

Leica Geosystems AG
 Heinrich Wild Strasse
 CH-9435 Heerbrugg
 St. Gallen, Switzerland

Phone: + 41 71 727 3131
 Fax: + 41 71 727 4674

- when it has to be **right**



Level Report

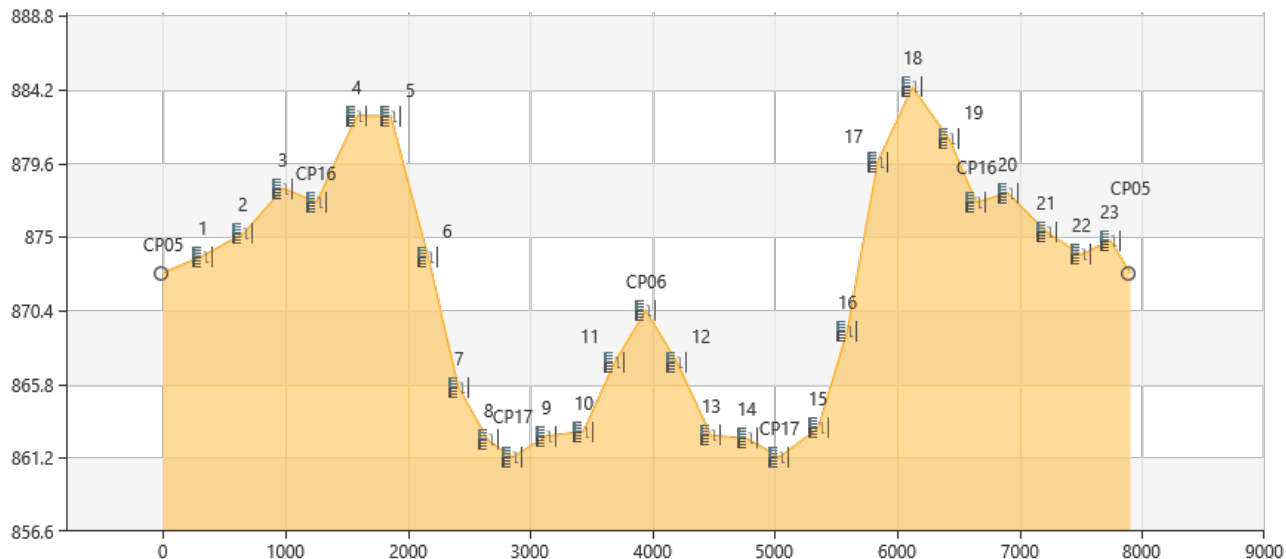
Report created: 01/07/2021 08:59:41

Project Details

General		Customer Details		Master Coordinate System	
Project Name:	TUS-250-23.46 PID 102408	Customer Name:	-	Coordinate System Name:	OHIO NORTH
Owner:	-	Contact Person:	-	Transformation Type:	Classical 3D
Lead Surveyor:	Jon Penix	Number:	-	Residual Distribution:	None
Date Created:	08/24/2020 11:25:16	Email:	-	Ellipsoid:	GRS 1980
Last Accessed:	01/07/2021 08:43:28	Skype:	-	Projection Type:	Lambert two
Application Software:	Infinity 3.4.0	Website:	-	Geoid Model:	OH G18 GRS80
				CSCS Model:	-

Path: I:\ProjectData\102408\Design\Survey\RawData\Level\Infinity\TUS-250-23.46 PID 102408\TUS-250-23.46 PID 102408.iprj
 Size: 207.9 MB
 Comments: -

Level Line Id: LINE00001



General			
Date/Time	7/23/2021 2:17:42 PM	Instrument Type:	Dna3/10
Staff One Id:		Method:	BF
Staff Two Id:		Stations:	29
Start Point:	CP05	Observations:	58
End Point:	CP05		

Results			
Height Difference:	0.000 ftUS	Height Error / Point:	0.000 ftUS
Length:	7,903.982 ftUS	Total Distance Balance:	-134.899 ftUS
Misclosure:	0.007 ftUS	Total Station Difference:	-

