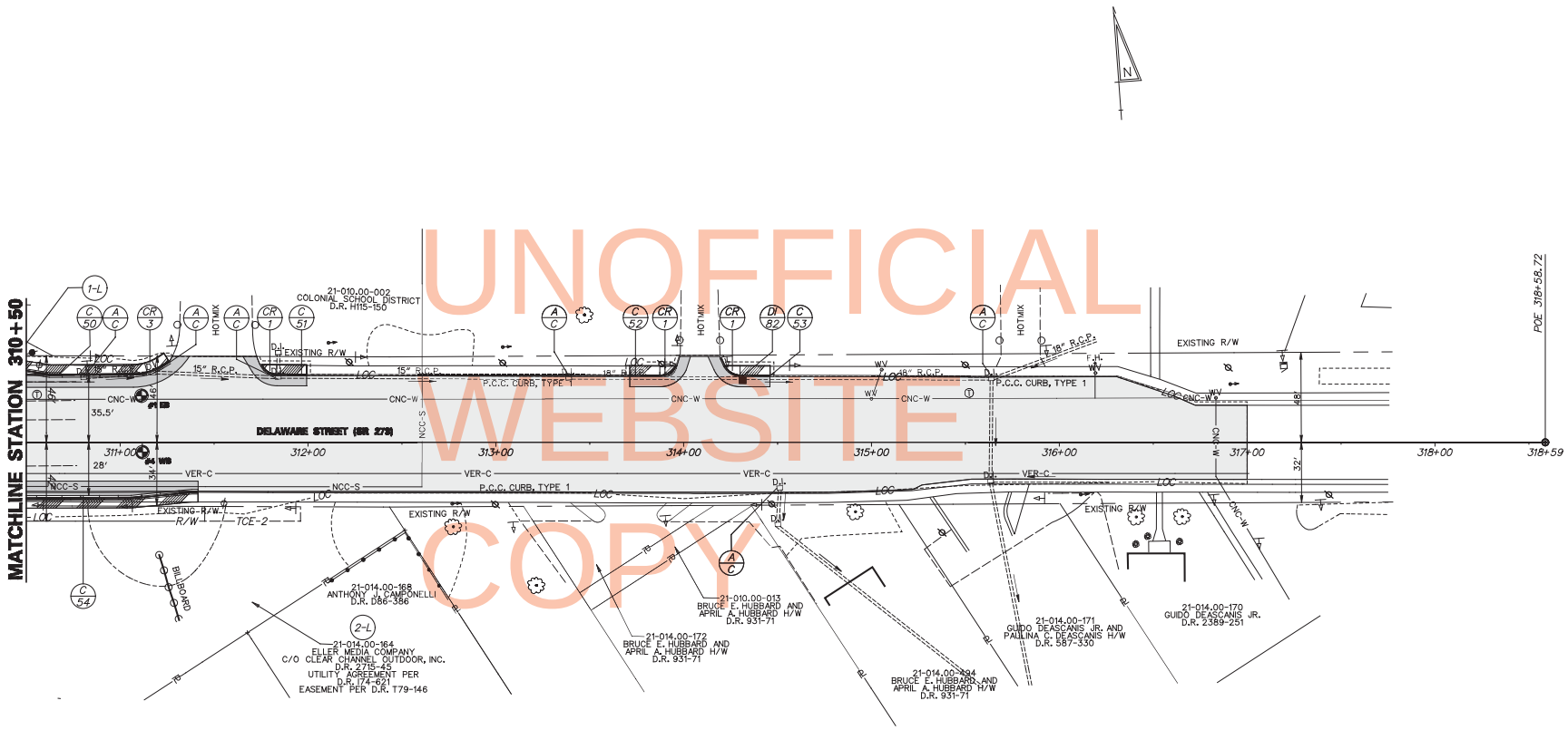
CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
50	P.C.C. CURB AND GUTTER, TYPE 3-8	79.00′
51	P.C.C. CURB, TYPE 1-8	27.00′
52	P.C.C. CURB, TYPE 1-8	28.00′
53	P.C.C. CURB, TYPE 1-8	32.00′
54	P.C.C. CURB AND GUTTER, TYPE 3-8	92.00′

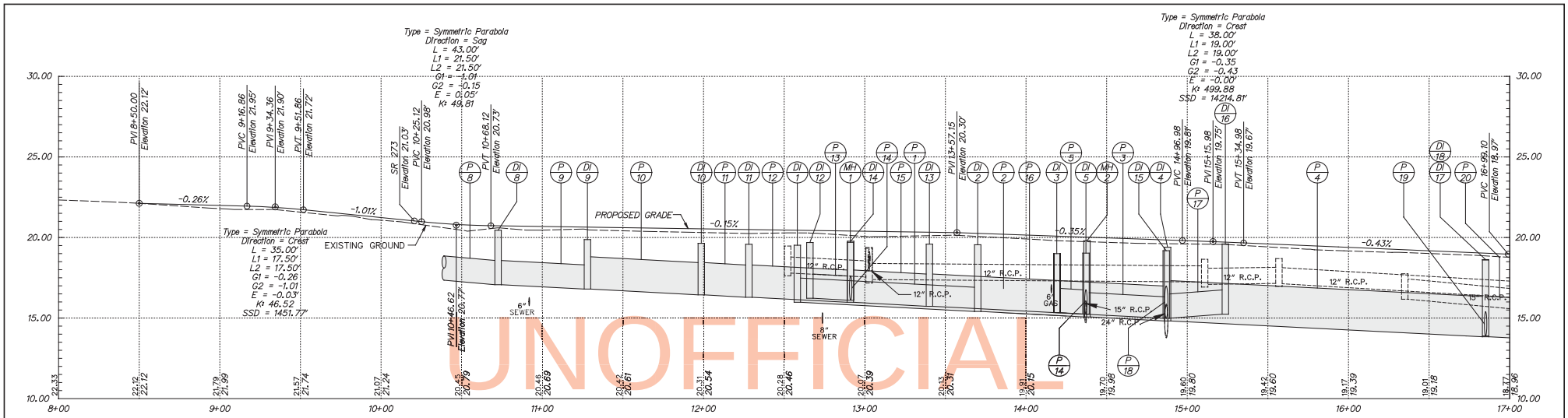
DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
82	314+31.41	-33.10′	48″ X 30″	4	16.90	MATCH



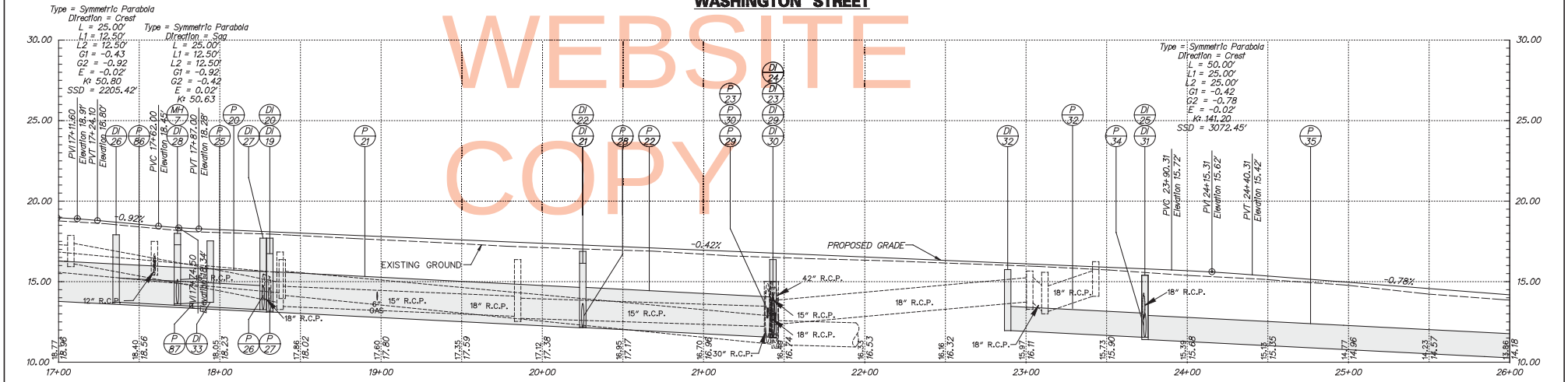
UNOFFICIAL WEBSITE COPY

ROADWAY CORE SCHEDULE			
NO.	STATION	OFFSET	DESCRIPTION
#1 EB	311+11.74	-24.83′	6.0″ HMA, 8.5″ P.C.C.
#4 WB	311+11.74	5.13′	4.75″ HMA

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	CONSTRUCTION PLAN	SHEET NO. 22
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		



WASHINGTON STREET

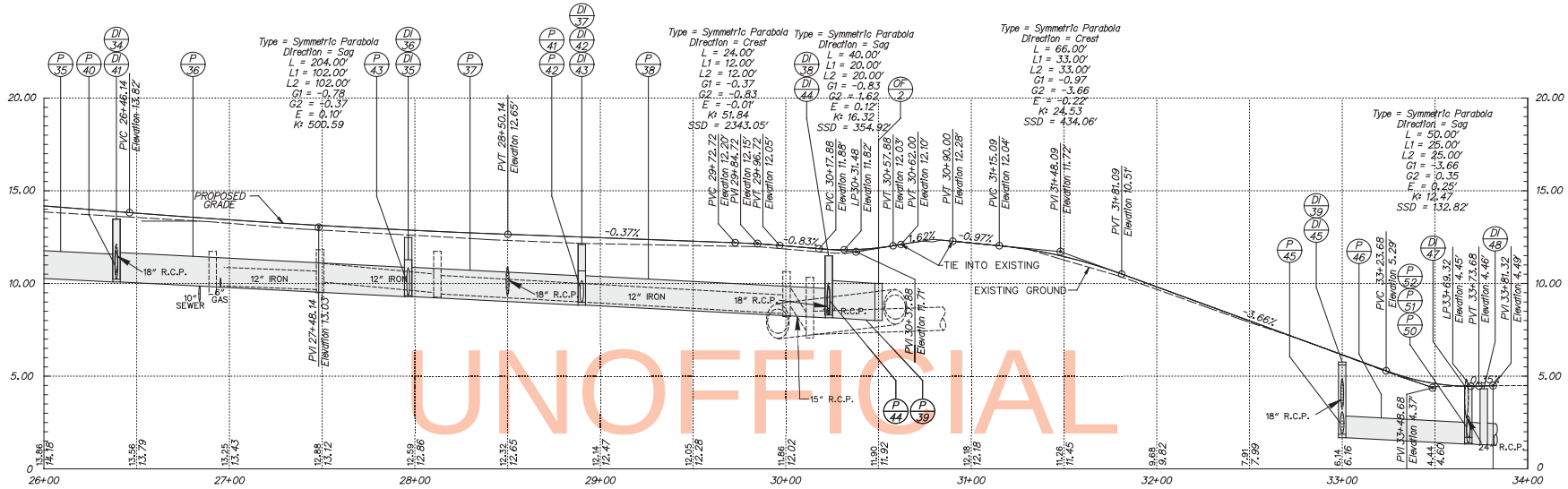


WASHINGTON STREET

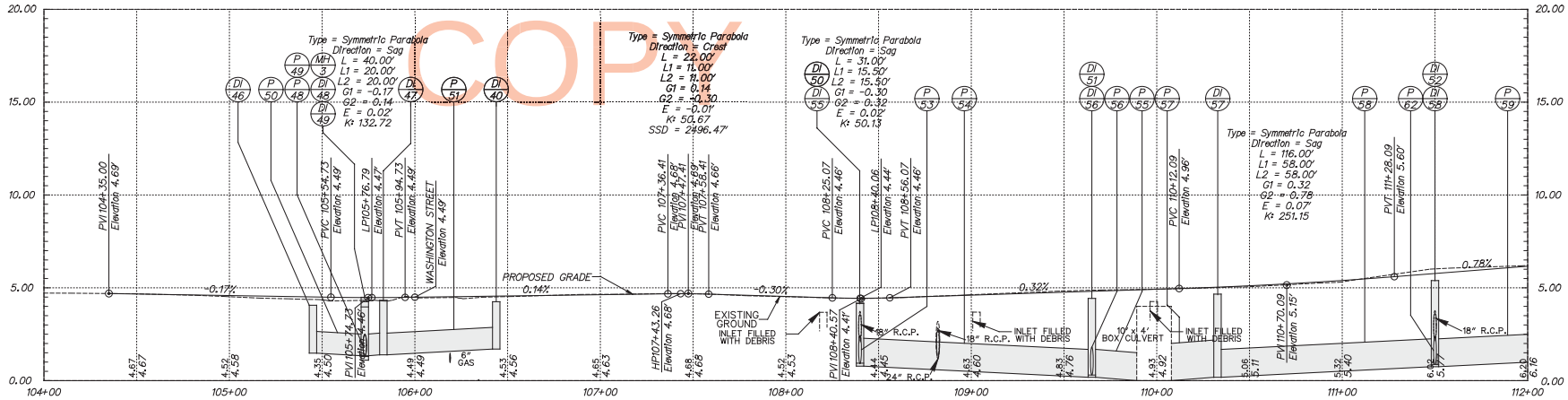
UNOFFICIAL WEBSITE COPY

VERTICAL SCALE FEET 0 3 6 9

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	PROFILES	SHEET NO. 23
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		



WASHINGTON STREET

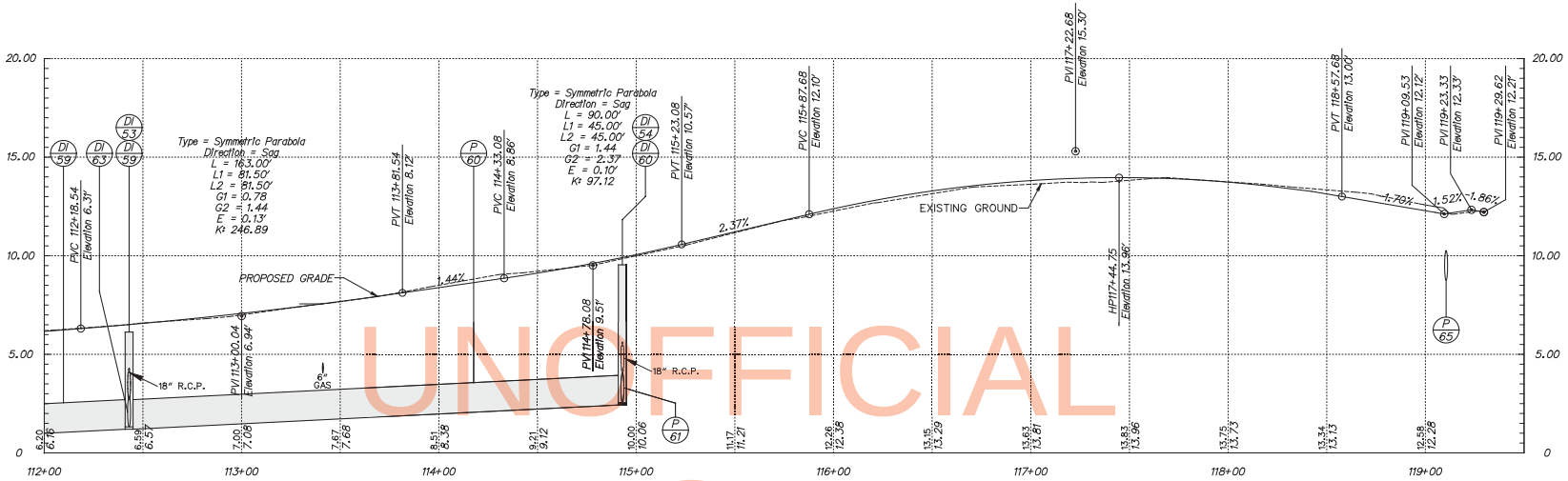


SEVENTH STREET

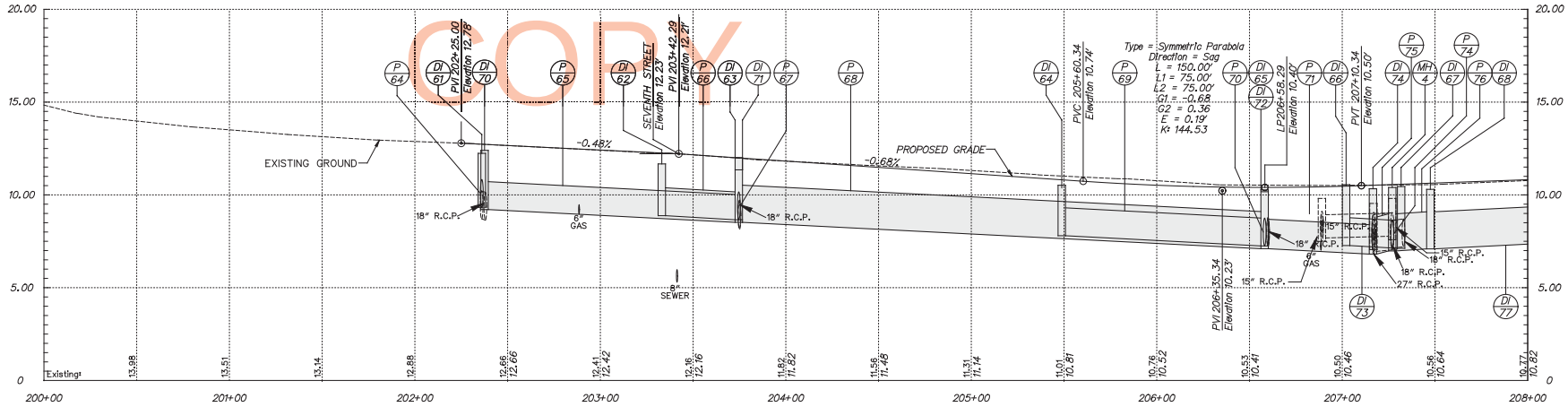
UNOFFICIAL WEBSITE COPY

VERTICAL SCALE FEET 0 3 6 9

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	PROFILES	SHEET NO. 24
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		



