## Jennifer Cline

**From:** Jennifer Cline <jcline@cityofmolalla.com>
**Sent:** Monday, February 29, 2016 2:02 PM
**To:** COLE David
**Cc:** Dan Huff; Dennis Welle; Jason Clifford; 'YELTON-BRAM Tiffany'
**Subject:** 2015 Molalla Annual I&I Report
**Attachments:** FINAL_2015 Molalla Annual I&I Report.pdf

Hi David,

Please see the attached 2015 Molalla Annual I&I Report document submitted in accordance with NPDES Permit #101514, Table B13: Reporting Requirements and Due Dates. A hard copy has been placed in the mail today as well.

Please let me know if you have any questions.

Regards,

**Jennifer Cline, P.E. | Public Works Director**
Licensed in OR, WA
City of Molalla
117 N Molalla Ave. | PO Box 248 ✉ | Molalla, OR 97038
O: 503.759.0218 | F: 503.829.3676

***Public Works Department***
*117 N Molalla Avenue*
*PO Box 248*
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February 29, 2016

David Cole
Oregon DEQ – Northwest Region
700 NE Multnomah St, Suite 600
Portland, OR 97232

**RE: 2015 ANNUAL INFLOW & INFILTRATION REPORT**

This report is to provide an annual summary of the actions the City of Molalla has taken for the 2015 calendar year in accordance with City's Inflow and Infiltration Assessment and Reduction Plan and NPDES Permit No. 101514.

Please contact myself (503)-759-0218 or Dan Huff (503) 829-6855 if you have and questions in regards to this letter or requirements above.

Best Regards,

Jennifer Cline

Jennifer Cline, P.E.
Public Works Director

Cc: Dan Huff, City Manager
Dennis Welle, Public Works Supervisor

| Project/Task | Description & Information | Status |
|---|---|---|
| I/I Assessment and Reduction Plan | In January 2015 the City's Inflow and Infiltration (I/I) Assessment and Reduction Plan was finalize and accepted by DEQ, Northwest Region on February 9, 2015. Later in October of 2015 a minor update to the plan and schedule had been made for clarifications and budget adjustments. | 100% |
| Flow Monitoring | Public Works purchased seven (7) HACH FL900 flow data loggers with accessories in January 2015. These data loggers were installed and calibrated at pre-determined strategic locations and began monitoring flows February 2 through April 29th. During this time, the loggers were monitored, sensors were cleaned/cleared of any debris for accuracy and data was downloaded for future analysis.<br><br>A quick summary of the flow data was generated once all the results had been collected and used to help determine basin prioritization for CCTV inspection and smoke testing investigations. In regards to the summary, peaking factors for a large storm event in March were analyzed and compared to the average flow rates. See Appendices for the data results and a Scattergraph analysis. Further analysis of the flow data will be included in the final I/I Cost Effective Analysis. | 100% |
| Manhole Inspections | Public Works began inspecting manholes on May 6, 2015. Prior to the inspection, the crewmembers attended a day long inspection course provided by Rob Lee, from Brown and Caldwell. This class focused on the proper method of inspection and documentation in accordance with NASSCO Manhole Assessment Certification Program (MACP) inspection guidelines. The primary inspection of all mapped and labeled manholes was completed on August 11, 2015. Inspection information is revised as needed when new visual issues have been identified. Inspection data has been provided in the Appendices. | 100% |
| CCTV Inspections | Beginning in May of 2015, the City contracted with CCTV Service crew to video, inspect and report the condition of the sanitary sewer and storm lines for an upcoming Urban Renewal project on Molalla Ave. In addition to the work completed for the Molalla Avenue Improvement project, the City advertised a request for services to video and inspect additional sewer collection lines that the budget would allow for. The contract was signed in November and the video crew began their work in early December 2015. Shortly after beginning the inspections, the Public Works crew and video crew encountered several delays due to heavy rainfall resulting in large flows in the system. In order for the | 23% |

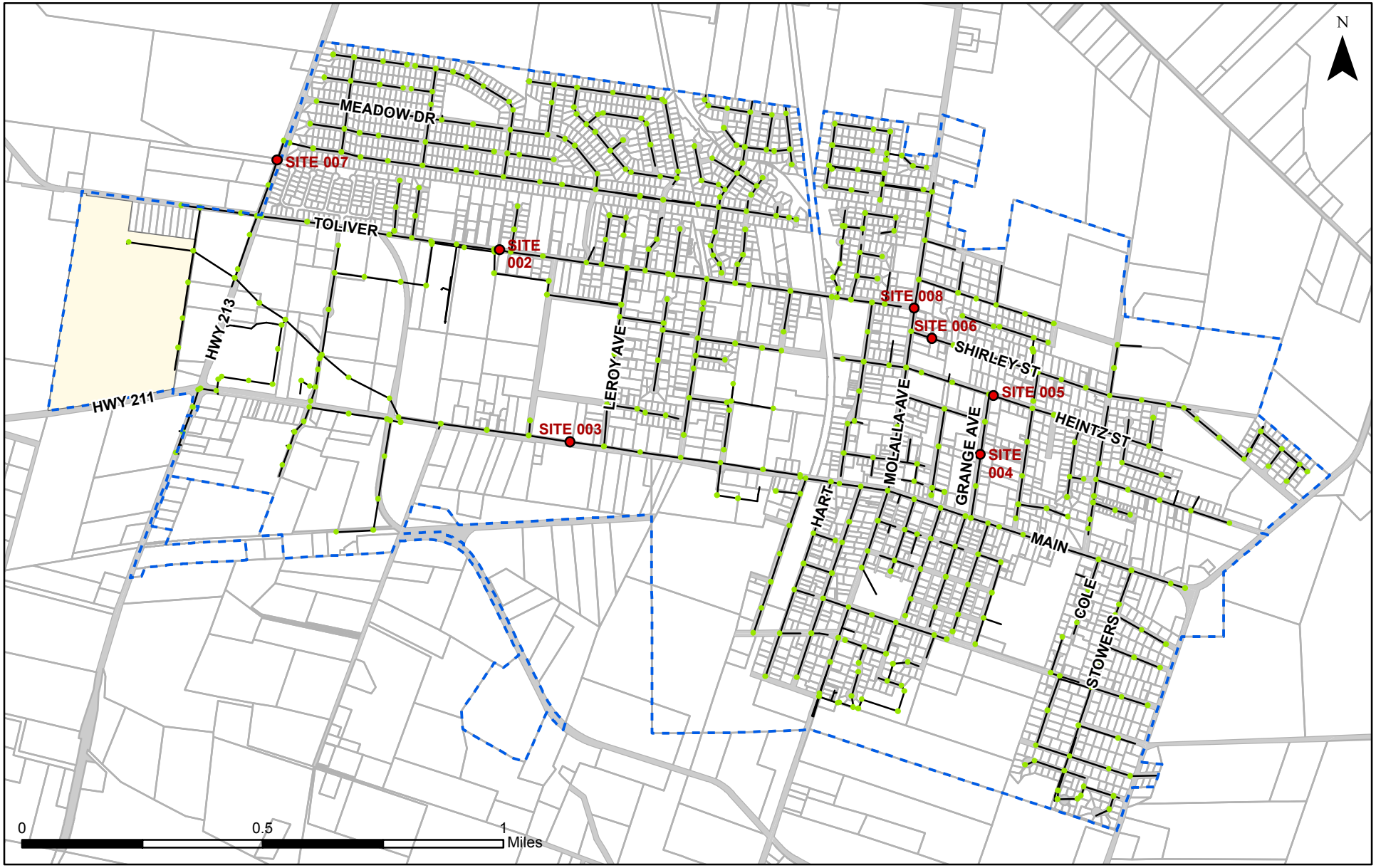
| | | |
|---|---|---|
| | City to effectively clean the lines and the video crew to obtain clear footage, the lines must be near 30% or less capacity. The extreme wet weather events in December and January directly affected the City's ability to clean the system and inhibited the video crew from inspections due to the exceeded capacities of the lines. As of February 1, 2016 the video crew has completed and reported approximately 16,429 LF of sewer line inspections. The total anticipated sanitary footage budgeted this fiscal year is 69,972 LF. A summary report of each video inspection is included in the Appendices. | |
| Manhole Lid Replacements | In Early December, through review of the manhole inspection data, it was identified the City had approximately 114 sewer manhole with storm sewer lids and a small collection of storm manholes with sewer lids. The storm sewer lid locations were mapped, see Appendices. Storm sewer lids have 16 holes per lid, where sewer lids have only two (2) holes thus reducing the possibility of rain water entering the sewer system. To address this issue, public works identified all the non-conforming sewer lid locations on a map and swapped storm for sewer lids wherever possible. Next the city purchased 96 sewer lids and replaced the storm lids. This is a simple project, but an effective way to simply minimize inflow into the sewer collections system. | 100% |

# APPENDIX

| *APPENDIX* | *TITLE* |
|---|---|
| *B1* | FLOW MONITORING LOCATIONS MAP |
| *B2* | FLOW DATA SUMMARY AND SCATTERGRAPH |
| *C1* | MANHOLE INSPECTION DATA SHEETS |
| *D1* | CCTV INSPECTION SUMMARY REPORTS – MOLALLA AVE |
| *D2* | CCTV INSPECTION SUMMARY REPORTS – PHASE 1 |
| *D3* | MOLALLA CCTV INSPECTION MAP – PHASE 1 |
| *E1* | STORM LID ISSUE MAP |

## Flow Meter Locations

APPENDIX B1 - FLOW MONITORING LOCATIONS MAP




Flow Meter Sites

Manholes

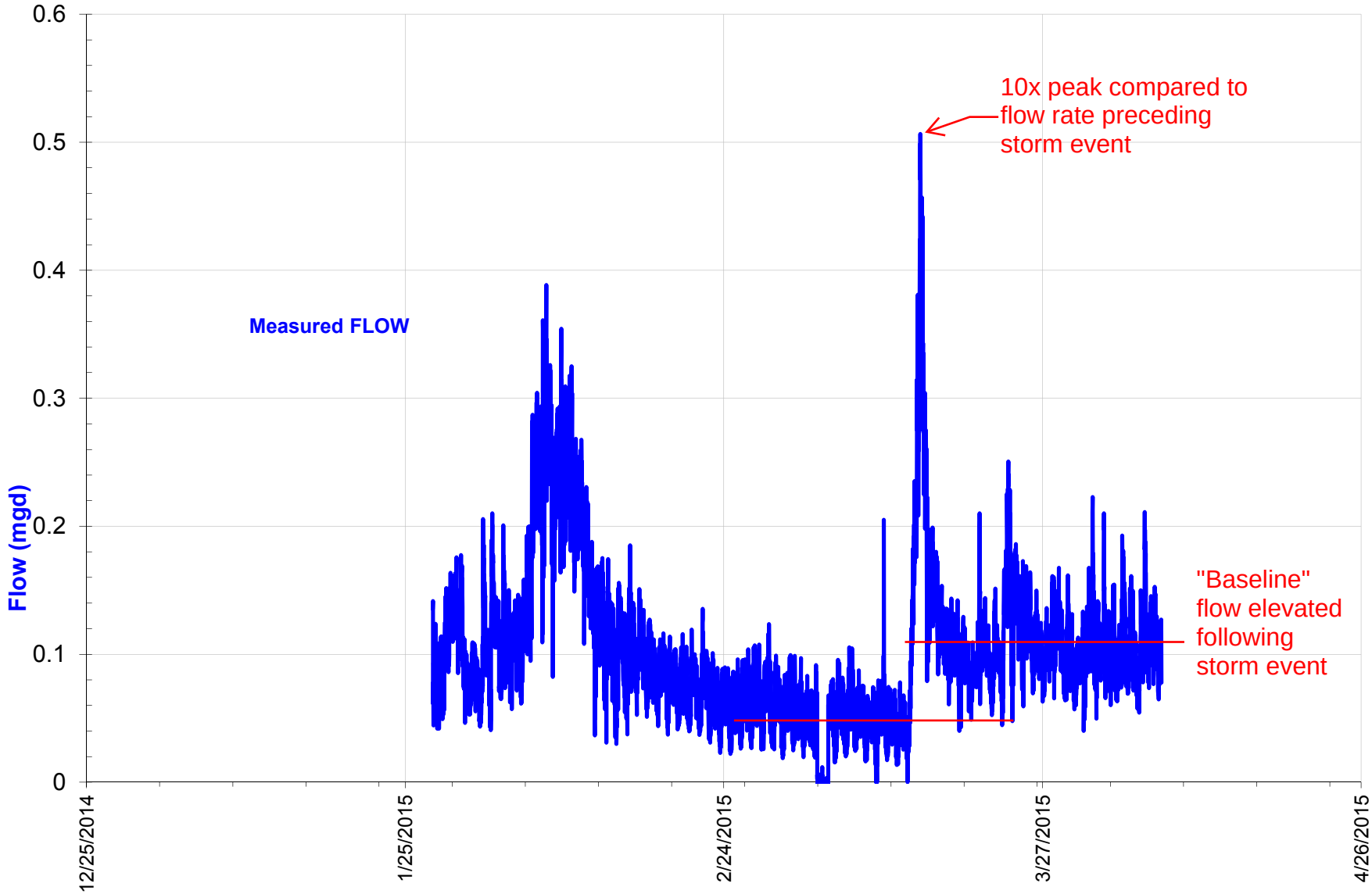
Sewer Mains

Wastewater Treatment_Plant

Molalla City Boundary

Peaking factors (peak flow rate compared to the average flow rate immediately preceding the storm) for the bigger storm on March 15.

- Flow Meter Site 002, Tolliver – 5x peaking factor
- Flow Meter Site 003, Pool and Sp'aah – 6x peaking factor
- Flow Meter Site 004, Grange – 10x peaking factor
- Flow Meter Site 005, Heintz – 6x peaking factor
- Flow Meter Site 006, Shirley – 9x peaking factor
- Flow Meter Site 007, Hwy 213 – 3x peaking factor
- Flow Meter Site 008, Molalla Ave – 6x peaking factor






