REPORT
December 15, 2016

MENSCH CAPITAL PARTNERS, LLC

DOWNSTREAM SANITARY SEWER CAPACITY ANALYSIS

WESTWOOD DEVELOPMENT PROJECT

Town of Amherst
New York

wendel

Introduction

Introduction

Mensch Capital Partners, LLC (Mensch) is proposing to redevelop a +/- 171 acre parcel of land located at 772 North Forest Road, Williamsville, New York 14221 (formerly the Westwood Country Club and Golf Course). The proposed development consists of both residential and commercial buildings and will discharge sewage into the Town of Amherst sewer system for treatment at the Town of Amherst Water Pollution Control Facility (WPCF). Wendel WD Architecture, Engineering, Surveying & Landscape Architecture, P.C. (Wendel) has been retained by Mensch to perform an investigation of the downstream capacity of the receiving sewers and the required inflow and infiltration (I&I) flow offset requirements. The results of the Downstream Capacity Sewer Analysis and I&I flow offset requirements are presented herein.

The proposed sanitary sewer system facilities include an onsite pump station, potentially incorporating onsite flow equalization, and a new 6" dedicated forcemain conveying sewage from the pump station along Maple Road. The 6" forcemain would tie into the Town of Amherst sewer system in the area of the intersection of Maple Road and Amherst Manor. A figure of the proposed sanitary sewer system facilities is include in Section 2.

The Sanitary Sewer and Water Preliminary Engineer's Report prepared by Nussbaumer and Clarke, Inc. dated May 2014 provides sanitary sewage flows for the proposed redevelopment that were used as the basis of this analysis. The proposed sanitary sewage flows are:

Total Proposed Flows

Average Daily Flow:	245,300 gpd
Maximum Daily Flow:	490,600 gpd
Peak Hourly Flow:	490,600 gpd (with onsite flow equalization)
Peak Hourly Flow:	999,400 gpd (without onsite flow equalization)

The peak hourly flows have been presented with and without onsite flow equalization as the use of onsite flow equalization has not been finalized. Peak flow equalization was evaluated as it is recommended in the 10 State Standards, Recommended Standards for Wastewater Facilities for consideration for treatment systems with peak flows greater than 4 times the average daily flow. The equalization basin would be sized for approximately 510,000 gallons, which would reduce the peak hourly flow rate of the sanitary sewer system to 490,600 gpd (341 gpm).

Downstream Sanitary Sewer Capacity Analysis

Downstream Sanitary Sewer Capacity Analysis

A downstream sanitary sewer capacity analysis was performed by comparing the capacity of the downstream sewer with the combination of the proposed new sanitary flows and current flows. These flows were obtained from recent wet weather flow monitoring data as the NYSDEC Sewer Extension Application Guidance and Related I/I Flow Offset Requirements recommends. The guidance documents further require that flow data is collected from a minimum of three key nodes during a significant rainfall event. A significant rainfall event is defined as a daily rainfall amount of 0.5" or greater.

TECSmith, Inc. performed flow monitoring of three downstream locations for this project between the dates of November 16, 2016 and December 6, 2016. Flow monitoring results are:

- Node 1 – Amherst Manor Drive (North of Maple Road):
  - Pipe Size: 15-inch diameter
  - Capacity: 1.70 million gallons per day (MGD)
  - Average daily Flow: 0.3 MGD
  - Daily Peak Flow: 0.48 MGD
  - Peak Hourly Flow from 2016 Flow Monitoring Data: 1.61 MGD
- Node 2 – 2031 Sweet Home Road (between Skinnersville Road and Durham Drive):
  - Pipe Size: 36-inch diameter
  - Capacity: 18.5 million gallons per day (MGD)
  - Average daily Flow: 1.10 MGD
  - Daily Peak Flow: 1.85 MGD
  - Peak Hourly Flow from 2016 Flow Monitoring Data: 3.48 MGD
- Node 3 – University of Buffalo (UB) Outfall (intersection of Sweet Home and Chestnut Ridge):
  - Pipe Size: 36-inch diameter
  - Capacity: 18.5 million gallons per day (MGD)
  - Average daily Flow: 1.10 MGD
  - Daily Peak Flow: 1.85 MGD
  - Peak Hourly Flow from 2016 Flow Monitoring Data: 2.83 MGD

The downstream capacity analysis was performed utilizing the sewer capacity of the three locations monitored and comparing it to a combination of the peak flows monitored and the proposed flows from the development with and without flow equalization. The table below represents the results of the downstream sanitary sewer capacity analysis with and without the use of an onsite equalization basin.

Sanitary Sewer Capacity Analysis								
Sewer Name	**Sewer Diameter (inches)**	**Existing Sewer Capacity (MGD)[1]**	**2016 Peak Hourly Flow Monitoring Results (MGD)[2]**	**Available Sewer Capacity (MGD)**	**Proposed Flow w/o Eq (MGD)**	**Proposed Flow with Eq (MGD)**	**Proposed Available Sewer Capacity w/o Eq (MGD)**	**Proposed Available Sewer Capacity with Eq (MGD)**
Amherst Manor Drive	15	1.7	1.61	0.09	1.00	0.49	-0.91	-0.40
2031 Sweet Home Road	36	18.5	3.48	15.02	1.00	0.49	14.02	14.53
UB Outfall	36	18.5	2.83	15.67	1.00	0.49	14.67	15.18

Notes:
1. Existing sewer capacities obtained from Town of Amherst Main Sanitary Sewer Interceptors Map, dated October 2016.
2. Obtained from the Sanitary Sewer Flow Capacity Study by TECSmith, Inc., dated December 7, 2016.