Processing Parameters

Adjustment Method: By Distance
 Staff Corrections: Not Applied

Points

Point Id	Date/Time	Height [ftUS]	ΔHeight [ftUS]	SD [ftUS]
CP05	7/23/2021 2:17:44 PM	872.743	-	-
1	7/23/2021 2:19:31 PM	873.769	1.026	0.000
2	7/23/2021 2:23:48 PM	875.182	1.413	0.000
3	7/23/2021 2:28:19 PM	878.024	2.842	0.000
CP16	7/23/2021 2:32:37 PM	877.166	-0.858	0.000
4	7/23/2021 2:37:45 PM	882.548	5.382	0.000
5	7/23/2021 2:42:23 PM	882.525	-0.023	0.000
6	7/23/2021 2:47:18 PM	873.703	-8.822	0.000
7	7/23/2021 2:51:46 PM	865.624	-8.079	0.000
8	7/23/2021 2:56:07 PM	862.303	-3.321	0.000
CP17	7/23/2021 3:00:19 PM	861.231	-1.072	0.000
9	7/23/2021 3:03:52 PM	862.550	1.319	0.000
10	7/23/2021 3:08:06 PM	862.832	0.282	0.000
11	7/23/2021 3:11:41 PM	867.171	4.339	0.000
CP06	7/23/2021 3:15:18 PM	870.398	3.227	0.000
12	7/23/2021 3:17:16 PM	867.169	-3.229	0.000
13	7/23/2021 3:23:39 PM	862.598	-4.570	0.000
14	7/23/2021 3:27:33 PM	862.397	-0.202	0.000
CP17	7/23/2021 3:30:49 PM	861.228	-1.169	0.000
15	7/23/2021 3:34:13 PM	863.050	1.822	0.000
16	7/23/2021 3:38:23 PM	869.112	6.062	0.000
17	7/23/2021 3:42:20 PM	879.662	10.550	0.000
18	7/23/2021 3:46:31 PM	884.326	4.664	0.000
19	7/23/2021 3:50:55 PM	881.085	-3.240	0.000
CP16	7/23/2021 3:55:03 PM	877.159	-3.926	0.000
20	7/23/2021 3:58:11 PM	877.742	0.582	0.000
21	7/23/2021 4:01:49 PM	875.294	-2.447	0.000
22	7/23/2021 4:05:38 PM	873.874	-1.420	0.000
23	7/23/2021 4:08:40 PM	874.764	0.890	0.000
CP05	7/23/2021 2:17:44 PM	872.743	-2.021	-

Line Tolerances

Allowable Misclosure E = a 0.032 ftUS
 + b √ L:
 a: 0.007 ftUS
 b: 0.021 ftUS/√mi
 L (Level Line Length): 1.497 mi
 Height Error / Point: 0.002 ftUS
 Total Distance Balance: 30.000 ftUS

Observation Tolerances

Double Observation Check: 0.003 ftUS
 Station Difference: 0.001 ftUS
 Max. Sight Distance: 130.000 ftUS
 Min. Ground Clearance: 1.600 ftUS

Point Height Tolerances

Height Spread: 0.066 ftUS
 Max. Difference From Fixed Height: 0.033 ftUS

Booking Sheet

Point Id	Type	BS [ftUS]	IS [ftUS]	FS [ftUS]	Rise [ftUS]	Fall [ftUS]	Hz Dist. [ftUS]	ΔHeight [ftUS]	ΔHeight Corr. [ftUS]	Height [ftUS]	Remark
CP05		-	-	-	-	-	-	0.000	0.000	872.743	
CP05	BS1	6.769	-	-	-	-	159.623	-	-	-	
1	FS1	-	-	5.742	1.026	-	158.166	-	-	-	
1		-	-	-	-	-	-	1.026	0.000	873.769	
1	BS1	6.003	-	-	-	-	168.404	-	-	-	
2	FS1	-	-	4.590	1.414	-	169.676	-	-	-	
2		-	-	-	-	-	-	1.414	0.000	875.182	
2	BS1	6.647	-	-	-	-	159.821	-	-	-	
3	FS1	-	-	3.805	2.842	-	166.565	-	-	-	
3		-	-	-	-	-	-	2.842	0.000	878.024	
3	BS1	5.853	-	-	-	-	141.429	-	-	-	
CP16	FS1	-	-	6.711	-	0.858	131.277	-	-	-	
CP16		-	-	-	-	-	-	-0.858	0.000	877.166	
CP16	BS1	7.981	-	-	-	-	142.480	-	-	-	
4	FS1	-	-	2.599	5.382	-	188.029	-	-	-	
4		-	-	-	-	-	-	5.382	0.000	882.548	
4	BS1	6.370	-	-	-	-	135.161	-	-	-	
5	FS1	-	-	6.392	-	0.022	140.052	-	-	-	