**Plot Flow**

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| General | | | | | | | | | Manhole Specs | | | | | | | Frame and Cover | | | | Grade Rings | | Barrel Wall | | Bench/Channel | | Structural/O&M Condition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Date | Time | Inspector | Weather Conditions | Surface Condition | Traffic Volume | Rim to top of cone (tenths) | Average Rim to Grade Height (tenths) | Chimney (y/n) | Cone Depth (tenths) | Barrel/Wall Height (tenths) | Rung Type | # of Steps | Inflow Potential | Joint Issues | Notes | Type | No_Slots | Material | Condition | Type2 | Condition3 | Type4 | Condition5 | Type6 | Condition7 | Rungs | Concrete Corrosion | Corrosion Location | Evidence of Infiltration | Evidence of Surcharge | Size (in) |
| BC_1 | 8/3/2015 | 220 | Dan Z | Cloudy | Sidewalk/ROW | None | 12 | 12 | Y | 36 | 98.4 | Metal | 10 | HIGH | | | Bolted | | Cast Iron | Loose | Concrete | Loose Grade Ring | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| BC_2 | 6/17/2015 | 950 | Dan Z | Sunny | Sidewalk/ROW | None | 12 | 0 | y | 36 | 0 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| BC_3 | 8/3/2015 | 325 | Dan Z | Cloudy | Easement | None | 6 | 6 | y | 42 | 36 | Metal | 5 | Med | | | Bolted | | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| BC_4 | 8/3/2015 | 230 | Dan Z | Cloudy | Easement | None | 0 | 24 | | 0 | 0 | | | Med | COULD NOT OPEN LID | | | | | | | | | | | | | | | | | 15 |
| BC_5 | 7/28/2015 | 100 | Dan Z | Sunny | Sidewalk/ROW | None | 12 | 12 | y | 30 | 21.6 | Metal | 4 | med | | | SOLID | | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| BC_A_1 | 7/29/2015 | 1040 | Dan Z | Sunny | Easement | Residential | 0 | 0 | | 0 | 0 | | | | | Buried under pavement - could not assess | | | | | | | | | | | | | | | | |
| BC_A_10 | 6/4/2015 | 234 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 30 | 18 | | 0 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_11 | 6/4/2015 | 240 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 24 | 12 | | 0 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_12 | 6/4/2015 | 247 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 24 | 30 | Metal | 4 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_13 | 6/4/2015 | 254 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 42 | 30 | Metal | 6 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_14 | 6/4/2015 | 321 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 24 | 20.4 | Metal | 3 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_15 | 7/31/2015 | 820 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 30 | 32.4 | Metal | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Corroded Metal | | | | | 8 |
| BC_A_16 | 7/31/2015 | 825 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 30 | 50.4 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_17 | 7/31/2015 | 830 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 24 | 12 | Metal | 3 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_18 | 7/31/2015 | 805 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 30 | 37.2 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_19 | 7/31/2015 | 800 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 30 | 54 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_2 | 6/4/2015 | 1116 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 30 | 36 | Metal | 6 | med | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_20 | 6/4/2015 | 341 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 48 | 0 | | | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_21 | 6/4/2015 | 349 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 48 | 42 | Metal | 5 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_22 | 6/4/2015 | 331 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 48 | 36 | Metal | 5 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_23 | 8/1/2015 | 1125 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | N | 36 | 126 | Plastic Laminate | 13 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| BC_A_24 | 6/4/2015 | 315 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 18 | 24 | | 0 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_25 | 6/4/2015 | 336 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 48 | 36 | Plastic Laminate | 5 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_26 | 6/4/2015 | 308 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 18 | 30 | | 0 | low | between wall and cone | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| BC_A_27 | 6/4/2015 | 301 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 24 | 12 | | 0 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_28 | 7/31/2015 | 755 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 74.4 | Metal | 8 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_29 | 7/31/2015 | 750 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 48 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A_3 | 6/4/2015 | 1109 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 36 | Metal | 6 | med | everywhere | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | BENCH, everywhere | | 8 |
| BC_A_30 | 7/29/2015 | 1055 | Dan Z | Sunny | Sidewalk/ROW | DOT | 6 | 0 | n | 36 | 126 | Plastic Laminate | 12 | LOW | | | Vented/Slots* | 2 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_31 | 7/29/2015 | 1057 | Dan Z | Sunny | Sidewalk/ROW | DOT | 18 | 0 | y | 30 | 96 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 2 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_32 | 7/29/2015 | 1107 | Dan Z | Sunny | Sidewalk/ROW | DOT | 12 | 24 | y | 30 | 60 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Aluminum | Sound | Concrete | Cracked | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_33 | 7/29/2015 | 1255 | Dan Z | Sunny | Sidewalk/ROW | DOT | 12 | 0 | n | 30 | 60 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_34 | 7/29/2015 | 115 | Dan Z | Sunny | Sidewalk/ROW | DOT | 12 | 0 | y | 36 | 96 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_35 | 7/29/2015 | 125 | Dan Z | Sunny | Sidewalk/ROW | DOT | 12 | 12 | y | 36 | 108 | Plastic Laminate | 11 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Offset | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_36 | 7/29/2015 | 105 | Dan Z | Sunny | Asphalt | None | 6 | 0 | n | 30 | 26.4 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| BC_A_38 | 8/1/2015 | 1105 | Dan Z | Sunny | Asphalt | City/County | 18 | 0 | Y | 36 | 78 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_39 | 8/1/2015 | 1050 | Dan Z | Sunny | Asphalt | City/County | 18 | 0 | Y | 36 | 51.6 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_4 | 6/4/2015 | 1105 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 36 | 36 | Metal | 6 | med | everywhere | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | BENCH, everywhere | | 8 |
| BC_A_40 | 8/1/2015 | 1045 | Dan Z | Sunny | Asphalt | City/County | 18 | 0 | Y | 36 | 75.6 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_41 | 8/1/2015 | 1040 | Dan Z | Sunny | Asphalt | City/County | 18 | 0 | Y | 36 | 82.8 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_42 | 8/11/2015 | 725 | Dan Z | Cloudy | Asphalt | DOT | 12 | 0 | N | 36 | 120 | Plastic Laminate | 12 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_43 | 8/11/2015 | 730 | Dan Z | Cloudy | Asphalt | DOT | 12 | 0 | N | 36 | 117.6 | Plastic Laminate | 12 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_44 | 8/11/2015 | 740 | Dan Z | Cloudy | Asphalt | DOT | 3.6 | 0 | N | 36 | 56.4 | Plastic Laminate | 8 | LOW | BETWEEN BENCH AND WALL | infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | BENCH | | 12 |
| BC_A_45 | 8/11/2015 | 735 | Dan Z | Cloudy | Asphalt | DOT | 12 | 0 | N | 36 | 66 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A_5 | 6/4/2015 | 1100 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 48 | Metal | 5 | med | everywhere | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | BENCH, everywhere | | 8 |
| BC_A_6 | 6/4/2015 | 1051 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 60 | 24 | Metal | 5 | high | everywhere | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | Surface Roughness Increase | | BENCH, everywhere | | 8 |
| BC_A_7 | 6/4/2015 | 1048 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 66 | 24 | Metal | 6 | high | everywhere | plugged pipe to south. Sediment in bottom. | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | Surface Roughness Increase | | BENCH, everywhere | | 8 |
| BC_A_8 | 6/4/2015 | 1125 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 30 | | 0 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | chimney | | 8 |
| BC_A_9 | 6/4/2015 | 230 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 24 | 30 | | 0 | low | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| BC_A1_1 | 5/28/2015 | 355 | DAN Z | Sunny | Asphalt | City/County | 12 | 0 | n | 36 | 54 | Metal | 8 | med | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A1_10 | 5/28/2015 | 156 | DAN Z | Sunny | Other | None | 6 | 9.6 | Y | 36 | 12 | Metal | 4 | HIGH | BETWEEN WALL AND CONE | | Vented/Slots* | 2 | Cast Iron | Broken | CONCRETE | Loose Grade Ring | Concrete | Sound | Concrete | Sound | Corroded Metal | | | | | 8 |
| BC_A1_11 | 5/28/2015 | 132 | DAN Z | Sunny | Other | None | 6 | 1.2 | Y | 36 | 36 | Metal | 4 | Low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Corroded Metal | | | | | 8 |
| BC_A1_12 | 5/28/2015 | 123 | DAN Z | Sunny | Other | None | 18 | 12 | N | 0 | 36 | Metal | 2 | High | | ROOT BALL IN PIPE | Vented/Slots* | 15 | Aluminum | Sound | CONCRETE | Loose Grade Ring | Concrete | Sound | Concrete | Sound | | | | BENCH | | 8 |
| BC_A1_13 | 5/28/2015 | 115 | DAN Z | Sunny | Other | None | 18 | 18 | N | 0 | 42 | Metal | 2 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | CONCRETE | Sound | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A1_14 | 5/28/2015 | 327 | DAN Z | Sunny | Other | None | 6 | 0 | Y | 36 | 72 | Metal | 8 | low | BETWEEN WALL AND CONE | Maybe some seam issues | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| BC_A1_15 | 5/28/2015 | 226 | DAN Z | Sunny | Other | None | 6 | 0 | N | 36 | 54 | Metal | 7 | W/in Floodp | BETWEEN BENCH AND WALL | FLOWING IN, | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | Corroded Metal | | | bench | | 8 |
| BC_A1_2 | 5/28/2015 | 348 | DAN Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 84 | Metal | 9 | med | between bench and wall | offset at top | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface aggregate visible | | | | 8 |
| BC_A1_3 | 5/28/2015 | 323 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 36 | 30 | Metal | 5 | med | | crack in channel | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | other | | 8 |
| BC_A1_4 | 5/28/2015 | 341 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 36 | 36 | Metal | 4 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A1_5 | 5/28/2015 | 337 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 0 | 60 | | 0 | low | BETWEEN BENCH AND WALL | Maybe some seam issues | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | bench | 8 |
| BC_A1_6 | 5/28/2015 | 915 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 48 | 36 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A1_7 | 5/28/2015 | 920 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 48 | 36 | | 0 | LOW | BETWEEN BENCH AND WALL | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | BENCH | | 8 |
| BC_A1_8 | 5/28/2015 | 212 | DAN Z | Sunny | Other | None | 6 | 9.6 | N | 36 | 48 | Metal | 7 | W/in Floodp | BETWEEN BENCH AND WALL | FLOWING IN | Vented/Slots* | 2 | Cast Iron | Sound | concrete | sound | Concrete | Sound | Concrete | Sound | Corroded Metal | | | | | 10 |
| BC_A1_9 | 5/28/2015 | 204 | DAN Z | Sunny | Other | None | 6 | 9.6 | Y | 36 | 24 | | | HIGH | BETWEEN BENCH AND WALL | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Corroded Metal | | | | | 8 |
| BC_A2_1 | 5/28/2015 | 402 | DAN Z | Sunny | Asphalt | City/County | 12 | 0 | y | 36 | 66 | Plastic Laminate | 8 | med | In channel | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | | | 8 |
| BC_A2_2 | 5/28/2015 | 417 | DAN Z | Sunny | Asphalt | City/County | 18 | 12 | y | 60 | 54 | Plastic Laminate | 8 | med | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface aggregate visible | | | | 8 |
| BC_A3_1 | 5/28/2015 | 907 | DAN Z | Sunny | Sidewalk/ROW | Residential | 6 | 0 | N | 48 | 48 | Metal | 7 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_10 | 5/26/2015 | 159 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 42 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_11 | 5/26/2015 | 217 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 30 | 36 | Metal | 3 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| BC_A3_12 | 5/26/2015 | 133 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 48 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_13 | 5/26/2015 | 127 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 24 | Metal | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_14 | 5/26/2015 | 121 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 60 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_15 | 5/28/2015 | 847 | DAN Z | Sunny | Asphalt | City/County | 6 | 0 | N | 54 | 54 | Metal | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_16 | 5/26/2015 | 1243 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 42 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_17 | 5/26/2015 | 1248 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_18 | 5/26/2015 | 1251 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 42 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_19 | 7/31/2015 | 840 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 43.2 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_2 | 5/28/2015 | 855 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 36 | 72 | Metal | 4 | LOW | | BAD LID | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Missing | | | | | 8 |
| BC_A3_20 | 8/11/2015 | 720 | Dan Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 61.2 | Metal | 8 | med | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A3_21 | 8/11/2015 | 745 | Dan Z | Cloudy | Asphalt | DOT | 18 | 0 | Y | 36 | 42 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_A3_3 | 5/28/2015 | 838 | DAN Z | Sunny | Asphalt | City/County | 6 | 0 | N | 30 | 48 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_4 | 5/26/2015 | 214 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 30 | 36 | Metal | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_5 | 5/28/2015 | 830 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 30 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_6 | 5/26/2015 | 208 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 30 | 30 | Metal | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_7 | 5/26/2015 | 146 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 36 | 54 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_8 | 5/26/2015 | 150 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 36 | 48 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A3_9 | 5/26/2015 | 157 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 36 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A4_1 | 7/2/2015 | 958 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 36 | 18 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A4_2 | 7/2/2015 | 949 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 30 | Plastic Laminate | 5 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | | | 8 |
| BC_A4_3 | 7/2/2015 | 947 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 30 | 32.4 | Plastic Laminate | 5 | low | between wall and cone | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A4_4 | 7/2/2015 | 941 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 30 | 32.4 | Plastic Laminate | 5 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_A4_5 | 7/2/2015 | 936 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 42 | 37.2 | Plastic Laminate | 5 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_B_1 | 6/19/2015 | 319 | Dan Z | Cloudy | Easement | DOT | 12 | 0 | y | 36 | 91.2 | Plastic Laminate | 10 | LOW | between wall and cone | significant infiltration | Gasketed | | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 10 |
| BC_B_10 | 6/19/2015 | 250 | Dan Z | Sunny | asphalt | Residential | 12 | 0 | y | 36 | 24 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 10 |
| BC_B_11 | 6/19/2015 | 245 | Dan Z | Sunny | asphalt | Residential | 6 | 0 | n | 48 | 30 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_B_12 | 6/19/2015 | 243 | Dan Z | Sunny | asphalt | Residential | 12 | 0 | y | 42 | 72 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_B_13 | 6/19/2015 | 237 | Dan Z | Sunny | asphalt | Residential | 12 | 0 | y | 42 | 72 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_B_14 | 6/19/2015 | 300 | Dan Z | Cloudy | Easement | DOT | 12 | 0 | y | 36 | 54 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_B_15 | 6/19/2015 | 255 | Dan Z | Cloudy | asphalt | Residential | 12 | 0 | y | 36 | 12 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_B_16 | 6/19/2015 | 305 | Dan Z | Cloudy | Easement | DOT | 12 | 0 | y | 36 | 79.2 | Plastic Laminate | 6 | LOW | between wall and cone | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Missing | | | barrel | | 10 |
| BC_B_17 | 7/14/2015 | 1145 | Dan Z | Sunny | Sidewalk/ROW | None | 6 | 48 | n | 42 | 126 | Plastic Laminate | 13 | med | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | concrete | Sound | Concrete | cracked | Concrete | corroded | | | bench | barrel, bench | | 10 |
| BC_B_18 | 7/14/2015 | 1130 | Dan Z | Sunny | Sidewalk/ROW | None | 6 | 48 | n | 30 | 66 | Plastic Laminate | 7 | med | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | concrete | Sound | Concrete | Sound | Concrete | corroded | | | bench | bench | | 10 |
| BC_B_2 | 7/14/2015 | 915 | Dan Z | Sunny | Sidewalk/ROW | None | 6 | 0 | n | 36 | 84 | Plastic Laminate | 9 | Med | | red streaks in mh | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_B_20 | 7/14/2015 | 1031 | Dan Z | Sunny | Asphalt | City/County | 24 | 0 | y | 36 | 48 | Plastic Laminate | 7 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 10 |
| BC_B_3 | 7/14/2015 | 937 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 60 | Plastic Laminate | 7 | LOW | between cone and wall, barrel wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 10 |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| | Pipe E | | | | | | Pipe I-1 | | | | | | | Pipe I-2 | | | | | | | Pipe I-3 | | | | | | Pipe I-4 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Material8 | Clock Position | Depth to Invert (tenths) | Channelized | Drop (in/out) | Notes9 | Size (in)10 | Material 11 | Clock Position 12 | Depth to Invert (tenths)13 | Channelized14 | Drop (in/out)15 | Notes16 | Size (in)17 | Material18 | Clock Position19 | Depth to Invert (tenths)20 | Channelized21 | Drop (in/out)22 | Notes23 | Size (in)24 | Material25 | Clock Position26 | Depth to Invert (tenths)27 | Channelized28 | Drop (in/out)29 | Notes30 | Size (in)31 | Material32 | Clock Position33 | Depth to Invert (tenths)34 | Channelized35 | Drop (in/out)36 | Notes37 |
| BC_1 | AC | 10 | 127 | Y | N | | | | | | | | | 15 | AC | 430 | 125 | Y | N | | 8 | AC | 6 | 125 | Y | N | | | | | | | | |
| BC_2 | PVC C900 | 7 | 51 | Y | N | bypass | 15 | PVC C900 | 11 | 51 | Y | N | also an outflow | 15 | PVC C900 | 4 | 51 | Y | N | | | | | | | | | | | | | | | |
| BC_3 | AC | 1030 | 77 | Y | N | | 6 | AC | 12 | 75 | Y | N | | 15 | AC | 4 | 77 | Y | N | | 6 | AC | 12 | 6 | Y | N | lateral from house? | | | | | | | |
| BC_4 | AC | 1030 | | Y | N | | | | | | | | | 15 | AC | 4 | | Y | N | | | | | | | | | | | | | | | |
| BC_5 | CONCRETE | 10 | 65 | Y | N | | 12 | PVC C900 | 1 | 63 | Y | N | | 15 | CONCRETE | 4 | 65 | Y | N | | 8 | PVC C900 | 7 | 63 | Y | N | | | | | | | | |
| BC_A_1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_A_10 | PVC C900 | 12 | 53 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 53 | Y | N | | 6 | PVC C900 | 9 | 53 | Y | N | | | | | | | | |
| BC_A_11 | PVC C900 | 12 | 43 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 43 | Y | N | | 8 | PVC C900 | 9 | 43 | Y | N | | | | | | | | |
| BC_A_12 | PVC C900 | 12 | 54 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 54 | Y | N | | 6 | PVC C900 | 9 | 54 | Y | N | | | | | | | | |
| BC_A_13 | PVC C900 | 12 | 74 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 74 | Y | N | | 6 | PVC C900 | 9 | 74 | Y | N | | | | | | | | |
| BC_A_14 | CONCRETE | 12 | 46 | Y | N | | | | | | | | | 8 | CONCRETE | 8 | 46 | Y | N | | | | | | | | | | | | | | | |
| BC_A_15 | AC | 12 | 70 | Y | N | | | | | | | | | 4 | STEEL | 6 | 42 | N | Y | | | | | | | | | | | | | | | |
| BC_A_16 | AC | 12 | 82 | Y | N | | | | | | | | | 8 | AC | 6 | 82 | Y | N | | | | | | | | | | | | | | | |
| BC_A_17 | AC | 3 | 48 | Y | N | | | | | | | | | 8 | AC | 9 | 48 | Y | N | | 8 | AC | 6 | 48 | Y | N | | | | | | | | |
| BC_A_18 | AC | 9 | 71 | Y | N | | 4 | PVC C900 | 12 | 4 | Y | N | | 8 | AC | 3 | 71 | Y | N | | | | | | | | | | | | | | | |
| BC_A_19 | AC | 9 | 85 | Y | N | | | | | | | | | 8 | AC | 3 | 85 | Y | N | | 8 | AC | 6 | 83 | Y | N | | 8 | PVC | 6 | 54 | N | Y | | |
| BC_A_2 | CONCRETE | 12 | 74 | Y | N | | | | | | | | | 8 | CONCRETE | 6 | 74 | Y | N | | 6 | CONCRETE | 9 | 74 | Y | N | | | | | | | | |
| BC_A_20 | PVC C900 | 12 | 49 | Y | N | | 4 | PVC C900 | 5 | 49 | Y | N | | | | | | | | | 4 | PVC C900 | 7 | 49 | Y | N | | | | | | | | |
| BC_A_21 | CONCRETE | 12 | 74 | Y | N | | 6 | PVC C900 | 5 | 65 | N | Y | | | | | | | | | 8 | CONCRETE | 7 | 74 | Y | N | | | | | | | | |
| BC_A_22 | CONCRETE | 3 | 77 | Y | N | | | | | | | | | 8 | CONCRETE | 8 | 77 | Y | N | | | | | | | | | | | | | | | |
| BC_A_23 | CONCRETE | 1030 | 157 | Y | N | | 12 | PVC C900 | 4 | 147 | Y | N | | 15 | CONCRETE | 5 | 157 | Y | N | | | | | | | | | | | | | | | |
| BC_A_24 | CONCRETE | 12 | 49 | Y | N | | 6 | CONCREE | 3 | 49 | Y | N | | 8 | CONCRETE | 8 | 49 | Y | N | | | | | | | | | | | | | | | |
| BC_A_25 | CONCRETE | 3 | 87 | Y | N | | | | | | | | | 8 | CONCRETE | 8 | 87 | Y | N | | 8 | PVC C900 | 6 | 87 | Y | N | | | | | | | | |
| BC_A_26 | PVC C900 | 12 | 54 | Y | N | | 8 | CONCREE | 3 | 54 | Y | N | | 8 | PVC C900 | 6 | 54 | Y | N | | | | | | | | | | | | | | | |
| BC_A_27 | PVC C900 | 3 | 39 | Y | N | | | | | | | | | | | | | | | | 8 | PVC C900 | 9 | 39 | Y | N | | | | | | | | |
| BC_A_28 | AC | 9 | 100 | Y | N | | | | | | | | | 8 | AC | 3 | 100 | Y | N | | 8 | AC | 6 | 98 | Y | N | | | | | | | | |
| BC_A_29 | AC | 9 | 75 | Y | N | | | | | | | | | 8 | AC | 3 | 75 | Y | N | | | | | | | | | | | | | | | |
| BC_A_3 | CONCRETE | 12 | 79 | Y | N | | | | | | | | | 8 | CONCRETE | 6 | 79 | Y | N | | | | | | | | | | | | | | | |
| BC_A_30 | PVC C900 | 10 | 148 | Y | N | | | | | | | | | | | | | | | | 12 | PVC C900 | 7 | 148 | Y | N | | | | | | | | |
| BC_A_31 | PVC C900 | 10 | 128 | Y | N | | | | | | | | | 12 | PVC C900 | 4 | 148 | Y | N | | 6 | PVC C900 | 7 | 145 | Y | N | | | | | | | | |
| BC_A_32 | PVC C900 | 10 | 93 | Y | N | | | | | | | | | 12 | PVC C900 | 4 | 93 | Y | N | | | | | | | | | | | | | | | |
| BC_A_33 | PVC C900 | 10 | 95 | Y | N | | 6 | PVC | 1 | 88 | Y | N | | 12 | PVC C900 | 4 | 90 | Y | N | | | | | | | | | | | | | | | |
| BC_A_34 | PVC C900 | 10 | 130 | Y | N | | 6 | PVC C900 | 1 | 130 | Y | N | | 12 | PVC C900 | 4 | 130 | Y | N | | 6 | PVC C900 | 7 | 130 | Y | N | | | | | | | | |
| BC_A_35 | PVC C900 | 10 | 135 | Y | N | | 8 | PVC C900 | 1 | 130 | Y | N | | 12 | PVC C900 | 4 | 133 | Y | N | | 10 | PVC C900 | 7 | 130 | Y | N | | | | | | | | |
| BC_A_36 | PVC C900 | 7 | 55 | Y | N | | | | | | | | | 6 | PVC C900 | 1 | 55 | Y | N | | | | | | | | | | | | | | | |
| BC_A_38 | PVC C900 | 10 | 118 | Y | N | | 8 | PVC C900 | 1 | 116 | Y | N | | 12 | PVC C900 | 4 | 118 | Y | N | | | | | | | | | | | | | | | |
| BC_A_39 | PVC C900 | 10 | 96 | Y | N | | 8 | PVC C900 | 1 | 94 | Y | N | | 12 | PVC C900 | 4 | 96 | Y | N | | 8 | PVC C900 | 7 | 94 | Y | N | STUB OUT? | | | | | | | |
| BC_A_4 | CONCRETE | 12 | 84 | Y | N | | | | | | | | | 8 | CONCRETE | 6 | 84 | Y | N | | | | | | | | | | | | | | | |
| BC_A_40 | PVC C900 | 10 | 116 | Y | N | | | | | | | | | 12 | PVC C900 | 4 | 116 | Y | N | | 8 | PVC C900 | 7 | 114 | Y | N | STUB OUT? | | | | | | | |
| BC_A_41 | PVC C900 | 10 | 112 | Y | N | | | | | | | | | 12 | PVC C900 | 3 | 112 | Y | N | | 8 | PVC C900 | 7 | 110 | Y | N | | | | | | | | |
| BC_A_42 | PVC C900 | 12 | 147 | Y | N | | 12 | PVC C900 | 4 | 147 | Y | N | | | | | | | | | | | | | | | | | | | | | | |
| BC_A_43 | PVC C900 | 10 | 146 | Y | N | | | | | | | | | 12 | PVC C900 | 4 | 146 | Y | N | | 8 | AC | 730 | 146 | Y | N | | | | | | | | |
| BC_A_44 | PVC C900 | 10 | 86 | Y | N | | | | | | | | | 12 | PVC C900 | 4 | 86 | Y | N | | | | | | | | | | | | | | | |
| BC_A_45 | PVC C900 | 10 | 112 | Y | N | | | | | | | | | 12 | PVC C900 | 4 | 112 | Y | N | | 8 | AC | 730 | 112 | Y | N | | | | | | | | |
| BC_A_5 | CONCRETE | 12 | 84 | Y | N | | | | | | | | | 8 | CONCRETE | 6 | 84 | Y | N | | | | | | | | | | | | | | | |
| BC_A_6 | CONCRETE | 12 | 84 | Y | N | | | | | | | | | 8 | CONCRETE | 6 | 84 | Y | N | | | | | | | | | | | | | | | |
| BC_A_7 | CONCRETE | 12 | 84 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_A_8 | CONCRETE | 12 | 72 | Y | N | | | | | | | | | 6 | CONCRETE | 6 | 72 | Y | N | this pipe should be | 6 | CONCRETE | 9 | 72 | Y | N | | | | | | | | |
| BC_A_9 | PVC C900 | 12 | 56 | Y | N | | | | | | | | | 8 | CONCRETE | 6 | 56 | Y | N | | 6 | CONCRETE | 9 | 56 | Y | N | | | | | | | | |
| BC_A1_1 | PVC | 6 | 90 | Y | N | | | | | | | | | 8 | PVC | 12 | 90 | Y | N | | | | | | | | | | | | | | | |
| BC_A1_10 | PVC | 9 | 57 | Y | N | | 8 | PVC | 12 | 57 | Y | N | | 4 | PVC | 1 | 57 | N | Y | LATERAL | | | | | | | | | | | | | | |
| BC_A1_11 | PVC | 6 | 74 | Y | N | | | | | | | | | | | | | | | | 8 | PVC | 6 | 74 | Y | N | | | | | | | | |
| BC_A1_12 | PVC | 9 | 44 | Y | N | | 8 | PVC | 12 | 44 | Y | N | | 6 | PVC | 3 | 44 | Y | N | ROOT BALL | | | | | | | | | | | | | | |
| BC_A1_13 | PVC | 6 | 54 | Y | N | | | | | | | | | 8 | PVC | 1030 | 54 | Y | N | | 6 | PVC | 3 | 54 | Y | N | | | | | | | | |
| BC_A1_14 | PVC | 6 | 102 | Y | N | | | | | | | | | 8 | PVC | 2 | 102 | Y | N | | | | | | | | | | | | | | | |
| BC_A1_15 | PVC | 7 | 84 | Y | N | | | | | | | | | 8 | PVC | 2 | 84 | Y | N | | | | | | | | | | | | | | | |
| BC_A1_2 | PVC | 6 | 112 | Y | N | | | | | | | | | | | | | | | | 8 | PVC | 3 | 112 | Y | N | | | | | | | | |
| BC_A1_3 | PVC | 8 | 72 | Y | N | | 6 | PVC | 12 | 72 | Y | N | | 8 | PVC | 3 | 72 | Y | N | | | | | | | | | | | | | | | |
| BC_A1_4 | PVC | 5 | 68 | Y | N | | | | | | | | | 8 | PVC | 9 | 68 | Y | N | | 6 | PVC | 12 | 68 | Y | N | | | | | | | | |
| BC_A1_5 | PVC | 3 | 65 | Y | N | | | | | | | | | 6 | PVC | 9 | 65 | Y | N | | 8 | PVC | 12 | 65 | Y | N | | | | | | | | |
| BC_A1_6 | PVC C900 | 6 | 80 | Y | N | | 6 | PVC C900 | 9 | 80 | Y | N | | | | | | | | | 6 | PVC C900 | 3 | 80 | Y | N | | | | | | | | |
| BC_A1_7 | PVC C900 | 6 | 80 | Y | N | | 6 | PVC C900 | 9 | 80 | Y | N | | 8 | PVC C900 | 5 | | Y | N | | 6 | PVC C900 | 3 | 80 | Y | N | | | | | | | | |