The existing 36-inch diameter gravity sanitary sewer at the UB Outfall and on Sweet Home Road have adequate capacity (with or without the addition of an equalization basin at the project site) to service the proposed project. The proposed project will not require improvements to these existing sanitary sewers.

However, the existing 15-inch diameter gravity sanitary sewer on Amherst Manor Drive does not have adequate capacity (with or without the addition of an equalization basin at the project site) to service the proposed project without upgrading the sewer.

It is proposed that the new 6-inch diameter, dedicated forcemain connect to the Town of Amherst Sewer at the existing manhole near the intersection of Amherst Manor Drive and Maple Road. The existing 15-inch diameter gravity sanitary sewer along Amherst Manor Drive (north of Maple Road) to Augspurger Road (at the UB Campus) is proposed to be replaced with a new 21-inch diameter gravity sanitary sewer pipe. A 21-inch diameter pipe with a minimum slope of 0.18% and a Manning's Roughness Coefficient of 0.014 (for concrete pipe) calculates to an available capacity of approximately 4.16 MGD, which provides adequate capacity (with or without the addition of an equalization basin at the project site) to service the proposed project and any future growth.

See attached Figure 2-1 for a map of the proposed 6-inch diameter forcemain and 21-inch diameter gravity sewer.

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PROPOSED SEWER LAYOUT

FIGURE 2-1

Proj. No.	495001
Date	12/15/16
Ref. Dwg.	N/A
No.	N/A

Inflow and Infiltration Analysis

Inflow and Infiltration Analysis

The New York State Department of Environmental Conservation (NYS DEC) requires that new development projects, such as apartments, hospitals, extended care facilities, office parks, malls, hotels, etc. that require sewer extensions and have design flows exceeding 2,500 gpd shall have I&I offsets to achieve a minimum reduction of 4 gallons of I&I for every 1 gallon of new peak wastewater flow.

As presented in Section 1, the proposed peak sanitary sewer flows for this project are 490,600 gpd (341 gpm) with onsite flow equalization and 999,400 gpd (694 gpm) without onsite flow equalization. Based on the NYSDEC I&I offset requirements of 4 gallons of I&I for every 1 gallon of new peak wastewater flow, the following I&I offsets are required:

I&I Offset with onsite flow equalization = 341 gpm x 4 = 1,364 gpm
I&I Offset without onsite flow equalization = 694 gpm x 4 = 2,776 gpm

We proposed that I&I remediation efforts consist of an equal split between the repair of damaged sewer laterals and cured-in-place pipe (CIPP) lining of existing 8-inch diameter piping. The actual split between repair of sewer laterals and cured-in place lining is preliminary and final quantities will be mutually agreed upon with the Town of Amherst and NYSDEC.

Based on the New York State Department of Environmental Conservation, Sewer Extension Application Guidance and Related I & I Flow Offset Requirements, the I&I Contribution Removal Values per the remediation efforts selected are as follows:

- Deficient residential lateral: 30 gpm per lateral
- CIPP lining of 8-inch diameter pipe: 8 gpm per 100 feet

I&I remediation required is:

- Without Flow Equalization (total of 2776 gpm):
    - Lateral Repair / Replacement: 1388 gpm / 30 gpm per lateral = 47 laterals
    - CIPP Lining of 8-Inch Diameter Pipe: 1388 gpm / 8 gpm per 100 feet = 17,350 feet
- With Flow Equalization (total of 1364 gpm):
    - Lateral Repair / Replacement: 682 gpm / 30 gpm per lateral = 23 laterals
    - CIPP Lining of 8-Inch Diameter Pipe: 682 gpm / 8 gpm per 100 feet = 8,525 feet

Conclusions

Conclusions

The downstream capacity sewer analysis shows that the existing sanitary sewer system has adequate capacity to convey the proposed sewage flows with the exception of the 15-inch diameter gravity sanitary sewer along Amherst Manor Drive (north of Maple Road) to Augspurger Road (at the UB Campus). This sewer is proposed to be upgraded to a 21-inch diameter gravity sanitary sewer. The upgraded 21-inch diameter gravity would then provide adequate capacity to convey the proposed sewage flows.

Sanitary Sewer Flow Capacity Study by TECSmith, Inc.

TECsmith

TECSMITH, Inc.
PO Box 383
Elma, New York 14059-0383
Tel: 716-687-1418
Fax: 716-655-3369

Date: December 7, 2016

SANITARY SEWER FLOW CAPACITY STUDY – Summary Review

Prepared For: Westwood- DS Capacity Analysis

Brian M. Sibiga
Wendel, Centerpointe Corporate Park,
375 Essjay Road, Suite 200
Williamsville, NY 14221
p. 716.688.0766 tf. 877.293.6335

Project Name: Westwood - DS Capacity Analysis

Flow Monitoring Period: November 16, 2016 to December 6, 2016

Rain Events (> 0.5-inches) Monitored: November 19 (0.54”), November (0.83”)

Number of Monitoring Nodes: Three (3) downstream manholes

Node Locations and Descriptions:

- Node 1 Amherst Manor Dr (15")
- Node 2 2031 Sweet Home Rd (36")
- Node 3 UB Outfall (36")

Summary Conclusion:

Based on the data presented in this report, specifically the flow depth measurements recorded (see graphs below)

- At no time during the monitoring period did the flow depth exceed pipe diameter at any of the downstream monitoring points during the rain vents monitored.
- At no time during the monitoring period did the flow at any point slow or stall which would have caused a backup or flooding at the manhole.

