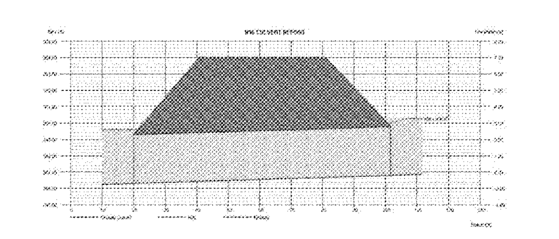
Culvert Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. — Wednesday, Dec 21 2016

B16 CULVERT REPORT

Invert Elev Dn (ft)	= 346.31	**Calculations**	
Pipe Length (ft)	= 81.63	Qmin (cfs)	= 46.85
Slope (%)	= 0.60	Qmax (cfs)	= 46.85
Invert Elev Up (ft)	= 346.80	Tailwater Elev (ft)	= 349.62
Rise (in)	= 36.0		
Shape	= Circular	**Highlighted**	
Span (in)	= 36.0	Qtotal (cfs)	= 46.85
No. Barrels	= 1	Qpipe (cfs)	= 46.85
n-Value	= 0.013	Qovertop (cfs)	= 0.00
Culvert Type	= Circular Concrete	Veloc Dn (ft/s)	= 6.63
Culvert Entrance	= Groove end projecting (C)	Veloc Up (ft/s)	= 6.63
Coeff. K,M,c,Y,k	= 0.0045, 2, 0.0317, 0.69, 0.2	HGL Dn (ft)	= 349.62
		HGL Up (ft)	= 350.02
Embankment		Hw Elev (ft)	= 350.29
Top Elevation (ft)	= 354.00	Hw/D (ft)	= 1.16
Top Width (ft)	= 40.00	Flow Regime	= Inlet Control
Crest Width (ft)	= 100.00		



