

**APPENDIX J**  
**SURVEY INFORMATION**

**31 TONAWANDA STREET OFF-SITE  
SITE NO. C915299A**

As part of the NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area, GES retained Clear Creek Land Surveying, LLC of Caneadea, New York, a surveyor licensed in the State of New York, to complete surveying activities at the site. The scope of the surveying is summarized in Section 3.12 of the Remedial Investigation Report.

The coordinates and elevations obtained during this survey are summarized in Tables J-1 through J-4 that follow. The point numbers that are referenced are shown on Figure J-1.

Please note that most of the survey information shown on Figure J-1 for the 31 Tonawanda Street property is from the survey completed at that site. Information concerning that survey is discussed in the 31 Tonawanda Street below.

**Table J-1**  
**Summary of the Survey Data Obtained for the 31 Tonawanda Street Off-Site Area**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



**Department of  
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Point No.	Survey Northing (y)	Survey Easting (x)	Elevation (ft. amsl)	Description	Latitude (Dec Deg)	Longitude (Dec Deg)	Geoid	Ellipsoid Elev	Notes
<b>Soil Borings, Monitoring Wells &amp; Staff Gauges</b>									
200	1067674.9308	1063939.5209	578.016	CONC EG MW 1660 MW-5R	42.92987186	-78.89830376	-115.703	462.313	SC-1660
201	1067675.2249	1063939.7597	577.611	TOP RISER MW 1660 MW-5R	42.92987267	-78.89830288	-115.703	461.908	
		TOR Stickup:	-0.40						
202	1067647.9331	1063898.0775	577.094	TBM COR CONC	42.92979735	-78.89845813	-115.703	461.391	
203	1067748.3405	1063876.4407	579.008	CONC EG MW 1660 MW-3R	42.93007263	-78.89854033	-115.705	463.303	
204	1067748.5530	1063876.6478	578.630	TOP RISER MW 1660 MW-3R	42.93007322	-78.89853956	-115.705	462.925	
		TOR Stickup:	-0.38						
205	1067781.7922	1063824.6568	576.674	EG MW 1660 RI-MW-2	42.93016388	-78.89873416	-115.707	460.967	
206	1067781.6975	1063824.2562	579.530	TOP CASING MW 1660 RI-MW-2	42.93016362	-78.89873565	-115.707	463.823	
207	1067781.5073	1063824.0844	578.502	TOP RISER MW 1660 RI-MW-2	42.93016310	-78.89873629	-115.707	462.795	
		TOR Stickup:	1.83						
		Pro Casing Stickup:	2.86						
208	1067844.5921	1063787.5345	580.672	CONC EG MW 1660 RI-MW-1	42.93033581	-78.89887365	-115.708	464.964	
209	1067844.3516	1063787.1321	580.396	TOP RISER MW 1660 RI-MW-1	42.93033515	-78.89887515	-115.708	464.688	
		TOR Stickup:	-0.28						
210	1067609.3406	1063998.9143	577.644	EG MW 1660 MW-7	42.92969250	-78.89808108	-115.701	461.943	
211	1067609.5292	1063998.6500	580.525	TOP CASING MW 1660 MW-7	42.92969301	-78.89808207	-115.701	464.824	
212	1067609.4297	1063998.3554	579.908	TOP RISER MW 1660 MW-7	42.92969274	-78.89808316	-115.701	464.207	
		TOR Stickup:	2.26						
		Pro Casing Stickup:	2.88						
213	1067582.4380	1063993.3430	578.881	NYSDEC B-1	42.92961862	-78.89810150	-115.701	463.180	
214	1067565.5997	1063969.7912	578.273	CONC EG MW 1660 MW-8	42.92957218	-78.89818921	-115.701	462.572	
215	1067565.8054	1063969.9223	580.977	TOP CASING MW 1660 MW-8	42.92957275	-78.89818872	-115.701	465.276	
216	1067565.9350	1063969.8407	580.800	TOP RISER MW 1660 MW-8	42.92957310	-78.89818903	-115.701	465.099	
		TOR Stickup:	2.53						
		Pro Casing Stickup:	2.70						
217	1067585.1841	1063959.4237	577.624	EG MW 1660 MW-6	42.92962581	-78.89822819	-115.701	461.923	
218	1067584.9662	1063959.1893	580.759	TOP CASING MW 1660 MW-6	42.92962521	-78.89822907	-115.701	465.058	
219	1067585.0004	1063959.0103	579.914	TOP RISER MW 1660 MW-6	42.92962530	-78.89822974	-115.701	464.213	
		TOR Stickup:	2.29						
		Pro Casing Stickup:	3.13						

Table J-1  
Summary of the Survey Data Obtained for the 31 Tonawanda Street Off-Site Area  
NYSDEC Remedial Investigation  
31 Tonawanda Street Off-Site Area, Site No. C915299A  
Buffalo, New York



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Point No.	Survey Northing (y)	Survey Easting (x)	Elevation (ft. amsl)	Description	Latitude (Dec Deg)	Longitude (Dec Deg)	Geoid	Ellipsoid Elev	Notes
Soil Borings, Monitoring Wells & Staff Gauges (continued)									
220	1067612.2477	1063936.7100	577.202	EG MW 1660 TPMW-1	42.92969984	-78.89831338	-115.702	461.500	SC-Bike Path
221	1067612.2055	1063936.8070	582.196	TOP RISER TEMP MW 1660 TPMW-1	42.92969972	-78.89831302	-115.702	466.494	
		TOR Stickup:	4.99						
229	1067337.1905	1063998.2733	578.959	TBM COR PED BRIDGE	42.92894576	-78.89807967	-115.696	463.263	
263	1067771.7548	1063991.4065	578.097	CONC EG MW 1675 MW-1	42.93013806	-78.89811138	-115.704	462.393	
264	1067772.0231	1063991.6953	577.513	TOP RISER MW 1675 MW-1	42.93013880	-78.89811031	-115.704	461.809	
		TOR Stickup:	-0.58						
265	1067867.0050	1063955.1932	580.584	CONC EG MW 1675 MW-2	42.93039903	-78.89824793	-115.707	464.877	
266	1067867.2189	1063955.4582	580.289	TOP RISER MW 1675 MW-2	42.93039962	-78.89824694	-115.707	464.582	SC-West Ave
		TOR Stickup:	-0.29						
301	1067775.6384	1064617.7335	583.612	TOP CENTER HEADWALL	42.93015512	-78.89577276	-115.697	467.915	
302	1067946.6049	1064731.2782	578.824	CONC EG MW MW-100	42.93062538	-78.89535115	-115.700	463.124	
303	1067946.8962	1064730.9733	578.557	TOP RISER MW MW-100	42.93062617	-78.89535230	-115.700	462.857	
		TOR Stickup:	-0.27						
304	1068055.5500	1064847.6224	578.810	CONC EG MW MW-103	42.93092549	-78.89491823	-115.700	463.110	
305	1068055.9210	1064847.3382	578.374	TOP RISER MW MW-103	42.93092650	-78.89491930	-115.700	462.674	
		TOR Stickup:	-0.44						
306	1068182.3311	1065043.0543	580.258	CONC EG MW MW-106	42.93127534	-78.89419024	-115.701	464.557	
307	1068182.8885	1065042.8495	579.837	TOP RISER MW MW-106	42.93127686	-78.89419101	-115.701	464.136	
		TOR Stickup:	-0.42						
316	1067688.4651	1064464.5768	581.539	MW COVER MW 31-MW-4R	42.92991437	-78.89634343	-115.697	465.842	
319	1067536.8973	1064389.5276	579.777	MW COVER MW 31-MW-3R	42.92949773	-78.89662155	-115.695	464.082	

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.  
ft. amsl = feet above mean sea level.

**Table J-2**  
**Summary of the Survey Data Obtained for the 31 Tonawanda Street Off-Site Area**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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Point No.	Survey Northing (y)	Survey Easting (x)	Elevation (ft. amsl)	Description	Latitude (Dec Deg)	Longitude (Dec Deg)	Geoid	Ellipsoid Elev	Notes
<b>Buildings</b>									
222	1067553.4952	1063973.1676	578.700	COR BLOCK BLDG	42.92953900	-78.89817643	-115.700	463.000	Pump House
223	1067543.9921	1063973.1309	580.692	TOP HEADWALL OVER OUTLET	42.92951293	-78.89817644	-115.700	464.992	PH Outfall
224	1067555.9210	1063996.1103	578.623	COR BLOCK BLDG	42.92954590	-78.89809080	-115.700	462.923	Pump House
225	1067566.1506	1063986.5843	578.681	COR BLOCK BLDG	42.92957387	-78.89812651	-115.700	462.981	Pump House
226	1067561.5467	1063991.3744	578.730	TOP CONC SW FF+/-	42.92956128	-78.89810856	-115.700	463.030	Pump House
228	1067544.1145	1063972.8547	576.234	INV OUTFALL PIPE	42.92951326	-78.89817747	-115.700	460.534	PH Outfall
267	1067749.2482	1064017.5947	579.449	COR BLOCK BLDG	42.93007657	-78.89801328	-115.704	463.745	1675 Niagara
268	1067820.2110	1063952.4077	578.574	COR BLOCK BLDG	42.93027061	-78.89825768	-115.706	462.868	1675 Niagara
269	1067849.9932	1063984.9935	580.913	COR BLOCK BLDG	42.93035266	-78.89813642	-115.706	465.207	1675 Niagara
270	1067876.8450	1063929.2181	580.944	COR BLOCK BLDG	42.93042577	-78.89834506	-115.707	465.237	1675 Niagara
271	1067876.1890	1063914.7235	580.444	COR BLOCK BLDG	42.93042382	-78.89839917	-115.707	464.737	1675 Niagara
272	1067899.3839	1063893.2881	580.591	COR BLOCK BLDG	42.93048724	-78.89847953	-115.708	464.883	1675 Niagara
273	1067923.1798	1063919.1566	581.098	FACE BLDG	42.93055280	-78.89838328	-115.708	465.390	1675 Niagara
400	1067926.2376	1064024.9260	588.690	BLDG COR	42.93056227	-78.89798838	-115.707	472.983	1675 Niagara
401	1067886.2410	1064025.9172	588.134	BLDG COR	42.93045254	-78.89798412	-115.706	472.428	1675 Niagara
402	1067870.5935	1064029.3037	587.774	BLDG COR	42.93040964	-78.89797125	-115.706	472.068	1675 Niagara
403	1067982.9745	1064013.6844	584.565	GAR COR	42.93071783	-78.89803115	-115.708	468.857	1675 Niagara
404	1067997.7694	1063999.9489	584.632	GAR COR	42.93075829	-78.89808264	-115.709	468.923	1675 Niagara
405	1067977.5964	1063977.9602	588.584	BLDG COR	42.93070271	-78.89816446	-115.709	472.875	1675 Niagara
308	1067829.7241	1064440.4369	584.713	BRICK BLDG COR	42.93030171	-78.89643553	-115.701	469.012	31 Tonawanda
311	1067848.2519	1064260.0165	585.619	COR BLDG	42.93035070	-78.89710947	-115.703	469.916	31 Tonawanda
315	1067818.5382	1064549.1345	585.350	EXIP 1/2 PROP COR	42.93027213	-78.89602950	-115.699	469.651	31 Tonawanda
318	1067587.0468	1064416.0680	580.635	BLDG COR	42.92963560	-78.89652314	-115.696	464.939	31 Tonawanda
320	1067468.9456	1064342.6593	580.254	CM (Property Line ?)	42.92931080	-78.89679560	-115.694	464.560	31 Tonawanda
321	1067471.0308	1064338.5646	580.421	BLDG COR	42.92931648	-78.89681092	-115.694	464.727	31 Tonawanda
309	1067897.1109	1064431.0384	584.277	COR BLDG	42.93048651	-78.89647156	-115.702	468.575	57 Tonawanda
310	1067914.2290	1064266.7906	585.253	COR BLDG	42.93053180	-78.89708509	-115.704	469.549	57 Tonawanda

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.  
ft. amsl = feet above mean sea level.