TECsmith

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PO Box 383
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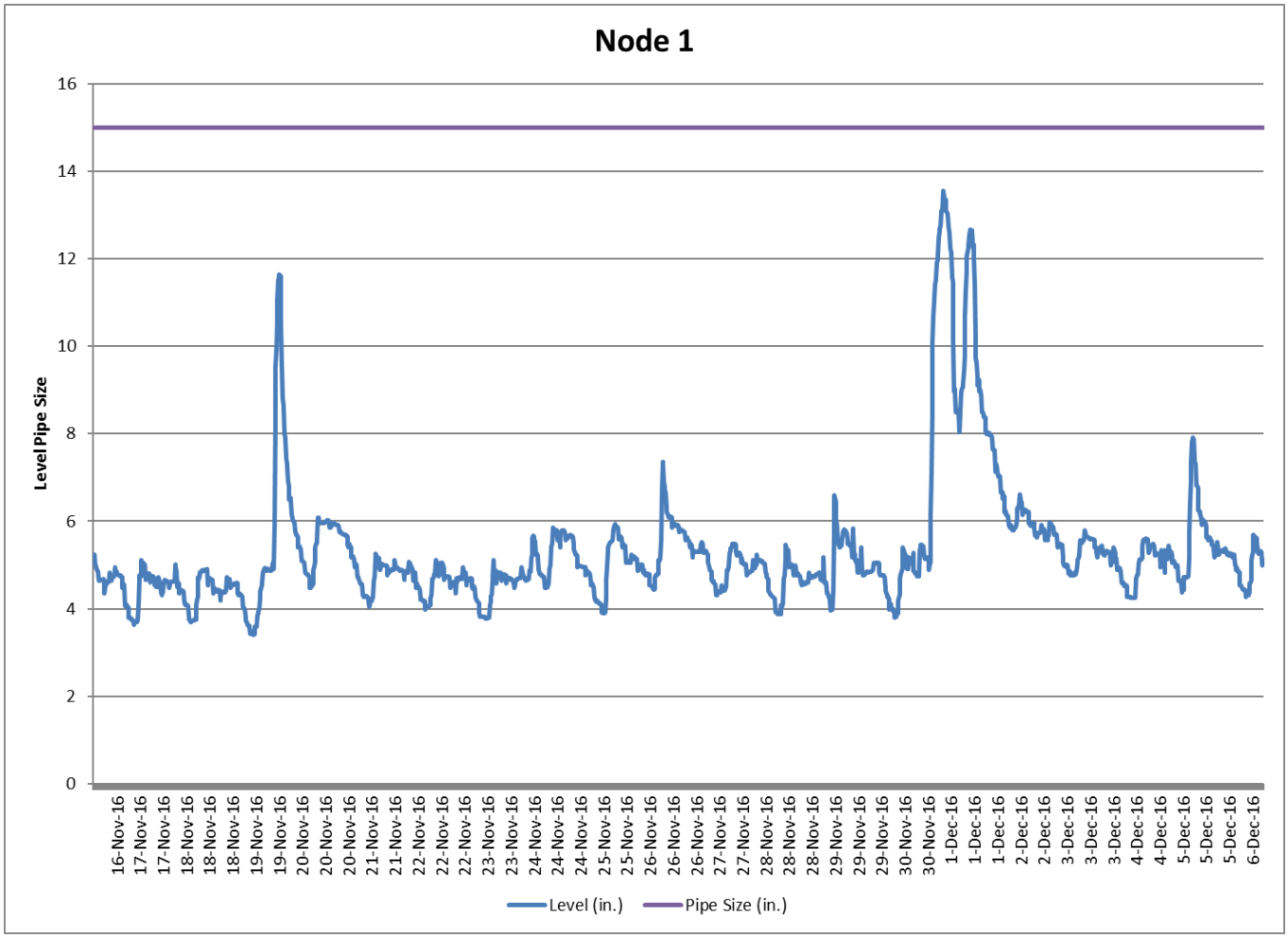
Depth of Flow Capacity Summary:

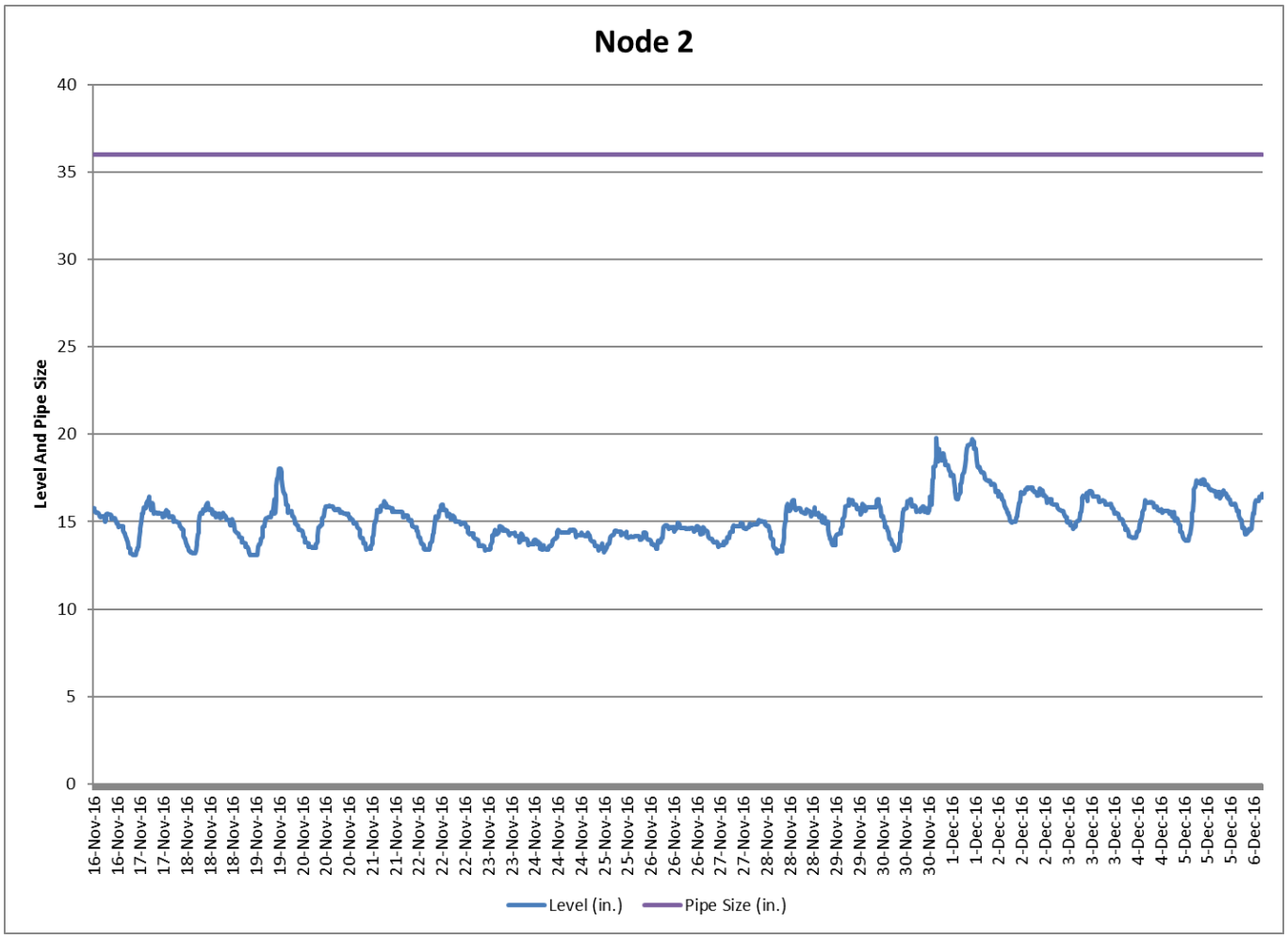
Depth of flow capacity is based on diameter of pipe. See graphs below.

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 1.



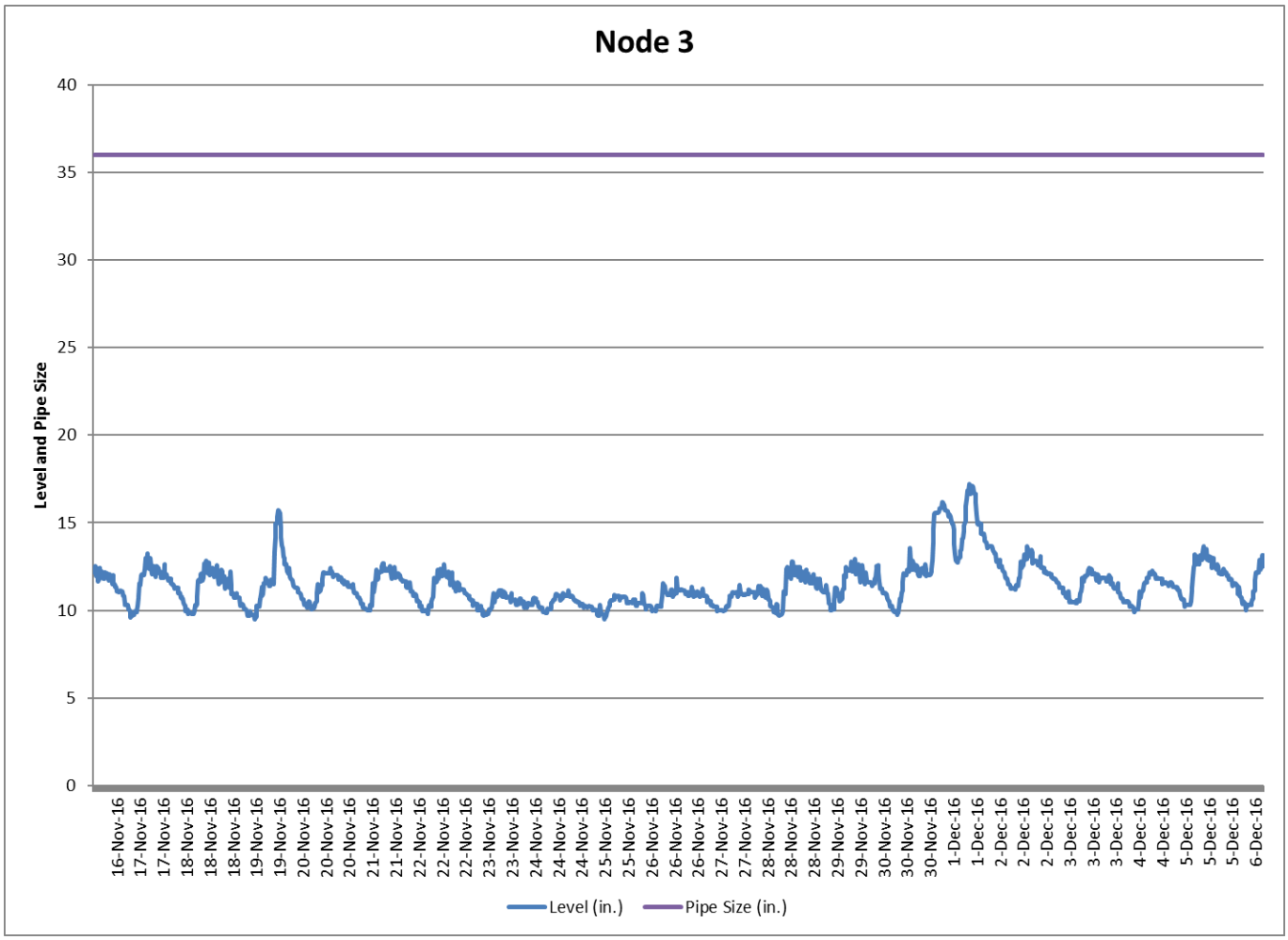
TECSMITH, Inc.
PO Box 383
Elma, New York 14059-0383
Tel: 716-687-1418
Fax: 716-655-3369