2 YEAR INLET COMPUTATIONS

Inlet No.	Inlet Type	Length (ft)	DA Drain Area (acres)	C Runoff Coefficient	I Intensity (in/hr)	Q Incr. Flow (cfs)	Qb Carry-over Flow (cfs)	Qt Accum. Flow (cfs)	S Gutter Slope (%)	Sx Cross Slope (%)	T Spread On Grade (ft)	W Gutter Width (ft)	W / T	Sw Gutter Cross Slope (%)	Sw / Sx	Eo (App. 9C-8)	a (in)	S'w = a / (12W) (%)	Se = Sx + S'w (Eo) (%)	Lt Comp. Length (9C-17) (ft)	L Specified Length (ft)	L / Lt	E Eff. 9C-18)	Qi Int'x Flow (cfs)	Qb Byp. Flow (cfs)	d Depth (ft)	h (ft)	d / h	Ts Spread In Sag (ft)	Remarks
A9	Curb DI-3C	10	0.39	0.80	5.01	1.56		1.56		2.00		1.50		8.33	4.17											0.14	0.46	0.31	6.82	In Sag
A10	Curb DI-3C	10	0.45	0.65	5.01	1.47		1.47		2.00		1.50		8.33	4.17											0.14	0.46	0.30	5.24	In Sag
A11	Curb DI-3C	6	0.28	0.60	5.01	0.84		0.84		2.00		1.50		8.33	4.17											0.29	0.46	0.63	3.18	In Sag
A12	Curb DI-3C	10	0.52	0.80	5.01	2.08		2.08		2.00		1.50		8.33	4.17											0.17	0.46	0.38	8.35	In Sag
A13	Curb DI-3C	12	0.83	0.70	5.01	2.91		2.91		2.00		1.50		8.33	4.17											0.21	0.46	0.47	10.22	[illegible]
A16	Curb DI-3B	12	0.42	0.85	5.01	1.79		1.79	1.00	2.00	8.55	1.50	0.18	8.33	4.17	0.52	2.64	14.66	9.57	9.8	12				–					On Grade
A18	Curb DI-3C	6	0.18	0.80	5.01	0.72		0.72		2.00		1.50		8.33	4.17											0.11	0.46	0.24		In Sag
B3	Curb DI-3CC	6	0.37	0.85	5.01	1.58		1.58		2.00		1.50		8.33	4.17											0.18	0.46	[illegible]	8.03	In Sag
B4	Curb DI-3BB	8	0.51	0.80	5.01	2.04		2.04		2.00		1.50		8.33	4.17											0.19	0.46	[illegible]	9.12	In Sag
B5	Curb DI-3C	10	0.73	0.80	5.01	2.93		2.93		2.00		1.50		8.33	4.17											0.22	0.46	0.47	10.34	[illegible]
B6	Curb DI-3B	8	0.55	0.80	5.01	2.20		2.20		2.00		1.50		8.33	4.17											0.20	0.46	0.44	[illegible]	[illegible]
B7	Curb DI-3C	10	0.63	0.80	5.01	2.53		2.53		2.00		1.50		8.33	4.17											0.20	0.46	0.43	[illegible]	In Sag
B8	Curb DI-3C	6	0.20	0.80	5.01	0.80		0.80		2.00		1.50		8.33	4.17											0.12	0.46	[illegible]	[illegible]	In Sag
B9	Curb DI-4C	12	0.85	0.80	5.01	3.41		3.41		2.00		1.50		8.33	4.17											[illegible]	0.46		10.38	In Sag
B10	Curb DI-3C	12	0.87	0.80	5.01	3.49		3.49		2.00		1.50		8.33	4.17											[illegible]	0.46	0.48	10.54	In Sag
B15	Curb DI-4B	14	0.33	0.85	5.01	1.41		1.41	1.00	2.00	7.17	1.50	0.21	8.33	4.17	0.60	2.64	14.66	10.81	[illegible]	14				–					On Grade
B17	Curb DI-3B	6	0.10	0.85	5.01	0.43		0.43	1.00	2.00	4.64	1.50	0.32	8.33	4.17	0.81	2.64	14.66	13.86	[illegible]	6			[illegible]	–					On Grade

NOTE: ALL GRAT[illegible] INLETS ON [illegible]RADE, HGL COM[illegible]TATIONS [illegible]OWN FOR CAPA[illegible]Y ONLY

SWM NARRATIVE

OUTFALL FROM THIS SITE FLOWS WEST ACROSS HAWLING FARM BOULEVARD THROUGH TWO RCP CULVERTS. THE CULVERT CONVEY RUNOFF TO A STORMWATER MANAGEMENT FACILITY PROPOSED BY OTHERS.

STORMWATER MANAGEMENT IS PROVIDED FOR THIS SITE BY A WET POND PROPOSED UNDER COMPASS CREE[illegible]MERCIAL CENTER PHASE I INFRASTRUCTURE PLAN CPAP 2014-0034. SEE "STORMWATER MANAGEMENT PLANS" SHEETS 81-95 [illegible] THIS SET PLAN FOR COMPUTATIONS AND DETAILS.

THE DESIGN OF THE WET POND IS BASED ON CHAPTER 5 (ADOPTED 11/9/2009) OF THE LOUDOU[illegible]UNTY FACILITIES S[illegible]NDARDS MANUAL (FSM). THE DESIGN IS NOT SUBJECT TO NEW TECHNICAL CRITERIA (WATER QUAL[illegible]ANTITY) OF THE [illegible] CHAPTER 5 (ADOPTED 5/21/2014) BECAUSE AN INITIAL GENERAL PERMIT HAS BEEN OBTAINED PRIOR TO JU[illegible] UNDER THE C[illegible]MPASS CREEK PLAN. SEE DOCUMENTATION AND NARRATIVE ON SHEET 89 OF THIS SET.

THE WET POND IS PROPOSED WITH AQUATIC BENCH (RETENTION BASIN III[illegible] FOUR TIMES TH[illegible]UALITY VOLUME), PROVIDING WATER QUALITY FOR THE ULTIMATE DEVELOPMENT OF CO[illegible]MERCIAL CE[illegible] THIS SITE.

