Appendix C

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Field Classification System for Soil Exploration
Delaware Department of Transportation – AASHTO Classification of Soils and Soil-Aggregate Mixtures

Appendix C
(Continued)

Supplemental Subsurface Exploration Program ***(This Section of Appendix C is on the CD included with this report)***

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
99-B-01	90.2	75.5	614618	435080
99-B-02	86.9	80.5	614597	435164
99-B-03	85.3	81	614629	435284
99-B-04	64	75.5	614574	435251
99-B-08	60.7	75	614588	435754
99-B-09	83.7	75.5	614534	435744
99-B-10	85.3	75.5	614561	435810
99-B-11	62.3	30.5	614421	435361
B-01	55	69.5	614967	432846
B-02	60	85	614882	432938
B-03	56	70	615032	432861
B-05	77	64.5	615157	432917
B-06	70	99.5	615122	433032
B-07	79.3	35	613995	432553
B-08	79.5	34.50131	614094	432575
B-09	78.9	35	614194	432594
B-10	77.7	35	614291	432621
B-12	80	35	614477	432668
B-13	80	35	614539	432682
B-14	65	40.5	614588	432693
B-15	53	40.5	614685	432718
B-16	52	34.5	614783	432741
B-17	53	39.5	614881	432765
B-18	79	38.5	614328	432758
B-19	79	38.5	614424	432778
B-20	79	40.5	614522	432802
B-21	68	40	614607	432840
B-22	65	40.5	614707	432873
B-23	63	40.5	614802	432900
H-1	63.1	60.5	611147	432247
H-2	66	60.5	611174	432325
H-3	68.7	65	611194	432404
H-4	65.8	60	611221	432456
H-5	68.3	60	611150	432486
H-6	67	60.5	611138	432439
H-7	66	60.5	611106	432348
H-8	64.7	60.5	611078	432281
HW-1	36	0	616001	433103
HW-2	30	0	616259	433454

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
IBR-01	60	100	610637	432411
IBR-02	49	71.5	610790	432511
IBR-03	60	100.5	610792	432649
IBR-04	65	100.5	612000	432114
IBR-05	66	99.5	611993	432151
IBR-06	67	100.5	612178	432185
IBR-07	64.4	101.5	612110	432114
IBR-08	72	100.5	611866	432395
IBR-09	76	100.5	612069	432403
IBR-09A	72.2	100	611916	432358
IBR-10	67.8	100	612184	432360
IBR-12	69	100	612241	432271
IBR-13	71	100	611754	432396
IBR-13A	70	100	611675	432366
IBR-14	74	100.5	611975	432426
IBR-15	70	99.5	612338	432216
IBR-16	70	99	612307	432281
IBR-17A	80	100.5	612868	432657
IBR-18	80	46.5	612788	432516
IBR-18A	80	79.9	612787	432515
IBR-18B	78	100.5	612836	432480
IBR-18C	71	100.5	612738	432442
IBR-19	77	100.5	612502	432446
IBR-20	70.9	100	612454	432303
IBR-22	71	91.5	612377	432289
IBR-23	65.3	100.5	612371	432399
IBR-24	87	100	613804	433303
IBR-26	91	100.5	613382	432907
IBR-26A	89	100.5	613443	433064
IBR-27	91.8	100.5	613429	432899
IBR-27A	89	100.5	613470	433033
IBR-28	89.7	76.5	613669	433260
IBR-28A	91.9	50	613598	433088
IBR-31	68	100.5	612621	432393
IBR-32	89	100	613562	433496
IBR-33	88	100	613716	433737
IBR-42	88	100.4	613305	432803
IBR-42A	89	100.5	613306	432909
IBR-43	71	98.5	612556	432316

Delaware Turnpike Improvements

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
IBR-44	61.4	100	609710	432809
IBR-45	33.7	100	609641	432855
IBR-46	38	100	609635	433001
IBR-47	66.2	100	609611	433211
IBR-48	38	100	609550	433160
IBR-49	45	76	610599	432473
IBR-50	46	74.3	610676	432578
IBR-51	65	75	610774	432701
IBR-52	57	75	610700	432734
IBR-53	45	76	610612	432609
IBR-54	44	73.8	610534	432502
IBR-55	88	76	613435	433113
IBR-56	88	76	613543	433229
IBR-57	86	76	613616	433406
IBR-58	89	75.5	613708	433342
IBR-59	85	76	613683	433567
IBR-60	86	75	613780	433519
IBR-61	84	95	613848	433688
ICPT-01	49	56	610737	432430
ICPT-02	47	51	610725	432538
ICPT-03	63	42	610876	432608
ICPT-04	68	72	612217	432185
ICPT-05	66	67	612155	432195
ICPT-06	70	70	611714	432361
ICPT-07	70	68	611639	432374
ICPT-08	71	51	611859	432348
ICPT-09	74	80	611978	432378
ICPT-09A	76	30	612030	432450
ICPT-10	70	61	612231	432346
ICPT-10A	77	55	612564	432449
ICPT-10AA	77	5	612547	432445
ICPT-10AB	77	88	612586	432464
ICPT-11	68	57	612507	432350
ICPT-12	76	56	612418	432428
ICPT-14	72	54	612777	432590
ICPT-15	80	63	612917	432621
ICPT-15A	80.2	46	612894	432613
ICPT-16	88	67	613277	432946
ICPT-16A	84.9	57.8	613212	432906

Delaware Turnpike Improvements

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
ICPT-17	90	71	613424	432988
ICPT-18	91	72	613623	433151
ICPT-18A	93	59	613558	432993
ICPT-21	87	22	613831	433414
ICPT-21A	87	70	613894	433448
ICPT-22	88	72	613628	433528
ICPT-23	86	86	613617	433609
IDMT-01	43	40	609929	433047
IDMT-02	45	37.4	610328	432846
IDMT-03	65	49.9	610271	432979
IDMT-04	57	42.7	610591	432759
IDMT-05	71	44	610996	432594
IDMT-06	61	33.5	611450	432136
IDMT-07	65	49.9	611787	432080
IDMT-08	60	42	611458	432306
IDMT-09	75	49.9	611842	432449
IDMT-10	77	40.7	612155	432519
IDMT-12	84	46.6	612804	433052
IDMT-13	77	46.6	612304	432634
IDMT-14	77	46.6	612630	432937
IDMT-15	81	46.6	612746	433096
IDMT-16	68	49.9	611920	432291
IDMT-17	84	45.9	613253	433360
IDMT-20	79	46.6	612744	432489
IDMT-21	82	49.9	613908	433470
IDMT-22	87	49.9	614056	433735
IDMT-23	89	19.7	614238	434065
IDMT-24	89	19.7	614184	434080
IDMT-25	82	49.9	614360	434344
IDMT-26	94	61.7	614503	434792
IEB-01	48.8	40.5	609692	433303
IEB-02	50.3	40	609719	433333
IEB-03	64.9	40	609518	433497
IEB-04	60.9	40	609389	433732
IEB-13	85	40.5	613184	432753
IEB-13A	84	40.5	613139	432813
IEB-13B	81.6	58.7	613076	432792
IEB-14	43	30	609940	433094
IEB-15	83	99.4	613152	432641

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
IRW-01	42	40	609858	433073
IRW-02	43	38.5	609995	433016
IRW-03	50	40	610137	432959
IRW-04	46	40	610266	432881
IRW-05	44	40	610389	432816
IRW-06	53	40	610181	432987
IRW-07	63	16.5	610316	432938
IRW-07A	57	40	610309	432915
IRW-08	60	40	610424	432858
IRW-09	59	38.5	611270	432381
IRW-10	57	40	610667	432711
IRW-11	57	40	610761	432659
IRW-12	61.4	40	610901	432582
IRW-13	68	43	611059	432547
IRW-14	73	40.5	611244	432492
IRW-15	72	50	611340	432468
IRW-16	61	40	611378	432145
IRW-17	62	50.5	611512	432139
IRW-18	63	49.5	611681	432109
IRW-19	67	49.5	611805	432120
IRW-20	65	50	611861	432074
IRW-21	63	50.5	611697	432078
IRW-22	62	50	611438	432249
IRW-23	60	50	611532	432298
IRW-24	61	50	611343	432274
IRW-25	62	50	611401	432348
IRW-26	61	50	611670	432286
IRW-27	77	40	612199	432544
IRW-28	72	50	611450	432449
IRW-29	72	50	611613	432434
IRW-30	73	50	611761	432431
IRW-31	75	50	611918	432463
IRW-32	79	50	612064	432516
IRW-33	79	50	612202	432572
IRW-33A	80	45	612314	432575
IRW-34	80	45	612423	432686
IRW-35	73	45	612524	432768
IRW-37	78	41.5	612241	432593
IRW-39	93	45	613440	433448

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
IRW-39A	93.3	50	613440	433448
IRW-40	77	45	612348	432686
IRW-41	81	45.5	612485	432777
IRW-42	75	45	612587	432882
IRW-43	78	46.5	612649	432456
IRW-44	81	45	612692	433062
IRW-45	80.4	50	612792	433112
IRW-46	59	50	611242	432303
IRW-47	61	56.5	611461	432120
IRW-47A	60	49.5	611132	432117
IRW-48	61	50	611620	432079
IRW-49	77	50	612917	433192
IRW-50	77.7	50	613055	433269
IRW-51	80	50	613192	433321
IRW-52	88	50	613313	433397
IRW-53	63.4	50	611824	432287
IRW-60	64	50	611588	432231
IRW-61	65	50	611750	432214
IRW-62	67	50	611900	432228
IRW-63	68	50	612037	432246
IRW-64	90	50	613527	433539
IRW-68	86	50	613832	433414
IRW-69	82	50	614018	433661
IRW-70	85	50	614000	433734
IRW-71	88.7	50	614085	433808
IRW-72	90	50	614068	433872
IRW-73	90	50	614141	433948
IRW-74	90	50	614133	434019
IRW-75	75	50	614173	434263
IRW-76	85	50	614276	434139
IRW-77	81	50	614248	434235
IRW-78	82	50	614330	434260
IRW-79	81.3	50	614244	434307
IRW-80	82	50	614306	434389
IRW-81	83	50	614390	434412
IRW-83	84	50	614373	434585
IRW-85	90	60	614487	434712
IRW-86	71	61	612398	431786
IRW-87	74	61	612368	431930

Delaware Turnpike Improvements

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
IRW-88	74	61	612383	432075
IRW-89	80	60	613974	434000
IRW-90	77	60	614086	434280
IRW-91	74	60	614198	434557
IRW-92	73	61	614297	434605
IRW-93	69	60	614347	434928
IRW-95	79	61	612576	432519
IRW-96	73	61	612609	432280
IRW-97	71	60	612677	432386
ISC-01	30	20	607249	432756
ISC-02	29	20	607487	432743
ISC-03	27	20	607750	432752
ISC-04	25	20	607984	432777
ISC-06	26	20	608275	432839
ISC-09	30	20	608744	432952
ISC-103	87	40.5	613234	432751
ISC-103A	85	40.5	613189	432855
ISC-11	36	40.5	609655	432899
ISC-115	104	52.5	612735	431979
ISC-116	111	55.5	612800	431983
ISC-117	114	52.5	612835	431983
ISC-118	82.1	60	613091	432753
ISC-119	82	60	613061	432840
ISC-12	35	40.5	609500	432939
ISC-13	27.3	40.5	609308	432911
ISC-14	32.3	40.5	609003	432948
ISC-15	39	20	609750	433000
ISC-16	39	40.5	609503	433137
ISC-17	37	40.5	609248	433113
ISC-19	36	20	609258	433038
ISC-20	36	40	609500	433250
ISC-21	35	40	609249	433263
ISC-23	40	40	609247	433495
ISC-24	33	40	609017	433479
ISC-24A	58	40	609250	433716
ISC-25	59.5	40	610501	432225
ISC-26	57.8	40	610255	432278
ISC-29	58.2	40.5	610255	432497
ISC-31	43	40	610499	432752

Delaware Turnpike Improvements

SR 1 Interchange

Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
ISC-32	41	20	610270	432741
ISC-33	40	40.5	610001	432750
ISC-34	39	20	610002	432905
ISC-35	60	40	611237	432129
ISC-36	77	40	610971	432166
ISC-37	65.8	40	610746	432188
ISC-40	58	40	610998	432512
ISC-41	64	40	610752	432843
ISC-42	69	40	611247	432612
ISC-43	69	40	611250	432620
ISC-44	56	40	611042	432382
ISC-49	71.6	40	611501	432596
ISC-50	76	40	611750	432581
ISC-51	78	40	612009	432580
ISC-64	74.6	40.5	612751	431752
ISC-65	71	40.5	612529	431758
ISC-66	73	40.5	612505	432000
ISC-67	78	40.5	613004	432250
ISC-68	73	20	612265	432501
ISC-69	75	40.5	612751	431751
ISC-70	73	41.5	612467	432647
ISC-71	86	40.5	612721	432836
ISC-72	82	20	612873	433014
ISC-74	81	40.5	613009	432718
ISC-76	76	40	612272	432742
ISC-77	74	40	612481	433002
ISC-86	96	40	613562	432018
ISC-87	103	40	613732	432085
ISC-90	105	40	613547	432243
ISC-91	104	40	613752	432251
ISC-94	88	40	613094	433151
ISC-95	88.2	20	613307	433279
ITP-01	84	11.5	612929	432178
ITP-02	92	15	612861	432156
ITP-03	87	14.3	612772	432141
ITP-04	80	8.4	612693	432127
ITP-05	85	5	612876	432054
ITP-06	81	12.2	612798	432056
ITP-07	79	13.8	612703	432033

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SR 1 Interchange

Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
ITP-08	88	14.2	612899	431986
ITP-09	82	12.5	612792	431882
ITP-10	81	11.8	612714	431909
ITP-11	83.4	13.5	612670	431957
ITP-12	130	75	610048	435111
ITP-13	152.3	40.5	609895	434973
ITP-14	132.8	76	609966	435106
ITP-15	84.8	15	610210	435173
ITP-16	93	15	610116	434832
ITP-17	79.6	15	610010	435458
ITP-18	77.5	15	609701	435203
ITP-19	86	15	609682	434984
ITP-20	86	15	609764	434816
MA-01	18.7	28	615542	438124
ML-01	87.8	31.5	613839	434055
ML-02	87	61.5	613781	434071
ML-03	87	58.5	614181	434152
ML-05	87	31.5	613950	434307
ML-06	85	61.5	613914	434307
ML-07	85	61.5	614314	434465
ML-08	74	30.5	614252	434506
ML-09	72	29.5	614095	434557
ML-10	75	61.5	614046	434587
ML-11	91	70.5	614430	434731
ML-12	71	30.5	614359	434768
ML-13	70	30	614224	434841
ML-14	86	60	614165	434868
ML-15	95	70.5	614508	434930
ML-16	68	30.5	614440	434969
ML-17	63.2	30	614314	435089
ML-18	94.4	60	614209	434986
ML-19	87	61.5	613794	434082
ML-20	73	40.5	614717	435465
ML-21	66	30	614660	435464
ML-22	64	30	614489	435533
ML-23	80	60.5	614440	435554
ML-25	63	30	614817	435647
ML-26	57	30.5	614749	435672
ML-29	53	35.5	614692	436022

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
ML-32	70	55.5	614996	436075
ML-34	85	79.5	614649	436181
ML-35	70	21.7	615036	436187
ML-36	53	39.5	614804	436241
ML-40	70	65.6	615090	436310
ML-43	50	40.5	614897	436479
ML-45	86	79.5	614781	436527
ML-46	76	35.4	615159	436421
ML-47	85	74.5	614830	436622
ML-48	81	79.5	615220	436537
ML-50	47	30	615104	436587
ML-51	47	39.5	614995	436718
ML-53	85.7	70	614863	436786
ML-54	83	57.7	615268	436650
ML-55	87	79.4	614905	436897
ML-56	85	66.7	615310	436760
ML-61	90	80	614957	437008
ML-62	83	61.7	615366	436896
ML-63	92	40	614995	437120
ML-64	87	80	615413	437011
ML-66	41	40	615283	437062
ML-67	40	39.5	615184	437191
ML-69	86	88	615055	437276
ML-70	89	60.4	615449	437093
ML-71	82	78.7	615106	437359
ML-72	67	40	615489	437251
ML-75	36	35	615269	437400
ML-77	79	79.5	615141	437473
ML-78	58	44	615520	437376
ML-79	69	25.6	615200	437587
ML-80	44.1	49.5	615521	437498
ML-81	33	30	615467	437523
ML-82	32	39.5	615369	437649
ML-85	30	31	615426	437788
ML-86	49	61.5	615331	437837
ML-87	8	61.5	615703	437922
ML-89	89	61.5	613870	434174
ML-90	79	61.5	613990	434441
ML-91	76	61.5	614104	434725

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
ML-92	94	61.5	614209	434985
ML-93	90	61.5	614304	435247
MRR-1	64	5	610701	433032
MRR-2	63	5	610824	432837
MRR-3	66	5	611032	432689
MRR-4	68	5	611224	432639
MRR-5	69	5	611450	432639
MRR-6	72	5	611723	432642
MRR-7	76	5	611979	432642
MRR-8	76	5	612227	432735
MRR-9	74	5	612419	432878
P-01	78	0	613893	433266
P-03	34	0	616107	433259
P-04	34	0	616650	433317
P-05	60	60.5	614431	432600
S-01	75	49.5	615229	433016
S-01A	59	38	614912	432964
S-01B	57	30.5	615088	433040
S-02	50	69.5	615385	433067
S-03	41	69.5	615547	433081
S-04	36.4	71.5	615893	433101
S-04A	36.5	7	615892	433100
S-07	7.5	0	608469	432848
S-09	7.5	0	608531	432862
S-10	7.5	0	608593	432879
S-11	8.1	0	608658	432864
S-12	8.8	0	608710	432878
S-13	7.1	0	608425	432914
S-15	7.7	0	608546	432942
S-16	7.6	0	608613	432958
S-17	8.2	0	608629	432996
S-18	6.7	0	608679	432755
S-19	6.6	0	608679	432772
S-21	6.2	0	608577	432795
SP-01	67	1	615393	432994
SP-02	82	1	614619	432727
SP-03	75	1	615149	433042
SP-04	80	1	615173	432978
SP-05	71	1	615327	433036

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Table C-1 - Summary of SPT/CPT/DMT Locations

Boring No.	Ground Surface Elevation	Hole Depth (ft)	Northing	Easting
SP-06	82	1	615481	433093
SP-07	81	1	614553	432752
SP-08	82	1	614709	432802
SP-09	85	1	614864	432859
SP-10	84	1	614881	432813
SW-01	32	19.5	609388	432539
SW-02	41.5	20	609955	432661
SW-03	40	20	609340	433427
SW-04	38	20	609372	433333
SW-05	78.5	20	612566	432587
SW-06	74	40.5	612640	431703
SW-07	78	40.5	613001	432088
SWM-01	48	25	615133	433127
SWM-02	55	25	615289	433149
SWM-03	88.8	26	613510	433305
SWM-04	84.9	25	613683	433627
URS-1	73	125.5	612432	432213
URS-2	90	1	613652	433202
URS-3	82	124.5	613938	433520
URS-4	77	127	612512	432438
URS-5	63	124.5	612037	432321
WA-1	48	69.5	615468	432911
WA-2	42	75.5	615586	433044
WA-3	41	69.5	615720	433066
WA-4	36.8	69.5	615865	433101
WA-5	33.9	69.5	615995	433132
WA-6	32.9	71.5	616133	433176
WS-1	55	71.5	614733	432739
WS-2	59	69.5	614885	432797

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
99-B-01	39	18.9			22		2		
99-B-04	15	26.3			54	28	26	CH	
99-B-10	30	14.1			28		11		
99-B-11	18	16.3			35		16		
B-01	3	14		56	27	19	8		A-4
B-01	8	15		35	24	21	3		A-2-4
B-01	13	16		28	22	19	3		A-2-4
B-01	18	35		83	39	27	12		A-6
B-01	19	14		9			NP		A-1-b
B-01	23	17		65	27	16	11		A-6
B-01	28	26		96	28	27	1		A-4
B-01	33	25		90	55	26	29		A-7-6
B-01	38	27		97	58	28	30		A-7-6
B-01	43	23		98	49	25	24		A-7-6
B-01	48	26		98	50	24	26		A-7-6
B-01	48.7	21			24				
B-01	49.2	16		48	30	20	10		A-4
B-01	53	21		14			NP		A-2-4
B-01	58	19		25			NP		A-2-4
B-01	63	23		20			NP		A-2-4
B-01	68	18		15			NP		A-2-4
B-02	13.5	18		52	26	16	10		A-4
B-02	18.5	20		53	25	18	7		A-4
B-02	19.5	13		22	17		NP		A-2-4
B-02	23.5	12		43	30	16	14		A-6
B-02	28.5	21		92	54	22	32		A-7-6
B-02	33.5	30		96	63	32	31		A-7-5
B-02	38.5	29		86	48	28	20		A-7-6
B-02	43.5	25		76	39	23	16		A-6
B-02	48.5	24		74	35	21	14		A-6
B-02	53.5	21		51	28	19	9		A-4
B-02	54.5	20		63	34	20	14		A-6
B-02	58.5	24		7			NP		A-3
B-02	59.5	21		15			NP		A-2-4
B-02	63.5	22		12			NP		A-2-4
B-02	68.5	21		16			NP		A-2-4
B-02	73.5	21		16			NP		A-2-4
B-02	74	17		76	32	21	11		A-6
B-02	78.5	18		27			NP		A-2-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
B-02	83.5	19		17			NP		A-2-4
B-02	84	16		50	27	19	8		A-4
B-03	2.5	13		45	25	19	6		A-4
B-03	4	17		62	32	20	12		A-6
B-03	4.5	11		21			NP		A-1-b
B-03	8.5	16		34	21		NP		A-2-4
B-03	13.5	24		68	28	19	9		A-4
B-03	18.5	37		93	45	30	15		A-7-5
B-03	23.5	15		63	26	19	7		A-4
B-03	28.5	12		31	21	16	5		A-2-4
B-03	33.5	14		22	20	16	4		A-2-4
B-03	38.5	23		18			NP		A-2-4
B-03	43.5	27		81	49	27	22		A-7-6
B-03	48.5	25		76	47	25	22		A-7-6
B-03	49	20		20			NP		A-2-4
B-03	53.5	18		24			NP		A-2-4
B-03	58.5	21		21			NP		A-2-4
B-03	63.5	23		24			NP		A-2-4
B-03	68.5	21		21			NP		A-2-4
B-05	3	14		13			NP	A-1-b	
B-05	8	22		52	29	20	9	A-4	
B-05	9	27		39	28		NP	A-4	
B-05	13	18		35	22	19	3	A-2-4	
B-05	18	40		97	44	33	11	A-7-5	
B-05	23	48		86	54	47	7	A-5	
B-05	28	66			50	43	7		
B-05	33	11		9			NP	A-1-a	
B-05	38	20		64	35	20	15	A-6	
B-05	43	22		2			NP	A-3	
B-05	48	21		7			NP	A-3	
B-05	53	19		44	16		NP	A-4	
B-05	58	24		26			NP	A-2-4	
B-05	63	19		20			NP	A-2-4	
B-06	1	10		38	23	18	5		A-4
B-06	3	11		36	23	18	5		A-4
B-06	8	20		93	29	23	6		A-4
B-06	13	11		12	19		NP		A-1-a
B-06	18	33		44	30	24	6		A-4
B-06	19	38			43	33	10		

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
B-06	23	42		90	44	33	11		A-7-5
B-06	28	169			97				
B-06	33	58			34				
B-06	34	22		8			NP		A-1-b
B-06	38	10		8	23		NP		A-1-a
B-06	43	23		75	36	25	11		A-6
B-06	48	21		83	36	22	14		A-6
B-06	53	24		73	36	23	13		A-6
B-06	58	19		46	22		NP		A-4
B-06	63	18		34	26	21	5		A-2-4
B-06	68	21		67	28	17	11		A-6
B-06	73	20		65	27	17	10		A-4
B-06	74	19		57	35	21	14		A-6
B-06	78	20		25	23	18	5		A-2-4
B-06	79	18		27			NP		A-2-4
B-06	83	17		26			NP		A-2-4
B-06	88	16		43	19	15	4		A-4
B-06	93	19		52	33	19	14		A-6
B-06	98	14		25	39	19	20		A-2-6
B-07	3	13		21			NP		A-2-4
B-07	8	17		17			NP		A-1-b
B-07	13	17		18			NP		A-2-4
B-07	18	18		66	28	18	10		A-4
B-07	23	21		87	28	19	9		A-4
B-07	28	22		77	27	19	8		A-4
B-07	33	23		80	26	18	8		A-4
B-12	3	7		14			NP		A-1-b
B-12	8	15		39	37	22	15		A-6
B-12	13	24		98	49	26	23		A-7-6
B-12	18	24		96	50	27	23		A-7-6
B-12	23	16		46	23		NP		A-4
B-12	28	25		28	20		NP		A-2-4
B-12	33	18		98	30	21	9		A-4
B-13	3	11		16			NP		A-1-b
B-13	8	16		81	34	19	15		A-6
B-13	13	16		24	24	21	3		A-2-4
B-13	18	23		94	58	27	31		A-7-6
B-13	23	18		91	38	22	16		A-6
B-13	28	21		98	42	23	19		A-7-6

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
B-13	33	23		96	48	23	25		A-7-6
B-14	1	14		30	23	18	5		A-2-4
B-14	4	23		95	32	22	10		A-4
B-14	9	19		67	33	20	13		A-6
B-14	14	18		89	38	22	16		A-6
B-14	19	23		98	49	24	25		A-7-6
B-14	24	2		98	39	22	17		A-6
B-14	29	51		98	53	29	24		A-7-6
B-14	34	53		95	51	27	24		A-7-6
B-14	39	13		90	39	23	16		A-6
B-15	1	18		37			NP		A-4
B-15	4	18		24	36	22	14		A-2-6
B-15	9	22		38	33	20	13		A-6
B-15	10	16		17	17		NP		A-1-b
B-15	14	23		81	32	19	13		A-6
B-15	19	23		80	36	21	15		A-6
B-15	24	24		91	48	21	27		A-7-6
B-15	29	31		96	57	27	30		A-7-6
B-15	34	30		89	35	26	9		A-4
B-15	39	21		45	27	16	11		A-6
B-15	40	28		93	47	28	19		A-7-6
B-16	1	22		94	28	21	7		A-4
B-16	3	18		87	29	19	10		A-4
B-16	8	19		81	29	20	9		A-4
B-16	13	16		48	29	19	10		A-4
B-16	18	26		96	51	25	26		A-7-6
B-16	23	27		95	54	27	27		A-7-6
B-16	28	40		96	55	31	24		A-7-5
B-16	33	28		88	48	27	21		A-7-6
B-17	1	18		81	29	22	7		A-4
B-17	4	21		84	33	21	12		A-6
B-17	8	19		90	26	20	6		A-4
B-17	13	16		61	28	18	10		A-4
B-17	14	16		22			NP		A-2-4
B-17	18	10		22	18	15	3		A-1-b
B-17	18.5	29		67	31	19	12		A-6
B-17	23	28		94	56	27	29		A-7-6
B-17	28	27		96	63	30	33		A-7-5
B-17	33	45		74	40	23	17		A-6

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
B-17	38	56		84	51	28	23		A-7-6
B-18	1	23		97	32	26	6		A-4
B-18	4.5	23		97	28	24	4		A-4
B-18	7	23		90	26	23	3		A-4
B-18	8	13			25	22	3		
B-18	12	21		70	20	15	5		A-4
B-18	17	24		48	20	17	3		A-4
B-18	22	23		75	24	19	5		A-4
B-18	22.5	17		70	23		NP		A-4
B-18	27	51		95	48	24	24		A-7-6
B-18	32	30		97	57	28	29		A-7-6
B-18	37	31		90	51	29	22		A-7-6
B-19	2	16		70	28	16	12		A-6
B-19	7	16		90	29	18	11		A-6
B-19	12	24		96	54	27	27		A-7-6
B-19	17	21		98	47	23	24		A-7-6
B-19	22	23		99	49	25	24		A-7-6
B-19	27	27		99	55	30	25		A-7-5
B-19	32	25		82	46	27	19		A-7-6
B-19	37	34		99	65	34	31		A-7-5
B-20	1	22		94	34	20	14		A-6
B-20	4	21		96	28	23	5		A-4
B-20	9	19		89	27	20	7		A-4
B-20	9.5	16		97	40	22	18		A-6
B-20	14	22		94	44	23	21		A-7-6
B-20	19	20		82	45	25	20		A-7-6
B-20	24	24		99	45	26	19		A-7-6
B-20	29	27		97	49	29	20		A-7-6
B-20	34	18		65	31	20	11		A-6
B-20	39	23		79	39	23	16		A-6
B-21	1	16		95	37	20	17		A-6
B-21	3.5	17		93	29	17	12		A-6
B-21	8.5	17		89	32	18	14		A-6
B-21	13.5	23		95	53	26	27		A-7-6
B-21	18.5	20		91	42	23	19		A-7-6
B-21	23.5	26		99	52	33	19		A-7-5
B-21	28.5	27		97	55	28	27		A-7-6
B-21	33.5	17		67	31	20	11		A-6
B-21	34.5	15		48	24	18	6		A-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
B-21	38.5	23		84	39	25	14		A-6
B-22	1	19		74	29	20	9		A-4
B-22	4	23			42	24	18		
B-22	9	24		90	45	26	19		A-7-6
B-22	14	23		91	44	28	16		A-7-6
B-22	19	23		87	47	25	22		A-7-6
B-22	24	27			48	27	21		
B-22	29	24		86	44	26	18		A-7-6
B-22	34	15		58	29	18	11		A-6
B-22	39	18		75	33	22	11		A-6
B-23	1	17		63	30	20	10		A-4
B-23	4	16		16			NP		A-2-4
B-23	9	20		74	34	21	13		A-6
B-23	14	27		92	60	29	31		A-7-6
B-23	19	30		94	58	30	28		A-7-5
B-23	24	46		81	49	25	24		A-7-6
B-23	29	2		68	33	21	12		A-6
B-23	34	3		83	39	22	17		A-6
B-23	39	40		86	48	27	21		A-7-6
IBR-01	5.5	12.8	19	60	25	17	8	CL	A-4
IBR-01	12.5	17.9	2	73	22	17	5	CL-ML	A-4
IBR-01	22.5	14.8	2	93	28	16	12	CL	A-6
IBR-01	29.5	19.6	2	89	38	20	18	CL	A-6
IBR-01	42.5	24.6	0.85	8	NP	NP	NP	SP-SM	A-3
IBR-02	10	24.5	2	92	40	22	18	CL	A-6
IBR-02	45	17.9	2	91	26	19	7	CL-ML	A-4
IBR-02	65	21.1	2	52	NP	NP	NP	ML	A-4
IBR-03	6	21.2	9.5	86	41	20	21	CL	A-7-5
IBR-03	15	17.3	2	92	29	17	12	CL	A-6
IBR-03	24								
IBR-03	27								
IBR-03	30	20.2	2	92	50	24	26	CH	A-7-5
IBR-03	33								
IBR-03	36								
IBR-03	39								
IBR-03	48								
IBR-03	57								
IBR-03	69	20.7	2	96	32	20	12	CL	A-6
IBR-03	78	13.7	2	54	20	14	6	CL-ML	A-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-04	6	19.9	9.5	82	25	20	5	CL-ML	A-4
IBR-04	15	22.9	2	97	47	24	23	CL	A-7-5
IBR-04	18	12.6	2	62	22	17	5	CL-ML	A-4
IBR-04	18.02								
IBR-04	18.03								
IBR-04	23								
IBR-04	26								
IBR-04	29								
IBR-04	32	17.6	4.75	41	25	18	7	SC-SM	A-4
IBR-04	38								
IBR-04	39.5	19.5	2	99	36	22	14	CL	A-6
IBR-04	39.51								
IBR-04	41.5	22	2	97	36	24	12	CL	A-6
IBR-04	51	24	2	32	NP	NP	NP	SM	A-2-4
IBR-04	66	15.5	2	81	NP	NP	NP	ML	A-4
IBR-04	78	16	2	47	20	14	6	SC-SM	A-4
IBR-04	90								
IBR-04	96	20.2	4.75	9	NP	NP	NP	SP-SM	A-3
IBR-05	9	19.7	2	89	46	23	23	CL	A-7-5
IBR-05	12								
IBR-05	15								
IBR-05	21	26.6	2	97	58	29	29	CH	A-7-5
IBR-05	30	17.5	2	96	35	21	14	CL	A-6
IBR-05	31.5	16	0.85	65	21	18	3	ML	A-4
IBR-05	31.501	20.8							
IBR-05	31.51								
IBR-05	41	17.7	2	73	21	17	4	CL-ML	A-4
IBR-05	47								
IBR-05	50								
IBR-05	59	18.7	2	45	NP	NP	NP	SM	A-4
IBR-05	71	18.8	2	80	16	15	1	ML	A-4
IBR-05	86	23.1	4.75	21	NP	NP	NP	SM	A-2-4
IBR-06	9	16.7	2	97	47	26	21	CL	A-7-5
IBR-06	18	17.6	2	91	40	24	16	CL	A-6
IBR-06	48	17.3	0.85	46	19	17	2	SM	A-4
IBR-06	87	22.1	4.78	38	NP	NP	NP	SM	A-4
IBR-07	12	22.6	2	98	45	23	22	CL	A-7-5
IBR-07	16.5	29.8	2	97	48	26	22	CL	A-7-5
IBR-07	18.5								