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 2.



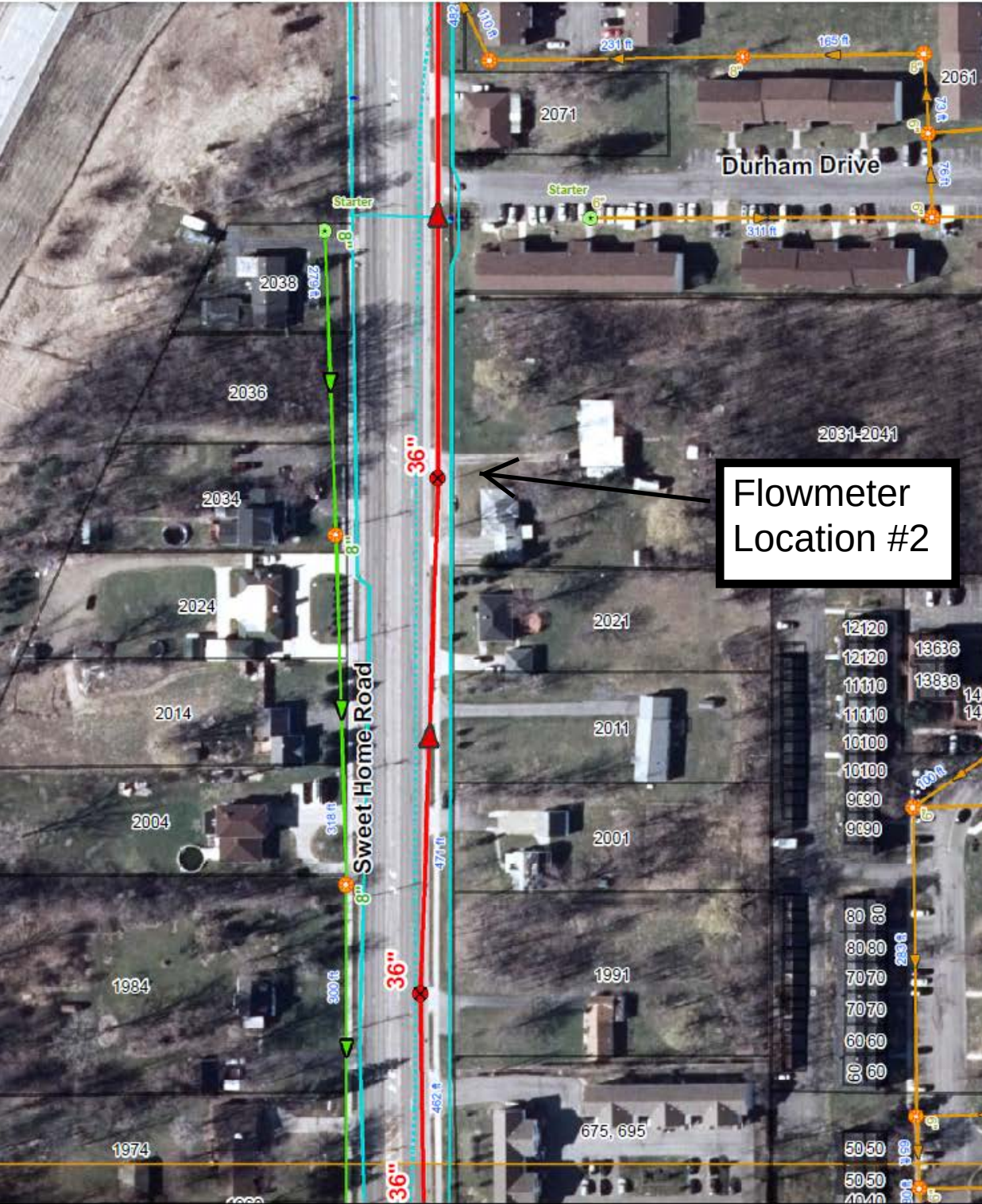
TECSMITH, Inc.
PO Box 383
Elma, New York 14059-0383
Tel: 716-687-1418
Fax: 716-655-3369