SEVENTH STREET



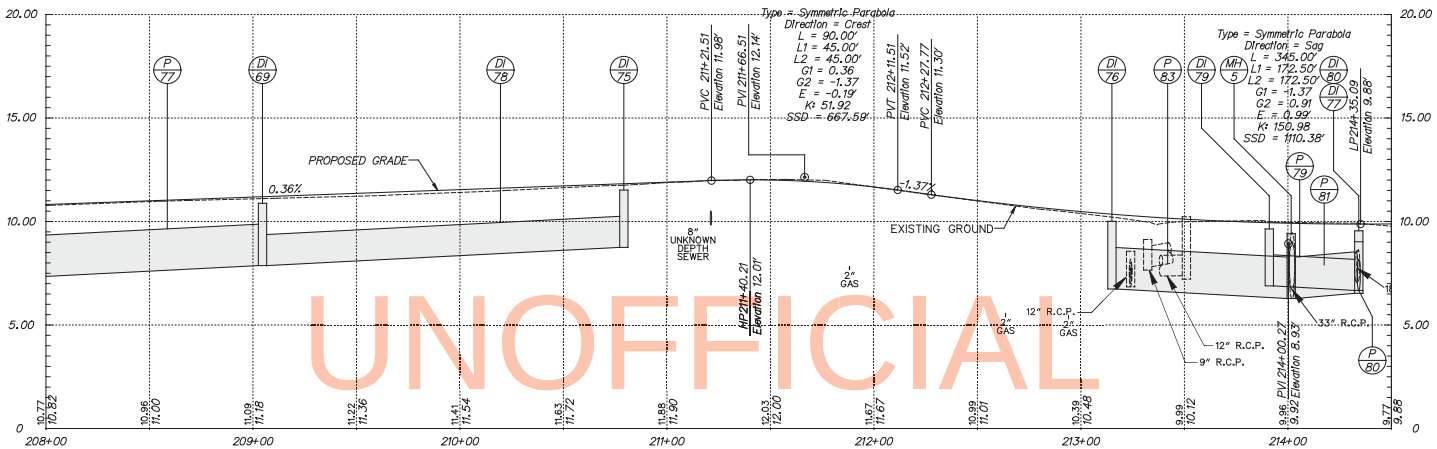
SOUTH STREET

UNOFFICIAL WEBSITE COPY

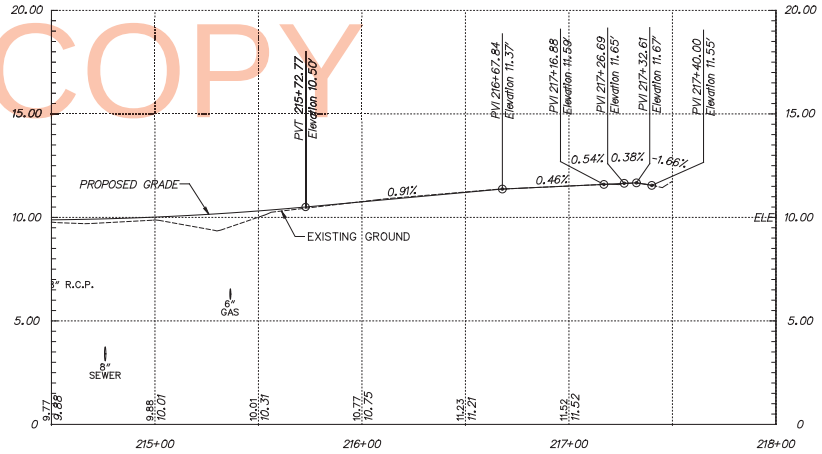
VERTICAL SCALE FEET 0 3 6 9

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	PROFILES
				COUNTY NEW CASTLE	DESIGNED BY: MAG	
					CHECKED BY: PAH	

SHEET NO. 25
TOTAL SHTS. 105



SOUTH STREET

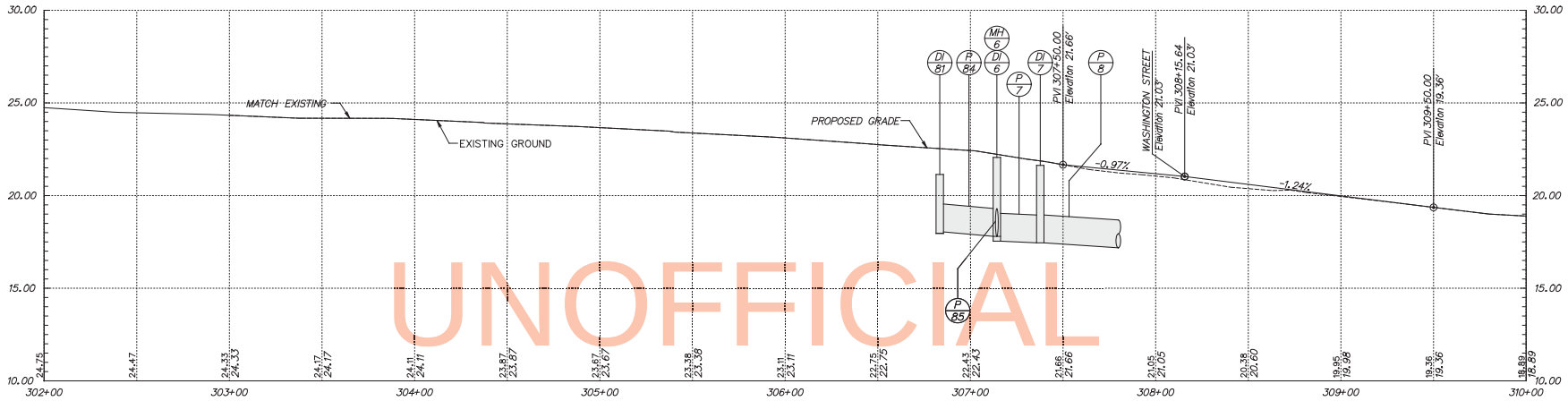


SOUTH STREET

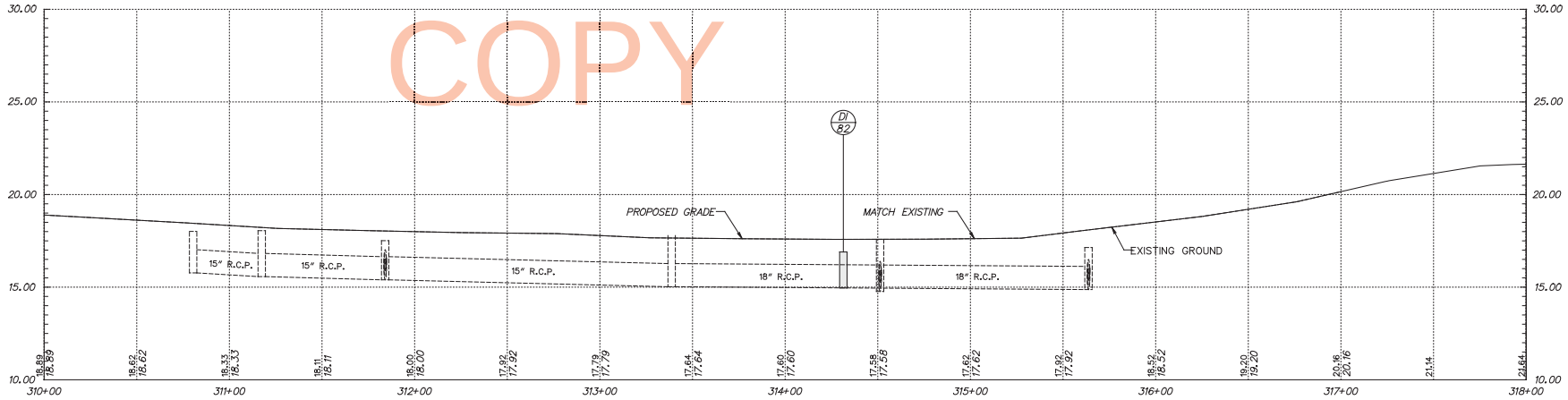
UNOFFICIAL WEBSITE COPY

VERTICAL SCALE FEET 0 3 6 9

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	PROFILES	SHEET NO. 26
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		



FRENCHTOWN ROAD (SR 273)



DELAWARE STREET (SR 273)

UNOFFICIAL WEBSITE COPY

VERTICAL SCALE FEET 0 3 6 9

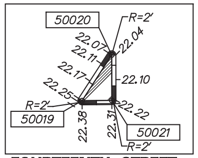
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	PROFILES	SHEET NO. 27
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10001	8+50.00	-20.30	606315.1216	610429.4002
10002	8+93.13	-21.39	606277.8319	610451.1046
10003	9+77.48	-52.38	606218.7937	610518.8496
10004	9+89.91	-52.37	606207.8885	610524.8201
10005	9+94.81	-64.12	606209.2469	610537.4754
10006	8+88.56	-202.33	606368.8825	610607.5360
10007	11+95.75	-97.77	606049.2763	610663.6392
10008	11+39.01	-66.05	606083.7624	610608.5419
10009	11+97.18	-32.78	606016.7557	610607.3594
10010	12+60.14	-34.18	605962.2293	610638.8668
10011	13+10.43	-23.31	605912.9120	610653.5336
10012	13+35.71	-23.88	605891.0208	610666.1904
10013	13+43.49	-37.00	605890.5205	610681.4354
10014	13+52.56	-37.00	605882.5654	610685.8005
10015	13+91.21	-19.74	605840.3747	610689.2579
10016	14+13.55	-30.34	605825.8903	610709.3065
10017	13+93.07	-44.67	605850.7372	610712.0092
10018	14+18.07	-44.67	605828.8214	610724.0382
10019	14+18.07	-54.48	605833.5413	610732.6375
10020	14+38.17	-54.45	605815.9100	610742.2797
10021	14+38.17	-41.00	605809.4366	610730.4861
10022	14+40.12	-31.32	605803.0702	610722.9393
10023	14+63.17	-41.00	605787.5209	610742.5153
10024	14+63.17	-16.00	605775.4946	610720.5980
10025	15+02.74	-35.37	605750.1227	610756.6181
10026	15+15.95	-35.37	605738.5445	610762.9712
10027	15+76.41	-16.00	605676.2168	610775.0732
10028	16+12.66	-49.50	605660.5517	610821.8808
10029	16+30.17	-49.50	605645.2039	610830.3023
10030	8+45.24	62.30	606279.5569	610354.6984
10031	8+53.82	49.02	606278.4244	610370.4706
10032	8+63.20	44.49	606272.3795	610378.9500

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10033	8+62.22	54.44	606268.4500	610369.7544
10034	8+57.92	98.23	606251.1604	610329.2937
10035	9+05.48	74.57	606220.8471	610372.9156
10036	10+39.52	64.22	606108.3108	610446.4771
10037	10+64.03	69.18	606084.4410	610453.9089
10038	10+63.47	44.19	606096.9489	610475.5549
10039	10+69.75	44.05	606091.5162	610478.6941



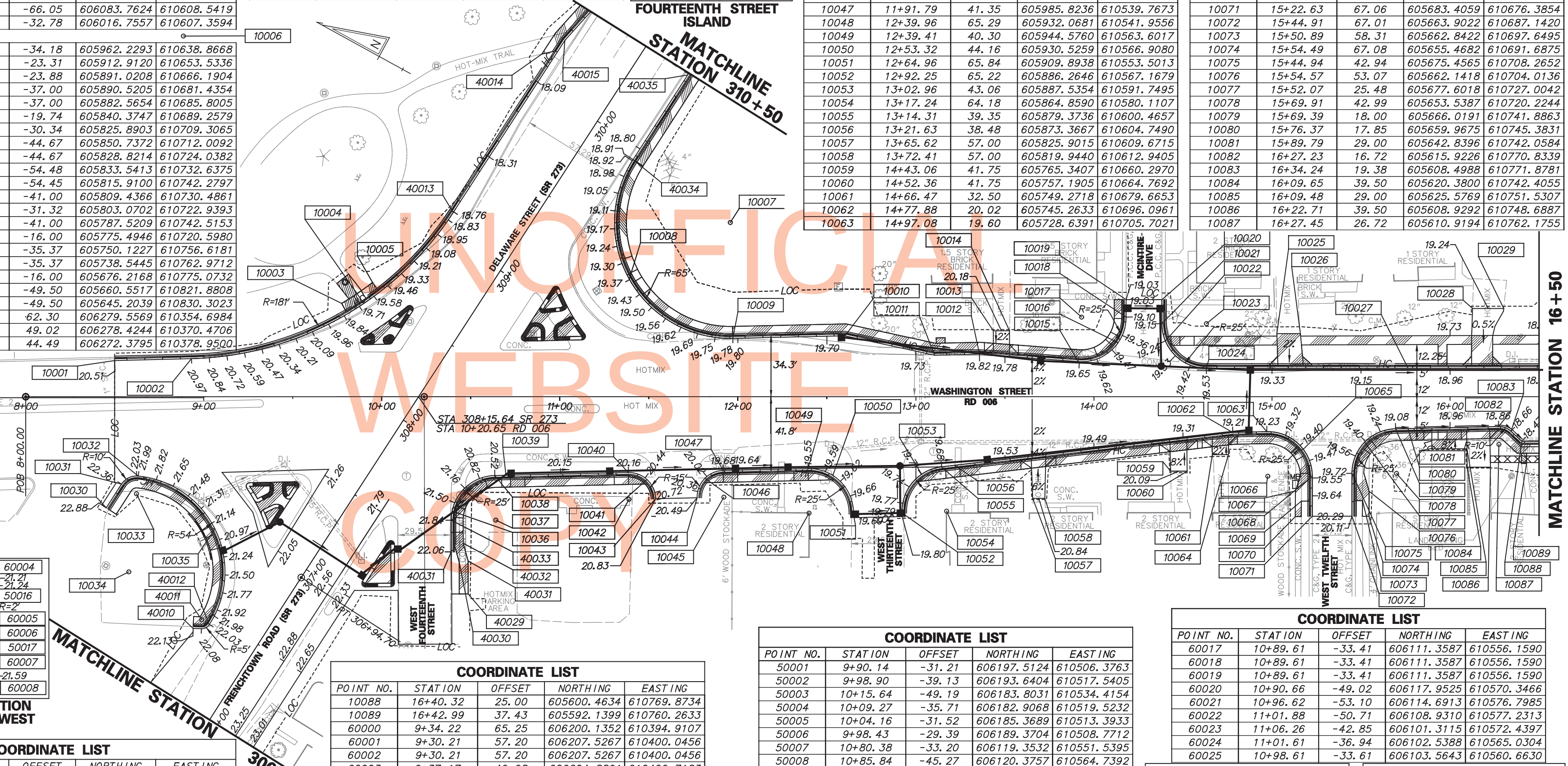
FOURTEENTH STREET ISLAND

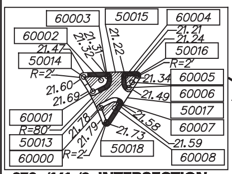
COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10040	11+38.50	42.53	606031.9738	610513.0999
10041	11+48.96	46.47	606020.9061	610514.6830
10042	11+38.83	57.53	606024.4691	610500.1123
10043	11+53.83	57.20	606011.4814	610507.6170
10044	11+77.12	56.68	605991.3065	610519.2749
10045	11+92.12	56.35	605978.3188	610526.7796
10046	11+81.50	45.75	605992.7220	610530.9688
10047	11+91.79	41.35	605985.8236	610539.7673
10048	12+39.96	65.29	605932.0681	610541.9556
10049	12+39.41	40.30	605944.5760	610563.6017
10050	12+53.32	44.16	605930.5259	610566.9080
10051	12+64.96	65.84	605909.8938	610553.5013
10052	12+92.25	65.22	605886.2646	610567.1679
10053	13+02.96	43.06	605887.5354	610591.7495
10054	13+17.24	64.18	605864.8590	610580.1107
10055	13+14.31	39.35	605879.3736	610600.4657
10056	13+21.63	38.48	605873.3667	610604.7490
10057	13+65.62	57.00	605825.9015	610609.6715
10058	13+72.41	57.00	605819.9440	610612.9405
10059	14+43.06	41.75	605765.3407	610660.2970
10060	14+52.36	41.75	605757.1905	610664.7692
10061	14+66.47	32.50	605749.2718	610679.6653
10062	14+77.88	20.02	605745.2633	610696.0961
10063	14+97.08	19.60	605728.6391	610705.7021

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10064	14+75.52	32.50	605741.3361	610684.0197
10065	15+17.54	29.47	605705.9520	610706.8899
10066	14+97.63	44.59	605716.1312	610684.0561
10067	15+13.15	52.85	605698.5594	610696.2827
10068	15+22.63	44.59	605694.2139	610696.0824
10069	15+16.47	58.57	605692.8872	610680.8623
10070	15+13.07	67.27	605691.6899	610671.5986
10071	15+22.63	67.06	605683.4059	610676.3854
10072	15+44.91	67.01	605663.9022	610687.1420
10073	15+50.89	58.31	605662.8422	610697.6495
10074	15+54.49	67.08	605655.4682	610691.6875
10075	15+44.94	42.94	605675.4565	610708.2652
10076	15+54.57	53.07	605662.1418	610704.0136
10077	15+52.07	25.48	605677.6018	610727.0042
10078	15+69.91	42.99	605653.5387	610720.2244
10079	15+69.39	18.00	605666.0191	610741.8863
10080	15+76.37	17.85	605659.9675	610745.3831
10081	15+89.79	29.00	605642.8396	610742.0584
10082	16+27.23	16.72	605615.9226	610770.8339
10083	16+34.24	19.38	605608.4988	610771.8781
10084	16+09.65	39.50	605620.3800	610742.4055
10085	16+09.48	29.00	605625.5769	610751.5307
10086	16+22.71	39.50	605608.9292	610748.6887
10087	16+27.45	26.72	605610.9194	610762.1755