| BC_A1_8 | PVC | 9 | 80 | Y | N | | | | | | | | | 8 | PVC | 2 | 80 | Y | N | | | | | | | | | | | | | | | |
| BC_A1_9 | PVC | 9 | 64 | Y | N | | 8 | PVC C900 | 11 | 64 | Y | N | | 8 | PVC | 1 | 64 | Y | N | | | | | | | | | | | | | | | |
| BC_A2_1 | PVC | 3 | 100 | Y | N | | | | | | | | | 8 | PVC | 9 | 100 | Y | N | | | | | | | | | | | | | | | |
| BC_A2_2 | PVC | 3 | 112 | Y | N | | | | | | | | | 6 | PVC | 9 | 112 | Y | N | | 8 | PVC | 12 | 112 | Y | N | | | | | | | | |
| BC_A3_1 | AC | 12 | 91 | Y | N | | | | | | | | | 8 | AC | 6 | 91 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_10 | AC | 12 | 78 | Y | N | | 6 | AC | 3 | 63 | Y | Y | | 8 | AC | 6 | 78 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_11 | AC | 9 | 66 | Y | N | | 6 | AC | 6 | 66 | Y | N | | 8 | AC | 3 | 66 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_12 | AC | 12 | 76 | Y | N | | 6 | AC | 3 | 70 | Y | Y | | 8 | AC | 6 | 76 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_13 | AC | 12 | 55 | Y | N | | 6 | AC | 6 | 55 | Y | N | | 8 | AC | 3 | 55 | Y | N | LATERAL??? | | | | | | | | | | | | | | |
| BC_A3_14 | AC | 12 | 85 | Y | N | | | | | | | | | 8 | AC | 3 | 85 | Y | N | | 8 | AC | | | | | | | | | | | | |
| BC_A3_15 | AC | 12 | 98 | Y | N | | 6 | AC | 3 | 98 | Y | N | | 8 | AC | 6 | 98 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_16 | AC | 9 | 70 | Y | N | | | | | | | | | 8 | AC | 3 | 70 | Y | N | | 8 | AC | 6 | 70 | Y | N | | | | | | | | |
| BC_A3_17 | AC | 9 | 66 | Y | N | | | | | | | | | 8 | AC | 3 | 66 | Y | N | | 8 | AC | 6 | 66 | Y | N | | | | | | | | |
| BC_A3_18 | AC | 9 | 70 | Y | N | | | | | | | | | 8 | AC | 3 | 70 | Y | N | | 8 | AC | 6 | 70 | Y | N | | | | | | | | |
| BC_A3_19 | AC | 3 | 69 | Y | N | | | | | | | | | 8 | AC | 9 | 69 | Y | N | | 8 | AC | 6 | 69 | Y | N | | | | | | | | |
| BC_A3_2 | AC | 12 | 94 | Y | N | | | | | | | | | 8 | AC | 6 | 94 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_20 | PVC C900 | 1030 | 92 | Y | N | | 8 | AC | 130 | 92 | Y | N | | 8 | AC | 430 | 92 | Y | N | | 8 | AC | 730 | 92 | Y | N | | | | | | | | |
| BC_A3_21 | PVC C900 | 10 | 88 | Y | N | | | | | | | | | 12 | PVC C900 | 4 | 88 | Y | N | | 8 | AC | 730 | 88 | Y | N | | | | | | | | |
| BC_A3_3 | AC | 12 | 72 | Y | N | | 6 | AC | 3 | 72 | Y | N | | 8 | AC | 6 | 72 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_4 | AC | 12 | 66 | Y | N | | 6 | AC | 3 | 66 | Y | N | | 8 | AC | 6 | 66 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_5 | AC | 12 | 62 | Y | N | | | | | | | | | 8 | AC | 6 | 62 | Y | N | | | | | | | | | | | | | | | |
| BC_A3_6 | AC | 12 | 60 | Y | N | | 6 | AC | 3 | 60 | Y | N | | 8 | AC | 6 | 60 | Y | N | | 6 | AC | 9 | 60 | Y | N | | | | | | | | |
| BC_A3_7 | AC | 12 | 81 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_A3_8 | AC | 12 | 72 | Y | N | | 6 | AC | 3 | 68 | Y | Y | | 8 | AC | 6 | 72 | Y | N | | | | | | | | | PVC C900 | 4 | 65 | N | Y | | |
| BC_A3_9 | AC | 12 | 68 | Y | N | | 6 | AC | 3 | 68 | Y | Y | | 8 | AC | 6 | 68 | Y | N | | | | | | | | | | | | | | | |
| BC_A4_1 | PVC C900 | 6 | 69 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_A4_2 | PVC C900 | 6 | 69 | Y | N | | | | | | | | | 8 | PVC C900 | 12 | 69 | Y | N | | 8 | PVC C900 | 12 | 69 | Y | N | | | | | | | | |
| BC_A4_3 | PVC C900 | 9 | 67 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 67 | Y | N | | | | | | | | | | | | | | | |
| BC_A4_4 | PVC C900 | 9 | 67 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 67 | Y | N | | | | | | | | | | | | | | | |
| BC_A4_5 | PVC C900 | 9 | 80 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 80 | Y | N | | | | | | | | | | | | | | | |
| BC_B_1 | PVC C900 | 4 | 120 | Y | N | | 8 | PVC C900 | 6 | 120 | Y | N | | 10 | PVC C900 | 9 | 90 | Y | N | | | | | | | | | | | | | | | |
| BC_B_10 | PVC C900 | 12 | 65 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 65 | Y | N | | | | | | | | | | | | | | | |
| BC_B_11 | PVC C900 | 1 | 75 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 75 | Y | N | | 6 | PVC C900 | 9 | 75 | Y | N | | | | | | | | |
| BC_B_12 | PVC C900 | 12 | 109 | Y | N | | | | | | | | | 10 | PVC C900 | 9 | 109 | Y | N | | 10 | PVC C900 | 6 | 109 | Y | N | | | | | | | | |
| BC_B_13 | PVC C900 | 12 | 109 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 109 | Y | N | | | | | | | | | | | | | | | |
| BC_B_14 | PVC C900 | 3 | 90 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 90 | Y | N | | | | | | | | | | | | | | | |
| BC_B_15 | PVC C900 | 3 | 55 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 55 | Y | N | | | | | | | | | | | | | | | |
| BC_B_16 | PVC C900 | 3 | 110 | Y | N | | | | | | | | | 10 | PVC C900 | 9 | 90 | Y | N | | | | | | | | | | | | | | | |
| BC_B_17 | PVC C900 | 12 | 150 | Y | N | | 6 | PVC C900 | 3 | 150 | Y | N | | | | | | | | | 10 | PVC C900 | 9 | 150 | Y | N | | | | | | | | |
| BC_B_18 | PVC C900 | 3 | 95 | Y | N | | 4 | PVC C900 | 6 | 95 | Y | N | | | | | | | | | 6 | PVC C900 | 12 | 95 | Y | N | | | | | | | | |
| BC_B_2 | PVC C900 | 130 | 110 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 110 | Y | N | | | | | | | | | | | | | | | |
| BC_B_20 | PVC C900 | 12 | 95 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_B_3 | PVC C900 | 3 | 90 | Y | N | | | | | | | | | 10 | PVC C900 | 10 | 90 | Y | N | | | | | | | | | | | | | | | |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| General | | | | | | | | | Manhole Specs | | | | | | | | | Frame and Cover | | | | Grade Rings | | Barrel Wall | | Bench/Channel | | Structural/O&M Condition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Date | Time | Inspector | Weather Conditions | Surface Condition | Traffic Volume | Rim to top of cone (tenths) | Average Rim to Grade Height (tenths) | Chimney (y/n) | Cone Depth (tenths) | Barrel/Wall Height (tenths) | Rung Type | # of Steps | Inflow Potential | Joint Issues | Notes | Type | No_Slots | Material | Condition | Type2 | Condition3 | Type4 | Condition5 | Type6 | Condition7 | Rungs | Concrete Corrosion | Corrosion Location | Evidence of Infiltration | Evidence of Surcharge | Size (in) |
| BC_B_4 | 7/14/2015 | 930 | Dan Z | Sunny | Asphalt | City/County | 24 | 0 | y | 36 | 27.6 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_B_5 | 7/14/2015 | 1115 | Dan Z | Sunny | Sidewalk/ROW | None | 6 | 18 | n | 30 | 120 | Plastic Laminate | 11 | med | barrel wall | damp mh | SOLID | | Cast Iron | Sound | concrete | Corroded | Concrete | Pitted | Concrete | corroded | | | bench | barrel, bench | | 10 |
| BC_B_6 | 7/14/2015 | 1106 | Dan Z | Sunny | Sidewalk/ROW | None | 6 | 0 | n | 30 | 102 | Plastic Laminate | 10 | high | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_B_7 | 7/14/2015 | 1101 | Dan Z | Sunny | Sidewalk/ROW | None | 3.6 | 12 | n | 36 | 132 | Plastic Laminate | 13 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | concrete | Cracked | Concrete | Sound | Concrete | Sound | | | | bench | | 10 |
| BC_B_8 | 7/14/2015 | 918 | Dan Z | Sunny | Sidewalk/ROW | None | 12 | 0 | y | 36 | 60 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 10 |
| BC_B_9 | 7/14/2015 | 922 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | y | 36 | 54 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_C_1 | 7/16/2015 | 220 | Dan Z | Sunny | Sidewalk/ROW | DOT | 6 | 0 | y | 36 | 138 | Plastic Laminate | 15 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_C_10 | 7/16/2015 | 325 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 32.4 | 108 | Plastic Laminate | 12 | LOW | | small pit in barrel | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | barrel | | 8 |
| BC_C_11 | 7/16/2015 | 330 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 84 | Plastic Laminate | 10 | LOW | between bench and wall | significant infiltration - streaming in | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | bench | bench | | 8 |
| BC_C_12 | 7/16/2015 | 335 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 66 | Plastic Laminate | 8 | LOW | | asphalt around MH cracked | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_13 | 7/16/2015 | 340 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 73.2 | Plastic Laminate | 8 | LOW | | asphalt around MH cracked | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_14 | 7/16/2015 | 347 | Dan Z | Sunny | Asphalt | Residential | 15.6 | 0 | y | 36 | 48 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_15 | 7/17/2015 | 925 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 42 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_16 | 7/17/2015 | 945 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 48 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_17 | 7/17/2015 | 950 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 31.2 | 60 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_18 | 7/17/2015 | 1125 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | y | 30 | 182.4 | Plastic Laminate | 16 | LOW | | bizzarre mh | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_19 | 7/17/2015 | 1120 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 30 | 60 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_2 | 7/17/2015 | 1042 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 66 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_20 | 7/17/2015 | 1116 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 30 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_21 | 7/17/2015 | 1110 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 150 | Plastic Laminate | 15 | LOW | | pits but no infiltration evidence | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | | | 8 |
| BC_C_22 | 7/17/2015 | 1105 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 90 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_23 | 7/16/2015 | 247 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 182.4 | Plastic Laminate | 18 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_24 | 7/16/2015 | 241 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 48 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_25 | 7/16/2015 | 920 | Dan Z | Cloudy | Asphalt | Residential | 24 | 0 | n | 0 | 30 | Plastic Laminate | 2 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_26 | 7/16/2015 | 1038 | Dan Z | Cloudy | Asphalt | Residential | 24 | 0 | y | 0 | 132 | Plastic Laminate | 11 | LOW | | minor, if any | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 10 |
| BC_C_27 | 7/16/2015 | 915 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | n | 36 | 30 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_28 | 7/16/2015 | 1205 | Dan Z | Cloudy | Asphalt | Residential | 24 | 0 | y | 30 | 78 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_C_29 | 7/16/2015 | 1200 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 84 | Plastic Laminate | 9 | LOW | between bench and wall, barrel wall | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_3 | 7/17/2015 | 1045 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 42 | 48 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_30 | 7/16/2015 | 1155 | Dan Z | Cloudy | Asphalt | Residential | 18 | 0 | y | 30 | 24 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_31 | 7/16/2015 | 1150 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | y | 42 | 48 | Plastic Laminate | 7 | LOW | betweeen bench and wall, between wall a | significant infiltration - streaming in | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_32 | 7/16/2015 | 1145 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | y | 36 | 54 | Plastic Laminate | 7 | LOW | betweeen bench and wall | significant infiltration - streaming in | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_33 | 7/16/2015 | 1140 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | y | 36 | 60 | Plastic Laminate | 7 | LOW | betweeen bench and wall | infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_34 | 7/16/2015 | 255 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 48 | 144 | Plastic Laminate | 14 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_35 | 7/15/2015 | 1105 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 78 | Plastic Laminate | 10 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_36 | 7/15/2015 | 1110 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 48 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_37 | 7/15/2015 | 1115 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 30 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_38 | 7/15/2015 | 1119 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 36 | 36 | | 0 | LOW | between bench and wall | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_39 | 7/15/2015 | 1126 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 36 | 44.4 | | 0 | LOW | between bench and wall | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_4 | 7/17/2015 | 1055 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 30 | 60 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_40 | 7/15/2015 | 907 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 21.6 | Plastic Laminate | 5 | LOW | between wall and cone | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_41 | 7/15/2015 | 912 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 42 | Plastic Laminate | 6 | med | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_42 | 7/15/2015 | 920 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 48 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_43 | 7/15/2015 | 925 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 30 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_44 | 7/15/2015 | 930 | Dan Z | Sunny | Asphalt | Residential | 30 | 0 | y | 0 | 6 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_45 | 7/15/2015 | 1037 | Dan Z | Sunny | Asphalt | Residential | 30 | 0 | y | 0 | 18 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_46 | 7/16/2015 | 905 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | n | 31.2 | 48 | | 0 | LOW | between wall and cone | significant infiltration - two spouts of water in w | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_47 | 7/15/2015 | 1042 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 0 | 30 | Plastic Laminate | 2 | LOW | | couldn't see much - very damp for end of line | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| BC_C_48 | 7/15/2015 | 1047 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 18 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_49 | 7/15/2015 | 1050 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 54 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_5 | 7/17/2015 | 1100 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 84 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_50 | 7/16/2015 | 310 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 90 | Plastic Laminate | 11 | LOW | barrel wall | significant infiltration - streaming in | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel, bench | | 8 |
| BC_C_51 | 7/16/2015 | 300 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 102 | Plastic Laminate | 12 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_52 | 7/16/2015 | 925 | Dan Z | Cloudy | Asphalt | Residential | 24 | 0 | n | 36 | 84 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_53 | 7/16/2015 | 930 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | n | 36 | 102 | Plastic Laminate | 11 | LOW | between cone and chimney | damp streak from chimney to bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| BC_C_54 | 7/16/2015 | 937 | Dan Z | Cloudy | Asphalt | Residential | 3.6 | 0 | n | 36 | 114 | Plastic Laminate | 11 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_55 | 7/16/2015 | 945 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | n | 36 | 102 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel | | 10 |
| BC_C_56 | 7/16/2015 | 953 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | n | 42 | 104.4 | Plastic Laminate | 11 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| BC_C_57 | 7/16/2015 | 230 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 48 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_58 | 7/16/2015 | 235 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 204 | Plastic Laminate | 19 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_59 | 7/16/2015 | 1033 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 0 | 168 | Plastic Laminate | 12 | LOW | between bench and wall | infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel, bench | | 10 |
| BC_C_6 | 7/17/2015 | 1102 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 66 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_60 | 7/16/2015 | 1025 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | n | 42 | 144 | Plastic Laminate | 14 | LOW | barrel wall | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel, bench | | 10 |
| BC_C_61 | 7/16/2015 | 1020 | Dan Z | Cloudy | Asphalt | Residential | 3.6 | 0 | n | 36 | 180 | Plastic Laminate | 16 | LOW | barrel wall | significant infiltration - water gushing in | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel, bench | | 10 |
| BC_C_62 | 7/16/2015 | 1015 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 204 | Plastic Laminate | 18 | LOW | barrel wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | barrel, bench | | 10 |
| BC_C_63 | 7/16/2015 | 1010 | Dan Z | Cloudy | Asphalt | Residential | 3.6 | 0 | n | 36 | 216 | Plastic Laminate | 18 | LOW | barrel wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel, bench | | 10 |
| BC_C_64 | 7/16/2015 | 1000 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | n | 36 | 222 | Plastic Laminate | 19 | LOW | barrel wall | significant infiltration at last wall joint | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel, bench | | 10 |
| BC_C_65 | 7/17/2015 | 142 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 36 | 242.4 | Plastic Laminate | 21 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_C_66 | 7/17/2015 | 150 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 42 | 236.4 | Plastic Laminate | 22 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_C_67 | 7/17/2015 | 200 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 254.4 | Plastic Laminate | 23 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_C_68 | 7/17/2015 | 205 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 38.4 | 246 | Plastic Laminate | 22 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_C_69 | 7/17/2015 | 213 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 30 | 216 | Plastic Laminate | 20 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_C_7 | 7/17/2015 | 905 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 72 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_70 | 7/17/2015 | 225 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 54 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_71 | 7/16/2015 | 200 | Dan Z | Sunny | Sidewalk/ROW | DOT | 6 | 24 | n | 36 | 114 | Plastic Laminate | 12 | LOW | | minor infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | barrel | | 12 |
| BC_C_72 | 7/16/2015 | 205 | Dan Z | Sunny | Sidewalk/ROW | DOT | 6 | 60 | n | 36 | 120 | Plastic Laminate | 12 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_C_73 | 7/28/2015 | 1145 | Dan Z | Sunny | Asphalt | DOT | 24 | 0 | y | 30 | 135.6 | Plastic Laminate | 14 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_C_74 | 7/28/2015 | 120 | Dan Z | Sunny | Sidewalk/ROW | None | 18 | 6 | N | 0 | 36 | Plastic Laminate | 3 | LOW | | WATER CATCHER BELOW LID | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_C_75 | 7/28/2015 | 110 | Dan Z | Sunny | Sidewalk/ROW | None | 6 | 18 | y | 36 | 12 | Plastic Laminate | 4 | LOW | | WATER CATCHER BELOW LID | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_C_76 | 7/15/2015 | 1058 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 36 | 60 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_77 | 7/17/2015 | 910 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 42 | 67.2 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_78 | 7/17/2015 | 915 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 73.2 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_79 | 7/17/2015 | 920 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 42 | 61.2 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_8 | 7/17/2015 | 230 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 30 | 228 | Plastic Laminate | 20 | LOW | between bench and wall | minor infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 10 |
| BC_C_80 | 7/17/2015 | 928 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 57.6 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_81 | 7/17/2015 | 935 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 36 | 48 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_82 | 7/17/2015 | 930 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 36 | 36 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_83 | 7/17/2015 | 942 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 42 | 54 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_84 | 7/17/2015 | 940 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 36 | 46.8 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_85 | 7/28/2015 | 1125 | Dan Z | Sunny | Asphalt | DOT | 12 | 0 | y | 30 | 90 | Plastic Laminate | 12 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| BC_C_9 | 7/16/2015 | 320 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 36 | 60 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C_90 | 7/17/2015 | 955 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 32.4 | 60 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_1 | 7/27/2015 | 320 | Dan Z | Cloudy | Asphalt | Residential | 18 | 0 | y | 30 | 48 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_10 | 7/27/2015 | 435 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 217.2 | Plastic Laminate | 20 | LOW | between bench and wall | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| BC_C1_11 | 7/29/2015 | 150 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 31.2 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_12 | 7/29/2015 | 155 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 31.2 | Plastic Laminate | 5 | LOW | | pulled frame out of road | Vented/Slots* | 2 | Cast Iron | Loose | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_13 | 7/29/2015 | 200 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 45.6 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_14 | 7/27/2015 | 300 | Dan Z | Cloudy | Asphalt | Residential | 24 | 0 | y | 0 | 258 | Plastic Laminate | 20 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_15 | 7/27/2015 | 410 | Dan Z | Cloudy | Asphalt | Residential | 18 | 0 | y | 36 | 42 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_16 | 7/27/2015 | 415 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 42 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_17 | 7/27/2015 | 420 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 98.4 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_18 | 7/27/2015 | 425 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 114 | Plastic Laminate | 12 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_19 | 7/28/2015 | 845 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 30 | 162 | Plastic Laminate | 16 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_2 | 7/27/2015 | 325 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 51.6 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_20 | 7/28/2015 | 857 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 145.2 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| | Pipe E | | | | | | Pipe I-1 | | | | | | Pipe I-2 | | | | | | Pipe I-3 | | | | | Pipe I-4 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Material8 | Clock Position | Depth to Invert (tenths) | Channelized | Drop (in/out) | Notes9 | Size (in)10 | Material 11 | Clock Position 12 | Depth to Invert (tenths)13 | Channelized14 | Drop (in/out)15 | Notes16 | Size (in)17 | Material18 | Clock Position19 | Depth to Invert (tenths)20 | Channelized21 | Drop (in/out)22 | Notes23 | Size (in)24 | Material25 | Clock Position26 | Depth to Invert (tenths)27 | Channelized28 | Drop (in/out)29 | Notes30 | Size (in)31 | Material32 | Clock Position33 | Depth to Invert (tenths)34 | Channelized35 | Drop (in/out)36 | Notes37 |
| BC_B_4 | PVC C900 | 3 | 78 | Y | N | | 10 | PVC C900 | 6 | 78 | Y | N | | | | | | | | | | | | | | | | | | | | | | |
| BC_B_5 | PVC C900 | 11 | 135 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 123 | Y | N | | 10 | PVC C900 | 9 | 135 | Y | N | | | | | | | |
| BC_B_6 | PVC C900 | 12 | 123 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 155 | Y | N | | 8 | PVC C900 | 9 | 123 | Y | N | | | | | | | |
| BC_B_7 | PVC C900 | 12 | 155 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 95 | Y | N | | | | | | | | | | | | | | |
| BC_B_8 | PVC C900 | 12 | 95 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 90 | Y | N | | 10 | PVC C900 | 9 | 90 | Y | N | | | | | | | |
| BC_B_9 | PVC C900 | 12 | 90 | Y | N | | | | | | | | | 10 | PVC | 1 | 136 | Y | N | | | | | | | | | | | | | | |
| BC_C_1 | PVC | 7 | 136 | Y | N | white pipe | | | | | | | | 12 | PVC | 1 | 125 | Y | N | | 8 | PVC C900 | 10 | 127 | Y | N | | | | | | | |
| BC_C_10 | PVC C900 | 7 | 127 | Y | N | | 8 | PVC C900 | 10 | 127 | Y | N | | 8 | PVC C900 | 4 | 115 | Y | N | | 8 | PVC C900 | 7 | 115 | Y | N | | | | | | | |
| BC_C_11 | PVC C900 | 10 | 115 | Y | N | | | | | | | | | 8 | PVC C900 | 5 | 100 | Y | N | | | | | | | | | | | | | | |
| BC_C_12 | PVC C900 | 1 | 100 | Y | N | | | | | | | | | 8 | PVC C900 | 430 | 96 | Y | N | | | | | | | | | | | | | | |
| BC_C_13 | PVC C900 | 11 | 96 | Y | N | | | | | | | | | 8 | PVC C900 | 430 | 87 | Y | N | | | | | | | | | | | | | | |
| BC_C_14 | PVC C900 | 1030 | 87 | Y | N | | 8 | PVC C900 | 130 | 87 | Y | N | | 8 | PVC C900 | 130 | 85 | Y | N | | | | | | | | | | | | | | |
| BC_C_15 | PVC C900 | 730 | 85 | Y | N | | | | | | | | | 8 | PVC C900 | 4 | 90 | Y | N | | | | | | | | | | | | | | |
| BC_C_16 | PVC C900 | 10 | 90 | Y | N | | | | | | | | | 8 | PVC C900 | 4 | 91 | Y | N | | | | | | | | | | | | | | |
| BC_C_17 | PVC C900 | 10 | 91 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 185 | Y | N | | 8 | PVC C900 | 1030 | 120 | Y | N | | 8 | PVC C900 | 1030 | 105 | Y | N | |
| BC_C_18 | PVC C900 | 7 | 185 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 95 | Y | N | | | | | | | | | | | | | | |
| BC_C_19 | PVC C900 | 430 | 95 | Y | N | | | | | | | | | 8 | PVC C900 | 430 | 95 | Y | N | | | | | | | | | | | | | | |
| BC_C_2 | PVC C900 | 1030 | 95 | Y | N | | | | | | | | | 8 | PVC C900 | 10 | 75 | Y | N | | | | | | | | | | | | | | |
| BC_C_20 | PVC C900 | 430 | 75 | Y | N | | | | | | | | | 8 | PVC C900 | 1 | 125 | Y | N | | 8 | PVC C900 | 1 | 177 | Y | N | | | | | | | |
| BC_C_21 | PVC C900 | 10 | 177 | Y | N | | | | | | | | | 8 | PVC C900 | 4 | 197 | Y | N | | 8 | PVC | 1 | 210 | Y | Y | | | | | | | |
| BC_C_22 | PVC C900 | 7 | 125 | Y | N | | | | | | | | | 4 | PVC C900 | 4 | 77 | Y | N | | 4 | PVC C900 | 3 | 77 | Y | N | | 4 | PVC C900 | 2 | 77 | Y | N | |
| BC_C_23 | PVC C900 | 10 | 197 | Y | N | | | | | | | | | 8 | PVC C900 | 1 | 85 | Y | N | | | | | | | | | | | | | | |
| BC_C_24 | PVC C900 | 10 | 80 | Y | N | | 4 | PVC C900 | 5 | 77 | Y | N | | 4 | PVC | 4 | 135 | Y | N | | | | | | | | | | | | | | |