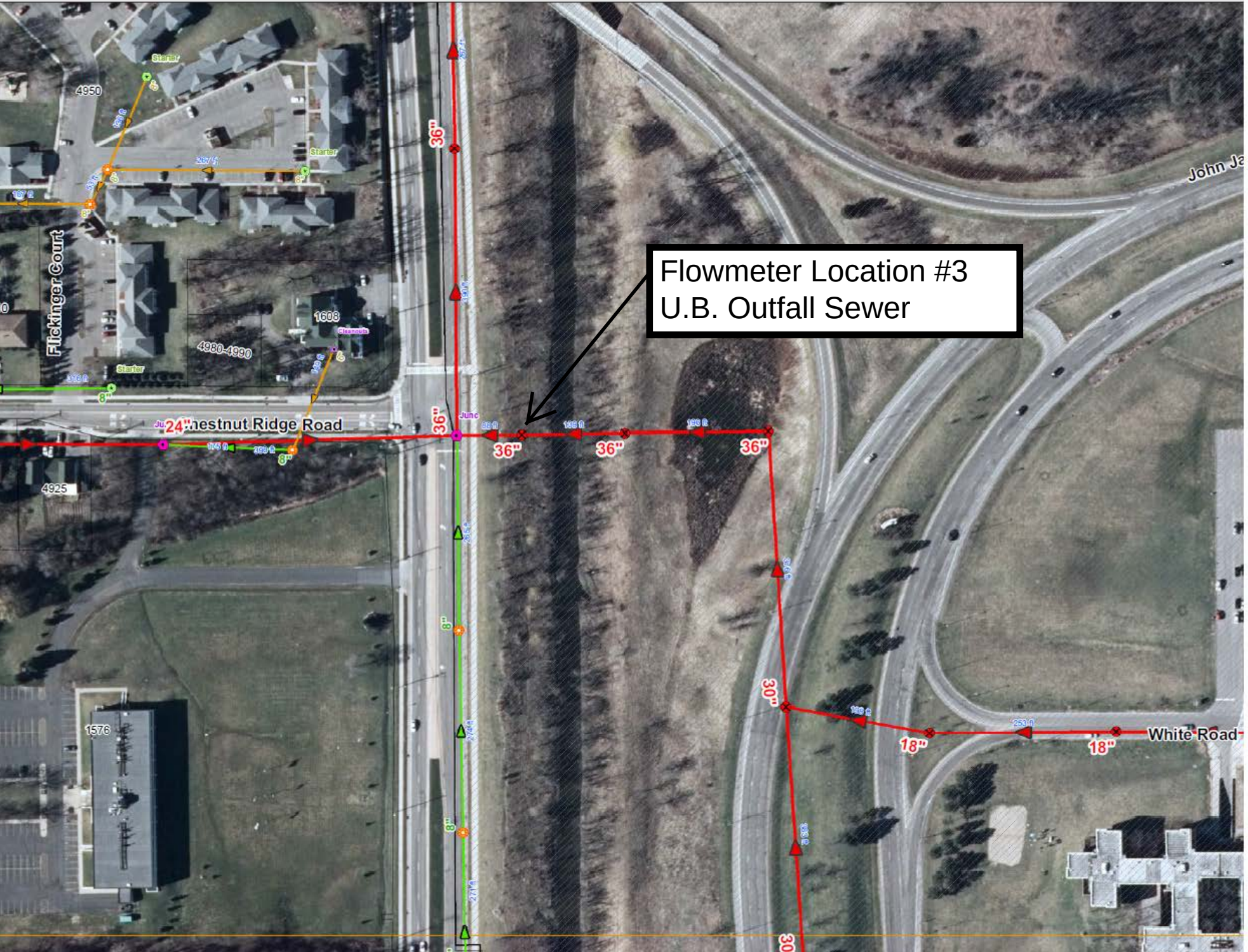
- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 3.



Date	Node 1			Node 2			Node 3			Rain[2]
	Amherst Manor Dr (15")			2031 Sweet Home Rd (36")			UB Outfall (36")			
	FLOW (GAL x 1,000)	PEAK FLOW (MGD)	PEAK LEVEL (IN)	FLOW (GAL x 1,000)	PEAK FLOW (MDG)	PEAK LEVEL (IN)	FLOW (GAL x 1,000)	PEAK FLOW (MDG)	PEAK LEVEL (IN)	(inches)
11/16/2016	84.613	0.249	5.245	786.266	2.042	15.767	484.113	1.478	12.537	***0***
11/17/2016	154.052	0.249	5.118	1573.930	2.402	16.451	964.176	1.588	13.262	***0***
11/18/2016	150.272	0.226	4.907	1503.442	2.297	16.074	933.902	1.419	12.858	***0***
11/19/2016	361.958	1.609	11.643	1598.395	3.216	18.033	1037.278	2.525	15.714	***0.54***
11/20/2016	291.603	0.402	6.091	1587.582	2.330	15.903	924.673	1.364	12.419	***0.11***
11/21/2016	189.628	0.254	5.258	1597.897	2.268	16.157	963.333	1.396	12.672	***0***
11/22/2016	170.802	0.248	5.118	1439.091	2.145	15.987	833.020	1.313	12.637	***0***
11/23/2016	162.022	0.256	5.176	1057.100	1.574	14.756	643.966	1.023	11.157	***0.1***
11/24/2016	252.337	0.356	5.858	1040.590	1.328	14.558	675.323	0.992	11.135	***0.05***
11/25/2016	220.473	0.362	5.935	1031.034	1.387	14.502	602.878	0.886	10.989	***0.07***
11/26/2016	297.611	0.574	7.353	1178.065	1.663	14.966	777.537	1.193	11.850	***0.17***
11/27/2016	213.639	0.308	5.490	1246.664	1.784	15.083	742.471	1.167	11.444	***0***
11/28/2016	167.736	0.284	5.460	1530.283	2.240	16.239	945.540	1.574	12.797	***0***
11/29/2016	231.695	0.432	6.590	1654.820	2.428	16.291	1054.784	1.632	12.936	***0.06***
11/30/2016	388.864	1.569	13.099	1761.657	3.480	19.785	1226.106	2.834	15.840	***0.83***
12/1/2016	1034.984	1.635	13.555	2904.177	4.176	19.751	2140.480	3.407	17.200	***0.38***
12/2/2016	294.309	0.533	7.002	1898.220	2.474	16.945	1223.356	1.843	13.673	***0.01***
12/3/2016	202.222	0.312	5.796	1657.215	2.380	16.754	968.169	1.361	12.410	***0***
12/4/2016	158.722	0.325	5.601	1485.828	2.252	16.212	879.489	1.332	12.289	***0***
12/5/2016	199.349	0.720	7.915	1806.498	2.482	17.404	1141.229	1.649	13.661	***0.21***
12/6/2016	70.251	0.317	5.688	724.748	2.358	16.613	452.501	1.637	13.160	***0.21***
---	---	---	---	---	---	---	---	---	---	***2.74***