273 /141 /9 INTERSECTION WESTBOUND NORTHWEST ISLAND

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
40010	306+37.83	-35.45	606204.2115	610318.8744
40011	306+44.47	-34.02	606202.3144	610325.4113
40012	306+44.43	-29.02	606197.3302	610325.0152
40013	309+12.94	-40.00	606188.4117	610593.7000
40014	310+14.56	-46.67	606187.5136	610695.5390
40015	310+28.03	-40.00	606179.8649	610708.4789
40029	307+38.06	83.63	606078.1093	610410.1201
40030	307+38.06	83.63	606078.1093	610410.1201
40031	307+52.81	62.80	606097.7865	610426.3781
40032	307+60.37	65.82	606094.2127	610433.6926
40033	307+67.57	53.15	606106.3198	610441.8127
40034	309+92.84	28.56	606114.1094	610668.2944
40035	310+49.35	28.41	606110.0623	610724.6578

COORDINATE LIST

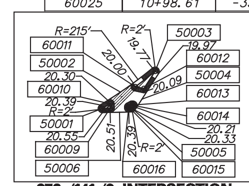
POINT NO.	STATION	OFFSET	NORTHING	EASTING
10088	16+40.32	25.00	605600.4634	610769.8734
10089	16+42.99	37.43	605592.1399	610760.2633
60000	9+34.22	65.25	606200.1352	610394.9107
60001	9+30.21	57.20	606207.5267	610400.0456
60002	9+30.21	57.20	606207.5267	610400.0456
60003	9+37.17	49.98	606204.8891	610409.7183
60004	9+46.17	49.79	606197.0965	610414.2211
60005	9+49.24	52.86	606192.9285	610413.0042
60006	9+47.67	55.42	606193.0692	610410.0064
60007	9+47.67	55.42	606193.0692	610410.0064
60008	9+47.67	55.42	606193.0692	610410.0064
60009	9+93.88	-31.29	606194.2673	610508.2515
60010	9+93.84	-33.46	606195.3521	610510.1287
60011	10+06.06	-41.72	606188.6137	610523.2499
60012	10+10.22	-40.84	606184.5430	610524.4816
60013	10+10.22	-40.84	606184.5430	610524.4816
60014	10+04.96	-32.75	606185.2595	610514.8618
60015	10+02.87	-31.96	606186.7084	610513.1588
60016	10+02.88	-31.49	606186.4747	610512.7543

COORDINATE LIST

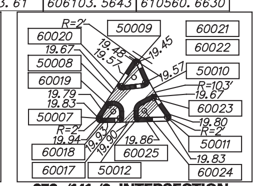
POINT NO.	STATION	OFFSET	NORTHING	EASTING
50001	9+90.14	-31.21	606197.5124	610506.3763
50002	9+98.90	-39.13	606193.6404	610517.5405
50003	10+15.64	-49.19	606183.8031	610534.4154
50004	10+09.27	-35.71	606182.9068	610519.5232
50005	10+04.16	-31.52	606185.3689	610513.3933
50006	9+98.43	-29.39	606189.3704	610508.7712
50007	10+80.38	-33.20	606119.3532	610551.5395
50008	10+85.84	-45.27	606120.3757	610564.7392
50009	10+97.78	-59.98	606116.9815	610583.3833
50010	11+05.73	-47.70	606104.1079	610576.4469
50011	11+12.40	-33.91	606091.6289	610567.5597
50012	10+94.16	-31.51	606106.4609	610556.6793
50013	9+30.53	62.06	606204.9040	610395.9335
50014	9+25.81	50.24	606214.7274	610404.0333
50015	9+41.63	47.89	606201.9934	610413.7014
50016	9+51.41	49.67	606192.5600	610416.8425
50017	9+46.90	60.28	606191.4090	610405.3702
50018	9+36.84	72.10	606194.5465	610390.1722
50019	9+90.77	104.72	606131.5700	610387.5134
50020	10+05.07	82.71	606129.6205	610413.6875
50021	10+05.14	104.58	606119.0422	610394.5540

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60017	10+89.61	-33.41	606111.3587	610556.1590
60018	10+89.61	-33.41	606111.3587	610556.1590
60019	10+89.61	-33.41	606111.3587	610556.1590
60020	10+90.66	-49.02	606117.9525	610570.3466
60021	10+96.62	-53.10	606114.6913	610576.7985
60022	11+01.88	-50.71	606108.9310	610577.2313
60023	11+06.26	-42.85	606101.3115	610572.4397
60024	11+01.61	-36.94	606102.5388	610565.0304
60025	10+98.61	-33.61	606103.5643	610560.6630



273 /141 /9 INTERSECTION NORTBOUND NORTHEAST ISLAND



273 /141 /9 INTERSECTION EASTBOUND SOUTHEAST ISLAND

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A
				COUNTY NEW CASTLE	DESIGNED BY: MAG
					CHECKED BY: PAH

GRADES AND GEOMETRICS

SHEET NO. 28

TOTAL SHTS. 105

COORDINATE LIST

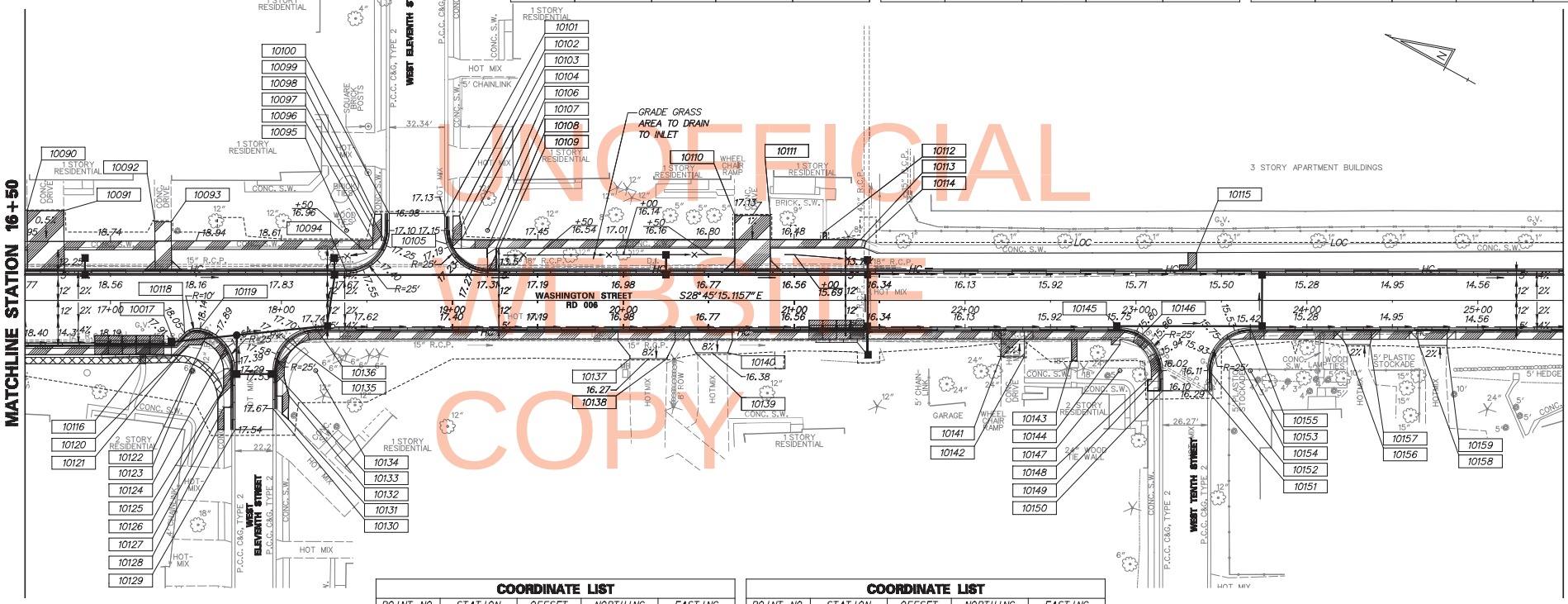
POINT NO.	STATION	OFFSET	NORTHING	EASTING
10090	16+51.20	-52.50	605628.2037	610843.0525
10091	16+72.65	-52.50	605609.3982	610853.3713
10092	17+25.90	-46.00	605559.5923	610873.2863
10093	17+35.54	-46.03	605551.1528	610877.9521
10094	18+38.24	-16.08	605446.7114	610901.0973
10095	18+38.10	-41.00	605458.8203	610922.8781
10096	18+53.52	-35.12	605442.4774	610925.1434
10097	18+53.52	-43.12	605446.3258	610932.1569
10098	18+61.66	-32.63	605434.1423	610926.8776
10099	18+54.61	-50.41	605448.8710	610939.0695
10100	18+63.12	-50.74	605441.5709	610943.4573
10101	18+95.61	-49.03	605412.2674	610957.5781
10102	19+04.21	-49.50	605404.9497	610962.1356

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10103	19+05.36	-43.51	605401.0641	610957.4366
10104	19+05.30	-35.51	605397.2661	610950.3954
10105	18+96.92	-33.01	605403.4104	610944.1647
10106	19+20.61	-41.00	605386.4888	610962.5674
10107	19+20.59	-30.53	605381.4638	610953.3810
10108	19+25.59	-30.53	605377.0829	610955.7908
10109	19+20.61	-16.00	605374.4625	610940.6501
10110	20+65.28	-49.75	605263.8679	611039.8319
10111	20+85.99	-49.75	605245.7080	611049.7965
10112	21+16.99	-39.56	605213.6292	611055.7732
10113	21+38.91	-35.75	605192.5813	611062.9836
10114	21+42.09	-34.71	605189.2947	611063.5974
10115	23+35.43	-27.95	605016.5398	611150.6792

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10116	17+17.37	36.59	605527.3363	610796.7743
10117	17+37.68	24.07	605515.5552	610817.5235
10118	17+43.40	19.21	605512.8796	610824.5387
10119	17+52.30	16.40	605506.4278	610831.2773
10120	17+46.13	25.93	605507.2535	610819.9635
10121	17+40.45	31.67	605509.4733	610812.1966
10122	17+53.72	25.93	605500.6001	610823.6143
10123	17+47.82	41.00	605498.5197	610807.5610
10124	17+68.10	26.37	605487.7842	610830.1386
10125	17+72.82	40.99	605476.6075	610819.5966
10126	17+62.81	58.49	605476.9694	610799.4387
10127	17+66.42	62.45	605471.9031	610797.7035
10128	17+62.81	75.44	605468.8122	610784.5728



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COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10129	17+72.84	75.44	605460.0204	610789.3979
10130	17+95.07	63.22	605446.4092	610810.8104
10131	18+04.08	69.55	605435.4689	610809.5932
10132	18+04.28	55.32	605442.1343	610822.1620
10133	17+95.07	41.08	605457.0577	610830.2167
10134	18+20.07	41.00	605435.1805	610842.3161
10135	18+02.86	22.87	605458.9929	610849.9299
10136	18+20.07	16.08	605447.1667	610864.1603
10137	20+03.91	34.00	605277.3760	610936.8902
10138	20+25.61	34.00	605258.3534	610947.3282
10139	20+42.51	30.56	605245.1890	610958.4733
10140	20+61.22	30.56	605228.7894	610967.4720
10141	22+21.02	32.68	605087.6732	611042.4885
10142	22+34.66	32.68	605075.7139	611049.0507
10143	22+62.30	35.10	605050.3220	611060.2283
10144	22+90.62	25.75	605029.9930	611082.0431

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10145	22+90.62	16.08	605034.6389	611090.5202
10146	23+03.87	19.80	605021.2429	611093.6362
10147	22+90.62	41.00	605022.6526	611068.6760
10148	23+06.85	46.36	605005.8490	611071.7865
10149	23+15.62	41.08	605000.6952	611080.6293
10150	23+15.62	52.75	604995.0819	611070.3992
10151	23+41.89	52.75	604972.0535	611083.0330
10152	23+42.89	41.08	604976.7911	611093.7458
10153	23+66.89	41.00	604955.7906	611105.3641
10154	23+53.17	20.10	604977.8708	611117.0886
10155	23+66.89	16.08	604967.7760	611127.2126
10156	24+22.84	25.75	604914.0736	611145.6498
10157	24+36.97	25.75	604901.6901	611152.4448
10158	24+65.80	26.29	604876.1550	611165.8403
10159	24+81.91	26.29	604862.0250	611173.5936

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

WASHINGTON STREET SIDEWALKS

CONTRACT	BRIDGE NO.	N/A
T200201104	DESIGNED BY: MAG	
COUNTY		
NEW CASTLE	CHECKED BY: PAH	

GRADES AND GEOMETRICS

SHEET NO.
29
TOTAL SHTS.
105

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10160	26+45.68	-16.00	604738.7960	611289.4493
10161	26+45.68	-34.00	604747.4549	611305.2297
10162	26+63.24	-30.04	604730.1566	611310.2065
10163	26+63.67	-33.52	604731.4487	611313.4638
10164	26+63.87	-40.55	604734.6639	611319.7231
10165	26+90.06	-39.78	604711.3244	611331.6441
10166	26+90.06	-31.00	604707.1024	611323.9498
10167	26+99.05	-38.21	604702.6935	611334.5946
10168	27+05.06	-31.00	604693.9520	611331.1656
10169	27+07.87	-38.21	604694.9583	611338.8389
10170	27+07.87	-37.53	604694.6302	611338.2409
10171	27+11.87	-37.53	604691.1234	611340.1651
10172	29+37.47	-33.00	604491.1672	611444.7177
10174	30+64.97	-20.17	604373.2134	611494.8024
10175	30+47.35	20.17	604369.2597	611450.9668
10179	28+03.66	-33.00	604608.4783	611380.3475

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10180	28+21.38	-33.00	604592.9434	611388.8717
10181	28+97.94	-33.32	604525.9750	611425.9869
10182	28+98.68	-30.84	604524.1336	611424.1620
10183	30+07.98	-22.61	604424.3527	611469.5324
10184	31+05.54	-20.17	604337.6444	611514.3196
10185	30+89.25	-16.00	604349.9188	611502.8317
10186	32+39.60	-25.75	604222.8042	611583.7026
10187	33+56.12	-18.57	604117.1956	611633.4566
10188	33+54.57	-25.53	604121.9026	611638.8128
10189	33+46.32	-36.00	604134.1741	611644.0269
10190	26+44.90	16.00	604724.0897	611261.0180
10191	26+58.90	20.29	604709.7470	611263.9931
10192	26+44.90	41.00	604712.0634	611239.1007
10193	26+69.90	40.97	604690.1589	611251.1503
10194	26+91.72	41.00	604671.0100	611261.6272
10195	27+16.72	41.00	604649.0928	611273.6535
10196	27+02.90	20.17	604671.2300	611285.2701
10197	27+20.55	31.31	604650.3986	611283.9864
10198	27+16.74	16.08	604661.0707	611295.5061
10199	27+68.64	30.00	604608.8659	611308.2738
10200	27+77.32	30.00	604601.2616	611312.4464
10201	27+96.48	29.39	604584.7566	611322.1933
10202	28+24.03	32.00	604559.3446	611333.1655
10203	28+24.09	20.17	604564.9905	611343.5652
10204	29+46.05	32.00	604452.3764	611391.8605

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10205	29+45.94	33.85	604451.5795	611390.1854
10206	30+72.52	16.00	604349.1988	611466.7259
10207	30+86.64	20.17	604334.8083	611469.8694
10208	31+63.06	16.23	604269.7141	611510.0821
10209	32+12.71	28.00	604220.5190	611523.6465
10210	32+35.28	37.25	604196.2792	611526.3962
10211	32+53.97	59.00	604169.4320	611516.3184
10212	32+82.16	42.28	604152.7673	611544.5351
10213	32+95.59	59.00	604132.9482	611536.3377
10214	33+06.88	28.00	604137.9650	611568.9450
10215	33+45.65	42.21	604097.1336	611575.1377
10216	33+06.88	88.00	604109.1019	611516.3435
10217	30+79.10	-16.00	604358.8229	611497.9460
10218	30+62.36	16.00	604358.1025	611461.8415