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-07	21								
IBR-07	24								
IBR-07	27								
IBR-07	30	20.8	2	100	38	21	17	CL	A-6
IBR-07	33.5								
IBR-07	43	20.2	2	99	38	21	17	CL	A-6
IBR-07	52	26.6	2	99	56	29	27	CH	A-7-5
IBR-07	55								
IBR-07	70								
IBR-07	76	19.1	2	31	NP	NP	NP	SM	A-2-4
IBR-07	85								
IBR-07	88	14.3	4.75	65	21	15	6	CL-ML	A-4
IBR-08	26.5								
IBR-08	29	29.1	0.85	100	53	27	26	CH	A-7-5
IBR-08	29.000001	20.8							
IBR-08	33								
IBR-08	36								
IBR-08	60	18.7	0.85	45	NP	NP	NP	SM	A-4
IBR-08	66								
IBR-08	81	14.5	0.85	84	27	16	11	CL	A-6
IBR-09	9	13	12.5	76	27	17	10	CL	A-4
IBR-09	36	17.8	2	99	43	23	20	CL	A-7-5
IBR-09	36.00001								
IBR-09	39								
IBR-09	45								
IBR-09	48								
IBR-09	66								
IBR-09	68								
IBR-09	72								
IBR-09	87	16.7	9.5	79	24	15	9	CL	A-4
IBR-09A	2.5	16.1	2	98	28	20	8	CL	A-4
IBR-09A	12.5								
IBR-09A	15	15.7	4.75	86	41	22	19	CL	A-7-5
IBR-09A	22.5								
IBR-09A	30	23.8	2	99	56	27	29	CH	A-7-5
IBR-09A	37								
IBR-09A	42.5	11.3	0.85	69	22	17	5	CL-ML	A-4
IBR-09A	50								
IBR-09A	57.5								

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-09A	62.5	14.5	2	67	21	15	6	CL-ML	A-4
IBR-09A	65								
IBR-09A	70								
IBR-09A	80	17.8	2	68	21	15	6	CL-ML	A-4
IBR-09A	90	18.3	2	16	NP	NP	NP	SM	A-2-4
IBR-09A	98.5	14.6	4.75	11	NP	NP	NP	SW-SM	A-1-b
IBR-10	12	22.5	2	98	45	23	22	CL	A-7-5
IBR-10	19.5	31.4	2	97	55	27	28	CH	A-7-5
IBR-10	24.5	15.4	0.85	92	32	20	12	CL	A-6
IBR-10	32	21	4.75	43	NP	NP	NP	SM	A-4
IBR-10	39.5	16.8	0.85	73	29	18	11	CL	A-6
IBR-10	49.5	26.4	2	98	50	26	24	CH	A-7-5
IBR-10	89.5	20.6	19	17	NP	NP	NP	SM	A-2-4
IBR-12	32.5	12.8	4.75	45	22	16	6	SC-SM	A-4
IBR-12	42.5	18.4	0.85	94	23	17	6	CL-ML	A-4
IBR-12	75	17.5	4.75	60	18	14	4	CL-ML	A-4
IBR-12	95	18.2	0.85	95	28	17	11	CL	A-6
IBR-13	12								
IBR-13	15	21	2	97	62	24	38	CH	A-7-5
IBR-13	18								
IBR-13	21								
IBR-13	24								
IBR-13	27								
IBR-13	33								
IBR-13	51								
IBR-13A	7	17.3	4.75	91	30	21	9	CL	A-4
IBR-13A	24.5	19.8	2	98	47	24	23	CL	A-7-5
IBR-13A	37	20.2	2	93	27	19	8	CL	A-4
IBR-13A	49.5	17.5	2	93	25	19	6	CL-ML	A-4
IBR-13A	62	22.6	2	53	19	19	NP	ML	A-6
IBR-13A	77	18.9	2	11	NP	NP	NP	SP-SM	A-2-4
IBR-13A	87	15.3	2	76	22	15	7	CL-ML	A-4
IBR-14	6	15.9	9.5	67	25	15	10	CL	A-4
IBR-14	15	14.1	4.75	62	24	17	7	CL-ML	A-4
IBR-14	21	18.9	2	94	44	20	24	CL	A-7-5
IBR-14	24								
IBR-14	30								
IBR-14	36	25.2	2	98	60	30	30	CH	A-7-5
IBR-14	45	19.2	2	83	29	17	12	CL	A-6

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-14	45.000001								
IBR-14	48								
IBR-14	51								
IBR-14	54								
IBR-14	57								
IBR-14	60	7.3	2	97	40	21	19	CL	A-6
IBR-14	63								
IBR-14	72								
IBR-14	75	16.5	2	88	30	17	13	CL	A-6
IBR-15	6	14.7	37.5	38	39	20	19	SC	A-6
IBR-15	15								
IBR-15	19.5	24.6	2	95	42	20	22	CL	A-7-5
IBR-15	19.51								
IBR-15	21.5								
IBR-15	25	19.3	2	97	42	22	20	CL	A-7-5
IBR-15	29.5	24	2	99	46	25	21	CL	A-7-5
IBR-15	29.51								
IBR-15	35	16.3	9.5	67	23	14	9	CL	A-4
IBR-15	44								
IBR-15	47	20.9	2	45	22	17	5	SC-SM	A-4
IBR-15	59	16.5	2	60	21	14	7	CL-ML	A-4
IBR-15	80	18.2	25.4	28	NP	NP	NP	SM	A-2-4
IBR-15	92	19.9	4.75	21	20	14	6	SC-SM	A-2-4
IBR-16	7.5	18	4.75	95	45	25	20	CL	A-7-5
IBR-16	20	19							
IBR-16	30	20							
IBR-16	35	16.6	2	99	66	27	39	CH	A-7-5
IBR-16	82.5	16.1							
IBR-16	95	14.7							
IBR-17A	12	21.3	19	78	45	21	24	CL	A-7-5
IBR-17A	18								
IBR-17A	21								
IBR-17A	27	16.1	0.425	92	31	18	13	CL	A-6
IBR-17A	36	14.8	2	63	22	16	6	CL-ML	A-4
IBR-17A	42								
IBR-17A	51	18.3	2	92	41	21	20	CL	A-7-5
IBR-17A	60								
IBR-17A	66	18.9	2	78	25	16	9	CL	A-4
IBR-17A	78	20.2	2	51	20	18	2	ML	A-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-17A	99	15.4	4.75	61	19	13	6	CL-ML	A-4
IBR-18	18								
IBR-18	24								
IBR-18	36								
IBR-18	39								
IBR-18	45								
IBR-18A	9								
IBR-18A	18	20.7	2	97	32	20	12	CL	A-6
IBR-18A	24								
IBR-18A	33								
IBR-18A	36	20.1	2	87	50	26	24	CH	A-7-5
IBR-18A	44								
IBR-18A	54	18.2	2	46	NP	NP	NP	SM	A-4
IBR-18A	79	13.6	2	21	NP	NP	NP	SM	A-2-4
IBR-18B	3	17.8	9.5	65	35	20	15	CL	A-6
IBR-18B	12	16.9	25.4	14	NP	NP	NP	SM	A-2-4
IBR-18B	18	20.4	2	95	37	21	16	CL	A-6
IBR-18B	27								
IBR-18B	39	25.2	2	100	67	30	37	CH	A-7-5
IBR-18B	48.5								
IBR-18B	60	19.6	2	59	20	18	2	ML	A-4
IBR-18B	78	15.8	4.75	27	18	12	6	SC-SM	A-2-4
IBR-18B	90	15.5	2	12	NP	NP	NP	SM	A-2-4
IBR-18C	9	31.9	4.75	76	42	25	17	CL	A-7-5
IBR-18C	21	13.8	2	94	32	20	12	CL	A-6
IBR-18C	27								
IBR-18C	36	25	2	98	62	32	30	MH	A-7-6
IBR-18C	44								
IBR-18C	54	20	2	27	NP	NP	NP	SM	A-2-4
IBR-18C	74	14.1	2	78	23	15	8	CL	A-4
IBR-18C	89	13.2	4.75	12	NP	NP	NP	SW-SM	A-2-4
IBR-19	6	15.5	9.5	44	24	16	8	SC	A-4
IBR-19	21	22.1	2	99	49	22	27	CL	A-7-5
IBR-19	33	20.4	2	26	NP	NP	NP	SM	A-2-4
IBR-19	36								
IBR-19	39								
IBR-19	42	14.9	4.75	42	19	14	5	SC-SM	A-4
IBR-19	45								
IBR-19	51								

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-19	54								
IBR-19	57								
IBR-19	60								
IBR-19	75	22.8	4.75	94	41	20	21	CL	A-7-5
IBR-19	81								
IBR-19	90	23.8	2	99	42	23	19	CL	A-7-5
IBR-20	2.5	14.6	9.5	23	NP	NP	NP	SM	A-2-4
IBR-20	17.5	24.2	2	100	41	22	19	CL	A-7-5
IBR-20	40	25.4	2	94	61	27	34	CH	A-7-5
IBR-20	47.5	20.6	2	98	44	29	15	ML	A-7-5
IBR-20	70	25.1	2	36	NP	NP	NP	SM	A-4
IBR-22	7.5	21.8	2	95	50	26	24	CH	A-7-5
IBR-22	27.5	9.3	2	26	NP	NP	NP	SM	A-2-4
IBR-22	35	17	2	99	36	20	16	CL	A-6
IBR-22	45	18.1	2	85	26	19	7	CL-ML	A-4
IBR-23	3	30.1	19	46	42	29	13	SM	A-7-5
IBR-23	12	19.9	2	99	49	19	30	CL	A-7-5
IBR-23	21								
IBR-23	24	22.3	0.85	98	55	27	28	CH	A-7-5
IBR-23	29								
IBR-23	42	26.8	2	99	49	27	22	CL	A-7-5
IBR-23	48								
IBR-23	54	20.1	2	99	41	22	19	CL	A-7-5
IBR-23	60								
IBR-23	72	16.7	2	80	29	17	12	CL	A-6
IBR-23	78								
IBR-23	81	16	2	80	28	17	11	CL	A-6
IBR-23	93	18.7	9.5	19	NP	NP	NP	SM	A-1-b
IBR-24	5	21.2	4.75	67	45	20	25	CL	A-7-5
IBR-24	30								
IBR-24	40	18.9	2	72	22	18	4	CL-ML	A-4
IBR-24	65	19.8	2	97	41	22	19	CL	A-7-5
IBR-24	85	21.3	4.75	23	NP	NP	NP	SM	A-2-4
IBR-24	95	15.3	12.5	57	28	18	10	CL	A-4
IBR-26	9	22.9	4.75	95	26	25	1	ML	A-4
IBR-26	18	17.7	25.4	16	NP	NP	NP	SM	A-1-b
IBR-26	30	14	25	66	30	17	13	CL	A-6
IBR-26	36								
IBR-26	42	17.3	4.75	97	33	20	13	CL	A-6

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-26	45								
IBR-26	48								
IBR-26	51								
IBR-26	54								
IBR-26	60	35.7	4.75	98	61	29	32	CH	A-7-5
IBR-26	66	27.7	2	96	41	24	17	CL	A-7-5
IBR-26	75								
IBR-26	78	15.2	2	92	32	18	14	CL	A-6
IBR-26	81	18	2	94	34	18	16	CL	A-6
IBR-26	87	16.6	2	72	23	15	8	CL	A-4
IBR-26	96	19.2	2	37	NP	NP	NP	SM	A-4
IBR-26A	3	20.4	2	76	28	20	8	CL	A-4
IBR-26A	12	16.2	4.75	26	NP	NP	NP	SM	A-2-4
IBR-26A	24	11.5	50	11	NP	NP	NP	SP-SM	A-1-b
IBR-26A	36								
IBR-26A	39	17.5	2	99	34	19	15	CL	A-6
IBR-26A	42								
IBR-26A	45	14.9	2	85	28	17	11	CL	A-6
IBR-26A	51								
IBR-26A	54	15.1	4.75	77	35	20	15	CL	A-6
IBR-26A	60								
IBR-26A	75	28.9	2	98	51	25	26	CH	A-7-5
IBR-26A	84								
IBR-26A	94								
IBR-27	15	9.9	9.5	11	NP	NP	NP	SP-SM	A-1-b
IBR-27	30	14.1	19	49	28	16	12	SC	A-6
IBR-27	39	22.1	2	100	44	21	23	CL	A-7-5
IBR-27	42								
IBR-27	48	16.5	0.85	98	33	19	14	CL	A-6
IBR-27	51								
IBR-27	54	15.5	2	80	25	15	10	CL	A-4
IBR-27	69	16.7	2	68	25	17	8	CL	A-4
IBR-27	81	23.2	2	96	49	24	25	CL	A-7-5
IBR-27	81.00000000001								
IBR-27	84	13.5	2	93	30	16	14	CL	A-6
IBR-27	96	17.6	2	43	NP	NP	NP	SM	A-4
IBR-27A	6	18.4	4.75	92	28	21	7	CL-ML	A-4
IBR-27A	9								
IBR-27A	21	16.8	9.5	57	28	18	10	CL	A-4

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-27A	33								
IBR-27A	36	34	2	100	51	26	25	CH	A-7-5
IBR-27A	42								
IBR-27A	48								
IBR-27A	51								
IBR-27A	54	17.3	2	60	23	17	6	CL-ML	A-4
IBR-27A	66								
IBR-27A	69	18.4	2	45	NP	NP	NP	SM	A-4
IBR-27A	69.000001	24.8							
IBR-27A	69.00001								
IBR-27A	79	24.8	4.75	99	56	31	25	MH	A-7-6
IBR-27A	84								
IBR-27A	94	19.8	2	99	34	20	14	CL	A-6
IBR-27A	99								
IBR-28	5	11.7	9.5	65	27	18	9	CL	A-4
IBR-28	20	17.4	12.5	17	21	17	4	SC-SM	A-2-4
IBR-28	35								
IBR-28	40	15.4	2	90	29	17	12	CL	A-6
IBR-28	45								
IBR-28	65	20.8	2	96	43	20	23	CL	A-7-5
IBR-28A	9.5	8.7	9.5	16	NP	NP	NP	SM	A-2-4
IBR-28A	25	8.5	25.4	11	NP	NP	NP	SP-SM	A-1-b+J358
IBR-28A	45	22	4.75	41	NP	NP	NP	SM	A-4
IBR-31	0								
IBR-31	9	16.2	2	97	33	19	14	CL	A-6
IBR-31	18								
IBR-31	24								
IBR-31	49								
IBR-31	59	21.9	2	98	40	23	17	CL	A-6
IBR-31	74								
IBR-31	89	18.6	9.5	50	25	15	10	CL	A-4
IBR-32	20	20.8	19	30	NP	NP	NP	SM	A-2-4
IBR-32	30	18.7	4.75	57	25	16	9	OL	A-8
IBR-32	45								
IBR-32	50	16.7	2	96	31	18	13	CL	A-6
IBR-32	52								
IBR-32	57.5								
IBR-32	62.5								
IBR-32	67.5	27.8	2	46	23	19	4	SC-SM	A-4

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-32	77.5								
IBR-32	82.5	17.8	2	73	33	19	14	CL	A-6
IBR-32	95								
IBR-32	98.5								
IBR-33	10	14.4	12.5	20	NP	NP	NP	SM	A-2-4
IBR-33	20	17	2	79	23	18	5	CL-ML	A-4
IBR-33	22.5								
IBR-33	27.5	15.8	2	89	30	18	12	CL	A-6
IBR-33	35	15.8	2	68	21	16	5	CL-ML	A-4
IBR-33	45	15.4	2	69	22	15	7	CL-ML	A-4
IBR-33	47.5								
IBR-33	52.5	22.3	2	95	43	22	21	CL	A-7-5
IBR-33	57								
IBR-33	60								
IBR-33	62.5								
IBR-33	65								
IBR-33	67.5								
IBR-33	70	30.9	2	99	69	34	35	MH	A-7-6
IBR-33	85	24.1	2	68	32	19	13	CL	A-6
IBR-33	95	32.2	2	89	46	25	21	CL	A-7-5
IBR-42	6	9.9	4.75	13	NP	NP	NP	SM	A-1-b
IBR-42	15	16.6	37.5	25	24	17	7	SC-SM	A-2-4
IBR-42	30	33.3	4.75	70	38	20	18	CL	A-6
IBR-42	36								
IBR-42	39								
IBR-42	42	25.7	4.75	89	41	20	21	CL	A-7-5
IBR-42	54	27.4	2	97	61	28	33	CH	A-7-5
IBR-42	72	12.9	2	83	26	16	10	CL	A-4
IBR-42	84	12.5	2	64	22	15	7	CL-ML	A-4
IBR-42A	3								
IBR-42A	9	5.9	4.75	54	22	15	7	CL-ML	A-4
IBR-42A	18	16.7	19	11	NP	NP	NP	SW-SM	A-1-b
IBR-42A	36								
IBR-42A	39	19.9	2	99	34	20	14	CL	A-6
IBR-42A	39.01	20.4							
IBR-42A	39.02								
IBR-42A	42	17	2	92	29	18	11	CL	A-6
IBR-42A	45								
IBR-42A	51								

