

Delaware Canal Survey Map Series 1964 + 1977 notes

Editor's Spreadsheet Notes (Version 090104 for web)

By Peter Sperry for Friends of the Delaware Canal

Column 1: Mile Post (MP) indicated on survey sheets, to 0.001 mile (ca. 5 ft.). Miles in italics are editor's numbers, obtained by interpolation using a map wheel, GPS information, etc. They are believed to be accurate to within 0.01 mile.

Column 2: Features that are not primary canal structures, e.g., bridges and culverts as opposed to locks and aqueducts.

Column 3: Canal Structures, e.g., locks, gates, aqueducts. Also editor's notes in italics. Some features and structures had (and have) different names historically and currently depending on the publication.

Columns 4-5: Universal Transverse Mercator (UTM) metric Northing and Easting coordinates of the MP or other object position. These were obtained from the 300 dpi digital map scans after calibration at typically 4 grid intersection points toward the corners. UTM Zone 18 (of 60 around the world) is where we are. The survey maps are referenced to North American Datum (NAD) of 1927, and are in so-called PA State Plane coordinates in 500' intervals as indicated on the grid. The PA State Plane coordinates at the calibration points were converted to UTM values for the more current NAD 1983 datum practically equal to WGS 84*. One can also generate the so-called geographic coordinates of all points, i.e., degrees-minute-second, but these aren't generally as useful and physically meaningful as the metric system. For instance, the straight line distance between any two UTM values is easily calculated as the root of the sum of squares of the differences between the N and B values.

Italicized entries were estimated by the editor using a Garmin OPS III and are thought to be accurate to within about 5 meters as a result of averaging the data for several minutes.

Columns 6-7: contain values of geographic coordinates in NAD 83 for the integer MPs. The 5 figure precision indicated is merely the unrounded output of the conversion software for the input UTM values which are certainly accurate to no better than 1 or 2 meters.

Column 8: USGS 7.5' Topographic map quadrangle. These are available on paper or for download on the web from Penn State. They are also 300 dpi scanned TIFF files.

* Conversion of PA (or any state) plane coordinates in either NAD 27 or NAD 83 datums to UTM metric, or geographic coordinates, also in either datum can be done with a piece of PC based software obtainable from the USGS, called CORPSCON. All kinds of cross conversions can be done. This work used a Macintosh running CORPSCON under Virtual PC.

MP	Features	Canal Structures	UTM 18 N	UTM 18 E	North Geogr	West Geogr	7.5' Topo Quad
	not primary canal structures	on Survey Map	NAD 83	NAD 83	NAD 83	NAD 83	
miles		(notes)	meters	meters	dd mm ss.ss	ddd mm ss.ss	
0.000	No indicator where MP 0 is located !		?	?			Bristol
0.06	at bank of Delaware River (on map)		4438119	512198			Bristol
0.14	(Riverfront Park)	Tide Lock	4438204	512102			Bristol
0.29		Lock 1	4438381	511922			Bristol
0.390	Mill St - bridge?		4438518	511918			Bristol
0.49		Lock 2	4438654	511997			Bristol
0.55		Lock 3	4438741	512046			Bristol
0.773	Beaver St		4439012	512282			Bristol
0.962	Washington St		4439247	512481			Bristol
1.000			4439304	512511	40 06 14.18498	074 51 11.55321	Bristol
1.110	Jefferson Ave		4439440	512623			Bristol
1.297	PA RR 3 tracks - bridge?		4439693	512767			Bristol
1.356	2 siding tracks - culvert		4439788	512762			Bristol
1.424		waste gate	4439899	512793			Bristol
1.746	PA RR to scrap yard - removed		4440371	512983			Bristol
2.000			4440692	513238	40 06 59.16410	074 50 40.74346	Bristol
2.119	Green Ln - culvert		4440865	513333			Bristol
2.160	PA RR - culvert		4440937	513362			Bristol
2.291	PA/NJ Turnpike - culvert		4441130	513435			Bristol
2.549	Beaver Dam Rd - culvert		4441518	513540			Bristol
2.706		Lock 4	4441769	513607			Trenton West
3.000			4442079	513945	40 07 44.10957	074 50 10.76756	Trenton West
3.085	Edgley Rd - culvert		4442151	514062			Trenton West
3.432	Haines Rd - culvert		4442570	514439			Trenton West
4.000			4443102	515179	40 08 17.21300	074 49 18.53967	Trenton West
4.023	culvert outlet-Levittown Shop Ctr		4443125	515207			Trenton West
4.28	Levittown Parkway		4443434	515486			Trenton West
4.36	KFC (next to Dunkin Donuts)		4443549	515541			Trenton West
4.604	Rt 13 Southbound - culvert		4443858	515765			Trenton West
4.667	Rt 13 Northbound - culvert		4443918	515851			Trenton West
5.000			4444362	516136	40 08 58.01603	074 48 37.98381	Trenton West
5.305	Levitt Corp drain pipe under canal		4444822	516286			Trenton West
5.582	Mill Creek Rd - culvert		4445260	516419			Trenton West
5.692		waste gate	4445429	516471			Trenton West
5.779	Martins Creek - culvert under canal		4445558	516527			Trenton West
6.000			4445800	516792	40 09 44.61016	074 48 10.12209	Trenton West
6.162	Wheatsheaf Rd - culvert		4445967	517000			Trenton West
6.346	Old Rt 13		4446092	517247			Trenton West