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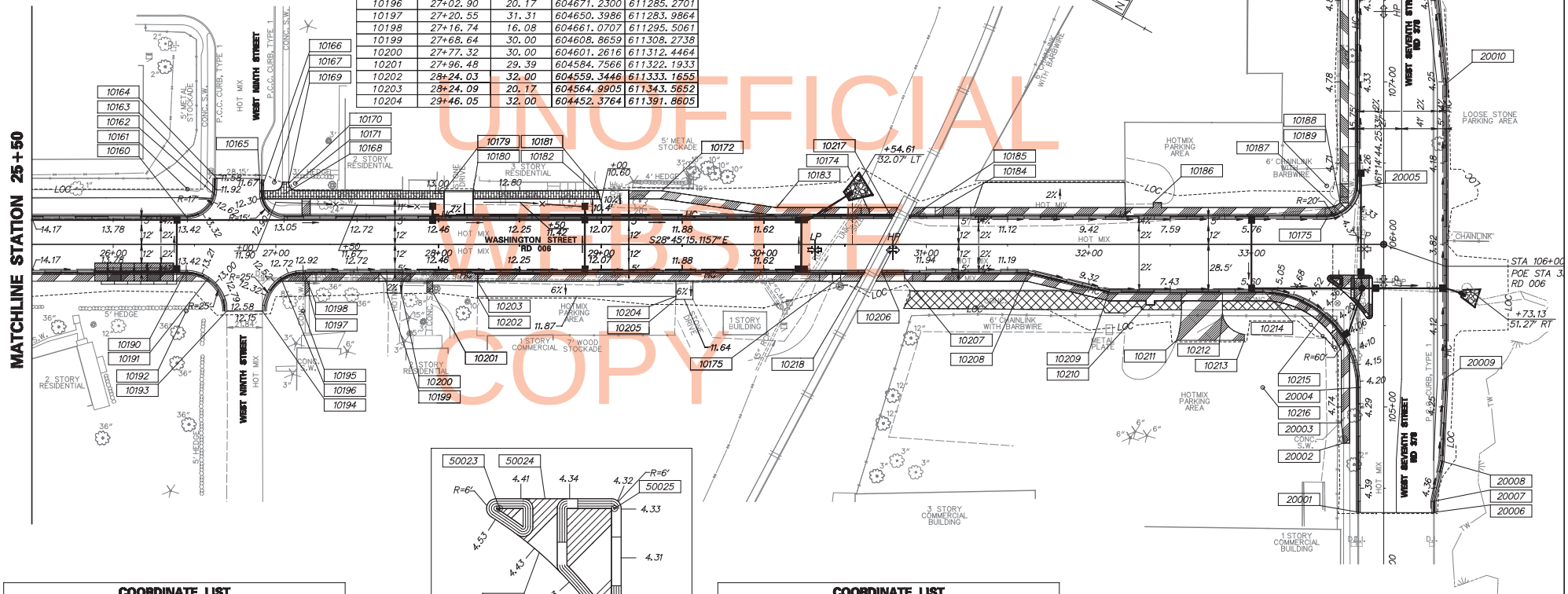
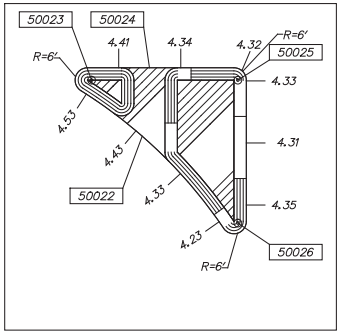




WASHINGTON STREET
SOUTHBOUND NORTHWEST
ISLAND

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
20001	104+35.07	-14.38	604019.4411	611477.7895
20002	104+77.78	-24.63	604048.9686	611510.3049
20003	104+90.21	-26.00	604056.1510	611520.5468
20004	105+12.05	-14.44	604056.5223	611545.2466
20005	106+36.00	-15.00	604116.6403	611653.6480
20006	104+35.00	29.64	603980.8089	611498.9095
20007	104+41.82	29.64	603984.0881	611504.8856
20008	104+67.00	34.67	603991.7973	611529.3856
20009	105+17.03	37.08	604013.7504	611574.4073
20010	106+97.84	37.08	604100.7295	611732.9205

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
50022	33+57.55	30.02	604092.5715	611591.5482
50023	33+48.73	21.00	604104.6369	611595.2172
50024	33+58.71	19.00	604096.8498	611601.7715
50025	33+72.32	21.00	604083.9599	611606.5631
50026	33+72.32	43.75	604073.0173	611586.6208

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

WASHINGTON STREET SIDEWALKS

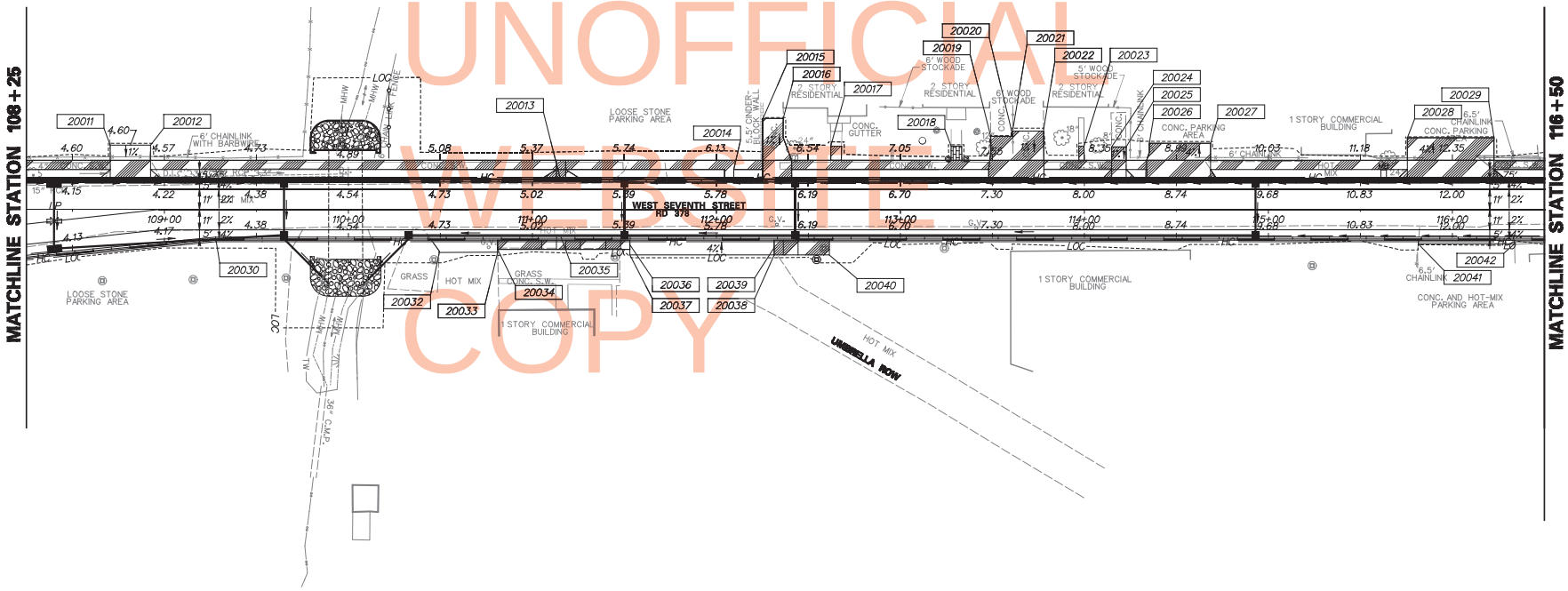
CONTRACT	BRIDGE NO.	N/A
T200201104	DESIGNED BY: MAG	
COUNTY		
NEW CASTLE	CHECKED BY: PAH	

GRADES AND GEOMETRICS

SHEET NO.
30
TOTAL SHTS.
105

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
20011	108+70.55	-35.00	604247.0060	611849.6552
20012	108+92.47	-35.00	604257.5498	611868.8705
20013	111+15.56	-15.00	604347.3337	612074.0706
20014	112+09.44	-21.75	604398.4144	612153.1299
20015	112+25.33	-49.50	604430.3880	612153.7138
20016	112+36.33	-49.50	604435.6806	612163.3592
20017	112+62.14	-34.44	604434.8971	612193.2281
20018	113+27.58	-34.47	604466.4000	612250.5861
20019	113+49.10	-39.79	604481.4112	612266.8889
20020	113+61.15	-39.78	604487.2050	612277.4606
20021	113+61.14	-43.50	604490.4579	612275.6595
20022	113+77.83	-43.50	604498.4875	612290.2930
20023	113+99.80	-34.45	604501.1241	612313.9079
20024	114+14.78	-34.00	604507.9323	612327.2536
20025	114+22.69	-34.00	604511.7370	612334.1875
20026	114+35.29	-36.00	604519.5532	612344.2745

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
20027	114+68.56	-36.00	604535.5584	612373.4427
20028	115+75.54	-39.00	604589.6516	612465.7876
20029	116+22.60	-39.00	604612.2927	612507.0494
20030	109+27.78	15.00	604230.7024	611923.8813
20032	110+49.37	23.34	604281.8823	612034.4942
20033	110+81.14	23.16	604297.3230	612062.2511
20034	110+81.08	21.67	604298.6011	612061.4801
20035	111+15.56	15.00	604321.0330	612088.5023
20036	111+52.97	19.17	604335.3792	612123.3087
20037	111+52.97	24.67	604330.5574	612125.9546
20038	112+31.39	24.75	604368.2055	612194.7386
20039	112+31.39	20.72	604371.7414	612192.7984
20040	112+61.39	24.75	604382.6371	612221.0393
20041	115+81.45	18.67	604541.9370	612498.7062
20042	116+33.77	18.67	604567.1103	612544.5828



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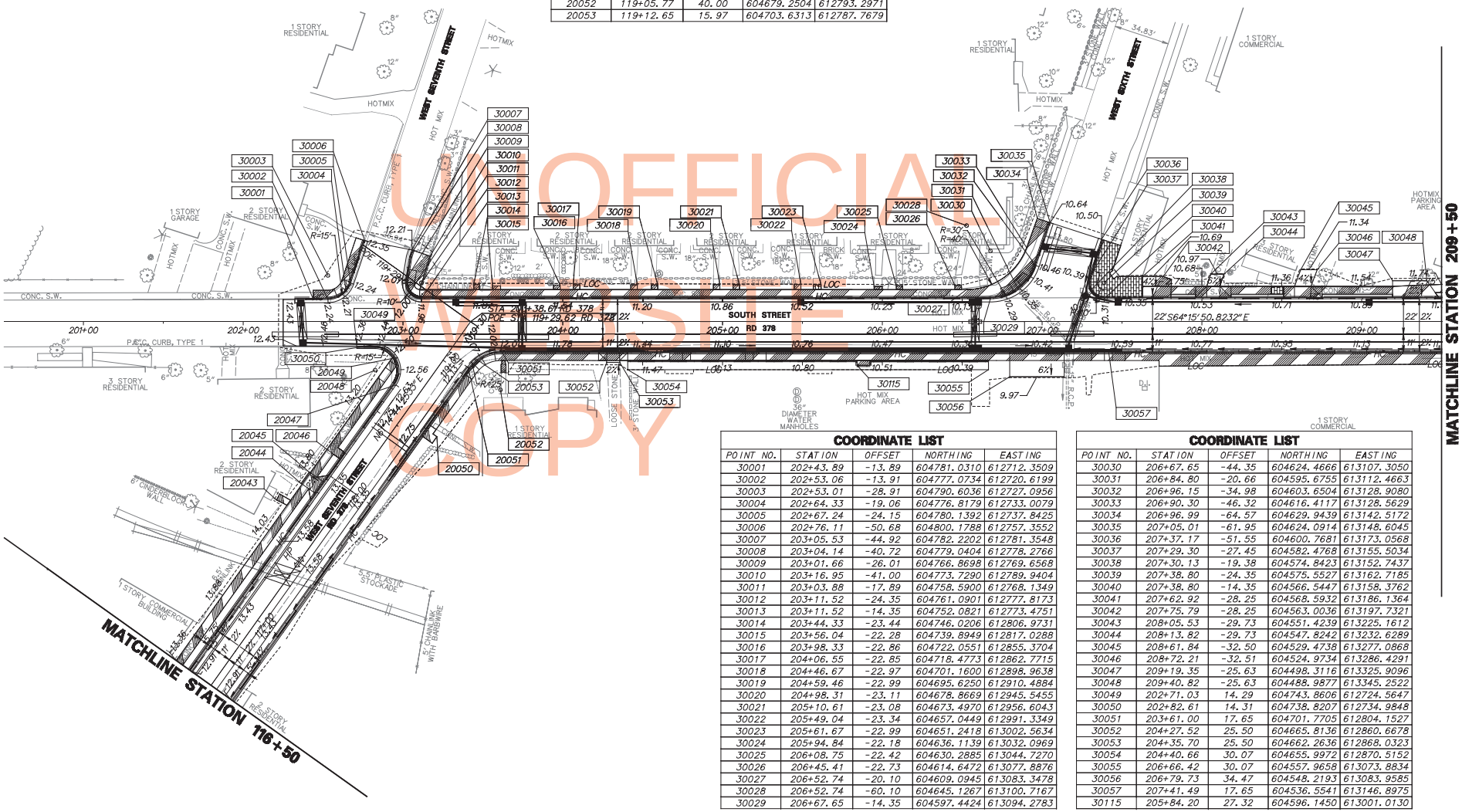
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	GRADES AND GEOMETRICS	SHEET NO. 31
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
20043	117+68.27	-34.03	604678.0054	612637.1417
20044	117+85.57	-27.50	604680.6049	612655.4492
20045	117+94.37	-27.50	604684.8392	612663.1659
20046	118+12.25	-21.75	604688.3988	612681.6059
20047	118+70.26	-15.00	604710.3900	612735.7150
20048	118+70.26	-31.00	604724.4170	612728.0181
20049	118+84.77	-24.25	604725.4778	612743.9829
20050	118+84.77	24.67	604670.0866	612744.7225
20051	119+05.77	15.00	604701.1676	612781.2707
20052	119+05.77	40.00	604679.2504	612793.2971
20053	119+12.65	15.97	604703.6313	612787.7679



UNOFFICIAL WEBSITE COPY

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
30001	202+43.89	-13.89	604781.0310	612712.3509
30002	202+53.06	-13.91	604777.0734	612720.6199
30003	202+53.01	-28.91	604790.6036	612727.0956
30004	202+64.33	-19.06	604776.8179	612733.0079
30005	202+67.24	-24.15	604780.1392	612737.8425
30006	202+76.11	-50.68	604800.1788	612757.3552
30007	203+05.53	-44.92	604782.2202	612781.3548
30008	203+04.14	-40.72	604779.0404	612778.2766
30009	203+01.66	-26.01	604766.8698	612769.6568
30010	203+16.95	-41.00	604773.7290	612789.9404
30011	203+03.88	-17.89	604758.5900	612768.1349
30012	203+11.52	-24.35	604761.0901	612777.8173
30013	203+11.52	-14.35	604752.0821	612773.4751
30014	203+44.33	-23.44	604746.0206	612806.9731
30015	203+56.04	-22.28	604739.8949	612817.0288
30016	203+98.33	-22.86	604722.0551	612855.3704
30017	204+06.55	-22.85	604718.4773	612862.7715
30018	204+46.67	-22.97	604701.1600	612898.9638
30019	204+59.46	-22.99	604695.6250	612910.4884
30020	204+98.31	-23.11	604678.8669	612945.5455
30021	205+10.61	-23.08	604673.4970	612956.6043
30022	205+49.04	-23.34	604657.0449	612991.3349
30023	205+61.67	-22.99	604651.2418	613002.5634
30024	205+94.84	-22.18	604636.1139	613032.0969
30025	206+08.75	-22.42	604630.2885	613044.7270
30026	206+45.41	-22.73	604614.6472	613077.8876
30027	206+52.74	-20.10	604609.0945	613083.3478
30028	206+52.74	-60.10	604645.1267	613100.7167
30029	206+67.65	-14.35	604597.4424	613094.2783

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
30030	206+67.65	-44.35	604624.4666	613107.3050
30031	206+84.80	-20.66	604595.6755	613112.4663
30032	206+96.15	-34.98	604603.6504	613128.9080
30033	206+90.30	-46.32	604616.4117	613128.5629
30034	206+96.99	-64.57	604629.9439	613142.5172
30035	207+05.01	-61.95	604624.0914	613148.6045
30036	207+37.17	-51.55	604600.7681	613173.0568
30037	207+29.30	-27.45	604582.4768	613155.5034
30038	207+30.13	-19.38	604574.8423	613152.7437
30039	207+38.80	-24.35	604575.5527	613162.7185
30040	207+38.80	-14.35	604566.5447	613158.3762
30041	207+62.92	-28.25	604568.5932	613186.1364
30042	207+75.79	-28.25	604563.0036	613197.7321
30043	208+05.53	-29.73	604551.4239	613225.1612
30044	208+13.82	-29.73	604547.8242	613232.6289
30045	208+61.84	-32.50	604529.4738	613277.0868
30046	208+72.21	-32.51	604524.9734	613286.4291
30047	209+19.35	-25.63	604498.3116	613325.9096
30048	209+40.82	-25.63	604488.9877	613345.2522
30049	202+71.03	14.29	604743.8606	612724.5647
30050	202+82.61	14.31	604738.8207	612734.9848
30051	203+61.00	17.65	604701.7705	612804.1527
30052	204+27.52	25.50	604665.8136	612860.6678
30053	204+35.70	25.50	604662.2636	612868.0323
30054	204+40.66	30.07	604655.9972	612870.5152
30055	206+66.42	30.07	604557.9658	613073.8834
30056	206+79.73	34.47	604548.2193	613083.9585
30057	207+41.49	17.65	604536.5541	613146.8975
30115	205+84.20	27.32	604596.1450	613001.0130