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SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-42A	54	22.9	2	88	46	24	22	CL	A-7-5
IBR-42A	57								
IBR-42A	60	24.3	2	98	51	27	24	CH	A-7-5
IBR-42A	60.01								
IBR-42A	63								
IBR-42A	66	19.9	2	92	37	22	15	CL	A-6
IBR-42A	72	20.4	2	8	NP	NP	NP	SP-SM	A-3
IBR-42A	78								
IBR-42A	87	14.1	2	74	23	15	8	CL	A-4
IBR-43	15	23.8	2	99	47	23	24	CL	A-7-5
IBR-43	22.5	17.6	2	91	32	20	12	CL	A-6
IBR-43	40	17.7	0.85	99	30	20	10	CL	A-4
IBR-43	50	23.8	2	89	54	29	25	CH	A-7-5
IBR-43	75	16.4	0.85	78	26	15	11	CL	A-6
IBR-44	3.5	11.4	25	35	22	14	8	GC	A-2-4
IBR-44	38.5	19.9	4.75	88	29	17	12	CL	A-6
IBR-44	93.5	21.6	2	20	NP	NP	NP	SM	A-1-b
IBR-45	3	14.5	9.5	70	25	16	9	CL	A-4
IBR-45	45	22.2	2	47	NP	NP	NP	SM	A-4
IBR-45	78	17.8	2	60	21	13	8	CL	A-4
IBR-46	0	13.9	9.5	85	26	20	6	CL-ML	A-4
IBR-46	12	17.2	4.75	20	NP	NP	NP	SM	A-2-4
IBR-46	36	24.4	2	93	49	24	25	CL	A-7-5
IBR-46	51	22	2	31	NP	NP	NP	SM	A-2-4
IBR-46	93	17.1	2	80	23	16	7	CL-ML	A-4
IBR-47	4	12.9	12.5	45	19	17	2	SM	A-4
IBR-47	49	23.4	2	81	37	20	17	CL	A-6
IBR-47	98.5	23.5	4.75	74	24	16	8	CL	A-4
IBR-48	0	12.7	9.5	67	25	17	8	CL	A-4
IBR-48	15	23.4	0.85	97	49	26	23	CL	A-7-5
IBR-48	36	20.1	2	90	41	22	19	CL	A-7-5
IBR-48	57	25.2	2	11	NP	NP	NP	SP-SM	A-2-4
IBR-48	75	20.2	4.75	20	NP	NP	NP	SM	A-2-4
IBR-49	0	19.8	25	62.3	24	20	4	CL-ML	A-4(0)
IBR-49	2	17.5	0.42	91.9	35	17	17	CL	A-6(15)
IBR-49	8	19.2	2	91.4	44	21	23	CL	A-7-6(22)
IBR-49	10	18.6	2	90.4	45	21	25	CL	A-7-6(24)
IBR-49	12	20.9	2	94	54	24	29	CH	A-7-6(32)
IBR-49	14	25.4	0.42	98	61	27	34	CH	A-7-6(39)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-49	16	28.2	0.19	97.4	52	28	24	CH	A-7-6(28)
IBR-49	18	20	0.42	80.8	38	19	19	CL	A-6(15)
IBR-49	24	20.9	2	75.1	29	18	11	CL	A-6(6)
IBR-49	25	20.3	0.42	36.2	22	NP	NP	SM	A-4(0)
IBR-49	29	21.6	2	11.7	NV	NP	NP	SP-SM	A-2-4(0)
IBR-49	34	25.5	2	94.1	50	22	28	CH	A-7-6(29)
IBR-49	39	21.8	2	96.7	39	22	18	CL	A-6(18)
IBR-49	44	19.7	0.42	89.1	28	18	10	CL	A-4(8)
IBR-49	49	22.1	4.75	69.1	19	NP	NP	ML	A-4(0)
IBR-49	54	21.7	0.42	84.1	23	NP	NP	ML	A-4(0)
IBR-49	59	21.6	4.75	19.5	NV	NP	NP	SM	A-2-4(0)
IBR-49	64	19.1	4.75	91.6	25	18	6	CL-ML	A-4(5)
IBR-49	69	21.5	9.5	17	NV	NP	NP	SM	A-2-4(0)
IBR-49	74	21.5	2	62.1	19	NP	NP	ML	A-4(0)
IBR-49	74.5	23.6	2	36.5	NV	NP	NP	SM	A-4(0)
IBR-50	0	16.3	9.5	76	29	22	6	CL-ML	A-4(4)
IBR-50	2	13.1	4.75	52.9	21	NP	NP	ML	A-4(0)
IBR-50	4	18.7	25	81.9	33	20	13	CL	A-6(10)
IBR-50	6	19	4.75	88.6	37	22	15	CL	A-6(14)
IBR-50	8	19.9	9.5	80.8	34	20	14	CL	A-6(10)
IBR-50	10	23.8	2	96.4	49	25	24	CL	A-7-6(26)
IBR-50	12	22.7	4.75	1.4	NV	NP	NP	SP	A-3
IBR-50	14	23.4	9.5	97	51	26	25	CH	A-7-6(28)
IBR-50	16	25.3	4.75	93.8	57	27	31	CH	A-7-6(33)
IBR-50	18	23.7	4.75	97.9	54	26	28	CH	A-7-6(32)
IBR-50	24	20.3	2	87.1	32	23	9	CL	A-4(8)
IBR-50	29	24.1	4.75	92.7	NV	NP	NP	ML	A-4(0)
IBR-50	34	17.7	0.15	89.8	30	20	10	CL	A-4(8)
IBR-50	39	21.6	0.42	52.1	18	NP	NP	ML	A-4(0)
IBR-50	44	21.9	0.42	55.8	20	NP	NP	ML	A-4(0)
IBR-50	49	20	0.42	54.2	20	NP	NP	ML	A-4(0)
IBR-50	54	24.9	4.75	49.6	22	NP	NP	SM	A-4(0)
IBR-50	59	19.5	4.75	55.5	20	15	5	CL-ML	A-4(0)
IBR-50	64	20.6	4.75	21.5	NV	NP	NP	SM	A-2-4(0)
IBR-50	69	20	0.42	35.5	NV	NP	NP	SM	A-4(0)
IBR-50	73	21.8	4.75	19.4	NV	NP	NP	SM	A-2-4(0)
IBR-51	0.5	16.4	25	59.7	28	21	7	CL-ML	A-4(2)
IBR-51	2	15.2	25	76.6	23	16	7	CL-ML	A-4(3)
IBR-51	4	15.9	0.42	93.3	23	19	4	CL-ML	A-4(2)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-51	6	18.6	0.42	97.6	27	21	6	CL-ML	A-4(5)
IBR-51	8	20.9	0.42	98.5	28	22	6	CL-ML	A-4(6)
IBR-51	10	18.4	0.42	95.6	28	19	9	CL	A-4(8)
IBR-51	14	21.6	9.5	75.8	24	17	7	CL-ML	A-4(3)
IBR-51	16	23	4.75	53.2	22	16	5	CL-ML	A-4(0)
IBR-51	18	21.2	2	95.4	46	23	23	CL	A-7-6(24)
IBR-51	24	15.9	0.42	92.6	30	18	12	CL	A-6(10)
IBR-51	29	18.7	2	90.5	47	21	26	CL	A-7-6(25)
IBR-51	34	24.2	0.42	98.3	57	29	28	CH	A-7-6(33)
IBR-51	39	20.6	0.42	99.2	50	24	26	CH	A-7-6(29)
IBR-51	45	18.3	0.42	39.1	20	NP	NP	SM	A-4(0)
IBR-51	49	16.9	2	75.5	21	15	6	CL-ML	A-4(2)
IBR-51	51	19.4	0.19	75.5	39	16	23	CL-ML	A-4(2)
IBR-51	54	22.9	0.42	94.2	43	21	22	CL	A-7-6(22)
IBR-51	59	25.6	4.75	97.8	48	27	22	CL	A-7-6(25)
IBR-51	64	24	0.42	64.8	22	NP	NP	ML	A-4(0)
IBR-51	69	19.1	0.42	66.7	20	15	5	CL-ML	A-4(1)
IBR-51	73	26.5	2	25.8	NV	NP	NP	SM	A-2-4(0)
IBR-52	1	7.9	25	47.2	26	18	9	SC	A-4(1)
IBR-52	2	11.2	0.42	65.9	16	NP	NP	ML	A-4(0)
IBR-52	4	23.2	4.75	69.9	22	NP	NP	ML	A-4(0)
IBR-52	6	16.5	0.42	77.6	20	17	2	ML	A-4(0)
IBR-52	8	23.6	0.42	42.9	NV	NP	NP	SM	A-4(0)
IBR-52	10	22.6	0.42	59.1	19	NP	NP	ML	A-4(0)
IBR-52	12	26	0.42	69.1	23	20	3	ML	A-4(0)
IBR-52	14	25.6	0.42	93.6	42	22	20	CL	A-7-6(20)
IBR-52	16	24.5	2	95.9	43	23	20	CL	A-7-6(21)
IBR-52	16.5	29.8	2	95.9	43	23	20		
IBR-52	18	20.2	4.75	92.6	48	21	28	CL	A-7-6(28)
IBR-52	22	20.4	4.75	95	51	23	29	CH	A-7-6(30)
IBR-52	29	23.4	0.42	98.3	54	27	27	CH	A-7-6(31)
IBR-52	34	24.8	0.42	96.6	45	13	33	CL	A-7-6(33)
IBR-52	35	17.8	0.42	83.7	29	21	8	CL	A-4(5)
IBR-52	39	25.4	4.75	17.2	NV	NP	NP	SM	A-2-4(0)
IBR-52	44	14.3	9.5	57.7	21	NP	NP	ML	A-4(0)
IBR-52	49	20.4	0.42	44.3	NV	NP	NP	SM	A-4(0)
IBR-52	54	18	0.42	46.9	19	NP	NP	SM	A-4(0)
IBR-52	59	27.3	4.75	30.2	NV	NP	NP	SM	A-2-4(0)
IBR-52	64	22.8	0.42	52.4	21	NP	NP	ML	A-4(0)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-52	69	21.9	2	16.8	NV	NP	NP	SM	A-2-4(0)
IBR-52	73	22	2	53.8	20	NP	NP	ML	A-4(0)
IBR-53	0	12.1	9.5	63.7	22	18	4	CL-ML	A-4(0)
IBR-53	1.5	5	2	24.6	NV	NP	NP	SM	A-2-4(0)
IBR-53	2	7	2	12.4	NV	NP	NP	SM	A-2-4(0)
IBR-53	4	20.8	2	14.7	NV	NP	NP	SM	A-2-4(0)
IBR-53	6	30.7	4.75	82.1	30	21	9	CL	A-4(6)
IBR-53	7.5	24.5	0.42	96.6	40	21	18	CL	A-6(20)
IBR-53	8	20.8	4.75	92.7	41	20	21	CL	A-7-6(20)
IBR-53	10	21.8	2	89.9	38	22	16	CL	A-6(15)
IBR-53	12	24.9	2	85.6	49	22	27	CL	A-7-6(25)
IBR-53	14	24.6	2	94.8	43	25	18	CL	A-7-6(19)
IBR-53	16	22.4	2	95.6	38	22	16	CL	A-6(16)
IBR-53	18	24.2	0.074	100	47	26	21	CL	A-7-6(25)
IBR-53	24	20.2	0.42	86.9	33	24	8	ML	A-4(7)
IBR-53	29	20.1	2	70.5	23	14	9	CL	A-4(3)
IBR-53	34	17.1	4.75	84.3	33	19	14	CL	A-6(11)
IBR-53	39	17.1	0.42	89.2	24	21	4	CL-ML	A-4(2)
IBR-53	44	23.2	0.42	64.5	21	NP	NP	ML	A-4(0)
IBR-53	49	24.8	0.42	33.9	NV	NP	NP	SM	A-2-4(0)
IBR-53	54	25.7	2	21.1	NV	NP	NP	SM	A-2-4(0)
IBR-53	59	21.9	4.75	12.3	NV	NP	NP	SM	A-2-4(0)
IBR-53	64	22.8	2	48.6	15	NP	NP	SM	A-4(0)
IBR-53	69	18.5	0.42	65.7	17	NP	NP	ML	A-4(0)
IBR-53	74	15.7	4.75	25.1	NV	NP	NP	SM	A-2-4(0)
IBR-54	0	17.4	25.4	74.6	22	17	5	CL-ML	A-4(1)
IBR-54	2	15.3	4.75	86.6	28	17	11	CL	A-6(8)
IBR-54	4	24.8	4.75	83.8	48	22	26	CL	A-7-6(23)
IBR-54	6	22.8	2	86.2	52	22	29	CH	A-7-6(27)
IBR-54	8	18.8	2	90	37	21	16	CL	A-6(15)
IBR-54	10	18.5	2	88	36	21	15	CL	A-6(13)
IBR-54	12	20.8	2	90.4	37	19	19	CL	A-6(16)
IBR-54	14	23.4	2	94.2	46	25	21	CL	A-7-6(22)
IBR-54	16	24.8	0.42	92.9	42	25	17	CL	A-7-6(18)
IBR-54	18	19.7	0.42	93.4	34	22	12	CL	A-6(11)
IBR-54	24	22.6	0.42	95.2	73	26	46	CH	A-7-6(50)
IBR-54	29	26.4	2	12.5	NV	NP	NP	SM	A-2-4(0)
IBR-54	34	17.5	0.42	90	28	19	10	CL	A-4(8)
IBR-54	39	16	50.8	32.7	16	NP	NP	SM	A-2-4(0)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-54	44	19.8	0.42	61	19	NP	NP	ML	A-4(0)
IBR-54	49	21	0.42	65.9	19	NP	NP	ML	A-4(0)
IBR-54	54	41.3			21	NP	NP		
IBR-54	55	53.8			NV	NP	NP		
IBR-54	59	32.3	4.75	19.4	NV	NP	NP	SM	A-2-4(0)
IBR-54	64	22.1	0.42	80.1	19	NP	NP	ML	A-4(0)
IBR-54	69	26.7	0.42	23.4	NV	NP	NP	SM	A-2-4(0)
IBR-54	73	25.3	2	72.5	20	18	2	ML	A-4(0)
IBR-55	0.5	11.5	25.4	43.4	22	17	5	SC-SM	A-4(0)
IBR-55	2	17.5	4.75	82.2	26	21	5	CL-ML	A-4(3)
IBR-55	4	11.4	25.4	40	16	NP	NP	SM	A-4(0)
IBR-55	6	10.5	9.5	34.6	16	NP	NP	SM	A-2-4(0)
IBR-55	8	11.5	25.4	35.1	18	NP	NP	SM	A-2-4(0)
IBR-55	10	10	25.4	25.4	22	NP	NP	SM	A-1-b
IBR-55	12	14.7	25.4	26	22	NP	NP	SM	A-2-4(0)
IBR-55	14	15.9	25.4	73.6	22	NP	NP	ML	A-4(0)
IBR-55	16	17.5	9.5	81.9	22	NP	NP	ML	A-4(0)
IBR-55	18	18.4	0.42	91.5	25	NP	NP	ML	A-4(0)
IBR-55	24	21.6	0.42	99	40	24	16	CL	A-6(18)
IBR-55	29	20.9	2	84.3	38	23	16	CL	A-6(13)
IBR-55	34	19.5	0.42	98.3	32	21	11	CL	A-6(11)
IBR-55	36	19.6	0.42	98.7	39	21	18	CL	A-6(19)
IBR-55	38	19.1	2	98.6	28	22	6	CL-ML	A-4(6)
IBR-55	44	18.4	0.42	94.1	25	19	6	CL-ML	A-4(4)
IBR-55	49	18.7	0.42	82.3	23	17	6	CL-ML	A-4(3)
IBR-55	54	23	2	95.8	35	24	11	CL	A-6(11)
IBR-55	59	26.3	0.42	97.9	43	25	18	CL	A-7-6(19)
IBR-55	64	29	2	97	46	32	14	ML	A-7-5(18)
IBR-55	69	29.8	2	93.6	55	29	26	CH	A-7-6(29)
IBR-55	74	32.2	0.42	99.1	48	29	18	ML	A-7-6(23)
IBR-56	0.5	11.4	9.5	45.8	23	17	7	SC-SM	A-4(0)
IBR-56	2	9.8	25.4	38.7	18	NP	NP	SM	A-4(0)
IBR-56	4	8.2	25.4	9.6	NV	NP	NP	SP-SM	A-1-b
IBR-56	6	8.6	25.4	18	NV	NP	NP	SM	A-1-b
IBR-56	8	9	25.4	18.3	NV	NP	NP	SM	A-1-b
IBR-56	10	9	25.4	14.6	NV	NP	NP	SM	A-1-b
IBR-56	12	25.1	25.4	13.7	NV	NP	NP	SM	A-2-4 (0)
IBR-56	14	16	4.75	72	25	16	9	CL	A-4(4)
IBR-56	16	19.2	2	87.1	41	17	24	CL	A-7-6(21)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-56	18	17.4	0.42	90.7	34	20	15	CL	A-6(13)
IBR-56	24	17.8	2	84.5	29	19	10	CL	A-4(7)
IBR-56	29	20.7	2	94.2	34	20	14	CL	A-6(13)
IBR-56	34	17.4	2	90.5	27	19	8	CL	A-4(6)
IBR-56	39	21.2	2	91.5	32	19	13	CL	A-6(11)
IBR-56	44	17.2	2	76.6	20	NP	NP	ML	A-4(0)
IBR-56	49	27.6	0.42	97.9	57	29	27	CH	A-7-6(32)
IBR-56	54	19.2	2	93.6	37	20	17	CL	A-6(16)
IBR-56	59	25.9	0.42	97.2	50	24	26	CH	A-7-6(29)
IBR-56	64	28.1	0.42	98.2	52	26	26	CH	A-7-6(30)
IBR-56	69	31.4	2	97.9	54	28	26	CH	A-7-6(30)
IBR-56	74	18.2	2	51.1	26	17	10	CL	A-4(2)
IBR-57	0.5	15.4	9.5	63.4	22	NP	NP	ML	A-4(0)
IBR-57	2	12.9	25.4	30.3	27	18	9	SC	A-2-4(0)
IBR-57	4	12.2	25.4	30.5	20	NP	NP	SM	A-2-4(0)
IBR-57	6	11	25.4	17.2	NP	NP	NP	SM	A-1-b
IBR-57	8	13.5	25.4	27	23	18	5	SC-SM	A-2-4(0)
IBR-57	10	14.7	25.4	19.4	NP	NP	NP	SM	A-1-b
IBR-57	12	14.6	25.4	22	NP	NP	NP	SM	A-1-b
IBR-57	14	18.5	25.4	22.1	NP	NP	NP	SM	A-2-4(0)
IBR-57	16	18.5	9.5	18.5	NP	NP	NP	SM	A-1-b
IBR-57	18	17.3	25.4	61.1	24	19	5	CL-ML	A-4(1)
IBR-57	24	20.1	4.75	89.2	27	18	9	CL	A-4(7)
IBR-57	26	20.5	9.5	93.6	36	20	16	CL	A-6(15)
IBR-57	28	19.6	2	92.2	31	18	13	CL	A-6(11)
IBR-57	34	20.9	4.75	72.6	22	18	4	CL-ML	A-4(1)
IBR-57	39	19.7	0.425	81.3	21	18	4	ML	A-4(0)
IBR-57	44	18.4	2	80.3	20	NP	NP	ML	A-4(0)
IBR-57	49	19.7	4.75	83	34	20	14	CL	A-6(11)
IBR-57	54	23.5	4.75	92.7	40	22	18	CL	A-6(18)
IBR-57	59	24.3	0.42	99.1	50	27	23	CH	A-7-6(27)
IBR-57	64	23.5	0.42	86.4	49	25	24	CL	A-7-6(21)
IBR-57	69	28.6	0.42	94.3	47	27	20	CL	A-7-6(22)
IBR-57	74	21.1	2	61.2	36	19	17	CL	A-6(8)
IBR-58	1.5	2.7	50.8	16	22	NP	NP	SM	A-1-b
IBR-58	2	8.7	25.4	30	24	16	7	SC	A-2-4
IBR-58	4	12.1	25.4	25	31	20	11	SC	A-2-6
IBR-58	6	10	25.4	19	25	NP	NP	SM	A-1-b
IBR-58	8	9.5	25.4	23	NV	NP	NP	SM	A-2-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-58	10	8.1	9.5	13	NV	NP	NP	SM	A-1-b
IBR-58	12	11.4	25.4	14	NV	NP	NP	SM	A-1-b
IBR-58	14	12.9	25.4	15	NV	NP	NP	SM	A-1-b
IBR-58	16	15.9	25.4	18	NV	NP	NP	SM	A-2-4
IBR-58	18	18.7	2	17	NV	NP	NP	SM	A-2-4
IBR-58	29	17.1	2	38	15	NP	NP	SM	A-4
IBR-58	34	17.5	2	79	41	18	23	CL	A-7-6
IBR-58	37	18.3	2	88	40	21	19	CL	A-6
IBR-58	39	18.3	2	70	21	17	5	CL-ML	A-4
IBR-58	44	20.2	2	78.2	23	17	6	CL-ML	A-4
IBR-58	49	21.8	2	84	24	17	7	CL-ML	A-4
IBR-58	54	21.5	4.75	81	25	18	7	CL-ML	A-4
IBR-58	59	21.7	2	67	42	23	19	CL	A-7-6
IBR-58	64	24.3	2	96	49	27	22	CL	A-7-6
IBR-58	69	24.4	0.42	84	34	22	12	CL	A-6
IBR-58	74	22	2	83	40	19	21	CL	A-6
IBR-59	0.5	10.3	25.4	21.4	NV	NP	NP	SM	A-2-4(0)
IBR-59	2	10.7	25.4	19.9	NV	NP	NP	SM	A-1-b
IBR-59	4	10.6	25.4	5.2	NV	NP	NP	SP-SM	A-1-b
IBR-59	6	10.8	25.4	16.7	NV	NP	NP	SM	A-1-b
IBR-59	8	19.2	50.8	28.7	27	NP	NP	SM	A-2-4(0)
IBR-59	10	13.3	25.4	8.4	NV	NP	NP	SW-SM	A-1-b
IBR-59	12	15.8	25.4	61.6	20	NP	NP	ML	A-4(0)
IBR-59	14	18.4	9.5	69.6	14	11	3	ML	A-4(0)
IBR-59	16	26.9	4.75	60.8	23	19	5	CL-ML	A-4(0)
IBR-59	18	24.4	9.5	36.2	16	NP	NP	SM	A-4(0)
IBR-59	24	17.3	4.75	59.2	22	17	5	CL-ML	A-4(0)
IBR-59	29	18.9	0.42	68.5	19	NP	NP	ML	A-4(0)
IBR-59	34	26	25.4	42	NV	NP	NP	SM	A-4(0)
IBR-59	39	24.9	25.4	88.4	34	20	14	CL	A-6(12)
IBR-59	44	23.9	0.42	97.7	46	25	21	CL	A-7-6(24)
IBR-59	49	26	0.42	99.1	55	26	29	CH	A-7-6(34)
IBR-59	54	15.4	2	68.3	29	18	11	CL	A-6(5)
IBR-59	56	23.2	2	62.5	31	17	14	CL	A-6(6)
IBR-59	58	21	2	56	22	16	6	CL-ML	A-4(1)
IBR-59	64	21	0.42	75	33	19	14	CL	A-6(9)
IBR-59	69	25	2	14.3	NV	NP	NP	SM	A-2-4(0)
IBR-59	74	25	2	82.2	41	25	16	CL	A-7-6(14)
IBR-60	2.5	9	25.4	30.1	22	16	6	SC-SM	A-2-4(0)

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-60	4	7.8	25.4	15.6	NV	NP	NP	SM	A-1-b
IBR-60	6	6.7	25.4	11.3	NV	NP	NP	SP-SM	A-1-b
IBR-60	8	10.9	50.8	16.8	NV	NP	NP	SM	A-1-b
IBR-60	10	9.3	25.4	14.4	NV	NP	NP	SM	A-1-b
IBR-60	12	12.9	50.8	6.9	NV	NP	NP	SW-SM	A-1-b
IBR-60	14	21.5	25.4	69.4	30	19	11	CL	A-6(6)
IBR-60	16	20.1	9.5	77.8	27	19	8	CL	A-4(5)
IBR-60	18	20.7	2	81.7	30	19	11	CL	A-6(8)
IBR-60	18.01	19.5	2.4	65.1	36	18	18	CL	A-6(9)
IBR-60	18.02								
IBR-60	24	20.1	2	61	23	18	5	CL-ML	A-4(0)
IBR-60	29	20.2	2	70.4	21	17	5	CL-ML	A-4(0)
IBR-60	34	24.5	2	58.1	21	NP	NP	ML	A-4(0)
IBR-60	39	27.3	50.8	67.4	29	20	9	CL	A-4(4)
IBR-60	44	22.2	25.4	91.7	41	22	19	CL	A-6(18)
IBR-60	46	19.6	2	94.9	36	21	16	CL	A-6(15)
IBR-60	46.01	18	1.19	91.2	39	21	18	CL	A-6(17)
IBR-60	49	24.2	2	87	46	21	24	CL	A-7-6(23)
IBR-60	59	18.1	2	66.1	27	17	10	CL	A-4(4)
IBR-60	64	24.7	0.42	98.3	45	25	20	CL	A-7-6(22)
IBR-60	69	20.6	2	44.2	27	16	12	SC	A-6(2)
IBR-60	73	23.8	2	64.3	33	18	15	CL	A-6(7)
IBR-61	2	12.1	25.4	41.8	25	22	3	SM	A-4(0)
IBR-61	4	14	25.4	32	24	15	9	SC	A-2-4(0)
IBR-61	6	10.6	50.8	15	23	19	4	SC-SM	A-1-b
IBR-61	8	10.1	25.4	15	21	NP	NP	SM	A-1-b
IBR-61	10	13.3	25.4	78	NV	NP	NP	ML	A-4(0)
IBR-61	12	23.3	25.4	41	30	22	8	SC	A-4(0)
IBR-61	14	24.2	2	98.8	34	21	13	CL	A-6(13)
IBR-61	14.01								
IBR-61	16	23.1	0.42	98.6	31	22	9	CL	A-4(9)
IBR-61	18	22.7	0.42	96.5	35	23	11	CL	A-6(11)
IBR-61	24	19	2	74.8	25	18	8	CL-ML	A-4(3)
IBR-61	29	19.1	4.75	70.2	24	17	7	CL-ML	A-4(3)
IBR-61	34	23.1	0.42	50.6	18	NP	NP	ML	A-4(0)
IBR-61	39	26.6	4.75	51.7	25	16	10	CL	A-4(2)
IBR-61	44	23.2	2	93	41	22	20	CL	A-7-6(19)
IBR-61	49	30.2	2	94.3	64	27	37	CH	A-7-6(40)
IBR-61	54	23.2	0.42	97.7	52	25	28	CH	A-7-6(30)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IBR-61	59	31.2	4.75	85.9	46	24	22	CL	A-7-6(20)
IBR-61	59.01	37.4	2	90.6	48	23	25	CL	A-7-6(25)
IBR-61	64	33.2	0.42	99.1	52	31	21	MH	A-7-5(26)
IBR-61	69	33.8	0.42	96.6	49	32	17	ML	A-7-5(21)
IBR-61	74	19.1	2	82.6	36	23	13	CL	A-6(11)
IBR-61	74.5	20.7	2	58.4	28	17	11	CL	A-6(4)
IBR-61	79	20.8	0.42	74.6	30	20	10	CL	A-4(6)
IBR-61	84	29.6	0.42	91.1	48	31	17	ML	A-7-5(19)
IBR-61	89	20.5	2	72.1	33	22	11	CL	A-6(7)
IBR-61	93	17.2	2	62.5	29	18	11	CL	A-6(4)
IBR-61	95	19.9	2	76	35	23	12	CL	A-6(8)
ICPT-15A	18	24.4		100	49	23	26	CL	
ICPT-15A	28	36.7		89.8	50	24	26	CH	
ICPT-15A	44	22.3		92.6	53	22	31	CH	
ICPT-16A	30	16.4		94.3	34	19	15	CL	
ICPT-16A	44	16.7		65	41	18	23	CL	
ICPT-16A	54	13.2		92.2	64	26	38	CH	
IEB-01	12	14	4.75	78	27	18	9	CL	A-4
IEB-01	30	21.7	0.85	99	35	22	13	CL	A-6
IEB-01	38.5	19.3	0.85	74	22	16	6	CL-ML	A-4
IEB-02	6	18.1	2	84	31	17	14	CL	A-6
IEB-02	24	17.9	0.85	98	37	20	17	CL	A-6
IEB-02	33.5	19.3	25.4	23	17	15	2	GM	A-2-4
IEB-03	4.5	8.6	9.5	36	21	68	NP	SM	A-6
IEB-03	20	16.6	12.5	80	24	17	7	CL-ML	A-4
IEB-03	38.5	14.3	2	91	34	18	16	CL	A-6
IEB-04	5	13.4	12.5	34	21	14	7	SC-SM	A-2-4
IEB-04	15	19.2	2	64	NP	NP	NP	ML	A-4
IEB-04	20								
IEB-04	30								
IEB-04	35	22.2	2	97	52	27	25	CH	A-7-5
IEB-04	38.5								
IEB-13	0	12.9							
IEB-13	3	14	9.5	21	24	21	3	SM	A-2-4
IEB-13	5	14.6							
IEB-13	21	15.9	4.75	72	34	19	15	CL	A-6
IEB-13	30	24.3	4.75	80	35	19	16	CL	A-6
IEB-13	33								
IEB-13	39	16.4	2	88	39	18	21	CL	A-6

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IEB-13A	2.5	14.6							
IEB-13A	3	20.8	4.75	50	26	17	9	CL	A-4
IEB-13A	5	11.9							
IEB-13A	7.5	17.7	25.4	40	33	20	13	SC	A-6
IEB-13A	15	18.7	2	75	33	19	14	CL	A-6
IEB-13A	15.01								
IEB-13A	15.05								
IEB-13A	18.5	16.9	2	84	36	22	14	CL	A-6
IEB-13A	25	17.3	2	96	31	19	12	CL	A-6
IEB-13A	37	20.1	4.75	76	30	19	11	OL	A-8
IEB-13B	19.8	26.2		97.2	58	25	33	CH	
IEB-13B	20.3	24.9							
IEB-13B	20.8	23.6							
IEB-13B	32	16.1		70.6	28	17	11	CL	
IEB-13B	38	15.5		65.4	27	14	13	CL	
IEB-13B	58	22.1		46.7	NP	NP	NP	SM	
IEB-14	3	18.7	2	98	28	20	8	CL	A-4
IEB-14	9	14.3	4.75	77	32	17	15	CL	A-6
IEB-14	12	15.6	2	89	34	17	17	CL	A-6
IEB-15	0	12.4	9.5	53.7	26	18	8	CL	A-4
IEB-15	2	19.1	4.75	76.1	28	20	8	CL	A-4
IEB-15	4	17.6	25.4	61.7	28	19	9	CL	A-4
IEB-15	6	12.6	25.4	28.6	23	16	6	SC-SM	A-2-4
IEB-15	8	24	9.5	90.9	49	25	24	CL	A-7-6
IEB-15	10	25.5	4.75	95.2	40	26	14	ML	A-6
IEB-15	12	23.9	2	99.1	49	26	23	CL	A-7-6
IEB-15	12.5								
IEB-15	14	22.3	0.425	91.1	34	24	10	CL	A-4
IEB-15	16	19.1	0.425	73.1	27	22	6	CL-ML	A-4
IEB-15	18	18.8	0.425	73	29	21	8	CL	A-4
IEB-15	24	21.7	4.75	90.1	37	24	14	CL	A-6
IEB-15	29	18.2	2	92.8	37	20	17	CL	A-6
IEB-15	31	17.9	2	95.5	36	20	16	CL	A-6
IEB-15	31.5								
IEB-15	34	17.9	4.75	84.2	38	19	20	CL	A-6
IEB-15	39	26.4	0.425	99.5	61	32	29	MH	A-7-5
IEB-15	44	20.4	0.425	82.7	37	24	13	CL	A-6
IEB-15	49	17.3	0.425	49.5	24	NP	NP	SM	A-4
IEB-15	54	19	2	83.1	32	19	13	CL	A-6

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IEB-15	56	20.1	2	98.1	47	25	22	CL	A-7-6
IEB-15	59	17.8	0.425	86.3	31	19	12	CL	A-6
IEB-15	64	18.7	2	92	31	19	12	CL	A-6
IEB-15	69	19.1	0.425	60.3	21	17	3	CL-ML	A-4
IEB-15	74	18.9	2	65.2	20	NP	NP	ML	A-4
IEB-15	79	20.5	9.5	49.3	19	NP	NP	SM	A-4
IEB-15	84	25.3	4.75	18.1	NP	NP	NP	SM	A-2-4
IEB-15	89	20.3	4.75	20.1	NP	NP	NP	SM	A-2-4
IEB-15	94	19.4	4.75	22	NP	NP	NP	SM	A-2-4
IEB-15	98	18.5	4.75	22.1	NP	NP	NP	SM	A-2-4
IRW-02	10	0.5	2	87	32	20	12	CL	A-6
IRW-02	20	16.4	2	88	26	16	10	CL	A-4
IRW-02	25	18.5	4.75	90	25	17	8	CL	A-4
IRW-02	25.00001	19							
IRW-02	30	18.8	4.75	73	21	17	4	CL-ML	A-4
IRW-02	35	17.2	2	89	39	20	19	CL	A-6
IRW-03	4	8.7	25	26	18	13	5	SC-SM	A-2-4
IRW-03	15	23.8	4.75	84	49	31	18	ML	A-7-6
IRW-03	25	17.8	2	99	28	18	10	CL	A-4
IRW-03	35	18.5	2	98	29	18	11	CL	A-6
IRW-04	1.5	7.5	9.5	17	NP	NP	NP	SM	A-2-4
IRW-04	9								
IRW-04	15	17.9	2	87	36	21	15	CL	A-6
IRW-04	35	26.8	2	5	NP	NP	NP	SP-SM	A-3
IRW-05	9.5	21.9	4.75	93	37	18	19	CL	A-6
IRW-05	20	19.5	2	88	32	16	16	CL	A-6
IRW-05	30	19.9	2	48	NP	NP	NP	SM	A-4
IRW-06	3.5								
IRW-06	6	10.5	19	65	35	21	14	CL	A-6
IRW-06	15	8.4	19	75	38	19	19	CL	A-6
IRW-06	25	20.8	2	87	24	17	7	CL-ML	A-4
IRW-07	2.5	13.6	19	63	27	16	11	CL	A-6
IRW-07	7.5	13.9	12.5	63	28	19	9	CL	A-4
IRW-07	15	18.8	12.5	79	27	25	2	ML	A-4
IRW-07A	5	13.6	12.5	65	24	15	9	CL	A-4
IRW-07A	30	19.7	2	75	28	18	10	CL	A-4
IRW-08	7.5	12.3	4.75	60	23	16	7	CL-ML	A-4
IRW-08	10								
IRW-08	12.5	15	2	86	26	17	9	CL	A-4

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-08	22.5								
IRW-08	25								
IRW-08	32.5								
IRW-08	38.5								
IRW-09	12.5								
IRW-09	15								
IRW-09	17.5								
IRW-09	20	28.6	2	99	39	20	19	CL	A-6
IRW-09	35	17.5	2	62	23	18	5	OL	A-8
IRW-09	35.01								
IRW-09	35.02								
IRW-10	10	20.4	2	99	39	21	18	CL	A-6
IRW-10	17.5								
IRW-10	20								
IRW-10	22.5								
IRW-10	25	23.9	2	96	60	24	36	CH	A-7-5
IRW-10	27.5								
IRW-10	30								
IRW-10	32.5								
IRW-10	33	21.1	2	89	36	21	15	CL	A-6
IRW-11	5								
IRW-11	7.5								
IRW-11	10	15.8	25.4	52	19	16	3	ML	A-4
IRW-11	15								
IRW-11	17.5								
IRW-11	20	17.4	4.75	59	26	15	11	CL	A-6
IRW-11	25								
IRW-11	27.5								
IRW-11	30								
IRW-11	32.5								
IRW-12	0								
IRW-12	2.5								
IRW-12	7.5	19.8	9.5	77	43	20	23	CL	A-7-5
IRW-12	12.5								
IRW-12	15	19.8	2	91	52	22	30	CH	A-7-5
IRW-12	17.5								
IRW-12	20								
IRW-12	22.5								
IRW-12	25								

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-12	30								
IRW-12	32.5								
IRW-12	33	14.1	2	86	27	16	11	CL	A-6
IRW-13	2	18.5	2	98	33	20	13	CL	A-6
IRW-13	8								
IRW-13	35	24.7	2	99	54	27	27	CH	A-7-5
IRW-14	9	15.6	2	76	25	15	10	CL	A-4
IRW-14	12	14.8	2	62	19	14	5	CL-ML	A-4
IRW-14	21								
IRW-14	24								
IRW-14	27	21.3	0.85	99	45	22	23	CL	A-7-5
IRW-14	30								
IRW-14	33								
IRW-14	36								
IRW-14	39								
IRW-15	9	13.7	19	46	32	17	15	SC	A-6
IRW-15	15								
IRW-15	18								
IRW-15	21								
IRW-15	24	21.7	2	97	47	22	25	CL	A-7-5
IRW-15	27								
IRW-15	30								
IRW-15	33								
IRW-16	7.5	10.7	25	15	NP	NP	NP	SM	A-2-4
IRW-16	15								
IRW-16	17.5	15.1	2	61	24	19	5	OL	A-8
IRW-16	20	19	0.85	90	35	20	15	CL	A-6
IRW-16	35	21.7	4.75	11	NP	NP	NP	SP-SM	A-1-a
IRW-17	4.5	14	9.5	59	27	17	10	CL	A-4
IRW-17	19.5	22.6	2	96	46	25	21	CL	A-7-5
IRW-17	29.5	16.6	4.75	93	28	17	11	CL	A-6
IRW-17	34								
IRW-17	37								
IRW-17	46								
IRW-17	49	20.3	2	74	26	18	8	CL	A-4
IRW-18	6	20.1	4.75	96	24	19	5	CL-ML	A-4
IRW-18	12	15.2	4.75	43	21	15	6	SC-SM	A-4
IRW-18	21								
IRW-18	27	22.6	2	90	37	22	15	CL	A-6

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-18	36	18.7	2	99	40	22	18	CL	A-6
IRW-18	42	12.4	2	90	25	17	8	CL	A-4
IRW-18	45								
IRW-19	4	15.3	25	9	NP	NP	NP	GP-GM	A-1-a
IRW-19	15	28.6	4.75	90	48	27	21	CL	A-7-5
IRW-19	19.5	19.1	2	99	39	22	17	CL	A-6
IRW-19	25	15.3	2	62	26	18	8	CL	A-4
IRW-19	34	18.6	2	99	39	22	17	CL	A-6
IRW-19	38.5	22	37.5	81	49	22	27	CL	A-7-5
IRW-19	45	16.4	19	67	24	16	8	CL	A-4
IRW-20	6	8.2	25	14	21	15	6	SC-SM	A-2-4
IRW-20	15	21.6	0.85	99	49	24	25	CL	A-7-5
IRW-20	27	4.1	2	20	NP	NP	NP	SM	A-2-4
IRW-21	3	24.8	2	99	26	18	8	CL	A-4
IRW-21	12	12.4	12.5	43	25	15	10	SC	A-4
IRW-21	15								
IRW-21	19.5	20.5	4.75	95	50	28	22	CH	A-7-5
IRW-21	28								
IRW-21	37	15.9	2	90	25	16	9	CL	A-4
IRW-21	46	19.9	2	92	33	20	13	CL	A-6
IRW-22	2.5	7.7							
IRW-22	17.5	19.3	2	93	40	23	17	CL	A-6
IRW-22	30	12.6	0.85	63	24	19	5	CL-ML	A-4
IRW-22	48.5	27.9	2	31	NP	NP	NP	SM	A-2-4
IRW-23	14.5	19.5	2	99	48	24	24	CL	A-7-5
IRW-23	24.5	18.4	2	99	36	15	21	CL	A-6
IRW-23	24.51	18.2							
IRW-23	24.52								
IRW-23	24.55								
IRW-23	32								
IRW-23	37								
IRW-23	39.5	19.2	2	97	36	23	13	CL	A-6
IRW-23	42								
IRW-23	44.5								
IRW-24	7.5	23.8	4.75	82	39	21	18	CL	A-6
IRW-24	12.5	21.7	4.75	95	42	23	19	CL	A-7-5
IRW-24	27.5	17.1	2	100	35	20	15	CL	A-6
IRW-25	3	17.9	9.5	81	27	19	8	CL	A-4
IRW-25	15								

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-25	25								
IRW-25	37.5								
IRW-25	48.5								
IRW-26	5	12.7	25	34	30	18	12	SC	A-2-6
IRW-26	17.5	26	2	99	57	29	28	CH	A-7-5
IRW-26	25	17.3	2	89	30	18	12	CL	A-6
IRW-26	30	20.5	2	18	NP	NP	NP	SM	A-2-4
IRW-26	42.5	20	2	82	33	19	14	CL	A-6
IRW-27	8	12.9	25	65	32	18	14	CL	A-6
IRW-27	20	15.8	37.5	64	29	15	14	CL	A-6
IRW-27	30	23	2	90	43	20	23	CL	A-7-5
IRW-27	38.5								
IRW-28	12	16.3	4.75	94	33	19	14	CL	A-6
IRW-28	18								
IRW-28	24	19.7	9.5	78	43	19	24	CL	A-7-5
IRW-28	30								
IRW-28	33	26.8	0.85	99	56	30	26	MH	A-7-5
IRW-28	36								
IRW-28	39								
IRW-28	42								
IRW-28	48.5	21.4	2	76	22	17	5	CL-ML	A-4
IRW-29	3	14.4	9.5	76	28	19	9	CL	A-4
IRW-29	9	19.8	2	87	27	21	6	CL-ML	A-4
IRW-29	21	21.7	2	91	44	23	21	CL	A-7-5
IRW-29	24								
IRW-29	27								
IRW-29	30								
IRW-29	33								
IRW-29	36	17.3	2	95	36	21	15	CL	A-6
IRW-29	48.5	21.8	2	34	20	17	3	SM	A-2-4
IRW-30	6	14.9	9.5	57	43	23	20	CL	A-7-5
IRW-30	9	18.8	2	60	24	17	7	CL-ML	A-4
IRW-30	30								
IRW-30	33								
IRW-30	42	13	2	39	NP	NP	NP	SM	A-4
IRW-31	6								
IRW-31	9	11.3	25	32	24	16	8	SC	A-2-4
IRW-31	27	25.2	2	95	46	23	23	CL	A-7-5
IRW-31	30								

