15	Break		
2:15 - 3:00	getting some scrap cable for tracing lines out		
3:00 - 3:30	paper work and let Johnny know what I found		

Break & Lunch

Comments/Observations		

W/o # 155040 is complete. MH 120-045 to CO 120-047 the customer service comes straight in city main and per Johnny will not do nothing. So no CO installed. Waiting on Wes to clean out right away from MH 121-260 to ???

TV VAN E333 DAILY Date: 9-12-19 Time in: 7:30 Time out: 3:30

Time:	MH From:	MH To:	Feet:
7:30 - 8:30	run to HarDld	truck for Windshield washer fluid +	
	#fill UP in Van		
8:30 - 9:00	155 - 235	155 - 236	Kevin Called for help
9:00 - 11:00	138 - 310	138 - 305	246
11:00 - 12:00	Help BB	drag hose	
12:00 - 12:30	Lunch		
12:30 - 3:00	Help BB	drag hose	
3:00 - 3:30	Print out	+ paper work	

Break & Lunch

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Comments/Observations

TV VAN E333 DAILY Date: 9-25-19 Time in: 7:00 Time out: 3:30

Time:	MH From:	MH To:	Feet:
7:00 - 8:00	down size big	Camera and Switch	Cameras
8:00 - 10:00	120-190	121-030	270 marked out line
10:00 - 10:30	120-190	120-195	87
10:30 - 10:45	Break		
10:45 - 11:30	in Almas office		
11:30 - 12:00	deliver a door hanger to	Customer on	West 1 st ST
	per Alma		
12:00 - 12:30	Lunch		
12:30 - 2:00	remark MH that need to	be raised	
2:00 - 3:30	Safety meeting		

Break & Lunch

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Comments/Observations

Lined area for handwritten notes and observations.

TV VAN E333 DAILY Date: 9-27-19 Time in: 7:00 Time out: 3:30

Time:	MH From:	MH To:	Feet:
7:00 - 8:30	Help Brent with stock receive, and letting him know what all went on yesterday		
8:30 - 10:40	121-140	121-160	158
10:40 - 10:55	Break		
10:55 - 11:40	Look for MH 136-135 all grown up could not find		
11:40 - 12:00	Went told Lonnie it was grown up around there		
12:00 - 12:30	Lunch		
12:30 - 1:30	Try metal detect MH 121 121-140 again		
1:30 - 2:00	Located MH 136-135 to see where Wes needs to clean a path for me, by Kicks n flips		
2:00 - 2:15	Break		
2:15 - 3:00	try to find a way to MH 136-135,		
3:00 - 3:30	Print out & Burn DVD		

know what
w/o 153171

needs

Break & Lunch

Comments/Observations

8:30-10:40 - w/o 153171 - MH 121-140 to MH 121-160 -
 TV City main to MH hooked up locator and traced it out,
 went to try and metal detect and called Dewey to
 come over and help, he was busy at the time, will
 meet me later.

TV VAN E333 DAILY Date: 10-15-19 Time in: 7:00 Time out: 3:30

Time:	MH From:	MH To:	Feet:
7:00 - 8:00	get fuel in Van		
8:00 - 9:00	155-135	155-140	116
9:00 - 10:00	155-145	155-140	175
10:00 - 10:15	155-145	155-035	7 needs cleaned
10:15 - 10:30	Breaks		
10:30 - 11:00	155-150	155-145	25
11:00 - 12:15	155-150	154-325	275
12:15 - 12:45	Lunch		
12:45 - 1:30	Measure out problems up above, and marked for repair		
1:30 - 2:00	Printouts		
2:00 - 3:30	in Cage		

Break & Lunch

Comments/Observations		

APPENDIX D
SEWER REPAIR AND REPLACEMENT RECORDS

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM

User Name : alma

Work Order : 155996		R/M SEWER MAIN	Account Number :	
Start Date : 8/6/2019	DIXIE CT	Job Code : 5RMSM	Book.Sequence :	
Completion Date : 8/8/2019	MOUNTAIN HOME AR 72653	Printed : ✓	Status :	Closed
Create Date : 8/6/2019				
Total Price : 2,805.29			Total Cost :	2,478.61

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
2235150006	PIPE 6" PVC SDR26 GJ SEWER	0.00	0.00	14.00	2.55	2.54	35.70	35.56
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00		62.20	78.41	0.00	0.00
Total					126.95	159.36	160.10	192.38

Work Order : 156167		RAISE MANHOLE	Account Number :	
Start Date : 8/13/2019	LONG ST	Job Code : 5RMH	Book.Sequence :	
Completion Date : 8/14/2019	MOUNTAIN HOME AR 72653	Printed : ✓	Status :	Closed
Create Date : 8/13/2019				
Total Price : 729.89			Total Cost :	444.77

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6600002025	RISER 6" MANHOLE 250-24A IRON	0.00	0.00	3.00	71.86	154.28	215.58	462.84
6600002023	RISER 3" MANHOLE 250-24A IRON	0.00	0.00	1.00	51.01	77.17	51.01	77.17
6601348123	LID MANHOLE	0.00	0.00	1.00	121.94	121.94	121.94	121.94
Total					244.80	353.39	388.53	661.95

Work Order : 156197		RAISE MANHOLE	Account Number :	
Start Date : 8/14/2019		Job Code : 5RMH	Book.Sequence :	
Completion Date : 8/14/2019		Printed : ✓	Status :	Closed
Create Date : 8/14/2019				
Total Price : 74.32			Total Cost :	57.45

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6600002022	RISER 2" MANHOLE 250-24A IRON	0.00	0.00	1.00	35.62	52.49	35.62	52.49
Total					35.62	52.49	35.62	52.49

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM

User Name : alma

Work Order : 156232		R/M SEWER SERVICE LINE	Account Number	:
Start Date : 8/15/2019	BROADMOOR DR	Job Code : 5RMSL	Book.Sequence	:
Completion Date : 8/19/2019	MOUNTAIN HOME AR 72653	Printed : ✓	Status	: Closed
Create Date : 8/15/2019				
Total Price : 1,782.62			Total Cost	: 1,587.38

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
2235150006	PIPE 6" PVC SDR26 GJ SEWER	0.00	0.00	14.00	2.55	2.54	35.70	35.56
Total					64.75	80.95	160.10	192.38

Work Order : 156323		RAISE MANHOLE	Account Number	:
Start Date : 8/19/2019	HOSPITAL DR	Job Code : 5RMH	Book.Sequence	:
Completion Date : 8/23/2019	MOUNTAIN HOME AR 72653	Printed : ✓	Status	: Closed
Create Date : 8/19/2019				
Total Price : 1,646.28			Total Cost	: 1,445.33

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6600002024	RISER 4" MANHOLE 250-24A IRON	0.00	0.00	1.00	63.85	101.84	63.85	101.84
6601348123	LID MANHOLE	0.00	0.00	1.00	121.94	121.94	121.94	121.94
Total					185.79	223.78	185.79	223.78