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

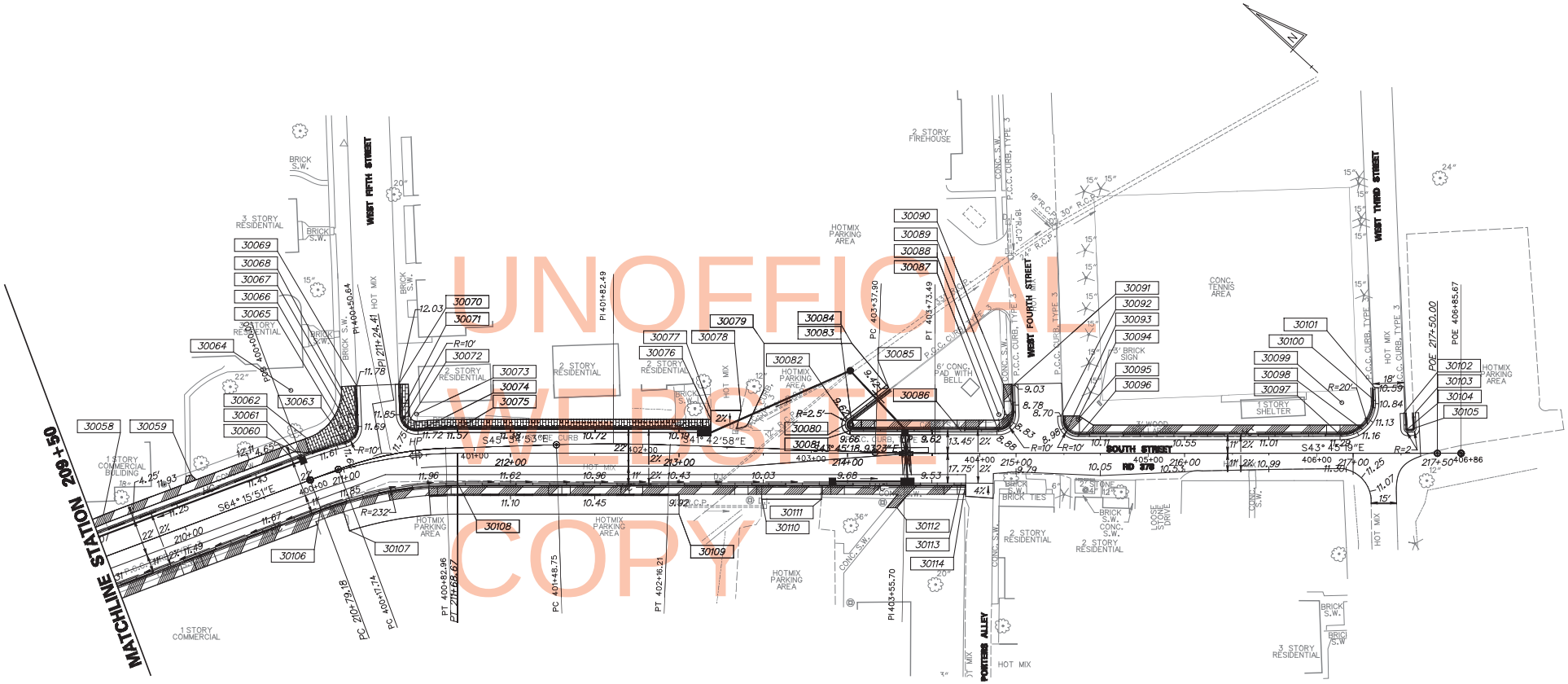
SCALE 0 30 60 90 FEET

WASHINGTON STREET SIDEWALKS

CONTRACT	BRIDGE NO.	N/A
T200201104	DESIGNED BY: MAG	
COUNTY	CHECKED BY: PAH	
NEW CASTLE		

GRADES AND GEOMETRICS

SHEET NO.
32
TOTAL SHTS.
105



COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
30058	209+57.04	-23.63	604480.1419	613358.9969
30059	210+14.20	-27.57	604458.8681	613412.1878
30060	210+76.47	-19.00	604424.1163	613464.5651
30061	210+79.18	-14.35	604418.7450	613464.9898
30062	210+85.49	-23.92	604424.2867	613475.3314
30063	211+05.12	-14.35	604405.5742	613489.0382
30064	210+85.74	-53.92	604450.8344	613489.3036
30065	211+05.12	-24.35	604414.0840	613494.2901
30066	211+11.01	-16.64	604404.1620	613495.5370
30067	211+14.09	-22.39	604407.1382	613501.4843
30068	211+09.89	-46.13	604429.6048	613510.5004
30069	211+17.71	-46.13	604424.4700	613518.2176
30070	211+38.69	-43.06	604407.1539	613536.1142
30071	211+37.32	-25.06	604394.2014	613523.5261
30072	211+39.61	-17.57	604386.8238	613520.7056

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
30073	211+46.39	-24.35	604387.2319	613530.6973
30074	211+46.39	-14.35	604379.7009	613524.1183
30075	211+68.67	-14.35	604363.4361	613541.1430
30076	213+18.97	-20.10	604258.8503	613649.2412
30077	213+18.89	-25.34	604262.5286	613652.9746
30078	213+36.80	-25.34	604249.5922	613665.3608
30079	213+50.44	-65.24	604267.3374	613703.6032
30080	213+98.62	-17.17	604199.2867	613702.2104
30081	214+01.61	-13.43	604194.5502	613701.5767
30082	213+99.52	-19.56	604200.2912	613704.5565
30083	214+02.62	-17.00	604196.2847	613704.8539
30084	214+02.56	-65.24	604229.6894	613739.6556
30085	214+24.44	-38.87	604195.6501	613735.7341
30086	214+67.53	-13.00	604146.6350	613746.8540
30087	214+89.73	-13.00	604130.6005	613762.2066

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
30088	214+89.73	-23.00	604137.5163	613769.4296
30089	214+96.92	-16.06	604127.5163	613769.3901
30090	214+99.72	-23.36	604130.5437	613776.5978
30091	214+99.10	-40.97	604143.1793	613788.8886
30092	215+26.66	-22.10	604110.2182	613794.3210
30093	215+29.79	-12.89	604101.5832	613789.8340
30094	215+37.58	-22.16	604102.3757	613801.9121
30095	215+36.74	-20.09	604101.5506	613799.8411
30096	215+36.74	-10.08	604094.6280	613792.6109
30097	216+93.31	-10.08	603981.5397	613900.8894
30098	217+05.53	-14.25	603975.5954	613912.3495
30099	216+93.31	-30.08	603995.3712	613915.3354
30100	217+13.29	-30.93	603981.5241	613929.7665
30101	217+12.95	-38.85	603987.2401	613935.2512
30102	217+29.90	-23.71	603964.5294	613936.0367

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
30103	217+36.89	-24.03	603959.6993	613941.1055
30104	217+32.31	-14.45	603956.3864	613931.0242
30105	217+35.32	-14.59	603954.3079	613933.2054
30106	210+79.25	17.65	604389.8917	613451.1517
30107	210+92.49	36.06	604368.1166	613453.2204
30108	211+68.67	17.68	604341.2844	613518.0059
30109	213+00.00	36.07	604233.7083	613595.5530
30110	213+49.03	27.25	604204.3907	613635.8301
30111	213+84.50	27.25	604178.7703	613660.3608
30112	214+29.34	32.27	604142.9135	613687.7420
30113	214+67.58	17.65	604125.3987	613724.7533
30114	214+70.12	17.65	604123.5646	613726.5093

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

WASHINGTON STREET SIDEWALKS

CONTRACT	BRIDGE NO.	N/A
T200201104	DESIGNED BY: MAG	
COUNTY		
NEW CASTLE	CHECKED BY: PAH	

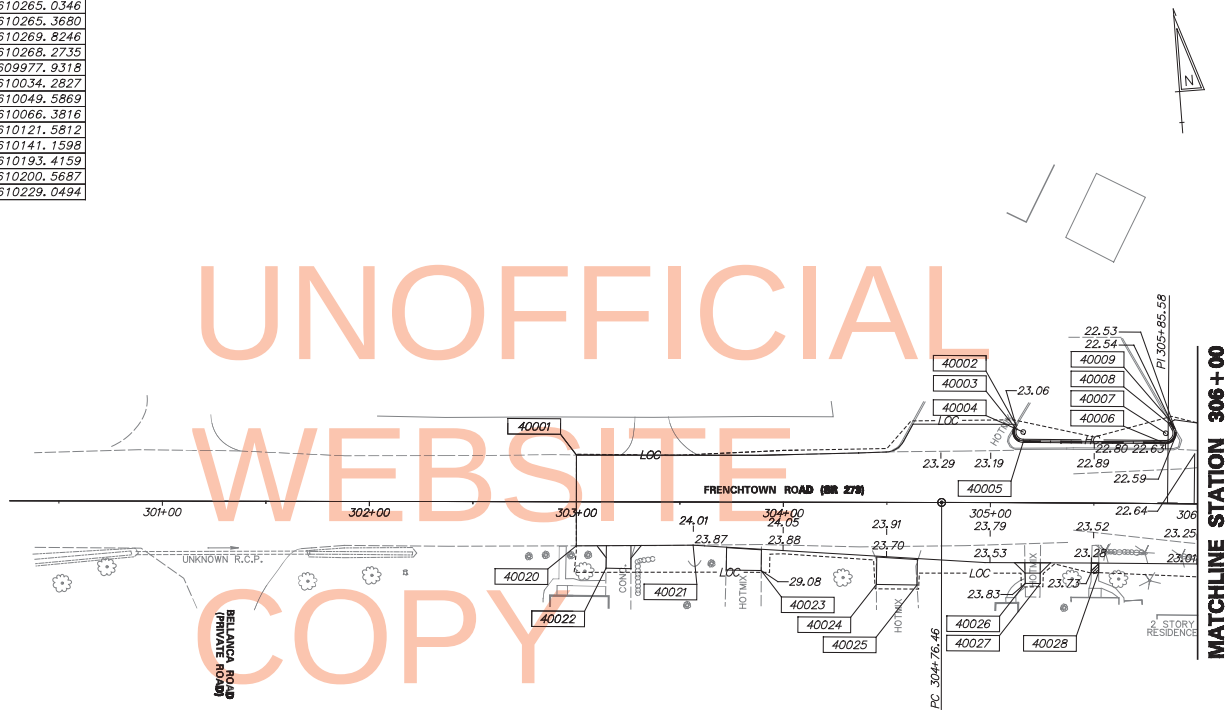
GRADES AND GEOMETRICS

SHEET NO.
33
TOTAL SHTS.
105

COORDINATE LIST

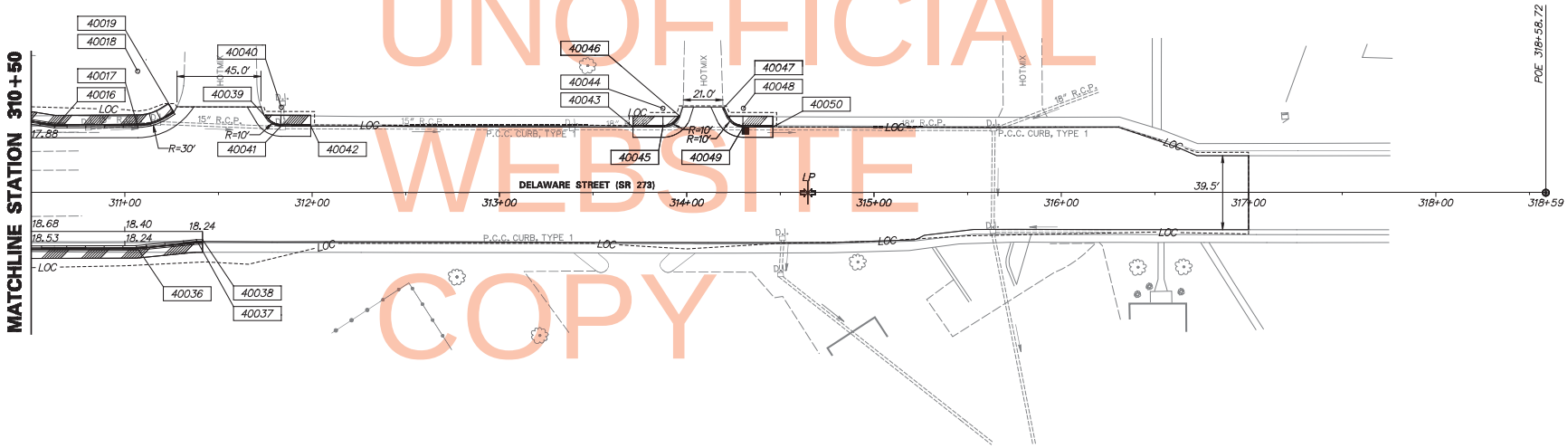
POINT NO.	STATION	OFFSET	NORTHING	EASTING
40001	303+00.00	-22.60	606212.4610	609980.5529
40002	305+12.11	-37.84	606214.9496	610193.2821
40003	305+11.43	-36.70	606213.8566	610192.5349
40004	305+15.72	-34.14	606211.0350	610196.6627
40005	305+15.70	-29.14	606206.0462	610196.3292
40006	305+84.42	-29.00	606201.4534	610265.0346
40007	305+84.42	-34.00	606206.4423	610265.3680
40008	305+88.71	-36.56	606208.7093	610269.8246
40009	305+86.96	-39.50	606211.7584	610268.2735
40020	303+00.00	21.26	606168.6777	609977.9318
40021	303+56.43	20.86	606165.7092	610034.2827
40022	303+72.48	32.84	606152.7954	610049.5869
40023	303+89.31	33.04	606151.5895	610066.3816
40024	304+45.01	39.67	606141.6380	610121.5812
40025	304+64.64	39.90	606140.2322	610141.1598
40026	305+17.04	39.00	606137.9526	610193.4159
40027	305+24.23	39.00	606137.5033	610200.5687
40028	305+52.49	33.58	606141.1161	610229.0494

UNOFFICIAL WEBSITE COPY



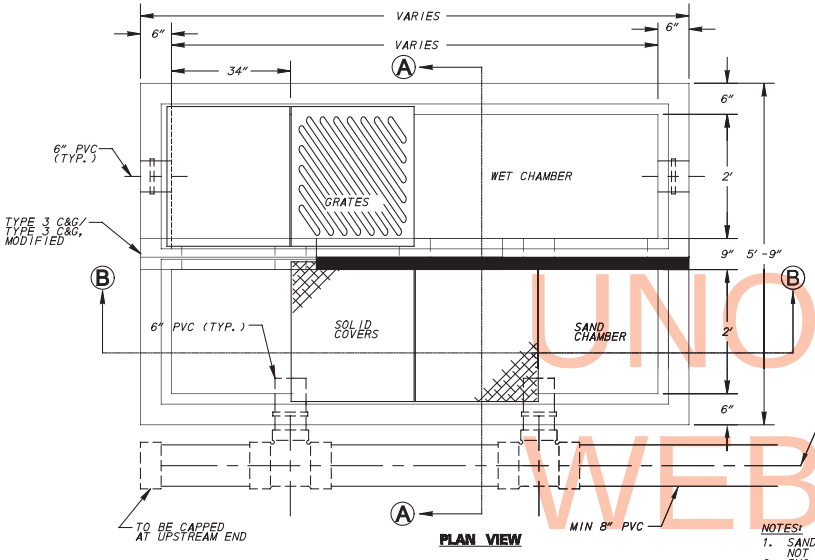
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	GRADES AND GEOMETRICS	SHEET NO. 34
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
40016	310+62.27	-34.61	606171.9475	610742.2183
40017	311+07.01	-34.86	606168.8745	610786.8594
40018	311+06.84	-64.86	606198.8036	610788.9197
40019	311+26.75	-41.92	606174.4447	610807.0692
40036	311+05.86	28.26	606106.0152	610781.0213
40037	311+38.15	25.04	606106.8240	610813.4556
40038	311+41.46	25.06	606106.5618	610816.7637
40039	311+74.52	-41.21	606170.1881	610854.6546
40040	311+83.53	-45.63	606173.9268	610863.9672
40041	311+83.51	-35.63	606163.9562	610863.2003
40042	311+99.27	-35.59	606162.7474	610878.9153
40043	313+71.30	-35.09	606149.4680	611050.4327
40044	313+87.30	-45.08	606158.2405	611067.1373
40045	313+87.30	-35.08	606148.2687	611066.3877
40046	313+96.35	-40.82	606153.3240	611075.8452
40047	314+19.38	-44.79	606155.5740	611099.1067
40048	314+30.23	-45.10	606155.0759	611109.9510
40049	314+30.21	-35.10	606145.1053	611109.1851
40050	314+45.99	-35.06	606143.8964	611124.9229



UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	GRADES AND GEOMETRICS	SHEET NO. 35
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		



PLAN VIEW

DE MODULAR SAND FILTER

NOT TO SCALE

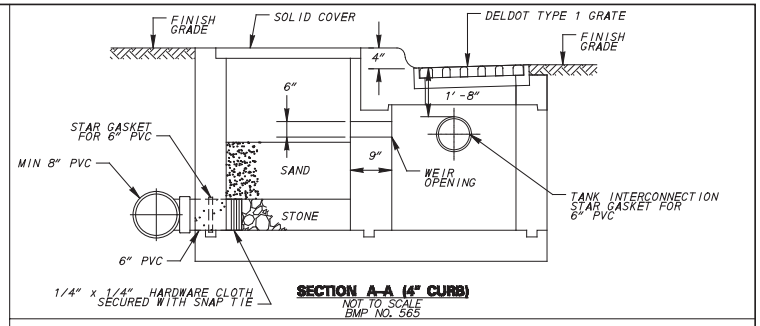
SAND FILTER SCHEDULE

BMP #	STATION	OFFSET	CONNECTION LOCATION
BMP #567	16+94.83	26.30	DI-26
	17+02.91	26.30	
	17+10.99	26.30	
	17+19.07	26.30	
	17+27.15	26.30	
BMP #566	21+12.70	17.25	DI-30
	21+20.79	17.25	
	21+28.87	17.25	
	21+36.95	17.25	
BMP #565	25+92.68	17.26	DI-41
	26+00.76	17.26	
	26+08.84	17.26	
	26+16.92	17.26	
	26+25.00	17.26	
	26+33.08	17.26	

NOTES:

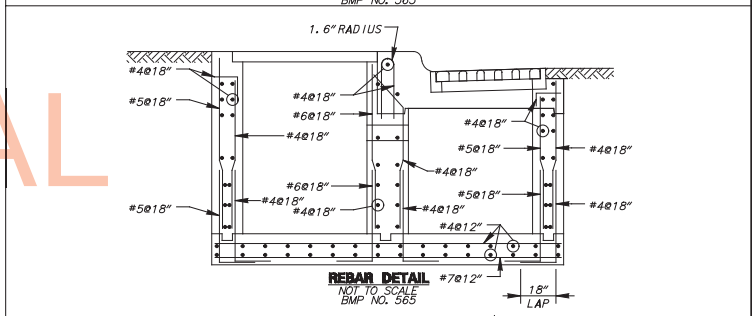
1. SAND FILTER SHALL BE CAST IN PLACE. PRECAST WILL NOT BE ACCEPTED.
2. PVC PIPE SHALL BE 6" AND SCHEDULE 40.
3. CONNECTIONS OF PERFORATED 6" PVC CLEANOUT SHALL BE MADE USING FITTINGS OF COMPATIBLE SCHEDULE.
4. GASKETS SHALL BE COMPATIBLE WITH PVC SCHEDULE (A-LOK, STAR SEAL OR EQUIVALENT).
5. CONCRETE SHALL BE f'c = 4500 psi @ 28 DAYS.
6. REINFORCING STEEL SHALL CONFORM TO ASTM 615, GRADE 60. MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS OTHERWISE NOTED, WITH THE EXCEPTION OF BARS AT THE BOTTOM OF THE FOOTING WHICH SHALL HAVE 3" COVER.
7. ALL REINFORCING STEEL IS TO BE EPOXY COATED.
8. BOTTOM OF SAND FILTER AND WEIR OPENING SHALL BE CONSTRUCTED AT LEVEL GRADE.
9. TOP OF SAND FILTER SHALL BE CAST IN PLACE TO MEET GRADE OF SURROUNDING PAVEMENT.
10. CONTRACTOR SHALL SUBMIT SAND FILTER SHOP DRAWINGS TO DELDOT FOR APPROVAL PRIOR TO INSTALLATION.
11. ITEM 708536, SAND FILTER SHALL INCLUDE FURNISHING AND PLACING NECESSARY FITTINGS, CONCRETE, METAL FRAMES, GRATES, SOLID COVERS, PERFORATED PVC UNDERDRAIN, CLEANOUT PIPES AND CAPS, GEOTEXTILE SOCK, PIPE FITTINGS, GASKETS AND SAND.