Flow Meter Location #1
Millersport Highway
Millersport Highway
Millersport Highway
Amherst Manor Drive
Das Court
Das Court
Maple Road
15"
12"


Durham Drive
Sweet Home Road
Flowmeter Location #2
2061
2071
2038
2036
2034
2031-2041
2024
2021
2014
2011
2004
2001
1994
1991
1974
675, 695
36"
8"
Starter


Flowmeter Location #3
U.B. Outfall Sewer
Flickinger Court
Chestnut Ridge Road
White Road
John Ja
4950
4980-4990
4925
1608
1576
36"
24"
30"
18"
8"

DOWNLOAD SHEET

SITE DATA

SITE	Amherst Manor	ID	1	Job	WEN016
METER MODEL	910	SERIAL NO	PIE		
DATE	11/23/16	Time	9:26 AM	CREW	PG AG

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	4.890	INCHES	4.88	INCHES	4.878	INCHES
FLOW	0.21	MGD			0.2	MGD
TOTAL	1452	X1000			1452	GAL x 1000
VEL	0.96	FPS		FPS	0.91	FPS
SIGNAL	50	%			46	%
BATTERY	6.0	VDC			6.1	VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☑	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☐	CLEAN PROBE	☑
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

DOWNLOAD SHEET

SITE DATA

SITE	2031 Sweethome RD	I.D.	2	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	V5J		
DATE	11/23/16	TIME	9:53 AM	CREW	PG AG

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	14.553	INCHES		INCHES		INCHES
FLOW	1.22	MGD				MGD
TOTAL	10487	GAL x 1000				GAL x 1000
VEL	0.70	FPS		FPS		FPS
SIGNAL	92	%				%
BATTERY	5.6	VDC				VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☐	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☐	TROUBLESHOOT	☐
CALIBRATE	☐	CLEAN PROBE	☐
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

DOWNLOAD SHEET

SITE DATA

SITE	UB outfall	I.D.	3	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	V5B		
DATE	11/23/16	TIME	9:46 AM	CREW	PG AG

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	10.475	INCHES	10.50	INCHES	10.487	INCHES
FLOW	0.7	MGD			0.72	MGD
TOTAL	6374	GAL x 1000			6374	GAL x 1000
VEL	0.65	FPS		FPS	0.66	FPS
SIGNAL	77	%			58	%
BATTERY	5.3	VDC			5.6	VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☐	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☐	TROUBLESHOOT	☐
CALIBRATE	☐	CLEAN PROBE	☐
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

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SITE DATA

SITE	Amherst Manor	ID	1	Job	WEN016
METER MODEL	910	SERIAL NO	PIE		
DATE	11/28/16	Time	11:56 AM	CREW	ES LC

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	4.831	INCHES	5.00	INCHES	4.991	INCHES
FLOW	0.21	MGD			0.22	MGD
TOTAL	2623	X1000			2624	GAL x 1000
VEL	0.94	FPS		FPS	0.93	FPS
SIGNAL	42	%			53	%
BATTERY	6.1	VDC			5.9	VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☑	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☐	CLEAN PROBE	☑
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

DOWNLOAD SHEET

SITE DATA

SITE	2031 Sweethome RD	I.D.	2	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	V5J		
DATE	11/28/16	TIME	11:41 AM	CREW	ES LC

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	16.050	INCHES	16.00	INCHES	16.000	INCHES
FLOW	2.02	MGD			2.16	MGD
TOTAL	16234	GAL x 1000			16234	GAL x 1000
VEL	1.04	FPS		FPS	1.09	FPS
SIGNAL	79	%			78	%
BATTERY	5.1	VDC			5.6	VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☑	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☐	CLEAN PROBE	☐
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

Download data, check level

DOWNLOAD SHEET

SITE DATA

SITE	UB outfall	I.D.	3	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	V5B		
DATE	11/28/16	TIME	12:19 PM	CREW	ES LC

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	12.180	INCHES	12.00	INCHES	12.016	INCHES
FLOW	1.14	MGD			1.23	MGD
TOTAL	9980	GAL x 1000			9980	GAL x 1000
VEL	0.85	FPS		FPS	0.92	FPS
SIGNAL	74	%			70	%
BATTERY	5.6	VDC			5.5	VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☑	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☑
CALIBRATE	☐	CLEAN PROBE	☐
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