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-31	33								
IRW-31	36								
IRW-31	42	14.8	2	55	22	18	4	CL-ML	A-4
IRW-32	12.5	20.9	9.5	93	26	22	4	ML	A-4
IRW-32	25	19.5	2	85	39	19	20	CL	A-6
IRW-32	25.01								
IRW-32	25.02								
IRW-32	27.5								
IRW-32	30								
IRW-32	32.5								
IRW-32	35	19.4	2	97	57	27	30	CH	A-7-5
IRW-32	37.5	16.8	2	87	41	19	22	CL	A-7-5
IRW-33	6	22.6	4.75	83	27	21	6	CL-ML	A-4
IRW-33	9	16.7	9.5	69	25	17	8	CL	A-4
IRW-33	21								
IRW-33	27	26.1	2	96	47	22	25	CL	A-7-5
IRW-33	27.01								
IRW-33	27.02								
IRW-33	30								
IRW-33	33								
IRW-33	36								
IRW-33	39								
IRW-33	42								
IRW-33	45								
IRW-33	48.5								
IRW-33A	12	22.7	9.5	68	22	16	6	CL-ML	A-4
IRW-33A	21								
IRW-33A	24	23.3	4.75	87	42	21	21	CL	A-7-5
IRW-33A	24.01								
IRW-33A	24.02								
IRW-33A	33	19.2	2	100	55	21	34	CH	A-7-5
IRW-33A	36								
IRW-33A	39								
IRW-33A	42								
IRW-33A	43.5								
IRW-34	12	20.6	9.5	61	29	19	10	CL	A-4
IRW-34	24	13	9.5	65	30	17	13	CL	A-6
IRW-34	27								
IRW-34	30								

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-34	43.5	21.8	2	99	37	20	17	CL	A-6
IRW-35	36								
IRW-35	42								
IRW-35	43.5								
IRW-37	3								
IRW-37	3.5	25.1	4.75	84	38	19	19	CL	A-6
IRW-37	15								
IRW-37	25	13.5	25.4	19	NP	NP	NP	SM	A-2-4
IRW-37	40	26.9	4.75	97	58	27	31	CH	A-7-5
IRW-39	5	16.5	9.5	86	26	21	5	CL-ML	A-4
IRW-39	15								
IRW-39	22.5								
IRW-39	25								
IRW-39	27.5								
IRW-39A	5	20.8	4.75	79	30	20	10	CL	A-4
IRW-39A	32.5								
IRW-39A	40								
IRW-39A	48.5								
IRW-40	7.5	10	2	95	43	23	20	CL	A-7-5
IRW-40	10								
IRW-40	15	21.9	4.75	93	47	22	25	CL	A-7-5
IRW-41	3	12.1	2	99	31	17	14	CL	A-6
IRW-41	9	12.6	19	38	21	16	5	SC-SM	A-4
IRW-41	12								
IRW-41	39								
IRW-41	44	24	2	99	43	23	20	CL	A-7-5
IRW-42	2.5	14.7							
IRW-42	12	15	4.75	56	24	18	6	CL-ML	A-4
IRW-42	15								
IRW-42	18				42	22	20	CL	A-7-5
IRW-42	24								
IRW-42	25	21.5	2	92	42	22	20	CL	A-7-5
IRW-42	30	26.1	2	97	44	22	22	CL	A-7-5
IRW-42	30.02								
IRW-42	30.03								
IRW-42	36								
IRW-43	3	9.7	9.5	18	NP	NP	NP	SM	A-2-4
IRW-43	12	23.5	4.75	88	48	22	26	CL	A-7-5
IRW-43	21								

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-43	30								
IRW-43	33	22	2	32	NP	NP	NP	SM	A-2-4
IRW-43	45	26.2	4.75	99	62	29	33	CH	A-7-5
IRW-44	7.5	15.1	4.75	46	25	13	12	SC	A-6
IRW-44	10	11.9	9.5	32	22	20	2	SM	A-2-4
IRW-44	17.5	25.5	2	75	28	18	10	CL	A-4
IRW-44	20								
IRW-44	25	20.1	2	92	40	19	21	CL	A-6
IRW-44	25.02								
IRW-44	35	20.5	2	99	56	28	28	CH	A-7-5
IRW-44	40								
IRW-44	43.5								
IRW-45	6	12.1	2	14	21	20	1	SM	A-2-4
IRW-45	25	23.4	2	98	47	23	24	CL	A-7-5
IRW-45	35								
IRW-45	40								
IRW-46	2.5								
IRW-46	5	14.3	19	51	37	20	17	CL	A-6
IRW-46	17	20.4	2	96	54	24	30	CH	A-7-5
IRW-46	22								
IRW-46	25								
IRW-46	32.5	15.7	4.75	12	NP	NP	NP	SM	A-2-4
IRW-46	35								
IRW-46	37.5								
IRW-46	40	17.7	2	81	23	19	4	CL-ML	A-4
IRW-47	3								
IRW-47	15								
IRW-47A	0	9.5	50	45	25	16	9	SC	A-4
IRW-47A	9	25.4	2	92	36	19	17	CL	A-6
IRW-47A	24	28	4.75	99	52	28	24	CH	A-7-5
IRW-47A	48	15.5	4.75	8	NP	NP	NP	SW-SM	A-1-b
IRW-48	12	22.1	4.75	88	35	20	15	CL	A-6
IRW-48	33	12.3	2	62	26	15	11	CL	A-6
IRW-49	20	17.7	2	68	21	19	2	ML	A-4
IRW-49	27.5								
IRW-49	30	20.7	2	99	41	22	19	CL	A-7-5
IRW-49	30.01								
IRW-49	30.02								
IRW-49	32.5	15.5	2	96	34	19	15	CL	A-6

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-49	35	20.3	2	94	35	21	14	CL	A-6
IRW-49	37.5	20.2	4.75	94	47	22	25	CL	A-7-5
IRW-49	40	20.6	4.75	95	44	19	25	CL	A-7-5
IRW-50	15	22.6	9.5	96	57	24	33	CH	A-7-5
IRW-50	25	19.9	2	32	NP	NP	NP	SM	A-2-4
IRW-50	25.02								
IRW-50	25.03								
IRW-50	48.5								
IRW-51	25	21.6	2	96	38	19	19	CL	A-6
IRW-51	25.01								
IRW-51	25.02								
IRW-51	35	22.3	0.85	98	48	21	27	CL	A-7-5
IRW-51	42.5								
IRW-51	48.5								
IRW-52	25				34	16	18	CL	A-6
IRW-52	27								
IRW-52	35	22.3	0.85	98	48	21	27	CL	A-7-5
IRW-52	35.01								
IRW-52	35.02								
IRW-52	40								
IRW-53	5	14.3	19	43	24	16	8	SC	A-4
IRW-53	15	19.9	2	99	39	22	17	CL	A-6
IRW-53	15.00001								
IRW-53	25	22.5	2	96	51	27	24	CH	A-7-5
IRW-53	48.5	18.8	0.85	57	NP	NP	NP	ML	A-4
IRW-60	5	17.4	2	96	44	24	20	CL	A-7-5
IRW-60	12.5	18.4	0.85	99	47	24	23	CL	A-7-5
IRW-60	20	14.7	0.85	64	24	18	6	CL-ML	A-4
IRW-60	40	16.1	0.85	99	29	19	10	CL	A-4
IRW-61	12.5	25.5	12.5	70	34	19	15	CL	A-6
IRW-61	30	13.9	0.85	99	30	19	11	CL	A-6
IRW-61	37.5	15.8	0.85	96	27	17	10	CL	A-4
IRW-63	2.5	16.2	25	52	28	19	9	CL	A-4
IRW-63	25	19.1	0.85	98	34	23	11	CL	A-6
IRW-63	35	18.4	2	88	44	24	20	CL	A-7-5
IRW-64	5	12.5	9.5	44	24	18	6	SC-SM	A-4
IRW-64	17.5	16.9	4.75	78	28	17	11	CL	A-6
IRW-64	25	19.5	2	92	35	20	15	CL	A-6
IRW-64	30	24.9	2	78	32	19	13	CL	A-6

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-64	40	24.9	2	78	32	19	13	CL	A-6
IRW-68	12	18.9	2	66	23	14	9	CL	A-4
IRW-68	21	25.2	4.75	23	NP	NP	NP	SM	A-2-4
IRW-68	36	22.2	0.85	99	42	19	23	CL	A-7-5
IRW-69	3	20.8	4.75	97	29	19	10	CL	A-4
IRW-69	12	27.5	2	17	NP	NP	NP	SM	A-2-4
IRW-69	33	21.4	0.85	99	52	21	31	CH	A-7-5
IRW-70	6	9.1	12.5	14	NP	NP	NP	SM	A-1-b
IRW-70	21	22	2	30	NP	NP	NP	SM	A-2-4
IRW-70	39	25.7	2	26	NP	NP	NP	SM	A-2-4
IRW-71	6	10.8	2	16	NP	NP	NP	SM	A-2-4
IRW-71	27	17.5	2	67	22	17	5	CL-ML	A-4
IRW-71	39	18.3	4.75	77	24	16	8	OL	A-8
IRW-72	0	16	4.75	97	33	20	13	CL	A-6
IRW-72	12	7.4	9.5	11	NP	NP	NP	SP-SM	A-1-b
IRW-72	24	18.6	9.5	60	25	15	10	CL	A-4
IRW-72	33	19.2	4.75	63	22	17	5	CL-ML	A-4
IRW-73	3	12.7	9.5	31	25	18	7	SC-SM	A-2-4
IRW-73	12	8.3	19	12	NP	NP	NP	SW-SM	A-1-b
IRW-73	30	21.9	2	62	23	15	8	CL	A-4
IRW-73	48.5	20.5	2	99	40	20	20	CL	A-6
IRW-74	3	22.3	4.75	95	30	22	8	CL	A-4
IRW-74	18.5	16.2	25.4	16	18	16	2	SM	A-2-4
IRW-74	43.5	23	2	90	49	21	28	CL	A-7-5
IRW-75	3	11.1	9.5	34	22	15	7	SC-SM	A-2-4
IRW-75	12	28.3	2	96	52	25	27	CH	A-7-5
IRW-75	36	24	2	98	50	23	27	CH	A-7-5
IRW-76	5	13.6	19	26	18	16	2	SM	A-2-4
IRW-76	15	27.6	19	12	28	21	7	SC-SM	A-2-4
IRW-76	22.5	23.5	2	97	39	21	18	CL	A-6
IRW-76	22.52								
IRW-76	27.5	33.8	2	97	56	25	31	CH	A-7-5
IRW-76	32.5	31.1	2	99	57	28	29	CH	A-7-5
IRW-76	32.51								
IRW-76	48.5	20.7	2	98	47	24	23	CL	A-7-5
IRW-77	3	17.1	2	97	35	20	15	CL	A-6
IRW-77	9	19	2	98	44	22	22	CL	A-7-5
IRW-77	27	28.5	2	97	57	27	30	CH	A-7-5
IRW-77	39	22.7	2	93	33	16	17	CL	A-6

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-77	45	22	2	99	49	23	26	CL	A-7-5
IRW-77	48.5	26	2	98	53	24	29	CH	A-7-5
IRW-78	7.5	23.5	19	71	33	19	14	CL	A-6
IRW-78	12.5	12.4	19	24	NP	NP	NP	SM	A-2-4
IRW-78	35	19.8	2	97	49	28	21	ML	A-7-5
IRW-79	0	14.8	9.5	84	25	17	8	CL	A-4
IRW-79	21	28.5	4.75	94	45	22	23	CL	A-7-5
IRW-79	39	19.9	2	97	43	22	21	CL	A-7-5
IRW-80	12	24.4	25	39	33	19	14	SC	A-6
IRW-80	21	21.3	4.75	42	NP	NP	NP	SM	A-4
IRW-80	33	23.4	2	50	NP	NP	NP	SM	A-4
IRW-80	45	26.8	2	98	57	23	34	CH	A-7-5
IRW-81	7.5	17.8	2	28	NP	NP	NP	SM	A-2-4
IRW-81	12.5	17.4	25.4	16	20	17	3	SM	A-2-4
IRW-81	20	18.2	2	75	22	16	6	CL-ML	A-4
IRW-81	42.5	20.6	2	85	48	25	23	CL	A-7-5
IRW-83	6	19.4	19	72	26	17	9	CL	A-4
IRW-83	18	19.1	2	89	30	20	10	CL	A-4
IRW-83	27	21.9	2	93	47	23	24	CL	A-7-5
IRW-83	30	20.2	2	99	41	21	20	CL	A-7-5
IRW-83	30.05								
IRW-85	0	11	19	25	19	15	4	SC-SM	A-2-4
IRW-85	18	9.8	19	16	NP	NP	NP	SM	A-1-b
IRW-85	51	23.6	2	83	45	20	25	CL	A-7-5
IRW-86	0.5	14.2	25.4	53	28	19	9	CL	A-4
IRW-86	2	17	25.4	44.9	25	17	7	SC-SM	A-4
IRW-86	4	13.9	50.8	36.8	28	19	9	SC	A-4
IRW-86	6	12	25.4	25.1	40	22	18	SC	A-2-6
IRW-86	8	14.6	25.4	50.1	22	16	5	CL-ML	A-4
IRW-86	10	16.7	25.4	63.2	29	19	10	CL	A-4
IRW-86	12	13.6	25.4	45.2	25	17	8	SC	A-4
IRW-86	14	11.8			31	17	14		
IRW-86	16	12	25.4	15.9	NP	NP	NP	SM	A-1-b
IRW-86	18	12.8	25.4	23.3	21	15	6	SC-SM	A-1-b
IRW-86	24	23.4	0.42	96.2	46	25	21	CL	A-7-6
IRW-86	29	20.2	0.42	91	28	19	9	CL	A-4
IRW-86	34	17.1	2	79.2	24	18	6	CL-ML	A-4
IRW-86	39	18.6	0.42	94.7	26	19	7	CL-ML	A-4
IRW-86	44	20.4	0.42	98.2	31	20	11	CL	A-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-86	49	23	0.42	92.5	29	22	7	CL-ML	A-4
IRW-86	54	24.5	2	57.8	20	NP	NP	ML	A-4
IRW-86	59	23.8	2	74.2	21	NP	NP	ML	A-4
IRW-87	0.5	2.9			21	NP	NP		
IRW-87	1	5.4			17	NP	NP		
IRW-87	3	10.4	25.4	34.6	21	17	4	SC-SM	A-2-4(0)
IRW-87	4	8.2	25.4	28.9	22	17	5	SC-SM	A-2-4(0)
IRW-87	6	16.8	25.4	81	28	20	8	CL	A-4(5)
IRW-87	7	9.4	25.4	24	19	NP	NP	SM	A-2-4(0)
IRW-87	8	18.6	25.4	85.4	30	20	10	CL	A-4(8)
IRW-87	10	19.3	9.5	85.4	27	20	6	CL-ML	A-4(5)
IRW-87	12	9.1			25	17	8		
IRW-87	15.3	15.7	25.4	79.5	32	19	13	CL	A-6(9)
IRW-87	16	13.1	25.4	20.3	18	NP	NP	SM	A-1-b
IRW-87	17	17.3	25.4	68.2	37	20	18	CL	A-6(10)
IRW-87	18	19.2	4.75	95	41	21	21	CL	A-7-6(20)
IRW-87	24	28.9	2	95.9	53	27	26	CH	A-7-6(29)
IRW-87	29	22.5	2	96.2	39	20	19	CL	A-6(19)
IRW-87	34	19.4	0.42	73.9	24	19	4	CL-ML	A-4(2)
IRW-87	39	12.4	0.42	90.1	21	NP	NP	ML	A-4(0)
IRW-87	44	21.2	0.42	99	32	22	11	CL	A-4(10)
IRW-87	49	24.6	0.42	97.8	34	25	9	ML	A-4(10)
IRW-87	54	48.6	4.75	63.9	28	22	6	CL-ML	A-4(2)
IRW-87	59	25.1	0.42	81.7	25	NP	NP	ML	A-4(0)
IRW-88	0.5	6.7	25.4	17.3	NV	NP	NP	SM	A-2-4
IRW-88	2	10.2	25.4	34.2	24	17	7	SC-SM	A-2-4
IRW-88	4	13.6	9.5	65.4	22	NP	NP	ML	A-4(0)
IRW-88	6	13	25.4	51.1	26	18	8	CL	A-4(1)
IRW-88	8	15.1	25.4	58	35	22	13	CL	A-6(5)
IRW-88	10	20.9	25.4	89.9	55	26	29	CH	A-7-6(29)
IRW-88	14	17.9	4.75	96.4	37	23	14	CL	A-6(15)
IRW-88	16	20.7	2	96.3	35	22	13	CL	A-6(13)
IRW-88	18	19.4	4.75	93.2	44	24	19	CL	A-7-6(21)
IRW-88	24	20.7	2	80.8	28	18	10	CL	A-4(6)
IRW-88	29	29.2	0.42	60.9	24	NP	NP	ML	A-4(0)
IRW-88	34	21.4	9.5	94.6	36	23	13	CL	A-6(13)
IRW-88	39	20.3	0.42	98.3	37	22	15	CL	A-6(16)
IRW-88	44	23	2	81.5	29	20	9	CL	A-4(6)
IRW-88	49	22.4	2	74.8	27	20	7	CL-ML	A-4(4)

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-88	54	23.5	2	77.8	29	19	10	CL	A-4(6)
IRW-88	59	23.5	9.5	53.6	24	NP	NP	ML	A-4(0)
IRW-89	1	7.6	50.8	11.3	NV	NP	NP	GP-GM	A-1-a
IRW-89	2.5	6.4	9.5	13.1	NV	NP	NP	SM	A-1-b
IRW-89	4	8.5	9.5	15.2	NV	NP	NP	SM	A-2-4(0)
IRW-89	6	16.1	25.4	17.6	NV	NP	NP	SM	A-2-4(0)
IRW-89	8	14	25.4	12.1	NV	NP	NP	SM	A-1-b
IRW-89	10	26.2	25.4	16.5	NV	NP	NP	SM	A-2-4(0)
IRW-89	12	18.2	50.8	17.8	NV	NP	NP	SM	A-2-4(0)
IRW-89	14	18.9	25.4	21.4	24	NP	NP	SM	A-1-b
IRW-89	16	14.1			16.4	NP	NP		
IRW-89	18	25.9	50.8	54.9	44	27	17	ML	A-7-6(7)
IRW-89	24	19.3	0.42	98.2	30	20	10	CL	A-4(9)
IRW-89	29	18	0.42	84.8	22	18	4	CL-ML	A-4(1)
IRW-89	34	17.3	0.42	86	26	18	8	CL	A-4(5)
IRW-89	39	22.9	2	93	43	23	20	CL	A-7-6(20)
IRW-89	44	32	2	99.1	62	30	33	CH	A-7-5(38)
IRW-89	49	24.2	2	98	47	25	23	CL	A-7-6(25)
IRW-89	54	27.3	0.42	78.1	26	NP	NP	ML	A-4(0)
IRW-89	58	28.5	0.42	93.5	46	28	18	ML	A-7-6(20)
IRW-90	2	10.9	50.8	22.7	NV	NP	NP	SM	A-2-4
IRW-90	4	21.5	25.4	20.7	NV	NP	NP	SM	A-2-4
IRW-90	6	18.1	25.4	13.6	NV	NP	NP	SM	A-2-4
IRW-90	8	21.4	25.4	14.1	NV	NP	NP	SM	A-2-4
IRW-90	10	18.4	25.4	10.1	NV	NP	NP	SP-SM	A-1-b
IRW-90	12	20	25.4	12.8	NV	NP	NP	SM	A-2-4
IRW-90	14	23.2	4.75	20.8	NV	NP	NP	SM	A-2-4
IRW-90	16	21.1	25.4	21.4	NV	NP	NP	SM	A-2-4
IRW-90	18	17.8	25.4	18.3	NV	NP	NP	SM	A-2-4
IRW-90	19	17.5	25.4	9.7	NV	NP	NP	SP-SM	A-1-b
IRW-90	24	19.8	4.75	77.5	24	18	6	CL-ML	A-4(3)
IRW-90	29	16.4	2	65.3	28	17	11	CL	A-6(5)
IRW-90	34	21	0.42	69.8	22	17	5	CL-ML	A-4(1)
IRW-90	39	21.3	0.42	67.4	22	18	4	CL-ML	A-4(0)
IRW-90	40	25.2			42	20	23		
IRW-90	41	24.9	1.18	86.2	49	25	24	CL	A-7-6(22)
IRW-90	43	21.3	2	90.5	45	22	22	CL	A-7-6(21)
IRW-90	49	25.7	2	93.8	50	26	24	CH	A-7-6(26)
IRW-90	54	30.2	0.42	95.8	49	28	21	CL	A-7-6(24)

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-90	58	35.4	2	96.9	55	32	23	MH	A-7-5(28)
IRW-91	1.5	2.9	25.4	6.5	NV	NP	NP	SP-SM	A-1-a
IRW-91	2	9.5	25.4	36.6	18	NP	NP	SM	A-4(0)
IRW-91	4	20.1	4.75	23.4	18	NP	NP	SM	A-2-4(0)
IRW-91	6	15.8	50.8	15.8	NV	NP	NP	SM	A-1-b
IRW-91	8	9.8			19	NP	NP		
IRW-91	10	16.2	25.4	42.8	20	NP	NP	SM	A-4(0)
IRW-91	12	12.8			21	NP	NP		
IRW-91	14	18.1	25.4	42.5	26	18	8	SC	A-4(0)
IRW-91	16	23.9	9.5	55.6	22	18	4	CL-ML	A-4(0)
IRW-91	18	23.2	4.75	53.3	23	16	7	CL-ML	A-4(1)
IRW-91	24	18.5	0.42	64.6	22	17	6	CL-ML	A-4(1)
IRW-91	29	25.9	25.4	29.5	19	NP	NP	SM	A-2-4(0)
IRW-91	34	23.7	2	95.3	49	21	28	CL	A-7-6(29)
IRW-91	39	21.5	2	92.5	38	19	18	CL	A-6(18)
IRW-91	44	30.9	0.42	97.4	56	25	31	CH	A-7-6(35)
IRW-91	49	29.2	0.42	93.3	42	21	21	CL	A-7-6(21)
IRW-91	54	33	0.42	97.7	50	29	21	CH	A-7-6(26)
IRW-91	58.5	32.3	0.42	97.2	60	31	29	CH	A-7-5(34)
IRW-92	2	8.5	25.4	21.3	NV	NP	NP	SM	A-1-b
IRW-92	4	9.5	50.8	14.3	NV	NP	NP	SM	A-1-b
IRW-92	6	16.8	0.42	54.5	20	NP	NP	ML	A-4(0)
IRW-92	8	17	4.75	81	26	17	9	CL	A-4(5)
IRW-92	10	23.4	25.4	65.9	28	20	8	CL	A-4(3)
IRW-92	12	17.6	2	78.4	36	19	17	CL	A-6(12)
IRW-92	14	18.4	2	82.9	37	22	15	CL	A-6(12)
IRW-92	16	63.3	2	88.2	40	23	18	CL	A-6(16)
IRW-92	18	18.5	2	91.5	35	21	14	CL	A-6(13)
IRW-92	24	25.4	0.42	99.2	50	24	26	CL	A-7-6(29)
IRW-92	29	15.9	0.42	87.2	31	17	14	CL	A-6(11)
IRW-92	34	22.3	0.42	94.9	47	24	23	CL	A-7-6(24)
IRW-92	39	25.3	0.42	98.3	38	24	14	CL	A-6(15)
IRW-92	44	21.3	0.42	89.8	36	24	13	CL	A-6(11)
IRW-92	49	23.8	0.42	41.3	NV	NP	NP	SM	A-4(0)
IRW-92	54	30.3	2	93.2	53	27	25	CH	A-7-6(28)
IRW-92	59	31.7	2	92.7	57	31	26	MH	A-7-5(29)
IRW-93	2	8.3	25.4	30.2	19	NP	NP	SM	A-2-4(0)
IRW-93	4	7	25.4	12.5	NV	NP	NP	SM	A-1-b
IRW-93	6	13.4	25.4	12.9	NV	NP	NP	SM	A-1-b

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-93	8	14.5	25.4	17.1	NV	NP	NP	SM	A-1-b
IRW-93	10	16.9	25.4	66.8	NV	NP	NP	ML	A-4(0)
IRW-93	12	19.6	2	77.5	24	17	7	CL-ML	A-4(3)
IRW-93	13	22.7	2	26.7	NV	NP	NP	SM	A-2-4(0)
IRW-93	14	16.6	2	65.1	24	16	8	CL	A-4(3)
IRW-93	16	19.2	2	84.8	46	23	24	CL	A-7-6(21)
IRW-93	18	21.9	2	92.2	51	25	26	CH	A-7-6(27)
IRW-93	20	21.7	2	91.8	44	22	22	CL	A-7-6(22)
IRW-93	24	20.3	2	89.4	40	22	18	CL	A-6(17)
IRW-93	29	24.1	0.42	96.7	45	25	20	CL	A-7-6(22)
IRW-93	34	19	0.42	93.6	37	21	17	CL	A-6(16)
IRW-93	39	19.1	0.42	99	40	23	18	CL	A-6(19)
IRW-93	44	23.9	2	96.5	34	25	9	ML	A-4(10)
IRW-93	49	18.2	0.42	84.4	30	18	13	CL	A-6(9)
IRW-93	54	20.5	0.42	80.7	24	18	5	CL-ML	A-4(3)
IRW-93	58	24.5	0.42	71.6	21	NP	NP	ML	A-4(0)
IRW-95	0	11.6	9.5	30.9	22	18	4	SC-SM	A-2-4(0)
IRW-95	2	12.5	9.5	29	19	NP	NP	SM	A-2-4(0)
IRW-95	3	21.1	4.75	67.7	29	19	10	CL	A-4(5)
IRW-95	4	14.5	25.4	19.7	NV	NP	NP	SM	A-2-4(0)
IRW-95	6	11.9	25.4	14.7	NV	NP	NP	SM	A-2-4(0)
IRW-95	8	16.8	25.4	13.5	NV	NP	NP	SM	A-2-4(0)
IRW-95	10	17.1	25.4	16.4	NV	NP	NP	SM	A-1-b
IRW-95	12	19.5	25.4	17.6	NV	NP	NP	SM	A-1-b
IRW-95	14	15.2	25.4	13.6	NV	NP	NP	SM	A-1-b
IRW-95	16	16.7	25.4	13.8	NV	NP	NP	SM	A-1-b
IRW-95	18	20.4	25.4	19.1	NV	NP	NP	SM	A-2-4(0)
IRW-95	24	24.9	2	99.5	55	26	29		A-7-6(34)
IRW-95	29	22.7	0.42	99	46	22	24	CL	A-7-6(26)
IRW-95	34	18.3	0.42	96.1	39	20	19	CL	A-6(19)
IRW-95	39	20.8	2	89.2	32	19	13	CL	A-6(11)
IRW-95	44	18.5	4.75	90.9	30	19	10	CL	A-6(9)
IRW-95	49	29.7	0.42	97.6	51	29	22	MH	A-7-6(26)
IRW-95	54	31.2	2	96.6	53	30	23	MH	A-7-5(27)
IRW-95	58	28.8	2	97.6	42	30	12	ML	A-7-5(15)
IRW-96	0.5	7.2	25.4	16.3	NV	NP	NP	SM	A-1-b
IRW-96	2	20.9	25.4	84	52	25	27	CH	A-7-6(24)
IRW-96	4	21.6	0.42	98	53	28	25	CH	A-7-6(29)
IRW-96	6	19.3	2	97.2	47	25	22	CL	A-7-6(25)

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
IRW-96	8	16.5	25.4	87.5	39	21	19	CL	A-6(17)
IRW-96	10	18.3	2	88.8	35	22	13	CL	A-6(12)
IRW-96	12	18.9	25.4	79.5	30	22	8	CL	A-4(5)
IRW-96	14	19.7	0.42	91.9	26	22	5	CL-ML	A-4(3)
IRW-96	16	19.9	9.5	90.8	26	21	5	CL-ML	A-4(3)
IRW-96	18	17.1	25.4	85.3	26	19	7	CL-ML	A-4(4)
IRW-96	24	32.8	9.5	81.4	35	24	12	CL	A-6(9)
IRW-96	29	18.8	0.42	69.4	25	19	6	CL-ML	A-4(2)
IRW-96	34	21.4	0.42	54.1	21	NP	NP	ML	A-4(0)
IRW-96	39	21.3	0.42	99	34	24	10	CL	A-4(11)
IRW-96	44	20.5	0.42	68.1	25	19	6	CL-ML	A-4(2)
IRW-96	49	23.6	0.42	54.9	22	NP	NP	ML	A-4(0)
IRW-96	54	19.2	2	47.3	27	17	11	SC	A-6(2)
IRW-96	59	26.6	4.75	93.9	50	27	23	CH	A-7-6(25)
IRW-97	0	13.5	25.4	31.6	18	NP	NP	SM	A-2-4
IRW-97	2	8.5	25.4	17.2	18	NP	NP	SM	A-1-b
IRW-97	4	21.3	4.75	85.6	38	22	15	CL	A-6(14)
IRW-97	6	19.9	25.4	76.7	37	22	16	CL	A-6(11)
IRW-97	8	23.8	4.75	87.8	44	26	18	CL	A-7-6(18)
IRW-97	10	28.4	2	95	58	30	28	CH	A-7-5(32)
IRW-97	12	25.8	2	95.8	48	26	22	CL	A-7-6(24)
IRW-97	14	24	4.75	97.5	46	25	21	CL	A-7-6(24)
IRW-97	16	21.6	0.42	98.6	42	23	19	CL	A-7-6(21)
IRW-97	18	19.8	0.42	98.3	34	22	13	CL	A-6(12)
IRW-97	24	19.8	0.42	97.5	27	19	8	CL	A-4(7)
IRW-97	29	35.4	9.5	77.4	29	23	5.4	ML	A-4(4)
IRW-97	34	16.1	4.75	61.5	23	20	3	ML	A-4(0)
IRW-97	39	16.7	4.75	90.4	31	18	13	CL	A-6(11)
IRW-97	41	25.2	0.3	98.3	54	24	30	CH	A-7-6(34)
IRW-97	43	23.3	2	76.9	40	20	20	CL	A-6(15)
IRW-97	49	30.5	0.42	97.7	46	33	14	ML	A-7-5(17)
IRW-97	54	22.5	4.75	67.6	21	NP	NP	ML	A-4(0)
IRW-97	58	23	2	34.9	14	NP	NP	SM	A-2-4
ISC-01	0	12.7							
ISC-01	5	12.8							
ISC-01	12.5	16.5	4.75	69	27	16	11	CL	A-6
ISC-02	0	14.7							
ISC-02	5	15.9							
ISC-02	18.5	22.2	2	96	38	24	14	CL	A-6