UNOFFICIAL WEBSITE COPY



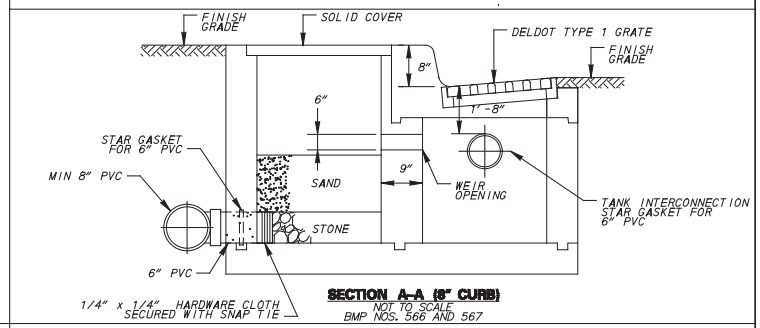
SECTION A-A (4" CURB)

NOT TO SCALE
BMP NO. 565



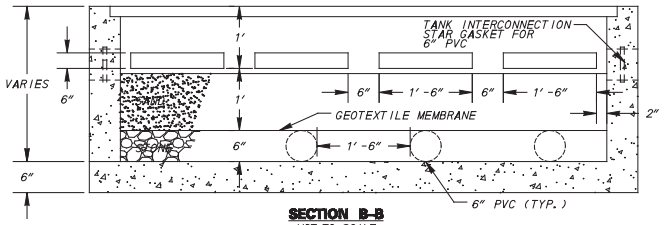
REBAR DETAIL

NOT TO SCALE
BMP NO. 565



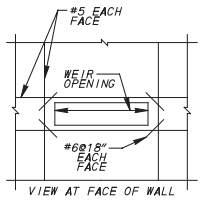
SECTION A-A (8" CURB)

NOT TO SCALE
BMP NOS. 566 AND 567



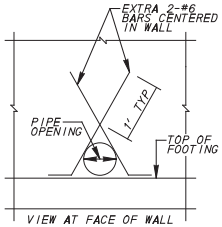
SECTION B-B

NOT TO SCALE



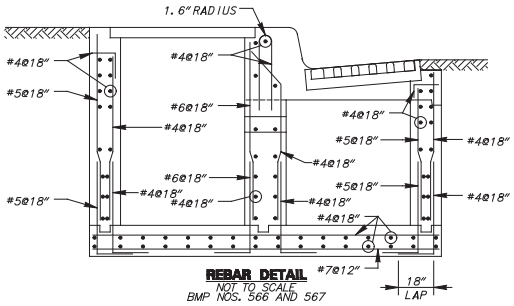
TYPICAL WEIR OPENING

NOT TO SCALE



TYPICAL PIPE OPENING WALL

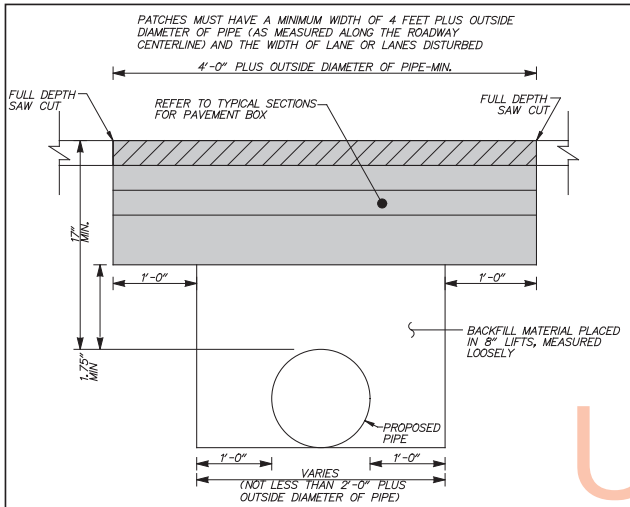
NOT TO SCALE



REBAR DETAIL

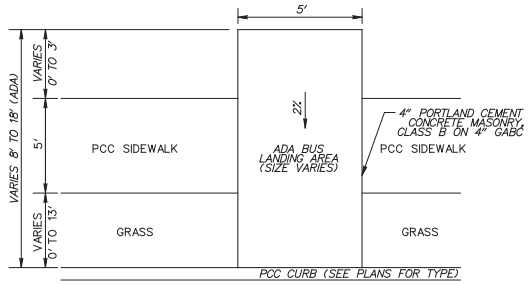
NOT TO SCALE
BMP NOS. 566 AND 567

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	STORMWATER MANAGEMENT PLAN	SHEET NO. 36
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		



TYPICAL DRAINAGE CROSSING PAVEMENT PATCHING DETAIL

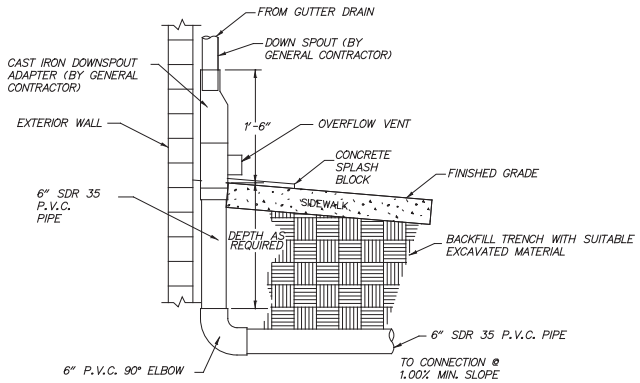
NOT TO SCALE



DART BUS PAD LAYOUT TYPE A

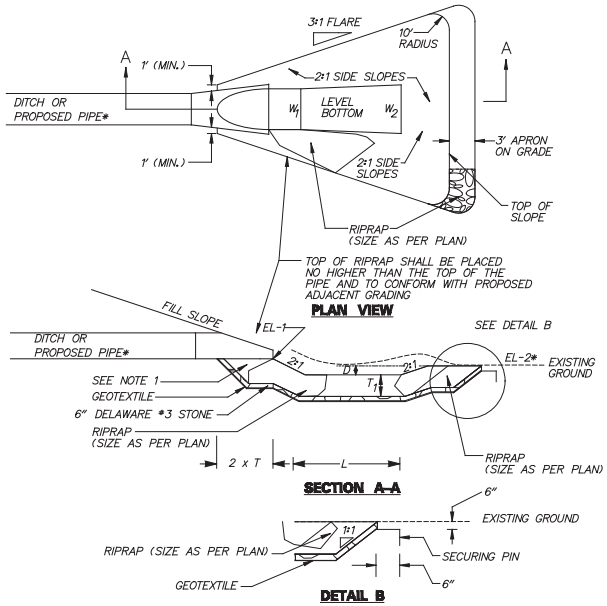
NOT TO SCALE

STREET	STATION	OFFSET
WASHINGTON	13+13.86	-25.00
WASHINGTON	17+50.00	17.93
WASHINGTON	19+23.10	-17.67
WASHINGTON	22+88.10	17.67
WASHINGTON	23+32.93	-17.67
WASHINGTON	27+18.64	-17.67
WASHINGTON	32+37.78	29.67
WASHINGTON	32+42.10	-17.67
SEVENTH	112+06.94	-16.67
SEVENTH	112+58.89	16.72
SEVENTH	118+14.75	-16.67
SEVENTH	118+56.27	16.67
SOUTH	205+70.88	19.32



ROOF DRAIN DETAIL

NOT TO SCALE

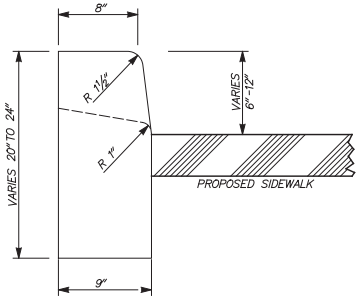


TYPE 1 ENERGY DISSIPATOR DETAIL

NOT TO SCALE

ENERGY DISSIPATOR SCHEDULE									
STATION	OFFSET	RIP RAP SIZE	D (FT)	T (FT)	W1 (FT)	W2 (FT)	L (FT)	EL 1 (FT)	EL 2 (FT)
30+52	-31'	R4	0.5	1.2	2.0	2.0	6.0	8.00	7.65
105+73	49'	R4	0.5	1.2	2.0	2.0	6.0	1.10	0.90

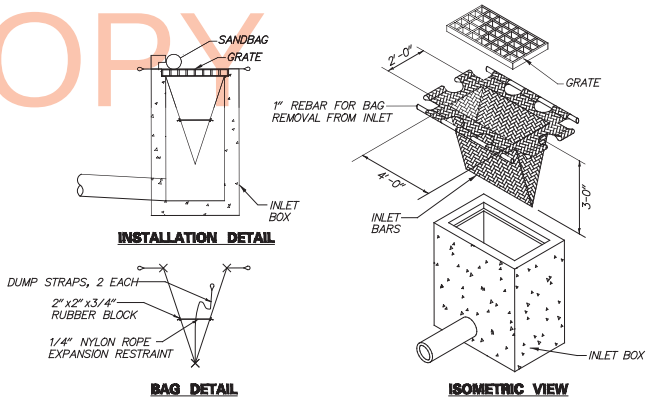
NOTES:
1. PLACE RIPRAP AND CHOKE WITH DE NO. 3 STONE BEFORE INSTALLING PIPES.
2. TOP OF RIPRAP ON SIDE SLOPES OF DITCHES SHALL BE 2 FEET ABOVE BOTTOM OF DITCHES.
3. THE CONTRACTOR SHALL FOLLOW NOTE 2.C ON EC-01 FOR SLOPE RIPRAP OUTFALL TREATMENT AT STATION 105+73.



PCC CURB WALL DETAIL

STATION 8+92.00 TO 9+05.00 RIGHT

NOT TO SCALE



INLET SEDIMENT CONTROL AT GRADE INLET

NOTE: NOT TO SCALE

1. MAXIMUM DRAINAGE AREA =½ACRE.

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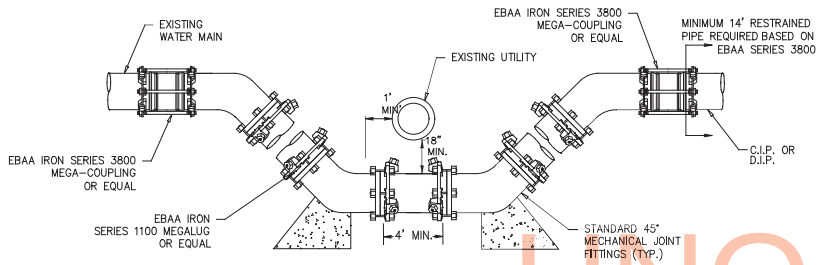
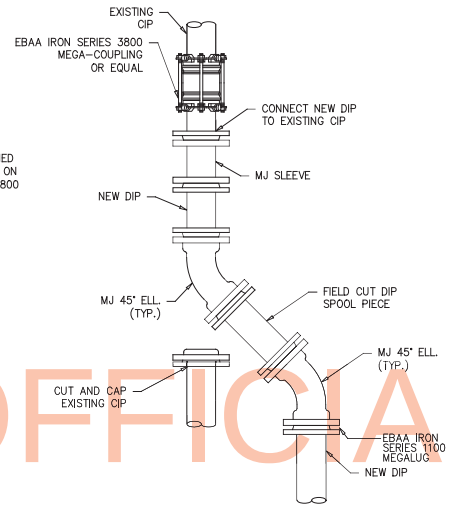
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	CONSTRUCTION DETAILS	SHEET NO. 37
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		



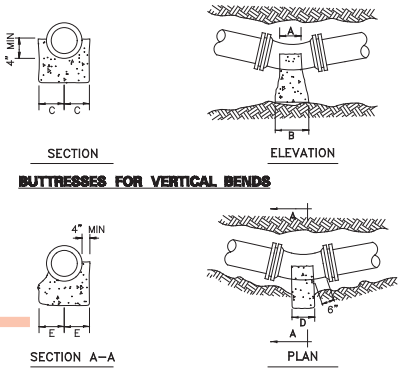
TYPICAL WATER MAIN VERTICAL BEND ASSEMBLY

NOT TO SCALE



TYPICAL DIP TO CIP CONNECTION DETAIL

NOT TO SCALE



BUTTRESSES FOR VERTICAL BENDS

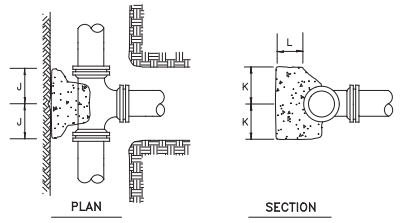
BUTTRESSES FOR HORIZONTAL BENDS

VERTICAL BENDS

SIZE		BEND 45°	BEND 22 ½°	BEND 11 ¼°
6"	A	6"	6"	*
	B	1'–5"	11"	*
	C	6"	4"	*
8"	A	6"	6"	*
	B	1'–10"	1'–2"	*
	C	8"	6"	*
12"	A	6"	6"	6"
	B	2'–10"	1'–10"	1'–2"
	C	11"	8"	7"

HORIZONTAL BENDS

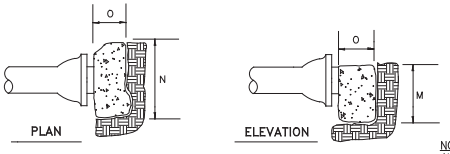
SIZE		6"	8"	12"
45°	D	1'–5"	1'–10"	3'–10"
	E	6"	8"	12"
22 ½°	D	11"	1'–2"	1'–10"
	E	4"	6"	9"
11 ¼°	D	*	*	1'–2"
	E	*	*	7"



BUTTRESSES FOR TEES

TEES

	SIZE 6"	SIZE 8"	SIZE 12"
J	6"	8"	1'–1"
K	10"	1'–1"	1'–7"
L	8"	8"	1'–0"



BUTTRESSES FOR PLUGS AND CAPS

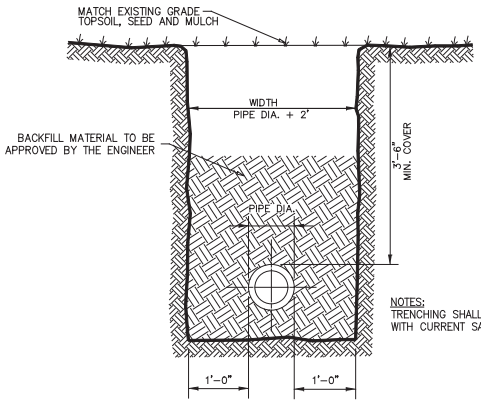
PLUG OR CAP

	SIZE 6"	SIZE 8"	SIZE 12"
M	1'–1"	1'–5"	2'–1"
N	1'–7"	2'–2"	3'–2"
O	0'–7"	0'–9"	1'–1"

NOTES:
ALL FITTINGS MUST BE WRAPPED WITH PLASTIC BEFORE CONCRETE BUTTRESS IS POURED.