7.000			4446884	517837	40 10 19.69119	074 47 25.83715	Trenton West
7.609	S end Tyburn Rd culvert		4447838	518067			Trenton West
7.713	N end Tyburn Rd culvert		4447999	518104			Trenton West
8.000			4448438	518260	40 11 10.06097	074 47 07.79378	Trenton West
8.691	US Steel RR (2 tracks) - culvert		4449478	518583			Trenton West
8.746	PA RR 3 tracks - bridge		4449599	518617			Trenton West
9.000			4449984	518750	40 12 00.16497	074 46 46.90984	Trenton West
9.310	Lincoln Highway (Rt 1) - culvert		4450445	518956			Trenton West
9.530	Bridge St - bridge		4450800	518977			Trenton West
9.720	Pennsylvania Ave - bridge		4451102	518992			Trenton West
9.917	boro foot bridge (Morrisville)		4451424	518992			Trenton West
10.000			4451559	518989	40 12 51.22897	074 46 36.63315	Trenton West
10.040	Franklin St - no bridge?		4451626	518974			Trenton West
10.179		waste gate	4451820	518863			Trenton West
10.219	Maple Ave - culvert		4451875	518816			Trenton West
10.320	Trenton Ave - culvert		4451993	518707			Trenton West
10.691	Ferry Rd		4452230	518175			Trenton West
10.706	culvert		4452233	518151			Trenton West
10.882	arch storm sewer		4452304	517874			Trenton West
11.000			4452371	517698	40 13 17.66698	074 47 31.17055	Trenton West
12.000			4452699	516222	40 13 28.41283	074 48 33.59220	Trenton West
12.261	Black Rock Rd - culvert		4452983	515917			Trenton West
13.000			4453713	514973	40 14 01.38446	074 49 26.35625	Trenton West
13.281	Yardley Water Co 12" main		4454027	514641			Trenton West
13.305	Reading RR 2 tracks - bridge		4454052	514610			Trenton West
13.340		Lock 5	4454103	514556			Trenton West
13.486	Letchworth Ave - bridge		4454238	514375			Trenton West
13.751	College Ave - bridge		4454493	514035			Trenton West
13.977	Afton Ave - bridge		4454764	513789			Trenton West
14.000			4454790	513763	40 14 36.39041	074 50 17.47900	Trenton West
14.011	Brock Creek	aqueduct - Yardley (Brock Creek)	4454807	513747			Trenton West
14.376	foot bridge (extension Fuld Ave)	(Mary Yardley Foot Bridge)	4455206	513301			Trenton West
14.693	private bridge ("Dr. Sommers")	(Authentic Camel Back)	4455620	512990			Pennington
14.871		Lock 6 (Lear's Lock)	4455858	512828			Pennington
15.000			4456033	512716	40 15 16.76520	074 51 01.70457	Pennington
15.117	I95/Scudders Falls - bridge		4456202	512630			Pennington
15.15		overflow, natural	4456248	512605			Pennington
15.227	Woodside Rd - culvert		4456367	512560			Pennington
15.24		waste gate	4456386	512554			Pennington
15.483	(Park Maintenance Area - Yardley)	Lock 7	4456752	512406			Pennington
15.947	(Dyers Creek)	waste gate, overflow	4457395	512020			Pennington
16.000			4457467	511973	40 16 03.31462	074 51 33.06084	Pennington