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ISC-03	10	19.2	2	91	28	17	11	CL	A-6
ISC-03	15	21.9	0.85	76	21	17	4	CL-ML	A-4
ISC-04	5	18.2	2	77	25	19	6	CL-ML	A-4
ISC-04	12.5	18.2	2	81	40	22	18	CL	A-6
ISC-06	15	30	2	96	56	30	26	MH	A-7-5
ISC-06	18.5	22.1	2	92	33	23	10	CL	A-4
ISC-09	10	14.3	4.75	65	27	18	9	CL	A-4
ISC-09	18	9.4	9.5	24	NP	NP	NP	SM	A-2-4
ISC-103	6	18.5	4.75	89	45	23	22	CL	A-7-5
ISC-103	21	17.6	19	34	NP	NP	NP	SM	A-2-4
ISC-103	30	16.4	4.75	92	29	19	10	CL	A-4
ISC-103	36								
ISC-103	39								
ISC-103A	0	16.9	12.5	62	35	15	20	CL	A-6
ISC-103A	5	14.5							
ISC-103A	6	12.2	12.5	52	27	13	14	CL	A-6
ISC-103A	18								
ISC-103A	27	28.5	2	99	58	28	30	CH	A-7-5
ISC-103A	39	19.2	2	74	22	16	6	CL-ML	A-4
ISC-11	0	13.8	25	68	26	16	10	CL	A-4
ISC-11	5	16.1	25.4	66	26	20	6	CL-ML	A-4
ISC-11	24	23.5	0.85	99	48	26	22	CL	A-7-5
ISC-11	36	25.8	2	90	46	22	24	CL	A-7-5
ISC-115	0	19.1							
ISC-115	5	22.9							
ISC-116	0	15.5							
ISC-116	3	19.8	4.75	71	38	19	19	CL	A-6
ISC-116	5	15.9							
ISC-116	30	22.3	19	73	35	19	16	CL	A-6
ISC-117	21	22.6	12.5	61	42	21	21	CL	A-7-5
ISC-117	42	15.4	25.4	73	25	18	7	CL-ML	A-4
ISC-118	28.5	21.6	4.75	87	38	21	17	CL	A-6
ISC-119	38.5	16.8	4.75	85	35	18	17	CL	A-6
ISC-12	0	12.7	9.5	55	24	16	8	CL	A-4
ISC-12	3	15.1	9.5	73	27	16	11	CL	A-6
ISC-12	5	15.6	37.5	46	27	17	10	SC	A-4
ISC-12	15	19.7	2	92	45	27	18	ML	A-7-5
ISC-12	27	18.8	2	31	NP	NP	NP	SM	A-2-4
ISC-12	36	15.5	25.4	51	32	20	12	CL	A-6

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ISC-13	0	21.7							
ISC-13	3	17.9	9.5	63	40	25	15	CL	A-6
ISC-13	5	16.1							
ISC-13	15	23.7	2	42	NP	NP	NP	SM	A-4
ISC-13	24	29.1	2	97	65	31	34	CH	A-7-6
ISC-13	36	20.1	0.85	24	NP	NP	NP	SM	A-2-4
ISC-14	2	14.7	37.5	38	24	14	10	SC	A-4
ISC-14	3	12.1	4.75	45	24	16	8	SC	A-4
ISC-14	5	12.9							
ISC-14	33	14.8	4.75	83	26	18	8	CL	A-4
ISC-15	7.5	16	2	96	36	21	15	CL	A-6
ISC-19	9	16.4	4.75	66	34	19	15	CL	A-6
ISC-19	18.5	15.4	4.75	56	21	15	6	CL-ML	A-4
ISC-20	0	16.3							
ISC-20	5	19.5							
ISC-20	6	19.6	4.75	84	42	22	20	CL	A-7-5
ISC-21	6	22.3	4.75	90	24	19	5	CL-ML	A-4
ISC-21	12	12.7							
ISC-21	23.5	22.1	2	97	41	22	19	CL	A-7-5
ISC-21	28.5	19.7	2	76	37	20	17	CL	A-6
ISC-23	0	19.8							
ISC-23	5	21.5							
ISC-23	6	16.8	2	94	43	23	20	CL	A-7-5
ISC-23	29.5	25.9	2	50	23	16	7	CL-ML	A-4
ISC-24	6	16.9	2	89	40	22	18	CL	A-6
ISC-24	21	18.1	0.85	64	24	18	6	CL-ML	A-4
ISC-24	30	32.8	2	96	63	30	33	CH	A-7-5
ISC-24	39	19.1	4.75	79	23	19	4	CL-ML	A-4
ISC-24A	2	10	19	37	24	15	9	SC	A-4
ISC-24A	4.5	8.3	19	28	18	15	3	SM	A-2-4
ISC-24A	5	11.2							
ISC-24A	15	17.6	0.85	71	24	16	8	CL	A-4
ISC-24A	20	21.8	2	70	37	21	16	CL	A-6
ISC-24A	25								
ISC-24A	30	16.4	2	94	38	19	19	CL	A-6
ISC-24A	35								
ISC-24A	38.5	24.2	2	96	52	27	25	CH	A-7-5
ISC-25	15	18	4.75	74	26	18	8	CL	A-4
ISC-25	30	23.8	9.5	72	29	19	10	CL	A-4

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ISC-26	0	16	9.5	66	24	19	5	CL-ML	A-4
ISC-26	2.5	13.5							
ISC-26	5	12.4							
ISC-26	20	13.9	2	47	22	16	6	SC-SM	A-4
ISC-26	25								
ISC-26	30	17.4	2	98	35	20	15	CL	A-6
ISC-26	38.5								
ISC-29	0	16.3							
ISC-29	3	16.4	4.75	66	NP	NP	NP	ML	A-4
ISC-29	5	18.2							
ISC-29	18	19.2	2	86	34	20	14	CL	A-6
ISC-29	30	17.3	0.85	78	25	16	9	CL	A-4
ISC-31	4.5	21.4	2	91	40	20	20	CL	A-6
ISC-31	7.5								
ISC-31	10								
ISC-31	20								
ISC-31	35	13.7	2	77	24	16	8	CL	A-4
ISC-32	0	21.9							
ISC-32	5	17.7							
ISC-32	6	14.1	2	90	27	16	11	CL	A-6
ISC-33	0	16							
ISC-33	5	14.8							
ISC-33	6	5.6	25.4	13	NP	NP	NP	GM	A-1-b
ISC-33	15	17.3	2	100	40	21	19	CL	A-6
ISC-33	30	19.5	4.75	90	29	18	11	CL	A-6
ISC-34	5	18.5							
ISC-35	1	7.7	19	39	NP	NP	NP	SM	A-4
ISC-35	5	18.9							
ISC-35	15	20.3	2	98	48	25	23	CL	A-7-5
ISC-35	17.5								
ISC-35	22.5	23.2	2	93	39	22	17	CL	A-6
ISC-35	32.5	13.2	2	38	NP	NP	NP	SM	A-4
ISC-36	5	13			27	16	11	CL	A-6
ISC-36	6.5	11.4	12.5	64	25	17	8	CL	A-4
ISC-36	17.5								
ISC-36	20	3.3	12.5	90	25	19	6	CL-ML	A-4
ISC-36	35	17.2	2	93	41	23	18	CL	A-7-5
ISC-37	2.5	13.4	19	42	23	15	8	SC	A-4
ISC-37	10	20	2	97	26	19	7	CL-ML	A-4

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ISC-37	20								
ISC-37	30	16	4.75	80	44	20	24	CL	A-7-5
ISC-37	38.5	16.3	2	93	36	20	16	CL	A-6
ISC-40	0	14.5							
ISC-40	5	21.1			25	18	7	CL-ML	A-4
ISC-40	10	22.3			47	21	26	CL	A-7-5
ISC-40	17.5								
ISC-40	22.5								
ISC-40	25								
ISC-40	27.5								
ISC-40	35								
ISC-40	38.5								
ISC-41	0	22.7	12.5	84	42	24	18	CL	A-7-5
ISC-41	5	14.5	19	71	25	17	8	CL	A-4
ISC-41	22.5								
ISC-41	27.5	21.4	2	90	52	24	28	CH	A-7-5
ISC-41	32.5								
ISC-41	35								
ISC-41	38.5								
ISC-42	0	20.4	4.75	70	27	19	8	CL	A-4
ISC-42	5	19.2	9.5	51	NP	NP	NP	ML	A-4
ISC-42	7.5	17.2	12.5	60	20	18	2	ML	A-4
ISC-42	25	24.5	4.75	90	53	22	31	CH	A-7-5
ISC-42	27.5								
ISC-42	30								
ISC-42	32.5								
ISC-42	35								
ISC-43	0	15.4							
ISC-43	4	16.5	9.5	46	22	15	7	SC-SM	A-4
ISC-43	5								
ISC-43	7.5	14.2	9.5	51	24	16	8	CL	A-4
ISC-43	10								
ISC-43	15	17.5	2	82	41	23	18	CL	A-7-5
ISC-43	25								
ISC-43	27.5	23.1	2	99	44	23	21	CL	A-7-5
ISC-43	30								
ISC-43	38.5								
ISC-44	0	14.1							
ISC-44	2.5								

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ISC-44	5	25.6							
ISC-44	7.5	16.1			26	17	9	CL	A-4
ISC-44	12.5								
ISC-44	15	17	2	95	51	22	29	CH	A-7-5
ISC-44	22.5	22.1	0.85	99	52	28	24	CH	A-7-5
ISC-44	25								
ISC-44	30	20.6	2	11	NP	NP	NP	SP-SM	A-2-4
ISC-44	38.5	18.3	2	94	35	21	14	CL	A-6
ISC-49	1	15.8	9.5	57	32	18	14	CL	A-6
ISC-49	5	16.7							
ISC-49	12.5	17.9	9.5	50	26	15	11	CL	A-6
ISC-49	27.5	21.8	2	88	45	23	22	CL	A-7-5
ISC-50	0	16.8							
ISC-50	5	19.3							
ISC-50	7.5	19.9	9.5	75	25	19	6	CL-ML	A-4
ISC-50	10								
ISC-50	12.5								
ISC-50	17.5								
ISC-50	20								
ISC-50	25								
ISC-50	30	19.7	2	94	46	23	23	CL	A-7-5
ISC-50	32								
ISC-50	35								
ISC-50	38.5								
ISC-51	0	16.8							
ISC-51	2.5	15.7	9.5	94	36	20	16	CL	A-6
ISC-51	5	15.3							
ISC-51	12.5	14.2	2	53	20	17	3	ML	A-4
ISC-51	22.5								
ISC-51	25	20.1	2	93	45	20	25	CL	A-7-5
ISC-51	35								
ISC-64	0	15.9							
ISC-64	9	27.5	9.5	54	40	25	15	CL	A-6
ISC-65	0	20.1							
ISC-65	5	17.6							
ISC-65	15	18.5	4.75	93	38	24	14	CL	A-6
ISC-65	39	19.2	0.85	100	37	21	16	CL	A-6
ISC-66	0	19.1							
ISC-66	6	13.3	12.5	51	30	16	14	CL	A-6

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ISC-66	27	17.2	2	97	50	23	27	CH	A-7-5
ISC-67	33	21.2	2	99	40	22	18	CL	A-6
ISC-68	0	10.2							
ISC-68	5	15.1			31	16	15	CL	A-6
ISC-69	0	19.3							
ISC-69	5	17.4							
ISC-69	15	28.4	2	99	51	30	21	MH	A-7-5
ISC-69	24	15.5	0.85	96	27	18	9	CL	A-4
ISC-70	2.5	8.8	19	34	23	15	8	SC	A-2-4
ISC-70	5	15.2	4.75	43	25	14	11	SC	A-6
ISC-70	15								
ISC-70	35	18.8	2	97	33	16	17	CL	A-6
ISC-70	40								
ISC-71	0	15.1							
ISC-71	5	14.3							
ISC-71	9	11.7	19	43	26	17	9	SC	A-4
ISC-71	15								
ISC-71	21	15.8	2	95	51	25	26	CH	A-7-5
ISC-71	24								
ISC-71	33	15.6	2	90	34	18	16	CL	A-6
ISC-72	2.5	16.2							
ISC-72	3	15.3	9.5	76	25	18	7	CL-ML	A-4
ISC-72	5	14.1							
ISC-72	12	10.1	19	12	25	37	NP	SW-SM	A-2-6
ISC-74	0	14.4	19	31	25	17	8	SC	A-2-4
ISC-74	4	17.8	12.5	20	NP	NP	NP	SM	A-2-4
ISC-74	5	18							
ISC-74	12	14.6	9.5	16	NP	NP	NP	SM	A-2-4
ISC-74	21								
ISC-74	24	24.4	2	95	56	26	30	CH	A-7-5
ISC-74	30								
ISC-76	0	13.4							
ISC-76	5	12.8							
ISC-76	10	12.5	25.4	27	28	18	10	SC	A-2-4
ISC-76	20	23.4	2	84	49	22	27	CL	A-7-5
ISC-76	25								
ISC-76	27.5								
ISC-76	30								
ISC-76	32.5								

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ISC-76	35								
ISC-77	1	15.5	25	43	27	16	11	SC	A-6
ISC-77	2.5	9.8	12.5	27	21	15	6	SC-SM	A-2-4
ISC-77	5	14							
ISC-77	12.5								
ISC-77	17.5	18.8	2	90	41	19	22	CL	A-7-5
ISC-77	20								
ISC-77	25								
ISC-77	27.5								
ISC-77	30								
ISC-77	32.5								
ISC-77	35								
ISC-77	38.5	14.9	2	86	27	16	11	CL	A-6
ISC-86	0	14.7	4.75	73	29	18	11	CL	A-6
ISC-86	5	17.1	2	97	37	23	14	CL	A-6
ISC-86	15	10	9.5	23	NP	NP	NP	SM	A-2-4
ISC-86	35	23.3	25.4	61	43	23	20	CL	A-7-5
ISC-87	5	22.6	4.75	55	28	19	9	CL	A-4
ISC-87	25	11.9	4.75	22	NP	NP	NP	SM	A-2-4
ISC-90	0	19.4	25	69	31	18	13	CL	A-6
ISC-90	5	15.8	12.5	59	32	19	13	CL	A-6
ISC-90	7.5	12.5	4.75	67	25	17	8	CL	A-4
ISC-90	25	10	4.75	41	21	16	5	SC-SM	A-4
ISC-91	0	21.5	25	66	34	20	14	CL	A-6
ISC-91	2.5	16.8	4.75	71	31	21	10	CL	A-4
ISC-91	5	14.8							
ISC-91	25	3.7	4.75	15	NP	NP	NP	SM	A-1-b
ISC-94	2.5	10.3	4.75	16	NP	NP	NP	SM	A-2-4
ISC-94	15	12.8	4.75	18	NP	NP	NP	SM	A-2-4
ISC-94	35	21.2	2	93	39	18	21	CL	A-6
ISC-95	0	18.2	9.5	80	26	19	7	CL-ML	A-4
ISC-95	2.5	15	4.75	86	30	19	11	CL	A-6
ISC-95	5	14.3	4.75	85	27	19	8	CL	A-4
ISC-95	10	12.2							
ISC-95	12.5	10.5			29	17	12	SC	A-2-6
ISC-95	18.5								
ITP-01	0.5	10.2	37.5	25	NP	NP	NP	SM	A-1-b
ITP-01	6.3	14							
ITP-02	0	10.6	25	32	21	14	7	SC-SM	A-2-4

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ITP-02	6.5	10.8							
ITP-02	12.5	8.5	19	22	NP	NP	NP	SM	A-1-b
ITP-03	0	10.2	37.5	20	18	15	3	SM	A-2-4
ITP-03	8.3	9.1							
ITP-04	0	8.8	25	37	22	15	7	SC-SM	A-4
ITP-06	0	25.5	25	75	46	18	28	CL	A-7-5
ITP-07	7.6	20.2							
ITP-07	9.6	23.4	25	71	40	23	17	CL	A-6
ITP-12	8.5	18.6	12.5	66	26	19	7	CL-ML	A-4
ITP-12	48.5	15.3	9.5	80	27	18	9	CL	A-4
ITP-13	9.5	15.6	12.5	71	25	17	8	CL	A-4
ITP-14	29	14.1	12.5	53	27	16	11	CL	A-6
ITP-15	5	20.7	25	52	25	15	10	CL	A-4
ITP-17	0	19	25	40	26	16	10	SC	A-4
ITP-19	0	18.3	25	46	27	16	11	SC	A-6
MA-01	2	17.1	19.1	55	23	14	9	CL	A-4
MA-01	12	15.7	12.7	45	25	17	8	SC	A-4
MA-01	16	25.4	19.1	55	37	24	13	CL	A-6
MA-01	20	25.9	38.1	41	30	19	11	SC	A-6
MA-01	25	19.3	19.1	15	NP	NP	NP	SM	A-2-4
ML-01	3	17.8	4.75	96	26	19	7	CL-ML	A-4
ML-01	15	18.4	12.7	7	NP	NP	NP	SP-SM	A-3
ML-01	24	14.6							
ML-02	2.5	20.9	2	92	28	17	11	CL	A-6
ML-02	7.5	21.2							
ML-02	9								
ML-02	10	22.9	2	78	24	18	6	CL-ML	A-4
ML-02	18								
ML-02	27	19.1	4.75	81	39	22	17	CL	A-6
ML-02	30								
ML-02	33								
ML-02	36	21.8	4.75	94	44	20	24	CL	A-7-5
ML-02	39								
ML-02	42								
ML-02	45								
ML-02	51								
ML-02	57								
ML-03	2.5	16.5	4.75	66	23	15	8	CL	A-4
ML-03	6								

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-03	7.5	16.6							
ML-03	10	18							
ML-03	12	20.8	4.75	82	42	21	21	CL	A-7-5
ML-03	15								
ML-03	17.5	18.6							
ML-03	18								
ML-03	24								
ML-03	27								
ML-03	33								
ML-03	39								
ML-03	42								
ML-03	45	22.9							
ML-03	48								
ML-03	51	18.9	0.85	98	43	21	22	CL	A-7-5
ML-03	54								
ML-03	57								
ML-05	3	15.5	12.7	33	31	16	15	SC	A-2-6
ML-05	12	16.9	4.75	22	NP	NP	NP	SM	A-2-4
ML-05	18	19							
ML-05	27	19.7	4.75	82	39	18	21	CL	A-6
ML-06	2.5	19.2	9.5	79	31	21	10	CL	A-4
ML-06	7.5	12.5							
ML-06	12.5	24.6							
ML-06	20	21.1	2	82	27	19	8	CL	A-4
ML-06	20.00001								
ML-06	24	14.6							
ML-06	27								
ML-06	32	19.8	2	59	23	17	6	CL-ML	A-4
ML-06	32.0001								
ML-06	36	25.2							
ML-06	45								
ML-06	48								
ML-06	51								
ML-06	54	16.2	2	80	40	19	21	CL	A-6
ML-06	57								
ML-06	60								
ML-07	2.5	9.9							
ML-07	6	8.6	9.5	15	NP	NP	NP	SM	A-2-4
ML-07	7.5	9	19.1	33	17	14	3	SM	A-2-4

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-07	10	8							
ML-07	12	9.5							
ML-07	15	13.1	25.4	30	NP	NP	NP	SM	A-2-4
ML-07	21	18.1	4.75	51	21	15	6	OL	A-8
ML-07	36	21	2	98	38	21	17	CL	A-6
ML-07	45	23.9	2	95	41	20	21	CL	A-7-5
ML-07	48	18.8	2	91	26	18	8	CL	A-4
ML-07	54	21.1	2	94	48	22	26	CL	A-7-5
ML-07	57								
ML-08	2.5	8.2							
ML-08	4	18.1	9.5	10	NP	NP	NP	SW-SM	A-2-4
ML-08	9	22							
ML-08	19	24.3	4.75	41	21	16	5	SC-SM	A-4
ML-08	25	29.3	4.75	17	NP	NP	NP	SM	A-2-4
ML-09	2.5	16.3	25.4	27	19	16	3	SM	A-2-4
ML-09	8	21.9	2	55	23	17	6	CL-ML	A-4
ML-09	23	16.9	2	90	35	19	16	CL	A-6
ML-10	2.5	20							
ML-10	7.5	13.6							
ML-10	18	25.5	4.75	48	18	17	1	SM	A-4
ML-10	21								
ML-10	30	17	2	75	27	15	12	CL	A-6
ML-10	33								
ML-10	36								
ML-10	39								
ML-10	45								
ML-10	51	20.8	2	92	46	23	23	CL	A-7-5
ML-10	51.01								
ML-10	57								
ML-10	60								
ML-11	2.5	11.3							
ML-11	7.5	14.2							
ML-11	10	10.8	9.5	28	19	16	3	SM	A-2-4
ML-11	12.5	8.9							
ML-11	17.5	7.7							
ML-11	24	18.8	9.5	12	NP	NP	NP	SM	A-2-4
ML-11	42	18	4.75	80	29	17	12	CL	A-6
ML-11	48								
ML-11	51								

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-11	64	17.4	4.75	87	36	18	18	CL	A-6
ML-12	2.5	8.1							
ML-12	9	17.9	2	81	25	16	9	CL	A-4
ML-12	14	17.1	9.5	65	27	17	10	CL	A-4
ML-12	19	16.5	4.75	82	38	19	19	CL	A-6
ML-12	29	16.9	2	99	35	20	15	CL	A-6
ML-13	2.5	10.4							
ML-13	10	18.3	25.4	63	25	18	7	CL-ML	A-4
ML-13	15	17.6							
ML-13	20	22.2	4.75	83	26	16	10	CL	A-4
ML-13	25	24.1							
ML-13	26								
ML-13	29	25.8	2	99	60	24	36	CH	A-7-5
ML-14	2.5	11.1							
ML-14	7.5	9							
ML-14	12.5	11.6	25.4	59	25	15	10	CL	A-4
ML-14	24	26.9	4.75	78	25	18	7	CL-ML	A-4
ML-14	30								
ML-14	33	20.3	4.75	87	32	19	13	CL	A-6
ML-14	36								
ML-14	42								
ML-14	45								
ML-14	48								
ML-14	54								
ML-14	57								
ML-15	2.5	15.3							
ML-15	6	12	2	55	28	19	9	CL	A-4
ML-15	12	5.2	19.1	11	NP	NP	NP	SW-SM	A-1-b
ML-15	17.5	7.8							
ML-15	33	9.6							
ML-15	42								
ML-15	45	16.5	4.75	77	28	16	12	CL	A-6
ML-15	51	19.4	4.75	91	49	22	27	CL	A-7-5
ML-16	1	7.2							
ML-16	2.5	7.9							
ML-16	4	16.9							
ML-16	9	18.4	4.75	82	31	17	14	CL	A-6
ML-16	19	17.6	4.75	83	32	17	15	CL	A-6
ML-16	24	21.3	4.75	92	39	18	21	CL	A-6

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-16	29								
ML-17	2.5	8.8							
ML-17	5	16.6							
ML-17	10	16.6	2	74	30	20	10	CL	A-4
ML-17	20	17.2	2	89	40	21	19	CL	A-6
ML-18	2.5	16.4							
ML-18	7.5	10.8							
ML-18	10	11.9							
ML-18	12	14.6	4.75	15	NP	NP	NP	SM	A-2-4
ML-18	33	20.3	2	92	26	19	7	CL-ML	A-4
ML-18	39								
ML-18	45								
ML-18	51								
ML-18	58.5								
ML-19	1	14.9							
ML-19	3	14	12.7	52	28	16	12	CL	A-6
ML-19	7.5	13							
ML-19	9	13.4	4.75	20	NP	NP	NP	SM	A-2-4
ML-19	12.5	14.3							
ML-19	21	23.1							
ML-19	24								
ML-19	30								
ML-19	39	18.6	2	73	24	16	8	CL	A-4
ML-19	45								
ML-19	48	25.8	4.75	94	40	21	19	CL	A-6
ML-19	51								
ML-19	57								
ML-20	2.5	6.3							
ML-20	7.5	8.6							
ML-20	12	19.7	2	61	21	18	3	ML	A-4
ML-20	18	15.2	2	75	21	14	7	CL-ML	A-4
ML-20	24	16.2	38.1	32	32	18	14	GC	A-2-6
ML-20	30	25.1	2	99	54	25	29	CH	A-7-5
ML-20	30.0001								
ML-20	36	18.9	2	97	48	24	24	CL	A-7-5
ML-21	2	7.3	12.7	11	NP	NP	NP	SW-SM	A-1-b
ML-21	5	12.4							
ML-21	10	15.9	9.5	45	28	16	12	SC	A-6
ML-21	15	18.7	2	96	26	19	7	CL-ML	A-4

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-21	21.5	22.8	2	94	36	17	19	CL	A-6
ML-21	21.50001								
ML-21	23.5	16.9	2	97	36	19	17	CL	A-6
ML-21	28.5								
ML-22	2.5	3.9	38.1	15	NP	NP	NP	SM	A-1-b
ML-22	5								
ML-22	7.5								
ML-22	10								
ML-22	15	21.3	2	99	51	23	28	CH	A-7-5
ML-22	25	14.3	2	63	37	17	20	CL	A-6
ML-22	28.5								
ML-23	2.5	21.7	12.7	86	26	20	6	CL-ML	A-4
ML-23	7.5	17.8							
ML-23	12	25.1	19.1	70	26	19	7	CL-ML	A-4
ML-23	18	20.6	9.5	37	30	17	13	SC	A-6
ML-23	27								
ML-23	34								
ML-23	38								
ML-23	43								
ML-23	45	22.1	4.75	100	49	24	25	CL	A-7-5
ML-23	45.0001								
ML-23	47								
ML-23	53								
ML-23	56								
ML-25	2.5	8.7							
ML-25	10	15.8	9.5	49	21	13	8	SC	A-4
ML-25	20	20.2	4.75	95	41	19	22	CL	A-7-5
ML-25	25	18.9	4.75	96	38	20	18	CL	A-6
ML-25	28.5								
ML-26	3	12.4	25.4	61	36	17	19	CL	A-6
ML-26	7.5	17.4							
ML-26	12	18.6	2	99	44	21	23	CL	A-7-5
ML-26	21	17.3	2	86	28	16	12	CL	A-6
ML-26	27	25.4	2	97	50	25	25	CH	A-7-5
ML-29	2.5								
ML-29	9.5	21.5	2	40	NP	19	NP	SM	A-4
ML-29	19	19.8	4.75	16	NP	NP	NP	SM	A-2-4
ML-29	34	29.6	2	97	68	26	42	CH	A-7-5
ML-32	3	14.9							

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-32	6	14.2							
ML-32	9	16.3	2	60	24	16	8	CL	A-4
ML-32	15	18.8	4.75	59	21	15	6	CL-ML	A-4
ML-32	18	17.9	4.75	90	35	19	16	CL	A-6
ML-32	24								
ML-32	27	33.1	2	55	22	16	6	CL-ML	A-4
ML-32	33								
ML-32	36								
ML-32	39								
ML-32	42	24.8							
ML-32	45								
ML-32	48								
ML-32	51	19.5	2	86	42	20	22	CL	A-7-5
ML-34	2.5	21.6	12.7	90	31	23	8	ML	A-4
ML-34	12.5	8.8	12.7	28	22	18	4	SC-SM	A-2-4
ML-34	27	16.1	4.75	63	29	17	12	CL	A-6
ML-34	36	17.3	4.75	81	50	14	36	CH	A-7-5
ML-34	39								
ML-34	45	23.6	2	51	NP	NP	NP	ML	A-4
ML-34	48								
ML-34	54								
ML-34	57	21.3	4.75	89	45	20	25	CL	A-7-5
ML-34	63								
ML-34	66	20.7	2	75	33	19	14	CL	A-6
ML-34	69								
ML-34	72								
ML-34	75								
ML-34	78								
ML-43	2.5	10.2							
ML-43	9	16.6	9.5	19	NP	NP	NP	SM	A-2-4
ML-43	19								
ML-43	25.5	25.4	2	85	56	26	30	CH	A-7-5
ML-43	25.51								
ML-43	25.52								
ML-45	5	18.5	2	95	27	20	7	CL-ML	A-4
ML-45	9	21.5	2	99	27	21	6	OL	A-8
ML-45	12	21.6	2	96	26	23	3	OL	A-8
ML-45	15	15.8	2	61	25	21	4	CL-ML	A-4
ML-45	18	22.1	19.1	60	25	16	9	CL	A-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-45	21	20.8	2	97	31	18	13	CL	A-6
ML-45	27	18.9	2	69	32	21	11	CL	A-6
ML-45	33	19	2	23	NP	NP	NP	SM	A-2-4
ML-45	39	24.9	2	14	NP	NP	NP	SM	A-2-4
ML-45	45	23.3	2	11	NP	NP	NP	SP-SM	A-2-4
ML-45	51	23.3	2	75	39	18	21	CL	A-6
ML-45	54								
ML-45	57	24.1							
ML-45	60	31.2							
ML-45	63	24.1							
ML-45	66	27.5							
ML-45	69	24	2	93	48	24	24	CL	A-7-5
ML-45	72	18.9							
ML-45	75								
ML-45	78								
ML-48	2.5	12.5							
ML-48	7.5	8.9							
ML-48	12.5	10.8							
ML-48	17.5	15.6							
ML-48	28	19.6	2	72	22	15	7	CL-ML	A-4
ML-48	30								
ML-48	33	23.3	2	65	NP	NP	NP	ML	A-4
ML-48	45								
ML-48	48	21.4	2	44	NP	NP	NP	SM	A-4
ML-48	69	29	2	35	NP	NP	NP	SM	A-2-4
ML-50	2.5	12.7	12.7	21	24	15	9	SC	A-2-4
ML-50	8.5								
ML-50	13.5	19.9							
ML-50	18.5	18.1	2	99	24	15	9	CL	A-4
ML-50	23.5								
ML-61	2.5	14.5							
ML-61	7.5	9.8	12.7	42	26	17	9	SC	A-4
ML-61	12.5	14.2							
ML-61	17.5	14	2	46	32	18	14	SC	A-6
ML-61	21	23.6	19.1	30	21	15	6	SC-SM	A-2-4
ML-61	24								
ML-61	27	19.3	4.75	76	27	18	9	CL	A-4
ML-61	33	17.2	2	78	25	17	8	CL	A-4
ML-61	36	25.3	4.75	85	30	19	11	CL	A-6