5		-	-	-	-	-	-	-0.022	0.000	882.525	
5	BS1	3.365	-	-	-	-	151.221	-	-	-	
6	FS1	-	-	12.186	-	8.822	156.477	-	-	-	
6		-	-	-	-	-	-	-8.822	0.000	873.703	
6	BS1	1.801	-	-	-	-	90.433	-	-	-	
7	FS1	-	-	9.880	-	8.079	154.480	-	-	-	
7		-	-	-	-	-	-	-8.079	0.000	865.624	
7	BS1	2.573	-	-	-	-	115.459	-	-	-	
8	FS1	-	-	5.894	-	3.321	124.618	-	-	-	
8		-	-	-	-	-	-	-3.321	0.000	862.303	
8	BS1	4.763	-	-	-	-	104.298	-	-	-	
CP17	FS1	-	-	5.835	-	1.072	98.658	-	-	-	
CP17		-	-	-	-	-	-	-1.072	0.000	861.231	
CP17	BS1	5.665	-	-	-	-	133.960	-	-	-	
9	FS1	-	-	4.346	1.319	-	141.900	-	-	-	
9		-	-	-	-	-	-	1.319	0.000	862.550	
9	BS1	4.701	-	-	-	-	158.952	-	-	-	
10	FS1	-	-	4.418	0.283	-	145.304	-	-	-	
10		-	-	-	-	-	-	0.283	0.000	862.832	
10	BS1	6.061	-	-	-	-	129.844	-	-	-	
11	FS1	-	-	1.722	4.339	-	124.506	-	-	-	
11		-	-	-	-	-	-	4.339	0.000	867.171	
11	BS1	7.913	-	-	-	-	123.212	-	-	-	
CP06	FS1	-	-	4.685	3.227	-	131.318	-	-	-	
CP06		-	-	-	-	-	-	3.227	0.000	870.398	
CP06	BS1	4.684	-	-	-	-	131.375	-	-	-	
12	FS1	-	-	7.913	-	3.229	123.211	-	-	-	
12		-	-	-	-	-	-	-3.229	0.000	867.169	
12	BS1	1.504	-	-	-	-	140.828	-	-	-	
13	FS1	-	-	6.074	-	4.570	135.508	-	-	-	
13		-	-	-	-	-	-	-4.570	0.000	862.598	
13	BS1	4.964	-	-	-	-	148.278	-	-	-	
14	FS1	-	-	5.166	-	0.201	151.118	-	-	-	
14		-	-	-	-	-	-	-0.201	0.000	862.397	
14	BS1	4.867	-	-	-	-	132.617	-	-	-	
CP17	FS1	-	-	6.036	-	1.169	127.824	-	-	-	
CP17		-	-	-	-	-	-	-1.169	0.000	861.228	
CP17	BS1	6.084	-	-	-	-	141.789	-	-	-	
15	FS1	-	-	4.261	1.823	-	175.510	-	-	-	
15		-	-	-	-	-	-	1.823	0.000	863.050	
15	BS1	7.293	-	-	-	-	134.195	-	-	-	
16	FS1	-	-	1.230	6.062	-	103.715	-	-	-	
16		-	-	-	-	-	-	6.062	0.000	869.112	
16	BS1	11.207	-	-	-	-	139.871	-	-	-	
17	FS1	-	-	0.657	10.550	-	107.773	-	-	-	
17		-	-	-	-	-	-	10.550	0.000	879.662	
17	BS1	8.108	-	-	-	-	135.488	-	-	-	
18	FS1	-	-	3.444	4.664	-	149.090	-	-	-	
18		-	-	-	-	-	-	4.664	0.000	884.326	
18	BS1	4.116	-	-	-	-	143.085	-	-	-	
19	FS1	-	-	7.356	-	3.240	157.464	-	-	-	
19		-	-	-	-	-	-	-3.240	0.000	881.085	
19	BS1	3.996	-	-	-	-	139.143	-	-	-	
CP16	FS1	-	-	7.922	-	3.926	82.770	-	-	-	
CP16		-	-	-	-	-	-	-3.926	0.000	877.159	
CP16	BS1	7.195	-	-	-	-	111.302	-	-	-	
20	FS1	-	-	6.613	0.583	-	144.805	-	-	-	
20		-	-	-	-	-	-	0.583	0.000	877.742	
20	BS1	4.177	-	-	-	-	147.320	-	-	-	
21	FS1	-	-	6.625	-	2.447	171.113	-	-	-	
21		-	-	-	-	-	-	-2.447	0.000	875.294	
21	BS1	4.847	-	-	-	-	145.993	-	-	-	
22	FS1	-	-	6.266	-	1.420	134.653	-	-	-	
22		-	-	-	-	-	-	-1.420	0.000	873.874	
22	BS1	5.263	-	-	-	-	109.202	-	-	-	

23	FS1	-	-	4.373	0.890	-	129.823	-	-	-	
23		-	-	-	-	-	-	0.890	0.000	874.764	
23	BS1	4.252	-	-	-	-	69.758	-	-	-	
CP05	FS1	-	-	6.272	-	2.021	94.038	-	-	-	
CP05		-	-	-	-	-	-	-2.021	0.000	872.743	