16.097	Mt. Eyre Rd - bridge		4457602	511892			Pennington
16.348	bridge ("Milk House")	<i>(Queen Truss)</i>	4457997	511766			Pennington
16.686	bridge, camelback ("Goat Farm")	<i>(Authentic Camel Back)</i>	4458525	511625			Pennington
17.000			4458989	511410	40 16 52.70697	074 51 56.80072	Pennington
17.002	Hough's Creek - 60'	aqueduct - Taylorsville (<i>Hough's Creek</i>)	4458989	511410			Pennington
17.325	bridge ("Tebola Beans") (<i>steel beam</i>)	<i>(Rebuilt, of oil truck fame)</i>	4459333	511015			Pennington
17.589	bridge, camelback ("White's Bridge")		4459569	510654			Pennington
17.852	Rt 532 - bridge	<i>(Washington Crossing)</i>	4459939	510442			Lambertville
18.000			4460165	510370	40 17 30.89765	074 52 40.77475	Lambertville
18.482	pedestrian bridge (Crow's Bridge)		4460895	510086			Lambertville
18.756	remnants of Malone's Lower Bridge		4461275	509838			Lambertville
19.000			4461573	509588	40 18 16.59770	074 53 13.82063	Lambertville
19.120	Malone's Upper Bridge ("Buckstone")	<i>(David Library)</i>	4461715	509456			Lambertville
20.000			4462575	508305	40 18 49.14554	074 54 08.12583	Lambertville
20.020	Rt 32 - bridge		4462585	508280			Lambertville
20.041	Jericho Creek (formerly Stoney Run) - 52'	aqueduct - Lawless (<i>Stoney Run</i>)	4462600	508249			Lambertville
20.406	private foot bridge (Morgan Arms)		4462841	507708			Lambertville
20.455	private foot bridge (Morgan Arms)		4462886	507633			Lambertville
21.000			4463380	506920	40 19 15.29993	074 55 06.77540	Lambertville
21.459	bridge - no name given (<i>Concrete Deck</i>)		4463872	506356			Lambertville
21.789		guard lock, foot bridge	4464225	505963			Lambertville
21.819		waste gate	4464253	505927			Lambertville
22.000			4464412	505682	40 19 48.80487	074 55 59.20071	Lambertville
22.164		overflow, Nealy's Creek	4464530	505432			Lambertville
22.200	bridge, camelback, pedestrian	<i>(Authentic Camel Back)</i>	4464565	505378			Lambertville
22.266	culvert and fill	<i>(Wash. Cross. Park/Bowman's Hill)</i>	4464622	505289			Lambertville
23.000			4465646	504699	40 20 28.84967	074 56 40.82688	Lambertville
23.045		Ferman's Creek inlet	4465704	504657			Lambertville
23.573		waste gate (flop gate)	4466520	504423			Lambertville
23.69	bridge, camelback, vehicular		4466695	504396			Lambertville
23.742	bridge - Union Paper		4466789	504386			Lambertville
23.81	foot bridge		4466898	504382			Lambertville
23.82	<i>("Paper Mill Lock" - removed 1847)</i>	lock removed	4466924	504382			Lambertville
23.840	bridge - Union Mills		4466951	504379			Lambertville
23.990	bridge	inlet gate to Delaware (E of canal)	4467204	504398			Lambertville
24.000		<i>(on bridge)</i>	4467210	504369	40 21 19.58184	074 56 54.77580	Lambertville
24.001	bridge - Chez Odette		4467210	504369			Lambertville
24.01		Lock 8 (flop gate upper end)	4467232	504367			Lambertville
24.121		Lock 9	4467404	504349			Lambertville
24.14		waste gate, Dark Hollow Creek	4467442	504341			Lambertville
24.15		overflow	4467457	504337			Lambertville
24.20	Main St - culvert		4467531	504308			Lambertville