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-61	42	19							
ML-61	45								
ML-61	48	23.2	2	97	48	22	26	CL	A-7-5
ML-61	48.0001								
ML-61	51	26.8							
ML-61	54								
ML-61	57								
ML-61	60								
ML-61	63.5	27.6							
ML-64	2.5	17.4	4.75	86	27	18	9	CL	A-4
ML-64	7.5	13.4							
ML-64	12.5	11	38.1	34	26	17	9	SC	A-2-4
ML-64	17.5	11.9	19.1	32	25	16	9	SC	A-2-4
ML-64	21	38.9	2	73	28	17	11	CL	A-6
ML-64	30								
ML-64	33								
ML-64	36	22.9	2	93	53	24	29	CH	A-7-5
ML-64	39								
ML-64	42								
ML-64	45	21.2							
ML-64	48								
ML-64	51								
ML-64	54								
ML-64	57								
ML-64	63.5	17.2	2	92	48	23	25	CL	A-7-5
ML-64	68.5								
ML-64	73.5								
ML-64	78.5								
ML-66	2.5	13.5							
ML-66	3.5	25.3	4.75	88	51	24	27	CH	A-7-5
ML-66	13.5	18.4	4.75	98	43	19	24	CL	A-7-5
ML-66	18.5								
ML-66	23.5	20.6	2	99	41	25	16	CL	A-7-5
ML-66	28.5								
ML-66	33.5	18.4	2	54	23	15	8	CL	A-4
ML-66	38.5								
ML-75	2.5	17.7							
ML-75	3.5								
ML-75	4.5	10.9	12.7	34	19	12	7	SC-SM	A-2-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-75	6								
ML-75	9.5	24.2	4.75	62	31	18	13	CL	A-6
ML-75	19.5	32.7	4.75	52	25	16	9	CL	A-4
ML-75	33.5	23	4.75	53	21	14	7	CL-ML	A-4
ML-77	2.5	16.6	2	97	30	20	10	CL	A-4
ML-77	7.5	12.2							
ML-77	12	18.8	4.75	87	32	19	13	CL	A-6
ML-77	18	16.4	2	67	22	18	4	CL-ML	A-4
ML-77	24	18.8	2	97	30	20	10	CL	A-4
ML-77	30								
ML-77	36	17.9	2	100	40	21	19	CL	A-6
ML-77	39	18.5	2	98	35	17	18	CL	A-6
ML-77	39.0001								
ML-77	39.0002								
ML-77	42	14.4							
ML-77	45								
ML-77	48								
ML-77	51								
ML-77	54	14.5	2	84	32	15	17	CL	A-6
ML-77	57								
ML-77	75	18.4	2	72	33	20	13	CL	A-6
ML-80	2.5	5.5							
ML-80	7.5	11.4							
ML-80	9	16.2	2	92	38	19	19	CL	A-6
ML-80	12	19.6	2	92	50	24	26	CH	A-7-5
ML-80	15								
ML-80	18								
ML-80	21	28.3	2	92	58	29	29	CH	A-7-5
ML-80	24								
ML-80	33	23.9	2	93	44	28	16	ML	A-7-5
ML-80	36								
ML-80	42								
ML-80	45	12.8	2	64	26	16	10	CL	A-4
ML-81	2.5	10.7							
ML-81	13.5								
ML-81	18.5	32.8							
ML-85	2.5	7.9							
ML-85	4.5								
ML-85	9.5	20.5	2	87	19	19	NP	ML	A-6

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SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-85	20	19.2	2	69	25	16	9	CL	A-4
ML-85	29.5								
ML-86	3	16.3	2	64	22	17	5	CL-ML	A-4
ML-86	7.5	18.7	19.1	53	38	19	19	CL	A-6
ML-86	9								
ML-86	12.5	17.8							
ML-86	15	14.3	4.75	88	32	16	16	CL	A-6
ML-86	16.5								
ML-86	18	19.9	2	98	41	20	21	CL	A-6
ML-86	21								
ML-86	27	17.4	2	99	35	16	19	CL	A-6
ML-86	30	28	2	8	NP	NP	NP	SP-SM	A-2-4
ML-86	33	22.9							
ML-86	51	27.1	2	91	44	24	20	CL	A-7-5
ML-87	2.5	11.2							
ML-87	12	20.5	12.7	55	20	16	4	CL-ML	A-4
ML-87	30	21.7	19.1	75	32	18	14	CL	A-6
ML-87	36.5	26.9	4.75	55	29	18	11	CL	A-6
ML-87	60								
ML-89	2.5	18.8							
ML-89	7.5	9.6							
ML-89	12.5	9.5							
ML-89	15	24.3							
ML-89	27	20.7	4.75	82	32	20	12	CL	A-6
ML-89	30								
ML-89	36								
ML-89	42	16.7	4.75	69	25	14	11	CL	A-6
ML-89	45								
ML-89	51	16.8	4.75	71	27	17	10	CL	A-4
ML-89	54								
ML-89	57								
ML-89	60								
ML-90	0								
ML-90	2.5	18.3	2	77	30	20	10	CL	A-4
ML-90	7	21.5							
ML-90	15	19.6	2	93	32	17	15	CL	A-6
ML-90	18								
ML-90	21	16.9	2	86	31	16	15	CL	A-6
ML-90	21.0001								

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-90	24								
ML-90	27								
ML-90	30	23.1	2	97	38	21	17	CL	A-6
ML-90	33								
ML-90	36								
ML-90	39	26	2	95	28	17	11	CL	A-6
ML-90	45								
ML-90	48								
ML-90	51								
ML-90	54								
ML-90	57								
ML-90	60								
ML-91	2.5	15.3							
ML-91	7.5	22.2							
ML-91	11								
ML-91	12.5	20.7	4.75	67	30	17	13	CL	A-6
ML-91	14								
ML-91	20								
ML-91	23	29.8	2	92	52	23	29	CH	A-7-5
ML-91	26								
ML-91	33								
ML-91	36	21.5	2	96	32	17	15	CL	A-6
ML-91	39								
ML-91	42								
ML-91	45								
ML-91	48								
ML-91	51	26.5	2	100	59	24	35	CH	A-7-5
ML-91	54								
ML-91	57								
ML-91	60								
ML-92	2.5	14.5							
ML-92	7.5	11.4							
ML-92	12.5	7.7							
ML-92	17.5	7.7	19.1	27	22	15	7	SC-SM	A-2-4
ML-92	30	16.9	19.1	9	NP	NP	NP	SW-SM	A-3
ML-92	36								
ML-92	39	37	2	36	NP	NP	NP	SM	A-4
ML-92	42								
ML-92	48								

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
ML-93	2.5	18.5							
ML-93	7.5	9.6							
ML-93	12.5	8.3							
ML-93	17.5	9.9	19.1	21	NP	NP	NP	SM	A-2-4
ML-93	24								
ML-93	27	21.4	2	66	21	18	3	ML	A-4
ML-93	33								
ML-93	39								
ML-93	60	18.7	2	96	35	18	17	CL	A-6
MRR-6	1	15.9	19	63	21	14	7	CL-ML	A-4
MRR-8	1	17.3	25	52	23	14	9	CL	A-4
P-05	1	15		42	28	10	18		A-6
P-05	7	16		33	31	21	10		A-2-4
P-05	9	25		89	44	25	19		A-7-6
P-05	14	21		91	38	21	17		A-6
P-05	19	18		90	25	19	6		A-4
P-05	24	21		98	42	23	19		A-7-6
P-05	29	19		41	20		NP		A-4
P-05	34	21		24			NP		A-2-4
P-05	39	21		10			NP		A-1-b
P-05	44	22		72	33	20	13		A-6
P-05	49	23		80	38	22	16		A-6
P-05	54	19		67	28	19	9		A-4
P-05	59	20		76	31	19	12		A-6
S-01	3	9	25.4	21	NP	NP	NP		A-1-b
S-01	3.5	14	25.4	57	24	19	5		A-4 (1)
S-01	8	12	25.4	41	24	21	3		A-4 (0)
S-01	13	25	2	89	40	23	17		A-6 (16)
S-01	18	34	2	94	39	27	12		A-6 (13)
S-01	23								
S-01	25	21.4							
S-01	25.01	21.2							
S-01	28	96			55	45	10		
S-01	28.8	16	25.4	18	NP	NP	NP		A-2-4 (0)
S-01	33	11	25.4	8	NP	NP	NP		A-1-a
S-01	38	25	4.75	79	45	23	22		A-7-6 (18)
S-01	43	21	25.4	68	27	19	8		A-4 (3)
S-01	48	24	0.42	81	39	25	14		A-6 (12)
S-01A	8	24		93	30	25	5		A-4

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
S-01A	10	23		89	26		NP		A-4
S-01A	11.5	10		45	23	15	8		A-4
S-01A	12	18		78	29	21	8		A-4
S-01A	14	21		91	27	23	4		A-4
S-01A	19	15		55	27	19	8		A-4
S-01A	24	16		54	39	21	18		A-6
S-01A	25.5	24		96	60	27	33		A-7-6
S-01A	29	18		72	42	24	18		A-7-6
S-01A	30	15		47	26	21	5		A-4
S-01A	31	22		27	25		NP		A-2-4
S-01A	34	29		85	44	28	16		A-7-6
S-01A	36	34.2			52	28	24		A-7-6
S-01A	36.01								
S-01B	27	28		28			NP		A-2-4
S-01B	27.7	107			59				
S-01B	28.5	52.2			58	47	11		A-7-5
S-01B	28.51								
S-02	3	21	4.75	70	33	24	9		A-4 (5)
S-02	8	18	4.75	59	32	22	10		A-4 (4)
S-02	13	29	2	95	41	26	15		A-7-6 (16)
S-02	15	30.7			40	22	18		A-6
S-02	15.01								
S-02	18	41	2	92	42	31	12		A-7-5 (14)
S-02	23	174			98				
S-02	28	14	25.4	10	NP	NP	NP		A-1-b
S-02	33	27	2	74	42	26	16		A-7-6 (12)
S-02	38	26	25.4	82	51	27	24		A-7-6 (21)
S-02	43	27	0.42	86	52	29	23		A-7-6 (22)
S-02	43.6	20	2	53	26	22	4		A-4 (0)
S-02	48	20	4.75	13	NP	NP	NP		A-2-4 (0)
S-02	53	20	2	72	31	23	8		A-4 (5)
S-02	58	20							
S-02	63	20	2	32	30	21	9		A-2-4 (0)
S-02	64	17	2	60	31	18	13		A-6 (5)
S-02	68	14	2	38	22	17	5		A-4 (0)
S-03	3	12	25.4	43	22	17	5		A-4 (0)
S-03	8	10			19	16	3		
S-03	8.5	37	0.42	98	40	29	11		A-6 (13)
S-03	10	38			39	27	12		A-6

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
S-03	10.01								
S-03	13	45	0.42	98	49	39	10		A-5 (15)
S-03	15	101			68	55	13		A-7-5
S-03	15.01								
S-03	18	73	2	58	61	53	8		A-5 (6)
S-03	23	27	25.4	33	32	NP	NP		A-2-4 (0)
S-03	28	20	2	78	38	24	14		A-6 (11)
S-03	33	24	0.42	32	21	NP	NP		A-2-4 (0)
S-03	33.5	21	0.42	76	33	23	10		A-4 (7)
S-03	38	21	2	37	26	NP	NP		A-4 (0)
S-03	43	24	2	22	NP	NP	NP		A-2-4 (0)
S-03	48	19	2	21	NP	NP	NP		A-2-4 (0)
S-03	53	22	2	61	36	22	14		A-6 (7)
S-03	58	25	2	52	27	23	4		A-4 (0)
S-03	63	20	2	47	23	18	5		A-4 (0)
S-03	68	20	2	59	40	23	17		A-6 (8)
S-04	1	9	25.4	28	21	17	4		A-2-4 (0)
S-04	4.5	24	2	91	33	25	8		A-4 (8)
S-04	6	24.5							
S-04	6.01	24.3							
S-04	8	25	0.42	98	27	22	5		A-4 (4)
S-04	14.5	28	25.4	13	NP	NP	NP		A-2-4 (0)
S-04	19	11			21				
S-04	24	21	25.4	64	39	24	15		A-6 (8)
S-04	25.5	18.2							
S-04	25.6	17.3							
S-04	27.5	33	2	89	68	37	31		A-7-5 (34)
S-04	35	25	2	8	NP	NP	NP		A-3
S-04	40	29			25				
S-04	40.5	25	2	20	NP	NP	NP		A-2-4 (0)
S-04	45	20	4.75	26	NP	NP	NP		A-2-4 (0)
S-04	45.5	20	4.75	17	NP	NP	NP		A-2-4 (0)
S-04	50	21	2	46	22	17	5		A-4 (0)
S-04	50.8	20	2	42	24	19	5		A-4 (0)
S-04	55	18	2	45	28	18	10		A-4 (1)
S-04	60	17	4.75	44	30	20	10		A-4 (1)
S-04	65	25	2	59	40	32	8		A-4 (4)
S-04	70	28	2	83	57	28	29		A-7-6 (27)
S-04A	0.3		9.5	58	28	13	15		A-6 (5)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
S-04A	1		9.5	58	28	21	7		A-4 (2)
S-04A	2.5		9.5	36	27	20	7		A-4 (0)
S-04A	3.5		4.75	77	30	21	9		A-4 (6)
S-04A	5.5		9.5	39	25	19	6		A-4 (0)
S-04A	6.5		2	91	41	13	28		A-7-6 (25)
SW-01	0	21.7							
SW-01	3	30.6	2	96	60	31	29	MH	A-7-6
SW-01	6	13.8	2	69	27	16	11	CL	A-6
SW-01	12	18.6	0.85	96	46	22	24	CL	A-7-5
SW-02	0	16.9	4.75	98	29	19	10	CL	A-4
SW-02	2.5	22.4							
SW-02	5	27.9							
SW-02	10	14.8							
SW-02	12	9.5	4.75	59	35	20	15	CL	A-6
SW-03	3	23.7	4.75	91	29	19	10	CL	A-4
SW-03	6	23.3	4.75	73	29	17	12	CL	A-6
SW-03	12	16.8	4.75	64	23	16	7	CL-ML	A-4
SW-03	15	16.6	4.75	85	37	20	17	CL	A-6
SW-03	18.5	20.8	0.85	74	26	16	10	CL	A-4
SW-04	3	23	4.75	93	26	19	7	CL-ML	A-4
SW-04	6	17.8	4.75	94	40	19	21	CL	A-6
SW-04	9	20	25.4	82	44	22	22	CL	A-7-5
SW-04	12	20	4.75	94	35	19	16	CL	A-6
SW-04	18.5	26.2	2	84	36	19	17	CL	A-6
SW-05	3.5	13.3	4.75	24	23	18	5	SC-SM	A-2-4
SW-06	0	21							
SW-06	3	19.2	4.75	72	24	18	6	CL-ML	A-4
SW-06	5	16.7							
SW-06	30	17.3	2	85	30	19	11	CL	A-6
SW-06	36	6.7	4.75	9	NP	NP	NP	SP-SM	A-3
SW-07	6	17.3	19	33	26	17	9	SC	A-2-4
SW-07	10	15.9							
SW-07	18	25.9							
SW-07	36	18.1	2	83	30	17	13	CL	A-6
SWM-01	0	17.6	25.4	68	31	20	11	CL	A-6(6)
SWM-01	2	24.4	25.4	89.2	37	20	17	CL	A-6(15)
SWM-01	4	21.1	9.5	74.2	36	19	17	CL	A-6(11)
SWM-01	6	14.6	25.4	58.6	26	16	11	CL	A-4(3)
SWM-01	7	9.5	25.4	32.4	19	NP	NP	SM	A-2-4(0)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
SWM-01	8	10.4	25.4	21.4	NV	NP	NP	SM	A-1-b
SWM-01	10	10.6	50.8	19.9	NV	NP	NP	SM	A-1-b
SWM-01	12	11.3	25.4	18.3	NV	NP	NP	SM	A-2-4(0)
SWM-01	13	21.4	2	94	47	26	21	CL	A-7-6(23)
SWM-01	14	21.8	9.5	90.2	43	24	18	CL	A-7-6(18)
SWM-01	16	20.6	0.42	97.5	44	25	19	CL	A-7-6(22)
SWM-01	18	17.9	2	91.2	35	21	14	CL	A-6(13)
SWM-01	20	17.4	2	88.4	27	21	6	CL-ML	A-4(4)
SWM-01	21	15	2	84.4	26	20	6	CL-ML	A-4(4)
SWM-01	22	16.4	0.42	89.4	25	19	6	CL-ML	A-4(4)
SWM-01	23.5	19.4	0.42	83.5	24	17	7	CL-ML	A-4(4)
SWM-02	0.5	10.2	25.4	47.2	22	NP	NP	SM	A-4(0)
SWM-02	2	15.8	25.4	50.7	33	19	14	CL	A-6(4)
SWM-02	4	22	2	89.3	24	NP	NP	ML	A-4(0)
SWM-02	6	24.3	9.5	87.6	27	NP	NP	ML	A-4(0)
SWM-02	7	24.3	25.4	91	26	23	3	ML	A-4(2)
SWM-02	8	20.4	25.4	84.3	25	23	2	ML	A-4(1)
SWM-02	10	23.9	4.75	78.1	23	NP	NP	ML	A-4(0)
SWM-02	12	23.1	25.4	93.2	39	24	16	CL	A-6(15)
SWM-02	14	22	0.42	97.4	34	23	12	CL	A-6(12)
SWM-02	16	23.3	0.42	95.7	42	23	19	CL	A-7-6(20)
SWM-02	18	21.3	2	92.3	37	24	14	CL	A-6(13)
SWM-02	20	21.4	0.42	94.1	35	21	14	CL	A-6(13)
SWM-02	22	20.4	0.42	89.6	29	20	8	CL	A-4(6)
SWM-02	23.5	24.5	0.42	95.9	33	22	11	CL	A-6(11)
SWM-03	0.5	11.2	9.5	68.7	26	21	6	CL-ML	A-4(2)
SWM-03	2	17.1	9.5	87.7	28	21	7	CL-ML	A-4(5)
SWM-03	4	17.1	9.5	89.4	27	21	7	CL-ML	A-4(4)
SWM-03	6	14.2	25.4	52	26	20	7	CL-ML	A-4(1)
SWM-03	8	15.4	9.5	43.5	29	21	8	SC	A-4(1)
SWM-03	10	20.9	9.5	49.5	32	22	10	SC	A-4(2)
SWM-03	12	22.7	25.4	54.3	31	22	9	CL	A-4(3)
SWM-03	14	17.5	25.4	18.6	NV	NP	NP	SM	A-2-4(0)
SWM-03	16	22.4	25.4	12.8	NV	NP	NP	SM	A-2-4(0)
SWM-03	18	18.4	25.4	12.9	NV	NP	NP	SM	A-1-b
SWM-03	20	14	9.5	13.5	NV	NP	NP	SM	A-1-b
SWM-03	22	11.8	25.4	14.8	NV	NP	NP	SM	A-1-b
SWM-03	24	21.7	25.4	15.5	NV	NP	NP	SM	A-2-4(0)
SWM-04	0.5	12	4.75	88.1	27	NP	NP	ML	A-4(0)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
SWM-04	2	16.9	0.42	98	26	21	6	CL-ML	A-4(4)
SWM-04	4	17.2	25.4	85.1	31	24	7	ML	A-4(6)
SWM-04	6	11.5	25.4	26.1	27	22	5	SC-SM	A-2-4(0)
SWM-04	8	14	25.4	30.4	21	17	5	SC-SM	A-2-4(0)
SWM-04	10	16.5	25.4	14.9	NV	NP	NP	SM	A-1-b
SWM-04	12	16.7	25.4	22.6	26.6	NP	NP	SM	A-1-b
SWM-04	14	17.1	2	82.3	22	17	5	CL-ML	A-4(2)
SWM-04	16	17.6	0.42	82	25	17	8	CL	A-4(5)
SWM-04	18	18.9	0.42	77.5	25	17	8	CL	A-4(4)
SWM-04	20	23.5	2	60	22	17	5	CL-ML	A-4(0)
SWM-04	22	21.5	2	85.3	28	18	10	CL	A-4(7)
SWM-04	23.5	25.6	2	34.3	17	NP	NP	SM	A-2-4(0)
URS-1	0	12.1	25.4	56.4	22	20	3	ML	A-4(0)
URS-1	2	20.2	25.4	75	25	22	3	ML	A-4(0)
URS-1	4	14.1	25.4	47.1	21	19	3	SM	A-4(0)
URS-1	6	14.7	9.5	44.2	30	17	13	SC	A-6(2)
URS-1	8	16.4	25.4	49.7	23	19	4	SC-SM	A-4(0)
URS-1	10	25	2	96.6	47	25	22	CL	A-7-6(24)
URS-1	12	24.9	0.42	99.1	44	26	18	CL	A-7-6(21)
URS-1	14	22.7	0.42	99.5	39	23	16	CL	A-6(18)
URS-1	16	21.4	0.42	99.2	40	23	17	CL	A-6(19)
URS-1	18	24	2	98.1	34	22	12	CL	A-6(12)
URS-1	20	27.2	4.75	87.5	40	23	17	CL	A-6(16)
URS-1	22	28.6	4.75	93.9	37	22	15	CL	A-6(15)
URS-1	24	30.4	2	86.6	48	24	24	CL	A-7-6(23)
URS-1	24.5	33.5	4.75		48	24	24		A-6(12)
URS-1	26	24	4.75	84.1	44	21	23	CL	A-7-6(20)
URS-1	28	18.3	2	88.6	35	20	15	CL	A-6(13)
URS-1	34	22.2	2	84.1	28	19	10	CL	A-4(6)
URS-1	39	21.1	2	93	29	19	10	CL	A-4(8)
URS-1	44	22	0.42	98.4	32	20	12	CL	A-6(12)
URS-1	49	24.9	2	59	23	NP	NP	ML	A-4(0)
URS-1	54	23.2	2	76.5	NV	NP	NP	ML	A-4(0)
URS-1	59	16.5	0.42	66.8	20	NP	NP	ML	A-4(0)
URS-1	64	19.7	2	46.7	18	NP	NP	SM	A-4(0)
URS-1	69	20.3	0.42	62	19	17	2	ML	A-4(0)
URS-1	74	19.5	2	45	17	NP	NP	SM	A-4(0)
URS-1	79	20.2	0.42	35.5	16	NP	NP	SM	A-4(0)
URS-1	84	19.8	2	53.3	18	NP	NP	ML	A-4(0)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
URS-1	89	16.4	2	20.7	NV	NP	NP	SM	A-2-4(0)
URS-1	94	10.6	25.4	20.5	NV	NP	NP	SM	A-2-4(0)
URS-1	99	16.6	25.4	14.8	NV	NP	NP	SM	A-2-4(0)
URS-1	104	16.4	25.4	16.6	NV	NP	NP	SM	A-2-4(0)
URS-1	109	15.2	4.75	20.3	NV	NP	NP	SM	A-2-4(0)
URS-1	114	13.2	2	40.3	18	14	4	SC-SM	A-4(0)
URS-1	119	26.1	2	77.9	40	21	19	CL	A-6(14)
URS-1	124	15.5	2	33.7	36	17	19	SC	A-2-6(2)
URS-2	1.5	3.2	50.8	5.2	NV	NP	NP	SP-SM	A-1-a
URS-2	2	12.2	9.5	58.1	32	21	11	CL	A-6(4)
URS-2	4	21.2	4.75	94.6	34	24	10	CL	A-4(10)
URS-2	6	8.5	25.4	16.6	NV	NP	NP	SM	A-1-b
URS-2	8	9.1	25.4	21.1	NV	NP	NP	SM	A-2-4(0)
URS-2	10	10.9	9.5	22.2	NV	NP	NP	SM	A-2-4(0)
URS-2	12	11.6	25.4	17.3	NV	NP	NP	SM	A-2-4(0)
URS-2	14	21.1	9.5	52.9	NV	NP	NP	ML	A-4(0)
URS-2	16	17.6	25.4	17.6	NV	NP	NP	SM	A-2-4(0)
URS-2	18	16.9	25.4	16.1	NV	NP	NP	SM	A-2-4(0)
URS-2	24	17.3	50.8	14	NV	NP	NP	SM	A-1-b
URS-2	29	17.1			NV	NP	NP		
URS-2	34	16.2	4.75	66.8	27	17	10	CL	A-4(4)
URS-2	39	24.8	0.42	98.2	40	21	19	CL	A-6(20)
URS-2	44	25.6	0.42	15.9	NV	NP	NP	SM	A-2-4(0)
URS-2	49	35.2	4.75	32.1	NV	NP	NP	SM	A-2-4(0)
URS-2	54	26.1	4.75	26	NV	NP	NP	SM	A-2-4(0)
URS-2	59	20.7	2	79.9	52	25	27	CH	A-7-6(23)
URS-2	64	22.7	2	87.8	55	27	28	CH	A-7-6(28)
URS-2	69	28.3	0.42	97.7	56	31	25	MH	A-7-5(30)
URS-2	72	24.6	2.4	90.7	51	27	24	CH	A-7-6(25)
URS-2	74	23.6	2	95	49	27	22	CL	A-7-6(24)
URS-2	79	27.3	2	84.5	44	24	20	CL	A-7-6(18)
URS-2	82	22	4.75	93	50	31	19	MH	A-7-5(22)
URS-2	84	18.5	0.42	79.8	29	20	9	CL	A-4(6)
URS-2	89	26.6	25	27.1	21	NP	NP	SM	A-2-4(0)
URS-2	94	16.6	2	46	21	14	7	SC-SM	A-4(0)
URS-2	98	22.8	0.42	86.1	40	23	17	CL	A-6(16)
URS-2	102	16.8	0.42	52.3	33	21	12	CL	A-6(4)
URS-2	104	19.4	2	72.4	30	20	9	CL	A-4(6)
URS-2	108								

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
URS-2	109	22.8							
URS-2	114	15.6	4.75	13	NV	NP	NP	SM	A-2-4(0)
URS-2	119	26.3	2	37.6	18.6	NP	NP	SM	A-4(0)
URS-2	124	23.2	25.4	22.4	NV	NP	NP	SM	A-2-4(0)
URS-3	1	13.4	25.4	39.3	27	NP	NP	SM	A-4(0)
URS-3	1.5	7.3	25.4	21.5	NP	NP	NP	SM	A-1-b
URS-3	2	9.1	50.8	13.7	NP	NP	NP	SM	A-1-b
URS-3	4	15.7	25.4	54.7	14	NP	NP	ML	A-4(0)
URS-3	6	14.3	25.4	17.6	NP	NP	NP	SM	A-2-4(0)
URS-3	8	7.9							
URS-3	10	17.4	4.75	87	22	18	5	CL-ML	A-4(1)
URS-3	12	20.4	0.42	83.1	28	18	10	CL	A-4(7)
URS-3	14	25.2	4.75	66.2	21	16	5	CL-ML	A-4(0)
URS-3	16	24.9	25.4	30.7	17	NP	NP	SM	A-2-4(0)
URS-3	17	19.9	0.42	94.3	33	19	14	CL	A-6(13)
URS-3	18	19.3	2	26	20	NP	NP	SM	A-2-4(0)
URS-3	23	23	0.42	44.7	NP	NP	NP	SM	A-4(0)
URS-3	28	22.9	0.42	62.1	19	NP	NP	ML	A-4(0)
URS-3	33	26	2	97.5	45	23	22	CL	A-7-6(24)
URS-3	35	26.1	2	98.6	40	22	18	CL	A-6(20)
URS-3	35.01	20.7		98.6	40	22	18	CL	A-6
URS-3	35.1	21							
URS-3	37	19.6	2	94.6	30	19	11	CL	A-6(10)
URS-3	43	20.8	2	94.5	30	21	9	CL	A-4(8)
URS-3	48	21.9	0.42	97.5	31	20	10	CL	A-4(9)
URS-3	50	42.8							
URS-3	50.01	26.6	2	97.2	51	24	27	CH	A-7-6(30)
URS-3	50.1	32.8							
URS-3	52	21.9	2	91	42	23	20	CL	A-7-6(19)
URS-3	58	28.8	0.42	98.3	53	29	24	CH	A-7-6(28)
URS-3	63	26.1	0.42	86.6	43	23	20	CL	A-7-6(18)
URS-3	68	20.8	2	75.4	35	19	16	CL	A-6(11)
URS-3	73								
URS-3	78	21.8	2	73	43	23	20	CL	A-7-6(14)
URS-3	81		4.75	79.2	43	22	20	CL	A-7-6(16)
URS-3	83	23.3	0.42	90.1	44	26	18	CL	A-7-6(18)
URS-3	88	19.5	2	69.3	35	21	14	CL	A-6(8)
URS-3	91								
URS-3	93	20.1	2	21	NP	NP	NP	SM	A-2-4(0)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
URS-3	98	21.6	0.42	86	36	25	12	CL	A-6(11)
URS-3	103	20.8	0.42	85.8	26	NP	NP	ML	A-4(0)
URS-3	108	23.8	2	15.8	NP	NP	NP	SM	A-2-4(0)
URS-3	113	15.1	25.4	17.9	NP	NP	NP	SM	A-1-b
URS-3	118	14.6	25.4	55.5	24	16	8	CL	A-4(2)
URS-3	123	19.3	2	66.1	39	20	19	CL	A-6(11)
URS-4	0.5	10	9.5	35.7	22	20	2	ML	A-4(0)
URS-4	2	10	25.4	57	19	NP	NP	ML	A-4(0)
URS-4	4	11.9	25.4	38	20	NP	NP	SM	A-4(0)
URS-4	6	14.1	25.4	20.1	NP	NP	NP	SM	A-2-4(0)
URS-4	8	13.6	25.4	24.7	22	NP	NP	SM	A-1-b
URS-4	10	9.5	50.8	19.9	22	21	1	GM	A-1-b
URS-4	12	17	25.4	17.9	NP	NP	NP	SM	A-2-4(0)
URS-4	14	20.6	25.4	52.4	34	20	14	CL	A-6(4)
URS-4	16	18.3	50.8	38	27	18	9	SC	A-4(0)
URS-4	18	22.9	9.5	73.2	40	22	18	CL	A-6(12)
URS-4	22	26.4	0.42	99.8	53	28	25	CH	A-7-6(30)
URS-4	22.1	24							
URS-4	24	24	0.42	98.9	40	24	17	CL	A-6(18)
URS-4	26	22.1							
URS-4	29	18.6	2	88.4	29	18	11	CL	A-6(8)
URS-4	34	23	2	90.4	36	24	12	CL	A-6(11)
URS-4	35	26.9							
URS-4	37	21.5	4.75	88.6	42	22	20	CL	A-7-6(19)
URS-4	39	17.3	2	63.5	20	17	2	ML	A-4(0)
URS-4	44	29.2	0.15	99.4	46	20	26	CL	A-7-6(28)
URS-4	49	24.6	2	80.4	34	21	13	CL	A-6(10)
URS-4	54	28.9	2	19.8	NP	NP	NP	SM	A-2-4(0)
URS-4	59	29.2	0.42	90.5	41	32	8	CL	A-4(10)
URS-4	64	23.5	0.42	57.3	22	NP	NP	ML	A-4(0)
URS-4	69	25.3	0.42	99.1	42	24	18	CL	A-7-6(20)
URS-4	74	28.6	0.42	98.5	43	26	17	CL	A-7-6(19)
URS-4	79	16.1							
URS-4	84	24.3	0.42	99.2	36	23	13	CL	A-6(14)
URS-4	86	15.5	0.15	99.8	46	22	24	CL	A-7-6(27)
URS-4	89	20.9	2	94.5	40	23	17	CL	A-6(17)
URS-4	94	16.4	2	78.1	28	19	9	CL	A-4(6)
URS-4	94.5	16.9	2	33.7	NP	NP	NP	SM	A-2-4(0)
URS-4	99	16.1	4.75	67.2	26	17	9	CL	A-4(4)