| BC_C_25 | PVC | 4 | 50 | Y | N | white pipe | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_26 | PVC | 10 | 135 | Y | N | white pipe | | | | | | | | 10 | PVC | 4 | 135 | Y | N | | | | | | | | | | | | | | |
| BC_C_27 | PVC C900 | 4 | 70 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_28 | PVC | 7 | 125 | Y | N | white pipe | 8 | PVC | 10 | 120 | Y | N | white pipe | 10 | PVC | 1 | 115 | Y | N | white pipe | 8 | PVC | 4 | 120 | Y | N | white pipe | | | | | | |
| BC_C_29 | PVC | 10 | 115 | Y | N | white pipe | | | | | | | | 10 | PVC | 4 | 95 | Y | Y | | | | | | | | | | | | | | |
| BC_C_3 | PVC C900 | 11 | 95 | Y | N | | | | | | | | | 8 | PVC C900 | 5 | 90 | Y | N | | | | | | | | | | | | | | |
| BC_C_30 | PVC | 10 | 65 | Y | N | white pipe | | | | | | | | 10 | PVC | 4 | 65 | Y | N | | | | | | | | | | | | | | |
| BC_C_31 | PVC | 7 | 85 | Y | N | white pipe | | | | | | | | 10 | PVC | 1 | 85 | Y | N | | 8 | PVC | 4 | 85 | Y | N | white pipe | | | | | | |
| BC_C_32 | PVC | 10 | 85 | Y | N | white pipe | | | | | | | | 10 | PVC | 4 | 85 | Y | N | | | | | | | | | | | | | | |
| BC_C_33 | PVC | 10 | 90 | Y | N | white pipe | | | | | | | | 8 | PVC | 4 | 90 | Y | N | | | | | | | | | | | | | | |
| BC_C_34 | PVC C900 | 7 | 170 | Y | N | | | | | | | | | 8 | PVC C900 | 1 | 170 | Y | N | | 8 | PVC C900 | 4 | 170 | Y | N | | | | | | | |
| BC_C_35 | PVC C900 | 7 | 110 | Y | N | | 8 | PVC C900 | 10 | 110 | Y | N | | 8 | PVC C900 | 1 | 110 | Y | N | | 8 | PVC C900 | 4 | 110 | Y | N | | | | | | | |
| BC_C_36 | PVC C900 | 10 | 85 | Y | N | | | | | | | | | 8 | PVC C900 | 4 | 85 | Y | N | | | | | | | | | | | | | | |
| BC_C_37 | PVC C900 | 10 | 70 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_38 | PVC C900 | 4 | 68 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_39 | PVC C900 | 7 | 75 | Y | N | | 8 | PVC C900 | 10 | 75 | Y | N | | 8 | PVC C900 | 1 | 75 | Y | N | | | | | | | | | | | | | | |
| BC_C_4 | PVC C900 | 11 | 90 | Y | N | | | | | | | | | 8 | PVC C900 | 5 | 90 | Y | N | | | | | | | | | | | | | | |
| BC_C_40 | PVC C900 | 3 | 68 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_41 | PVC C900 | 6 | 80 | Y | N | | 8 | PVC C900 | 9 | 80 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 80 | Y | N | | | | | | | |
| BC_C_42 | PVC C900 | 9 | 80 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 80 | Y | N | | | | | | | | | | | | | | |
| BC_C_43 | PVC C900 | 9 | 70 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_44 | PVC C900 | 3 | 35 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_45 | PVC C900 | 6 | 45 | Y | N | TP buildup | 8 | PVC C900 | 9 | 45 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 45 | Y | N | | | | | | | |
| BC_C_46 | PVC C900 | 7 | 76 | Y | N | | | | | | | | | 8 | PVC C900 | 1 | 76 | Y | N | | | | | | | | | | | | | | |
| BC_C_47 | PVC C900 | 2 | 50 | Y | N | Pool - unusual for end of line | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_48 | PVC C900 | 4 | 60 | Y | N | | | | | | | | | 8 | PVC C900 | 10 | 60 | Y | N | | | | | | | | | | | | | | |
| BC_C_49 | PVC C900 | 4 | 90 | Y | N | | | | | | | | | 8 | PVC C900 | 10 | 90 | Y | N | | | | | | | | | | | | | | |
| BC_C_5 | PVC C900 | 11 | 110 | Y | N | | | | | | | | | 8 | PVC C900 | 7 | 110 | Y | N | | | | | | | | | | | | | | |
| BC_C_50 | PVC C900 | 5 | 120 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 120 | Y | N | | | | | | | | | | | | | | |
| BC_C_51 | PVC C900 | 7 | 130 | Y | N | | | | | | | | | 8 | PVC C900 | 11 | 130 | Y | N | | | | | | | | | | | | | | |
| BC_C_52 | PVC | 7 | 125 | Y | N | white pipe | 8 | PVC | 10 | 100 | N | Y | | 8 | PVC | 1 | 125 | Y | N | | 8 | PVC | 4 | 125 | Y | N | | | | | | | |
| BC_C_53 | PVC | 10 | 130 | Y | N | white pipe | | | | | | | | 8 | PVC | 4 | 130 | Y | N | | | | | | | | | | | | | | |
| BC_C_54 | PVC | 10 | 135 | Y | N | white pipe | | | | | | | | 8 | PVC | 4 | 125 | Y | Y | | | | | | | | | | | | | | |
| BC_C_55 | PVC | 7 | 125 | Y | N | white pipe | | | | | | | | 10 | PVC | 1 | 125 | Y | N | | 8 | PVC | 1 | 115 | Y | Y | | | | | | | |
| BC_C_56 | PVC | 10 | 127 | Y | N | white pipe | | | | | | | | 8 | PVC | 4 | 125 | Y | N | | | | | | | | | | | | | | |
| BC_C_57 | PVC | 10 | 80 | Y | N | white pipe | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_58 | PVC | 7 | 215 | Y | N | white pipe | | | | | | | | 8 | PVC | 1 | 215 | Y | N | white pipe | 8 | PVC | 1 | 210 | Y | Y | white pipe | | | | | | |
| BC_C_59 | PVC | 10 | 155 | Y | N | white pipe | 10 | PVC | 1 | 155 | Y | N | | 10 | PVC | 4 | 155 | Y | N | | | | | | | | | | | | | | |
| BC_C_6 | PVC C900 | 1 | 100 | Y | N | | | | | | | | | 8 | PVC C900 | 730 | 100 | Y | N | | | | | | | | | | | | | | |
| BC_C_60 | PVC | 10 | 165 | Y | N | white pipe | | | | | | | | 10 | PVC | 4 | 165 | Y | N | | | | | | | | | | | | | | |
| BC_C_61 | PVC | 10 | 188 | Y | N | white pipe | | | | | | | | 10 | PVC | 4 | 188 | Y | N | | | | | | | | | | | | | | |
| BC_C_62 | PVC | 10 | 215 | Y | N | white pipe | 10 | PVC | 1 | 205 | Y | Y | | 10 | PVC | 4 | 215 | Y | N | | | | | | | | | | | | | | |
| BC_C_63 | PVC | 10 | 218 | Y | N | white pipe | | | | | | | | 10 | PVC | 4 | 218 | Y | N | | | | | | | | | | | | | | |
| BC_C_64 | PVC | 10 | 230 | Y | N | white pipe | | | | | | | | 10 | PVC | 4 | 230 | Y | N | | | | | | | | | | | | | | |
| BC_C_65 | PVC C900 | 10 | 240 | Y | N | | 8 | PVC C900 | 1 | 240 | Y | N | | 10 | PVC C900 | 4 | 240 | Y | N | | | | | | | | | | | | | | |
| BC_C_66 | PVC C900 | 10 | 242 | Y | N | | | | | | | | | 10 | PVC C900 | 4 | 242 | Y | N | | | | | | | | | | | | | | |
| BC_C_67 | PVC C900 | 10 | 252 | Y | N | | | | | | | | | 10 | PVC C900 | 4 | 252 | Y | N | | | | | | | | | | | | | | |
| BC_C_68 | PVC C900 | 10 | 245 | Y | N | | 8 | PVC C900 | 1 | 245 | Y | N | | 10 | PVC C900 | 4 | 245 | Y | N | | | | | | | | | | | | | | |
| BC_C_69 | PVC C900 | 10 | 215 | Y | N | | | | | | | | | 10 | PVC C900 | 4 | 215 | Y | N | | 8 | PVC C900 | 7 | 90 | N | Y | | | | | | | |
| BC_C_7 | PVC C900 | 10 | 95 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_70 | PVC C900 | 1 | 85 | Y | N | | 8 | PVC C900 | 4 | 85 | Y | N | | 8 | PVC C900 | 10 | 85 | Y | N | | | | | | | | | | | | | | |
| BC_C_71 | PVC | 9 | 136 | Y | N | white pipe | | | | | | | | 12 | PVC | 4 | 136 | Y | N | | | | | | | | | | | | | | |
| BC_C_72 | PVC | 7 | 142 | Y | N | white pipe | | | | | | | | | | | | | | | 12 | PVC | 4 | 142 | Y | N | | | | | | | |
| BC_C_73 | PVC C900 | 7 | 165 | Y | N | | | | | | | | | 12 | PVC C900 | 1 | 165 | Y | N | | | | | | | | | | | | | | |
| BC_C_74 | PVC C900 | 7 | 55 | Y | N | | | | | | | | | 12 | PVC C900 | 1 | 55 | Y | N | | | | | | | | | | | | | | |
| BC_C_75 | PVC C900 | 7 | 55 | Y | N | | | | | | | | | 12 | PVC C900 | 1 | 55 | Y | N | | | | | | | | | | | | | | |
| BC_C_76 | PVC C900 | 4 | 90 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C_77 | PVC C900 | 1030 | 106 | Y | N | | | | | | | | | 8 | PVC C900 | 5 | 106 | Y | N | | | | | | | | | | | | | | |
| BC_C_78 | PVC C900 | 1030 | 111 | Y | N | | | | | | | | | 8 | PVC C900 | 5 | 111 | Y | N | | | | | | | | | | | | | | |
| BC_C_79 | PVC C900 | 10 | 101 | Y | N | | | | | | | | | 8 | PVC C900 | 430 | 101 | Y | N | | | | | | | | | | | | | | |
| BC_C_8 | PVC C900 | 10 | 225 | Y | N | | | | | | | | | 10 | PVC C900 | 10 | 225 | Y | N | | 8 | PVC C900 | 10 | 220 | Y | Y | | | | | | | |
| BC_C_80 | PVC C900 | 430 | 93 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 93 | Y | N | | | | | | | | | | | | | | |
| BC_C_81 | PVC C900 | 430 | 95 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 95 | Y | N | | | | | | | | | | | | | | |
| BC_C_82 | PVC C900 | 730 | 85 | Y | N | | 4 | PVC C900 | 2 | 83 | Y | N | | 4 | PVC C900 | 1 | 83 | Y | N | | 4 | PVC C900 | 12 | 83 | Y | N | | | | | | | |
| BC_C_83 | PVC C900 | 4 | 95 | Y | N | | | | | | | | | 8 | PVC C900 | 10 | 95 | Y | N | | | | | | | | | | | | | | |
| BC_C_84 | PVC C900 | 4 | 94 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 94 | Y | N | | | | | | | | | | | | | | |
| BC_C_85 | PVC C900 | 7 | 120 | Y | N | | | | | | | | | 12 | PVC C900 | 1 | 120 | Y | N | | | | | | | | | | | | | | |
| BC_C_9 | PVC C900 | 4 | 88 | Y | N | | | | | | | | | 8 | PVC C900 | 10 | 88 | Y | N | | | | | | | | | | | | | | |
| BC_C_90 | PVC C900 | 10 | 92 | Y | N | | | | | | | | | 8 | PVC C900 | 4 | 92 | Y | N | | | | | | | | | | | | | | |
| BC_C1_1 | PVC C900 | 10 | 85 | Y | N | | 8 | PVC C900 | 1 | 85 | Y | N | | 8 | PVC C900 | 4 | 85 | Y | N | | | | | | | | | | | | | | |
| BC_C1_10 | PVC C900 | 630 | 226 | Y | N | | | | | | | | | 8 | PVC C900 | 130 | 226 | Y | N | | | | | | | | | | | | | | |
| BC_C1_11 | PVC C900 | 1230 | 71 | Y | N | | | | | | | | | 8 | PVC C900 | 5 | 71 | Y | N | | | | | | | | | | | | | | |
| BC_C1_12 | PVC C900 | 11 | 71 | Y | N | | | | | | | | | 8 | PVC C900 | 430 | 71 | Y | N | | | | | | | | | | | | | | |
| BC_C1_13 | PVC C900 | 1030 | 78 | Y | N | | | | | | | | | 8 | PVC C900 | 530 | 78 | Y | N | | | | | | | | | | | | | | |
| BC_C1_14 | PVC C900 | 10 | 240 | Y | N | | 8 | PVC C900 | 1 | 240 | Y | N | | 10 | PVC | 4 | 100 | Y | Y | | 10 | PVC | 7 | 120 | N | Y | | | | | | | |
| BC_C1_15 | PVC C900 | 4 | 85 | Y | N | | | | | | | | | 4 | PVC C900 | 1030 | 83 | Y | N | | | | | | | | | | | | | | |
| BC_C1_16 | PVC C900 | 5 | 80 | Y | N | | | | | | | | | 4 | PVC C900 | 11 | 78 | Y | N | | | | | | | | | | | | | | |
| BC_C1_17 | PVC C900 | 4 | 127 | Y | N | | | | | | | | | 8 | PVC C900 | 11 | 127 | Y | N | | | | | | | | | | | | | | |
| BC_C1_18 | PVC C900 | 430 | 140 | Y | N | | | | | | | | | 8 | PVC C900 | 10 | 140 | Y | N | | | | | | | | | | | | | | |
| BC_C1_19 | PVC C900 | 7 | 190 | Y | N | | | | | | | | | 8 | PVC C900 | 1230 | 185 | Y | N | | | | | | | | | | | | | | |
| BC_C1_2 | PVC C900 | 10 | 88 | Y | N | | 8 | PVC C900 | 1 | 88 | Y | N | | 8 | PVC C900 | 4 | 88 | Y | N | | | | | | | | | | | | | | |
| BC_C1_20 | PVC C900 | 630 | 166 | Y | N | | 8 | PVC C900 | 630 | 140 | N | Y | | 8 | PVC C900 | 1230 | 166 | Y | N | stubs out | | | | | | | | | | | | | | |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| General | | | | | | | | | | | | Manhole Specs | | | | | | Frame and Cover | | | | Grade Rings | | Barrel Wall | | Bench/Channel | | Structural/O&M Condition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Date | Time | Inspector | Weather Conditions | Surface Condition | Traffic Volume | Rim to top of cone (tenths) | Average Rim to Grade Height (tenths) | Chimney (y/n) | Cone Depth (tenths) | Barrel/Wall Height (tenths) | Rung Type | # of Steps | Inflow Potential | Joint Issues | Notes | Type | No_Slots | Material | Condition | Type2 | Condition3 | Type4 | Condition5 | Type6 | Condition7 | Rungs | Concrete Corrosion | Corrosion Location | Evidence of Infiltration | Evidence of Surcharge | Size (in) |
| BC_C1_21 | 7/28/2015 | 850 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 187.2 | Plastic Laminate | 17 | LOW | between bench and wall | minor infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_22 | 7/28/2015 | 950 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 30 | 48 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_23 | 7/28/2015 | 955 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 30 | 158.4 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_24 | 7/28/2015 | 1000 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 30 | 198 | | 0 | LOW | | infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel | | 8 |
| BC_C1_25 | 7/28/2015 | 1013 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 30 | 60 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_26 | 7/28/2015 | 1015 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 181.2 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_27 | 7/28/2015 | 935 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 30 | 168 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_28 | 7/28/2015 | 910 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 84 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_29 | 7/28/2015 | 917 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 24 | 50.4 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_3 | 7/27/2015 | 337 | Dan Z | Cloudy | Asphalt | Residential | 24 | 0 | y | 30 | 60 | | 0 | LOW | between bench and wall | minor infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_30 | 7/28/2015 | 920 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 43.2 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_31 | 7/28/2015 | 925 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 36 | 43.2 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_32 | 7/28/2015 | 930 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 42 | 87.6 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_33 | 7/29/2015 | 145 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 60 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_34 | 7/27/2015 | 140 | Dan Z | Cloudy | Asphalt | Residential | 6 | 0 | n | 42 | 84 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_35 | 7/27/2015 | 135 | Dan Z | Cloudy | Asphalt | Residential | 18 | 0 | y | 30 | 207.6 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | bench | 8 |
| BC_C1_4 | 7/27/2015 | 331 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 30 | 61.2 | Plastic Laminate | 6 | LOW | at pipe joints | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | pipe penetrations | | 8 |
| BC_C1_40 | 7/29/2015 | 210 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 45.6 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_5 | 7/27/2015 | 345 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 84 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_6 | 7/27/2015 | 353 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 30 | 60 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_7 | 7/27/2015 | 350 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 42 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_C1_8 | 7/27/2015 | 400 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 60 | Plastic Laminate | 17 | LOW | between bench and wall | major infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | corroded | | surface reinforcement visible | bench | bench, barrel | | 8 |
| BC_C1_9 | 7/27/2015 | 430 | Dan Z | Cloudy | Asphalt | Residential | 12 | 0 | y | 36 | 223.2 | Plastic Laminate | 20 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_SB1_1 | 7/28/2015 | 147 | Dan Z | Sunny | Asphalt | Parking Lot | 12 | 0 | y | 36 | 42 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_SB1_10 | 8/11/2015 | 810 | Dan Z | Cloudy | Asphalt | DOT | 12 | 0 | Y | 30 | 98.4 | | | LOW | | | Vented/Slots* | 15 | Cast Iron | Loose | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_SB1_11 | 8/3/2015 | 245 | Dan Z | Cloudy | Easement | None | 3.6 | 6 | n | 38.4 | 60 | Plastic Laminate | 8 | HIGH | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_SB1_13 | 8/11/2015 | 805 | Dan Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 42 | 60 | | | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | BENCH | 8 |
| BC_SB1_2 | 7/28/2015 | 140 | Dan Z | Sunny | Easement | None | 3.6 | 0 | n | 36 | 54 | Plastic Laminate | 6 | med | | | Vented/Slots* | 2 | Cast Iron | Sound | Cast-in-pla | Loose Grade Ring | Concrete | Pitted | Concrete | Sound | | | | barrel | | 10 |
| BC_SB1_3 | 7/28/2015 | 155 | Dan Z | Sunny | Asphalt | Parking Lot | 3.6 | 0 | y | 38.4 | 66 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_SB1_4 | 7/28/2015 | 205 | Dan Z | Sunny | Asphalt | Parking Lot | 12 | 0 | y | 30 | 84 | Plastic Laminate | 8 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_SB1_5 | 7/28/2015 | 215 | Dan Z | Sunny | Asphalt | Parking Lot | 12 | 0 | y | 30 | 84 | Plastic Laminate | 8 | LOW | | recent pipe mortar patch | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| BC_SB1_6 | 8/3/2015 | 300 | Dan Z | Cloudy | Easement | None | 6 | 6 | n | 36 | 48 | Metal | 7 | HIGH | | no bolts, orangish yellow buildup | Bolted | | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | bench | bench | | 15 |
| BC_SB1_7 | 8/11/2015 | 755 | Dan Z | Cloudy | Asphalt | DOT | 18 | 0 | Y | 36 | 54 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_SB1_9 | 8/11/2015 | 815 | Dan Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 84 | | | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_SB2_1 | 6/19/2015 | 1145 | Dan Z | Cloudy | Easement | None | 12 | 1.2 | y | 36 | 60 | Metal | 8 | LOW | at pipe joints | white residue around pipe I-2 | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | Surface Reinforcement Visible | bench | bench | bench | 15 |
| BC_SB2_2 | 6/17/2015 | 945 | Dan Z | Sunny | Easement | None | 12 | 1.2 | y | 36 | 72 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| BC_SB2_3 | 6/19/2015 | 1130 | Dan Z | Cloudy | asphalt | Residential | 12 | 0 | y | 48 | 102 | Plastic Laminate | 12 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface aggregate visible | bench | bench | Rungs | 15 |
| BC_SB2_4 | 6/19/2015 | 1159 | Dan Z | Cloudy | asphalt | Residential | 12 | 0 | y | 30 | 60 | Metal | 3 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| BC_SB2_5 | 6/19/2015 | 1105 | Dan Z | Cloudy | asphalt | Residential | 18 | 0 | y | 18 | 92.4 | Plastic Laminate | 9 | LOW | between wall and cone | terrible manhole | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface aggregate visible | bench | bench | bench | 15 |
| BC_SB2_6 | 6/19/2015 | 220 | Dan Z | Sunny | Easement | None | 36 | 12 | y | 24 | 54 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface aggregate visible | bench | bench | | 15 |
| BC_SB2_7 | 6/19/2015 | 144 | Dan Z | Cloudy | Easement | None | 12 | 0 | y | 36 | 78 | Metal | 8 | LOW | between wall and cone | leaky joints | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface aggregate visible | bench | bench | | 15 |
| BC_SB2_8 | 6/19/2015 | 1050 | Dan Z | Cloudy | Easement | None | 12 | 6 | y | 36 | 60 | Plastic Laminate | 8 | LOW | | water in pipe suggests infiltration upstream | Vented/Slots* | 2 | Cast Iron | Sound | concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| BC_SB3_1 | 7/28/2015 | 125 | Dan Z | Sunny | Sidewalk/ROW | None | 12 | 12 | y | 30 | 54 | Plastic Laminate | 6 | med | | | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_1 | 7/7/2015 | 900 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 30 | 36 | Plastic Laminate | 5 | LOW | | red streaks in mh | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_10 | 7/13/2015 | 930 | Dan Z | Cloudy | Sidewalk/ROW | None | 12 | 0 | y | 36 | 60 | Metal | 7 | High | barrel wall | stagnant water, MH in a slight depression in gra | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 15 |
| TL_11 | 7/13/2015 | 935 | Dan Z | Cloudy | Sidewalk/ROW | None | 12 | 6 | y | 36 | 60 | Metal | 7 | High | | | Vented/Slots* | 2 | Cast Iron | Corroded | concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_12 | 7/13/2015 | 1047 | Dan Z | Cloudy | Asphalt | None | 12 | 0 | y | 24 | 0 | Metal | 2 | LOW | | | SOLID | | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_13 | 7/13/2015 | 1055 | Dan Z | Cloudy | Easement | None | 6 | 0 | n | 30 | 54 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_14 | 7/13/2015 | 1059 | Dan Z | Cloudy | Easement | None | 24 | 0 | y | 24 | 24 | Metal | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_15 | 7/22/2015 | 140 | Dan Z | Cloudy | Asphalt | City/County | 18 | 0 | y | 0 | 48 | Metal | 4 | LOW | | one plastic rung | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_16 | 7/7/2015 | 846 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 24 | 36 | Metal | 4 | LOW | | | Gasketed | | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_17 | 7/6/2015 | 350 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 48 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_18 | 7/6/2015 | 328 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_19 | 7/7/2015 | 915 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 30 | 60 | Metal | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | Rungs | 15 |
| TL_2 | 7/6/2015 | 344 | Dan Z | Sunny | Asphalt | City/County | 36 | 0 | n | 36 | 36 | Metal | 0 | LOW | | significant infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | bench | | 12 |
| TL_20 | 7/22/2015 | 404 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 36 | 126 | Metal | 12 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | rungs | 15 |
| TL_21 | 7/22/2015 | 400 | Dan Z | Sunny | Asphalt | City/County | 14.4 | 0 | n | 0 | 84 | | 0 | LOW | | steel cross runner | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_22 | 7/22/2015 | 355 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 50.4 | Metal | 5 | LOW | | 15" pipe not exposed | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_23 | 7/22/2015 | 353 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 57.6 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_24 | 7/22/2015 | 350 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 57.6 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_25 | 7/22/2015 | 345 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | y | 36 | 42 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_26 | 7/22/2015 | 340 | Dan Z | Sunny | Asphalt | City/County | 14.4 | 0 | y | 38.4 | 12 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_27 | 7/22/2015 | 325 | Dan Z | Sunny | Asphalt | City/County | 18 | 0 | y | 36 | 25.2 | Metal | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Broken | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_28 | 7/22/2015 | 320 | Dan Z | Sunny | Asphalt | City/County | 18 | 0 | y | 36 | 67.2 | Metal | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_29 | 7/22/2015 | 335 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 78 | Metal | 10 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_3 | 7/6/2015 | 335 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 42 | 60 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_30 | 7/22/2015 | 212 | Dan Z | Cloudy | Asphalt | City/County | 12 | 0 | y | 30 | 98.4 | Plastic Laminate | 10 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_31 | 7/22/2015 | 157 | Dan Z | Cloudy | Asphalt | City/County | 6 | 0 | n | 36 | 27.6 | Metal | 4 | LOW | | con pipe could use some busting out | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_32 | 7/22/2015 | 153 | Dan Z | Cloudy | Asphalt | City/County | 12 | 0 | y | 36 | 36 | Metal | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_33 | 7/22/2015 | 150 | Dan Z | Cloudy | Asphalt | City/County | 12 | 0 | y | 39.6 | 18 | Metal | 3 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_34 | 7/22/2015 | 145 | Dan Z | Cloudy | Asphalt | City/County | 18 | 0 | y | 36 | 0 | Metal | 2 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_35 | 7/22/2015 | 134 | Dan Z | Cloudy | Asphalt | City/County | 6 | 0 | N | 30 | 54 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_36 | 7/22/2015 | 130 | Dan Z | Cloudy | Asphalt | City/County | 24 | 0 | y | 30 | 48 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_37 | 7/22/2015 | 125 | Dan Z | Cloudy | Asphalt | City/County | 24 | 0 | y | 30 | 36 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_38 | 7/22/2015 | 115 | Dan Z | Cloudy | Asphalt | City/County | 30 | 0 | y | 24 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_39 | 7/13/2015 | 1124 | Dan Z | Cloudy | Asphalt | City/County | 30 | 0 | y | 30 | 84 | Metal | 9 | LOW | barrel wall | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 15 |
| TL_4 | 7/6/2015 | 332 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_40 | 7/8/2015 | 1110 | Dan Z | Sunny | Other | None | 12 | 30 | y | 36 | 24 | Metal | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Loose Grade Ring | Concrete | Sound | Concrete | Sound | | | | | | 18 |
| TL_41 | 7/22/2015 | 205 | Dan Z | Cloudy | Asphalt | City/County | 18 | 0 | y | 36 | 50.4 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_42 | 7/22/2015 | 208 | Dan Z | Cloudy | Asphalt | City/County | 12 | 0 | y | 36 | 84 | Metal | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_43 | 7/7/2015 | 905 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 60 | Metal | 7 | LOW | | asphalt around MH cracked | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 12 |
| TL_44 | 7/22/2015 | 315 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | y | 36 | 84 | Metal | 8 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_46 | 7/13/2015 | 1110 | Dan Z | Sunny | Other | None | 12 | 24 | y | 0 | 48 | Plastic Laminate | 3 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 18 |
| TL_48 | 5/28/2015 | 843 | DAN Z | Sunny | Asphalt | City/County | 6 | 0 | N | 54 | 54 | Metal | 7 | LOW | | DAMP BARREL | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | BARREL | | 10 |
| TL_5 | 7/6/2015 | 325 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 42 | 42 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_50 | 7/28/2015 | 1131 | Dan Z | Sunny | Asphalt | DOT | 24 | 0 | y | 36 | 66 | Metal | 10 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_51 | 7/13/2015 | 915 | Dan Z | Cloudy | Asphalt | City/County | 12 | 0 | y | 36 | 108 | Metal | 11 | LOW | barrel wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | barrel, bench | | 15 |
| TL_6 | 7/7/2015 | 924 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 30 | 60 | Plastic Laminate | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_7 | 7/7/2015 | 936 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 24 | 66 | Metal | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_8 | 7/22/2015 | 215 | Dan Z | Cloudy | Asphalt | City/County | 12 | 0 | y | 30 | 91.2 | Metal | 10 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_9 | 7/22/2015 | 220 | Dan Z | Cloudy | Asphalt | City/County | 12 | 0 | y | 30 | 91.2 | Metal | 10 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 15 |
| TL_A_1 | 5/11/2015 | 136 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 24 | 24 | | 0 | Low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A_10 | 5/18/2015 | 111 | DAN Z | Sunny | Sidewalk/ROW | None | 6 | 1.2 | N | 24 | 12 | | 0 | Low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Cracked | Choose an | Sound | | | | Barrel | | 6 |
| TL_A_11 | 5/18/2015 | 129 | DAN Z | Sunny | Asphalt | Residential | 12 | 0 | N | 24 | 24 | | 0 | Low | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Sound | | | | Barrel | | 6 |
| TL_A_12 | 5/18/2015 | 204 | DAN Z | Sunny | Asphalt | Residential | 7.2 | 0 | N | 24 | 36 | | 0 | Med | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | Barrel | | 8 |
| TL_A_13 | 5/18/2015 | 158 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 36 | 36 | | 0 | Low | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | Concrete | Cracked | Concrete | Sound | Concrete | Sound | | | | Barrel | | 8 |
| TL_A_14 | 5/18/2015 | 220 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 24 | 48 | | 0 | None | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | Barrel | | 8 |
| TL_A_15 | 5/18/2015 | 212 | DAN Z | Sunny | Asphalt | Residential | 6 | 2.4 | Y | 36 | 24 | | 0 | Med | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Sound | | | | | | 8 |