THE WET POND ALSO PROVIDES STORM WATER DETENTION FO[illegible] 10 YEAR E[illegible] ULTIMA[illegible] DEVEL[illegible] INCLUDING THIS SITE.

ADEQUATE OUTFALL IS PROVIDED FOR DISCHARGE [illegible] THE WET P[illegible] INTO EXISTING REC[illegible]ELS.

THIS PROJECT IS IN ADHERENCE WITH THE CO[illegible]TIONS FOR THE W[illegible] POND PROPOSED WITH [illegible]STRAIL PLAN. THE SITE IS A COMMERCIAL SITE PLAN, WHICH MATC[illegible]OFF CURVE NU[illegible]BERS ASSOCIATED WITH "BUS[illegible]" (CN = 92 FOR B SOILS, 94 FOR C SOILS) USED IN THE HYDRO[illegible]OGIC CALCU[illegible] FOR ULTIMA[illegible] DEVELOPMENT.

PER PROFFER IX (SEE SHEET [illegible] THE WET POND MU[illegible]STRUCT[illegible] AND OPERATIONAL PRIOR TO APPROVAL OF THE FIRST OCCUPANCY PERMIT FOR [illegible]URE THAT UTILI[illegible] FACI[illegible]Y.

10 YEAR HEADWATER COMPUTATIONS

Structure No.	Structure Type	DA Drainage Area (ac)	C Runoff Coefficient	I Intensity (in/hr)	Q 10 Yr Flow (cfs)	Head Water (ft)	Rim / Invert Elevation (ft)	10 Yr WSE (ft)	Remarks
[illegible]	Grate DI-1	0.62	0.35	6.75	1.46	0.13	Rim 352.50	352.63	
A3	Grate DI-1	0.70	0.70	6.75	3.31	0.25	Rim 352.70	352.95	
A8	Grate DI-1 (Double)	1.15	0.75	6.75	5.82	0.22	Rim 356.00	356.22	
A14	Grate DI-1 (Quad)	0.76	0.85	6.75	4.36	0.11	Rim 352.60	352.71	
A15	Grate DI-1 (Double)	0.36	0.85	6.75	2.07	0.11	Rim 354.42	354.53	
A17	Grate DI-1 (Double)	1.09	0.80	6.75	5.89	0.22	Rim 356.50	356.72	
B11	Grate DI-1 (Quad)	0.81	0.85	6.75	4.65	0.11	Rim 352.29	352.40	
B12	Grate DI-1 (Double)	0.37	0.85	6.75	2.12	0.11	Rim 354.14	354.25	
B13	Grate DI-1 (Double)	0.56	0.85	6.75	3.21	0.14	Rim 351.56	351.70	
B14	Grate DI-1 (Quad)	0.98	0.85	6.75	5.62	0.13	Rim 353.95	354.08	