Miscellaneous Usage

Description	Estimated Usage	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
CONCRETE (MHC)	1.00	1.00	68.26	68.26	68.26	68.26
Total			68.26	68.26	68.26	68.26

Work Order : 156357		R/M SEWER MAIN	Account Number	:
Start Date : 8/21/2019	HOWARD & NORTH ST	Job Code : 5RMSM	Book.Sequence	:
Completion Date : 8/26/2019	MOUNTAIN HOME AR 72653	Printed : ✓	Status	: Closed
Create Date : 8/21/2019				
Total Price : 1,594.59			Total Cost	: 1,463.97

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
2235150006	PIPE 6" PVC SDR26 GJ SEWER	0.00	0.00	9.00	2.58	2.54	23.22	22.86

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM

User Name : alma

2235150004	PIPE 4" SCH40	0.00	0.00	9.00	1.89	1.74	17.01	15.66
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	1.00	62.20	78.41	62.20	78.41
6704444444	COUPLING 4" PVC X 4" PVC MISSION	0.00	0.00	2.00	20.16	27.00	40.32	54.00
2264204075	WYE 4" FLEX SADDLE DFW	0.00	0.00	1.00	41.52	41.52	41.52	41.52
2410321040	BEND 45 DEGREE 4" SCH40 DWV	0.00	0.00	1.00	8.08	6.86	8.08	6.86
REBAR10001	REBAR (SEWER)	0.00	0.00	2.00	8.28	7.04	16.56	14.08
Total					144.71	165.11	208.91	233.39

Work Order :	156634	RAISE MANHOLE	Account Number :	:
Start Date :	8/28/2019	HOSPITAL DR	Job Code :	5RMH
Completion Date :	8/29/2019	MOUNTAIN HOME AR 72653	Printed :	✓
Create Date :	8/28/2019		Status :	Closed
Total Price :	358.10		Total Cost :	260.53

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6600002025	RISER 6" MANHOLE 250-24A IRON	0.00	0.00	1.00	71.86	154.28	71.86	154.28
6601348123	LID MANHOLE	0.00	0.00	1.00	121.94	121.94	121.94	121.94
Total					193.80	276.22	193.80	276.22

Work Order :	156635	RAISE MANHOLE	Account Number :	:
Start Date :	8/28/2019	HWY 5 N	Job Code :	5RMH
Completion Date :	8/29/2019	MOUNTAIN HOME AR 72653	Printed :	✓
Create Date :	8/28/2019		Status :	Closed
Total Price :	251.81		Total Cost :	149.02

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6600002025	RISER 6" MANHOLE 250-24A IRON	0.00	0.00	1.00	71.86	154.28	71.86	154.28
Total					71.86	154.28	71.86	154.28

Work Order :	156641	R/M SEWER MAIN	Account Number :	:
Start Date :	8/29/2019	HWY 201 N	Job Code :	5RMSM
Completion Date :	8/29/2019	MOUNTAIN HOME AR 72653	Printed :	✓
Create Date :	8/29/2019		Status :	Closed
Total Price :	369.77		Total Cost :	320.24

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM

User Name : alma

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
4260480070	CLAMP FCC 4" X 7 1/2" OD 4.74-5.14	0.00	0.00	1.00	75.98	75.98	75.98	75.98
Total					75.98	75.98	75.98	75.98

Work Order :	156686	SEWER MAIN UPGRADE	Account Number :	
Start Date :	9/3/2019	MEADOWBROOK DRIVE	Job Code :	5SMUPG
Completion Date :	9/30/2019	MOUNAIN HOME AR 72653	Printed :	✓
Create Date :	9/3/2019		Status :	Closed
Total Price :	2,414.35		Total Cost :	2,213.65

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
2235150008	PIPE 8" PVC SDR26 GJ SEWER	0.00	0.00	6.10	4.44	4.98	27.08	30.38
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	1.00	62.20	78.41	62.20	78.41
2410600040	WYE 4" SCH40 X 12" SDR26	0.00	0.00	1.00	173.00	173.00	173.00	173.00
Total					239.64	256.39	262.28	281.79

Work Order :	156717	TV SEWER MAIN	Account Number :	
Start Date :	9/3/2019	COOPER ST	Job Code :	5TVMAIN
Completion Date :	9/6/2019	MOUNAIN HOME AR 72653	Printed :	✓
Create Date :	9/3/2019		Status :	Closed
Total Price :	17.65		Total Cost :	17.65

Work Order :	156849	R/M SEWER MAIN	Account Number :	
Start Date :	9/6/2019	LOUANN DR	Job Code :	5RMSM
Completion Date :	10/23/2019	MOUNTAIN HOME AR 72653	Printed :	✓
Create Date :	9/6/2019		Status :	Closed
Total Price :	6,509.02		Total Cost :	5,755.25

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
2264204075	WYE 4" FLEX SADDLE DFW	0.00	0.00	1.00	31.50	31.50	31.50	31.50
2410321040	BEND 45 DEGREE 4" SCH40 DWV	0.00	0.00	1.00	7.48	6.86	7.48	6.86
6704444444	COUPLING 4" PVC X 4" PVC MISSION	0.00	0.00	2.00	20.17	27.00	40.34	54.00
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM

User Name : alma

2264204075	WYE 4" FLEX SADDLE DFW	0.00	0.00	1.00	31.50	31.50	31.50	31.50
6704444444	COUPLING 4" PVC X 4" PVC MISSION	0.00	0.00	2.00	20.17	27.00	40.34	54.00
2410321040	BEND 45 DEGREE 4" SCH40 DWV	0.00	0.00	1.00	7.48	6.86	7.48	6.86
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
2235150006	PIPE 6" PVC SDR26 GJ SEWER	0.00	0.00	14.00	2.61	2.54	36.54	35.56
Total					307.51	368.49	568.38	690.74

Work Order : 156893		SEWER MAIN REPLACEMENT	Account Number :
Start Date : 9/9/2019	VILLAGE GREEN	Job Code : 5SMREPLACE	Book.Sequence :
Completion Date : 9/30/2019	MOUNTAIN HOME AR 72653	Printed : <input checked="" type="checkbox"/>	Status : Closed
Create Date : 9/9/2019			
Total Price : 8,824.51			Total Cost : 8,612.19

Miscellaneous Usage

Description	Estimated Usage	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
MANHOLES (SCURLOCK)	1.00	1.00	5,574.11	5,574.11	5,574.11	5,574.11
TREE TRIMMING (NEALS TREE)	1.00	1.00	1,000.00	1,000.00	1,000.00	1,000.00
Total			6,574.11	6,574.11	6,574.11	6,574.11