| TL_A_16 | 5/26/2015 | 1133 | DAN Z | Cloudy | Easement | Residential | 18 | 1.2 | N | 0 | 18 | | 0 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A_17 | 5/18/2015 | 404 | DAN Z | Cloudy | Sidewalk/ROW | None | 6 | 0 | Y | 36 | 0 | | 0 | Low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_A_18 | 5/18/2015 | 358 | DAN Z | Cloudy | Sidewalk/ROW | None | 6 | 0 | Y | 36 | 36 | Metal | 3 | Low | at pipe joints | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_A_19 | 2/19/2016 | 206 | DENNIS WI | Rainy | Asphalt | Residential | 6 | 0 | N | 32 | 20 | Metal | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | Cast-in-pla | Sound | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A_2 | 5/18/2015 | 333 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 36 | 24 | Metal | 4 | None | | STICKS | Vented/Slots* | 15 | Cast Iron | Sound | Cast-in-pla | Loose Grade Ring | Concrete | Sound | Concrete | Sound | | | | | | 8 |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| | Pipe E | | | | | | | Pipe I-1 | | | | | | | Pipe I-2 | | | | | | | Pipe I-3 | | | | | | | Pipe I-4 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Material8 | Clock Position | Depth to Invert (tenths) | Channelized | Drop (in/out) | Notes9 | Size (in)10 | Material 11 | Clock Position 12 | Depth to Invert (tenths)13 | Channelized14 | Drop (in/out)15 | Notes16 | Size (in)17 | Material18 | Clock Position19 | Depth to Invert (tenths)20 | Channelized21 | Drop (in/out)22 | Notes23 | Size (in)24 | Material25 | Clock Position26 | Depth to Invert (tenths)27 | Channelized28 | Drop (in/out)29 | Notes30 | Size (in)31 | Material32 | Clock Position33 | Depth to Invert (tenths)34 | Channelized35 | Drop (in/out)36 | Notes37 | | |
| BC_C1_21 | PVC C900 | 630 | 201 | Y | N | | 8 | PVC C900 | 930 | 180 | N | Y | | 8 | PVC C900 | 1230 | 201 | Y | N | | 8 | PVC C900 | 330 | 201 | Y | N | | | | | | | | | | |
| BC_C1_22 | PVC C900 | 7 | 88 | Y | N | | 8 | PVC C900 | 10 | 85 | Y | N | | 4 | PVC C900 | 12 | 85 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_23 | PVC C900 | 5 | 167 | Y | N | | | | | | | | | 8 | PVC C900 | 11 | 167 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_24 | PVC C900 | 8 | 200 | Y | N | | 8 | PVC C900 | 11 | 200 | Y | N | | 8 | PVC C900 | 5 | 85 | Y | Y | | | | | | | | | | | | | | | | |
| BC_C1_25 | PVC C900 | 11 | 90 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C1_26 | PVC C900 | 930 | 191 | Y | N | | | | | | | | | 8 | PVC C900 | 130 | 191 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_27 | PVC C900 | 830 | 185 | Y | N | | 8 | PVC C900 | 1230 | 140 | N | Y | | 8 | PVC C900 | 230 | 185 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_28 | PVC C900 | 4 | 110 | Y | N | | | | | | | | | 8 | PVC C900 | 10 | 110 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_29 | PVC C900 | 4 | 83 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 83 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_3 | PVC C900 | 10 | 100 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BC_C1_30 | PVC C900 | 430 | 76 | Y | N | | | | | | | | | 8 | PVC C900 | 12 | 76 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_31 | PVC C900 | 430 | 86 | Y | N | | | | | | | | | 8 | PVC C900 | 1230 | 86 | Y | N | stubs out | | | | | | | | | | | | | | | |
| BC_C1_32 | PVC C900 | 4 | 124 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 124 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_33 | PVC C900 | 1230 | 90 | Y | N | | | | | | | | | 8 | PVC C900 | 630 | 90 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_34 | PVC C900 | 7 | 110 | Y | N | | | | | | | | | | | | | | | | 8 | PVC C900 | 10 | 110 | Y | N | | | | | | | | | |
| BC_C1_35 | PVC C900 | 10 | 220 | Y | N | | 8 | PVC | 12 | 60 | N | Y | | 8 | PVC C900 | 4 | 220 | Y | N | | | | | | | | | 8 | PVC C900 | 1 | 110 | N | Y | | |
| BC_C1_4 | PVC C900 | 10 | 91 | Y | N | | | | | | | | | 8 | PVC C900 | 4 | 91 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_40 | PVC C900 | 1130 | 86 | Y | N | | 4 | PVC C900 | 5 | 84 | Y | N | | | | | | | | | 4 | PVC C900 | 8 | 84 | Y | N | | | | | | | | | |
| BC_C1_5 | PVC C900 | 130 | 105 | Y | N | | 4 | PVC C900 | 5 | 105 | Y | N | | | | | | | | | 4 | PVC C900 | 7 | 105 | Y | N | | | | | | | | | |
| BC_C1_6 | PVC C900 | 1030 | 85 | Y | N | | 8 | PVC C900 | 130 | 85 | Y | N | | | | | | | | | 8 | PVC C900 | 130 | 85 | Y | N | | | | | | | | | |
| BC_C1_7 | PVC C900 | 730 | 80 | Y | N | | | | | | | | | 4 | PVC C900 | 130 | 78 | Y | N | | | | | | | | | | | | | | | | |
| BC_C1_8 | PVC C900 | 730 | 200 | Y | N | | 8 | PVC C900 | 430 | 110 | N | Y | | 8 | PVC C900 | 130 | 200 | Y | N | | 8 | PVC C900 | 1030 | 125 | N | Y | | | | | | | | | |
| BC_C1_9 | PVC C900 | 730 | 231 | Y | N | | 8 | PVC C900 | 1030 | 180 | N | Y | | 8 | PVC C900 | 130 | 231 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB1_1 | PVC C900 | 3 | 85 | Y | N | | | | | | | | | 10 | PVC C900 | 730 | 85 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB1_10 | PVC C900 | 1 | 121 | Y | N | | | | | | | | | 8 | PVC C900 | 7 | 121 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB1_11 | PVC C900 | 12 | 91 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 91 | Y | N | | 6 | PVC C900 | 9 | 89 | Y | N | | | | | | | | | |
| BC_SB1_13 | PVC C900 | 1 | 95 | Y | N | | 6 | PVC C900 | 5 | 95 | Y | N | | 8 | PVC C900 | 7 | 95 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB1_2 | PVC C900 | 130 | 85 | Y | N | | | | | | | | | 10 | PVC C900 | 6 | 85 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB1_3 | PVC C900 | 3 | 96 | Y | N | | | | | | | | | 10 | PVC C900 | 9 | 96 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB1_4 | PVC C900 | 12 | 110 | Y | N | | | | | | | | | 10 | PVC C900 | 9 | 110 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB1_5 | PVC C900 | 12 | 110 | Y | N | | | | | | | | | 10 | PVC C900 | 9 | 110 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB1_6 | AC | 1030 | 90 | Y | N | | | | | | | | | 15 | AC | 4 | 90 | Y | N | | 10 | PVC C900 | 9 | 80 | Y | N | | | | | | | | | |
| BC_SB1_7 | PVC C900 | 1 | 100 | Y | N | | 8 | PVC C900 | 5 | 100 | Y | N | | | | | | | | | 8 | PVC C900 | 10 | 100 | Y | N | | | | | | | | | |
| BC_SB1_9 | PVC C900 | 1 | 112 | Y | N | | | | | | | | | 8 | PVC C900 | 7 | 112 | Y | N | | 6 | PVC C900 | 10 | 112 | Y | N | | | | | | | | | |
| BC_SB2_1 | PVC | 10 | 98 | Y | N | | 15 | PVC | 12 | 98 | Y | N | | 15 | PVC | 4 | 98 | Y | N | white residue arou | 8 | PVC C900 | 6 | 98 | Y | N | | | | | | | | | |
| BC_SB2_2 | PVC C900 | 6 | 108 | Y | N | | 12 | PVC C900 | 2 | 90 | Y | N | stub out | 15 | PVC C900 | 12 | 90 | N | Y | | | | | | | | | | | | | | | | |
| BC_SB2_3 | PVC C900 | 6 | 143 | Y | N | | 12 | PVC | 9 | 143 | Y | Y | | 15 | PVC C900 | 12 | 143 | Y | N | | 12 | PVC | 3 | 143 | Y | Y | | | | | | | | | |
| BC_SB2_4 | PVC C900 | 6 | 64 | Y | N | | 6 | PVC | 9 | 64 | Y | N | | | | | | | | | 6 | PVC | 3 | 64 | Y | N | | | | | | | | | |
| BC_SB2_5 | PVC C900 | 6 | 115 | Y | N | | 6 | PVC C900 | 9 | 115 | Y | N | stub out | 8 | PVC C900 | 12 | 115 | Y | N | | 15 | PVC C900 | 3 | 115 | Y | N | | | | | | | | | |
| BC_SB2_6 | PVC C900 | 9 | 109 | Y | N | | | | | | | | | 15 | PVC C900 | 3 | 109 | Y | N | | 15 | PVC | 3 | 50 | N | Y | | | | | | | | | |
| BC_SB2_7 | PVC C900 | 9 | 109 | Y | N | | | | | | | | | 15 | PVC C900 | 6 | 109 | Y | N | | | | | | | | | | | | | | | | |
| BC_SB2_8 | PVC C900 | 9 | 98 | Y | N | | | | | | | | | 15 | PVC C900 | 3 | 98 | N | Y | | | | | | | | | | | | | | | | |
| BC_SB3_1 | PVC C900 | 1 | 85 | Y | N | | | | | | | | | 8 | PVC C900 | 7 | 85 | Y | N | | | | | | | | | | | | | | | | |
| TL_1 | AC | 9 | 80 | Y | N | | 6 | PVC C900 | 12 | 60 | N | Y | | 15 | AC | 3 | 80 | Y | N | | | | | | | | | | | | | | | | |
| TL_10 | PVC | 12 | 105 | Y | N | | 15 | PVC | 3 | 105 | Y | N | | | | | | | | | | | | | | | | | | | | | | | |
| TL_11 | PVC | 9 | 110 | Y | N | | | | | | | | | | | | | | | | 15 | PVC | 6 | 110 | Y | N | | | | | | | | | |
| TL_12 | PVC | 12 | 40 | Y | N | | 15 | PVC | 3 | 40 | Y | N | | | | | | | | | | | | | | | | | | | | | | | |
| TL_13 | PVC | 9 | 85 | Y | N | | | | | | | | | | | | | | | | 15 | PVC | 6 | 85 | Y | N | | | | | | | | | |
| TL_14 | PVC | 9 | 75 | Y | N | | | | | | | | | | | | | | | | 15 | PVC | 3 | 75 | Y | N | | | | | | | | | |
| TL_15 | PVC | 9 | 70 | Y | N | | | | | | | | | 12 | PVC | 3 | 65 | Y | N | | 15 | PVC | 130 | 63 | Y | Y | | | | | | | | | |
| TL_16 | AC | 9 | 65 | Y | N | | 6 | DI | 12 | 70 | Y | Y | | 12 | AC | 3 | 75 | Y | N | | | | | | | | | | | | | | | | |
| TL_17 | AC | 9 | 85 | Y | N | | 4 | PVC | 12 | 75 | Y | Y | | 10 | AC | 3 | 85 | Y | N | | | | | | | | | | | | | | | | |
| TL_18 | AC | 12 | 64 | Y | N | | | | | | | | | 10 | AC | 6 | 64 | Y | N | | | | | | | | | | | | | | | | |
| TL_19 | AC | 12 | 105 | Y | N | | 12 | AC | 3 | 105 | Y | N | | 8 | AC | 6 | 105 | Y | N | | 8 | PVC | 6 | 95 | Y | Y | | | | | | | | | |
| TL_2 | AC | 9 | 94 | Y | N | | | | | | | | | 12 | AC | 3 | 94 | Y | N | | 8 | AC | 6 | 94 | Y | N | | | | | | | | | |
| TL_20 | CONCRETE | 9 | 156 | Y | N | | | | | | | | | 8 | CONCRETE | 3 | 150 | Y | N | | 15 | CONCRETE | 6 | 153 | Y | N | | | | | | | | | |
| TL_21 | CONCRETE | 9 | 92 | Y | N | | 8 | CONCREE | 12 | 87 | Y | N | | 15 | CONCRETE | 3 | 87 | Y | N | | | | | | | | | | | | | | | | |
| TL_22 | CONCRETE | 9 | 87 | Y | N | | 8 | PVC | 12 | 80 | Y | N | | 15 | CONCRETE | 3 | 87 | Y | N | | | | | | | | | | | | | | | | |
| TL_23 | CONCRETE | 9 | 91 | Y | N | | | | | | | | | 15 | CONCRETE | 3 | 91 | Y | N | | | | | | | | | | | | | | | | |
| TL_24 | CONCRETE | 9 | 91 | Y | N | | | | | | | | | 15 | CONCRETE | 3 | 91 | Y | N | | 8 | PVC | 3 | 89 | Y | N | | | | | | | | | |
| TL_25 | CONCRETE | 9 | 81 | Y | N | | | | | | | | | 15 | CONCRETE | 3 | 81 | Y | N | | | | | | | | | | | | | | | | |
| TL_26 | CONCRETE | 9 | 64 | Y | N | | 8 | PVC C900 | 12 | 60 | Y | Y | | 15 | CONCRETE | 3 | 64 | Y | N | | | | | | | | | | | | | | | | |
| TL_27 | CONCRETE | 9 | 76 | Y | N | | | | | | | | | 15 | CONCRETE | 3 | 74 | Y | N | | 8 | CONCRETE | 6 | 74 | Y | N | | | | | | | | | |
| TL_28 | CONCRETE | 9 | 115 | Y | N | | 8 | PVC C900 | 12 | 110 | Y | Y | | 15 | CONCRETE | 3 | 112 | Y | N | | | | | | | | | | | | | | | | |
| TL_29 | CONCRETE | 9 | 114 | Y | N | | | | | | | | | 15 | CONCRETE | 3 | 115 | Y | N | | | | | | | | | | | | | | | | |
| TL_3 | AC | 9 | 94 | Y | N | | | | | | | | | 8 | AC | 3 | 94 | Y | N | | | | | | | | | | | | | | | | |
| TL_30 | CONCRETE | 9 | 127 | Y | N | | 8 | PVC C900 | 12 | 117 | N | Y | | 12 | CONCRETE | 3 | 127 | Y | N | | | | | | | | | | | | | | | | |
| TL_31 | CONCRETE | 9 | 77 | Y | N | | 8 | PVC C900 | 12 | 70 | Y | Y | | 12 | CONCRETE | 3 | 77 | Y | N | | | | | | | | | | | | | | | | |
| TL_32 | CONCRETE | 9 | 78 | Y | N | | | | | | | | | 12 | CONCRETE | 3 | 78 | Y | N | | | | | | | | | | | | | | | | |
| TL_33 | CONCRETE | 9 | 77 | Y | N | | | | | | | | | 12 | CONCRETE | 3 | 67 | Y | N | | 6 | PVC | 6 | 60 | Y | Y | | | | | | | | | |
| TL_34 | PVC | 9 | 65 | Y | N | | | | | | | | | 12 | PVC | 3 | 55 | Y | N | | 2 | PVC C900 | 6 | 40 | N | Y | | | | | | | | | |
| TL_35 | PVC | 9 | 86 | Y | N | | 8 | PVC C900 | 12 | 80 | Y | Y | | 12 | PVC | 3 | 80 | Y | N | | | | | | | | | | | | | | | | |
| TL_36 | PVC | 9 | 94 | Y | N | | 10 | PVC | 2 | 90 | Y | Y | | 12 | PVC | 3 | 90 | Y | N | | | | | | | | | | | | | | | | |
| TL_37 | PVC | 9 | 100 | Y | N | | | | | | | | | 12 | PVC | 3 | 80 | Y | N | | | | | | | | | | | | | | | | |
| TL_38 | PVC | 9 | 95 | Y | N | | 8 | PVC | 12 | 85 | Y | N | | 12 | PVC | 3 | 95 | Y | N | | | | | | | | | | | | | | | | |
| TL_39 | PVC | 6 | 145 | Y | N | | 15 | PVC | 3 | 130 | Y | N | | | | | | | | | 8 | PVC | 9 | 115 | N | Y | | | | | | | | | |
| TL_4 | AC | 12 | 64 | Y | N | | | | | | | | | 10 | AC | 6 | 64 | Y | N | | | | | | | | | | | | | | | | |
| TL_40 | CONCRETE | 9 | 80 | Y | N | | 15 | CONCREE | 12 | 80 | Y | N | Toliver Line | 15 | CONCRETE | 4 | 80 | Y | N | Bear Creek | 8 | PVC C900 | 6 | 45 | N | Y | | 15 | CONCRETE | 6 | 80 | Y | N | Stub out for overflow | |
| TL_41 | CONCRETE | 9 | 95 | Y | N | | | | | | | | | 12 | CONCRETE | 3 | 95 | Y | N | | | | | | | | | | | | | | | | |
| TL_42 | CONCRETE | 9 | 120 | Y | N | | 8 | PVC C900 | 12 | 110 | N | Y | | 12 | CONCRETE | 3 | 120 | Y | N | | | | | | | | | | | | | | | | |
| TL_43 | AC | 9 | 93 | Y | N | | 8 | AC | 12 | 93 | Y | N | | 15 | AC | 3 | 93 | Y | N | | 8 | AC | 6 | 93 | Y | N | | | | | | | | | |
| TL_44 | CONCRETE | 9 | 122 | Y | N | | 8 | PVC | 12 | 112 | Y | Y | | 15 | CONCRETE | 3 | 122 | Y | N | | 4 | PVC | 6 | 112 | N | Y | | | | | | | | | |
| TL_46 | PVC | 730 | 65 | Y | N | | | | | | | | | 18 | PVC | 3 | 65 | Y | N | | | | | | | | | | | | | | | | |
| TL_48 | AC | 12 | 97 | Y | N | | 8 | AC | 3 | 97 | Y | N | | 8 | AC | 6 | 97 | Y | N | | | | | | | | | | | | | | | | |
| TL_5 | AC | 12 | 74 | Y | N | | | | | | | | | 10 | AC | 6 | 74 | Y | N | | | | | | | | | | | | | | | | |
| TL_50 | CONCRETE | 9 | 115 | Y | N | | | | | | | | | 15 | CONCRETE | 3 | 115 | Y | N | | | | | | | | | | | | | | | | |
| TL_51 | PVC | 9 | 140 | Y | N | | 15 | PVC | 9 | 140 | Y | N | | | | | | | | | | | | | | | | | | | | | | | |
| TL_6 | PVC | 3 | 89 | Y | N | | 6 | PVC | 6 | 89 | Y | N | | 8 | PVC | 9 | 89 | Y | N | | | | | | | | | | | | | | | | |
| TL_7 | AC | 12 | 100 | Y | N | | | | | | | | | 15 | AC | 6 | 100 | Y | N | | | | | | | | | | | | | | | | |
| TL_8 | CONCRETE | 9 | 125 | Y | N | | | | | | | | | 15 | CONCRETE | 3 | 125 | Y | N | | 8 | CONCRETE | 6 | 120 | N | Y | | | | | | | | | |
| TL_9 | CONCRETE | 9 | 125 | Y | N | | | | | | | | | 15 | CONCRETE | 3 | 125 | Y | N | | 15 | PVC | 6 | 120 | Y | N | Toliver BYPASS | | | | | | | | |
| TL_A_1 | AC | 9 | 58 | Y | N | | | | | | | | | 8 | AC | 3 | 58 | Y | N | | | | | | | | | | | | | | | | |
| TL_A_10 | CONCRETE | 9 | 42 | Y | N | | | | | | | | | 6 | CONCRETE | 3 | 42 | Y | N | | | | | | | | | | | | | | | | |
| TL_A_11 | AC | 9 | 76 | Y | N | | | | | | | | | 6 | AC | 3 | 76 | Y | N | | | | | | | | | | | | | | | | |
| TL_A_12 | AC | 9 | 67 | Y | N | | 6 | DI | 6 | 67 | Y | N | | 8 | AC | 3 | 67 | Y | N | | 6 | DI | 12 | 67 | Y | N | | | | | | | | | |
| TL_A_13 | AC | 9 | 53 | Y | N | | | | | | | | | 8 | AC | 3 | 53 | Y | N | | | | | | | | | | | | | | | | |
| TL_A_14 | AC | 9 | 66 | Y | N | | | | | | | | | 8 | AC | 3 | 66 | Y | N | | | | | | | | | | | | | | | | |
| TL_A_15 | AC | 9 | 65 | Y | N | | 4 | DI | 12 | 65 | Y | N | | 8 | DI | 3 | 65 | Y | N | | 4 | DI | 6 | 65 | Y | N | | | | | | | | | |
| TL_A_16 | AC | 12 | 36 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL_A_17 | CONCRETE | 12 | 57 | Y | N | | 6 | CONCREE | 3 | 57 | Y | N | | 6 | CONCRETE | 6 | 57 | Y | N | | | | | | | | | | | | | | | | |
| TL_A_18 | CONCRETE | 12 | 64 | Y | N | | | | | | | | | 6 | CONCRETE | 6 | 64 | Y | N | | | | | | | | | | | | | | | | |
| TL_A_19 | CONCRETE | 1 | 61 | Y | N | | | | | | | | | 8 | CONCRETE | 12 | 61 | Y | N | | | | | | | | | | | | | | | | |
| TL_A_2 | CONCRETE | 1 | 68 | Y | N | | | | | | | | | 8 | CONCRETE | 6 | 68 | Y | N | | | | | | | | | | | | | | | | |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| General | | | | | | | | | Manhole Specs | | | | | | | | | Frame and Cover | | | | Grade Rings | | Barrel Wall | | Bench/Channel | | Structural/O&M Condition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Date | Time | Inspector | Weather Conditions | Surface Condition | Traffic Volume | Rim to top of cone (tenths) | Average Rim to Grade Height (tenths) | Chimney (y/n) | Cone Depth (tenths) | Barrel/Wall Height (tenths) | Rung Type | # of Steps | Inflow Potential | Joint Issues | Notes | Type | No_Slots | Material | Condition | Type2 | Condition3 | Type4 | Condition5 | Type6 | Condition7 | Rungs | Concrete Corrosion | Corrosion Location | Evidence of Infiltration | Evidence of Surcharge | Size (in) |
| TL_A_20 | 2/19/2016 | 157 | DENNIS WI | Rainy | Asphalt | Residential | 6 | 0 | N | 30 | 31 | Metal | 5 | None | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A_21 | 5/18/2015 | 352 | DAN Z | Cloudy | Asphalt | Residential | 6 | 1.2 | Y | 36 | 24 | Metal | 4 | Low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_A_22 | 2/19/2016 | 216 | DENNIS WI | Rainy | Asphalt | Residential | 6 | 0 | N | 24 | 28 | Metal | 4 | LOW | **Mortar issues between bench and wall** | aggregate showing in channel, bench, and abov | Vented/Slots* | 2 | Cast Iron | Sound | Cast-in-pla | Sound | Concrete | Sound | Concrete | Corroded | | Surface Aggregate Visible | **bench, channel, and several** | Bench | | 10 |
| TL_A_23 | 5/18/2015 | 118 | DAN Z | Sunny | Asphalt | Residential | 9.6 | 0 | N | 36 | 60 | | 0 | None | between wall and cone | STAGNANT | SOLID | | Cast Iron | Cracked | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_A_24 | 5/18/2015 | 135 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 24 | 0 | Metal | 2 | Low | In channel | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Corroded | | Surface Aggregate Visible | | Bench | | 8 |
| TL_A_25 | 2/19/2016 | 137 | DENNIS WI | Rainy | Asphalt | Residential | 6 | 0 | N | 36 | 30 | Metal | 5 | LOW | | FULL OF GRAVEL | Vented/Slots* | 2 | Cast Iron | Sound | Cast-in-pla | Sound | Concrete | Sound | Concrete | Debris | | | | | | 8 |
| TL_A_26 | 5/18/2015 | 326 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 36 | 24 | Plastic Laminate | 5 | None | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A_27 | 5/26/2015 | 1124 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 84 | Metal | 10 | HIGH | between wall and cone, at pipe joints | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | BARREL | | 10 |
| TL_A_28 | 5/26/2015 | 1120 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 84 | Metal | 10 | LOW | between wall and cone, at pipe joints | | Vented/Slots* | 15 | Cast Iron | Cracked | | | Concrete | Sound | Concrete | Sound | | | | BARREL | | 10 |
| TL_A_29 | 5/26/2015 | 1113 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 84 | Metal | 9 | None | | | Vented/Slots* | 15 | Cast Iron | Cracked | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_A_3 | 5/18/2015 | 338 | DAN Z | Sunny | Asphalt | Residential | 9.6 | 0 | Y | 36 | 36 | Metal | 6 | None | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A_30 | 5/26/2015 | 1109 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 72 | Metal | 7 | None | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_A_31 | 5/26/2015 | 1103 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 72 | Metal | 7 | None | | maybe surcharge | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | Bench | 10 |
| TL_A_32 | 5/26/2015 | 108 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 60 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_A_33 | 5/26/2015 | 1259 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 60 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_A_4 | 5/18/2015 | 100 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 0 | 12 | | 0 | Low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_A_48 | 5/26/2015 | 1255 | DAN Z | Cloudy | Asphalt | DOT | 6 | 0 | N | 36 | 60 | Metal | 7 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | BARREL | | 10 |
| TL_A_5 | 5/18/2015 | 145 | DAN Z | Sunny | Asphalt | Residential | 3.6 | 0 | N | 24 | 24 | Metal | 1 | Med | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Sound | | | | Barrel | | 8 |
| TL_A_6 | 5/18/2015 | 152 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 36 | 24 | | 0 | Low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A_7 | 5/18/2015 | 226 | DAN Z | Sunny | Asphalt | Residential | 9.6 | 0 | N | 30 | 30 | Metal | 4 | None | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A_8 | 5/18/2015 | 318 | DAN Z | Sunny | Asphalt | None | 6 | 0 | Y | 30 | 30 | | 0 | Med | between bench and wall | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | Barrel | | 8 |
| TL_A_9 | 5/18/2015 | 311 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 36 | 48 | Metal | 4 | Low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A1_1 | 5/11/2015 | 102 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 36 | 36 | Metal | 5 | Low | at pipe joints | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Corroded Metal | | | Barrel | | 8 |
| TL_A1_10 | 5/6/2015 | 407 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 36 | 72 | | 0 | Med | between wall and cone | Stagnant water, infiltration minor at all joints | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | Barrel | | 8 |
| TL_A1_2 | 5/11/2015 | 113 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 48 | Metal | 6 | Med | SMALL CRACK IN CONE | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Sound | | | | BARREL | | 8 |
| TL_A1_3 | 5/11/2015 | 119 | DAN Z | Cloudy | Easement | None | 6 | 14.4 | N | 36 | 84 | | 0 | None | | SURCHARGE, GRADE RING SHIFTED | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Loose Grade Ring | Concrete | Cracked | Concrete | Sound | | Surface Reinforcement Visible | CONE, NEAR TOP | | | 8 |
| TL_A1_4 | 5/11/2015 | 1246 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 36 | 36 | Metal | 4 | Low | between wall and cone, at pipe joints | minor, looks like recent repair | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_A1_5 | 5/6/2015 | 356 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | Y | 36 | 66 | | 0 | None | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A1_6 | 5/11/2015 | 1252 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 72 | Metal | 8 | Low | between bench and wall | MINOR LEAK | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A1_7 | 5/6/2015 | 315 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 24 | 12 | | 0 | Med | between bench and wall, at pipe joints | Also mortar issues in channel. Black bacterial gr | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Infiltration | | | | Bench | | 8 |
| TL_A1_8 | 5/6/2015 | 331 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 36 | 12 | | 0 | Low | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | Barrel | | 8 |
| TL_A1_9 | 5/6/2015 | 345 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 36 | | 0 | Med | between bench and wall, at pipe joints | major infiltration, minor at cone | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Infiltration | | | | Barrel | | 8 |
| TL_A2_1 | 5/11/2015 | 217 | DAN Z | Cloudy | Asphalt | Residential | 12 | 0 | Y | 36 | 36 | Plastic Laminate | 4 | Low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A2_2 | 5/11/2015 | 113 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 48 | Metal | 6 | None | | SMALL CRACK IN CONE | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Sound | | | | Barrel | | 8 |
| TL_A2_3 | 5/11/2015 | 143 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 24 | 12 | | 0 | Low | | | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Cracked | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A2_4 | 5/11/2015 | 150 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 24 | 12 | | 0 | Low | between wall and cone | MINOR LEAKAGE ALL THE WAY AROUND | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | Barrel | | 8 |
| TL_A2_5 | 5/11/2015 | 131 | DAN Z | Cloudy | Asphalt | Residential | 9.6 | 0 | Y | 36 | 24 | Metal | 4 | Low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A2_6 | 5/11/2015 | 203 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 36 | 12 | Metal | 5 | Low | | | Vented/Slots* | 15 | Cast Iron | Sound | Concrete | Cracked | Concrete | Sound | Concrete | Sound | Surface Damage Corroded Metal | | | Chimney | | 10 |
| TL_A2_7 | 5/18/2015 | 1248 | DAN Z | Sunny | Asphalt | Residential | 6 | 0 | N | 36 | 36 | Plastic Laminate | 3 | Low | | GRADE RING WAY OFFSET | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Cracked | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_A2_8 | 5/11/2015 | 158 | DAN Z | Cloudy | Asphalt | Residential | 9.6 | 0 | Y | 24 | 0 | | 0 | Low | | | Vented/Slots* | 15 | Cast Iron | Sound | Concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_1 | 6/8/2015 | 220 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 24 | 48 | Metal | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_10 | 6/8/2015 | 1229 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 12 | Metal | 3 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_11 | 6/8/2015 | 1250 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 12 | Metal | 3 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_12 | 6/8/2015 | 1242 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 36 | 18 | Metal | 3 | Med | streaks down side, | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_B_13 | 6/8/2015 | 107 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 24 | Plastic Laminate | 4 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_14 | 6/8/2015 | 102 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 30 | Plastic Laminate | 4 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_15 | 6/8/2015 | 112 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 24 | Plastic Laminate | 4 | low | | slight jog in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_B_16 | 6/8/2015 | 410 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 42 | 24 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_17 | 6/8/2015 | 406 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 30 | 42 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_18 | 6/8/2015 | 401 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 42 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_19 | 6/8/2015 | 355 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 48 | 42 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_2 | 6/8/2015 | 206 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 24 | 60 | Metal | 4 | LOW | | small crack in cone | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Sound | | | | barrel | | 8 |
| TL_B_20 | 6/8/2015 | 335 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_21 | 6/8/2015 | 330 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 54 | 24 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_22 | 6/8/2015 | 314 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 24 | 24 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | pipe penetratic | bench | 8 |
| TL_B_23 | 6/8/2015 | 325 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 42 | 24 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_24 | 6/8/2015 | 320 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 42 | 24 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_25 | 6/8/2015 | 214 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 24 | 48 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_26 | 6/8/2015 | 1257 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 36 | 24 | Plastic Laminate | 4 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_27 | 6/8/2015 | 908 | Dan Z | Sunny | Sidewalk/ROW | Residential | 6 | 6 | n | 30 | 72 | | 0 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_28 | 6/8/2015 | 200 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 36 | 72 | Metal | 8 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_29 | 6/8/2015 | 155 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 48 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_3 | 6/8/2015 | 129 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 60 | Plastic Laminate | 6 | med | | black streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | chimney | | 8 |