10 YEAR STORM COMPUTATIONS

From Point	To Point	Drain. Area (acres)	Runoff Coeff. C	CA Incr.	CA Σ	Inlet Time (min)	Rainfall Intensity (in/hr)	Q Incr. (cfs)	Q Known (cfs)	Q Σ (cfs)	Invert Elev. Upper (ft)	Invert Elev. Lower (ft)	Length (ft)	Slope (%)	Dia. (in)	n	Capacity (cfs)	Velocity (fps)	Flow Time Incr. (min)	Flow Time Σ (min)	Q / Qfull	V / Vfull	Vfull	Remarks
A11	A10	0.28	0.60	0.17	0.17	5.00	6.75	1.15	–	1.15	355.40	354.70	119.22	0.59%	12	0.013	2.74	3.29	0.60	5.60	0.42	0.84	3.49	
A10	A9	0.45	0.65	0.29	0.46	5.60	6.58	1.91	–	3.03	354.45	353.28	153.64	0.76%	15	0.013	5.65	4.83	0.55	6.15	0.54	1.02	4.81	
A9	A8	0.39	0.80	0.31	0.77	6.15	6.43	1.99	–	4.95	352.53	351.59	100.73	0.86%	24	0.013	21.09	5.40	0.34	6.49	0.23	0.80	6.71	
A8	A7	1.15	0.75	0.86	1.63	6.49	6.34	5.45	–	10.33	351.49	349.75	258.38	0.57%	24	0.013	18.81	6.02	0.72	7.21	0.55	1.02	5.95	
A7	A6	–	–	–	1.77	7.21	6.14	–	–	24.53	349.56	349.37	75.92	0.50%	30	0.013	29.10	5.69	0.19	7.40	0.85	1.12	5.93	
A6	A5	–	–	–	3.64	7.40	6.08	–	–	30.03	349.17	349.05	23.04	0.52%	36	0.013	28.68	6.89	0.06	7.46	1.05	1.14	6.05	
A5	A3	–	–	–	2.64	7.46	5.07	–	0.18	30.18	348.35	347.55	111.45	0.63%	36	0.013	53.00	7.74	0.24	7.70	0.57	1.03	7.50	
A3	A2	0.70	0.70	0.49	3.13	7.70	6.00	2.94	–	32.93	347.75	346.56	239.48	0.50%	36	0.013	47.14	7.15	0.56	8.26	0.70	1.07	6.67	
A2	A1	–	–	–	3.49	8.26	5.84	–	–	34.54	346.46	346.15	60.92	0.51%	36	0.013	47.71	7.32	0.14	8.40	0.72	1.08	6.75	
A1	Ex 60	0.62	0.35	0.22	5.67	5.45	5.80	1.28	–	47.07	346.05	345.80	50.11	0.50%	36	0.013	47.24	7.22	0.11	5.51	1.00***	1.16	6.65	
A15	A14	0.36	0.85	0.31	0.31	5.00	6.75	2.09	–	2.09	351.13	349.40	75.04	2.29%	12	0.013	5.41	6.36	0.20	5.20	0.39	0.92	6.09	
A14	A13	0.76	0.85	0.65	0.96	5.20	6.69	4.35	–	6.43	349.15	348.25	57.55	1.56%	15	0.013	8.05	7.28	0.13	5.33	0.79	1.10	6.59	
A13	A12	0.83	0.70	0.58	1.54	5.33	6.66	3.86	–	10.25	347.77	347.04	135.73	0.54%	30	0.013	30.35	5.55	0.41	5.74	0.34	[illegible]	[illegible]	
A12	A1	0.52	0.80	0.42	1.96	5.74	6.54	2.75	–	12.83	346.94	346.55	75.62	0.50%	30	0.013	29.15	5.73	0.22	5.96	[illegible]	0.96	5.94	