Work Order : 156989		R/M SEWER MAIN	Account Number :
Start Date : 9/13/2019	TANGLEWOOD DR	Job Code : 5RMSM	Book.Sequence :
Completion Date : 10/4/2019	MOUNTAIN HOME AR 72653	Printed : <input checked="" type="checkbox"/>	Status : Closed
Create Date : 9/13/2019			
Total Price : 7,371.94			Total Cost : 6,731.00

Stock Usage

		Usage						
Code	Description	Estimated	Required	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
2264204075	WYE 4" FLEX SADDLE DFW	0.00	0.00	1.00	41.52	41.52	41.52	41.52
2410321040	BEND 45 DEGREE 4" SCH40 DWV	0.00	0.00	2.00	7.48	6.86	14.96	13.72
2235150006	PIPE 6" PVC SDR26 GJ SEWER	0.00	0.00	14.00	2.61	2.54	36.54	35.56
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
2264204075	WYE 4" FLEX SADDLE DFW	0.00	0.00	1.00	41.52	41.52	41.52	41.52
2410321040	BEND 45 DEGREE 4" SCH40 DWV	0.00	0.00	2.00	7.48	6.86	14.96	13.72
6704444444	COUPLING 4" PVC X 4" PVC MISSION	0.00	0.00	2.00	20.16	27.00	40.32	54.00
2235150004	PIPE 4" SCH40	0.00	0.00	10.00	1.77	1.74	17.70	17.40
6756662720	COUPLING 6" PVC X PVC MISSION	0.00	0.00	2.00	57.07	36.72	114.14	73.44
2264204075	WYE 4" FLEX SADDLE DFW	0.00	0.00	1.00	31.50	41.52	31.50	41.52

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM

User Name : alma

2410321040	BEND 45 DEGREE 4" SCH40 DWV	0.00	0.00	1.00	7.48	6.86	7.48	6.86
6704444444	COUPLING 4" PVC X 4" PVC MISSION	0.00	0.00	1.00	20.16	27.00	20.16	27.00
2235150004	PIPE 4" SCH40	0.00	0.00	20.00	1.77	1.74	35.40	34.80
2235150006	PIPE 6" PVC SDR26 GJ SEWER	0.00	0.00	14.00	2.61	2.54	36.54	35.56
Total					367.51	401.24	701.54	750.26

Work Order	: 156990		R/M SEWER MAIN	Account Number	:
Start Date	: 9/13/2019	S CHURCH ST	Job Code	: 5RMSM	Book.Sequence
Completion Date	: 10/4/2019	MOUNTAIN HOME AR 72653	Printed	: ✓	Status
Create Date	: 9/13/2019				: Closed
Total Price	: 0.00			Total Cost	: 0.00

Work Order	: 157106		R/M SEWER MAIN	Account Number	:
Start Date	: 9/19/2019	DODD ST	Job Code	: 5RMSM	Book.Sequence
Completion Date	: 9/19/2019	MOUNTAIN HOME AR 72653	Printed	: ✓	Status
Create Date	: 9/19/2019				: Closed
Total Price	: 223.16			Total Cost	: 193.34

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6704442720	COUPLING 4" PVC X 4" CON MISSION	0.00	0.00	1.00	32.40	30.78	32.40	30.78
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
2235150006	PIPE 6" PVC SDR26 GJ SEWER	0.00	0.00	14.00	2.61	2.54	36.54	35.56
Total					97.21	111.73	193.34	223.16

Work Order	: 157135	ARVEST BANK	TV SEWER MAIN	Account Number	: 00000319
Start Date	: 9/19/2019	2619 HWY 62 E	Job Code	: 5TVMAIN	Book.Sequence
Completion Date	: 9/20/2019	MOUNTAIN HOME AR 72653	Printed	: ✓	Status
Create Date	: 9/19/2019				: Closed
Total Price	: 17.65			Total Cost	: 17.65

Work Order	: 157175		TV SEWER MAIN	Account Number	:
Start Date	: 9/23/2019		Job Code	: 5TVMAIN	Book.Sequence
Completion Date	: 9/23/2019		Printed	: ✓	Status
Create Date	: 9/23/2019				: Closed
Total Price	: 17.65			Total Cost	: 17.65

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM
 User Name : alma

Work Order :	157244	R/M SEWER MAIN	Account Number :
Start Date :	9/25/2019	REDWING TRL	Book.Sequence :
Completion Date :	10/15/2019	MOUNTAIN HOME AR 72653	Status :
Create Date :	9/25/2019	Job Code :	Closed
Total Price :	5,902.86	Printed :	✓
			Total Cost :
			5,270.72

Stock Usage

		Usage						
Code	Description	Estimated	Required	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
6706662720	COUPLING 6" CON X 6" PVC MISSION	0.00	0.00	2.00	62.20	78.41	124.40	156.82
2235150006	PIPE 6" PVC SDR26 GJ SEWER	0.00	0.00	14.00	2.61	2.54	36.54	35.56
Total					189.21	237.77	409.74	506.02

Work Order :	157367	RAISE MANHOLE	Account Number :
Start Date :	9/26/2019	WESTERN HILLS WAY	Book.Sequence :
Completion Date :	10/3/2019	MOUNAIN HOME AR 72653	Status :
Create Date :	9/26/2019	Job Code :	Closed
Total Price :	1,971.79	Printed :	✓
			Total Cost :
			1,060.24

Stock Usage

		Usage						
Code	Description	Estimated	Required	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
6600002022	RISER 2" MANHOLE 250-24A IRON	0.00	0.00	1.00	35.62	52.49	35.62	52.49
6600002025	RISER 6" MANHOLE 250-24A IRON	0.00	0.00	2.00	80.70	154.28	161.40	308.56
6600002025	RISER 6" MANHOLE 250-24A IRON	0.00	0.00	4.00	80.70	154.28	322.80	617.12
Total					197.01	361.05	519.82	978.17

Work Order :	157401	R/M SEWER MAIN	Account Number :
Start Date :	9/30/2019	PARKWOOD DR	Book.Sequence :
Completion Date :	10/2/2019	MOUNAIN HOME AR 72653	Status :
Create Date :	9/30/2019	Job Code :	Closed
Total Price :	402.24	Printed :	✓
			Total Cost :
			411.96

Stock Usage

		Usage						
Code	Description	Estimated	Required	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
6756662720	COUPLING 6" PVC X PVC MISSION	0.00	0.00	2.00	57.07	36.72	114.14	73.44
Total					57.07	36.72	114.14	73.44

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM
 User Name : alma

Work Order : 157743	R/M MANHOLE	Account Number :
Start Date : 10/14/2019	Job Code : 5MHRM	Book.Sequence :
Completion Date : 10/14/2019	Printed :	Status : Closed
Create Date : 10/14/2019		
Total Price : 121.94		Total Cost : 121.94

Stock Usage

		Usage						
Code	Description	Estimated	Required	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
6601348123	LID MANHOLE	0.00	0.00	1.00	121.94	121.94	121.94	121.94
Total					121.94	121.94	121.94	121.94