| TL_B_30 | 6/8/2015 | 149 | Dan Z | Sunny | Asphalt | Residential | 30 | 0 | y | 0 | 72 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_31 | 6/8/2015 | 141 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 48 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_32 | 6/8/2015 | 344 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 48 | 48 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_B_4 | 6/8/2015 | 123 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 36 | Plastic Laminate | 6 | med | | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | chimney | | 8 |
| TL_B_5 | 6/8/2015 | 924 | Dan Z | Sunny | Sidewalk/ROW | Residential | 6 | 0 | n | 54 | 48 | | 0 | low | between wall and cone | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_B_6 | 6/8/2015 | 916 | Dan Z | Sunny | Sidewalk/ROW | Residential | 6 | 0 | n | 54 | 48 | | 0 | low | between wall and cone | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_B_7 | 6/8/2015 | 856 | Dan Z | Sunny | Sidewalk/ROW | None | 6 | 0 | n | 36 | 74.4 | Metal | 9 | Med | | DAMP BARREL - hard to see where infiltration c | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_B_8 | 6/8/2015 | 1237 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 24 | Metal | 5 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Offset | | | | | 8 |
| TL_B_9 | 6/8/2015 | 1231 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 24 | Metal | 5 | low | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Offset | | | | | 8 |
| TL_C_1 | 7/29/2015 | 405 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 36 | 12 | Metal | 4 | LOW | | this one is in great shape! | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_10 | 6/10/2015 | 300 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 48 | 14.4 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_11 | 6/10/2015 | 302 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 42 | 18 | Plastic Laminate | 4 | LOW | between wall and cone | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C_12 | 6/9/2015 | 159 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 42 | 42 | | | LOW | between wall and cone | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_13 | 6/10/2015 | 330 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 18 | Metal | 5 | LOW | Between cone and chimney | significantly damp | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_C_14 | 6/10/2015 | 343 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 72 | Metal | 8 | LOW | between wall and cone | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel | | 8 |
| TL_C_15 | 6/10/2015 | 352 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 24 | 36 | Metal | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_16 | 6/9/2015 | 1257 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | n | 42 | 72 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Aluminum | Sound | | | Concrete | Sound | Concrete | corroded | | | | bench | bench | 8 |
| TL_C_17 | 6/10/2015 | 1040 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 36 | 120 | Plastic Laminate | 8 | LOW | barrel wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_C_18 | 6/10/2015 | 1103 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 54 | 102 | Plastic Laminate | 10 | LOW | between bench and wall | pooling on bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C_19 | 6/10/2015 | 1108 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 42 | 36 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_2 | 6/9/2015 | 954 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 36 | 24 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_20 | 6/17/2015 | 140 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 36 | 108 | Metal | 8 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_21 | 7/31/2015 | 845 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 156 | Metal | 13 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_22 | 7/31/2015 | 855 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | n | 30 | 108 | Metal | 10 | LOW | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_23 | 7/31/2015 | 900 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 50.4 | Metal | 6 | LOW | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_24 | 7/31/2015 | 910 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 14.4 | Metal | 3 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_26 | 6/9/2015 | 1001 | Dan Z | Sunny | Asphalt | City/County | 24 | 0 | y | 0 | 36 | Plastic Laminate | 2 | LOW | | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C_27 | 6/10/2015 | 320 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 36 | 48 | Metal | 3 | LOW | barrel wall | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Corroded | Concrete | Sound | Corroded Metal | | | bench | | 8 |
| TL_C_28 | 6/10/2015 | 419 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 30 | 36 | Metal | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_29 | 6/9/2015 | 157 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 54 | 66 | | | LOW | between wall and cone | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | cracked, pitted | Concrete | Sound | | | | barrel | | 8 |
| TL_C_3 | 6/9/2015 | 1007 | Dan Z | Sunny | Asphalt | City/County | 20.4 | 0 | y | 0 | 42 | Plastic Laminate | 3 | LOW | | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_30 | 6/10/2015 | 338 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 36 | 42 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_31 | 6/10/2015 | 410 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 12 | Metal | 3 | med | between wall and cone | major infiltration | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | cracked | Concrete | Sound | | | | barrel | | 8 |
| TL_C_32 | 6/10/2015 | 358 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 0 | 78 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_33 | 6/9/2015 | 1252 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 30 | 68.4 | Metal | 6 | LOW | between wall and cone | significant infiltration | Vented/Slots* | 2 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_C_34 | 6/9/2015 | 106 | Dan Z | Sunny | Asphalt | Residential | 30 | 0 | n | 30 | 72 | | | LOW | between wall and cone | significant infiltration | Vented/Slots* | 2 | Aluminum | Sound | | | Concrete | Cracked | Concrete | corroded | | | | bench, barrel | | 8 |
| TL_C_35 | 6/10/2015 | 1127 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 48 | Plastic Laminate | 6 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C_36 | 6/10/2015 | 1047 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 114 | Metal | 11 | LOW | | two pits in cone (fastenings?) | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Sound | | | | | | 8 |
| TL_C_37 | 6/10/2015 | 1055 | Dan Z | Sunny | Asphalt | Residential | 14.4 | 0 | y | 48 | 84 | Plastic Laminate | 9 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | | | 8 |
| TL_C_38 | 6/10/2015 | 1118 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 36 | Plastic Laminate | 5 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| | Pipe E | | | | | | Pipe I-1 | | | | | | Pipe I-2 | | | | | | Pipe I-3 | | | | Pipe I-4 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Material8 | Clock Position | Depth to Invert (tenths) | Channelized | Drop (in/out) | Notes9 | Size (in)10 | Material 11 | Clock Position 12 | Depth to Invert (tenths)13 | Channelized14 | Drop (in/out)15 | Notes16 | Size (in)17 | Material18 | Clock Position19 | Depth to Invert (tenths)20 | Channelized21 | Drop (in/out)22 | Notes23 | Size (in)24 | Material25 | Clock Position26 | Depth to Invert (tenths)27 | Channelized28 | Drop (in/out)29 | Notes30 | Size (in)31 | Material32 | Clock Position33 | Depth to Invert (tenths)34 | Channelized35 | Drop (in/out)36 | Notes37 |
| TL_A_20 | AC | 12 | 68 | Y | N | | | | | | | | | 8 | AC | 12 | 68 | Y | N | | | | | | | | | | | | | | |
| TL_A_21 | CONCRETE | 9 | 63 | Y | N | | | | | | | | | | | | | | | | 6 | CONCRETE | 6 | 63 | Y | N | | | | | | | |
| TL_A_22 | CONCRETE | 1 | 60 | Y | N | | 6 | CONCREE | 4 | 60 | Y | N | | 8 | CONCRETE | 7 | 60 | Y | N | | | | | | | | | | | | | | |
| TL_A_23 | AC | 9 | 76 | Y | N | | | | | | | | | 6 | AC | 3 | 76 | Y | N | | | | | | | | | | | | | | |
| TL_A_24 | DI | 12 | 37 | Y | N | | 6 | AC | 3 | 37 | Y | N | | 8 | DI | 6 | 37 | Y | N | | 6 | STEEL | 730 | 28 | N | Y | | | | | | | |
| TL_A_25 | CONCRETE | 1 | 76 | Y | N | GRAVEL | | | | | | | | 8 | AC | 7 | 75 | Y | N | GRAVEL, stub out | | | | | | | | | | | | | |
| TL_A_26 | PVC | 9 | 78 | Y | N | | | | | | | | | 8 | PVC | 3 | 78 | Y | N | | | | | | | | | | | | | | |
| TL_A_27 | PVC | 9 | 115 | Y | N | | 6 | DI | 12 | | Y | N | | 10 | PVC | 3 | 115 | Y | N | | 8 | AC | 6 | 115 | Y | N | | | | | | | |
| TL_A_28 | AC | 9 | 115 | Y | N | | | | | | | | | 10 | AC | 3 | 115 | Y | N | | 8 | AC | 6 | 115 | Y | N | | | | | | | |
| TL_A_29 | AC | 9 | 110 | Y | N | | | | | | | | | 10 | AC | 3 | 110 | Y | N | | 8 | AC | 6 | 110 | Y | N | | 8 | DI | 3 | 83 | N | Y | WHAT IS THIS FROM? |
| TL_A_3 | AC | 12 | 84 | Y | N | | | | | | | | | 8 | AC | 6 | 84 | Y | N | | | | | | | | | | | | | | |
| TL_A_30 | AC | 9 | 92 | Y | N | | | | | | | | | 10 | AC | 3 | 92 | Y | N | | 8 | DI | 6 | 92 | Y | N | | | | | | | |
| TL_A_31 | AC | 9 | 92 | Y | N | | | | | | | | | 10 | AC | 3 | 92 | Y | N | | | | | | | | | | | | | | |
| TL_A_32 | PVC | 9 | 86 | Y | N | | | | | | | | | 10 | PVC | 3 | 83 | Y | N | | 8 | AC | 6 | 86 | Y | N | | | | | | | |
| TL_A_33 | AC | 9 | 83 | Y | N | | | | | | | | | 10 | AC | 3 | 83 | Y | N | | 8 | AC | 6 | 83 | Y | N | | 8 | PVC C900 | 6 | 45 | N | Y | |
| TL_A_4 | DI | 12 | 20 | Y | N | | 6 | DI | 3 | 20 | Y | N | | 6 | DI | 6 | 20 | Y | N | | 6 | DI | 9 | 20 | Y | N | | 2.5 | PVC | 6 | 10 | N | Y | |
| TL_A_48 | AC | 9 | 86 | Y | N | | 10 | DI | 12 | 86 | Y | N | | | | | | | | | | | | | | | | | | | | | |
| TL_A_5 | DI | 12 | 48 | Y | N | | | | | | | | | 8 | DI | 6 | 48 | Y | N | | | | | | | | | | | | | | |
| TL_A_6 | DI | 12 | 56 | Y | N | | 8 | AC | 3 | 56 | Y | N | | 8 | DI | 6 | 56 | Y | N | | | | | | | | | | | | | | |
| TL_A_7 | DI | 12 | 60 | Y | N | | | | | | | | | 8 | DI | 6 | 60 | Y | N | | | | | | | | | | | | | | |
| TL_A_8 | DI | 12 | 78 | Y | N | | | | | | | | | 8 | DI | 6 | 78 | Y | N | | 6 | AC | 3 | 78 | Y | N | | | | | | | |
| TL_A_9 | DI | 12 | 80 | Y | N | | | | | | | | | 8 | DI | 6 | 80 | Y | N | | | | | | | | | | | | | | |
| TL_A1_1 | CONCRETE | 6 | 78 | Y | N | | | | | | | | | | | | | | | | 8 | CONCRETE | 9 | 78 | Y | N | INFILTRATION AT PIPE JOINT | | | | | | |
| TL_A1_10 | PVC C900 | 6 | 91 | Y | N | stagnant | | | | | | | | 8 | PVC C900 | 12 | 91 | Y | N | stagnant | | | | | | | | | | | | | | |
| TL_A1_2 | CONCRETE | 7 | 80 | Y | N | | | | | | | | | 8 | CONCRETE | 1230 | 80 | Y | N | | | | | | | | | | | | | | |
| TL_A1_3 | CONCRETE | 7 | 92 | Y | N | | | | | | | | | 8 | CONCRETE | 1 | 92 | Y | N | | | | | | | | | | | | | | |
| TL_A1_4 | CONCRETE | 12 | 68 | Y | N | minor leaking around pipe | | | | | | | | 6 | CONCRETE | 7 | 68 | Y | N | | | | | | | | | | | | | | |
| TL_A1_5 | PVC C900 | 730 | 93 | Y | N | | 8 | PVC C900 | 11 | 93 | Y | N | | 8 | PVC C900 | 2 | 93 | Y | N | | | | | | | | | | | | | | |
| TL_A1_6 | CONCRETE | 9 | 100 | Y | N | | | | | | | | | 8 | CONCRETE | 3 | 100 | Y | N | | 8 | CONCRETE | 6 | 100 | Y | N | | | | | | | |
| TL_A1_7 | PVC C900 | 1 | 47 | Y | N | | 6 | PVC C900 | 9 | 47 | Y | Y | mortar around pipes | | | | | | | | 6 | PVC | 6 | 47 | Y | N | mortar cracked, bacterial growth | | | | | | |
| TL_A1_8 | PVC C900 | 3 | 59 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 59 | Y | N | mortar issues | | | | | | | | | | | | | |
| TL_A1_9 | PVC C900 | 6 | 93 | Y | N | mortar issues | 8 | PVC C900 | 9 | 93 | Y | N | | | | | | | | | 8 | PVC C900 | 9 | 85 | Y | N | | | | | | | |
| TL_A2_1 | PVC | 3 | 70 | Y | N | | | | | | | | | 8 | PVC | 3 | 70 | Y | N | | 8 | PVC | 12 | 70 | Y | N | | | | | | | |
| TL_A2_2 | CONCRETE | 7 | 80 | Y | N | | | | | | | | | 12 | CONCRETE | 12 | 80 | Y | N | | | | | | | | | | | | | | |
| TL_A2_3 | AC | 9 | 47 | Y | N | | | | | | | | | 8 | AC | 3 | 47 | Y | N | | | | | | | | | | | | | | |
| TL_A2_4 | AC | 12 | 45 | Y | N | | 8 | AC | 3 | 45 | N | N | | | | | | | | | 6 | AC | 9 | 45 | Y | N | | | | | | | |
| TL_A2_5 | AC | 3 | 62 | Y | N | | | | | | | | | 8 | AC | 9 | 62 | Y | N | | | | | | | | | | | | | | |
| TL_A2_6 | DI | 5 | 70 | Y | N | | 8 | DI | 6 | 70 | Y | N | | 10 | DI | 9 | 70 | Y | N | | 8 | AC | 12 | 70 | Y | N | | 8 | AC | 9 | 54 | N | Y | |
| TL_A2_7 | PVC | 6 | 60 | Y | N | | | | | | | | | 8 | PVC C900 | 11 | 60 | Y | N | | | | | | | | | | | | | | |
| TL_A2_8 | AC | 12 | 45 | Y | N | | | | | | | | | 8 | AC | 6 | 45 | Y | N | | | | | | | | | | | | | | |
| TL_B_1 | AC | 9 | 76 | Y | N | | 8 | AC | 12 | 76 | Y | N | | 8 | PVC C900 | 3 | 76 | Y | N | | 8 | AC | 6 | 76 | Y | N | | | | | | | |
| TL_B_10 | PVC C900 | 6 | 54 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL_B_11 | PVC C900 | 12 | 54 | Y | N | | | | | | | | | | | | | | | | 8 | PVC C900 | 3 | 54 | Y | N | | | | | | | |
| TL_B_12 | PVC C900 | 9 | 54 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 54 | Y | N | | | | | | | | | | | | | | |
| TL_B_13 | PVC C900 | 12 | 64 | Y | N | | 8 | PVC C900 | 3 | 64 | Y | N | | 8 | PVC C900 | 6 | 64 | Y | N | | | | | | | | | | | | | | |
| TL_B_14 | PVC C900 | 12 | 69 | Y | N | | | | | | | | | 4 | PVC C900 | 7 | 68 | Y | N | | | | | | | | | | | | | | |
| TL_B_15 | PVC C900 | 12 | 60 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 60 | Y | N | | | | | | | | | | | | | | |
| TL_B_16 | AC | 9 | 64 | Y | N | | 8 | PVC C900 | 6 | 64 | Y | N | | 8 | AC | 3 | 64 | Y | N | | | | | | | | | | | | | | |
| TL_B_17 | AC | 9 | 79 | Y | N | | | | | | | | | 8 | AC | 3 | 79 | Y | N | | | | | | | | | | | | | | |
| TL_B_18 | AC | 9 | 79 | Y | N | | | | | | | | | 8 | AC | 3 | 79 | Y | N | | 8 | AC | 6 | 79 | Y | N | | | | | | | |
| TL_B_19 | AC | 9 | 85 | Y | N | | 8 | AC | 12 | 85 | Y | N | | 8 | AC | 3 | 85 | Y | N | | 8 | AC | 6 | 85 | Y | N | | | | | | | |
| TL_B_2 | AC | 12 | 86 | Y | N | | 8 | PVC C900 | 12 | 86 | Y | N | | 8 | AC | 6 | 86 | Y | N | | | | | | | | | | | | | | |
| TL_B_20 | AC | 12 | 69 | Y | N | | | | | | | | | 8 | AC | 6 | 69 | Y | N | | | | | | | | | | | | | | |
| TL_B_21 | AC | 12 | 72 | Y | N | | 8 | PVC C900 | 3 | 72 | Y | N | | 8 | AC | 6 | 72 | Y | N | | | | | | | | | | | | | | |
| TL_B_22 | AC | 12 | 54 | Y | N | | 4 | PVC | 5 | 30 | N | Y | | 8 | AC | 3 | 54 | Y | N | | | | | | | | | | | | | | |
| TL_B_23 | PVC C900 | 9 | 64 | Y | N | | | | | | | | | 8 | PVC C900 | 9 | 64 | Y | N | | | | | | | | | | | | | | |
| TL_B_24 | PVC C900 | 9 | 64 | Y | N | | 4 | PVC | 2 | 30 | Y | N | | | | | | | | | | | | | | | | | | | | | |
| TL_B_25 | AC | 12 | 76 | Y | N | | | | | | | | | 8 | AC | 6 | 76 | Y | N | | | | | | | | | | | | | | |
| TL_B_26 | PVC C900 | 9 | 60 | Y | N | | | | | | | | | 4 | PVC C900 | 5 | 58 | Y | N | | | | | | | | | | | | | | |
| TL_B_27 | PVC C900 | 9 | 94 | Y | N | | 6 | PVC | 12 | 94 | Y | N | | 8 | PVC C900 | 3 | 94 | Y | N | | 4 | PVC | 6 | 90 | Y | N | | | | | | | |
| TL_B_28 | AC | 12 | 98 | Y | N | | | | | | | | | 8 | AC | 6 | 98 | Y | N | | | | | | | | | | | | | | |
| TL_B_29 | AC | 12 | 85 | Y | N | | | | | | | | | 8 | AC | 6 | 85 | Y | N | | | | | | | | | | | | | | |
| TL_B_3 | PVC C900 | 9 | 105 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 105 | Y | N | | | | | | | | | | | | | | |
| TL_B_30 | AC | 12 | 89 | Y | N | | 6 | PVC | 3 | 89 | Y | N | | 8 | AC | 6 | 89 | Y | N | | | | | | | | | | | | | | |
| TL_B_31 | AC | 12 | 82 | Y | N | | | | | | | | | 8 | AC | 6 | 82 | Y | N | | | | | | | | | | | | | | |
| TL_B_32 | AC | 12 | 89 | Y | N | | 8 | AC | 3 | 80 | Y | N | | 8 | AC | 6 | 89 | Y | N | | | | | | | | | | | | | | |
| TL_B_4 | PVC C900 | 9 | 77 | Y | N | | | | | | | | | 4 | PVC C900 | 2 | 75 | Y | N | | | | | | | | | | | | | | |
| TL_B_5 | AC | 9 | 94 | Y | N | | 4 | PVC | 12 | 94 | Y | N | | 8 | AC | 3 | 94 | Y | N | | | | | | | | | | | | | | |
| TL_B_6 | AC | 9 | 94 | Y | N | | 4 | PVC | 12 | 94 | Y | N | | 8 | PVC C900 | 3 | 94 | Y | N | | | | | | | | | | | | | | |
| TL_B_7 | PVC C900 | 9 | 101 | Y | N | | 6 | PVC | 12 | 101 | Y | N | | 8 | PVC C900 | 3 | 101 | Y | N | plug? End of line? Check as builts | | | | | | | | | | | | | | |
| TL_B_8 | PVC C900 | 9 | 68 | Y | N | | 6 | PVC C900 | 12 | 68 | Y | N | | 8 | PVC C900 | 3 | 68 | Y | N | | 8 | PVC C900 | 3 | 68 | Y | N | | | | | | | |
| TL_B_9 | PVC C900 | 9 | 68 | Y | N | | 8 | PVC C900 | 12 | 68 | Y | N | | 8 | PVC C900 | 3 | 68 | Y | N | | | | | | | | | | | | | | |
| TL_C_1 | PVC | 7 | 60 | Y | N | | | | | | | | | 8 | PVC | 11 | 60 | Y | N | | | | | | | | | | | | | | |
| TL_C_10 | PVC C900 | 9 | 66 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 66 | Y | N | | | | | | | | | | | | | | |
| TL_C_11 | PVC C900 | 9 | 69 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 69 | Y | N | | | | | | | | | | | | | | |
| TL_C_12 | AC | 9 | 82 | Y | N | | | | | | | | | 8 | AC | 3 | 82 | Y | N | | | | | | | | | | | | | | |
| TL_C_13 | AC | 9 | 59 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 59 | Y | N | stub out? | | | | | | | | | | | | | |
| TL_C_14 | AC | 4 | 99 | Y | N | | | | | | | | | 8 | AC | 9 | 99 | Y | N | | 8 | AC | 3 | 79 | Y | N | | | | | | | |
| TL_C_15 | AC | 4 | 59 | Y | N | | 4 | PVC | 9 | 59 | Y | N | | 4 | PVC C900 | 9 | 59 | Y | N | | 4 | PVC | 9 | 59 | Y | N | | | | | | | |
| TL_C_16 | AC | 9 | 120 | Y | N | | | | | | | | | 8 | AC | 3 | 120 | Y | N | | | | | | | | | | | | | | |
| TL_C_17 | PVC C900 | 9 | 144 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 144 | Y | N | | | | | | | | | | | | | | |
| TL_C_18 | PVC C900 | 8 | 130 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 130 | Y | N | | | | | | | | | | | | | | |
| TL_C_19 | PVC C900 | 9 | 74 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 74 | Y | N | | | | | | | | | | | | | | |
| TL_C_2 | PVC | 1030 | 64 | Y | N | | 6 | PVC C900 | 130 | 64 | Y | N | force main | | | | | | | | | | | | | | | | | | | | |
| TL_C_20 | CONCRETE | 6 | 134 | Y | N | | | | | | | | | 8 | CONCRETE | 12 | 134 | Y | N | | 8 | PVC C900 | 9 | 110 | N | Y | | | | | | | |
| TL_C_21 | AC | 6 | 167 | Y | N | | | | | | | | | 8 | AC | 12 | 167 | Y | N | | 8 | PVC | 3 | 80 | N | Y | | | | | | | |
| TL_C_22 | AC | 6 | 132 | Y | N | | | | | | | | | 8 | AC | 12 | 132 | Y | N | | 8 | AC | 3 | 96 | N | Y | | | | | | | |
| TL_C_23 | AC | 6 | 80 | Y | N | | | | | | | | | 8 | AC | 12 | 80 | Y | N | | | | | | | | | | | | | | |
| TL_C_24 | AC | 6 | 46 | Y | N | | | | | | | | | 8 | AC | 12 | 46 | Y | N | | 4 | STEEL | 9 | 37 | N | Y | force main | | | | | | |
| TL_C_26 | PVC | 1030 | 54 | Y | N | | | | | | | | | 8 | PVC | 430 | 54 | Y | N | | | | | | | | | | | | | | |
| TL_C_27 | PVC C900 | 9 | 79 | Y | N | | 8 | DI | 12 | 79 | Y | N | stub out? | 8 | PVC C900 | 3 | 79 | Y | N | | 6 | PVC | 6 | 79 | Y | N | stub out? | | | | | | |
| TL_C_28 | AC | 12 | 64 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL_C_29 | AC | 9 | 112 | Y | N | | | | | | | | | 8 | AC | 3 | 112 | Y | N | | | | | | | | | | | | | | |
| TL_C_3 | PVC | 1030 | 56 | Y | N | | | | | | | | | 8 | PVC | 430 | 56 | Y | N | | | | | | | | | | | | | | |
| TL_C_30 | AC | 6 | 79 | Y | N | | 8 | AC | 9 | 79 | Y | N | | | | | | | | | 8 | AC | 3 | 79 | Y | N | | | | | | | |
| TL_C_31 | AC | 430 | 49 | Y | N | | | | | | | | | 8 | AC | 12 | 49 | Y | N | | | | | | | | | | | | | | |
| TL_C_32 | AC | 4 | 84 | Y | N | | | | | | | | | 8 | AC | 9 | 84 | Y | N | | | | | | | | | | | | | | |
| TL_C_33 | AC | 9 | 91 | Y | N | | 8 | PVC | 12 | 91 | N | Y | | 8 | AC | 3 | 91 | Y | N | | | | | | | | | | | | | | |
| TL_C_34 | AC | 9 | 115 | Y | N | | 8 | DI | 12 | 105 | N | Y | pipe coming down 4ft to drc | 8 | AC | 3 | 115 | Y | N | | | | | | | | | | | | | | |
| TL_C_35 | PVC C900 | 9 | 79 | Y | N | | 8 | PVC | 12 | 79 | Y | N | | 8 | PVC C900 | 3 | 79 | Y | N | | | | | | | | | | | | | | |
| TL_C_36 | PVC C900 | 9 | 134 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 134 | Y | N | | | | | | | | | | | | | | |
| TL_C_37 | PVC C900 | 9 | 126 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 126 | Y | N | | 4 | PVC | 6 | 126 | Y | N | corrosion in intersection | | | | | | |
| TL_C_38 | PVC C900 | 9 | 69 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 69 | Y | N | | | | | | | | | | | | | | |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| General | | | | | | | | | Manhole Specs | | | | | | | Frame and Cover | | | | Grade Rings | | Barrel Wall | | Bench/Channel | | Structural/O&M Condition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Date | Time | Inspector | Weather Conditions | Surface Condition | Traffic Volume | Rim to top of cone (tenths) | Average Rim to Grade Height (tenths) | Chimney (y/n) | Cone Depth (tenths) | Barrel/Wall Height (tenths) | Rung Type | # of Steps | Inflow Potential | Joint Issues | Notes | Type | No_Slots | Material | Condition | Type2 | Condition3 | Type4 | Condition5 | Type6 | Condition7 | Rungs | Concrete Corrosion | Corrosion Location | Evidence of Infiltration | Evidence of Surcharge | Size (in) |
| TL_C_39 | 7/31/2015 | 850 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 168 | Metal | 14 | LOW | between bench and wall | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C_4 | 6/9/2015 | 1015 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | y | 36 | 48 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | bench | | 8 |
| TL_C_5 | 6/10/2015 | 313 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 48 | 66 | Plastic Laminate | 7 | LOW | | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C_6 | 6/10/2015 | 308 | Dan Z | Sunny | Asphalt | Residential | 30 | 0 | y | 30 | 36 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_7 | 6/9/2015 | 1125 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 48 | 48 | | | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C_8 | 6/9/2015 | 1116 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 48 | 36 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_C_9 | 6/10/2015 | 1121 | Dan Z | Sunny | Asphalt | Residential | 14.4 | 0 | y | 48 | 24 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C1_1 | 5/6/2015 | 205 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 12 | Plastic Laminate | 3 | Low | between wall and cone, at pipe joints | minor | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C1_2 | 5/6/2015 | 155 | DAN Z | Cloudy | Asphalt | Residential | 9 | 0 | Y | 36 | 12 | Plastic Laminate | 3 | None | between wall and cone, at pipe joints | significant | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | Barrel | | 8 |
| TL_C1_3 | 5/6/2015 | 143 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | Y | 36 | 12 | Plastic Laminate | 3 | Med | at pipe joints | crack in chimney | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Sound | | | | | | 8 |
| TL_C1_4 | 5/6/2015 | 212 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 12 | Plastic Laminate | 3 | Low | between wall and cone, at pipe joints | minor | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C1_5 | 5/6/2015 | 1 | DAN Z | Cloudy | Asphalt | Residential | 6 | 0 | N | 36 | 43.2 | Plastic Laminate | 4 | Low | between wall and cone, at pipe joints | crack in channel wall | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Mortar Missing | | | | | | 8 |
| TL_C1_6 | 5/6/2015 | 121 | DAN Z | Cloudy | Asphalt | Residential | 10.2 | 0 | Y | 34.2 | 24 | Plastic Laminate | 3 | None | between wall and cone, at pipe joints | Minor | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C1_7 | 7/29/2015 | 355 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | y | 39.6 | 24 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C2_1 | 6/4/2015 | 1013 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 54 | Plastic Laminate | 7 | Low | Between cone and chimney | minor | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_C2_10 | 6/4/2015 | 1000 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 36 | 33.6 | Plastic Laminate | 5 | LOW | Between cone and chimney | minor | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_C2_11 | 5/27/2015 | 257 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 0 | 78 | Plastic Laminate | 5 | LOW | | Wet bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Infiltration | | | | | | 8 |
| TL_C2_12 | 5/27/2015 | 305 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 0 | 168 | | 0 | LOW | | LIFT STATION, | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | UNKNOWN | | | | | | |
| TL_C2_13 | 5/27/2015 | 313 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 0 | 78 | Plastic Laminate | 5 | LOW | | Wet bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Infiltration | | | | | | 8 |
| TL_C2_14 | 5/28/2015 | 1112 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 0 | 60 | Plastic Laminate | 4 | LOW | BETWEEN BENCH AND WALL | Wet bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | BENCH | | 8 |
| TL_C2_15 | 5/27/2015 | 249 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 36 | 24 | Plastic Laminate | 5 | High | | Wet bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Pitted | Concrete | Infiltration | | Surface Reinforcement Visible | | BARREL | | 8 |
| TL_C2_16 | 6/4/2015 | 952 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 42 | 30 | Plastic Laminate | 5 | LOW | between bench and wall | minor | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C2_17 | 5/28/2015 | 1104 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | Y | 0 | 36 | | 0 | Med | BETWEEN BENCH AND WALL | Wet bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Corroded | | Surface Roughness Increase | | BENCH | | 8 |
| TL_C2_18 | 5/28/2015 | 1124 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 24 | 36 | Plastic Laminate | 3 | LOW | Between cone and chimney | not surcharge but extra tp | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | Barrel, chimney | | 8 |
| TL_C2_19 | 6/4/2015 | 1020 | Dan Z | Sunny | Easement | None | 12 | 0 | Y | 42 | 18 | Plastic Laminate | 4 | HIGH | Between cone and chimney | major, additional issues in bench | Locking | | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | Corroded Metal | | | bench | bench | 8 |
| TL_C2_2 | 6/4/2015 | 1031 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 42 | 33.6 | Plastic Laminate | 4 | Low | Between cone and chimney, between wal | moderate | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | BENCH | bench | 8 |
| TL_C2_20 | 6/4/2015 | 1008 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | Y | 0 | 36 | Plastic Laminate | 2 | Med | between bench and wall | moderate | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Corroded Metal | | | bench | | 8 |
| TL_C2_3 | 5/28/2015 | 1118 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 0 | 60 | Plastic Laminate | 3 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_C2_4 | 5/28/2015 | 1132 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 54 | 0 | Plastic Laminate | 3 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Cracked | Concrete | Sound | | | | barrel | | 8 |