A16	A2	0.42	0.85	0.36	0.36	5.00	6.75	2.45	–	2.42	349.53	348.48	55.92	1.77%	12	0.013	4.76	6.09	0.15	[illegible]	0.51	1.00	[illegible]	
A17	A8	1.09	0.80	0.87	0.87	5.00	6.75	5.87	–	5.87	355.05	352.75	18.92	1.53%	15	0.013	8.02	7.08	0.04	[illegible]	0.73	1.08	[illegible]	
A19	A18	–	0.80	–	–	–	–	–	13.97	13.97	355.00	352.85	120.53	1.78%	18	0.013	14.03	9.05	0.22	[illegible]	1.00	1.14	[illegible]	Siphonic Manhole
A18	A7	0.18	0.80	0.14	0.14	5.22	6.69	0.96	–	14.91	352.75	350.65	104.94	2.01%	18	0.013	14.93	9.84	0.12	[illegible]	1.00	[illegible]	[illegible]	
D3	D2	0.14	0.80	0.13	0.13	5.00	6.75	0.88	–	0.88	355.75	355.65	6.67	1.50%	8	0.013	1.24	3.89	0.03	[illegible]	0.71	[illegible]	[illegible]	[illegible]
D2	D1	–	–	–	0.13	5.03	6.74	–	–	0.88	355.88	355.00	81.09	0.75%	8	0.013	1.05	3.39	0.45	5.48	0.84	[illegible]	3.00	
D1	B8	–	–	–	0.23	5.48	6.62	–	–	1.52	354.57	354.48	21.00	1.00%	12	0.013	[illegible]	4.29	0.06	5.56	[illegible]	0.94	4.85	
B8	B7	0.20	0.80	0.16	0.39	5.58	6.59	1.06	–	2.59	354.21	352.91	224.55	0.59%	15	0.013	4.93	4.02	0.93	6.49	[illegible]	1.00	4.02	
B7	B6	0.63	0.80	0.50	0.89	6.49	6.34	3.17	–	5.64	352.86	351.75	174.35	0.50%	[illegible]	[illegible]	[illegible]	[illegible]	0.63	7.12	[illegible]	[illegible]	[illegible]	
B6	B5	0.55	0.80	0.44	1.33	7.12	6.16	2.71	–	8.18	351.55	350.82	146.33	0.50%	[illegible]	[illegible]	[illegible]	[illegible]	0.47	7.59	[illegible]	1.00	5.12	
B5	B4	0.73	0.80	0.58	1.91	7.59	6.03	3.50	–	24.45	350.08	349.55	145.67	[illegible]	[illegible]	[illegible]	29.11	6.64	0.37	7.96	0.84	1.12	5.93	
B4	B3	0.51	0.80	0.41	2.32	7.96	5.93	2.43	–	26.89	349.23	348.41	163.56	[illegible]	30	[illegible]	29.12	8.71	0.41	8.37	0.92	1.13	5.93	
B3	B2	0.37	0.85	0.31	2.63	8.37	5.81	1.80	0.30	28.53	348.31	347.88	89.45	[illegible]	30	[illegible]	29.17	[illegible]	0.22	8.59	0.98	1.14	5.84	
B2	B1	–	–	–	2.72	8.59	5.75	–	–	28.69	347.76	346.47	257.11	[illegible]	30	[illegible]	29.13	6.77	0.63	9.22	0.99	1.14	5.93	