Work Order : 157826	RAISE MANHOLE	Account Number :
Start Date : 10/16/2019	HWY 178	Book.Sequence :
Completion Date : 10/17/2019	MOUNTAIN HOME AR 72653	Status : Closed
Create Date : 10/16/2019		
Total Price : 871.64		Total Cost : 719.21

Stock Usage

		Usage						
Code	Description	Estimated	Required	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
6600002023	RISER 3" MANHOLE 250-24A IRON	0.00	0.00	1.00	51.01	77.17	51.01	77.17
6600002025	RISER 6" MANHOLE 250-24A IRON	0.00	0.00	1.00	80.70	154.28	80.70	154.28
6601348123	LID MANHOLE	0.00	0.00	1.00	121.94	121.94	121.94	121.94
Total					253.64	353.39	253.65	353.39

Work Order : 157937	RAISE MANHOLE	Account Number :
Start Date : 10/23/2019	NORTH ST	Book.Sequence :
Completion Date : 10/25/2019	MOUNTAIN HOME AR 72653	Status : Closed
Create Date : 10/23/2019		
Total Price : 654.67		Total Cost : 551.06

Stock Usage

		Usage						
Code	Description	Estimated	Required	Actual Usage	Unit Cost	Unit Price	Total Cost	Total Price
6600002023	RISER 3" MANHOLE 250-24A IRON	0.00	0.00	1.00	51.01	77.17	51.01	77.17
Total					51.01	77.17	51.01	77.17

CITY OF MOUNTAIN HOME WATER DEPARTMENT

Work Order Report

Detail

Date : 11/5/2019 2:28:43 PM

User Name : alma

Work Order	: 157974	RAISE MANHOLE	Account Number	:
Start Date	: 10/28/2019	RIDGEWOOD DR	Job Code	: 5RMH
Completion Date	: 10/30/2019	MOUNAIN HOME AR 72653	Printed	: ✓
Create Date	: 10/28/2019		Status	: Closed
Total Price	: 1,017.29		Total Cost	: 777.63

Stock Usage

Code	Description	Usage			Unit Cost	Unit Price	Total Cost	Total Price
		Estimated	Required	Actual Usage				
6600002025	RISER 6" MANHOLE 250-24A IRON	0.00	0.00	2.00	80.70	154.28	161.40	308.56
6600002024	RISER 4" MANHOLE 250-24A IRON	0.00	0.00	1.00	63.85	101.84	63.85	101.84
6601348123	LID MANHOLE	0.00	0.00	1.00	121.94	121.94	121.94	121.94
Total					266.49	378.06	347.19	532.34

Total number of work orders listed : 25

APPENDIX E
LIFT STATION MAINTENANCE RECORDS

YEAR 2019 MOUNTAIN HOME WASTEWATER PLANT LIFT STATION MONTHLY RUN TIMES

LIFT STATION NAME	PUMP #	BEGINNING	ENDING	TOTAL RUN
		READING	READING	TIME
AUGUST				
IND PARK LS #1	PUMP #1	1246.9	1260.2	13.3
	PUMP #2	6280	6301.5	21.5
IND PARK LS #2	PUMP #1	367.2	387.7	20.5
	PUMP #2	2178.7	2200.7	22
IND PARK LS #3	PUMP #1	625	627.1	2.1
	PUMP #2	7.1	9.8	2.7
MONROE LS	PUMP #1	8527.1	8557	29.9
	PUMP #2	3782.8	3812.1	29.3
FRANKLIN LS	PUMP #1	2102.59	2113.25	10.66
	PUMP #2	3863.18	3873.41	10.23
WOODCREEK	PUMP #1	3641.8	3653.7	11.9
	PUMP #2	5771.17	5783.7	12.53
PARKWOOD LS	PUMP #1	1802.2	1812.1	9.9
	PUMP #2	1730.5	1739.6	9.1
INDIAN CREEK	PUMP #1	5439.5	5532.2	92.7
	PUMP #2	5394.7	5494.9	100.2
HWY 62 . LS	PUMP #1	217.88	220.55	2.67
	PUMP #2	203.99	206.43	2.44
CR 390 LS	PUMP #1	4400	4423.1	23.1
	PUMP #2	4467.6	4499.2	31.6
BIG CREEK LS	PUMP #1	545.48	551.68	6.2
	PUMP #2	518.26	524.5	6.24
CARLILE LS	PUMP #2	44.6	59.4	14.8
	PUMP #2	42.1	55.7	13.6

YEAR 2019		MOUNTAIN HOME WASTEWATER PLANT LIFT STATION MONTHLY RUN TIMES		
		BEGINNING	ENDING	TOTAL RUN
		READING	READING	TIME
LIFT STATION NAME	PUMP #			September
IND PARK LS #1	PUMP #1	1260.2	1270.5	10.3
	PUMP #2	6301.5	6317.7	16.2
IND PARK LS #2	PUMP #1	387.7	404.1	16.4
	PUMP #2	2200.7	2218	17.3
IND PARK LS #3	PUMP #1	627.1	629.1	2
	PUMP #2	9.8	10.9	1.1
MONROE LS	PUMP #1	8557	8581.5	24.5
	PUMP #2	3812.1	3835.9	23.8
FRANKLIN LS	PUMP #1	2113.25	2122.3	9.05
	PUMP #2	3873.41	3881.79	8.38
WOODCREEK	PUMP #1	3653.7	3665.5	11.8
	PUMP #2	5783.7	5796.3	12.6
PARKWOOD LS	PUMP #1	1812.1	1820.7	8.6
	PUMP #2	1739.6	1747.9	8.3
INDIAN CREEK	PUMP #1	5532.2	5597.6	65.4
	PUMP #2	5494.9	5563.8	68.9
HWY 62 . LS	PUMP #1	220.55	222.41	1.86
	PUMP #2	206.43	208.31	1.88
CR 390 LS	PUMP #1	4423.1	4464.4	41.3
	PUMP #2	4499.2	4499.2	0
BIG CREEK LS	PUMP #1	551.68	558.14	6.46
	PUMP #2	524.5	531.04	6.54
CARLILE LS	PUMP #2	59.4	72.1	12.7
	PUMP #2	55.7	72.4	16.7