| TL_C2_5 | 5/28/2015 | 1137 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | Y | 0 | 36 | Plastic Laminate | 2 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C2_6 | 6/4/2015 | 942 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | Y | 0 | 39.6 | Plastic Laminate | 2 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C2_7 | 6/4/2015 | 947 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | Y | 54 | 0 | Plastic Laminate | 3 | LOW | between bench and wall | minor | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_C2_8 | 5/27/2015 | 244 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 30 | 12 | Plastic Laminate | 3 | Med | | Wet bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Infiltration | | | | | | 8 |
| TL_D_1 | 7/6/2015 | 100 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | y | 36 | 42 | Metal | 6 | low | barrel wall | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | barrel | | 8 |
| TL_D_10 | 7/6/2015 | 915 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 56.4 | Metal | 7 | med | barrel wall | streaks in manhole | Vented/Slots* | 15 | Cast Iron | Loose | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_D_11 | 7/6/2015 | 918 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 60 | Metal | 7 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_D_12 | 7/6/2015 | 112 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | y | 36 | 36 | Metal | 5 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_D_13 | 7/6/2015 | 130 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | y | 30 | 30 | Metal | 4 | LOW | between wall and cone | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_D_14 | 7/6/2015 | 144 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 36 | Metal | 4 | LOW | between wall and cone | bench broken | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | bench | | 8 |
| TL_D_15 | 7/6/2015 | 107 | Dan Z | Sunny | Sidewalk/ROW | City/County | 12 | 0 | y | 36 | 36 | Metal | 5 | med | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_D_16 | 7/6/2015 | 1132 | Dan Z | Sunny | Sidewalk/ROW | None | 12 | 0 | y | 24 | 48 | Metal | 6 | low | | offset cone | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_D_2 | 7/6/2015 | 935 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 42 | Metal | 6 | low | | | Vented/Slots* | 15 | Cast Iron | Broken | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_D_3 | 7/6/2015 | 1137 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 48 | Metal | 6 | low | | | Vented/Slots* | 15 | Cast Iron | Loose | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_D_4 | 7/6/2015 | 1145 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 30 | 48 | Metal | 6 | low | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface aggregate visible | | barrel, bench | | 8 |
| TL_D_5 | 7/6/2015 | 125 | Dan Z | Sunny | Asphalt | City/County | 12 | 0 | y | 36 | 24 | Metal | 4 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_D_7 | 7/6/2015 | 136 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 30 | Metal | 4 | LOW | between wall and cone | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Corroded | Concrete | Sound | | | | | | 8 |
| TL_D_8 | 7/6/2015 | 152 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 36 | 50.4 | Metal | 6 | LOW | between wall and cone | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | | | | | 8 |
| TL_D_9 | 7/6/2015 | 909 | Dan Z | Sunny | Asphalt | City/County | 6 | 0 | n | 36 | 72 | Metal | 8 | med | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_E_1 | 6/17/2015 | 159 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 30 | 42 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_E_10 | 6/17/2015 | 301 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | n | 0 | 12 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_E_2 | 6/17/2015 | 203 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 36 | 36 | Plastic Laminate | 5 | LOW | between bench and wall | red streaks in MH, concrete chips on bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_E_3 | 6/17/2015 | 210 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 0 | 36 | Plastic Laminate | 2 | LOW | | concrete chips on bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_E_4 | 6/17/2015 | 330 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | n | 0 | 37.2 | Plastic Laminate | 1 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | Corroded Metal | | | | | 8 |
| TL_E_5 | 6/17/2015 | 255 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 0 | 12 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_E_6 | 6/17/2015 | 213 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 24 | 13.2 | Plastic Laminate | 3 | LOW | | concrete chips on bench | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_E_7 | 6/17/2015 | 223 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 0 | 6 | Plastic Laminate | 1 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_E_8 | 6/17/2015 | 217 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 0 | 6 | Plastic Laminate | 1 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_E_9 | 6/17/2015 | 336 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 24 | 36 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_1 | 6/25/2015 | 1100 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 36 | 12 | | | med | | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_10 | 7/2/2015 | 1021 | Dan Z | Sunny | Asphalt | Residential | 12 | 1.2 | n | 30 | 0 | | | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_F_11 | 7/2/2015 | 1026 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 24 | 24 | | | med | | black streaks in manhole | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | bench | 6 |
| TL_F_12 | 7/2/2015 | 1034 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 60 | Metal | 6 | med | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_F_13 | 7/2/2015 | 1040 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 42 | 18 | Metal | 5 | med | between wall and cone | black streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_F_18 | 7/2/2015 | 1045 | Dan Z | Sunny | Asphalt | Residential | 42 | 0 | y | 54 | 24 | Metal | 3 | med | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_2 | 6/25/2015 | 1041 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 42 | 24 | Plastic Laminate | 6 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_20 | 6/25/2015 | 1029 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 48 | Metal | 6 | Med | | mud in chimney | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_21 | 6/25/2015 | 1035 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 42 | Plastic Laminate | 6 | low | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_22 | 6/25/2015 | 1107 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 30 | 48 | Metal | 6 | med | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_24 | 6/25/2015 | 1115 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 30 | 54 | Metal | 6 | med | | caked mud around entry | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_25 | 6/25/2015 | 1119 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 30 | 48 | Metal | 5 | low | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_26 | 7/2/2015 | 1012 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 24 | 98.4 | Metal | 1 | LOW | In channel | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | Missing | surface aggregate visible | bench | barrel, bench | | 8 |
| TL_F_27 | 7/2/2015 | 1003 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 122.4 | Metal | 11 | med | | | Vented/Slots* | 15 | Cast Iron | Corroded | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_28 | 6/25/2015 | 928 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 30 | Metal | 3 | med | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface roughness visible | | pipe penetrations | | 8 |
| TL_F_3 | 6/25/2015 | 1025 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 24 | 60 | Metal | 5 | Med | | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_F_4 | 6/25/2015 | 1007 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 42 | Metal | 5 | Med | barrel wall | | Vented/Slots* | 15 | Aluminum | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_F_5 | 6/25/2015 | 937 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 30 | 30 | Metal | 5 | high | | caked mud around entry | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | corroded | | surface roughness visible | | | | 8 |
| TL_F_6 | 6/25/2015 | 920 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 24 | 24 | Metal | 3 | high | | why is the pipe to the east flowing? | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | pipe penetrations | | 8 |
| TL_F_7 | 6/25/2015 | 915 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | n | 30 | 43.2 | Metal | 6 | Med | between wall and cone | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | Missing | | | | bench | 8 |
| TL_F_8 | 6/25/2015 | 905 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 24 | 38.4 | Metal | 5 | high | | caked mud around entry | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 8 |
| TL_F_9 | 6/25/2015 | 955 | Dan Z | Sunny | Asphalt | Residential | 18 | 24 | n | 30 | 24 | Metal | 3 | low | 2 ft berm above grade | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_SB1_1 | 6/17/2015 | 238 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 6 | | 0 | LOW | between bench and wall | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 6 |
| TL_SB1_2 | 6/17/2015 | 233 | Dan Z | Sunny | Asphalt | Residential | 16.8 | 0 | y | 32.4 | 6 | | 0 | LOW | between bench and wall | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 6 |
| TL_SB1_3 | 6/17/2015 | 242 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 36 | 0 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_SB1_4 | 6/17/2015 | 247 | Dan Z | Sunny | Asphalt | Residential | 12 | 6 | y | 36 | 12 | | 0 | LOW | | 5" asphalt berm to lip | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 6 |
| TL_SB10_1 | 7/8/2015 | 1120 | Dan Z | Sunny | Other | None | 12 | 7.2 | y | 36 | 31.2 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB10_2 | 7/8/2015 | 1130 | Dan Z | Sunny | Other | None | 12 | 9.6 | y | 30 | 30 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB10_3 | 7/8/2015 | 1140 | Dan Z | Sunny | Other | None | 12 | 9.6 | y | 36 | 38.4 | Plastic Laminate | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | Concrete | Sound | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB11_1 | 7/13/2015 | 1120 | Dan Z | Sunny | Asphalt | City/County | 24 | 0 | y | 0 | 36 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB13_1 | 7/7/2015 | 149 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 30 | 54 | Metal | 6 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB13_2 | 7/7/2015 | 144 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 36 | 18 | Metal | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB2_1 | 7/7/2015 | 1254 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 0 | 12 | Plastic Laminate | 1 | LOW | | | SOLID | | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB3_1 | 7/22/2015 | 410 | Dan Z | Sunny | Asphalt | City/County | 24 | 0 | n | 36 | 50.4 | Metal | 8 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB4_1 | 7/7/2015 | 115 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 30 | 24 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | bench | 8 |
| TL_SB4_2 | 7/7/2015 | 110 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 30 | 12 | Plastic Laminate | 3 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB4_3 | 7/7/2015 | 100 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 0 | 24 | Plastic Laminate | 1 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB5_1 | 7/7/2015 | 124 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 18 | 0 | | 0 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB6_1 | 7/8/2015 | 937 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 36 | 52.8 | Plastic Laminate | 2 | LOW | | random step locations | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB6_2 | 7/8/2015 | 926 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | y | 0 | 24 | | 0 | Med | | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB6_3 | 7/8/2015 | 921 | Dan Z | Sunny | Sidewalk/ROW | Residential | 12 | 0 | y | 0 | 36 | Plastic Laminate | 1 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB6_4 | 7/8/2015 | 932 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 42 | 12 | | 0 | Med | | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| | Pipe E | | | | | | Pipe I-1 | | | | | | Pipe I-2 | | | | | | | Pipe I-3 | | | | | Pipe I-4 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Material8 | Clock Position | Depth to Invert (tenths) | Channelized | Drop (in/out) | Notes9 | Size (in)10 | Material 11 | Clock Position 12 | Depth to Invert (tenths)13 | Channelized14 | Drop (in/out)15 | Notes16 | Size (in)17 | Material18 | Clock Position19 | Depth to Invert (tenths)20 | Channelized21 | Drop (in/out)22 | Notes23 | Size (in)24 | Material25 | Clock Position26 | Depth to Invert (tenths)27 | Channelized28 | Drop (in/out)29 | Notes30 | Size (in)31 | Material32 | Clock Position33 | Depth to Invert (tenths)34 | Channelized35 | Drop (in/out)36 | Notes37 |
| TL_C_39 | AC | 6 | 174 | Y | N | | | | | | | | | 8 | AC | 12 | 174 | Y | N | | 8 | AC | 3 | 173 | N | Y | | 8 | PVC | 3 | 69 | N | Y | probably plugged and drops down a few feet back |
| TL_C_4 | PVC | 9 | 84 | Y | N | | | | | | | | | 8 | PVC | 430 | 84 | Y | N | | | | | | | | | | | | | | |
| TL_C_5 | PVC C900 | 9 | 109 | Y | N | | | | | | | | | 8 | PVC C900 | 3 | 109 | Y | N | | | | | | | | | | | | | | |
| TL_C_6 | PVC C900 | 9 | 84 | Y | N | | 8 | AC | 12 | 84 | Y | N | | 8 | PVC C900 | 3 | 84 | Y | N | | | | | | | | | | | | | | |
| TL_C_7 | AC | 9 | 94 | Y | N | | 6 | DI | 12 | 94 | Y | N | | 8 | PVC | 3 | 65 | N | Y | | | | | | | | | | | | | | |
| TL_C_8 | PVC | 6 | 84 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL_C_9 | PVC C900 | 9 | 76 | Y | N | | 8 | AC | 12 | 76 | Y | N | | 8 | PVC C900 | 3 | 76 | Y | N | | | | | | | | | | | | | | |
| TL_C1_1 | PVC | 12 | 48 | Y | N | mortar cracked significantly | 4 | PVC | 3 | 47 | Y | N | mortar cracked significantly | | | | | | | | 4 | PVC | 9 | 47 | Y | N | mortar cracked significantly | | | | | | |
| TL_C1_2 | PVC | 9 | 59 | Y | N | mortar significantly cracked | | | | | | | | 8 | PVC | 3 | 60 | Y | N | mortar significantly | 8 | PVC | 6 | 58 | Y | N | mortar significantly cracked | | | | | | |
| TL_C1_3 | PVC | 9 | 61 | Y | N | mortar crack significantly | | | | | | | | 8 | PVC | 3 | 62 | Y | N | mortar cracked sig | 8 | PVC | 6 | 60 | Y | N | mortar cracked significantly | | | | | | |
| TL_C1_4 | PVC | 12 | 47 | Y | N | minor mortar damage | 8 | PVC | 3 | 46 | Y | N | minor mortar damage | | | | | | | | 8 | PVC | 9 | 46 | Y | N | minor mortar damage | | | | | | |
| TL_C1_5 | PVC | 2 | 72 | Y | N | | 4 | PVC | 7 | 70 | Y | N | mortar around pipe cracked | | | | | | | | 4 | PVC | 11 | 69 | Y | N | | | | | | | |
| TL_C1_6 | PVC | 12 | 77 | Y | N | mortar around pipe cracked | 8 | PVC | 3 | 74 | Y | N | mortar around pipe cracked | 8 | PVC | 6 | 72 | Y | N | mortar around pipe cracked | | | | | | | | | | | | | |
| TL_C1_7 | PVC C900 | 130 | 62 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL_C2_1 | PVC C900 | 9 | 84 | Y | N | | 4 | PVC C900 | 1030 | 84 | Y | N | | | | | | | | | 4 | PVC C900 | 430 | 84 | Y | N | | | | | | | |
| TL_C2_10 | PVC | 9 | 72 | Y | N | | | | | | | | | 8 | PVC | 3 | 72 | Y | N | | | | | | | | | | | | | | |
| TL_C2_11 | PVC | 5 | 84 | Y | N | | 8 | PVC | 6 | 84 | Y | N | | 8 | PVC | 12 | 84 | Y | N | | 8 | PVC | 9 | 84 | Y | N | | | | | | | |
| TL_C2_12 | | | | | | | | | | | | | | 8 | PVC | 10 | 116 | N | Y | | 8 | PVC | 10 | 30 | N | Y | NO FLOW - WHAT IS THIS? | | | | | | |
| TL_C2_13 | PVC | 5 | 84 | Y | N | | 8 | PVC | 6 | 84 | Y | N | | 8 | PVC | 12 | 84 | Y | N | | 8 | PVC | 9 | 84 | Y | N | | | | | | | |
| TL_C2_14 | PVC | 12 | 64 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL_C2_15 | PVC | 6 | 74 | Y | N | | | | | | | | | 8 | PVC | 12 | 74 | Y | N | | 8 | PVC | 9 | 74 | Y | N | | | | | | | |
| TL_C2_16 | PVC | 9 | 74 | Y | N | | 6 | PVC | 1030 | 74 | Y | N | | | | | | | | | 6 | PVC | 430 | 74 | Y | N | | | | | | | |
| TL_C2_17 | PVC | 9 | 54 | Y | N | | | | | | | | | 8 | PVC | 3 | 54 | Y | N | | | | | | | | | | | | | | |
| TL_C2_18 | PVC | 9 | 64 | Y | N | | | | | | | | | | | | | | | | 8 | PVC | 6 | 64 | Y | N | | | | | | | |
| TL_C2_19 | PVC | 9 | 64 | Y | N | | | | | | | | | 8 | PVC | 430 | 64 | Y | N | | | | | | | | | | | | | | |
| TL_C2_2 | PVC C900 | 1030 | 72 | Y | N | | | | | | | | | 8 | PVC C900 | 1030 | 72 | Y | N | | | | | | | | | | | | | | |
| TL_C2_20 | PVC | 9 | 54 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL_C2_3 | PVC | 12 | 64 | Y | N | | 8 | PVC | 3 | 64 | Y | N | | 8 | PVC | 6 | 64 | Y | N | | | | | | | | | | | | | | |
| TL_C2_4 | PVC | 12 | 56 | Y | N | | | | | | | | | 8 | PVC | 5 | 56 | Y | N | | | | | | | | | | | | | | |
| TL_C2_5 | PVC | 12 | 56 | Y | N | | 8 | PVC | 3 | 56 | Y | N | | 8 | PVC | 6 | 56 | Y | N | | | | | | | | | | | | | | |
| TL_C2_6 | PVC | 9 | 47 | Y | N | | | | | | | | | | | | | | | | 8 | PVC | 6 | 43 | Y | N | | | | | | | |
| TL_C2_7 | PVC | 9 | 69 | Y | N | | | | | | | | | 8 | PVC | 3 | 69 | Y | N | | | | | | | | | | | | | | |
| TL_C2_8 | PVC | 6 | 50 | Y | N | | | | | | | | | | | | | | | | 8 | PVC | 9 | 50 | Y | N | | | | | | | |
| TL_D_1 | AC | 12 | 80 | Y | N | | | | | | | | | 8 | AC | 6 | 80 | Y | N | stub out | | | | | | | | | | | | | |
| TL_D_10 | AC | 12 | 90 | Y | N | | | | | | | | | 10 | AC | 6 | 90 | Y | N | | | | | | | | | | | | | | |
| TL_D_11 | AC | 12 | 95 | Y | N | | 8 | AC | 3 | 90 | Y | Y | | 10 | AC | 6 | 95 | Y | N | | | | | | | | | | | | | | |
| TL_D_12 | AC | 9 | 74 | Y | N | | | | | | | | | 6 | PVC C900 | 3 | 74 | Y | N | | 6 | AC | 6 | 74 | Y | N | | | | | | | |
| TL_D_13 | AC | 12 | 64 | Y | N | | 8 | AC | 3 | 64 | Y | N | | 8 | AC | 6 | 64 | Y | N | | | | | | | | | | | | | | |
| TL_D_14 | AC | 12 | 64 | Y | N | | 6 | AC | 4 | 64 | Y | N | | 8 | AC | 6 | 730 | Y | N | | | | | | | | | | | | | | |
| TL_D_15 | AC | 12 | 74 | Y | N | | 4 | AC | 430 | 74 | Y | N | | | | | | | | | 4 | AC | 730 | 74 | Y | N | | | | | | | |
| TL_D_16 | AC | 9 | 75 | Y | N | | | | | | | | | 6 | AC | 3 | 75 | Y | N | stub out | | | | | | | | | | | | | |
| TL_D_2 | AC | 12 | 70 | Y | N | | 6 | AC | 3 | 65 | Y | Y | | 8 | AC | 6 | 65 | Y | N | | | | | | | | | | | | | | |
| TL_D_3 | AC | 12 | 75 | Y | N | | | | | | | | | 8 | AC | 6 | 75 | Y | N | | | | | | | | | | | | | | |
| TL_D_4 | AC | 9 | 75 | Y | N | | | | | | | | | 8 | AC | 3 | 75 | Y | N | | 8 | AC | 6 | 75 | Y | N | | | | | | | |
| TL_D_6 | AC | 9 | 64 | Y | N | | | | | | | | | 6 | AC | 6 | 64 | Y | N | | 8 | AC | 3 | 64 | Y | N | | | | | | | |
| TL_D_7 | AC | 130 | 59 | Y | N | | | | | | | | | 8 | AC | 6 | 59 | Y | N | | | | | | | | | | | | | | |
| TL_D_8 | AC | 12 | 86 | Y | N | | | | | | | | | 8 | AC | 6 | 6 | Y | N | | | | | | | | | | | | | | |
| TL_D_9 | AC | 12 | 102 | Y | N | | 6 | AC | 430 | 100 | Y | Y | | 10 | AC | 6 | 104 | Y | N | | | | | | | | | | | | | | |
| TL_E_1 | PVC C900 | 12 | 79 | Y | N | | | | | | | | | | | | | | | | 8 | PVC C900 | 3 | 79 | Y | N | | | | | | | |
| TL_E_10 | PVC C900 | 7 | 34 | Y | N | | | | | | | | | 8 | PVC C900 | 12 | 34 | Y | N | | | | | | | | | | | | | | |
| TL_E_2 | PVC C900 | 3 | 74 | Y | N | | 4 | PVC C900 | 1 | 72 | Y | N | | 8 | PVC C900 | 6 | 74 | Y | N | | | | | | | | | | | | | | |
| TL_E_3 | PVC C900 | 6 | 44 | Y | N | | 4 | PVC C900 | 11 | 42 | Y | N | | 8 | PVC C900 | 3 | 44 | Y | N | | | | | | | | | | | | | | |
| TL_E_4 | PVC C900 | 5 | 55 | Y | N | | | | | | | | | 4 | PVC C900 | 12 | 53 | Y | N | | 8 | PVC C900 | 1 | 55 | Y | N | | | | | | | |
| TL_E_5 | PVC C900 | 6 | 29 | Y | N | | | | | | | | | 8 | PVC C900 | 12 | 24 | Y | N | | 4 | PVC C900 | 9 | 22 | Y | N | | | | | | | |
| TL_E_6 | PVC C900 | 3 | 50 | Y | N | | 8 | PVC C900 | 12 | 50 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 50 | Y | N | | | | | | | |
| TL_E_7 | PVC C900 | 6 | 29 | Y | N | | 8 | PVC C900 | 3 | 29 | Y | N | | | | | | | | | 8 | PVC C900 | 9 | 29 | Y | N | | | | | | | |
| TL_E_8 | PVC C900 | 9 | 24 | Y | N | | | | | | | | | | | | | | | | 8 | PVC C900 | 12 | 24 | Y | N | | | | | | | |
| TL_E_9 | PVC C900 | 6 | 64 | Y | N | | | | | | | | | 8 | PVC C900 | 11 | 64 | Y | N | | | | | | | | | | | | | | |
| TL_F_1 | PVC | 9 | 54 | Y | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL_F_10 | AC | 12 | 40 | Y | N | | | | | | | | | 6 | AC | 6 | 40 | Y | N | | | | | | | | | | | | | | |
| TL_F_11 | AC | 12 | 54 | Y | N | | | | | | | | | 6 | AC | 6 | 54 | Y | N | | 6 | AC | 3 | 54 | Y | N | | | | | | | |
| TL_F_12 | AC | 3 | 94 | Y | N | | 8 | AC | 12 | 94 | Y | N | | 6 | AC | 6 | 94 | Y | N | | | | | | | | | | | | | | |
| TL_F_13 | AC | 6 | 59 | Y | N | | | | | | | | | 6 | AC | 6 | 59 | Y | N | | | | | | | | | | | | | | |
| TL_F_18 | AC | 12 | 104 | Y | N | | | | | | | | | 8 | AC | 6 | 104 | Y | N | | 6 | AC | 9 | 104 | Y | N | | | | | | | |
| TL_F_2 | AC | 12 | 69 | Y | N | | 8 | PVC | 3 | 69 | Y | N | | 8 | AC | 6 | 69 | Y | N | | | | | | | | | | | | | | |
| TL_F_20 | AC | 12 | 74 | Y | N | | | | | | | | | 8 | AC | 6 | 74 | Y | N | | | | | | | | | | | | | | |
| TL_F_21 | PVC | 9 | 74 | Y | N | | 4 | PVC | 130 | 74 | Y | N | | 4 | PVC | 3 | 74 | Y | N | | 4 | PVC | 430 | 74 | Y | N | | | | | | | |
| TL_F_22 | AC | 12 | 79 | Y | N | | 8 | PVC | 3 | 79 | Y | N | | 8 | AC | 6 | 79 | Y | N | | | | | | | | | | | | | | |
| TL_F_24 | AC | 12 | 83 | Y | N | | | | | | | | | 8 | AC | 6 | 83 | Y | N | | | | | | | | | | | | | | |
| TL_F_25 | AC | 12 | 79 | Y | N | | 6 | DI | 3 | 79 | N | Y | | 8 | AC | 6 | 79 | Y | N | | | | | | | | | | | | | | |
| TL_F_26 | AC | 12 | 126 | Y | N | | 8 | AC | 3 | 126 | Y | N | | 8 | AC | 6 | 126 | Y | N | | | | | | | | | | | | | | |
| TL_F_27 | AC | 12 | 146 | Y | N | | 8 | DI | 430 | 100 | N | Y | | 8 | AC | 6 | 146 | Y | N | | 10 | DI | 900 | 90 | N | Y | | | | | | | |
| TL_F_28 | AC | 6 | 64 | Y | N | | | | | | | | | 6 | AC | 12 | 64 | Y | N | slight flow, why??? | 4 | DI | 3 | 64 | Y | N | | | | | | | |
| TL_F_3 | AC | 12 | 80 | Y | N | | 8 | AC | 3 | 80 | Y | N | | 8 | AC | 6 | 80 | Y | N | | | | | | | | | | | | | | |
| TL_F_4 | AC | 12 | 76 | Y | N | | | | | | | | | 8 | AC | 6 | 76 | Y | N | | | | | | | | | | | | | | |
| TL_F_5 | AC | 9 | 82 | Y | N | | | | | | | | | 8 | AC | 2 | 76 | N | Y | concrete cascade | 8 | AC | 5 | 82 | Y | N | | | | | | | |
| TL_F_6 | AC | 830 | 64 | Y | N | | 8 | AC | 12 | 64 | Y | N | | 8 | PVC C900 | 3 | 55 | N | Y | Constant flow. Why??? | | | | | | | | | | | | | |
| TL_F_7 | AC | 11 | 80 | Y | N | | | | | | | | | 8 | AC | 6 | 80 | Y | N | | | | | | | | | | | | | | |
| TL_F_8 | AC | 12 | 76 | Y | N | | | | | | | | | 8 | AC | 6 | 76 | Y | N | | | | | | | | | | | | | | |
| TL_F_9 | PVC C900 | 3 | 64 | Y | N | | 4 | DI | 12 | 64 | Y | N | | | | | | | | | 4 | PVC C900 | 6 | 64 | Y | N | | | | | | | |
| TL_SB1_1 | AC | 6 | 50 | Y | N | | | | | | | | | 6 | AC | 12 | 50 | Y | N | | 6 | AC | 9 | 50 | Y | N | | | | | | | |
| TL_SB1_2 | AC | 3 | 52 | Y | N | | | | | | | | | 6 | AC | 9 | 52 | Y | N | | | | | | | | | | | | | | |
| TL_SB1_3 | AC | 6 | 56 | Y | N | | | | | | | | | 6 | AC | 12 | 56 | Y | N | | 6 | AC | 9 | 56 | Y | N | | | | | | | |
| TL_SB1_4 | AC | 9 | 56 | Y | N | | | | | | | | | 4 | AC | 4 | 56 | Y | N | | 6 | AC | 2 | 56 | Y | N | | | | | | | |
| TL_SB10_1 | PVC C900 | 12 | 72 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 72 | Y | N | | | | | | | | | | | | | | |
| TL_SB10_2 | PVC C900 | 12 | 65 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 65 | Y | N | | | | | | | | | | | | | | |
| TL_SB10_3 | PVC C900 | 12 | 80 | Y | N | | | | | | | | | 8 | PVC C900 | 6 | 80 | Y | N | | | | | | | | | | | | | | |
| TL_SB11_1 | PVC | 3 | 52 | Y | N | | | | | | | | | 1 | PVC | 9 | 52 | Y | N | | 1 | PVC | 9 | 52 | Y | N | two adjacent lateral pipes | | | | | | |
| TL_SB13_1 | PVC | 6 | 80 | Y | N | | | | | | | | | 8 | PVC | 130 | 80 | Y | N | | | | | | | | | | | | | | |
| TL_SB13_2 | PVC | 730 | 65 | Y | N | | | | | | | | | 8 | PVC | 12 | 65 | Y | N | | | | | | | | | | | | | | |
| TL_SB2_1 | PVC | 12 | 30 | Y | N | | | | | | | | | | | | | | | | 4 | PVC | 9 | 28 | Y | N | | | | | | | |
| TL_SB3_1 | CONCRETE | 9 | 100 | Y | N | | 6 | CONCREE | 12 | 98 | Y | N | | 8 | CONCRETE | 3 | 100 | Y | N | | | | | | | | | | | | | | |
| TL_SB4_1 | PVC | 6 | 58 | Y | N | | | | | | | | | 6 | PVC | 12 | 58 | Y | N | | | | | | | | | | | | | | |
| TL_SB4_2 | PVC | 730 | 58 | Y | N | | | | | | | | | 8 | PVC | 12 | 58 | Y | N | | | | | | | | | | | | | | |
| TL_SB4_3 | PVC | 6 | 40 | Y | N | | | | | | | | | 8 | PVC | 12 | 40 | Y | N | stubs out | | | | | | | | | | | | | |
| TL_SB5_1 | PVC C900 | 6 | 31 | Y | N | | 3 | PVC C900 | 11 | 31 | Y | N | | 3 | PVC C900 | 12 | 31 | Y | N | | | | | | | | | | | | | | |
| TL_SB6_1 | PVC C900 | 6 | 88 | Y | N | | | | | | | | | 8 | PVC C900 | 12 | 88 | Y | N | | | | | | | | | | | | | | |
| TL_SB6_2 | PVC C900 | 9 | 34 | Y | N | | | | | | | | | | | | | | | | 8 | PVC C900 | 6 | 34 | Y | N | | | | | | | |
| TL_SB6_3 | PVC C900 | 12 | 44 | Y | N | | | | | | | | | | | | | | | | 6 | PVC C900 | 9 | 44 | Y | N | | | | | | | |
| TL_SB6_4 | PVC C900 | 6 | 54 | Y | N | | | | | | | | | 3 | PVC C900 | 11 | 54 | Y | N | | 8 | PVC C900 | 3 | 54 | Y | N | | | | | | | |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| General | | | | | | | | | | | | Manhole Specs | | | | Frame and Cover | | | | Grade Rings | | Barrel Wall | | Bench/Channel | | Structural/O&M Condition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Date | Time | Inspector | Weather Conditions | Surface Condition | Traffic Volume | Rim to top of cone (tenths) | Average Rim to Grade Height (tenths) | Chimney (y/n) | Cone Depth (tenths) | Barrel/Wall Height (tenths) | Rung Type | # of Steps | Inflow Potential | Joint Issues | Notes | Type | No_Slots | Material | Condition | Type2 | Condition3 | Type4 | Condition5 | Type6 | Condition7 | Rungs | Concrete Corrosion | Corrosion Location | Evidence of Infiltration | Evidence of Surcharge | Size (in) |
| TL_SB7_1 | 7/8/2015 | 949 | Dan Z | Sunny | Asphalt | Residential | 3.6 | 0 | n | 24 | 20.4 | Plastic Laminate | 1 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB7_2 | 7/8/2015 | 943 | Dan Z | Sunny | Asphalt | Residential | 18 | 0 | y | 0 | 18 | Plastic Laminate | 2 | LOW | | | Vented/Slots* | 15 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB8_1 | 7/8/2015 | 1001 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 0 | 24 | Plastic Laminate | 1 | LOW | | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB8_2 | 7/8/2015 | 956 | Dan Z | Sunny | Asphalt | Residential | 25.2 | 0 | y | 0 | 4.8 | | | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 8 |
| TL_SB9_1 | 7/8/2015 | 1017 | Dan Z | Sunny | Asphalt | Residential | 6 | 0 | n | 36 | 30 | Plastic Laminate | 5 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 10 |
| TL_SB9_2 | 7/8/2015 | 1011 | Dan Z | Sunny | Asphalt | Residential | 12 | 0 | n | 30 | 12 | Plastic Laminate | 4 | LOW | | | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | | | 10 |
| TL_SB9_3 | 7/8/2015 | 1006 | Dan Z | Sunny | Asphalt | Residential | 24 | 0 | y | 30 | 12 | Plastic Laminate | 4 | LOW | | red streaks in MH | Vented/Slots* | 2 | Cast Iron | Sound | | | Concrete | Sound | Concrete | Sound | | | | bench | | 10 |