B1	EX 15	–	–	–	15.45	10.33	5.31	–	–	[illegible]*	346.57	[illegible]	[illegible]	[illegible]	[illegible]	0.013	[illegible]	12.92	[illegible]	[illegible]	0.89	1.12	[illegible]	
B12	B11	0.37	0.85	0.31	0.31	5.00	6.75	2.09	–	[illegible]	[illegible]	[illegible]	[illegible]	2.53%	[illegible]	[illegible]	16.76	6.17	0.20	5.20	0.12	0.86	6.45	
B11	B10	0.81	0.85	0.69	1.00	5.20	6.69	[illegible]	[illegible]	[illegible]	349.10	347.35	82.80	[illegible]	[illegible]	0.013	24.79	6.55	0.16	5.36	0.27	0.83	7.69	
B10	B9	0.87	0.80	0.70	1.70	5.36	[illegible]	4.59	–	11.50	347.25	346.25	199.38	[illegible]	30	0.013	28.13	5.46	0.61	5.87	0.39	0.92	5.93	
B9	B1	0.85	0.80	0.68	3.69	5.97	[illegible]	4.41	–	23.92	[illegible]	[illegible]	115.74	[illegible]	36	0.013	47.34	6.70	0.29	6.26	0.51	1.00	6.70	
B14	B13	0.98	0.85	0.83	0.83	5.00	[illegible]	5.60	–	5.60	[illegible]	[illegible]	[illegible]	2.88%	12	0.013	10.55	8.95	0.20	5.20	0.53	1.00	8.88	
B13	B9	0.56	0.85	0.48	1.31	5.20	6.69	[illegible]	–	8.77	[illegible]	[illegible]	20.00	2.05%	18	0.013	15.08	8.81	0.04	5.24	0.58	1.03	8.55	
B16	B15	11.85	0.75	8.74	8.74	10.00	5.36	[illegible]	–	46.85	346.80	346.32	81.63	0.59%	[X]	0.013	110.45	6.39	0.16	10.15	0.42	0.94	8.79	24"x48" Box Culvert
B15	B1	0.33	0.85	0.28	9.02	10.20	5.33	[illegible]	–	48.04	346.22	345.97	48.21	0.52%	[X]	0.013	103.71	7.96	0.10	10.30	0.46**	0.96	8.25	24"x48" Box Culvert
B17	B2	0.10	0.85	[illegible]	[illegible]	5.00	6.75	0.61	–	0.61	354.50	353.79	35.31	2.01%	12	0.013	5.07	4.26	0.14	5.14	0.12	0.85	5.43	
B19	B18	–	[illegible]	–	–	–	–	–	12.94	12.94	354.90	353.78	72.22	1.55%	18	0.013	13.12	8.46	0.14	5.14	0.99	1.14	7.42	Siphonic Manhole
[illegible]	B5	–	–	–	–	–	–	–	–	12.94	353.68	351.03	131.31	2.00%	18	0.013	14.88	9.46	0.23	5.37	0.87	1.13	8.42	
[illegible]	D4	[illegible]	0.80	[illegible]	[illegible]	[illegible]	6.75	0.65	–	0.66	355.75	355.53	22.00	1.00%	8	0.013	1.21	3.38	0.10	5.10	0.56	1.02	3.47	Trench Well Drain
[illegible]	D1	–	–	–	[illegible]	5.10	6.73	–	–	0.67	355.53	355.00	59.41	0.89%	8	0.013	1.13	3.36	0.38	5.48	0.58	1.03	3.23	