YEAR 2019		MOUNTAIN HOME WASTEWATER PLANT LIFT STATION MONTHLY RUN TIMES		
		BEGINNING	ENDING	TOTAL RUN
		READING	READING	TIME
LIFT STATION NAME	PUMP #			October
IND PARK LS #1	PUMP #1	1270.5	1286.9	16.4
	PUMP #2	6317.7	6344.7	27
IND PARK LS #2	PUMP #1	404.1	430.2	26.1
	PUMP #2	2218	2246.3	28.3
IND PARK LS #3	PUMP #1	629.1	631.6	2.5
	PUMP #2	10.9	13.25	2.35
MONROE LS	PUMP #1	8581.5	8609.5	28
	PUMP #2	3835.9	3862.9	27
FRANKLIN LS	PUMP #1	2122.3	2133.75	11.45
	PUMP #2	3881.79	3892.44	10.65
WOODCREEK	PUMP #1	3665.5	3679.4	13.9
	PUMP #2	5796.3	5810.68	14.38
PARKWOOD LS	PUMP #1	1820.7	1830.6	9.9
	PUMP #2	1747.9	1757.4	9.5
INDIAN CREEK	PUMP #1	5597.6	5687.4	89.8
	PUMP #2	5563.8	5670	106.2
HWY 62 . LS	PUMP #1	222.41	224.79	2.38
	PUMP #2	208.31	210.98	2.67
CR 390 LS	PUMP #1	4464.4	4500	35.6
	PUMP #2	4499.2	4510.8	11.6
BIG CREEK LS	PUMP #1	558.14	564.19	6.05
	PUMP #2	531.04	538.84	7.8
CARLILE LS	PUMP #2	72.1	85.2	13.1
	PUMP #2	72.4	93.8	21.4

APPENDIX F
FATS, OIL, AND GREASE (FOG) MANAGEMENT

No Grease Down the Drain

Grease

is a byproduct of cooking. It comes from meat, lard, oil, shortening, butter, margarine, food scraps, baking goods, sauces and dairy products. When grease washes down the sink, it sticks to the insides of the pipes that connect your home or business to the city's sewer. It also coats the insides of the city's sewer pipes.

Eventually, the grease can build up until it completely blocks sewer pipes. That can create difficult and expensive maintenance problems for both the city and private property owners.

Blocked sewer pipes can cause raw sewage to back up into your home or business, or overflow into streets and streams.

Garbage disposals don't keep grease out of sewer pipes. Products that claim to dissolve grease may dislodge a blockage, but will only cause problems farther on down the line when the grease hardens again.

How You Can Help

AT HOME:

- Don't pour grease down sink drains or toilets.
- Scrape grease and food scraps into the trash.
- Or, pour grease into steel cans, let it harden and throw in the trash.
- Catch food scraps and other solids with a strainer in the sink drain, and empty the strainer into the trash.
- Stop using your garbage disposal if possible, or try to minimize its use.

Restaurant and Building Owners:

- Recycle grease and oil.
- Don't pour grease or oil into sinks, floor drains, or onto a parking lot or street.
- Use a grease trap or interceptor that is designed, installed, and maintained correctly.
- Never put solids into grease traps or interceptors.
- Check and maintain grease traps and interceptors regularly.
- Stop using your garbage disposal if possible, or try to minimize its use.

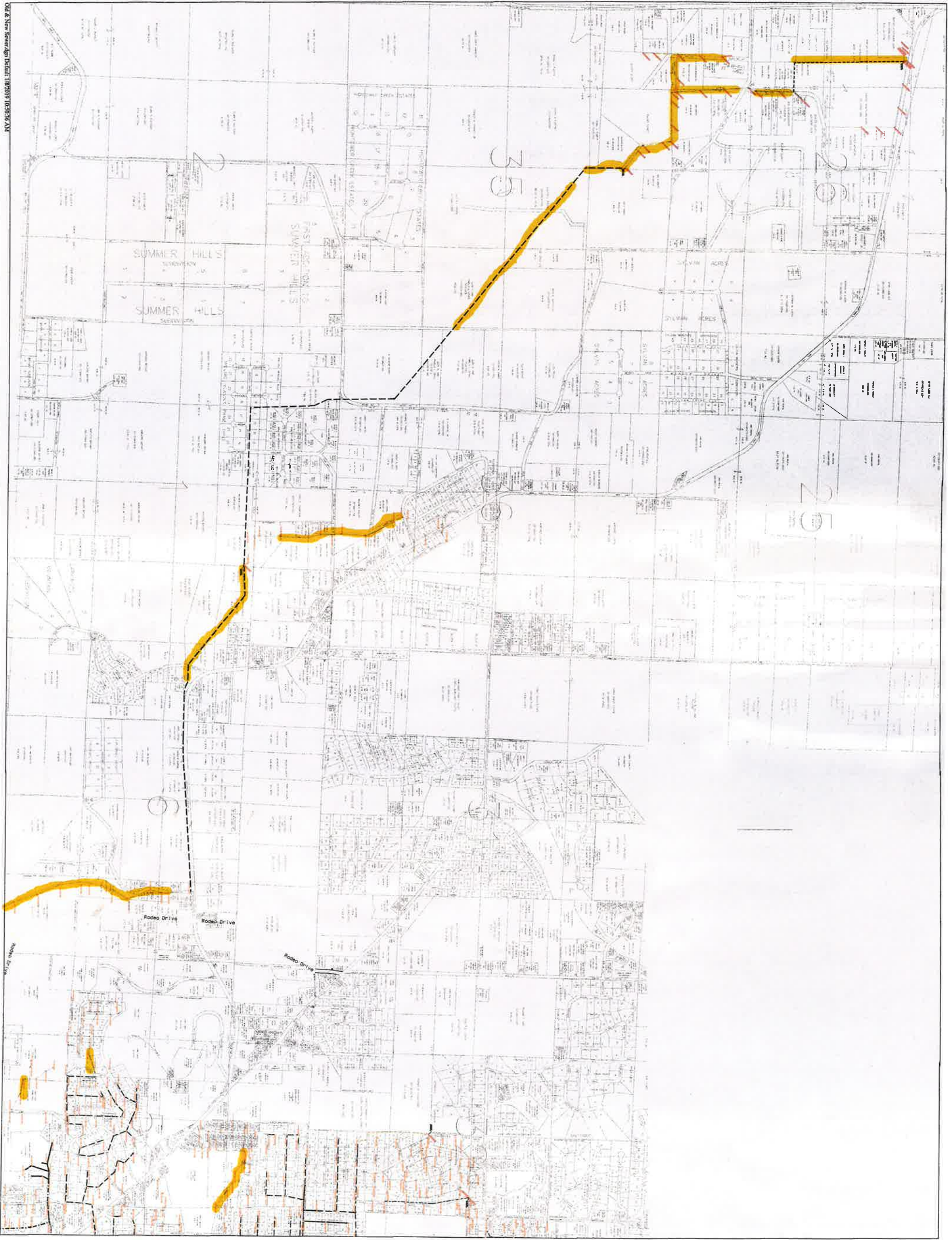
What Not to Flush:

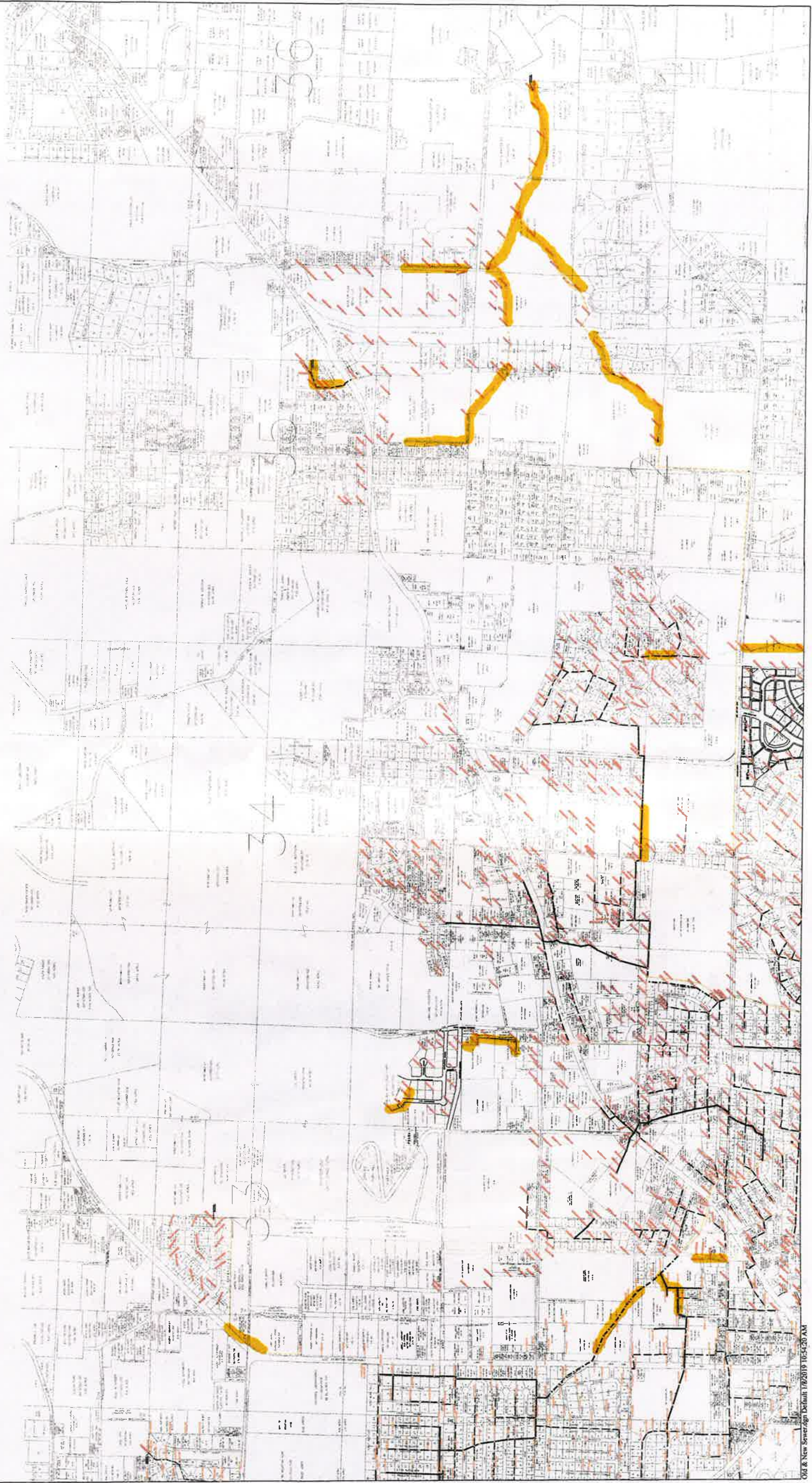
Grease in sewer pipes is a big problem. But there are other things that should never enter the sewer system because they can also block pipes, cause mechanical problems at pump stations or treatment plants, and pollute the environment.

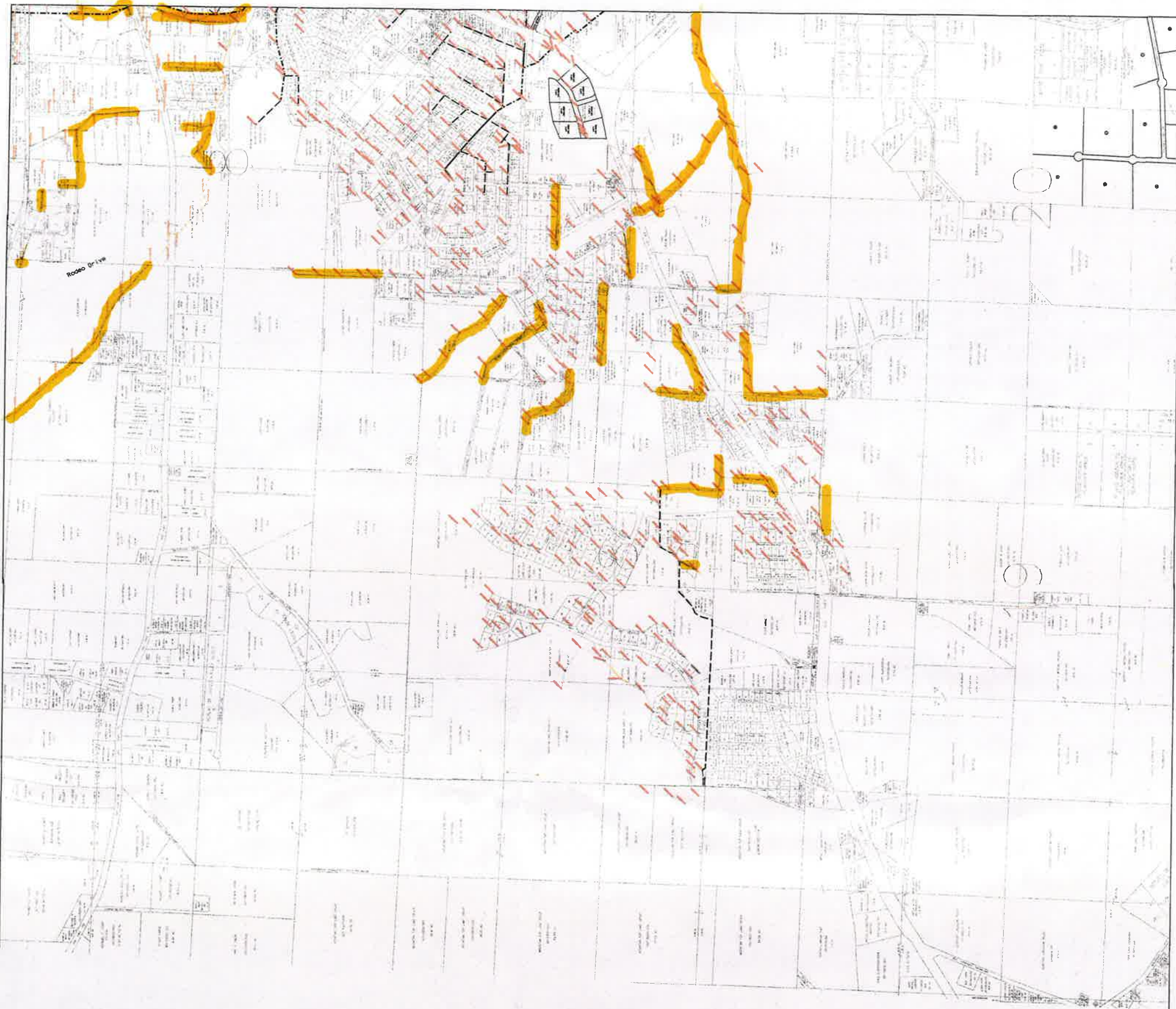
Basically, the only thing you should ever flush down a toilet is human waste (urine and feces) and toilet paper. Here is a list of some of things to keep out of the toilet.