INSTALLATION SHEET

SITE DATA

SITE	Amherst Manor Dr	I.D.	1	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	PIE	SENSOR SN.	TEC 15
DATE	11/16/16	TIME	12:36 PM	CREW	KK AG
RIM TO INVERT	15 ft	PIPE SIZE	15 in	LOCATION	Downstream

INITIAL READINGS

LEVEL	5.223	INCHES
FLOW	0.23	MGD
TOTAL	0	GAL x 1000
VEL	0.93	FPS
SIGNAL	70	%
BATTERY	6.0	VDC

ACTUAL MEASURMENTS

Level 1		Measured		Velocity	
Level 2		Measured		Measured	

WORK COMPLETED:			
INSTALL	☑	CHANGE BATTERIES	☐
DOWNLOAD	☐	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☑	CLEAN PROBE	☐
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☑
CHANGE DESICCANT	☐	SET TIME AND DATE	☑
		MANHOLE ENTERY	☑

NOTES:

INSTALLATION SHEET

SITE DATA

SITE	2031 Sweet Home Rd	I.D.	2	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	V5J	SENSOR SN.	TEC 14
DATE	11/16/16	TIME	1:22 PM	CREW	KK AG
RIM TO INVERT	20 ft	PIPE SIZE	36 in	LOCATION	Upstream

INITIAL READINGS

LEVEL	15.765	INCHES
FLOW	2.14	MGD
TOTAL	0	GAL x 1000
VEL	1.10	FPS
SIGNAL	86	%
BATTERY	5.6	VDC

AL MEASURMENTS

Level 1		Measured		Velocity	
Level 2		Measured		Measured	

WORK COMPLETED:			
INSTALL	☑	CHANGE BATTERIES	☐
DOWNLOAD	☐	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☑	CLEAN PROBE	☐
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☑
CHANGE DESICCANT	☐	SET TIME AND DATE	☑
		MANHOLE ENTERY	☑

NOTES:

INSTALLATION SHEET

SITE DATA

SITE	UB Outfall	I.D.	3	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	V5B	SENSOR SN.	TEC 37
DATE	11/16/16	TIME	2:03 PM	CREW	KK AG
RIM TO INVERT	20 ft	PIPE SIZE	36in	LOCATION	Upstream

INITIAL READINGS

LEVEL	12.357	INCHES
FLOW	1.31	MGD
TOTAL	4	GAL x 1000
VEL	0.96	FPS
SIGNAL	76	%
BATTERY	5.3	VDC

ACTUAL MEASURMENTS

Level 1		Measured		Velocity	
Level 2		Measured		Measured	

WORK COMPLETED:			
INSTALL	☑	CHANGE BATTERIES	☐
DOWNLOAD	☐	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☑	CLEAN PROBE	☐
REMOVE	☐	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☑
CHANGE DESICCANT	☐	SET TIME AND DATE	☑
		MANHOLE ENTERY	☑

NOTES:

DOWNLOAD SHEET

SITE DATA

SITE	Amherst Manor	ID	1	Job	WEN016
METER MODEL	910	SERIAL NO	PIE		
DATE	12/06/16	Time	12:02 PM	CREW	KK AG

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	5.109	INCHES	5.00	INCHES		INCHES
FLOW	0	MGD				MGD
TOTAL	5297	X1000				GAL x 1000
VEL	0.17	FPS		FPS		FPS
SIGNAL	23	%				%
BATTERY	5.9	VDC				VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☑	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☐	CLEAN PROBE	☐
REMOVE	☑	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

removed meter

DOWNLOAD SHEET

SITE DATA

SITE	2031 Sweethome RD	I.D.	2	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	V5J		
DATE	11/28/16	TIME	11:41 AM	CREW	ES LC

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	16.613	INCHES	16.50	INCHES		INCHES
FLOW	2.26	MGD				MGD
TOTAL	31066	GAL x 1000				GAL x 1000
VEL	1.10	FPS		FPS		FPS
SIGNAL	75	%				%
BATTERY	5.3	VDC				VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☑	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☐	CLEAN PROBE	☐
REMOVE	☑	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

removed meter

DOWNLOAD SHEET

SITE DATA

SITE	UB outfall	I.D.	3	JOB NO.	WEN016
METER MODEL	910	SERIAL NO	V5B		
DATE	12/06/16	TIME	12:20 PM	CREW	KK AG

	INITIAL READINGS		ACTUAL MSMTS		FINAL READINGS	
LEVEL	12.524	INCHES	12.50	INCHES		INCHES
FLOW	1.22	MGD				MGD
TOTAL	19614	GAL x 1000				GAL x 1000
VEL	0.87	FPS		FPS		FPS
SIGNAL	68	%				%
BATTERY	5.5	VDC				VDC

DATA DOWNLOAD

WORK COMPLETED:			
INSTALL	☐	CHANGE BATTERIES	☐
DOWNLOAD	☑	MEMORY BATTERIES	☐
CHECK LEVEL\ LEVEL ADJUST	☑	TROUBLESHOOT	☐
CALIBRATE	☐	CLEAN PROBE	☐
REMOVE	☑	PURGE LINE	☐
REINSTALL	☐	TECSMITH BANDING	☐
CHANGE DESICCANT	☐	SET TIME AND DATE	☐
		MANHOLE ENTERY	☐

NOTES:

removed meter