* ACCUMULATED [illegible] AT EX 15 IS WITHIN THE PROVIDED CAPACITY IN RECEIVING PIPE (PROPOSING 95.31 CFS WITH A CAPACITY OF 110.77 CFS). SEE SHEET 82 OF THIS SET FOR COMPUTATIONS.
** FLOW REMAINS UNDER MAXIMUM CAPACITY (46.16 CFS)
*** FLOW REMAINS UNDER MAXIMUM CAPACITY (50.66 CFS)

10 YEAR HGL COMPUTATIONS

Structure No.	Outlet WSE	Do (in)	Qo	Lo	Sfo (%)	Hf	Vo	Ho	Qi	Vi	Qi · Vi	Vi^2/2g	Hi	Angle	K	Hd	Ht	1.3 Ht	0.6 Ht	Final H	Inlet WSE	Flow Line Elev.	Inlet Shaping	Pre-Cast Structure	Junction Loss Reduction	Remarks
A1	348.20	36	47.07	50.11	0.50%	0.25	7.62	0.23	34.54	7.32	252.70	0.83	0.29	90.00	0.70	0.58	1.10	–	0.55	0.60	349.00	352.50	Yes	Yes	Yes	
A2	349.00	36	34.54	60.92	0.27%	0.16	7.32	0.21	32.93	7.15	235.44	0.79	0.28	69.00	0.60	0.48	0.97	–	0.48	0.65	349.65	354.12	Yes	Yes	Yes	
A3	349.65	36	32.93	239.46	0.24%	0.58	7.15	0.20	30.16	7.74	233.38	0.93	0.33	26.00	0.23	0.22	0.74	–	0.37	0.95	350.60	353.70	Yes	Yes	Yes	
A5	350.60	36	30.16	111.45	0.20%	0.23	7.74	0.23	30.03	6.82	207.00	0.74	0.26	72.00	0.53	0.48	0.95	–	0.47	0.70	351.30	356.29	Yes	Yes	Yes	
A6	351.30	30	30.03	23.04	0.24%	0.12	6.82	0.18	24.83	5.54	164.54	0.88	0.24	90.00	0.70	0.45	0.90	–	0.45	0.58	351.88	356.55	Yes	Yes	Yes	
A7	351.88	30	24.83	75.92	0.37%	0.29	[illegible]	0.17	14.91	9.64	143.72	1.34	0.51	90.00	0.79	1.01	1.69	–	0.84	1.12	353.00	356.32	Yes	Yes	Yes	
A8	353.00	24	10.33	258.38	0.21%	0.54	6.02	0.14	4.95	5.40	26.72	0.45	0.16	87.00	0.68	0.31	0.61	0.79	0.40	0.94	353.93	356.00	Yes	Yes	Yes	
A9	353.93	24	4.95	105.73	0.05%	0.05	5.40	0.11	3.03	4.65	14.18	0.34	0.12	10.00	0.07	0.02	0.26	0.33	0.17	0.22	354.15	357.70	Yes	Yes	Yes	
A10	354.26	15	3.03	153.54	0.22%	0.34	4.65	0.09	1.15	3.29	3.78	0.17	0.06	16.00	0.11	0.02	0.16	0.21	0.11	0.44	354.72	357.70	Yes	Yes	Yes	
A11	355.50	12	1.15	119.22	0.10%	0.12	3.29	0.04						–	–		0.04	0.05	0.03	0.15	355.65	356.10	Yes	Yes	Yes	
A12	349.00	30	12.83	75.62	0.10%	0.07	5.73	0.13	10.25	5.62	57.16	0.36	0.17	1.00	0.00	0.00	0.39	0.25	0.19	0.27	349.27	352.56	Yes	Yes	Yes	
A13	349.27	30	10.25	135.73	0.06%	0.08	5.58	0.12	6.43	7.28	46.81	0.82	0.29	90.00	0.70	0.58	0.99	1.28	0.64	0.73	349.99	351.57	Yes	Yes	Yes	
A14	349.99	15	6.43	57.55	0.89%	0.57	7.28	0.21	2.09	6.36	13.30	0.63	0.22	–	–	0.00	0.43	0.56	0.28	0.85	350.84	352.60	Yes	Yes	Yes	
A15	350.84	12	2.09	75.04	0.34%	0.28	6.36	0.16						–	–		0.16	0.20	0.10	0.36	351.22	354.42	Yes	Yes	Yes	
A16	349.65	12	2.45	55.92	0.47%	0.31	[illegible]	0.14						–	–		0.14	0.18	0.09	0.40	350.04	354.55	Yes	Yes	Yes	
A17	353.76	15	5.87	18.92	0.63%	0.16	7.08	0.19						–	–		0.19	0.25	0.13	0.28	354.04	356.50	Yes	Yes	Yes	
A18	353.00	18	14.91	104.94	2.01%	2.11	9.54	0.36	13.97	9.08	126.48	1.27	0.45	76.00	0.64	0.82	1.62	–	0.81	2.92	355.92	358.65	Yes	Yes	Yes	