24.25		Lock 10	4467604	504276			Lambertville
24.30		Lock 11	4467666	504246			Lambertville
24.309	looks like concrete/bridge head of Lock 11	(Locktender's House - FODC)	4467684	504237			Lambertville
24.481	Mechanic St - bridge		4467942	504106			Lambertville
24.53	Aquetong Creek - 54'	aqueduct - New Hope (<i>Ingham Creek</i>)	4468016	504068			Lambertville
24.577	Ferry St - bridge		4468078	504038			Lambertville
24.640	Bridge St (Old Rt 202) - bridge		4468175	504005			Lambertville
25.000			4468739	503857	40 22 09.18136	074 57 16.44880	Lambertville
25.409	Rabbit Run Bridge		4469396	503712			Stockton
25.69	New Rt 202 Bridge (penciled in)		4469830	503589			Stockton
26.000			4470291	503380	40 22 59.52509	074 57 36.64575	Stockton
26.136	Phillip's Mill Bridge		4470498	503276			Stockton
26.799	Lower Limeport Bridge		4471422	502736			Stockton
27.000			4471645	502509	40 23 43.45059	074 58 13.56783	Stockton
27.213	Upper Limeport Bridge		4471873	502245			Stockton
27.681	Centre Bridge-Stockton Bridge	(<i>Dilly's Corner</i>)	4472359	501687			Stockton
28.000			4472622	501246	40 24 15.14792	074 59 07.13760	Stockton
28.024	Redfield Bridge		4472650	501200			Stockton
28.863		stop gate	4472811	499888			Lumberville
28.880		waste gate	4472824	499865			Lumberville
28.967	road over culvert and fill	(Virginia Forrest Recreation Area)	4472874	499736			Lumberville
29.000			4472882	499685	40 24 23.58365	075 00 13.36455	Lumberville
29.48		overflow, concrete	4472758	498924			Lumberville
29.912	private bridge - Delaware Quarries		4472538	498263			Lumberville
30.000			4472488	498132	40 24 10.79771	075 01 19.24976	Lumberville
30.010	culvert under canal (<i>Cuttalossa Creek</i>)		4472481	498115			Lumberville
30.146		overflow	4472455	497901			Lumberville
30.470		waste gate and overflow	4472564	497382			Lumberville
30.914	foot bridge, Lumberville to Bulls Island		4472943	496784			Lumberville
31.000			4473008	496664	40 24 27.64636	075 02 21.53935	Lumberville
31.018		Lock 12	4473021	496638			Lumberville
31.111	Paunaucussin Creek	aqueduct - Lumberville (<i>Paunacoussing Crk</i>)	4473090	496496			Lumberville
31.230		creek entrance	4473194	496333			Lumberville
31.285		overflow	4473255	496278			Lumberville
31.425	Raritan Dam (<i>wing dam</i>)		4473449	496166			Lumberville
32.000			4473825	495349	40 24 54.12138	075 03 17.35347	Lumberville
32.066		waste gate and spillway	4473858	495260			Lumberville
32.363	(<i>bridge just S of</i>)	Lock 13	4474147	494869			Lumberville
32.4	(<i>Pt. Pleasant Pumping Station</i>)	(<i>approx., between Lock 13-14</i>)					Lumberville
32.524		Lock 14	4474346	494713			Lumberville
32.547		waste gate	4474374	494686			Lumberville
32.712	bridge, at Kinsman Company		4474576	494528			Lumberville