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
URS-4	104	15.5	25.4	13.1	NP	NP	NP	SM	A-1-b
URS-4	109	12.7	25.4	15.5	NP	NP	NP	SM	A-2-4(0)
URS-4	114	13.9	9.5	13.3	NP	NP	NP	SM	A-2-4(0)
URS-4	119	22.1	2	83.2	40	23	17	CL	A-6(14)
URS-4	124	25.5	2	74.3	34	22	12	CL	A-6(8)
URS-4	126	15.2	2.4	45.9	26	13	13	SC	A-6(2)
URS-5	0.5	13.1	9.5	34.5	23	16	7	SC-SM	A-2-4(0)
URS-5	2	15.2	9.5	40.9	18	16	2	SM	A-4(0)
URS-5	4	18.6	2	81.2	29	17	12	CL	A-6(8)
URS-5	6	20.1	0.425	90.8	34	21	13	CL	A-6(12)
URS-5	8	23.3	0.425	84.5	36	20	16	CL	A-6(13)
URS-5	10	21.3	0.425	92.3	44	24	20	CL	A-7-6(20)
URS-5	12	15.7	9.5	54.2	23	15	8	CL	A-4(1)
URS-5	14	19.4	2	38.4	17	NP	NP	SM	A-4(0)
URS-5	16	12.9	9.5	51.7	24	16	8	CL	A-4(1)
URS-5	18	16.2	9.5	32.2	19	NP	NP	SM	A-2-4(0)
URS-5	23	17	0.425	51.3	23	19	4	CL-ML	A-4(0)
URS-5	28	13.6	0.425	44.9	22	17	5	SC-SM	A-4(0)
URS-5	33	24	0.425	99.5	50	26	24	CH	A-7-6(28)
URS-5	35.5	29.9	2	97.4	55	30	25	MH	A-7-5(29)
URS-5	35.51								
URS-5	37.5	20.9	0.075	97.7	58	28	30	CH	A-7-6(35)
URS-5	43	21.1	0.075	95.2	35	21	14	CL	A-6(12)
URS-5	48	17.1	0.075	82.3	29	20	9	CL	A-4(6)
URS-5	53	18.4	0.075	48.5	18	NP	NP	SM	A-4(0)
URS-5	58	18.5	0.425	52.7	18	NP	NP	ML	A-4(0)
URS-5	63	21	0.425	52.2	17	NP	NP	ML	A-4(0)
URS-5	68	23.1	2	48.1	17	NP	NP	SM	A-4(0)
URS-5	73	22.4	0.425	26.6	NP	NP	NP	SM	A-2-4(0)
URS-5	78	21.4	0.425	42.9	17	NP	NP	SM	A-4(0)
URS-5	83	26	0.075	54.6	16	NP	NP	ML	A-4(0)
URS-5	88	19.1	2	14.6	NP	NP	NP	SM	A-2-4(0)
URS-5	93	17.4	2	21.4	NP	NP	NP	SM	A-2-4(0)
URS-5	98	20.2	4.75	22.1	NP	NP	NP	SM	A-2-4(0)
URS-5	103	17.2	2	15.2	NP	NP	NP	SM	A-2-4(0)
URS-5	108	21	9.5	29.7	20	NP	NP	SM	A-2-4(0)
URS-5	113	19.8	9.5	55.2	40	17	23	CL	A-6(9)
URS-5	118	22.3	2	53.2	42	20	22	CL	A-7-6(8)
URS-5	123	22.3	0.425	74.6	42	21	21	CL	A-7-6(15)

Delaware Turnpike Improvements

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Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
WA-1	3	26		91	26	19	7		A-4
WA-1	8	22		86	30	20	10		A-4
WA-1	13	41		98	46	29	17		A-7-6
WA-1	18	174			100				
WA-1	23	27		54	28	27	1		A-4
WA-1	28								
WA-1	33	22		21	23		NP		A-2-4
WA-1	38	29		90	40	31	9		A-4
WA-1	43	32		89	46	30	16		A-7-5
WA-1	43.5	27		13			NP		A-2-4
WA-1	48	21		12			NP		A-2-4
WA-1	53	20		17	16		NP		A-2-4
WA-1	58	14		35	19	17	2		A-2-4
WA-1	63	22		16			NP		A-2-4
WA-1	68	22		27			NP		A-2-4
WA-2	1	15		87	20		NP		A-4
WA-2	4	26		93	29	24	5		A-4
WA-2	9	23		90	34	23	11		A-6
WA-2	14	41		98	46	32	14		A-7-5
WA-2	19	174			115				
WA-2	24	15		4			NP		A-1-a
WA-2	29	21		26	24	20	4		A-2-4
WA-2	34	24		47	28	24	4		A-4
WA-2	39	28		6			NP		A-3
WA-2	44	21		64	38	20	18		A-6
WA-2	49	21		15			NP		A-2-4
WA-2	54	22		8			NP		A-1-b
WA-2	59	20		8			NP		A-1-b
WA-2	64	20		10			NP		A-3
WA-2	69	24		67	40	22	18		A-6
WA-2	74	21		52	41	22	19		A-7-6
WS-1	4	17		82	28	20	8		A-4
WS-1	9	13		35	24	18	6		A-2-4
WS-1	14	20		59	33	22	11		A-6
WS-1	19	14		17	25	20	5		A-1-b
WS-1	24	18		96	31	17	14		A-6
WS-1	25.5	25.7							
WS-1	25.6	25.9							
WS-1	27.5	20		88	35	20	15		A-6

Delaware Turnpike Improvements

SR 1 Interchange

Table C-2a - Summary of Laboratory Soil Classification Tests

Boring No.	Sample Depth (ft)	NMC (%)	Max. Particle Size (mm)	Percent Passing No. 200	LL	PL	PI	USCS	AASHTO
WS-1	35	28		91	47	27	20		A-7-6
WS-1	40	18.9							
WS-1	40.1	19.1							
WS-1	42	29		84	39	24	15		A-6
WS-1	45	26		82	39	24	15		A-6
WS-1	50	19		68	28	18	10		A-4
WS-1	55	20		72	34	21	13		A-6
WS-1	60	24		25			NP		A-2-4
WS-1	65	23		11			NP		A-2-4
WS-1	70								
WS-2	3	6		18			NP		A-1-b
WS-2	8	16		78	29	20	9		A-4
WS-2	13	18		69	31	20	11		A-6
WS-2	18	13		59	22	15	7		A-4
WS-2	23	16		53	23	16	7		A-4
WS-2	23.5	22		91	44	25	19		A-7-6
WS-2	28	29		92	63	33	30		A-7-5
WS-2	30	27.1		93	64	35	29		A-7-5
WS-2	30.1	25.1							
WS-2	33	34		95	68	33	35		A-7-5
WS-2	38	31		82	47	27	20		A-7-6
WS-2	43	23		71	35	20	15		A-6
WS-2	48	23		74	38	21	17		A-6
WS-2	53	16		47	28	17	11		A-6
WS-2	58	24		5			NP		A-3
WS-2	63	21		76	35	26	9		A-4
WS-2	68	13		15			NP		A-2-4

Delaware Turnpike Improvements
SR 1 Interchange
Table C-2b - Summary of Thin-Walled Tube Samples

Boring No.	Sample Depth (ft)	NMC (%)	Percent Passing No. 200	LL	PI	USCS	Test Method	Total Unit Weight (pcf)	Total Stress		Effective Stress		Undrained Shear (psf)
									Cohesion (psf)	Phi (deg)	Cohesion (psf)	Phi (deg)	
IBR-04	18.0	12.6	62	22	5	CL-ML	DS	133.8	760	23.6			
IBR-04	18.0						CONS	115.5					
IBR-04	18.0						UC	129.8					2013
IBR-04	39.5						UU	131.1	4478				4479
IBR-05	31.5	16	65	21	3	ML	UC	132.9					2042
IBR-05	31.5	20.8					DS	128.7	935	15.62			
IBR-05	31.5						CONS	119					
IBR-07	16.5	29.8	97	48	22	CL	UC	123.2					740.5
IBR-08	29.0	29.1	100	53	26	CH	UC	125.4					1325
IBR-08	29.0	20.8					DS	129.5	985	11.18			
IBR-09	36.0	17.8	99	43	20	CL	DS	132.4	785	16.23			
IBR-09	36.0						UC	133.5					2757.5
IBR-10	12.0	22.5	98	45	22	CL	UU	127.6					1.25
IBR-14	45.0	19.2	83	29	12	CL	UC	140.7					3448.5
IBR-14	45.0						DS	133.8	1370	11.98			
IBR-15	19.5	24.6	95	42	22	CL	DS		910	1.5			
IBR-15	19.5						CONS	96.9					
IBR-15	29.5						UU						2232
IBR-16	20.0	19					UC	130.1					2272
IBR-27	39.0	22.1	100	44	23	CL	UU	130					3040
IBR-27	81.0	23.2	96	49	25	CL	UU	122.7					3930
IBR-27	81.0						DS	125.6	920	10.99			
IBR-27A	69.0	18.4	45	NP	NP	SM	UC	130.5					616
IBR-27A	69.0	24.8					DS	124.9	365	16.21			
IBR-27A	69.0						UU	136.5					4080

UCC - Unconfined Compressive Strength
DS - Direct Shear
UU - Unconsolidated Undrained Triaxial Compressive Strength
CONS - Consolidation Test

Delaware Turnpike Improvements
SR 1 Interchange
Table C-2b - Summary of Thin-Walled Tube Samples

Boring No.	Sample Depth (ft)	NMC (%)	Percent Passing No. 200	LL	PI	USCS	Test Method	Total Unit Weight (pcf)	Total Stress		Effective Stress		Undrained Shear (psf)
									Cohesion (psf)	Phi (deg)	Cohesion (psf)	Phi (deg)	
IBR-32	50.0	16.7	96	31	13	CL	CONS	132.7					
IBR-42A	39.0	19.9	99	34	14	CL	UU	136.5					2070
IBR-42A	39.0	20.4					DS	129.7	925	12			
IBR-42A	39.0						UC	131.3					2173.5
IBR-42A	60.0	24.3	98	51	24	CH	UU	125.5					3810
IBR-42A	60.0						DS	126.7	490	18.04			
IBR-49	16.0	28.2	97.4	52	24	CH	DS				70	18.7	
IBR-50	34.0	17.7	89.8	30	10	CL	UU		5609				5609
IBR-51	51.0	19.4	75.5	39	23	CL-ML	DS				198	21	
IBR-52	16.0	24.5	95.9	43	20	CL	UU		576				0.288
IBR-52	16.5	29.8	95.9	43	20		CONS	126.9					
IBR-53	12.0	24.9	85.6	49	27	CL	UU		804				804
IBR-55	36.0	19.6	98.7	39	18	CL	UU		4816				2.408
IBR-57	26.0	20.5	93.6	36	16	CL	UU	135.3					2516
IBR-58	1.5	2.7	16	22	NP	SM	DS	135.2			534	19.4	
IBR-60	18.0	20.7	81.7	30	11	CL	UC						
IBR-60	18.0	19.5	65.1	36	18	CL	UU		1514				
IBR-60	18.0						CONS						
IBR-60	46.0	19.6	94.9	36	16	CL	CONS						
IBR-60	46.0	18	91.2	39	18	CL	UU		1986				
IBR-61	14.0	24.2	98.8	34	13	CL	UC						
IBR-61	14.0						CONS						
IBR-61	59.0	31.2	85.9	46	22	CL	CONS						
IBR-61	59.0	37.4	90.6	48	25	CL	DS				58	18	
ICPT-15A	18.0	24.4	100	49	26	CL	UC	125.5					2026
ICPT-15A	28.0	36.7	89.8	50	26	CH	UC	109.4					3109
ICPT-15A	44.0	22.3	92.6	53	31	CH	UC	129.2					2318.1
ICPT-16A	30.0	16.4	94.3	34	15	CL	UC	137.3					4190.1

Delaware Turnpike Improvements
SR 1 Interchange
Table C-2b - Summary of Thin-Walled Tube Samples

Boring No.	Sample Depth (ft)	NMC (%)	Percent Passing No. 200	LL	PI	USCS	Test Method	Total Unit Weight (pcf)	Total Stress		Effective Stress		Undrained Shear (psf)
									Cohesion (psf)	Phi (deg)	Cohesion (psf)	Phi (deg)	
ICPT-16A	44.0	16.7	65	41	23	CL	UC	135.7					3245
ICPT-16A	54.0	13.2	92.2	64	38	CH	UC	128.9					5617
IEB-13A	15.0	18.7	75	33	14	CL	UU	127.7					1770
IEB-13A	15.0						UC	132.3					1169
IEB-13A	15.1						CONS	77.8					
IEB-13B	19.8	26.2	97.2	58	33	CH	CIUC	126.1	310	26.1			
IEB-13B	32.0	16.1	70.6	28	11	CL	UC	135.9					4622
IEB-13B	38.0	15.5	65.4	27	13	CL	UC	137.2					4576
IEB-15	12.0	23.9	99.1	49	23	CL	CONS	129.5					
IEB-15	12.5						UU	128.3					1594
IEB-15	31.0	17.9	95.5	36	16	CL	CONS	132.8					
IEB-15	31.5						DS	128			0	26.9	
IEB-15	56.0	20.1	98.1	47	22	CL	CONS	132.8					
IRW-02	25.0	19					DS	130.8	145	27.11			
IRW-02	35.0	17.2	89	39	19	CL	UU						4555
IRW-09	20.0	28.6	99	39	19	CL	CIUC		1760	11.7	1630	18.2	
IRW-09	35.0	17.5	62	23	5	OL	DS		1075	15.2			
IRW-09	35.0						CONS	110.9					
IRW-09	35.0						UU						5819
IRW-16	20.0	19	90	35	15	CL	DS	131.5	255	26.01			
IRW-19	19.5	19.1	99	39	17	CL	UC	133.15					3542
IRW-19	38.5	22	81	49	27	CL	CIUC		430	7.5	570	8.3	
IRW-21	19.5	20.5	95	50	22	CH	UC	133.95					2473
IRW-23	14.5	19.5	99	48	24	CL	CIUC		1070	5.3	1080	7.6	
IRW-23	24.5	18.4	99	36	21	CL	CONS	108.7					
IRW-23	24.5	18.2					DS	130.6	985	20.11			
IRW-23	24.5						UU						3790
IRW-23	24.6						UC	131.9					2575

DELDOT THIN-WALLED TUBE SAMPLES ALL DE I95 GINT FILE.GPJ RKK_CURRENT.GDT 1/22/09

Delaware Turnpike Improvements
SR 1 Interchange
Table C-2b - Summary of Thin-Walled Tube Samples

Boring No.	Sample Depth (ft)	NMC (%)	Percent Passing No. 200	LL	PI	USCS	Test Method	Total Unit Weight (pcf)	Total Stress		Effective Stress		Undrained Shear (psf)
									Cohesion (psf)	Phi (deg)	Cohesion (psf)	Phi (deg)	
IRW-26	25.0	17.3	89	30	12	CL	DS	134.1	995	15.82			
IRW-27	30.0	23	90	43	23	CL	CIUC		550	14.8	500	24.6	
IRW-32	25.0	19.5	85	39	20	CL	DS		715	15.7			
IRW-32	25.0						CONS	114.2					
IRW-32	25.0						UU						2785
IRW-32	35.0	19.4	97	57	30	CH	CIUC		1820	14.8	1580	23	
IRW-33	27.0	26.1	96	47	25	CL	CONS	100.5					
IRW-33	27.0						DS	130.8	470	10.73			
IRW-33	27.0						UU	126.2					1420
IRW-33A	24.0	23.3	87	42	21	CL	CONS	107.8					
IRW-33A	24.0						UU	125.7					920
IRW-33A	24.0						DS	131.9	170	19.36			
IRW-33A	33.0	19.2	100	55	34	CH	CIUC		930	5.2	660	17.2	
IRW-42	18.0			42	20	CL	CIUC		630	9.6	680	13.8	
IRW-42	30.0	26.1	97	44	22	CL	DS		370	14.7			
IRW-42	30.0						CONS	114.7					
IRW-42	30.0						UU						1847
IRW-44	25.0	20.1	92	40	21	CL	DS		722	7.2			
IRW-44	25.0						CONS	103.6					
IRW-44	35.0	20.5	99	56	28	CH	CIUC		1140	4.3	1100	8.8	
IRW-49	20.0	17.7	68	21	2	ML	CIUC		0	45.4	530	36.3	
IRW-49	30.0	20.7	99	41	19	CL	CONS	113.4					
IRW-49	30.0						UU	132					1090
IRW-49	30.0						UC	128.5					2779.5
IRW-50	25.0	19.9	32	NP	NP	SM	DS		725	15.7			
IRW-50	25.0						CONS	111.2					
IRW-50	25.0						UU						2250
IRW-51	25.0	21.6	96	38	19	CL	DS		415	14.6			

Delaware Turnpike Improvements
SR 1 Interchange
Table C-2b - Summary of Thin-Walled Tube Samples

Boring No.	Sample Depth (ft)	NMC (%)	Percent Passing No. 200	LL	PI	USCS	Test Method	Total Unit Weight (pcf)	Total Stress		Effective Stress		Undrained Shear (psf)
									Cohesion (psf)	Phi (deg)	Cohesion (psf)	Phi (deg)	
IRW-51	25.0						CONS	105.8					
IRW-51	25.0						UU						2772
IRW-51	35.0	22.3	98	48	27	CL	CIUC		520	10.1	550	15.8	
IRW-52	25.0			34	18	CL	CIUC		210	20.7	350	30.4	
IRW-52	35.0	22.3	98	48	27	CL	DS		1155	11.1			
IRW-52	35.0						CONS	108.3					
IRW-52	35.0						UU	128.7					4870
IRW-53	15.0	19.9	99	39	17	CL	CONS	107.6					
IRW-53	15.0						DS	129.8	860	9.73			
IRW-53	25.0	22.5	96	51	24	CH	CIUC		1520	7.4	1580	9.7	
IRW-64	25.0	19.5	92	35	15	CL	CIUC		700	12.2	570	20.9	
IRW-64	40.0	24.9	78	32	13	CL	UU	116.5					810
IRW-71	27.0	17.5	67	22	5	CL-ML	UU	134.2					8230
IRW-76	22.5	23.5	97	39	18	CL	DS	129.9	120	19.1			
IRW-76	22.5						UC	132.5					2047.5
IRW-76	32.5						UU	122					700
IRW-83	30.0	20.2	99	41	20	CL	UU	130					780
IRW-83	30.1						DS	133.5	410	13.73			
IRW-90	41.0	24.9	86.2	49	24	CL	DS				214	19	
IRW-97	16.0	21.6	98.6	42	19	CL	UU	127.7					1355
IRW-97	41.0	25.2	98.3	54	30	CH	DS	126.8			338	17	
ML-06	20.0	21.1	82	27	8	CL	DS		230	9.9			
ML-06	20.0						UC	137					2390
ML-06	32.0	19.8	59	23	6	CL-ML	DS		620	22.1			
ML-06	32.0						UC	131					465
ML-10	51.0	20.8	92	46	23	CL	DS		1870	2.8			
ML-10	51.0						UC	133					2263
ML-20	30.0	25.1	99	54	29	CH	DS	126.2	270	18.5			

Delaware Turnpike Improvements
SR 1 Interchange
Table C-2b - Summary of Thin-Walled Tube Samples

Boring No.	Sample Depth (ft)	NMC (%)	Percent Passing No. 200	LL	PI	USCS	Test Method	Total Unit Weight (pcf)	Total Stress		Effective Stress		Undrained Shear (psf)
									Cohesion (psf)	Phi (deg)	Cohesion (psf)	Phi (deg)	
ML-20	30.0						UC	128					1255.5
ML-21	21.5	22.8	94	36	19	CL	DS		799	10			
ML-21	21.5						UC	140					883.5
ML-23	45.0	22.1	100	49	25	CL	DS		835	11.5			
ML-23	45.0						UC	133					1842
ML-43	25.5	25.4	85	56	30	CH	DS		407	18.6			
ML-43	25.5						CONS	128					
ML-43	25.5						UU	126					1800
ML-61	48.0	23.2	97	48	26	CL	DS		980	11.3			
ML-61	48.0						UC	131					1367.5
ML-77	39.0	18.5	98	35	18	CL	DS		652	20.5			
ML-77	39.0						UC	130					2836.5
ML-77	39.0						UU	131.9					4200
ML-90	21.0	16.9	86	31	15	CL	DS		595	26.6			
ML-90	21.0						UC	150					2525
S-01	25.0	21.4					UC	29.26	1980				
S-01	25.0	21.2					CONS	58					
S-01A	36.0	34.2		52	24		CONS	119					
S-01A	36.0						UC		1390				
S-01B	28.5	52.2		58	11		CONS	99					
S-01B	28.5						UC		1700				
S-02	15.0	30.7		40	18		CONS	123.1					
S-02	15.0						UC		1110				
S-03	10.0	38		39	12		CONS	114					
S-03	10.0						UC		1980				
S-03	15.0	101		68	13		CONS	104					
S-03	15.0						UC		1500				
S-04	6.0	24.5					CONS	126.2					

Delaware Turnpike Improvements
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Table C-2b - Summary of Thin-Walled Tube Samples

Boring No.	Sample Depth (ft)	NMC (%)	Percent Passing No. 200	LL	PI	USCS	Test Method	Total Unit Weight (pcf)	Total Stress		Effective Stress		Undrained Shear (psf)
									Cohesion (psf)	Phi (deg)	Cohesion (psf)	Phi (deg)	
S-04	6.0	24.3					UC		1728				
S-04	25.5	18.2					CONS	129					
S-04	25.6	17.3					UU	133.72	2200	16	2000	19	
URS-1	24.0	30.4	86.6	48	24	CL	UC	134					
URS-1	24.5	33.5		48	24		CONS	126					
URS-2	72.0	24.6	90.7	51	24	CH	UU		663				
URS-2	82.0	22	93	50	19	MH	UU		5800				
URS-2	102.0	16.8	52.3	33	12	CL	UU		5871				
URS-3	35.0	26.1	98.6	40	18	CL	CONS	132.3					
URS-3	35.0	20.7	98.6	40	18	CL	UC	133.3					2366
URS-3	50.0	42.8					CONS	117					
URS-3	50.0	26.6	97.2	51	27	CH	UC	123.9					1204
URS-4	22.0	26.4	99.8	53	25	CH	CONS	123.9					
URS-4	35.0	26.9					CONS	131.2					
URS-5	35.5	29.9	97.4	55	25	MH	CONS						
URS-5	35.5						UC						1215
WS-1	25.5	25.7					CONS	124.2					
WS-1	25.6	25.9					UC	129.68	2297				
WS-1	40.0	18.9					CONS	130.55					
WS-1	40.1	19.1					UU	132.09	3500	1			
WS-2	30.0	27.1	93	64	29		UU	129.64	1700	4			
WS-2	30.1	25.1					CONS	124.56					

DELDOT THIN-WALLED TUBE SAMPLES ALL DE I95 GINT FILE.GPJ RKK_CURRENT.GDT 1/22/09

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Table C-2c - Summary of Consolidation Test Data

Boring No.	Sample Depth (ft)	Pc (tsf)	C_c	C_r	e_0	Max Cv (ft^2/day)	Min Cv (ft^2/day)	Total Unit Weight (pcf)	USCS
IBR-04	18	8.25	0.05	0.01	0.487	0.15	0	115.5	CL-ML
IBR-05	31.5	1.74	0.15	0.02	0.661	2	1	119	ML
IBR-15	19.5	1.63	0.22	0.06	0.772	0.015	0.003	96.9	CL
IBR-32	50	1.92	0.16	0.05	0.519	1.39	0.02	132.7	CL
IBR-52	16.5	1.1	0.18	0.07	0.678	0.22	0.02	126.9	CL
IBR-60	18	1.97	0.13	0.03	0.521	2.1	0.09	133	CL
IBR-60	46	1.23	0.16	0.04	0.602	1.11	0.01	132	CL
IBR-61	14	2.91	0.24	0.05	0.748	2.24	0.34	124	CL
IBR-61	59	0.69	0.22	0.06	0.839	0.26	0.03	123	CL
IEB-13A	15	2.51	0.12	0.02	0.554	3.78	0.23	77.8	CL
IEB-15	12	3.53	0.19	0.05	0.669	3.17	0.02	129.5	CL
IEB-15	31	5.29	0.17	0.05	0.527	1.1	0.01	132.8	CL
IEB-15	56	2.4	0.2	0.06	0.582	1.7	0.01	132.8	CL
IRW-09	35	3.92	0.11	0.03	0.536	2.8	0.2	110.9	OL
IRW-23	24.5	4.95	0.13	0.03	0.522	0.38	0.06	108.7	CL
IRW-32	25	3.34	0.14	0.04	0.545	0.024	0.005	114.2	CL
IRW-33	27	1.12	0.2	0.07	0.801	0.16	0.02	100.5	CL
IRW-33A	24	1.25	0.19	0.07	0.685	0.41	0.01	107.8	CL
IRW-42	30	3.96	0.18	0.04	0.541	0.022	0.001	114.7	CL
IRW-44	25	2.91	0.17	0.05	0.657	0.011	0	103.6	CL
IRW-49	30	5.1	0.09	0.03	0.475	0.03	0.008	113.4	CL
IRW-50	25	8.25	0.19	0.03	0.563	0.1	0	111.2	SM
IRW-51	25	1.94	0.23	0.09	0.64	0.2	0.03	105.8	CL
IRW-52	35	2.56	0.16	0.05	0.628	0.47	0.24	108.3	CL
IRW-53	15	1.96	0.15	0.04	0.539	0.32	0.04	107.6	CL
ML-43	25.5	0.6	0.105	0.105	0.78	0.16	0.095	128	CH
S-01	25	3.3	1.15	0.26	1.59	1.89	0.15	58	
S-01A	36	2.41	0.22	0.09	0.9628	0.46	0.13	119	
S-01B	28.5	7.8	0.48	0.08	0.8648	0.255	0.01	99	
S-02	15	2.1	0.2	0.065	0.7594	0.28	0.06	123.1	
S-03	10	4.53	0.26	0.06	0.9468	0.54	0.307	114	
S-03	15	4.23	0.5	0.095	1.2792	2.4	0.4	104	
S-04	6	2	0.076	0.013	0.604	3.9	1.6	126.2	
S-04	25.5	1.3	0.111	0.241	0.535	1.52	1.12	129	
URS-1	24.5	0.67	0.23	0.07	0.792	0.17	0.03	126	CL
URS-3	35	2.59	0.2	0.07	0.614	1.92	0.02	132.3	
URS-3	50	0.84	0.27	0.08	0.987	0.33	0.01	117	
URS-4	22	1.78	0.25	0.09	0.851	2.5	0.01	123.9	CH
URS-4	35	1.01	0.2	0.06	0.458	2.35	0.01	131.2	

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Table C-2c - Summary of Consolidation Test Data

Boring No.	Sample Depth (ft)	Pc (tsf)	C_c	C_r	e_0	Max Cv (ft^2/day)	Min Cv (ft^2/day)	Total Unit Weight (pcf)	USCS
URS-5	35.5	2.01	0.23	0.09	0.786	1.6	0.05	121	MH
WS-1	25.5	4.3	0.194	0.06	0.53	0.604	0.36	124.2	
WS-1	40	3.45	0.132	0.04	0.53	0.48	0.28	130.55	
WS-2	30.1	4.9	0.184	0.059	0.687	0.58	0.2	124.56	

Delaware Turnpike Improvements
SR 1 Interchange
Table C-3 - Summary of Groundwater Data

Boring No.	Boring Elevation	Boring Depth	Initial Reading (0 hr)		Final Reading (24 hrs or >)		Remarks
			GW Depth	Caved Depth	GW Depth	Caved Depth	
99-B-01	90.2	75.5	25.9		27.4		
99-B-02	86.9	80.5	DRY	23.3	24.9		
99-B-03	85.3	81	20		19.7		
99-B-04	64	75.5	0.5		0		
99-B-08	60.7	75	6.5				
99-B-09	83.7	75.5	12.3		18.3		
99-B-10	85.3	75.5	14.1		13.5		
99-B-11	62.3	30.5	2.2				
B-01	55	69.5	12	15			
B-02	60	85	14.75	20			
B-03	56	70	9.5	10			
B-05	77	64.5	3	5			
B-06	70	99.5	10	14.5			
B-07	79.3	35	8	10			
B-08	79.5	34.50131	8				
B-12	80	35	26	30			
B-14	65	40.5	12	15.5			
B-15	53	40.5	7	10.5			
B-16	52	34.5	15	19.5			
B-18	79	38.5	9	13.5			
H-1	63.1	60.5	49				
H-7	66	60.5	10				
HW-1	36	0	9				
HW-2	30	0	7.5				
IBR-01	60	100	13.9	26.5			
IBR-03	60	100.5	14	53	Well Installed at 39-ft		
IBR-03	60	100.5	4.3	5.9			
IBR-04	65	100.5	2	15			
IBR-05	66	99.5			Well Installed at 50-ft		
IBR-06	67	100.5	29.3	29.8			
IBR-07	64.4	101.5	2		2.5	20	
IBR-08	72	100.5	23	39	Well Installed at 49-ft		
IBR-09	76	100.5	4.6	100.5	13.5	66	
IBR-10	67.8	100	4	62			
IBR-12	69	100	28.1'	36'			
IBR-13	71	100	46	48	45	53.5	
IBR-13	71	100	8.1	8.3			
IBR-13A	70	100	39	56			
IBR-14	74	100.5	42	73.4	Well Installed at 50-ft		

Delaware Turnpike Improvements
SR 1 Interchange
Table C-3 - Summary of Groundwater Data

Boring No.	Boring Elevation	Boring Depth	Initial Reading (0 hr)		Final Reading (24 hrs or >)		Remarks
			GW Depth	Caved Depth	GW Depth	Caved Depth	
IBR-15	70	99.5	5.5	5.6	2	8	
IBR-16	70	99	33	66			
IBR-17A	80	100.5	16.7	17.4	5.2	13.3	
IBR-18	80	46.5	9	12			
IBR-19	77	100.5			Well Installed at 49-ft		
IBR-22	71	91.5	44	74			
IBR-24	87	100	Dry	13	Backfilled at Completion		
IBR-26	91	100.5	15.3	53.4	Well Installed at 50-ft		
IBR-26	91	100.5	18.3	48.1			
IBR-27	91.8	100.5	16.9	17			
IBR-28	89.7	76.5	Dry	16			
IBR-28A	91.9	50	Dry	14	Backfilled at Completion		
IBR-32	89	100	13.5	14	12.7	30.5	
IBR-33	88	100	13	17.5	11.6	20	
IBR-42A	89	100.5	14.4	14.5			
IBR-44	61.4	100	Dry	35.9			
IBR-48	38	100	11	19.7	15.3	27.4	
IBR-49	45	76	6.7	7.3	5.5	6.5	
IBR-50	46	74.3	Damp	16.5	Dry	16.5	
IBR-51	65	75	14.5	17.5	16.5	17	
IBR-52	57	75			11.5	12	
IBR-53	45	76	16.5	19	15	19.5	
IBR-54	44	73.8	14.9	22.5	0.25	12.5	
IBR-55	88	76	Damp	13.3	11	11.4	
IBR-56	88	76	Dry	8.4	12.5	22	
IBR-57	86	76	Dry	8.9	Dry	8	
IBR-58	89	75.5			Backfilled for Public Safety		
IBR-59	85	76	8	8.5	8.3	9.2	
IBR-60	86	75			11.4	11.4	
IBR-61	84	95			Backfilled for Public Safety		
IEB-03	64.9	40	27	32	Backfilled at Completion		
IEB-04	60.9	40	27	30	Backfilled at Completion		
IEB-13	85	40.5	Dry	13.2			
IEB-13A	84	40.5	36.9	39	9.6	24.8	
IEB-14	43	30	26.7	27.1			
IEB-15	83	99.4	11.8	18.3	Dry	15.8	
IRW-01	42	40	28.5	40.0			
IRW-02	43	38.5	13.0	14.5	14.9	22	
IRW-03	50	40	Dry	35	Backfilled at Completion		