**Table J-3**  
**Summary of the Survey Data Obtained for the 31 Tonawanda Street Off-Site Area**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



**Department of  
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Point No.	Survey Northing (y)	Survey Easting (x)	Elevation (ft. amsl)	Description	Latitude (Dec Deg)	Longitude (Dec Deg)	Geoid	Ellipsoid Elev	Notes
<b>Edge of Pavement</b>									
232	1067541.9889	1064098.7104	576.942	EP	42.92950872	-78.89770751	-115.699	461.243	Niagara Street
233	1067562.7396	1064079.6046	575.140	EP	42.92956546	-78.89777913	-115.699	459.441	Niagara Street
234	1067580.4487	1064063.2763	573.934	EP	42.92961388	-78.89784035	-115.700	458.234	Niagara Street
235	1067596.0180	1064049.1808	573.185	EP	42.92965646	-78.89789320	-115.700	457.485	Niagara Street
238	1067613.8957	1064032.6608	572.878	EP	42.92970534	-78.89795513	-115.701	457.177	Niagara Street
240	1067640.6710	1064008.0236	572.983	EP	42.92977856	-78.89804750	-115.702	457.281	Niagara Street
242	1067670.7367	1063980.5601	573.723	EP	42.92986077	-78.89815047	-115.703	458.020	Niagara Street
243	1067696.5682	1063956.9261	575.183	EP	42.92993140	-78.89823908	-115.703	459.480	Niagara Street
244	1067721.4132	1063934.2172	576.407	EP	42.92999934	-78.89832422	-115.704	460.703	Niagara Street
245	1067751.3417	1063906.8110	577.097	EP	42.93008118	-78.89842697	-115.705	461.392	Niagara Street
246	1067781.5602	1063879.0701	577.750	EP	42.93016381	-78.89853098	-115.706	462.044	Niagara Street
247	1067804.9320	1063857.7187	578.227	EP	42.93022772	-78.89861103	-115.707	462.520	Niagara Street
248	1067835.5923	1063829.4825	578.827	EP	42.93031155	-78.89871689	-115.708	463.119	Niagara Street
249	1067879.1728	1063870.8655	578.903	EP	42.93043155	-78.89856298	-115.708	463.195	Niagara Street
250	1067841.9209	1063905.0748	578.103	EP	42.93032969	-78.89843472	-115.707	462.396	Niagara Street
251	1067811.6165	1063932.8569	577.609	EP	42.93024683	-78.89833056	-115.706	461.903	Niagara Street
252	1067775.7575	1063965.7083	576.766	EP	42.93014878	-78.89820739	-115.705	461.061	Niagara Street
253	1067739.5889	1063999.0363	575.425	EP	42.93004988	-78.89808244	-115.704	459.721	Niagara Street
254	1067710.6274	1064025.5270	573.862	EP	42.92997068	-78.89798312	-115.703	458.159	Niagara Street
256	1067680.1059	1064053.5033	573.057	EP	42.92988723	-78.89787823	-115.702	457.355	Niagara Street
258	1067653.1231	1064078.3107	573.191	EP	42.92981344	-78.89778523	-115.701	457.490	Niagara Street
260	1067623.3734	1064105.5949	574.501	EP	42.92973210	-78.89768293	-115.700	458.801	Niagara Street
261	1067602.8721	1064124.3300	576.165	EP	42.92967604	-78.89761269	-115.700	460.465	Niagara Street
262	1067590.4204	1064135.7696	577.240	EP	42.92964199	-78.89756980	-115.699	461.541	Niagara Street

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.  
ft. amsl = feet above mean sea level.

**Table J-4**  
**Summary of the Survey Data Obtained for the 31 Tonawanda Street Off-Site Area**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



Point No.	Survey Northing (y)	Survey Easting (x)	Elevation (ft. amsl)	Description	Latitude (Dec Deg)	Longitude (Dec Deg)	Geoid	Ellipsoid Elev	Notes
<b>Manholes in Sidewalk Leading to the Pump House</b>									
227	1067576.3563	1064004.3623	578.681	SAN MH	42.92960205	-78.89806027	-115.700	462.981	
231	1067607.9287	1064010.0558	578.336	SAN MH	42.92968874	-78.89803946	-115.701	462.635	
<b>Catch Basins on the South Side of Niagara Street Under the Railroad Bridge</b>									
236	1067601.4006	1064044.2579	572.924	DI RIM SCB	42.92967118	-78.89791166	-115.700	457.224	
239	1067628.7234	1064018.9895	572.731	DI RIM SCB	42.92974589	-78.89800639	-115.701	457.030	
239A	1067628.7501	1064019.0401	572.689	DI NO OFFSET	42.92974596	-78.89800620	-115.701	456.988	
239A2	1067629.2352	1064019.2800	568.693	SUMP INVERT	42.92974729	-78.89800531	-115.701	452.992	
241	1067655.0701	1063994.9015	573.247	DI RIM SCB	42.92981793	-78.89809670	-115.702	457.545	
<b>Catch Basins on the North Side of Niagara Street Under the Railroad Bridge</b>									
255	1067695.6197	1064039.3242	573.271	DI RIM SCB	42.92992965	-78.89793139	-115.702	457.569	
257	1067668.9049	1064063.8220	572.767	DI RIM SCB	42.92985660	-78.89783955	-115.702	457.065	
257A	1067668.5128	1064063.2067	569.450	SUMP INVERT	42.92985552	-78.89784184	-115.702	453.748	
259	1067642.3745	1064088.1236	573.596	DI RIM SCB	42.92978405	-78.89774844	-115.701	457.895	
<b>Miscellaneous Survey Points</b>									
300	1067790.3405	1064599.4963	583.635	TBM COR CONC HEADWALL	42.93019527	-78.89584106	-115.698	467.937	West Ave Bridge
312	1067858.2475	1064239.1872	582.222	WV	42.93037792	-78.89718738	-115.703	466.519	31 Tonawanda
313	1067858.0248	1064246.2186	582.218	TOP RAIL	42.93037738	-78.89716112	-115.703	466.515	31 Tonawanda
314	1067857.5580	1064251.1032	582.252	TOP RAIL	42.93037615	-78.89714288	-115.703	466.549	31 Tonawanda
317	1067651.9678	1064461.1744	578.178	EXRB 5/8 SCHUTT	42.92981419	-78.89635562	-115.697	462.481	31 Tonawanda
322	1067684.0785	1064482.0466	576.231	EXRB 5/8 SCHUTT	42.92990251	-78.89627813	-115.697	460.534	31 Tonawanda
230	1067497.8155	1064128.3489	580.238	SCRIBE IN SW	42.92938782	-78.89759622	-115.697	464.541	Niagara Street
237	1067601.3959	1064043.9457	573.431	TOP CURB	42.92967116	-78.89791282	-115.700	457.731	Niagara Street

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.  
ft. amsl = feet above mean sea level.



**31 TONAWANDA STREET  
SITE NO. C915299**

Coordinates are not available for the soil borings completed during the 2014 Phase II Investigation or the 2015 Limited Sub-Slab Soil Subsurface Assessment, nor are coordinates available for soil borings SBH-1 through SBH-8 that were completed during the BCP Remedial Investigation. However, the coordinates provided in Table 6 of the BCP Remedial Investigation Report are suspect as they plot at different locations at Google Maps than shown on Figure 3 of the Remedial Investigation Report. Ground surface elevations are not available for any of the soil borings completed at the site.

In order to obtain coordinates and ground surface elevations for the soil borings completed at the site, I needed to first produce a composite map for the site. This composite map included Figure 3 (Soil Analytical Results) from the 31 Tonawanda Street BCP RI Report, Figure 3A (2019 Crawlspace Investigation) from the 31 Tonawanda Street BCP RI Report, and the AutoCAD file of the property survey that I obtained from the BCP applicant. In addition to the RI soil borings, Figure 3 includes the soil borings completed during the 2014 Phase II Investigation and the 2015 Limited Sub-Slab Soil Subsurface Assessment.

This process began on July 20, 2022 and was completed on August 4, 2022. Each drawing was first converted to an AutoCAD drawing, then the two (2) drawings were merged to produce a single composite AutoCAD drawing of the two (2) BCP RI Report figures. This drawing was then imported into the 31 Tonawanda Street property survey AutoCAD drawing. It is important to note that I had difficulty aligning the two (2) drawings because the building dimensions shown on Figure 3 didn't match those of the survey. I ultimately aligned the drawings so that the west and south building walls were aligned, which also aligned the southern portion of the east wall. The majority of the soil borings completed at the site were at this location. Further north, the east wall from Figure 3 and the property survey differed by up to 5 feet. This indicates, therefore, that the locations of the soil borings at the northeast portion of the property will also differ by up to 5 feet.

At this point I was able to obtain the coordinates for the soil borings completed at the site. In addition, using spot elevations and TIN lines from the 31 Tonawanda Street property survey, I was able to estimate ground surface elevations. These coordinates and elevations are summarized in Table J-5, while the elevation worksheet is provided as Table J-6.