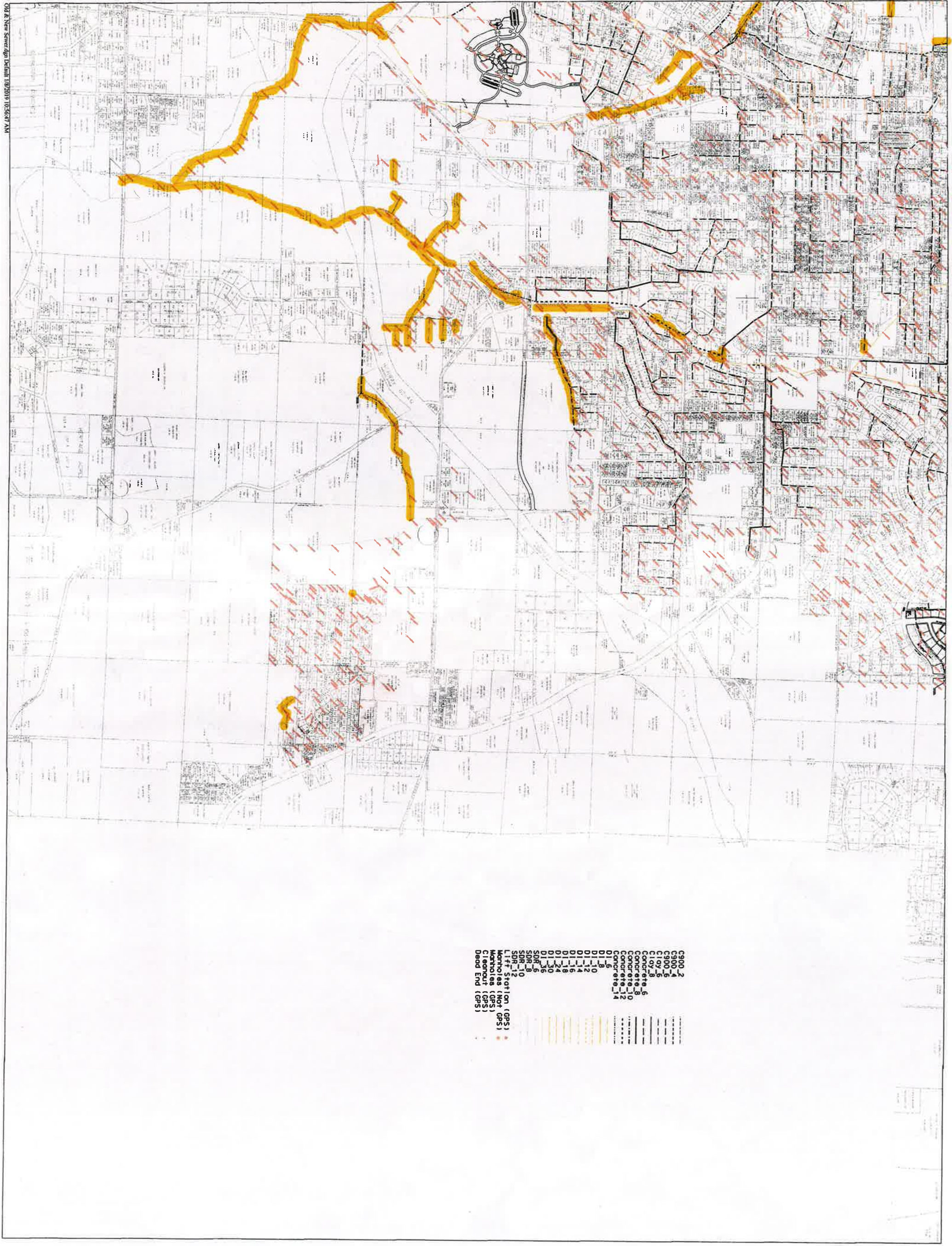
- _ disposable diapers
- _ paper towels
- _ feminine personal hygiene products
- _ cotton balls and swabs
- _ unused medications (put original containers in a plastic, zip-lock bag and throw the bag in the trash)
- _ condoms
- _ cleaning wipes of any kind
- _ facial tissue
- _ bandages and bandage wrappings
- _ razor blades, syringes and needles
- _ disposable toilet brushes

APPENDIX G
EASEMENT RIGHT OF WAY CLEANING MAPS









- CS900_2
- CS900_4
- CS900_5
- Clay_5
- Clay_8
- Concrete_5
- Concrete_8
- Concrete_10
- Concrete_12
- Concrete_14
- D1_8
- D1_10
- D1_12
- D1_14
- D1_16
- D1_18
- D1_24
- D1_30
- SDR_5
- SDR_8
- SDR_10
- SDR_12
- Li++ Station (GPS)
- Manholes (GPS)
- Manholes (GPS)
- Manhole (GPS)
- Dead End (GPS)

APPENDIX H
RAINFALL RECORDS

Month/Yr AUGUST 2019

Influent

Day	Weather		Side #1	Side #2	NH ₃ -N T-N-T mg/l	BOD		PHOS		TSS		VSS		
	Precip	Type	MGD	MGD		mg/l	lbs	mg/l	lbs	mg/l	lbs	mg/l	% VSS	
1			2.533	2.005		1.981								
2			2.610	2.007		1.816								
3	.19	R	2.615	1.977		1.475								
4	.49	R	2.559	1.916		1.762								
5	.09	R	2.591	1.974		1.996								
6	.05	R	2.585	1.979		1.983								
7			2.595	2.011	18.9	1.943	166.5	2,698		214	3,468	191	89%	
8	.59	R	2.582	1.951		1.984			7.31	112.2				
9	.92	R	2.620	2.002		2.370								
10			2.534	1.957		2.808								
11	.46	R	2.420	1.851		1.723								
12			2.725	2.056		1.956								
13			2.668	2.058		1.801								
14			2.661	2.000	17.8	1.801	142.5	2,140		174	3,614	157	90%	
15			2.688	2.041		1.742			12.3	225.7				
16	.02	R	2.680	2.014		1.804								
17			2.659	1.972		2.117								
18	.06	R	2.625	1.970		1.800								
19			2.700	2.028		1.792								
20	.54	R	2.722	2.042		1.824								
21	1.16	R	2.657	1.982		1.769	196.5	3,899		198	2,921	183	92%	
22	.22	R	2.791	2.085		2.342			4.68	82.0				
23	.18	R	2.627	2.002		1.697								
24	3.14	R	2.720	2.062		1.785								
25	.3	R	2.636	1.960		54.2								
26	.01	R	2.706	2.011		3.226								
27	.65	R	2.667	1.986		2.548								
28			2.750	2.062	10.2	3.722	108.0	3,352		105	3,259	98	93%	
29			2.780	2.103		2.866			5.38	122.0				
30			2.678	2.035		2.595								
31			2.648	1.981		2.586								
Min.														
Max.														
Avg.	.53	R	2.647	2.005	15.6	2.240	153.4	2,772	7.42	135.5	173	3,066	157	91%
Total	9.07	R	82.067	62.160	46.9	69.526	613.5	11,089	29.67	541.9	691	12,262	629	