STANDARD BUTTRESS FOR PIPE FITTINGS

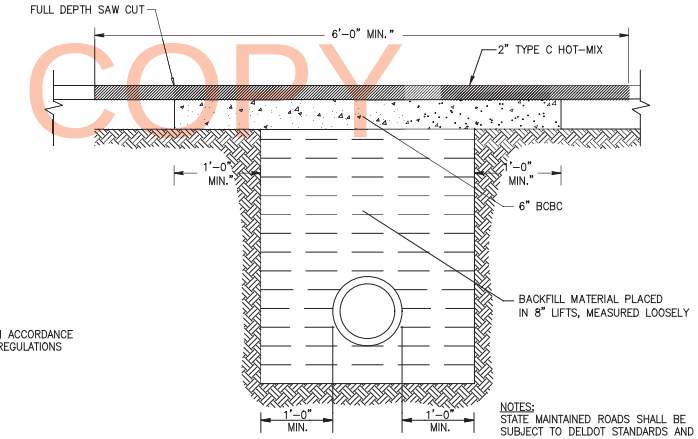
NOT TO SCALE



NOTES:
TRENCHING SHALL BE IN ACCORDANCE WITH CURRENT SAFETY REGULATIONS

TYPICAL WATER MAIN TRENCH DETAIL

NOT TO SCALE



NOTES:
STATE MAINTAINED ROADS SHALL BE SUBJECT TO DELDOT STANDARDS AND INSPECTION

TYPICAL WATER MAIN CROSSING PAVEMENT PATCHING DETAIL

NOT TO SCALE

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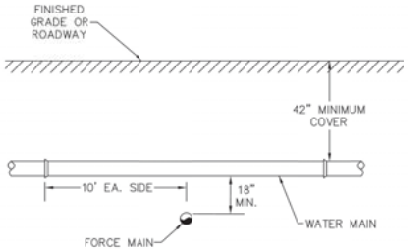
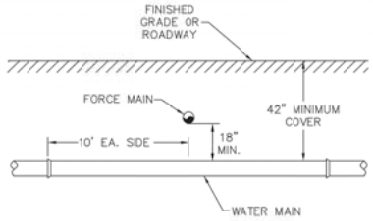
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	CONSTRUCTION DETAILS	SHEET NO. 38
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		



PREFERRED TYPICAL SEWER CROSSING

NOT TO SCALE



ALTERNATE SEWER CROSSING

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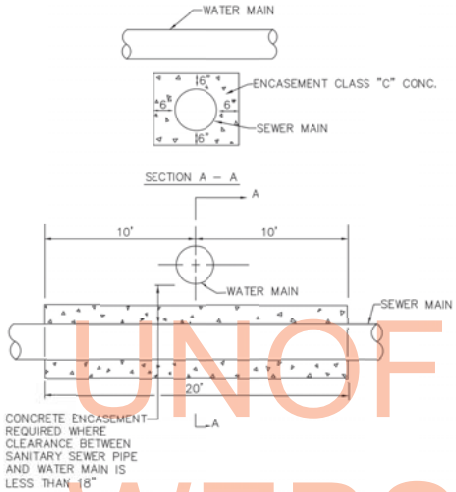
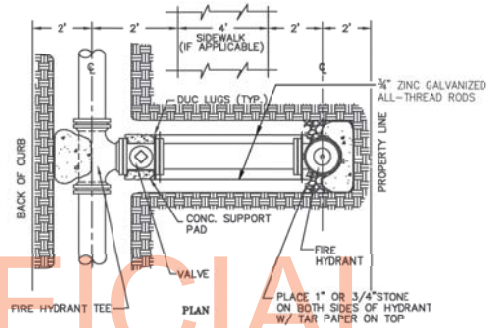
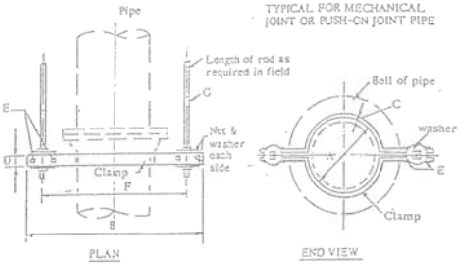


CONCRETE ENCASEMENT DETAIL

NOT TO SCALE



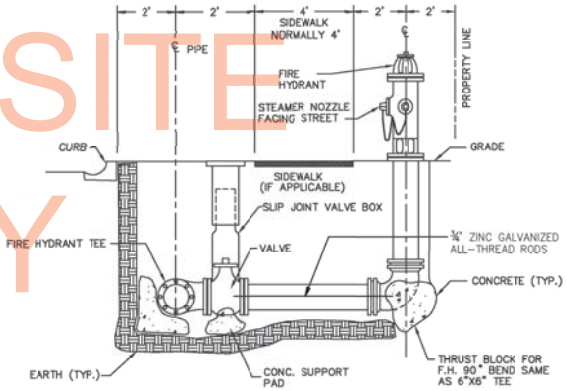


PIPE HARNESS SCHEDULE									
Nominal Pipe Size	A	B	C	D	Bolts E	F	G	No. Rods	No. Clamps
4	3	14 3/8	1/2	2	5/8 x 3 1/2	10 1/8	3/4	2	1
6	7 1/8	15 7/8	1/2	2	5/8 x 3 1/2	12 1/16	3/4	2	1
8	9 5/16	19 1/8	5/8	2 1/2	5/8 x 3 3/4	14 3/8	7/8	2	1
10	11 1/2	21 3/8	5/8	2 1/2	3/4 x 3 3/4	16 9/16	1	2	1
12	13 1/2	25 1/8	5/8	3	7/8 x 4 1/2	18 13/16	1 1/4	2	1
14	15 3/4	28 1/4	3/4	3	7/8 x 4 1/2	23 3/4	1 3/8	2	1
16	17 7/8	31 3/8	3/4	4	1 x 4 1/2	25 7/8	1 1/2	2	1
18	20	35 1/8	3/4	4	1 1/4 x 5	28 1/8	1 1/4	4	2
20	22 1/8	37 3/4	3/4	4 1/2	1 1/4 x 5	31 1/4	1 3/8	4	2
24	26 3/8	44 1/4	3/4	5	1 1/2 x 5 1/2	35 1/2	1 3/4	4	2

1. Clamps to be fabricated from ASTM Galvanized Steel
2. Rods are to be ASTM A-307 Galvanized
3. Clamps shall be as manufactured by Grinnell Co., Stellar Corporation, or equal.

RESTRAINT RODS AND CLAMPS

NOT TO SCALE

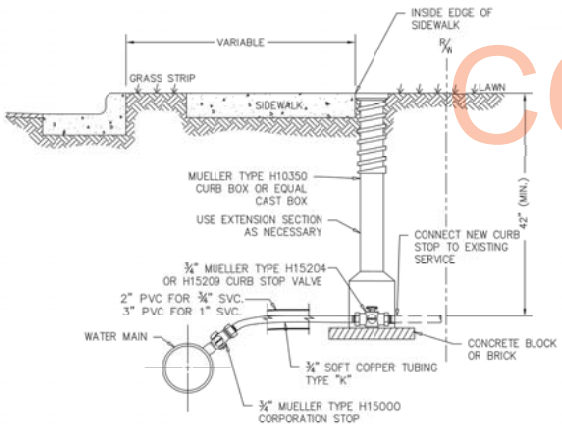


PROFILE

1. ALLOW SUFFICIENT SPACE TO HAVE ACCESS TO BOLTS IN THE MECHANICAL JOINT.
2. STRENGTH OF CONCRETE SHOULD BE 2500 P.S.I. (MIN.) AFTER 28 DAYS.
3. ALL REACTION BACKING TO EXTEND TO UNDISTURBED EARTH.
4. WHEN USING MECHANICAL JOINT, USE TAR PAPER BETWEEN FITTING AND CONCRETE.

TYPICAL FIRE HYDRANT ASSEMBLY

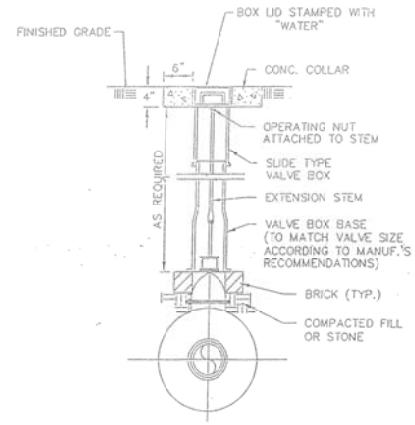
NOT TO SCALE



NOTES:
ALL ITEMS TO BE AS SHOWN OR APPROVED EQUAL.

STANDARD REPLACEMENT WATER SERVICE ASSEMBLY

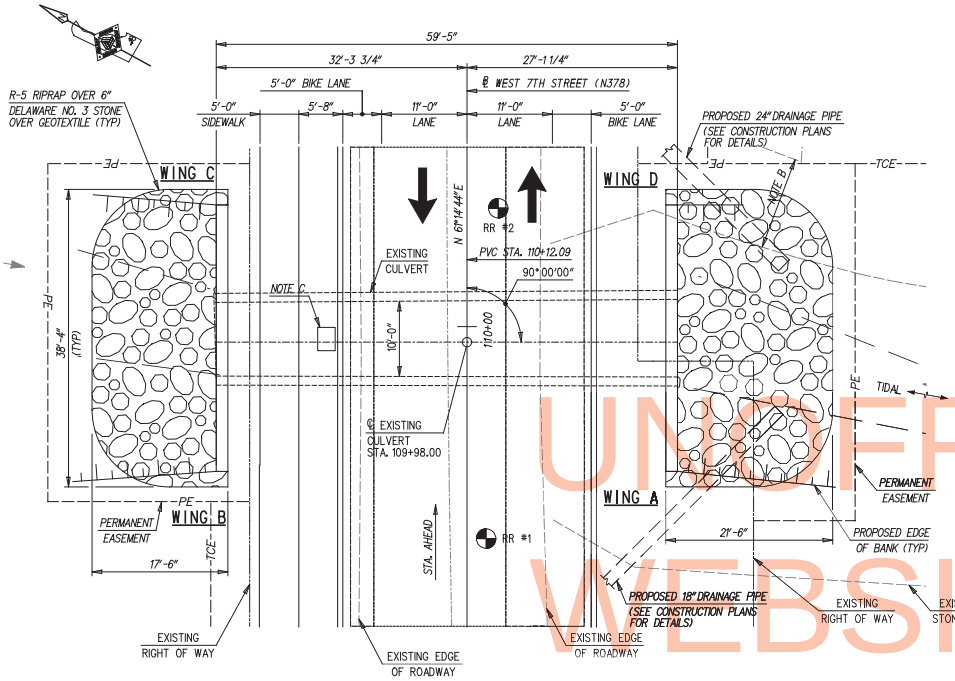
NOT TO SCALE



VALVE BOX DETAIL

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	CONSTRUCTION DETAILS	SHEET NO. 39
				COUNTY NEW CASTLE	DESIGNED BY: MAG		TOTAL SHTS. 105
					CHECKED BY: PAH		

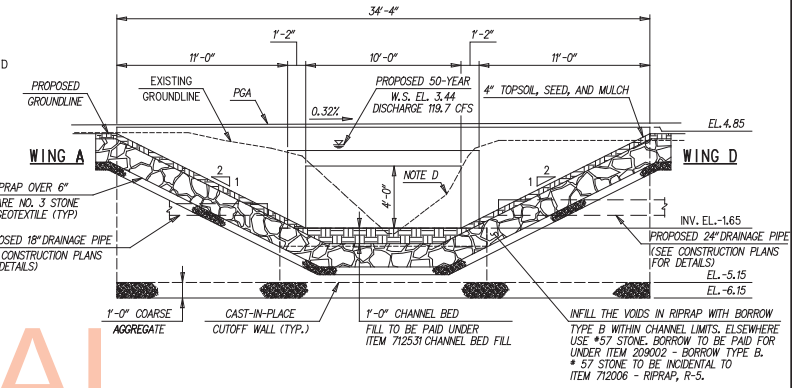


PLAN

SCALE 0 4' 8' 16'

LEGEND:

- ℄ - CENTERLINE
- ℄ - BASELINE
- PGA - PROFILE GRADE APPLIED
- E.F. - EACH FACE
- ⊕ - BORING LOCATION
- - - - MEAN HIGH WATER
- W.S. - WATER SURFACE



SOUTH ELEVATION

SCALE 0 2' 4' 8'

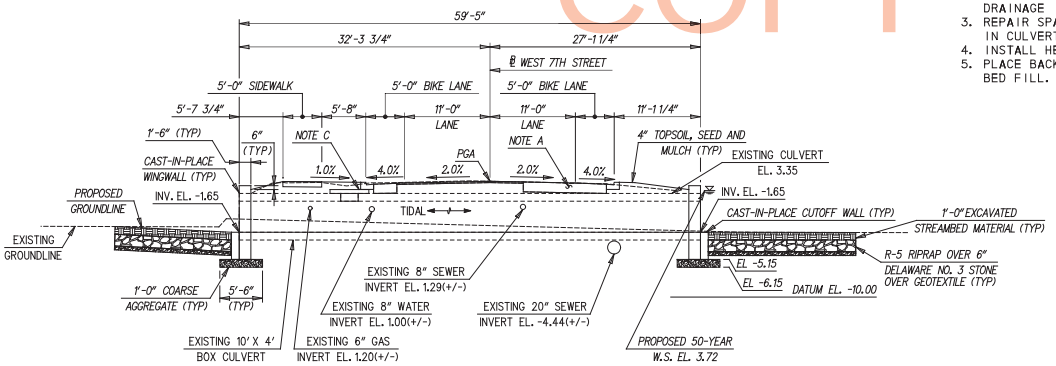
TEST BORING LOCATIONS		
BORING NO.	STATION	OFFSET
RR #1	STA. 109+72.69	2.46' R
RR #2	STA. 110+15.25	4.02' R

SUGGESTED SEQUENCE OF CULVERT REHABILITATION:

1. EXCAVATE FOR HEADWALLS AND CUTOFF WALLS, REMOVE SEDIMENT FROM CULVERT.
2. REPAIR CULVERT TOP SLAB AT FULL-DEPTH DRAINAGE INLET.
3. REPAIR SPALLED AND DELAMINATED AREAS IN CULVERT.
4. INSTALL HEADWALLS AND CUTOFF WALLS.
5. PLACE BACKFILL, RIPRAP AND CHANNEL BED FILL.

NOTES:

A. FOR PAVEMENT BOX DETAILS SEE TYPICAL SECTION ON SHEET 7. VARY DEPTH OF GRADED AGGREGATE BASE COARSE AS REQUIRED.
B. EXISTING DRIVEWAY AT STA. 110+22.00 TO BE REMOVED. ACCESS TO PROPERTY TO BE MAINTAINED AT ALL TIMES THROUGH EXISTING DRIVEWAY AT STA. 110+65.00.
C. HOLE IN TOP SLAB (12" DEPTH) TO BE REPAIRED. FOR TOP SLAB REPAIR DETAILS SEE SHEET 4.
D. CONTRACTOR SHALL REMOVE ALL SEDIMENT WITHIN CULVERT LIMITS, INCIDENTAL TO ITEM 207000 - EXCAVATION AND BACKFILL FOR STRUCTURES.



SECTION

SCALE 0 4' 8' 16'

INDEX OF BRIDGE SHEETS	
SHEET NO.	TABLE OF CONTENTS
1	GENERAL PLAN AND ELEVATION
2	GENERAL NOTES, QUANTITIES, AND RATINGS
3	STRUCTURE DETAILS
4	REPAIR DETAILS
5	REINFORCEMENT SCHEDULE
6	BORING LOGS

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BRIDGE PROJECT NOTES:

MISCELLANEOUS

1. LOCATION
   REHABILITATION OF 7TH STREET CULVERT OVER RAILROAD DRAINAGE SYSTEM, NEW CASTLE COUNTY, DE.

2. DESIGN CRITERIA
   2007 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. DELAWARE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, MAY 2005, LATEST REVISIONS JANUARY 2008.

3. DESIGN LOADING
   VEHICLE LIVE LOAD IS HL-93
   DEAD LOAD INCLUDES SURFACE AREA DENSITY OF 0.025 KSF FOR FUTURE WEARING SURFACE.

4. HYDRAULIC DATA

DRAINAGE AREA	0.11	SQ. MILES
DESIGN FREQUENCY	50	YEARS
DESIGN DISCHARGE	119.7	CFS
50 YR FLOOD ELEVATION	3.44	FT
PROPOSED OPENING	40	SF

   A TIDE CONTROL GATE AT THE DOWNSTREAM END OF THE WATERWAY PREVENTS TIDAL FLOW.

5. SCOUR ANALYSIS
   THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC-18 - 'EVALUATING SCOUR AT BRIDGES'. SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE WORST CASE OF THE OVERTOPPING FLOOD OR THE 500-YR FLOOD EVENT.

DESIGN EVENT	500 YEAR FLOOD	DESIGN VELOCITY	2.72FT/S
DESIGN DISCHARGE	140.80 CFS	DESIGN DEPTH OF FLOW	2.92FT

6. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATION OUTSIDE THE LIMITS OF CONSTRUCTION SHALL BE TOPSOILED, SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

7. REPLACE OR REPAIR, AT NO EXPENSE TO THE DEPARTMENT, ANY PORTION OF THE EXISTING STRUCTURE NOT SPECIFIED FOR REMOVAL IN THESE DRAWINGS WHICH IS DAMAGED DURING CONSTRUCTION.

8. DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE BY THE DEPARTMENT AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT MAY BE PRESENT OR ENCOUNTERED IN THE FIELD.

9. REFER TO CONSTRUCTION PHASING PLANS FOR STREAM DIVERSION AND NOTES.

SECTION 100

1. THE DEPARTMENT RESERVES THE RIGHT TO INCREASE OR DECREASE THE QUANTITIES OF PAY ITEMS SPECIFIED FOR THE STRUCTURES LISTED IN THIS CONTRACT. SUCH ADDITIONS OR DELETIONS SHALL NOT BE CAUSE FOR AN INCREASE OR DECREASE IN ANY CONTRACT UNIT BID PRICES. THE "CHANGE" THRESHOLD OF PLUS OR MINUS 25%, AS DESCRIBED IN SECTION 104.05 OF THE DELDOT STANDARD SPECIFICATIONS, SHALL NOT APPLY TO THIS CONTRACT.