**Table J-5**  
**Survey Data for the 31 Tonawanda Street Property**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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Soil Boring No.	New York State Plane Coordinates		Ground Surface Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)			
Soil Borings					
BH-1	1064217.9910	1067499.0884	581.37	2014 Phase II boring	See Note 1 See Note 2 Boring completed within building
BH-2	1064228.3809	1067598.0061	581.77	2014 Phase II boring	
BH-3	1064239.1106	1067708.9305	581.87	2014 Phase II boring	
BH-4	1064251.8953	1067835.5478	582.36	2014 Phase II boring	
BH-5	1064393.2477	1067551.0285	579.37	2014 Phase II boring	
BH-6	1064433.8057	1067655.9908	580.09	2014 Phase II boring	
BH-7	1064451.8642	1067678.4780	581.44	2014 Phase II boring	
BH-8	N/A	N/A	NE	2014 Phase II boring	
BH-9	N/A	N/A	NE	2014 Phase II boring	
BH-10	1064280.0116	1067682.0907	NS/NE	2014 Phase II boring	
BH5-1S	1064386.9681	1067540.6368	579.49	2014 Phase II boring	
BH5-2S	1064380.1703	1067529.8407	579.62	2014 Phase II boring	
BH5-3S	1064371.3829	1067518.1964	579.77	2014 Phase II boring	
BH5-4S	1064362.5694	1067504.6377	580.09	2014 Phase II boring	
BH5-1N	1064400.6832	1067557.3839	579.26	2014 Phase II boring	
BH5-2N	1064407.3525	1067567.0859	579.28	2014 Phase II boring	
BH5-3N	1064415.4051	1067582.0397	579.53	2014 Phase II boring	
C-1	1064375.0246	1067557.2032	NS/NE	2015 Sub-Slab Assessment	Boring completed within building
C-2	1064352.7592	1067508.0354	NS/NE	2015 Sub-Slab Assessment	Boring completed within building
C-3	1064313.7412	1067516.9793	NS/NE	2015 Sub-Slab Assessment	Boring completed within building
C-4	1064333.8570	1067562.4290	NS/NE	2015 Sub-Slab Assessment	Boring completed within building
31-BH-1	1064351.8784	1067489.9277	580.46	BCP RI boring	See Note 1 Boring completed within building Boring completed within building Boring completed within building Boring completed within building
31-BH-2	1064422.9137	1067601.7197	579.48	BCP RI boring	
31-BH-3S	1064468.4197	1067672.7918	579.08	BCP RI boring	
31-BH-4	1064486.9033	1067731.8162	580.32	BCP RI boring	
31-BH-5	1064506.6842	1067798.9144	582.18	BCP RI boring	
31-BH-6	N/A	N/A	NE	BCP RI boring	
SBH-1	1064298.5068	1067494.6802	NS/NE	BCP RI boring	
SBH-2	1064334.8644	1067475.7838	NS/NE	BCP RI boring	
SBH-3	1064346.6209	1067496.9724	NS/NE	BCP RI boring	
SBH-4	1064316.0139	1067534.0300	NS/NE	BCP RI boring	

Table J-5  
Survey Data for the 31 Tonawanda Street Property  
NYSDEC Remedial Investigation  
31 Tonawanda Street Off-Site Area, Site No. C915299A  
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Boring & Well No.	New York State Plane Coordinates		Ground Surface Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)			
Soil Borings (continued)					
SBH-5	1064358.1285	1067520.5947	NS/NE	BCP RI boring	Boring completed within building
SBH-6	1064380.6034	1067564.8143	NS/NE	BCP RI boring	Boring completed within building
SBH-7	1064393.0714	1067558.6605	NS/NE	BCP RI boring	Boring completed within building
SBH-8	1064337.7635	1067507.6623	NS/NE	BCP RI boring	Boring completed within building
Monitoring Wells					
MW-1	1064222.4943	1067571.1353	581.20	BCP RI well (ground)	Well destroyed during redevelopment
"	"	"	580.66	BCP RI well (top of riser)	"
"	"	"	581.24	BCP RI well (top of casing)	"
MW-2	1064251.3780	1067829.9518	582.30	BCP RI well (ground)	
"	"	"	581.89	BCP RI well (top of riser)	
"	"	"	582.31	BCP RI well (top of casing)	
MW-3	1064389.5276	1067536.8973	579.30	BCP RI well (ground)	
"	"	"	578.96	BCP RI well (top of riser)	
"	"	"	579.30	BCP RI well (top of casing)	
MW-4	1064464.5768	1067688.4651	580.90	BCP RI well (ground)	Well destroyed during redevelopment
"	"	"	580.60	BCP RI well (top of riser)	"
"	"	"	580.95	BCP RI well (top of casing)	"
MW-5	1064516.1718	1067782.2664	581.40	BCP RI well (ground)	Well removed during remediation
"	"	"	583.14	BCP RI well (top of riser)	"
"	"	"	583.38	BCP RI well (top of casing)	"

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.

The worksheet utilized to estimate ground surface elevations is given as Table J-6.

N/A = Not Applicable.

NS = Not Surveyed.

NE = Not Estimated. Soil boring was completed within the building. Floor elevations are not available so estimates could not be made.

ft. amsl = feet above mean sea level.

Green shaded elevations are the original surveyed elevations prior to the installation of a cover system during remediation.

Orange shaded elevations were estimated from the spot elevations and TIN lines of the 31 Tonawanda Street AutoCAD survey drawing.

Yellow shaded coordinates were surveyed by the DEC in 2020 as part of the 31 Tonawanda Street Off-Site Investigation.

**Table J-5**  
**Survey Data for the 31 Tonawanda Street Property**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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**Notes (continued):**

**Note 1:** Soil boring plots on slope to Scajaquada Creek. This boring location is not correct so coordinates are not given.

**Note 2:** Soil boring plots at base of slope near Scajaquada Creek. This boring location is not correct so coordinates are not given.

**Table J-6**  
**Worksheet to Estimate Ground Surface Elevations at the 31 Tonawanda Street Property**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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Boring No.	Elevations (feet)			Average Elev (ft)	Maximum * Diff. (in)	Estimated Elev (ft)	Notes
	Pt 1	Pt 2	Pt 3				
Soil Borings							
BH-1	580.9115	581.4050	581.3436	581.2200	5.9220	581.37	Near TIN line (pts 2 & 3). Interpolated.
BH-2	580.9479	582.0239	581.6896	581.5538	12.9120	581.77	Near TIN line (pts 2 & 3). Interpolated.
BH-3	582.2755	581.3561	581.9806	581.8707	11.0328	581.87	Near center of triangle. Used average elevation.
BH-4	582.3026	582.1872	582.5591	582.3496	4.4628	582.36	Near TIN line (pts 1 & 3). Interpolated.
BH-5	579.2602	578.8693	579.7690	579.2995	10.7964	579.37	On TIN line (pts 1 & 3). Interpolated.
BH-6	580.0587	580.2141	579.9954	580.0894	2.6244	580.09	2.41 feet from center of triangle. Used average elevation.
BH-7	580.8985	582.2472	579.8825	581.0094	28.3764	581.44	Interpolated bewteen 581 & 582 contour lines
BH-8	N/A	N/A	N/A	N/A	N/A	N/A	Not within a triangle. Shown on slope to creek. This boring location is not correct.
BH-9	N/A	N/A	N/A	N/A	N/A	N/A	Not within a triangle. At base of slope to creek. This boring location is not correct.
BH-10	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
BH5-1S	579.2602	578.8693	579.7690	579.2995	10.7964	579.49	Near TIN line (pts 1 & 3). Interpolated.
BH5-2S	579.2602	578.8693	579.7690	579.2995	10.7964	579.62	Near TIN line (pts 1 & 3). Interpolated.
BH5-3S	N/A	N/A	N/A	N/A	N/A	579.77	Boring 0.30 feet from 579.769. Used rounded elevation.
BH5-4S	579.5198	580.6180	579.7690	579.9689	13.1784	580.09	On TIN line (pts 2 & 3). Interpolated.
BH5-1N	578.8693	578.8864	579.2602	579.0053	4.6908	579.26	Boring 3.37 feet from 579.2602. Used rounded elevation.
BH5-2N	579.6914	578.8864	579.2602	579.2793	9.6600	579.28	3.15 feet from center of triangle. Used average elevation.
BH5-3N	579.6914	578.8864	579.0758	579.2179	9.6600	579.53	Near TIN line (pts 1 & 2). Interpolated.
C-1	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
C-2	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
C-3	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
C-4	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
31-BH-1	579.5198	580.6180	579.7690	579.9689	13.1784	580.46	Near TIN line (pts 2 & 3). Interpolated.
31-BH-2	579.0758	579.6758	579.6914	579.4810	7.3872	579.48	3.77 feet from center of triangle. Used average elevation.
31-BH-3S	N/A	N/A	N/A	N/A	N/A	579.08	Not within a triangle. Estimated from contour lines.
31-BH-4	579.3728	581.4002	580.2013	580.3248	24.3288	580.32	2.17 feet from center of triangle. Used average elevation.
31-BH-5	581.4209	582.2523	582.8766	582.1833	17.4684	582.18	4.48 feet from center of triangle. Used average elevation.
31-BH-6	N/A	N/A	N/A	N/A	N/A	N/A	Not within a triangle. Shown on slope to creek. This boring location is not correct.

Table J-6  
Worksheet to Estimate Ground Surface Elevations at the 31 Tonawanda Street Property  
NYSDEC Remedial Investigation  
31 Tonawanda Street Off-Site Area, Site No. C915299A  
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Boring No.	Elevations (feet)			Average Elev (ft)	Maximum * Diff. (in)	Estimated Elev (ft)	Notes
	Pt 1	Pt 2	Pt 3				
Soil Borings (continued)							
SBH-1	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SBH-2	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SBH-3	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SBH-4	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SBH-5	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SBH-6	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SBH-7	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SBH-8	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.

**Notes:**

The 31 & 150 Tonawanda Street AutoCAD survey drawing contains spot elevations for the ground surface. I drew TIN lines between the elevations to envelope the soil borings completed at the site. For each boring shown on Figures 3 & 3A of the BCP RI Report, I have tabulated the 3 closest ground surface elevations. From these data I estimated the ground surface elevation for each boring.

\* = Elevation difference between the highest and lowest elevations.

N/A = Not Applicable.

Pink Shaded Values = Difference between the highest and lowest elevation differ by 6 inches or more.

**57-71 TONAWANDA STREET  
SITE NO. C915024**



Coordinates are not available for the soil borings and monitoring wells completed during the 1990 DEC Phase II Investigation, nor for the soil borings completed by RETEC in 1998 along what is now the bike path. However, the coordinates provided in Table 7 of the BCP Remedial Investigation Report are suspect as they plot at different locations at Google Maps than shown on Figure 3 of the Remedial Investigation Report. In addition, the monitoring wells do not plot over the flush mounts, which can clearly be observed on the aerial photo of Google Maps. Ground surface elevations are also lacking as they are not available for the soil boring completed during the 1990 DEC Phase II Investigation nor for the soil borings and test pits completed during the BCP Remedial Investigation.

In order to obtain coordinates and ground surface elevations for the soil borings and test pits completed at the site, I needed to produce a composite map of the site. This composite map included the 1992 Phase II Report site survey map showing the soil boring and well locations, the 1998 survey map showing the RETEC soil boring locations, Figure 2 (Phase II Sample Locations) from the 57-71 Tonawanda Street BCP RI Report, Figure 3 (RI Investigation Plan) from the 57-71 Tonawanda Street BCP RI Report, Figure 5 (RI GW Contours and Analytical Results) from the 57-71 Tonawanda Street BCP RI Report, and the AutoCAD file of the property survey that I obtained from the BCP applicant.

This process began on July 20, 2022 and was completed on October 10, 2022. Each drawing was first converted to an AutoCAD drawing, then the six (6) AutoCAD drawings were merged to produce a single drawing for the 57-71 Tonawanda Street BCP Site. Unfortunately, the AutoCAD file of the property survey was not in the State Plane New York West coordinate system. As a result, I added the DEC survey coordinates for the buildings at 31 & 57-71 Tonawanda Street, then moved the composite drawing to those locations. I used the NW corner of the building at 31 Tonawanda Street as the insertion point. A slight rotation of the drawing produced a nearly perfect fit with the other surveyed locations. In fact, a comparison of the coordinates for manholes common to the 31, 57-71, and 68 Tonawanda Street property surveys matched to within 2.4 inches or less.