* c - clear w - windy cl - cloudy
ca - calm r - rain s - snow

lbs. = mg/l x 8.34 x flow in MGD
% removal = $\frac{\text{Influent} - \text{Effluent}}{\text{Influent}} \times 100$

SVI = 30

% VSS = $\frac{\text{VSS}}{\text{TSS}} \times 100$

F/M = lbs

TSS

Month/Yr SEPTEMBER 2019

Influent

Day	Weather		Side #1	Side #2	NH ₄ -N T-N-T mg/l	BOD		PHOS		TSS		VSS		
	Precip	Type	NHRS Flow MGD	NHRS Flow MGD		MGD	mg/l	lbs	mg/l	lbs	mg/l	lbs	mg/l	% VSS
1	.04	R	2.719	2.013		2.524								
2			2.683	1.953		2.459								
3			2.666	1.948		2.388								
4			2.670	1.958	17.1	2.496	156.0	3,247		225	4,684	195	87%	
5			2.691	1.921		2.525			9.92	206.0				
6			2.686	1.911		1.961								
7			2.612	1.850		1.813								
8			2.741	1.936		2.071								
9			2.679	1.942		1.742								
10	.06	R	2.737	1.944		1.809								
11			2.729	1.927	20.1	1.865	144.0	2,240		205	3,189	184	90%	
12			2.666	1.901		1.503			10.90	187.3				
13			2.736	1.955		1.566								
14	.05	R	2.633	1.873		1.740								
15			2.690	1.911		1.920								
16			2.676	1.929		1.955								
17			2.684	1.900		2.100								
18			2.645	1.909	20.4	1.974	162.0	2,467		241	3,968	214	89%	
19			2.682	1.937		2.026			8.12	155.8				
20	.04	R	2.726	1.941		1.825								
21	.01	R	2.601	1.850		1.828								
22			2.622	1.921		1.855								
23	.06	R	2.620	1.932		1.787								
24	.52	R	2.589	1.907		1.861			9.49	175.7				
25	.06	R	2.629	1.925		1.876								
26	.37	R	2.642	1.900	20.9	2.052	159.0	2,721		205	3,508	183	89%	
27			2.672	1.889		1.947								
28	.24	R	2.658	1.911		1.857								
29			2.611	1.866		2.129								
30			2.600	1.895		1.914								
31														
Min.														
Max.														
Avg.	.15	R	2.667	1.920	19.6	1.979	155.5		9.61	181.2	219	3,837	194	89%
Total	1.45	R	80.000	57.500	78.5	59.368	621	10,875	38.43	724.8	876	15,349	776	

BIO. {

FPS -

* c - clear w - windy cl - cloudy
ce - calm r - rain s - snow

lbs. = mg/l x 8.34 x flow in MGD
% removal = $\frac{\text{Influent} - \text{Effluent}}{\text{Influent}} \times 100$

SVI = 30

F/M = lb

% VSS = $\frac{\text{VSS}}{\text{TSS}} \times 100$

Month/Yr OCTOBER 2019

Influent

Day	Weather		Side #1	Side #2	NH ₄ -N T-T mg/l	BOD		PHOS		TSS		VSS		
	Precip	Type	NRRS Flow MGD	NRRS Flow MGD		MGD Flow	mg/l	lbs	mg/l	lbs	mg/l	lbs	mg/l	% VSS
1			2.582	1.934		1.863								
2			2.638	1.938	20.0	1.926	184.5	2964			211	3,389	188	89%
3			2.719	1.938		1.932			9.93	188.0				
4			2.736	1.948		2.281								
5	.02	R	2.631	1.879		1.945								
6	1.83	R	2.619	1.911		2.133								
7	.08	R	2.680	1.900		3.483								
8			2.681	1.924		2.360								
9			2.680	1.938	19.3	2.276	139.5	2,648			173	3,284	145	84%
10	.61	R	2.552	1.853		2.165			7.02	138.8				
11	1.05	R	2.525	1.825		2.405								
12			2.511	1.731		3.619								
13			2.466	1.741		2.405								
14			2.622	1.859		1.974								
15	.22	R	2.663	1.886		2.117								
16			2.424	1.729	17.4	2.714	240.0	5432			246	5,563	217	88%
17			2.641	1.879		2.831			11.20	260.6				
18			2.660	1.882		2.783								
19	.03	R	2.580	1.822		2.327								
20			2.561	1.787		2.301								
21	.56	R	2.570	1.808		2.927								
22			2.564	1.807		2.088								
23			2.580	1.798	19.1	1.659	144.0	1,992			199	2,753	178	89%
24	.75	R	2.587	1.819		1.173			10.20	197.4				
25	.18	R	2.715	1.858		2.468								
26	.48	R	2.445	1.688		2.742								
27			2.518	1.722		2.558								
28			2.570	1.775		2.355								
29	.16	R	2.598	1.850		2.463								
30	.34	R	2.596	1.854	17.5	2.084	117.0	2,034			239	4,154	216	90%
31			2.610	1.800		2.211			11.70	274.2				
Min.														
Max.														
Avg.	.49	R	2.598	1.841	18.7	2.341	165.0	3,014	10.01	211.8	214	3,830	189	88%
Total	6.31	R	80.524	57.083	93.3	72.568	825.0	15,000	50.06	1,059	1,068	19,148	944	

* c - clear w - windy cl - cloudy
ca - calm r - rain s - snow

lbs. = mg/l x 8.34 x flow in MGD
% removal = $\frac{\text{Influent} - \text{Effluent}}{\text{Influent}} \times 100$

SVI = $\frac{30 \text{ min}}{\text{settling rate}}$

F/M = $\frac{\text{lbs.}}{\text{lb.}}$

% VSS = $\frac{\text{VSS}}{\text{TSS}} \times 100$

TSS