32.750	Tohickon Creek - 221'	aqueduct - Point Pleasant (<i>Tohickon Creek</i>)	4474640	494509				Lumberville
32.842	Point Pleasant Ave - bridge		4474777	494465				Lumberville
33.000			4475023	494410	40 25 32.95520	075 03 57.23545		Lumberville
33.386	road over culvert ("Clymers")	Smithtown Bridge No. 1 (<i>Walter's Nursery</i>)	4475645	494326				Lumberville
33.945	Smithtown Bridge No. 2 ("Solidays")	(<i>reconstructed 3/2003</i>)	4476535	494150				Lumberville
34.000			4476621	494128	40 26 24.77588	075 04 09.25647		Lumberville
34.314		overflow	4477117	494002				Lumberville
35.000			4478203	493755	40 27 16.07470	075 04 25.14568		Lumberville
35.176	Smithtown Bridge No. 3		4478479	493790				Lumberville
35.19		Lock 15/16	4478504	493732				Lumberville
35.557	Smithtown Bridge No. 4		4479073	493879				Lumberville
35.574		waste gates	4479099	493885				Lumberville
35.879	Smithtown Bridge No. 5		4479561	494044				Lumberville
36.000			4479751	494084	40 28 06.28914	075 04 11.22919		Lumberville
36.189		Lock 17	4480064	494096				Lumberville
36.814		waste gate	4481069	494133				Lumberville
36.92	bridge ("Petritis")		4481238	494136				Lumberville
37.000			4481368	494149	40 28 58.73430	075 04 08.52261		Lumberville
37.181	vehicle bridge		4481662	494165				Lumberville
37.195	Tinicum Creek - 118'	aqueduct - Tinicum	4481684	494166				Lumberville
37.361		waste gates	4481946	494160				Lumberville
37.503	Rt 32 - bridge		4482173	494121				Lumberville
37.80		spillway, masonry	4482674	494074				Lumberville
38.000			4482975	494020	40 29 50.85004	075 04 14.05650		Lumberville
38.242	road over culvert		4483355	493928				Frenchtown
38.60	<i>Tinicum Park Picnic Area</i>	(<i>road extension, sign at canal</i>)	4483915	493749				Frenchtown
38.61	<i>Buckeye Co. Pipeline Crossing</i>	(<i>est. center at canal edge</i>)	4484083	493701				Frenchtown
39.000			4484552	493707	40 30 41.98764	075 04 27.41051		Frenchtown
39.34		spillway	4485087	493747				Frenchtown
39.398		waste gate	4485189	493745				Frenchtown
39.945	covered bridge (Uhlertown)		4486079	493809				Frenchtown
39.970		Lock 18	4486119	493814				Frenchtown
40.000		waste gates	4486168	493813				Frenchtown
40.000			4486168	493813	40 31 34.40119	075 04 22.96310		Frenchtown
40.815	bridge (county) (<i>Jugtown Hill Road</i>)		4487457	493651				Frenchtown
41.000			4487711	493495	40 32 24.43540	075 04 36.53603		Frenchtown
41.311	bridge ("Hazzards")	(<i>Authentic Camel Back</i>)	4488127	493216				Frenchtown
41.756	(DCSP Park Office - Lodi)	Lock 19	4488739	492825				Frenchtown
41.829	road over culvert (<i>Lodi Hill/Red Cliff Road</i>)	(<i>DCSP access from Rt. 32</i>)	4488835	492753				Frenchtown
41.84		waste gate - double	4488849	492742				Frenchtown
42.000			4489039	492568	40 33 07.47728	075 05 16.00019		Frenchtown
42.360	bridge ("Sphars")	(<i>Authentic Camel Back</i>)	4489477	492186				Frenchtown