At this point I was able to obtain the coordinates for the soil borings and test pits completed at the site. In addition, using spot elevations and the TIN lines from the 57-71 property survey, I was able to estimate ground surface elevations. These coordinates and elevations are summarized in Table J-7, while the elevation worksheet is provided as Table J-8.

**Table J-7**  
**Survey Data for the 57-71 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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Boring & Test Pit No.	New York State Plane Coordinates		Ground Surface Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)			
Soil Borings					
B-1	1064499.8888	1067899.2073	580.86	Phase II Investigation	Within building. Floor elevations are not available.
BH-01	1064628.7170	1067883.2798	578.04	BCP RI boring	
BH-02	1064725.6733	1067956.0556	578.34	BCP RI boring	
BH-03	1064811.3564	1068035.5053	578.58	BCP RI boring	
BH-04	1064703.8300	1068009.4551	578.98	BCP RI boring	
BH-05	1064689.7450	1068060.4365	580.09	BCP RI boring	
BH-06	1064637.2436	1068073.2004	581.42	BCP RI boring	
BH-07	1064602.2389	1068034.3671	580.52	BCP RI boring	
BH-08	1064602.0713	1067969.3216	579.70	BCP RI boring	
BH-09	1064540.4512	1067953.4555	580.56	BCP RI boring	
BH-10	1064461.1391	1067922.6996	582.09	BCP RI boring	
BH-11	1064451.3078	1068012.5568	582.56	BCP RI boring	
BH-12	1064487.3361	1067927.4465	581.61	BCP RI boring	
BH-13	1064471.6367	1068092.9856	585.67	BCP RI boring	
SSB-1	1064410.8289	1067941.8397	NS	BCP RI boring	
SSB-2	1064354.7816	1067968.8540	NS	BCP RI boring	
SSB-3	1064297.7097	1067953.1947	NS	BCP RI boring	
SSB-4	1064302.7172	1068003.0792	NS	BCP RI boring	
SSB-5	1064415.8364	1067991.7242	NS	BCP RI boring	
SB-01	1064706.3811	1067905.2750	≈ 579	RETEC boring	
SB-02	1064722.5720	1067929.7261	≈ 579	RETEC boring	
SB-03	1064748.7884	1067945.8566	≈ 579	RETEC boring	
SB-04	1064772.7696	1067975.0637	≈ 579	RETEC boring	
Test Pits					
TP-14	1064448.7918	1068119.1063	587.51	BCP RI test pit	
TP-15	1064402.0081	1068149.1719	587.88	BCP RI test pit	
TP-16	1064359.9565	1068164.9457	587.60	BCP RI test pit	
TP-17	1064334.5017	1068099.5506	587.21	BCP RI test pit	
TP-18	1064398.3751	1068096.2613	587.20	BCP RI test pit	

**Table J-7**  
**Survey Data for the 57-71 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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Well No.	New York State Plane Coordinates		Ground Surface Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)			
Monitoring Wells					
GW-1	1064530.1320	1068038.0412	581.00	Phase II well (ground)	Well destroyed prior to the BCP RI
"	"	"	580.69	Phase II well (top of riser)	"
"	"	"	581.01	Phase II well (top of casing)	"
GW-2	1064771.9945	1068003.6534	577.10	Phase II well (ground)	Well destroyed prior to the BCP RI
"	"	"	579.46	Phase II well (top of riser)	"
"	"	"	579.58	Phase II well (top of casing)	"
GW-3	1064670.7584	1067915.6807	577.30	Phase II well (ground)	Well destroyed prior to the BCP RI
"	"	"	579.52	Phase II well (top of riser)	"
"	"	"	579.61	Phase II well (top of casing)	"
MW-1	1064624.8444	1067886.9812	578.22	BCP RI well (ground)	
"	"	"	577.70	BCP RI well (top of riser)	
MW-2	1064773.0547	1068013.3477	578.53	BCP RI well (ground)	
"	"	"	578.33	BCP RI well (top of riser)	
MW-3	1064613.9569	1067978.2588	579.65	BCP RI well (ground)	
"	"	"	579.15	BCP RI well (top of riser)	
MW-4	1064251.8012	1067973.9167	582.79	BCP RI well (ground)	
"	"	"	582.75	BCP RI well (top of riser)	
MW-5	1064277.7818	1068176.0533	584.80	BCP RI well (ground)	
"	"	"	584.00	BCP RI well (top of riser)	
MW-100	1064730.9733	1067946.8962	578.82	DEC RI well (ground)	Also in Table J-1
"	"	"	578.56	DEC RI well (top of riser)	"
MW-103	1064847.3382	1068055.9210	578.81	DEC RI well (ground)	Also in Table J-1
"	"	"	578.37	DEC RI well (top of riser)	"
MW-106	1065042.8495	1068182.8885	580.26	DEC RI well (ground)	Also in Table J-1
"	"	"	579.84	DEC RI well (top of riser)	"

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.

N/A = Not Applicable.

NS = Not Surveyed.

ft. amsl = feet above mean sea level.

Blue shaded elevations are from the DEC Phase II Investigation Report dated February 1992.

Green shaded elevations are listed on the soil boring logs prepared by RETEC in December 1998.

**Table J-7**  
**Survey Data for the 57-71 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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**Notes (continued):**

Grey shaded elevations are from Table 8 (Groundwater Elevations) of the BE3 RI Report dated May 2019.

Orange shaded elevations were estimated from the TIN lines on the 57-71 Tonawanda Street AutoCAD property survey drawing.

Yellow shaded coordinates and elevations were surveyed by the DEC in 2020 as part of the 31 Tonawanda Street Off-Site Investigation.

A worksheet to estimate ground surface elevations was not prepared for this site.

Table J-8  
Worksheet to Estimate Ground Surface Elevations at the 57-71 Tonawanda Street BCP Site  
NYSDEC Remedial Investigation  
31 Tonawanda Street Off-Site Area, Site No. C915299A  
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Point No.	Elevations (feet)			Average Elev (ft)	Maximum * Diff. (in)	Estimated Elev (ft)	Notes
	Pt 1	Pt 2	Pt 3				
Soil Borings							
B-1	579.8850	581.1680	581.4300	580.8277	18.5400	580.86	Closest to TIN line (pts 1 & 2). Interpolated.
BH-01	577.9660	578.2360	578.1900	578.1307	3.2400	578.04	Near TIN line (pts 1 & 2). Interpolated.
BH-02	578.2690	578.3810	578.5660	578.4053	3.5640	578.34	Near TIN line (pts 1 & 3). Interpolated.
BH-03	578.4890	578.6510	578.9790	578.7063	5.8800	578.58	Near TIN line (pts 1 & 2). Interpolated.
BH-04	578.5660	578.9780	578.3810	578.6417	7.1640	578.98	5.67 feet from pt 2. Used rounded elevation.
BH-05	580.2740	580.3330	579.6570	580.0880	8.1120	580.09	2.11 feet from center of triangle. Used average elevation.
BH-06	581.3220	581.5270	580.3330	581.0607	14.3280	581.42	Near TIN line (pts 1 & 2). Interpolated.
BH-07	580.3830	580.6150	581.6880	580.8953	15.6600	580.52	Near TIN line (pts 1 & 2). Interpolated.
BH-08	579.0190	579.9740	579.0050	579.3327	11.6280	579.70	Near TIN line (pts 1 & 2). Interpolated.
BH-09	580.1890	580.8550	581.8220	580.9553	19.5960	580.56	Near TIN line (pts 1 & 3). Interpolated.
BH-10	581.1680	582.6010	581.4300	581.7330	17.1960	582.09	Near TIN line (pts 1 & 2). Interpolated.
BH-11	582.4500	582.5790	582.8650	582.6313	4.9800	582.56	Near TIN line (pts 1 & 2). Interpolated.
BH-12	581.4300	581.8280	582.6010	581.9530	14.0520	581.61	Near TIN line (pts 1 & 2). Interpolated.
BH-13	585.2960	586.9950	584.7130	585.6680	27.3840	585.67	3.69 feet from center of triangle. Used average elevation.
SSB-1	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SSB-2	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SSB-3	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SSB-4	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
SSB-5	N/A	N/A	N/A	N/A	N/A	N/A	Within building. Floor elevations are not available.
Test Pits							
TP-14	587.4410	587.7130	586.9950	587.3830	8.6160	587.51	Near TIN line (pts 1 & 2). Interpolated.
TP-15	587.6040	587.9980	587.2630	587.6217	8.8200	587.88	Near TIN line (pts 1 & 2). Interpolated.
TP-16	587.2010	587.9710	587.5390	587.5703	9.2400	587.60	Near TIN line (pts 1 & 2). Interpolated.
TP-17	587.0780	587.2540	587.2660	587.1993	2.2560	587.21	Near TIN line (pts 1 & 2). Interpolated.
TP-18	587.2560	586.9950	587.6040	587.2850	7.3080	587.20	Closest to TIN line (pts 1 & 2). Interpolated.
Monitoring Wells							
MW-1	578.1900	578.2360	577.9660	578.1307	3.2400	578.22	Near TIN line (pts 1 & 2). Interpolated.
MW-2	578.4890	578.5220	578.5780	578.5297	1.0680	578.53	Due to the small maximum difference, I used average elevation.
MW-3	579.0050	579.9740	579.0190	579.3327	11.6280	579.65	Near TIN line (pts 1 & 2). Interpolated.
MW-4	582.5070	582.8860	582.9380	582.7770	5.1720	582.79	Near TIN line (pts 1 & 2). Interpolated.
MW-5	584.8110	585.0820	584.5200	584.8043	6.7440	584.80	1.26 feet from center of triangle. Used average elevation.

**Table J-8**  
**Worksheet to Estimate Ground Surface Elevations at the 57-71 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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**Notes:**

The 57-71 Tonawanda Street AutoCAD survey drawing contained the TIN lines used to generate the topographic contours. Elevations are not shown for any of the TIN grid nodes, but elevations are attached to the associated TIN lines. For each boring, test pit & monitoring well shown on Figure 3 of the BCP RI Report, I have tabulated the 3 closest ground surface elevations. From these data I estimated the ground surface elevation for each boring, test pit & monitoring well.

\* = Elevation difference between the highest and lowest elevations.

N/A = Not Applicable.

Pink Shaded Values = Difference between the highest and lowest elevation differ by 6 inches or more.

**68 TONAWANDA STREET  
SITE NO. C915316**

Coordinates and ground surface elevations are not available for the soil borings completed during the 2014 & 2017 Phase II Investigations, while ground surface elevations are not available for the soil borings and test pits completed during the BCP Remedial Investigation. However, the coordinates provided in Table 2 of the BCP Remedial Investigation Report are suspect as they plot at different locations at Google Maps than shown on Figure 2 of the Remedial Investigation Report. Figure 2 shows all of the soil borings, test pits, and monitoring wells completed at the site.