A19	355.92	18	13.97	120.53	1.77%	2.13	9.05	0.32						76.00	0.64		0.32	–	0.16	2.29	358.21	359.56	Yes	Yes	Yes	
B1	347.85	42	95.15	42.96	0.55%	0.35	12.92	0.65	48.04	7.98	322.22	0.98	0.34	90.00	0.75	0.69	1.66	–	0.84	1.25	349.07	353.59	Yes	Yes	Yes	
B2	349.07	30	28.69	257.11	0.50%	1.28	6.77	0.18	28.53	6.77	193.28	0.71	0.25	88.00	0.68	0.49	0.92	–	0.46	1.74	350.81	356.69	Yes	Yes	Yes	
B3	350.81	30	28.53	89.45	0.48%	0.43	6.77	0.18	26.69	6.71	179.07	0.70	0.24	57.00	0.53	0.37	0.79	–	0.40	0.83	351.64	358.08	Yes	Yes	Yes	
B4	351.64	30	26.69	163.58	0.42%	0.69	6.71	0.17	24.46	6.64	162.49	0.59	0.24	31.00	0.29	0.20	0.61	–	0.31	1.00	352.64	357.54	Yes	Yes	Yes	
B5	352.64	30	24.46	145.67	0.36%	0.52	6.64	0.17	12.94	9.48	122.67	1.40	0.49	90.00	0.70	0.98	1.64	–	0.82	1.34	353.98	357.16	Yes	Yes	Yes	
B6	353.98	24	8.18	146.33	0.12%	0.19	5.12	0.10	5.64	4.61	25.96	0.33	0.12	75.00	0.64	0.21	0.43	0.55	0.28	0.47	354.44	357.63	Yes	Yes	Yes	
B7	354.44	15	5.64	174.35	0.29%	0.50	4.61	0.05	2.59	4.02	10.36	0.25	0.09	16.00	0.16	0.03	0.25	0.25	0.13	0.63	355.07	358.26	Yes	Yes	Yes	
B8	355.07	15	2.59	224.55	0.16%	0.36	4.02	0.06	1.52	4.29	6.53	0.29	0.10	90.00	0.70	0.20	0.36	0.47	0.24	0.59	355.67	358.50	Yes	Yes	Yes	
B9	349.07	36	23.92	115.74	0.13%	0.15	6.70	0.17	8.77	8.81	77.24	1.21	0.42	90.00	0.70	0.84	1.44	–	0.72	0.87	349.94	351.14	Yes	Yes	Yes	
B10	349.94	30	11.50	199.38	0.09%	0.15	5.46	0.12	8.70	6.55	48.98	0.67	0.23	90.00	0.70	0.47	0.82	1.06	0.53	0.68	350.63	350.79	Yes	Yes	Yes	
B11	350.63	24	8.70	82.80	0.09%	0.08	6.55	0.17	2.09	6.17	12.90	0.59	0.21	–	–	0.00	0.37	0.48	0.24	0.30	350.92	352.29	Yes	Yes	Yes	
B12	350.92	12	2.09	75.04	0.54%	0.05	6.17	0.15						–	–		0.15	0.19	0.10	0.13	351.05	354.14	Yes	Yes	Yes	
B13	349.84	18	8.77	20.00	0.70%	0.14	8.81	0.30	5.60	6.66	48.51	1.17	0.41	–	–	0.00	0.71	0.92	0.46	0.80	350.64	351.56	Yes	Yes	Yes	
B14	350.64	15	5.60	101.72	0.75%	0.76	8.66	0.29						–	–		0.29	0.38	0.19	0.95	351.50	353.95	Yes	Yes	Yes	
B15	349.17	48	48.04	48.21	0.11%	0.05	7.96	0.25	46.85	8.30	388.77	1.07	0.37	13.00	0.09	0.08	0.71	–	0.36	0.41	349.58	354.27	Yes	Yes	Yes	
B17	354.59	12	0.61	35.31	0.03%	0.01	4.30	0.07						–	–		0.07	0.09	0.04	0.05	354.64	357.12	Yes	Yes	Yes	
B18	353.98	18	12.94	131.31	1.52%	1.99	9.48	0.35	12.84	8.46	109.49	1.11	0.39	87.00	0.65	0.77	1.50	–	0.75	2.74	356.72	359.55	Yes	Yes	Yes	
B19	356.72	18	12.94	72.22	1.52%	1.10	8.46	0.28						76.00	0.62		0.28	–	0.14	1.24	357.96	358.57	Yes	Yes	Yes	

REVISIONS	BY
1. REVISED PER COUNTY AND TOWN COMMENTS	[illegible]
2. REVISED PER COUNTY AND TOWN COMMENTS	[illegible]
3. REVISED PER COUNTY AND TOWN COMMENTS	GRP

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