42.701	bridge ("Gottlieb")		4489886	491831				Frenchtown
42.777	bridge, foot, private ("Minders")		4489995	491774				Frenchtown
43.000	bridge ("Dillcio")		4490276	491552				Frenchtown
43.000			4490276	491552	40 33 47.56073	075 05 59.25886		Frenchtown
43.279	bridge ("Singleys")(Homestead Genl Store)		4490583	491233				Frenchtown
43.845	bridge (Rt 32, over canal)		4491048	490446				Frenchtown
44.000			4491143	490216	40 34 15.62635	075 06 56.12174		Frenchtown
44.513	bridge ("Otto Hoffs")		4491254	489396				Riegelsville
44.887	bridge		4491267	488791				Riegelsville
45.000			4491270	488604	40 34 19.67096	075 08 04.68954		Riegelsville
45.654	road over culvert		4491169	487564				Riegelsville
45.78		former stop gate - crumbling	4491076	487373				Riegelsville
45.838	Narrowsville waste gate	waste gate	4491025	487306				Riegelsville
45.86	foot bridge		4491003	487279				Riegelsville
46.000			4490847	487115	40 34 05.87361	075 09 07.98774		Riegelsville
46.730	(Narrowsville, Nockamixon Cliffs)	Lock 20	4490177	486152				Riegelsville
47.000			4490077	487536	40 33 40.81958	075 10 06.57254		Riegelsville
47.141	foot bridge, private ("Mrs. Copperwaites")	(steel beams with planking)	4490033	485504				Riegelsville
47.162	Gallows Run - 68'	aqueduct - Gallows Run	4490046	485472				Riegelsville
47.708	Evans Bridge (Island Road)		4490097	484614				Riegelsville
47.878	Nicholas Bridge		4490241	484372				Riegelsville
48.000			4490367	484226	40 33 50.12624	075 11 10.81063		Riegelsville
48.244	Trauger's Br (lower, Farm Mkt, Island Rd)		4490695	484019				Riegelsville
48.573		stop gate, Trauger's stop gate	4491192	483810				Riegelsville
48.603	Trauger's Bridge (upper)		4491236	483791				Riegelsville
48.700		overflow spillway	4491380	483740				Riegelsville
49.000			4491760	483446	40 34 35.24905	075 11 44.11253		Riegelsville
49.227		Lock 21	4492104	483344				Riegelsville
49.267	Durham Creek	aqueduct - Durham	4492154	483342				Riegelsville
49.403	bridge, removed (new large wooden bridge)	(to PA Fish & Boat, access & lot)	4492378	483383				Riegelsville
50.000			4493328	483783	40 35 22.88300	075 11 29.91442		Riegelsville
50.340	Riegelsville Bridge		4493776	483696				Riegelsville
51.000			4494819	483492	40 36 14.46118	075 11 42.44426		Riegelsville
51.31	Bucks - Northampton Cty Line ("approx")		4495258	483283				Riegelsville
51.327		Rocky Falls stop gate	4495289	483267				Riegelsville
51.327	foot bridge (to Mueller's Mini Mall)		4495289	483267				Riegelsville
51.356		Rocky Falls waste gate	4495333	483245				Riegelsville
52.000			4496262	482826	40 37 01.21122	075 12 10.92519		Riegelsville
52.136	Kleinhan's Creek - 17'	aqueduct - Kleinhan's (footbridge)	4496460	482919				Riegelsville
53.000			4497241	483873	40 37 33.03772	075 11 26.45541		Easton
53.104	bridge to Roosevelt SP		4497405	483842				Easton
53.11	(Theodore Roosevelt Recreation Area)	Lock 22/23 (Groundhog Lock)	4497424	483839				Easton

53.425	foot bridge (steel beam/red wooden rails)		4497920	483771			Easton
53.711	bridge (concrete)		4498375	483698			Easton
53.948	(wooden foot bridge spans overflow)	emergency overflow	4498734	483552			Easton
54.000			4498808	483516	40 38 23.83258	075 11 41.79903	Easton
54.076		overflow	4498913	483453			Easton
54.171	foot bridge (Dr. Smith's Bridge)	(Authentic Camel Back)	4499045	483389			Easton
54.728	(nearby hamlet is "Brown's Terrace")	waste gate (next to 54.728)	4499737	482853			Easton
54.728	foot bridge		4499737	482853			Easton
55.000			4500156	482915	40 39 07.50620	075 12 07.51805	Easton
56.000			4501428	483901	40 39 48.83031	075 11 25.64947	Easton
56.20	wooden foot bridge to Wy-Hit-Tuk Park	MP calculated rel. to MP56	4501623	484146			Easton
56.570	foot bridge (Wy-Hit-Tuk Park)		4502057	484561			Easton
56.570		stop gate	4502057	484561			Easton
56.708		overflow	4502192	484736			Easton
56.9	I-78 mid span over canal - rel. to MP 57	MP calculated rel. to MP 57	4502465	484912			Easton
57.000			4502603	484946	40 40 27.00820	075 10 41.24497	Easton
57.27	footbridge (old stop gate site)		4503013	484809			Easton
57.297		waste gate (black iron frame)	4503042	484773			Easton
58.000			4503171	483692	40 40 45.34334	075 11 34.71359	Easton
58.002		stop gate	4503172	483690			Easton
58.88		Lock 24, waste gate nearby	4504133	482723			Easton
58.899	Canal Begin	begin canal channel	4504161	482708	40 41 17.37809	075 12 16.72950	Easton