On July 19, 2022 I imported Figure 2 into AutoCAD to reproduce the figure and completed this task the following day. The base map for this figure was an aerial photo, so I also digitized buildings, roads and fences that were near the 68 Tonawanda Street BCP Site that were not included in the Regional Base Map.

On January 9, 2023 I emailed the BCP Applicant for this site about obtaining the AutoCAD file for the property survey. The BCP applicant sent me this file On January 11, 2023. This drawing was in the State Plane New York West coordinate system and contained many features at and near the site (e.g., buildings, Tonawanda Street, property lines, monitoring wells, railroad tracks, utilities, and fences).

On January 18, 2023 I imported the Figure 2 AutoCAD drawing into the 68 Tonawanda Street property survey using the SE corner of the building as the insertion point. At this point I was able to obtain the coordinates for the soil borings and test pits completed at the site along with utility manholes, the building corners, and the property lines. In addition, using spot elevations and the TIN lines from the property survey, I was able to estimate ground surface elevations. These coordinates and elevations are summarized in Tables J-9 and J-10, while the elevation worksheet is provided as Table J-11.

It is important note that on November 8, 2018 I received the following email from BE3: "Some new information has come to our attention regarding groundwater and well elevations at the 68 Tonawanda St property. Yesterday, in reviewing the well survey elevations taken at the adjacent property, 150 Tonawanda St, we noticed that there was an elevation difference of almost ten feet between the well elevations at 68 and 150 Tonawanda St. Looking more into this, we contacted both surveyors (surveyors are different for each site) to determine how this could be possible. We found that the surveyor for 68 had miscalculated in their survey and all elevations associated with 68 Tonawanda are actually 9.84 ft low." The corrected elevations are also provided in Tables J-9 and J-10.



**Table J-9**  
**Survey Data for the 68 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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Soil Boring No.	New York State Plane Coordinates		Original GS Elev. (ft. amsl)	Revised GS Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)				
Soil Borings						
BH-1	1064162.6811	1068380.6714	581.15	590.99	2014 Phase II boring	Boring not shown on BCP RI figure
BH-2	1064152.3575	1068282.8110	580.84	590.68	2014 Phase II boring	
BH-3	1064145.4820	1068196.7751	580.93	590.77	2014 Phase II boring	
BH-4	1064123.3695	1068052.2817	580.77	590.61	2014 Phase II boring	
BH-5	1064155.0665	1067994.6268	577.88	587.72	2014 Phase II boring	
BH-9	1064222.1099	1068859.2796	582.00	591.84	2014 Phase II boring	
BH-10	N/A	N/A	N/A	N/A	N/A	
BH-11	1064190.8699	1068659.9466	582.69	592.53	2014 Phase II boring	
BH-1A	1064235.5158	1068821.8699	581.30	591.14	2017 Phase II boring	
BH-2A	1064216.5114	1068803.9588	582.23	592.07	2017 Phase II boring	
BH-3A	1064194.5077	1068750.7560	582.41	592.25	2017 Phase II boring	
BH-4A	1064193.1125	1068700.6765	582.58	592.42	2017 Phase II boring	
BH-5A	1064165.6948	1068667.1310	582.74	592.58	2017 Phase II boring	
BH-6A	1064155.8862	1068522.2421	582.49	592.33	2017 Phase II boring	
BH-7A	1064157.4735	1068333.3629	580.97	590.81	2017 Phase II boring	
BH-8A	1064142.1864	1068152.8984	580.65	590.49	2017 Phase II boring	
BH-9A	1064123.0508	1068024.9998	580.17	590.01	2017 Phase II boring	
RI-01	1064153.5863	1068033.2625	578.47	588.31	BCP RI boring	
RI-02	1064138.4181	1068112.6472	579.72	589.56	BCP RI boring	
RI-03	1064120.0250	1068127.4550	580.18	590.02	BCP RI boring	
RI-04	1064131.9295	1068271.1020	581.18	591.02	BCP RI boring	
RI-05	1064139.2987	1068371.2554	581.68	591.52	BCP RI boring	
RI-06	1064173.8083	1068512.3953	582.15	591.99	BCP RI boring	
RI-07	1064183.7608	1068618.9369	582.44	592.28	BCP RI boring	
RI-08	1064166.6142	1068639.4664	582.62	592.46	BCP RI boring	
RI-09	1064224.0649	1068738.6059	582.62	592.46	BCP RI boring	
RI-10	1064245.4481	1068831.4927	580.92	590.76	BCP RI boring	
RI-11	1064249.6511	1068916.2917	581.68	591.52	BCP RI boring	
RI-12	1064199.0190	1068934.1905	583.05	592.89	BCP RI boring	
RI-13	1064195.2231	1068870.7589	582.86	592.70	BCP RI boring	
RI-14	1064180.5386	1068795.7979	582.60	592.44	BCP RI boring	

**Table J-9**  
**Survey Data for the 68 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



Test Pit & Well No.	New York State Plane Coordinates		Original GS Elev. (ft. amsl)	Revised GS Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)				
Test Pits						
TP-1	1064235.7464	1068935.4343	582.77	592.61	BCP RI test pit	
TP-2	1064229.9686	1068889.9389	582.16	592.00	BCP RI test pit	
TP-3	1064176.9687	1068762.0807	582.44	592.28	BCP RI test pit	
TP-4	1064130.7790	1068025.3254	580.29	590.13	BCP RI test pit	
TP-5	1064132.8139	1068051.9375	580.86	590.70	BCP RI test pit	
TP-6	1064126.0949	1068039.5441	580.54	590.38	BCP RI test pit	
Monitoring Wells						
MW-1	1064209.6817	1068956.2871	N/A	595.75	BCP RI well (top of casing)	See Note 1
"	"	"	N/A	595.41	BCP RI well (top of riser)	"
"	"	"	N/A	592.62	BCP RI well (ground)	"
MW-2	1064255.4506	1068951.6819	N/A	595.77	BCP RI well (top of casing)	See Note 1
"	"	"	N/A	595.39	BCP RI well (top of riser)	"
"	"	"	N/A	592.62	BCP RI well (ground)	"
MW-3	1064146.5464	1068433.6323	N/A	594.46	BCP RI well (top of casing)	See Note 1
"	"	"	N/A	594.10	BCP RI well (top of riser)	"
"	"	"	N/A	591.92	BCP RI well (ground)	"
MW-4	1064171.5705	1067991.1804	N/A	589.42	BCP RI well (top of casing)	See Note 1
"	"	"	N/A	589.06	BCP RI well (top of riser)	"
"	"	"	N/A	586.72	BCP RI well (ground)	"

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.

The worksheet utilized to estimate ground surface elevations is given as Table J-10.

N/A = Not Applicable.

Coordinates and elevations were obtained by GMM in January 2023 from the AutoCAD file of the property survey after Figure 2 of the BCP RI Report was imported into the drawing.

Revised elevations were calculated by adding 9.84 feet to the elevations shown on the AutoCAD survey drawing. See discussion on the previous page for details.

Orange shaded elevations were estimated from the spot elevations and TIN lines of the 68 Tonawanda Street AutoCAD property survey drawing.

Note 1: Elevations are from a PDF drawing of an ALTA survey dated November 8, 2018. These elevations have been adjusted to account for the calculation error.

**Table J-10**  
**Survey Data for the 68 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



Point No.	New York State Plane Coordinates		Original GS Elev. (ft. amsl)	Revised GS Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)				
Manholes along Tonawanda Street						
140	1064328.3670	1068873.7040	578.235	588.075	San MH (Rim Elev)	West Ave. at Tonawanda St. Tonawanda St. at West Ave. West Ave. at Tonawanda St. West Ave. at Tonawanda St. Tonawanda St. near West Ave. Tonawanda St. at Dearborn St. Dearborn Street
"	"	"	565.040	574.880	South Invert Elevation	
149	1064302.3190	1068623.5440	578.295	588.135	San MH (Rim Elev)	
"	"	"	564.190	574.030	N/S Invert Elevation	
"	"	"	573.390	583.230	East Invert Elevation	
152	1064270.3050	1068381.1480	577.966	587.806	San MH (Rim Elev)	
"	"	"	563.290	573.130	N/S Invert Elevation	
157	1064247.4070	1068146.7560	575.093	584.933	San MH (Rim Elev)	
"	"	"	562.390	572.230	N/S Invert Elevation	
164	1064246.0380	1067886.7540	572.429	582.269	San MH (Rim Elev)	
165	1064239.3130	1067884.0080	572.493	582.333	WV (Surface Elev)	
166	1064235.8640	1067877.4230	572.484	582.324	WV (Surface Elev)	
167	1064226.9220	1067887.6590	572.830	582.670	Elec MH (Rim Elev)	
168	1064222.6570	1067914.4320	572.887	582.727	San MH (Rim Elev)	
170	1064199.3850	1067879.6380	572.784	582.624	Elec MH (Rim Elev)	
172	1064173.5870	1067913.1870	574.403	584.243	Elec MH (Rim Elev)	
Building						
N/A	1064177.2816	1068015.9551	N/A	N/A	SE Corner	
N/A	1064137.6233	1068019.9247	N/A	N/A	SW Corner	
N/A	1064211.9528	1068758.0639	N/A	N/A	NW Corner	
N/A	1064251.9641	1068754.0380	N/A	N/A	NE Corner	
Property Lines						
N/A	1064172.5522	1067969.2677	N/A	N/A	SE Corner	
N/A	1064103.6551	1068044.4861	N/A	N/A	SW Corner	
N/A	1064189.6144	1068962.5968	N/A	N/A	NW Corner	
N/A	1064272.2226	1068954.2376	N/A	N/A	NE Corner	
N/A	1064203.4239	1068961.1994	N/A	N/A	At 150 Property Line	

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.

N/A = Not Applicable. Elevations are not included in the 68 Tonawanda Street property survey AutoCAD drawing.

WV = Water Valve.

**Table J-10**  
**Survey Data for the 68 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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**Notes (continued):**

Revised elevations were calculated by adding 9.84 feet to the elevations shown on the AutoCAD survey drawing.

Green shaded elevations are the original surveyed elevations included in the 68 Tonawanda Street AutoCAD property survey drawing.