SECTION 200

1. ALL EXCAVATIONS SHALL CONFORM TO CURRENT OSHA OR OTHER APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. SHORING SHALL BE REQUIRED FOR ANY EXCAVATION EXCEEDING 5 FEET IN HEIGHT, THE COST OF SHORING SHALL BE INCIDENTAL TO ITEM 207000 - EXCAVATION AND BACKFILL FOR STRUCTURES. IN LIEU OF SHORING, THE CONTRACTOR MAY USE A 2:1 CUT SLOPE. NO PAYMENT SHALL BE MADE FOR ADDITIONAL EXCAVATION OR FILL OUTSIDE THE LIMITS AS DEFINED IN SECTION 207 OF THE STANDARD SPECIFICATIONS.

2. CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM WITHIN CULVERT LIMITS. THE COST SHALL BE INCLUDED IN ITEM 207000 - EXCAVATION AND BACKFILL FOR STRUCTURES.

3. STRUCTURAL BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF BORROW TYPE C. PAYMENT UNDER ITEM 210000 - FURNISH BORROW TYPE "C" FOR STRUCTURE BACKFILL.

4. IF UNSUITABLE STRATA IS ENCOUNTERED IN THE EXISTING SOIL AT THE LEVEL OF THE PROPOSED FOUNDATION, THE UNSUITABLE MATERIAL SHALL BE REMOVED BY UNDERCUT EXCAVATION AS SPECIFIED IN SECTION 212000 OF THE STANDARD SPECIFICATIONS. REPLACE THE UNDERCUT SOIL WITH TYPE B BORROW TO THE ELEVATION OF THE PROPOSED FOUNDATION. PAYMENT FOR TYPE B BORROW SHALL BE INCLUDED UNDER ITEM 209002. THE ENGINEER SHALL SPECIFY THE LIMITS OF REMOVAL FOR NECESSARY UNDERCUT EXCAVATIONS. PAYMENT FOR UNDERCUTTING SHALL BE INCLUDED UNDER ITEM 212000.

5. PROVIDE ADEQUATE WATER DIVERSION AND DEWATERING METHODS DURING EXCAVATION AND FOUNDATION CONSTRUCTION. SEE EROSION AND SEDIMENTATION NOTES ON CONSTRUCTION PHASING NOTES FOR PAYMENT ITEMS.

BRIDGE PROJECT NOTES (CONT):

SECTION 200 (CONT)

7. DO NOT EXCEED A 2 FOOT DIFFERENCE IN FILL ELEVATION ON THE SIDES DURING PLACEMENT OF THE BACKFILL. DO NOT ALLOW WHEELS OF ROLLERS TO COME CLOSER THAN 1 FOOT TO THE FACE OF THE STRUCTURE DURING COMPACTION OF THE BACKFILL.

8. FOUNDATION STABILIZATION
   LIMITS OF COURSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL (ITEM 608000) SHALL EXTEND 18" OUTSIDE OF THE NEAT LINE PERIMETER OF THE VERTICAL FACES OF THE FOOTING OR STRUCTURAL UNIT.

9. UTILITIES
   THE CONTRACTOR IS RESPONSIBLE FOR WORKING AROUND AND PROTECTING ALL UTILITIES DURING CONSTRUCTION, WHERE NECESSARY. THE COST OF THIS WORK SHALL BE INCIDENTAL TO ITEM 207000 - EXCAVATION AND BACKFILL FOR STRUCTURES. FOR EXACT LOCATION OF UNDERGROUND UTILITIES , IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT MISS UTILITY AT (800) 282-8555.

SECTION 600

1. PORTLAND CEMENT CONCRETE
   a. PORTLAND CEMENT CONCRETE SHALL BE CLASS A AND MEET f'c = 4500 PSI. (f'c = 28 DAY COMPRESSIVE STRENGTH). MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE SPECIFICATIONS. A HIGHER STRENGTH CONCRETE MAY BE SUBSTITUTED FOR A LOWER STRENGTH CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT.
   b. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" X 3/4" UNLESS OTHERWISE NOTED.
   c. KEYED CONSTRUCTION JOINTS SHALL BE 2" X 4" EXCEPT AS INDICATED.
   d. RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS EXCEPT AS INDICATED.

2. BAR REINFORCEMENT
   a. STEEL REINFORCING SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL REINFORCEMENT STEEL SHALL BE PROTECTED WITH FUSION BONDED EPOXY. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284 (ASTM D3963), AND IS DENOTED WITH A SUFFIX "E" IN THE BAR MARKS.
   b. PROVIDE MINIMUM LAP AND EMBEDMENT LENGTH OF 30 DIAMETERS OR IN ACCORDANCE WITH AASHTO, WHICHEVER IS GREATER

3. DOWELS
   a. DRILLING HOLES AND FURNISHING AND INSTALLING DOWELS TO BE PAID FOR UNDER ITEM NO. 602579 DRILLING AND INSTALLING DOWELS. DO NOT EPOXY COAT DOWELS.
   b. WHERE ADHESIVE ANCHORS ARE SPECIFIED, DRILL DOWEL HOLES TO THE DEPTH AND TO THE DIAMETER AS RECOMMENDED BY THE ADHESIVE MANUFACTURER FOR THE DOWEL SIZE INDICATED. FURNISH AN APPROVED ADHESIVE ANCHOR. ADHESIVE ANCHORS ARE CONSIDERED INCIDENTAL TO ITEM 602579.

4. VERIFY ALL DIMENSIONS AND GEOMETRY OF THE EXISTING STRUCTURE IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION. PAYMENT INCIDENTAL TO ITEM 602572 - REPAIRING EXISTING P.C.C. STRUCTURES,

5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFE ERECTION AND CONSTRUCTION OF ALL STRUCTURAL COMPONENTS. PROVIDE ALL NECESSARY BRACING AND SUPPORT.

6. INTENTIONALLY ROUGHEN, POWER WASH AND APPLY EPOXY BONDING COMPOUND TO ALL EXISTING CONCRETE SURFACES TO WHICH NEW CONCRETE WILL BE ADDED, UNLESS OTHERWISE DIRECTED. PAYMENT IS INCIDENTAL TO PCC MASONRY.

7. WHEN PERFORMING SPALL REPAIRS ON VERTICAL SURFACES UNDER PAY ITEM 602586, THE PRODUCT DATA SHEET FOR PROPOSED MATERIAL MUST STATE THAT THE MATERIAL IS SUITABLE FOR REPAIRS ON VERTICAL SURFACES.

8. REPAIR SPALLS AND DELAMINATED AREAS IN EXISTING CONCRETE. WHEN REPAIRING CONCRETE SURFACES, PERFORM REPAIRS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
   a. FOR SPALL AND DELAMINATION REPAIRS LESS THAN OR EQUAL TO 2.0" DEEP, USE ITEM 602572 (WITH NO EXPOSED REINFORCING STEEL).
   b. SPALLS WITH SURFACE AREA LESS THAN 0.25 SF, AND DEPTH LESS THAN 3", SHALL BE PAID UNDER ITEM 602572.
   c. PERFORM SOUNDING FOR DELAMINTATION OF CONCRETE AROUND VISIBLE CRACKS, SPALLS AND OTHER DETERIORATION. SOUNDING OF CONCRETE SHALL BE INCIDENTAL TO PAY ITEM 602572. REMOVE AND REPLACE DELAMINATED AND DETERIORATED CONCRETE.
   d. FOR SPALL AND DELAMINATION REPAIRS GREATER THAN 2.0" IN DEPTH, OR WHEN REINFORCING STEEL IS EXPOSED BEFORE OR DURING REPAIR ACTIVITIES, PAYMENT SHALL BE UNDER ITEM 602586.

BRIDGE PROJECT NOTES (CONT):

SECTION 600 (CONT)

8. (CONT)
   e. WHEN REINFORCING STEEL IS EXPOSED BEFORE OR DURING THE REPAIR ACTIVITIES, REMOVE CONCRETE BEHIND BAR AND PREPARE SURFACE IN ACCORDANCE WITH INCLUDED DRAWING DETAIL FOR DEEP SPALL REPAIR. PAYMENT SHALL BE UNDER ITEM 602586.
   f. CRACK WIDTHS LARGER THAN ONE HALF INCH SHALL BE REPAIRED BY GROUTING. PAYMENT WILL BE UNDER ITEM 602572, REPAIR OF EXISTING PCC STRUCTURES.

9. ALL CONCRETE SPALL REPAIR PERFORMED UNDER PAY ITEM 602572 OR 602586 SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS STATED IN THE RESPECTIVE SPECIAL PROVISIONS, AND IN ACCORDANCE WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:
   a. PERFORM ABRASIVE BLASTING OF REINFORCING STEEL AS NECESSARY TO REMOVE CORROSION AND OTHER CONTAMINANTS PRIOR TO PLACEMENT OF PATCHING MORTAR OR CONCRETE.
   b. PREPARED CONCRETE SURFACE SHALL BE ROUGHENED BY ABRASIVE BLASTING PRIOR TO PLACEMENT OF PATCH MORTAR OR CONCRETE. THIS ROUGHENING IMPROVES THE MECHANICAL BOND WHEN PATCH MATERIAL IS APPLIED.

10. THE DEPARTMENT AND THE CONTRACTOR SHALL INSPECT UTILITIES INSIDE THE CULVERT AND AGREE ON THE CONDITION PRIOR TO THE START OF CONSTRUCTION. UTILITIES DAMAGED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE.

11. CONCRETE PROTECTIVE COATINGS
    PORTLAND CEMENT CONCRETE MASONRY SUBSTRUCTURE SEALER SHALL BE APPLIED TO EXPOSED, NEW CONCRETE SURFACES TO ONE FOOT BELOW FINISHED GRADE. PAYMENT UNDER ITEM 602782.

SECTION 700

1. STOCKPILE EXCAVATED STREAMBED MATERIAL AND PLACE 1'-0" THICK ABOVE RIPRAP IN THE CHANNEL AND IN FILL AS SHOWN ON THE PLANS. PAYMENT FOR THIS SHALL BE UNDER ITEM 712531 - CHANNEL BED FILL.

2. GEOTEXTILES
   ALL GEOTEXTILES SHALL BE KEYED UNDER ADJACENT SOIL OR RIP-RAP A MINIMUM OF 6" IN LENGTH TO PREVENT FREE EDGES.

CULVERT LOAD RATINGS

TRUCK	LOAD (TON)	INVENTORY RATING: RATING FACTOR	INVENTORY RATING: LOAD RATING (TON)	OPERATING RATING: RATING FACTOR	OPERATING RATING: LOAD RATING (TON)
AASHTO HL-93	N/A	0.75	N/A	1.20	N/A
AASHTO HS-20	36	1.04	37.53	1.35	48.66
S437 (DE 4 AXLE SINGLE UNIT)	37	1.13	41.33	1.47	53.58
T435 (DE 4 AXLE SEMI)	35	1.01	35.45	1.31	45.95
T540 (DE 5 AXLE SEMI)	40	1.01	40.52	1.31	52.52
S220 (DE 2 AXLE SINGLE UNIT)	20	1.67	33.36	2.16	43.25
S327 (DE 3 AXLE SINGLE UNIT, INTERSTATE)	27	1.13	30.57	1.47	39.63
S335 (DE SINGLE AXLE SINGLE UNIT)	35	0.80*	27.89	1.03	36.15
T330 (DE 3 AXLE SEMI)	30	1.67	50.05	2.16	64.88

*LEGAL LOAD RATING FACTOR IS 0.99

APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
207000	EXCAVATION AND BACKFILL FOR STRUCTURES	CY	135
209002	BORROW TYPE "B"	CY	3
210000	FURNISHING BORROW TYPE "C" FOR STRUCTURE BACKFILL	CY	65
212000	UNDERCUT EXCAVATION	CY	3
302011	DELAWARE NO.3 STONE	TON	45
602001	PORTLAND CEMENT CONCRETE MASONRY, CLASS A	CY	35
602572	REPAIRING EXISTING P.C.C. STRUCTURES	LB	300
602579	DRILLING HOLES AND INSTALLING DOWELS	EA	158
602586	REHABILITATION OF CONCRETE STRUCTURES	CF	15
602782	P.C.C. MASONRY SUBSTRUCTURE SEALER	SF	375
604000	BAR REINFORCEMENT, EPOXY COATED	LB	4600
608000	COARSE AGGREGATE FOR FOUNDATION STABILIZATION	TON	23
712006	RIPRAP, R-5	SY	145
712531	CHANNEL BED FILL	CY	12
713003	GEOTEXTILE, RIPRAP	SY	145

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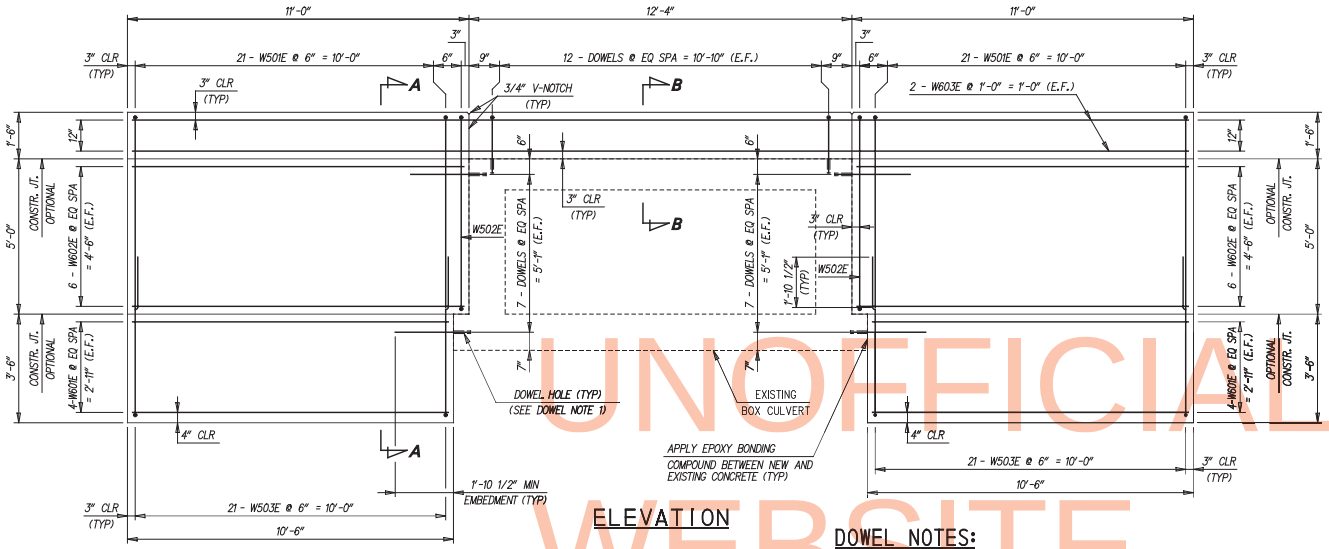
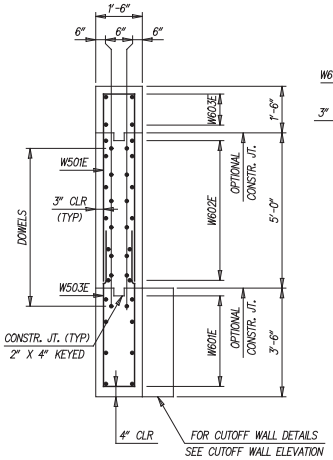
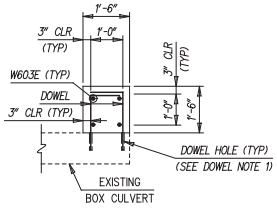


ELEVATION



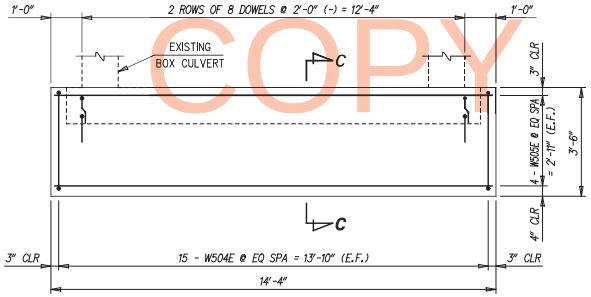
SECTION A-A



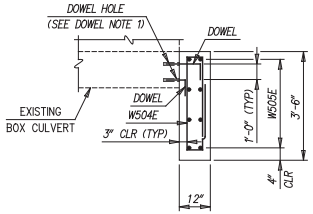
SECTION B-B

DOWEL NOTES:

1. DRILL DOWEL HOLES FOR #6 BAR DOWELS TO ADHESIVE ANCHOR MANUFACTURER'S RECOMMENDED DIAMETER AND EMBEDMENT. AS AN EXAMPLE, BASED ON HILTI HVA ADHESIVE ANCHOR SYSTEM DRILL 7/8" DIAMETER DOWEL HOLE, 6-5/8" EMBEDMENT.



CUTOFF WALL ELEVATION



SECTION C-C

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 1' 2' 4'	WASHINGTON STREET SIDEWALKS	CONTRACT T200201104	BRIDGE NO. N/A	BRIDGE SHEET 3 OF 6 STRUCTURE DETAILS	SHEET NO. 42
				COUNTY NEW CASTLE	DESIGNED BY: MDR		TOTAL SHTS. 105
					CHECKED BY: LAA		