APPENDIX C1 - MANHOLE INSPECTION DATA SHEETS

| | Pipe E | | | | | | Pipe I-1 | | | | | | | Pipe I-2 | | | | | | | Pipe I-3 | | | | | | | Pipe I-4 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manhole Number | Material8 | Clock Position | Depth to Invert (tenths) | Channelized | Drop (in/out) | Notes9 | Size (in)10 | Material 11 | Clock Position 12 | Depth to Invert (tenths)13 | Channelized14 | Drop (in/out)15 | Notes16 | Size (in)17 | Material18 | Clock Position19 | Depth to Invert (tenths)20 | Channelized21 | Drop (in/out)22 | Notes23 | Size (in)24 | Material25 | Clock Position26 | Depth to Invert (tenths)27 | Channelized28 | Drop (in/out)29 | Notes30 | Size (in)31 | Material32 | Clock Position33 | Depth to Invert (tenths)34 | Channelized35 | Drop (in/out)36 | Notes37 |
| TL_SB7_1 | PVC | 6 | 45 | Y | N | | | | | | | | | 8 | PVC | 12 | 45 | Y | N | | | | | | | | | | | | | | | |
| TL_SB7_2 | PVC | 6 | 35 | Y | N | | 2 | PVC | 1030 | 35 | Y | N | | 2 | PVC | 12 | 35 | Y | N | | | | | | | | | | | | | | | |
| TL_SB8_1 | PVC | 6 | 45 | Y | N | | | | | | | | | 8 | PVC | 12 | 45 | Y | N | | | | | | | | | | | | | | | |
| TL_SB8_2 | PVC | 6 | 33 | Y | N | | | | | | | | | 4 | PVC C900 | 12 | 30 | Y | N | | 4 | PVC C900 | 12 | 3 | Y | N | | | | | | | | |
| TL_SB9_1 | PVC | 8 | 65 | Y | N | | | | | | | | | 10 | PVC | 1 | 65 | Y | N | | | | | | | | | | | | | | | |
| TL_SB9_2 | PVC | 5 | 53 | Y | N | | | | | | | | | 10 | PVC | 12 | 53 | Y | N | | | | | | | | | | | | | | | |
| TL_SB9_3 | PVC | 6 | 60 | Y | N | | 6 | PVC | 9 | 60 | Y | N | | | | | | | | | | | | | | | | | | | | | | |

# APPENDIX D1 - CCTV INSPECTION SUMMARY REPORTS – MOLALLA AVE

## Molalla Ave CCTV 2015 - Sanitary Video #1861

| Rpt # | Upstream ID | Downstream ID | Direction | Date | Location/Street | Pipe | Size | Length | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 1 | SS.EAST | SS.MH.018 | Upstream | 5/19/15 | Molalla/5TH | CSP | 8 | 40.0 | Grease, offset joint at 25.9' |
| 2 | SS.SOUTH | SS.MH.018 | Upstream | 5/19/15 | Molalla/5TH | CSP | 8 | 40.0 | |
| 3 | SS.EAST | SS.MH.031 | Upstream | 5/19/15 | Molalla / 2ND ST | CSP | 6 | 44.0 | |
| 4 | SS.MH.054 | SS.MH.031 | Downstream | 5/18/15 | Molalla | CSP | 8 | 353.0 | Joints that aren't grouted are leaking |
| 5 | SS.MH.019 | SS.MH.054 | Upstream | 5/18/15 | Molalla | CSP | 8 | 199.5 | Leaking joints, Cracks in Wyes at 65' and 69' |
| 6 | SS.EAST | SS.MH.130 | Upstream | 5/19/15 | Molalla/ ROSS | CSP | 8 | 50.0 | Slight offset joint at 8' - Grease |
| 7 | SS.SOUTH | SS.MH.130 | Upstream | 5/18/15 | Molalla | CSP | 12 | 336.0 | Joints that aren't grouted are leaking, Service at 204' appears capped with diamond plate, Grout plug at end, looks like it goes all the way to Main ST |
| 8 | SS.MH.130 | SS.MH.131 | Upstream | 5/18/15 | Molalla | CSP | 12 | 366.5 | Leaking joints, Roots |
| 9 | SS.EAST | SS.MH.132 | Upstream | 5/19/15 | Molalla/ROBBINS | CSP | 8 | 40.0 | Leaking and encrusted joints |
| 10 | SS.MH.131 | SS.MH.132 | Downstream | 5/18/15 | Molalla | CSP | 12 | 352.0 | Aggregate visible in services |
| 11 | SS.EAST | SS.MH.133 | Upstream | 5/19/15 | Molalla / Shirley | PVC | 8 | 40.0 | |
| 12 | SS.NORTH | SS.MH.133 | Upstream | 5/19/15 | Molalla / Shirley | CSP | 8 | 28.2 | Heavy flow, cant see very much |
| 13 | SS.EAST | SS.MH.353 | Upstream | 5/19/15 | Molalla / HEINTZ | CSP | 12 | 40.0 | Leaking joints |
| 14 | SS.MH.132 | SS.MH.353 | Downstream | 5/18/15 | Molalla | CSP | 12 | 309.0 | Leaking joints, Shifted lateral at 191' |
| 15 | SS.MH.133 | SS.MH.353 | Downstream | 5/19/15 | Molalla / Shirley | CSP | 10 | 353.0 | Heavy flow, Broken pipe at 79' (wall is gone) leaking joints |
| 16 | SS.MH.133 | SS.MH.353 | Upstream | 5/19/15 | Molalla / HEINTZ | CSP | 8 | 49.0 | Running back up to spot we couldn’t pass |
| 17 | SS.EAST | SS.MH.500 | Upstream | 5/19/15 | Molalla/MAIN | CSP | 8 | 30.0 | |
| 18 | SS.MH.031 | SS.MH.500 | Downstream | 5/18/15 | Molalla | CSP | 8 | 350.0 | Leaking Joints, Encrustation |
| 19 | SS.MH.018 | SS.WEST | Downstream | 5/19/15 | Molalla/5TH | CSP | 8 | 40.0 | Roots 30-36' at joints, Leaking CP/PVC transition 21.2' |
| 20 | SS.MH.353 | SS.WEST | Downstream | 5/19/15 | Molalla / HEINTZ | CSP | 15 | 60.0 | |
| 21 | SS.MH.500 | SS.WEST | Downstream | 5/19/15 | Molalla/MAIN | PVC | 12 | 60.0 | |

**Sanitary Footage: 3180.2**

Video by Pacific Int-R-Tek
2501 NW Division St., Gresham, OR 97030 Mobile 503-730-4343 Office 503-665-1090
OR CCB #146869 WA PACIFI*991CW Licensed - Bonded - Insured

# APPENDIX D2 - CCTV INSPECTION SUMMARY REPORTS – PHASE 1

Molalla CCTV Sanitary 2015-2016 (Through Jan-2016)

| # | Upstream | Downstream | Direction | Date | Street | Size | Length | Comments |
|---|---|---|---|---|---|---|---|---|
| 1 | TL_A_02 | TL_A_03 | Downstream | 1/12/16 | COLE | 8 | 382.0 | Multiple issues, holes, fractures and I&I |
| 2 | TL_A_03 | TL_A_29 | Downstream | 1/12/16 | COLE | 8 | 352.0 | Roots, I&I and possible broken lateral |
| 3 | TL_A_04 | TL_A_24 | Downstream | 12/2/15 | 6th st | 8 | 186.2 | Intruding tap, unable to pass |
| 4 | TL_A_04CO | TL_A_10 | Upstream | 12/2/15 | 6th st | 8 | 201.0 | Leaking laterals |
| 5 | TL_A_10 | TL_A_04 | Downstream | 12/2/15 | 6th st | 8 | 432.1 | Large hole, top of pipe missing 150' |
| 6 | TL_A_10 | TL_A_04 | Upstream | 12/2/15 | 6th st | 8 | 27.9 | Offset joint 28', unable to pass |
| 7 | TL_A_11 | TL_A_24 | Upstream | 12/2/15 | 5th st | 8 | 351.0 | |
| 8 | TL_A_12 | TL_A_13 | Downstream | 12/2/15 | 4th st | 8 | 307.0 | |
| 9 | TL_A_13 | TL_A_06 | Downstream | 12/2/15 | 4th st | 8 | 338.0 | |
| 10 | TL_A_14 | TL_A_08 | Downstream | 12/2/15 | 3rd st | 8 | 332.0 | Hole in lat at 189' |
| 11 | TL_A_15 | TL_A_14 | Downstream | 12/2/15 | 3rd st | 8 | 305.5 | Heavy infiltration from broken cap in MH TL_A_15 |
| 12 | TL_A_16 | TL_A_17 | Upstream | 1/13/16 | ECHERD | 8 | 304.0 | Leaking Joints, Defective repair 20' |
| 13 | TL_A_17 | TL_A_18 | Downstream | 1/13/16 | ECHERD | 8 | 296.0 | Collapsed laterals? Heavy I&I, Multiple fractures 288' |
| 14 | TL_A_17a | TL_A_17 | Upstream | 1/13/16 | ECHERD | 8 | 30.0 | First attempt at run (grout in line) |
| 15 | TL_A_17a | TL_A_17 | Upstream | 1/13/16 | ECHERD | 8 | 202.5 | Heavy I&I from cracked MH 17a (added MH) East of Echerd |
| 16 | TL_A_18 | TL_A_21 | Downstream | 1/13/16 | ECHERD | 8 | 353.0 | Roots 108' - 352' |
| 17 | TL_A_19 | TL_A_22 | Downstream | 1/13/16 | LOLA | 8 | 351.0 | Leaking laterals |
| 18 | TL_A_20 | TL_A_19 | Downstream | 1/13/16 | LOLA | 8 | 350.0 | Holes in Laterals |
| 19 | TL_A_21 | TL_A_22 | Downstream | 1/14/16 | 2nd | 8 | 266.0 | Multiple leaks |
| 20 | TL_A_22 | TL_A_33 | Downstream | 1/13/16 | LOLA | 8 | 358.0 | Multiple large sags, possible broken pipe at 342' |
| 21 | TL_A_23 | TL_A_11 | Upstream | 12/2/15 | 5th st | 8 | 296.0 | Fracture at tap, 241' Gushing, Leaking lats |

# APPENDIX D2 - CCTV INSPECTION SUMMARY REPORTS – PHASE 1

Molalla CCTV Sanitary 2015-2016 (Through Jan-2016)

| # | Upstream | Downstream | Direction | Date | Street | Size | Length | Comments |
|---|---|---|---|---|---|---|---|---|
| 22 | TL_A_25 | TL_A_20 | Upstream | 12/2/15 | Lola | 8 | 40.6 | Tried to run a line pre cleaning, very dirty, rock and grease, unable to run. (mis-communition between myself and Dennis over what had been cleaned on our first day out - Kept to show pre cleaning condition of lines.) |

# APPENDIX D2 - CCTV INSPECTION SUMMARY REPORTS – PHASE 1

Molalla CCTV Sanitary 2015-2016 (Through Jan-2016)

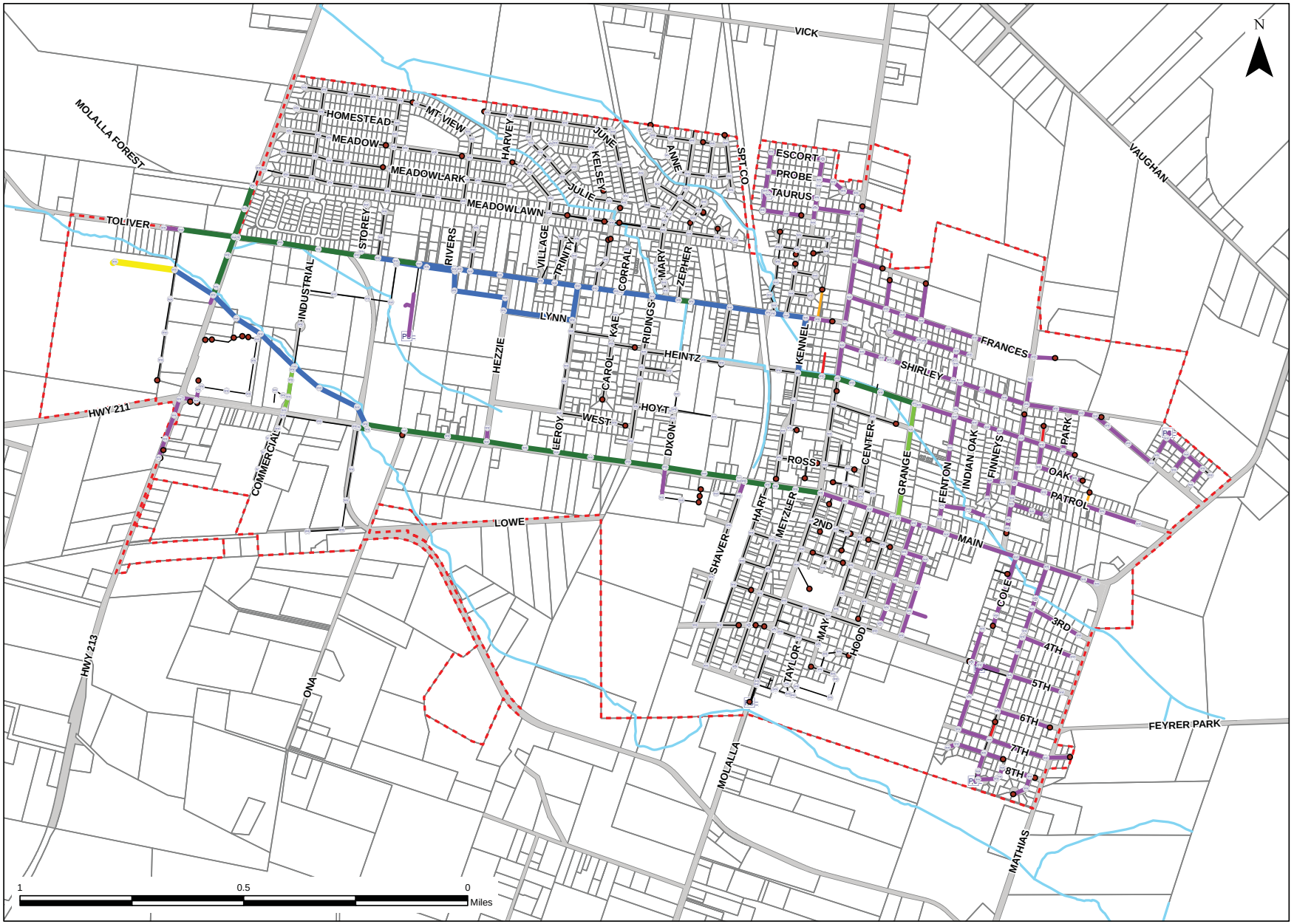
| # | Upstream | Downstream | Direction | Date | Street | Size | Length | Comments |
|---|---|---|---|---|---|---|---|---|
| 23 | TL_A_25 | TL_A_20 | Upstream | 1/13/16 | LOLA | 8 | 194.5 | Roots, and Leak from crack at 105, and leak from around lat at 59' |
| 24 | TL_A1_01 | TL_A1_02 | Upstream | 1/11/16 | 8TH | 8 | 106.0 | |
| 25 | TL_A1_01CO | TL_A1_04 | Upstream | 1/11/16 | 8TH | 8 | 162.0 | Cleanout 75% full of asphault, Gushing leak 3' from crack |
| 26 | TL_A1_02 | TL_A1_03 | Downstream | 1/11/16 | 8TH | 8 | 50.0 | |
| 27 | TL_A1_02CO | TL_A1_06 | Upstream | 1/11/16 | 8TH | 8 | 55.0 | Gushing infiltration from crack 49' |
| 28 | TL_A1_03 | TL_A1_05 | Downstream | 1/11/16 | ALYSSA CT | 8 | 220.0 | Infiltration in both MH's |
| 29 | TL_A1_03CO | TL_A1_09 | Upstream | 1/11/16 | STOWERS | 8 | 239.0 | Infiltration in my 09 |
| 30 | TL_A1_04 | TL_A1_06 | Upstream | 1/11/16 | MATHIAS CT | 8 | 149.0 | Infiltration and staining in my 06 |
| 31 | TL_A1_05 | TL_A1_PS | Downstream | 1/11/16 | ALYSSA CT | 8 | 36.0 | |
| 32 | TL_A1_06 | TL_A1_01 | Downstream | 1/11/16 | 8TH | 8 | 344.0 | |
| 33 | TL_A1_07 | TL_A1_08 | Upstream | 1/11/16 | 8TH | 8 | 115.0 | Infiltration in both MH's, large cracks in MH 07 |
| 34 | TL_A1_08 | TL_A1_09 | Upstream | 1/11/16 | 8TH | 8 | 340.0 | Infiltration in both MH's |
| 35 | TL_A1_09 | TL_A1_10 | Downstream | 1/11/16 | STOWERS | 8 | 226.0 | |
| 36 | TL_A1_10 | TL_A1_05 | Downstream | 1/11/16 | STOWERS | 8 | 97.0 | |
| 37 | TL_A2_01 | TL_A2_06 | Downstream | 1/14/16 | 5th | 8 | 106.0 | |
| 38 | TL_A2_01CO | TL_A2_05 | Upstream | 1/11/16 | 7TH | 8 | 290.0 | Leaking laterals? |
| 39 | TL_A2_02 | TL_A2_03 | Upstream | 1/11/16 | 7TH | 8 | 458.0 | Two leaking laterals, leaking hole at 34' |
| 40 | TL_A2_03 | TL_A2_04 | Downstream | 1/11/16 | 7TH | 8 | 384.0 | |
| 41 | TL_A2_03CO | TL_A2_01 | Upstream | 1/14/16 | 5th | 8 | 19.5 | Line goes to 100% full of gravel |
| 42 | TL_A2_04 | TL_A2_08 | Downstream | 1/14/16 | 2nd | 8 | 402.0 | |
| 43 | TL_A2_05 | TL_A2_02 | Downstream | 1/11/16 | 7TH | 8 | 247.0 | Infiltration from CP/AC transition at 50' |
| 44 | TL_A2_06 | TL_A2_PS | Downstream | 1/14/16 | 5th | 8 | 43.0 | |
| 45 | TL_A2_07 | TL_A2_01 | Upstream | 1/14/16 | 5th | 8 | 412.0 | Infiltration in mh 07 |

# APPENDIX D2 - CCTV INSPECTION SUMMARY REPORTS – PHASE 1

Molalla CCTV Sanitary 2015-2016 (Through Jan-2016)

| # | Upstream | Downstream | Direction | Date | Street | Size | Length | Comments |
|---|---|---|---|---|---|---|---|---|
| 46 | TL_A2_08 | TL_A2_06 | Downstream | 1/14/16 | COLE | 8 | 402.0 | Laterals deteriorating and leaking, MH 06 - Lateral coming into it is leaking and has encrustion. |
| 47 | TL_B_05 | TL_B_02 | Upstream | 1/14/16 | PATROL | 8 | 363.5 | Roots at 50' were caked in grease, blocking line, we cleared most of the grease with camera, tap at 277.5 is leaking heavily |
| 48 | TL_B_06 | TL_B_05 | Upstream | 1/14/16 | PATROL | 8 | 364.0 | Light infiltration from 3 joints |
| 49 | TL_B_07 | TL_B_27 | Upstream | 1/14/16 | PATROL | 8 | 451.0 | MH 07 heavy leak from around lateral in MH |
| 50 | TL_B_27 | TL_B_06 | Downstream | 1/14/16 | PATROL | 8 | 344.5 | Multiple issues, Holes, possible bore hit at 201' leaking laterals, and an intruding tap at 344', unable to pass |
| 51 | TL_B_27 | TL_B_06 | Upstream | 1/14/16 | PATROL | 8 | 22.5 | |
| 52 | TL_B_28 | TL_B_02 | Upstream | 1/14/16 | COLE | 8 | 179.0 | Roots |
| 53 | TL_B_29 | TL_B_28 | Upstream | 1/14/16 | COLE | 8 | 73.5 | leaking joint 15' |
| 54 | TL_B_30 | TL_B_29 | Upstream | 1/14/16 | COLE | 8 | 188.0 | leaking joints, 4' and 105', offset joint in lateral 117' |
| 55 | TL_B_31 | TL_B_30 | Upstream | 1/14/16 | COLE | 8 | 105.0 | MH 30 is leaking and water is coming in through lid |
| | | | | | | | | |
| | | | | | **Total Footage:** | | **13,249.8** | |
| | | | | | | | | |

# APPENDIX D3 - MOLALLA CCTV INSPECTION MAP – PHASE 1




**Sanitary Sewer Mains Inspection Overview**

**Sewer and Map Features**

**Mains To Inspect**

- 4" Lines
- 6" Lines
- 8" Lines
- 10" Lines
- 12" Lines
- 15" Lines
- 18" Lines

**Mains Not To Inspect**

**Other Sewer Features**

- Manholes
- Lampholes
- Lift Stations

**Other Features**

- Streams
- Molalla City Boundary

The data shown represents utility data prepared by the City of Molalla. It is presented "as is," as of September, 2015. This data may be subject to change. The City of Molalla shall assume no liability for any errors, positional accuracy, omissions, or inaccuracies in the information provided and therefore, there are no warranties which accompany this product. The City of Molalla assumes no liability for decisions made or action taken (or not taken) based upon any of the furnished information or data.

**Storm Lid Issues Map**

# APPENDIX E1 - STORM LID ISSUE MAP


## Manholes

- Sewer Lid
- Storm Lid