**Table J-11**  
**Worksheet to Estimate Ground Surface Elevations at the 68 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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Boring No.	Elevations (feet)			Average Elev (ft)	Maximum * Diff. (in)	Estimated Elev (ft)	Notes
	Pt 1	Pt 2	Pt 3				
Soil Borings							
BH-1	581.5810	580.6974	581.4033	581.2272	10.6032	581.15	Near center of TIN line (pts 1 & 2). Interpolated.
BH-2	580.6929	581.8750	579.9577	580.8419	23.0076	580.84	In center of triangle. Used average elevation.
BH-3	580.5650	581.1513	N/A	580.8582	7.0356	580.93	Boring near TIN line. Interpolated.
BH-4	580.6660	581.0445	580.6120	580.7742	5.1900	580.77	In center of triangle. Used average elevation.
BH-5	577.8808	578.1641	N/A	578.0225	3.3996	577.88	Boring 6.16 feet from 577.8808. Used rounded elevation.
BH-9	581.8940	582.1600	N/A	582.0270	3.1920	582.00	Boring near TIN line. Interpolated.
BH-10	N/A	N/A	N/A	N/A	N/A	N/A	Boring not shown on BCP RI figure.
BH-11	582.7156	582.6050	N/A	582.6603	1.3272	582.69	Boring 10.05 feet from 582.7156. Interpolated.
BH-1A	580.1090	581.8940	N/A	581.0015	21.4200	581.30	Boring near TIN line. Slightly closer to 581.894. Interpolated.
BH-2A	580.1090	581.8940	582.4500	581.4843	28.0920	582.23	In triangle but closer to TIN line (pts 2 & 3). Interpolated.
BH-3A	582.3940	582.4584	N/A	582.4262	0.7728	582.41	Boring 10.06 from 582.394. Interpolated.
BH-4A	582.7050	582.4584	N/A	582.5817	2.9592	582.58	Boring near TIN line in the center. Interpolated.
BH-5A	582.8640	582.6050	N/A	582.7345	3.1080	582.74	Boring near TIN line in the center. Interpolated.
BH-6A	582.5530	582.4285	N/A	582.4908	1.4940	582.49	Not within a triangle. Closest elevs shown. Used average elev.
BH-7A	581.2750	580.2439	581.4033	580.9741	13.9128	580.97	Near center of triangle. Used average elevation.
BH-8A	580.9810	580.5460	N/A	580.7635	5.2200	580.65	Boring 5.18 feet from 580.546. Interpolated.
BH-9A	581.0445	579.9000	580.6660	580.5368	13.7340	580.17	Near TIN line (pts 1 & 2). Boring near test pit 4. Interpolated.
RI-01	578.4700	N/A	N/A	N/A	N/A	578.47	In building; closest floor elevation. Used rounded elevation.
RI-02	580.9810	580.3790	579.0792	580.1464	22.8216	579.72	Near center of TIN line (pts 2 & 3). Interpolated.
RI-03	580.1800	N/A	N/A	N/A	N/A	580.18	Boring 2.25 feet from spot elevation. Used rounded elevation.
RI-04	581.8750	580.7440	580.1660	580.9283	20.5080	581.18	In center of large triangle. Closest to TIN line (pts 1 & 3). Interpolated.
RI-05	581.7180	581.5810	N/A	581.6495	1.6440	581.68	Boring on TIN line; closer to 581.718. Interpolated.
RI-06	581.7377	582.4285	N/A	582.0831	8.2896	582.15	Boring on TIN line near center. Interpolated.
RI-07	582.7290	581.9089	N/A	582.3190	9.8412	582.44	Boring near TIN line; slightly closer to 582.729. Interpolated.
RI-08	582.7156	582.6050	582.7290	582.6832	1.4880	582.62	Boring 7.37 feet from 582.605. Near TIN line (pts 2 & 3). Interpolated.
RI-09	582.5800	582.6600	N/A	582.6200	0.9600	582.62	In building; closest floor elevations. Used average elevation.
RI-10	581.8940	579.8600	580.3620	580.7053	24.4080	580.92	Near TIN line (pts 1 & 2). Interpolated.
RI-11	580.1242	582.1600	582.7700	581.6847	31.7496	581.68	5.52 feet from center of triangle. Used average elevation.
RI-12	583.3290	582.1600	582.7700	582.7530	1.1690	583.05	Boring near TIN line (pts 1 & 2). Interpolated.
RI-13	583.3290	582.1600	583.1000	582.8630	14.0280	582.86	14.41 feet from center of large triangle. Used average elevation.
RI-14	582.4500	583.1000	582.2540	582.6013	10.1520	582.60	6.56 feet from center of triangle. Used average elevation.

**Table J-11**  
**Worksheet to Estimate Ground Surface Elevations at the 68 Tonawanda Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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Test Pit No.	Elevations (feet)			Average Elev (ft)	Maximum * Diff. (in)	Estimated Elev (ft)	Notes
	Pt 1	Pt 2	Pt 3				
Test Pits							
TP-1	582.7700	N/A	N/A	N/A	N/A	582.77	Test pit 2.44 feet from spot elevation. Used rounded elevation.
TP-2	582.1600	N/A	N/A	N/A	N/A	582.16	Test pit 4.18 feet from spot elevation. Used rounded elevation.
TP-3	582.3940	582.2540	582.7301	582.4594	1.6800	582.44	Test pit near TIN line (pts 2 & 3). Interpolated.
TP-4	581.0445	579.9000	579.9300	580.2915	13.7340	580.29	2.60 feet from center of triangle. Used average elevation.
TP-5	581.0445	580.6120	580.6660	580.7742	5.1900	580.86	Near TIN line (pts 1 & 2). Interpolated.
TP-6	581.0445	579.9000	580.6660	580.5368	13.7340	580.54	3.76 feet from center of triangle. Used average elevation.

**Notes:**

The 68 Tonawanda Street AutoCAD drawing contains spot elevations for numerous features of the site including ground surface. The drawing also includes the TIN lines used to generate the topographic contours. Some of the TIN grid nodes, however, do not have spot elevations shown for them, but elevations are attached to the associated TIN lines. For each boring & test pit shown on Figure 2 of the BCP RI Report, I have tabulated the 3 closest ground surface elevations unless otherwise noted. From these data I estimated the ground surface elevation for each boring and test pit.

\* = Elevation difference between the highest and lowest elevations.

N/A = Not Applicable.

Orange Shaded Elevations = Spot elevations shown on the drawing and should have greater weight than other elevations.

Green Shaded Elevations = Spot elevations that are listed as FL. One of these points is listed as Floor, but they are outside the building.

Blue Shaded Elevation = Elevation for a gate post. Presumed to be ground surface.

Yellow Shaded Values = Difference between average and closest elevations differ by 6 inches or more.

Pink Shaded Values = Difference between the highest and lowest elevation differ by 6 inches or more.

**150 TONAWANDA STREET  
SITE NO. C915299**

Coordinates and ground surface elevations are not available for the test pits completed during the 2016 Phase II Investigation, while ground surface elevations are not available for the soil borings completed during the BCP Remedial Investigation. However, the coordinates provided in Table 6 of the BCP Remedial Investigation Report are suspect as they plot at vastly different locations at Google Maps than shown on Figure 2 of the Remedial Investigation Report.

In order to obtain coordinates and ground surface elevations for the soil borings and test pits completed at the site, I needed to first produce a composite map for the site. This composite map included the Figure 2 (Soil Analytical Results) from the 31 Tonawanda Street BCP RI Report, and the AutoCAD file of the property survey that I obtained from the BCP applicant. In addition to the RI soil borings, Figure 2 includes the test pits completed during the 2016 Phase II Investigation.

This process began on July 19, 2022 and was completed the following day. I first converted Figure 2 to an AutoCAD drawing, then imported it into the 150 Tonawanda Street property survey AutoCAD drawing. Since the base map for Figure 2 was a property survey, the fit of the property lines of the merged drawing was perfect.

At this point I was able to obtain the coordinates for the soil borings and test pits completed at the site. In addition, using spot elevations and TIN lines from the 150 Tonawanda Street property survey, I was able to estimate ground surface elevations. These coordinates and elevations are summarized in Table J-12, while the elevation worksheet is provided as Table J-13.



**Table J-12**  
**Survey Data for the 150 Tonawanda Street Property**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
**Buffalo, New York**



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Boring, TP & Well No.	New York State Plane Coordinates		Ground Surface Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)			
Soil Borings					
BH-1	1064262.0968	1069019.2112	592.95	BCP RI boring	
BH-2	1064248.0373	1069102.1686	593.65	BCP RI boring	
BH-3	1064239.5349	1069237.4853	595.13	BCP RI boring	
BH-4	1064272.8664	1069380.1171	593.28	BCP RI boring	
BH-5	1064287.7916	1069453.5964	592.96	BCP RI boring	
BH-6	1064318.5216	1069520.1149	593.00	BCP RI boring	
Test Pits					
TP-1	1064219.8574	1069053.7049	593.68	Phase II ESA	
TP-2	1064225.9799	1069116.2200	594.16	Phase II ESA	
TP-3	1064233.8807	1069164.9947	594.78	Phase II ESA	
TP-4	1064276.1097	1069158.9873	593.73	Phase II ESA	
TP-5	1064271.0659	1069217.8906	593.47	Phase II ESA	
TP-6	1064258.9672	1069265.9796	595.18	Phase II ESA	
TP-7	1064254.5049	1069315.9226	595.40	Phase II ESA	
TP-8	1064297.5785	1069319.1150	591.33	Phase II ESA	
TP-9	1064305.9962	1069408.7073	592.64	Phase II ESA	
Monitoring Wells					
MW-1	1064219.8648	1069031.3881	593.20	BCP RI well (ground)	Well removed during remediation
"	"	"	594.62	BCP RI well (top of riser)	"
"	"	"	595.75	BCP RI well (top of casing)	"
MW-2	1064307.3693	1069383.1616	592.50	BCP RI well (ground)	Well removed during remediation
"	"	"	594.65	BCP RI well (top of riser)	"
"	"	"	594.93	BCP RI well (top of casing)	"
MW-3	1064259.3787	1069436.2754	593.50	BCP RI well (ground)	Well removed during remediation
"	"	"	596.57	BCP RI well (top of riser)	"
"	"	"	596.80	BCP RI well (top of casing)	"
MW-4	1064271.2277	1069087.6629	593.50	BCP RI well (ground)	Well removed during remediation
"	"	"	595.65	BCP RI well (top of riser)	"
"	"	"	595.81	BCP RI well (top of casing)	"

**Table J-12**  
**Survey Data for the 150 Tonawanda Street Property**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.

The worksheet utilized to estimate ground surface elevations is given as Table J-13.

N/A = Not Applicable.

NS = Not Surveyed.

Green shaded elevations are the original surveyed elevations prior to the installation of a cover system during remediation.

Orange shaded elevations were estimated from the spot elevations and TIN lines of the 150 Tonawanda Street AutoCAD property survey drawing.

**Table J-13**  
**Worksheet to Estimate Ground Surface Elevations at the 150 Tonawanda Street Property**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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Point No.	Elevations (feet)			Average Elev (ft)	Maximum * Diff. (in)	Estimated Elev (ft)	Notes
	Pt 1	Pt 2	Pt 3				
Soil Borings							
BH-1	592.8152	593.1747	592.8652	592.9517	4.3140	592.95	Near center of triangle. Closer to TIN line (pts 1 & 2). Used avg.
BH-2	593.6463	N/A	N/A	N/A	N/A	593.65	Boring 0.86 feet from 593.6463. Used rounded elevation.
BH-3	596.5601	594.4048	595.4571	595.4740	25.8636	595.13	Boring near TIN line (pts 1 & 2). Interpolated.
BH-4	595.1168	592.0888	595.8332	594.3463	44.9328	593.28	Boring 6.08 feet from 595.1168 & 5.57 feet from 592.0888. Note 1.
BH-5	592.7107	593.1531	592.4369	592.7669	8.5944	592.96	Boring in triangle. Closest to 593.1531. Interpolated pts 2 & 3.
BH-6	592.6978	594.1838	592.0480	592.9765	25.6296	593.00	Boring near TIN line (pts 1 & 2). Interpolated.
Test Pits							
TP-1	594.6093	593.2422	593.1747	593.6754	17.2152	593.68	Near center of triangle. Closer to TIN line (pts 1 & 2). Used avg.
TP-2	593.6463	594.6093	594.7597	594.3384	13.3608	594.16	Near center of TIN line (pts 1 & 3). Interpolated.
TP-3	595.5280	594.0549	594.7597	594.7809	17.6772	594.78	In center of triangle. Closer to 594.0549. Used average elevation.
TP-4	594.0549	593.6222	N/A	593.8386	5.1924	593.73	On TIN line (pts 1 & 2). Interpolated.
TP-5	592.4931	594.4048	593.5903	593.4961	22.9404	593.47	Test pit near TIN line (pts 1 & 2). Interpolated.
TP-6	595.3306	594.4048	593.5903	594.4419	20.8836	595.18	Test pit near TIN line (pts 1 & 2). Interpolated.
TP-7	596.5601	595.0079	596.9578	596.1753	23.3988	595.40	Test pit near TIN line (pts 1 & 2). Interpolated.
TP-8	591.1717	591.4214	591.9437	591.5123	9.2640	591.33	Test pit near TIN line (pts 1 & 2). Interpolated.
TP-9	592.4792	592.4489	593.4619	592.7967	12.1560	592.64	Test pit near TIN line (pts 2 & 3). Interpolated.

**Notes:**

The 31 & 150 Tonawanda Street AutoCAD survey drawing contains spot elevations for the ground surface. I drew TIN lines between the elevations to envelope the soil borings and test pits completed at the site. For each boring & test pit shown on Figure 5 of the BCP RI Report, I have tabulated the 3 closest ground surface elevations. From these data I estimated the ground surface elevation for each boring & test pit.

\* = Elevation difference between the highest and lowest elevations.

N/A = Not Applicable.

Pink Shaded Values = Difference between the highest and lowest elevation differ by 6 inches or more.

Note 1: I Interploated the ground surface elevation from the contour lines.

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Coordinates and ground surface elevations are not available for the soil borings and test pits completed during the 2015 Phase II Investigation. The three (3) soil borings completed as micro-wells, however, are the exception as coordinates and ground surface elevations are available for these borings. Coordinates for the monitoring wells installed during the BCP Remedial Investigation, and most of the test pits, are contained in an EDD file that was submitted to the NYSDEC for upload to EQulS. Ground surface elevations for the monitoring wells and test pits are estimated. These coordinates and elevations are summarized in Table J-14.

In order to obtain coordinates and ground surface elevations for the soil borings and test pits completed during the 2015 Phase II Investigation, and the remaining test pits completed during the BCP Remedial Investigation, I needed to first produce a composite map for the site. This composite map included the Figure 2 (Sample Location Map) from the draft 1660 Niagara Street BCP RI Report, and the AutoCAD file of the property survey that I obtained from the BCP applicant. In addition to the RI soil borings, Figure 2 includes the soil borings and test pits completed during the 2015 Phase II Investigation.

This process began on March 3, 2023 and was completed the same day. I first copied Figure 2 into a new AutoCAD drawing. As I had previously added the BCP Remedial Investigation test pits to the 1660 Niagara Street AutoCAD drawing using the EDD coordinates, I copied and pasted these test pits into the Figure 2 drawing. I needed to scale and rotate this layer but found that the test pits overlaid perfectly. As a result, I added symbols for the Phase II ESA test pits and those without EDD coordinates. I also added symbols for the Phase II ESA soil borings.

At this point I was able to obtain the coordinates for the remaining soil borings and test pits completed at the site. In addition, using spot elevations and TIN lines from the 1660 Niagara Street property survey, I was able to estimate ground surface elevations. These coordinates and elevations are summarized in Table J-14, while the elevation worksheet is provided as Table J-15.

**Table J-14**  
**Survey Data for the 1660 Niagara Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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Soil Boring & Test Pit No.	New York State Plane Coordinates		Ground Surface Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)			
Soil Borings					
SB-1/TPMW1	1063936.9473	1067612.5070	576.77	2015 Phase II boring	See Note 1
SB-2	1063968.0902	1067635.8189	577.33	2015 Phase II boring	
SB-3	1063941.6631	1067670.0514	577.40	2015 Phase II boring	
SB-4/TPMW2	1063901.2899	1067674.0202	576.85	2015 Phase II boring	
SB-5	1063826.0238	1067785.6640	579.05	2015 Phase II boring	
SB-5A	1063820.4927	1067790.4753	578.85	2015 Phase II boring	
SB-6	1063838.7299	1067786.2812	578.25	2015 Phase II boring	
SB-7	1063851.6430	1067759.6605	578.14	2015 Phase II boring	
SB-8/TPMW3	1063823.5031	1067802.7557	578.14	2015 Phase II boring	
SB-1	1063993.3430	1067582.4380	578.88	2020 DEC boring	
Test Pits					
TP-1	1063773.3377	1067843.0620	578.71	2015 Phase II test pit	
TP-2	1063833.3144	1067793.5590	578.41	2015 Phase II test pit	
TP-3	1063835.2592	1067767.7675	578.02	2015 Phase II test pit	
TP-4	1063897.6660	1067702.3867	577.06	2015 Phase II test pit	
TP-5	1063963.3580	1067615.9444	577.14	2015 Phase II test pit	
TP-6	1063916.2224	1067661.8888	577.19	2015 Phase II test pit	
TP-7	1063872.4756	1067736.5641	576.98	2015 Phase II test pit	
TP-8	1063805.0532	1067798.5623	578.03	2015 Phase II test pit	
RI-TP-1	1063783.4682	1067829.4023	578.73	BCP RI test pit	
RI-TP-2	1063868.9305	1067732.3687	576.98	BCP RI test pit	
RI-TP-3	1063886.8770	1067712.6611	577.21	BCP RI test pit	
RI-TP-4	1063894.2604	1067719.7116	577.29	BCP RI test pit	
RI-TP-5	1063909.1743	1067702.4222	577.28	BCP RI test pit	
RI-TP-6	1063901.8303	1067710.6042	577.19	BCP RI test pit	
RI-TP-7	1063900.3925	1067691.1601	576.78	BCP RI test pit	
RI-TP-8	1063938.7507	1067646.0515	577.24	BCP RI test pit	
RI-TP-9	1063966.4677	1067604.3658	577.32	BCP RI test pit	
RI-TP-10	1063946.2693	1067618.2864	576.94	BCP RI test pit	
RI-TP-11	1063958.9533	1067585.5148	577.02	BCP RI test pit	
RI-TP-12	1063931.2951	1067673.9425	577.40	BCP RI test pit	
RI-TP-13	1063959.4507	1067646.9591	577.33	BCP RI test pit	

**Table J-14**  
**Survey Data for the 1660 Niagara Street BCP Site**  
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Test Pit & Well No.	New York State Plane Coordinates		Ground Surface Elev. (ft. amsl)	Description	Notes	
	Easting (x)	Northing (y)				
Test Pits (continued)						
RI-TP-14	1063956.9410	1067636.6505	577.30	BCP RI test pit		
RI-TP-15	1063979.3363	1067620.8891	577.33	BCP RI test pit		
RI-TP-8RE	NS	NS	N/A	BCP RI test pit		
RI-TP-16	1063931.5158	1067653.6124	577.23	BCP RI test pit		
RI-TP-17	1063931.8442	1067664.9058	577.29	BCP RI test pit		
RI-TP-18	1063940.2903	1067660.1317	577.35	BCP RI test pit		
RI-TP-19	1063947.2511	1067653.8400	577.33	BCP RI test pit		
RI-TP-20	1063929.4077	1067637.0803	577.17	BCP RI test pit		
RI-TP-21	1063948.9254	1067634.3607	577.12	BCP RI test pit		
RI-TP-22	1063966.3329	1067629.2866	577.33	BCP RI test pit		
RI-TP-23	1063938.5003	1067615.7056	576.77	BCP RI test pit		
RI-TP-24	1063922.4713	1067644.8536	577.04	BCP RI test pit		
RI-TP-25	1063973.3116	1067635.4776	577.36	BCP RI test pit		
RI-TP-26	1063915.7104	1067651.9085	577.01	BCP RI test pit		
Monitoring Wells						
TPMW1	1063936.9473	1067612.5070	576.77	Phase II well (ground)		See Note 2
"	"	"	581.17	Phase II well (top of riser)	"	
"	1063936.8070	1067612.2055	577.20	Phase II well (ground)	2020 DEC survey	
"	"	"	582.20	Phase II well (top of riser)	"	
TPMW2	1063901.2899	1067674.0202	576.85	Phase II well (ground)	Well destroyed during cover system	
"	"	"	581.55	Phase II well (top of riser)	installation. See Note 2.	
TPMW3	1063823.5031	1067802.7557	578.14	Phase II well (ground)	Well destroyed during UST removal	
"	"	"	581.04	Phase II well (top of riser)	IRM. See Note 2.	
MW-1	1063784.7617	1067843.9939	578.29	BCP RI well (ground)	See Note 2	
"	"	"	578.79	BCP RI well (top of riser)	"	
"	1063787.1321	1067844.3516	580.67	BCP RI well (ground)	DEC survey after cover system install.	
"	"	"	580.40	BCP RI well (top of riser)	Flush mount installed by DEC in 2020.	
MW-2	1063819.0973	1067778.7528	577.15	BCP RI well (ground)	See Note 2	
"	"	"	577.65	BCP RI well (top of riser)	"	
"	1063824.0844	1067781.5073	576.67	BCP RI well (ground)	DEC survey after cover system install.	
"	"	"	578.50	BCP RI well (top of riser)	Protective casing installed by DEC in	
"	"	"	579.53	BCP RI well (top of casing)	2020	

**Table J-14**  
**Survey Data for the 1660 Niagara Street BCP Site**  
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Well No.	New York State Plane Coordinates		Ground Surface Elev. (ft. amsl)	Description	Notes
	Easting (x)	Northing (y)			
Monitoring Wells (continued)					
MW-3	1063873.5453	1067749.4565	576.82	BCP RI well (ground)	Well destroyed during cover system installation. See Note 2.
"	"	"	577.32	BCP RI well (top of riser)	
1660-MW-3R	1063876.6478	1067748.5530	579.01	DEC RI well (ground)	DEC replacement well. Flush mount installed.
"	"	"	578.63	DEC RI well (top of riser)	
MW-4	1063890.5111	1067687.7889	575.05	BCP RI well (ground)	Well destroyed during cover system installation. See Note 2.
"	"	"	575.55	BCP RI well (top of riser)	
MW-5	1063945.4002	1067667.4287	576.75	BCP RI well (ground)	Well destroyed during cover system installation. See Note 2.
"	"	"	577.25	BCP RI well (top of riser)	
1660-MW-5R	1063939.7597	1067675.2249	578.02	DEC RI well (ground)	DEC replacement well. Flush mount installed.
"	"	"	577.61	DEC RI well (top of riser)	
MW-6	1063956.1857	1067580.9129	576.70	BCP RI well (ground)	See Note 2
"	"	"	577.20	BCP RI well (top of riser)	"
"	1063959.0103	1067585.0004	577.62	DEC RI well (ground)	DEC survey after cover system install.
"	"	"	579.91	DEC RI well (top of riser)	Protective casing installed by DEC in 2020
"	"	"	580.76	DEC RI well (top of casing)	
MW-7	1063995.7415	1067605.5823	577.21	BCP RI well (ground)	See Note 2
"	"	"	578.21	BCP RI well (top of riser)	"
"	1063998.3554	1067609.4297	577.64	DEC RI well (ground)	DEC survey after cover system install.
"	"	"	579.91	DEC RI well (top of riser)	Protective casing installed by DEC in 2020
"	"	"	580.53	DEC RI well (top of casing)	
MW-8	1063969.8407	1067565.9350	578.27	DEC RI well (ground)	New DEC well. Protective casing installed.
"	"	"	580.80	DEC RI well (top of riser)	
"	"	"	580.98	DEC RI well (top of casing)	"

**Notes:**

Horizontal coordinates are relative to the State Plane New York West Zone of the North American Datum (NAD) of 1983.

NS = Not Surveyed.

ft. amsl = feet above mean sea level.

**Coordinates:**

Blue shaded coordinates are from the EDD file that was submitted to the DEC for upload to EQUIS.

Orange shaded coordinates were surveyed by the BCP applicant and were obtained from the AutoCAD file that was provided to the DEC.

Yellow shaded coordinates were surveyed by the DEC in 2020 as part of the 31 Tonawanda Street Off-Site Investigation.



**Table J-14**  
**Survey Data for the 1660 Niagara Street BCP Site**  
**NYSDEC Remedial Investigation**  
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**Notes (continued):**

**Coordinates (continued):**

Unshaded coordinates were obtained by GMM in March 2023 from the AutoCAD file of the property survey after Figure 2 of the BCP RI Report was imported into the drawing.

**Elevations:**

Blue shaded elevations are from the EDD file that was submitted to the DEC for upload to EQUIS.

Gray shaded elevations were calculated by adding the stickup to the ground surface elevation. Top of riser elevations were not surveyed.

Green shaded elevations were surveyed by the BCP applicant prior to the installation of a cover system during remediation.

Orange shaded elevations were surveyed by the BCP applicant and were obtained from the AutoCAD file that was provided to the DEC.

Pink shaded elevations were calculated by subtracting the stickup from the top of riser elevations. Ground surface was not surveyed.

Yellow shaded elevations were surveyed by the DEC in 2020 as part of the 31 Tonawanda Street Off-Site Investigation.

Unshaded elevations were estimated from the TIN lines on the 1660 Niagara Street AutoCAD property survey drawing.

**Note 1:** Coordinates are different from the EDD file and the DEC survey.

**Note 2:** The wells installed by LaBella were not completed with protective casings or flush mounts, so there are no top of casing elevations.

**Table J-15**  
**Worksheet to Estimate Ground Surface Elevations at the 1660 Niagara Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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Point No.	Elevations (feet)			Average Elev (ft)	Maximum * Diff. (in)	Estimated Elev (ft)	Notes
	Pt 1	Pt 2	Pt 3				
Soil Borings							
SB-1/TPMW1	N/A	N/A	N/A	N/A	N/A	576.77	Surface elevation was surveyed.
SB-2	577.3953	577.3369	577.2614	577.3312	1.6068	577.33	Maximum difference is small. Used average elevation.
SB-3	577.4770	577.4251	577.3106	577.4042	1.9968	577.40	Maximum difference is small. Used average elevation.
SB-4/TPMW2	N/A	N/A	N/A	N/A	N/A	576.85	Surface elevation was surveyed.
SB-5	579.0178	579.0899	N/A	579.0539	0.8652	579.05	Boring on TIN Line. Maximum difference is small. Used average elevation.
SB-5A	579.0178	579.0899	578.4318	578.8465	7.8972	578.85	Boring 0.57 feet from center of TIN. Used average elevation.
SB-6	578.3015	578.2000	N/A	578.2508	1.2180	578.25	Boring near TIN Line. Maximum difference is small. Used average elevation.
SB-7	578.2099	578.1046	577.9780	578.0975	2.7828	578.14	Near TIN line (pts 1 & 2). Interpolated.
SB-8/TPMW3	N/A	N/A	N/A	N/A	N/A	578.14	Surface elevation was surveyed.
SB-1	N/A	N/A	N/A	N/A	N/A	578.88	Surface elevation was surveyed.
Test Pits							
TP-1	579.0678	578.5625	579.6254	579.0852	12.7548	578.71	Near TIN line (pts 1 & 2). Interpolated.
TP-2	578.3544	578.5875	578.3015	578.4145	3.4320	578.41	Test pit 1.24 feet from center of TIN. Used average elevation.
TP-3	577.9034	578.0787	578.2635	578.0819	4.3212	578.02	Near TIN line (pts 1 & 2). Interpolated.
TP-4	577.1420	577.0429	N/A	577.0925	1.1892	577.06	Test pit is almost on TIN line. Interpolated.
TP-5	577.3369	577.3000	576.7742	577.1370	6.7524	577.14	Test pit 6.20 feet from center of TIN. Used average elevation.
TP-6	577.1881	577.2614	576.9515	577.1337	3.7188	577.19	Test pit 2.51 feet from pt 1. Used that elevation.
TP-7	577.3290	576.7770	576.8272	576.9777	6.6240	576.98	Test pit 3.03 feet from center of TIN. Used average elevation.
TP-8	578.3977	577.9587	578.5639	578.3068	7.2624	578.03	Near TIN line (pts 1 & 2). Interpolated.
RI-TP-1	577.8206	579.0777	577.8762	578.2582	15.0852	578.73	Near TIN line (pts 1 & 2). Interpolated.
RI-TP-2	577.3290	576.7770	576.8272	576.9777	6.6240	576.98	Test pit 2.57 feet from center of TIN. Used average elevation.
RI-TP-3	577.2122	577.2896	577.3290	577.2769	1.4016	577.21	Test pit 0.67 feet from pt 1. Used that elevation.
RI-TP-4	577.2122	577.2896	577.0429	577.1816	2.9604	577.29	Test pit 1.69 feet from pt 2. Used that elevation.
RI-TP-5	577.1420	577.0429	577.3675	577.1841	3.8952	577.28	Near TIN line (pts 1 & 3). Interpolated.
RI-TP-6	577.2896	577.0429	577.3675	577.2333	3.8952	577.19	Near TIN line (pts 2 & 3). Interpolated.
RI-TP-7	577.1420	577.0429	576.6873	576.9574	5.4564	576.78	Near TIN line (pts 1 & 3). Interpolated.
RI-TP-8	577.1566	577.2614	576.9515	577.1232	3.7188	577.24	Near TIN line (pts 1 & 2). Interpolated.
RI-TP-9	577.3369	577.3000	N/A	577.3185	0.4428	577.32	Test pit is almost on TIN line. Maximum difference is small. Used average elevation.
RI-TP-10	577.3369	577.2614	576.7742	577.1242	6.7524	576.94	Near TIN line (pts 1 & 3). Interpolated.

**Table J-15**  
**Worksheet to Estimate Ground Surface Elevations at the 1660 Niagara Street BCP Site**  
**NYSDEC Remedial Investigation**  
**31 Tonawanda Street Off-Site Area, Site No. C915299A**  
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Point No.	Elevations (feet)			Average Elev (ft)	Maximum * Diff. (in)	Estimated Elev (ft)	Notes
	Pt 1	Pt 2	Pt 3				
Test Pits (continued)							
RI-TP-11	577.3000	577.0506	576.7090	577.0199	7.0920	577.02	Test pit 3.29 feet from center of TIN. Used average elevation.
RI-TP-12	577.4770	577.4251	577.3106	577.4042	1.9968	577.40	Maximum difference is small. Used average elevation.
RI-TP-13	577.3953	577.3369	577.2614	577.3312	1.6068	577.33	Maximum difference is small. Used average elevation.
RI-TP-14	577.3369	577.2614	576.7742	577.1242	6.7524	577.30	Near TIN line (pts 1 & 2). Interpolated.
RI-TP-15	577.3369	577.3174	577.4118	577.3554	1.1328	577.33	Near center of TIN line (pts 1 & 2). Used average line elevation.
RI-TP-8RE	N/A	N/A	N/A	N/A	N/A	N/A	Test pit is not shown on Figure 2 of the LaBella BCP RI Report.
RI-TP-16	577.1881	577.2614	576.9515	577.1337	3.7188	577.23	Near TIN line (pts 1 & 2). Interpolated.
RI-TP-17	577.3106	577.4770	577.2614	577.3497	2.5872	577.29	Near TIN line (pts 1 & 3). Interpolated.
RI-TP-18	577.3106	577.4770	577.2614	577.3497	2.5872	577.35	Test pit 2.14 feet from center of TIN. Used average elevation.
RI-TP-19	577.3106	577.4770	577.2614	577.3497	2.5872	577.33	Near TIN line (pts 2 & 3). Interpolated.
RI-TP-20	577.1566	577.2614	576.9515	577.1232	3.7188	577.17	Near TIN line (pts 1 & 2). Interpolated.
RI-TP-21	577.3369	577.2614	576.7742	577.1242	6.7524	577.12	Test pit 5.10 feet from center of TIN. Used average elevation.
RI-TP-22	577.3369	577.2614	576.7742	577.1242	6.7524	577.33	Near TIN line (pts 1 & 2). Interpolated.
RI-TP-23	577.3369	577.2614	576.7742	577.1242	6.7524	576.77	Test pit 3.56 feet from pt 3. Used that elevation.
RI-TP-24	577.1566	577.2614	576.9515	577.1232	3.7188	577.04	Equidistant between two Tin lines. Interpolated twice. Same elevation to 2 decimal places.
RI-TP-25	577.3174	577.3369	577.4118	577.3554	1.1328	577.36	Maximum difference is small. Used average elevation.
RI-TP-26	577.1881	577.2614	576.9515	577.1337	3.7188	577.01	Near TIN line (pts 1 & 3). Interpolated.

**Notes:**

The 1660 Niagara Street AutoCAD survey drawing contains spot elevations for the ground surface. I drew TIN lines between the elevations to envelope the soil borings & test pits completed at the site. For each boring & test pit shown on Figure 2 of the Draft BCP RI Report, I have tabulated the 3 closest ground surface elevations. From these data I estimated the ground surface elevation for each boring.

\* = Elevation difference between the highest and lowest elevations.

N/A = Not Applicable.

Orange shaded elevations were surveyed by the BCP applicant and were obtained from the AutoCAD file that was provided to the DEC.

Pink Shaded Values = Difference between the highest and lowest elevation differ by 6 inches or more.

Yellow shaded elevations were surveyed by the DEC in 2020 as part of the 31 Tonawanda Street Off-Site Investigation.