Delaware Turnpike Improvements
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Table C-3 - Summary of Groundwater Data

Boring No.	Boring Elevation	Boring Depth	Initial Reading (0 hr)		Final Reading (24 hrs or >)		Remarks
			GW Depth	Caved Depth	GW Depth	Caved Depth	
IRW-04	46	40	21.0	23.0	Backfilled at Completion		
IRW-05	44	40	24.0	27.5	Backfilled at Completion		
IRW-06	53	40			Well Installed at 39-ft		
IRW-07	63	16.5	1	5	Backfilled at Completion		
IRW-07A	57	40	32.8	33	Backfilled at Completion		
IRW-08	60	40	Dry	31.0			
IRW-09	59	38.5	Dry	28.7	Dry	28.7	
IRW-10	57	40	29.0	32.0	13.0	16.5	
IRW-11	57	40	30.0	32.5	23	26.5	
IRW-12	61.4	40	Dry	34.5	26.5	30.5	
IRW-13	68	43	12.0		Dry	39	
IRW-14	73	40.5	24.5	32.2	10.2	12.6	
IRW-15	72	50		49.0	Well Installed at 49-ft		
IRW-16	61	40	7.3	7.5	6.3	15.0	
IRW-17	62	50.5	3	10	Backfilled at Completion		
IRW-18	63	49.5			Well Installed at 49.5-ft		
IRW-19	67	49.5	Dry	18	Backfilled at Completion		
IRW-20	65	50	25.2	47.9			
IRW-21	63	50.5	5	12	Backfilled at Completion		
IRW-22	62	50	8.0	40.0			
IRW-23	60	50	36.7	37			
IRW-25	62	50	Dry	41.3	2.0	24.2	
IRW-26	61	50	31.6	45	24	34	
IRW-27	77	40	24.6	29.8			
IRW-28	72	50	Dry	33.4	7.3	13.3	
IRW-29	72	50	6.8	6.8	5	7.0	
IRW-30	73	50	Dry	44.5	8.5	12.8	
IRW-31	75	50			Well Installed at 50-ft		
IRW-32	79	50	Dry	27.2	13.4	24.2	
IRW-33	79	50	Dry	50.0	Well Installed at 50-ft		
IRW-33A	80	45			Well Installed at 45-ft		
IRW-34	80	45	Dry	41.8			
IRW-35	73	45	Dry	5.6	Dry	2.5	
IRW-37	78	41.5	18	18.5	Backfilled at Completion		
IRW-39	93	45	Dry	35.0	28.8	31.0	
IRW-39A	93.3	50	32.0	41.7	15.9	27.0	
IRW-40	77	45	Dry	33.7	Dry	31.3	
IRW-41	81	45.5			Well Installed at 45-ft		
IRW-42	75	45	2.4	3.2	1.0	1.6	

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Table C-3 - Summary of Groundwater Data

Boring No.	Boring Elevation	Boring Depth	Initial Reading (0 hr)		Final Reading (24 hrs or >)		Remarks
			GW Depth	Caved Depth	GW Depth	Caved Depth	
IRW-44	81	45	33.6	34.5	10.0	21.6	
IRW-46	59	50	29.8	43.7			
IRW-47	61	56.5			Well Installed at 50-ft		
IRW-47A	60	49.5			Well Installed at 49.5-ft		
IRW-49	77	50	5.8	6.0	2.6	6.0	
IRW-50	77.7	50	32.8	40.0	5.2	31.3	
IRW-51	80	50	Dry	41.9	10.7	24.0	
IRW-52	88	50	Dry	42.9	15.2	33.5	
IRW-53	63.4	50	18.5	26			
IRW-61	65	50	DRY	44.0			
IRW-63	68	50	DRY	24.5			
IRW-64	90	50	13	15.9	12.7	15.5	
IRW-68	86	50	9.3	1.6			
IRW-70	85	50	9				
IRW-71	88.7	50	14.7	15.0			
IRW-72	90	50	15				
IRW-73	90	50	15				
IRW-74	90	50	18.5				
IRW-75	75	50	3				
IRW-76	85	50	15				
IRW-78	82	50	17.1	41.2			
IRW-79	81.3	50	14.6	15			
IRW-80	82	50	10.9	11.3			
IRW-81	83	50	12				
IRW-83	84	50	15				
IRW-85	90	60	27.5	28			
IRW-86	71	61	2.8	6.8	7	9.9	
IRW-87	74	61			7	12	
IRW-87	74	61			Backfilled for Safety		
IRW-88	74	61	Dry	3	Backfilled for Safety		
IRW-89	80	60					
IRW-90	77	60			Backfilled for Public Safety		
IRW-92	73	61	12.4	22	Backfilled for Safety		
IRW-93	69	60			Backfilled for Public Safety		
IRW-95	79	61	11	11.4	Wet	8.6	
IRW-96	73	61	Dry	3	Backfilled for Safety		
IRW-97	71	60	7.4	14.2	Backfilled for Public Safety		
ISC-03	27	20	DRY	12.5			
ISC-04	25	20	DRY	10.5			

Delaware Turnpike Improvements
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Table C-3 - Summary of Groundwater Data

Boring No.	Boring Elevation	Boring Depth	Initial Reading (0 hr)		Final Reading (24 hrs or >)		Remarks
			GW Depth	Caved Depth	GW Depth	Caved Depth	
ISC-06	26	20	DRY	10.5			
ISC-09	30	20	DRY	10.5			
ISC-103	87	40.5	10.3	13.8			
ISC-103A	85	40.5	10.7	11	10	11.2	
ISC-11	36	40.5	13.1	15.4			
ISC-115	104	52.5	DRY	4.9			
ISC-117	114	52.5	13.1	45.8			
ISC-118	82.1	60	8	9.8			
ISC-12	35	40.5	12.3	17.2			
ISC-14	32.3	40.5	16.5	39.3			
ISC-15	39	20	DRY	12.0			
ISC-16	39	40.5	21.2	35.7			
ISC-17	37	40.5	7.6	35.5			
ISC-19	36	20	Dry	17.5			
ISC-20	36	40	19	34.5	0	9	
ISC-21	35	40	18.9	36.8	0	7.1	
ISC-23	40	40	36.5	37.83	4.9	6.5	
ISC-24	33	40	15.5	24.9	0	6.8	
ISC-24A	58	40	Dry	32	Backfilled at Completion		
ISC-26	57.8	40	14	31.5			
ISC-31	43	40	18.5	20.0	Backfilled at Completion		
ISC-32	41	20	Dry	18.6			
ISC-33	40	40.5	DRY	37.6			
ISC-34	39	20	DRY	12.0			
ISC-35	60	40	Dry	31.5	26.7	27.9	
ISC-36	77	40	Dry	30.5	Backfilled at Completion		
ISC-37	65.8	40	Dry	30			
ISC-40	58	40	Dry	32.0	Dry	32.5	
ISC-41	64	40	Dry	32.9	9.6	13.5	
ISC-42	69	40	12.5	13.0	7.5	11.7	
ISC-43	69	40	Dry	31.7	21.5	25.0	
ISC-44	56	40	28.9	29.0			
ISC-49	71.6	40	7.4	11.3	5.0	9.5	
ISC-50	76	40	Dry	31.0	31.0	32.5	
ISC-51	78	40	Dry	31.0	12.8	14.0	
ISC-64	74.6	40.5	13.4	32.1			
ISC-65	71	40.5	DRY	35.1			
ISC-66	73	40.5	6.5	11.9			
ISC-67	78	40.5	6.6	34.7			

Delaware Turnpike Improvements
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Table C-3 - Summary of Groundwater Data

Boring No.	Boring Elevation	Boring Depth	Initial Reading (0 hr)		Final Reading (24 hrs or >)		Remarks
			GW Depth	Caved Depth	GW Depth	Caved Depth	
ISC-68	73	20	Dry	15.0	8.0	10.5	
ISC-69	75	40.5	11.5	36.1			
ISC-70	73	41.5	Dry	27	Backfilled at Completion		
ISC-71	86	40.5	Dry	29.5	9.8	25.5	
ISC-74	81	40.5	6.2	6.3	5.3	6.0	
ISC-76	76	40	10.3	29.9			
ISC-77	74	40	Dry	29.0			
ISC-86	96	40	DRY	17.5			
ISC-87	103	40	DRY	25			
ISC-90	105	40	DRY	26.5			
ISC-91	104	40	Dry	27			
ISC-94	88	40	12.5	13.5			
ISC-95	88.2	20	Dry	15.0	Dry	15.0	
ITP-02	92	15	DRY	14.5			
ITP-03	87	14.3	12.3	12.7			
ITP-04	80	8.4	7.9	8			
ITP-09	82	12.5	12.3	12.5			
ITP-12	130	75	DRY	61.6			
MA-01	18.7	28	12.0	26.0	10.3	17.0	
ML-01	87.8	31.5	Dry	6.0	Dry	6.0	
ML-02	87	61.5	17.6	20.4	11.4	13.7	
ML-03	87	58.5	Dry	53.6	Dry	54	
ML-05	87	31.5	14.1	14.1	12.0	12.5	
ML-06	85	61.5	Dry	10.7	10.5	15.7	
ML-07	85	61.5	14.8	15	12.8	13	
ML-08	74	30.5	3.9	4	Backfilled at Completion		
ML-09	72	29.5			1		Monitoring Well
ML-10	75	61.5	6.8	7.1	4.0	6.3	
ML-11	91	70.5	3	24.1	22.5	25	
ML-12	71	30.5	Dry	22	Backfilled at Completion		
ML-13	70	30	4.0	4.6	Backfilled at Completion		
ML-14	86	60	17.0				Monitoring Well
ML-15	95	70.5	28.9	29.5	30	30	
ML-16	68	30.5	3.2	24.6	Backfilled at Completion		
ML-17	63.2	30	Dry	24.5	Backfilled at Completion		
ML-18	94.4	60	32.5	34.1	Dry	27.7	
ML-19	87	61.5	8.7	8.9	11.3	13.0	
ML-20	73	40.5	29.5	38	11	13	
ML-20	73	40.5			10.3	12	

Delaware Turnpike Improvements
SR 1 Interchange
Table C-3 - Summary of Groundwater Data

Boring No.	Boring Elevation	Boring Depth	Initial Reading (0 hr)		Final Reading (24 hrs or >)		Remarks
			GW Depth	Caved Depth	GW Depth	Caved Depth	
ML-21	66	30	6.5	19.5	Backfilled at Completion		
ML-22	64	30	Dry	23.7	Backfilled at Completion		
ML-23	80	60.5	7.5	8.0	7.5	8.0	
ML-25	63	30	26	26.5	Backfilled at Completion		
ML-26	57	30.5	22.8	28.3	6	17.8	
ML-26	57	30.5			5	10	
ML-29	53	35.5	8.0	14.0	Backfilled at Completion		
ML-32	70	55.5	17.4	37.6			
ML-34	85	79.5			15.7		Monitoring Well
ML-43	50	40.5	2.7	4.0	Backfilled at Completion		
ML-45	86	79.5	35.0	36.0	23.0	45.2	
ML-48	81	79.5	40	73	26.5	43	Monitoring Well
ML-48	81	79.5			27.1		
ML-50	47	30	Dry	23	Backfilled at Completion		
ML-61	90	80			Dry	18	Monitoring Well
ML-61	90	80			29.1		
ML-64	87	80	72.9		71.9		Monitoring Well
ML-66	41	40					
ML-75	36	35	11.8	14.7	Backfilled at Completion		
ML-77	79	79.5	54	70.8	57	62	
ML-80	44.1	49.5	Dry	34.3	Dry	25.5	
ML-80	44.1	49.5			Dry	28	
ML-81	33	30	14	23.2	Backfilled at Completion		
ML-85	30	31	11.5	26.5	Backfilled at Completion		
ML-86	49	61.5					Monitoring Well
ML-87	8	61.5	3.4		4.2	21.5	
ML-89	89	61.5	14.6	14.6	13.3	13.5	
ML-90	79	61.5	8.1		8.6		Monitoring Well
ML-92	94	61.5	Dry	24.0	Dry	24.0	
ML-93	90	61.5	22.6	45.3	16.6	32.6	
P-01	78	0	7.5				
P-03	34	0	10				
P-04	34	0	14				
P-05	60	60.5	28.9	30.5			
S-01B	57	30.5	12.5				
S-02	50	69.5					
S-04	36.4	71.5					
SW-01	32	19.5	Dry	18.5'			
SW-03	40	20	19.2	19.2	.2	5.2	

Delaware Turnpike Improvements
SR 1 Interchange
Table C-3 - Summary of Groundwater Data

Boring No.	Boring Elevation	Boring Depth	Initial Reading (0 hr)		Final Reading (24 hrs or >)		Remarks
			GW Depth	Caved Depth	GW Depth	Caved Depth	
SW-04	38	20	18.3	19.1	.9	3.1	
SW-05	78.5	20	4.8	6.9			
SW-06	74	40.5	WET	7.5			
SW-07	78	40.5	WET	5.6			
SWM-01	48	25	Dry	6.8	6.4	9.5	
SWM-02	55	25			7	9.5	
SWM-03	88.8	26			Dry	13	
SWM-04	84.9	25	Dry	4.7	2.8	6.8	
URS-1	73	125.5	14.6		6	25	
URS-3	82	124.5	5.5	7.5	6		
URS-4	77	127	Dry	14.0	Damp	8.5	
URS-5	63	124.5	5.5	13.6	4	12.8	
WA-2	42	75.5	12.5	15.5			
WA-4	36.8	69.5	9.5				
WA-5	33.9	69.5	15				
WS-1	55	71.5	16.8	20.5			
WS-2	59	69.5	37	50			

Delaware Turnpike Improvements
SR1 Interchange
Table C-4a Summary of Groundwater Monitoring Data - Interchange

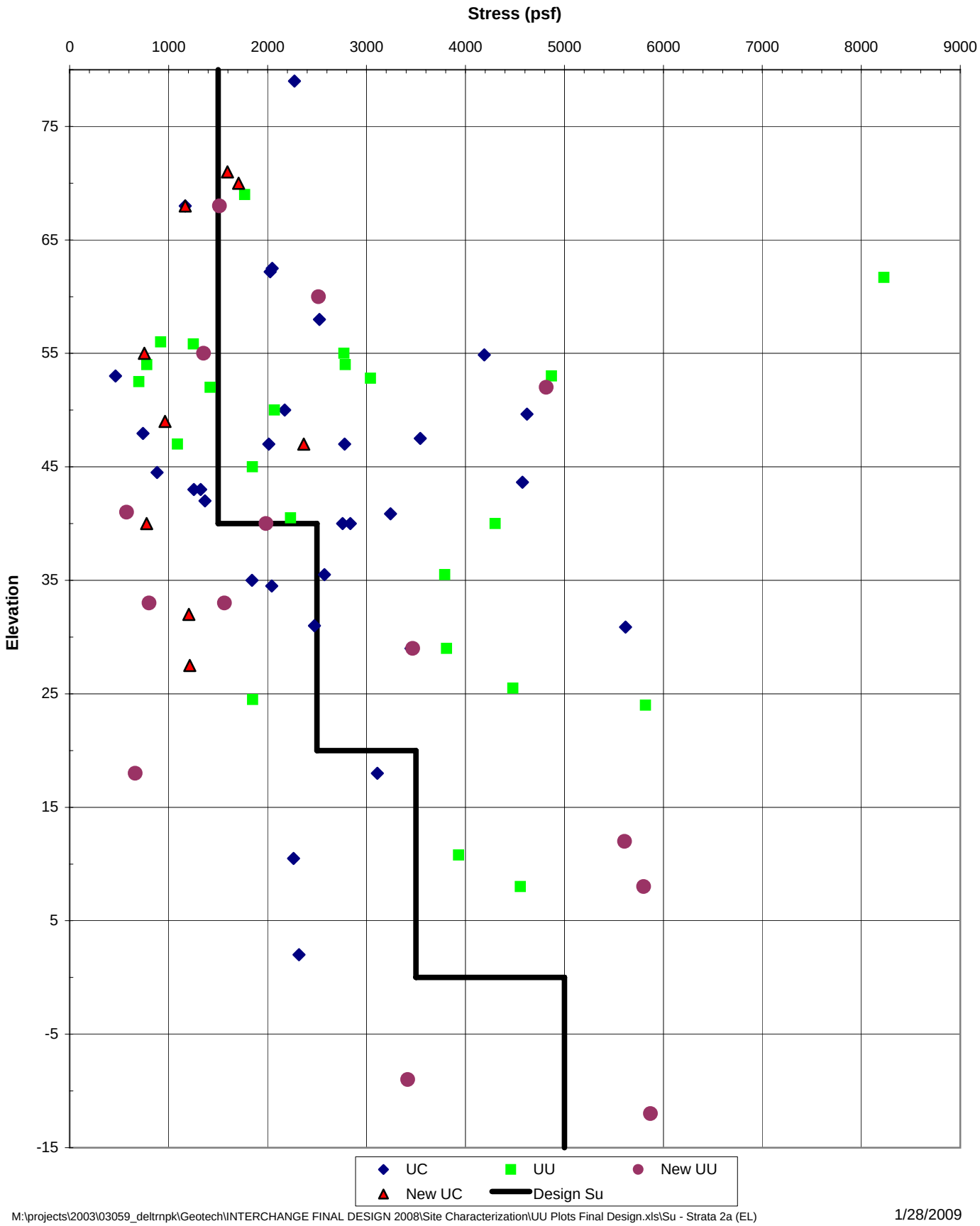
Monitoring Well / Boring No.	Date Completed	Surface Elevation	Well Depth	Initial Groundwater Depth	Reading Date / Depth (Ft)												
					2/8/2005	2/23/2005	3/1/2005	4/29/2005-GS	6/30/2008	7/1/2008	8/21/2008-GS	8/28/2008-GS	9/2/2008-GS	9/4/2008-GS	10/28/2008-GS	12/17/2008-GS	1/23/2009-GS
IBR-01	12/21/2004	46	50	13.9	36.3	36.4	33.9	33.5		36.8	34.6				34.4	34.5	34.6
IBR-03	10/28/2004	57	39	4.3	13.4	12.2		11.4	Lock Stuck	20.7	13.5				13.3	12.8	12.0
IBR-05	11/5/2004	65	50		34.6	34.6		32.5				32.6			32.1	32.3	32.4
IBR-08	10/22/2004	72	49	23	47.3	47.3		44.8	Lock Stuck		46.0				45.7	45.8	46.0
IBR-14	10/20/2004	74	50	42	42.5	42.5		40.3	41.2 (GS)		41.2				41.1	41.5	41.3
IBR-16	1/26/2005	70	50	33	41.8	41.4		40.2					37.5		36.3		38.0
IBR-19	11/10/2004	76	49		7.8	46.1		6.0			8.9				10.6	8.3	7.1
IBR-26	11/2/2004	92	49	18.3	17.9			15.4			17.4	17.4			18.1	18.4	18.3
IBR-26A	11/15/2004	91	40		15.7	15.3		12.0			14.5	14.6			15.3	15.5	15.0
IBR-43	2/16/2004	72	23.5			6.6							4.5		4.4		4.0
IEB-02	2/9/2005	51	40			23.5					24.3				25.0	25.1	24.6
IRW-01	12/10/2005	43	40	28.5	20.2						18.7				19.1	19.5	19.6
IRW-06	10/31/2004	53	39	28.5	20.9		20.9				21.0						21.4
IRW-15	10/13/2004	72	49		47.5	47.5		45.3	Lock Stuck		46.5				46.3	46.5	46.5
IRW-18	11/11/2004	62	49.5		37.4	37.3		34.7				36.0			35.9	35.9	35.7
IRW-24	12/28/2004	59	49		36.1	36.0		36.0					34.8		34.7	34.6	34.7
IRW-31	10/15/2004	75	50		50.9	50.8		48.0	51.5		49.1				49.1	49.2	49.1
IRW-33	10/21/2004	79	50	DRY	34.4	34.3		31.7	Lock Stuck		31.0				30.4	30.2	32.3
IRW-33A	10/22/2004	77	45		13.5	13.3		11.5	Lock Stuck		14.4				15.1	14.4	13.8
IRW-41	10/27/2004	82	45		12.9			11.4	Lock Stuck		11.7				12.3	11.4	11.2
IRW-45	12/8/2004	80	49		11.2	11.0			Lock Stuck		9.9				14.5	9.9	9.6
IRW-47	11/15/2004	59	50		33.6		33.6	33.3					Repaved				
IRW-47A	11/16/2004	80	49.5		36.6	36.6		34.1				34.6			34.4		34.6
IRW-49	10/19/2004	77	49	5.8	2.0		2.0				5.1		Repaved				
IRW-60	1/3/2005	60	51		33.0	32.6							31.8		31.5		31.8
IRW-62	1/7/2005	64	50		40.9	46.7							39.2		39.2		39.3
IRW-70	1/4/2005	77	50	9	15.4		12.3	12.1						14.7	15.0	14.5	14.4
IRW-73	12/20/2004	74	50	15	24.2		21.8	21.1						22.5	22.4	22.1	22.0
IRW-76	12/15/2004	89	50	15	32.2		29.8	29.9		34.1		32.1			32.1	31.9	31.8
IRW-81	12/16/2004	85	50	12	19.9		17.9	17.4		21.9		20.3			20.5	20.3	19.5
IRW-83	12/16/2004	84	49	15	29.7		27.4	29.1				31.4			31.7	32.0	32.0

Delaware Turnpike Improvements
Mainline
Table C-4b Summary of Groundwater Monitoring Data - Mainline

STATE OF DELAWARE
Department of Transportation

Monitoring Well / Boring No.	Date Completed	Surface Elevation	Well Depth	Reading Date / Depth (Ft)							
				11/23/2004	2/16/2005	4/29/2005-GS	9/2/2008-GS	9/4/2008-GS	10/29/2008-GS	12/17/2008-GS	1/23/2009-GS
ML-09	8/28/2004	74	28	0.75	0	0.0	Repaved				
ML-14	8/11/2004	85.3	58	17.32	17.39	17.4	20.2		20.6	20.1	18.6
ML-34	8/20/2004	84	40	27.2	14.92	14.6		15.4	18.3	18.0	17.4
ML-48	9/1/2004	81	40	27.2	26.76	27.0	27.4		27.5	27.8	28.0
ML-61	8/26/2004	88	40	27.93	24.27	23.5	23.3		23.7		22.9
ML-64	9/1/2004	84	80	54.18	65.79	65.8	67.7		68.0	68.0	68.0
ML-66	9/12/2004	37.5	39		22.62	x	Repaved				
ML-86	8/27/2004	47	40	27.2	26.74	27.0	40.4		28.9	28.6	28.2
ML-90	8/18/2004	79.1	30		7.6	Stuck Lock	12.7		13.0	10.7	10.9

Figure C-1
Summary of Undrained Shear Testing
Stratum 2a



M:\projects\2003\03059_deltrnpk\Geotech\INTERCHANGE FINAL DESIGN 2008\Site Characterization\UU Plots Final Design.xls\Su - Strata 2a (EL)

1/28/2009

Figure C-2
Stress History
Stratum IIa

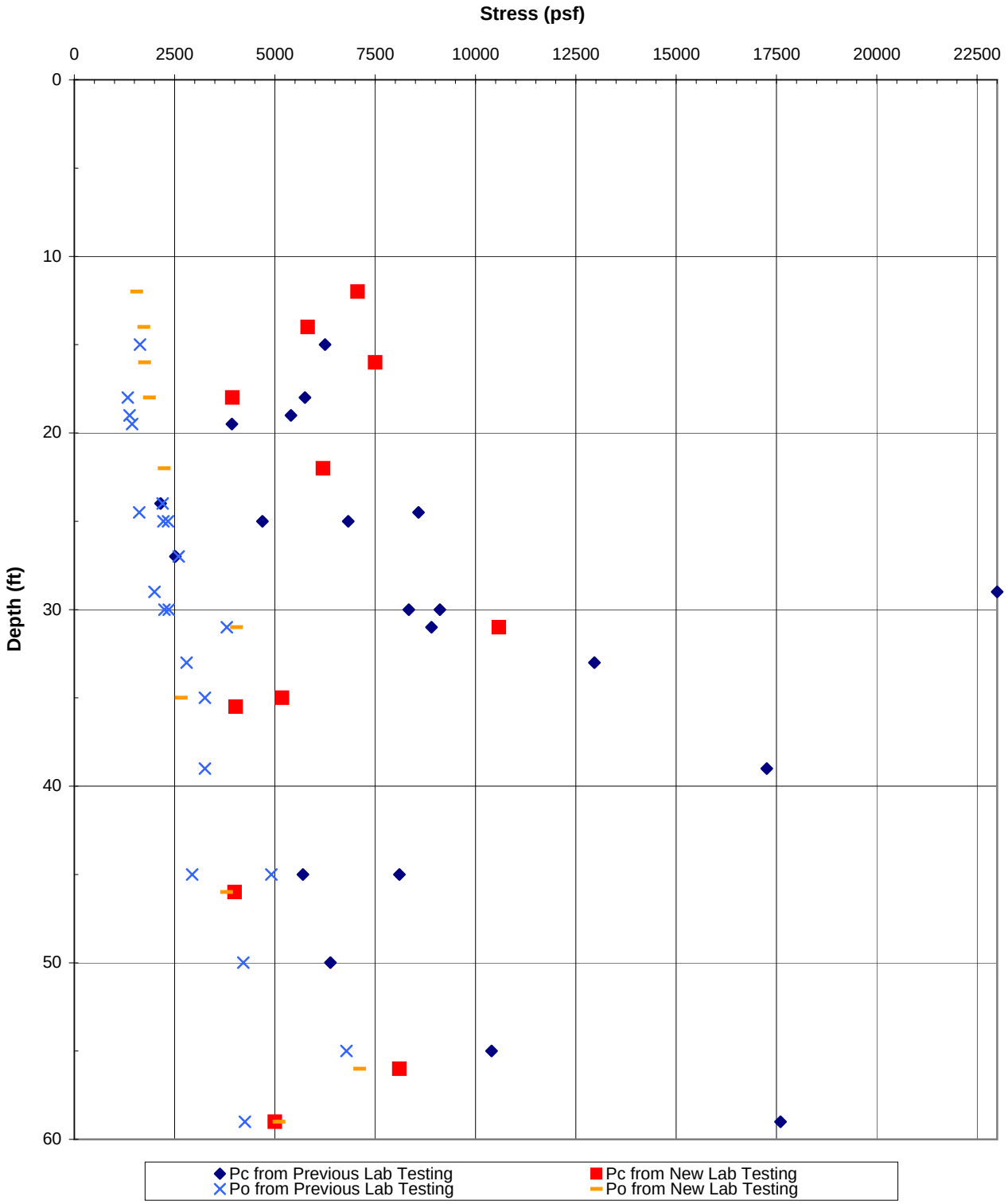


Figure C-3a
Summary of CU with Pore Pressure for External Stability Analysis
Effective Stress - Stratum IIa
EL 40 & Above

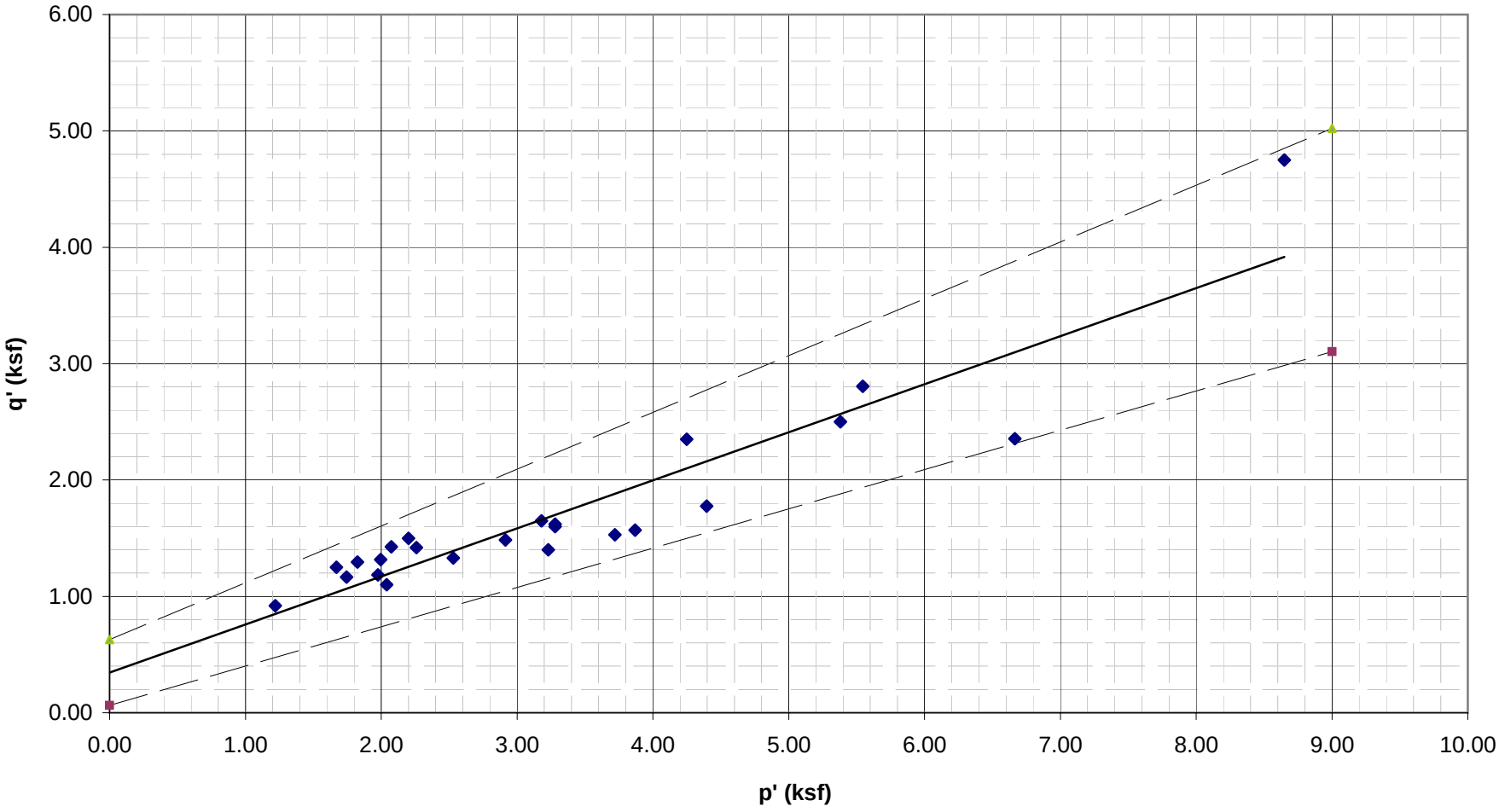


Figure C-3b
Summary of CU with Pore Pressure for Global Stability Analysis
Effective Stress - Stratum IIa
EL 40 & Above

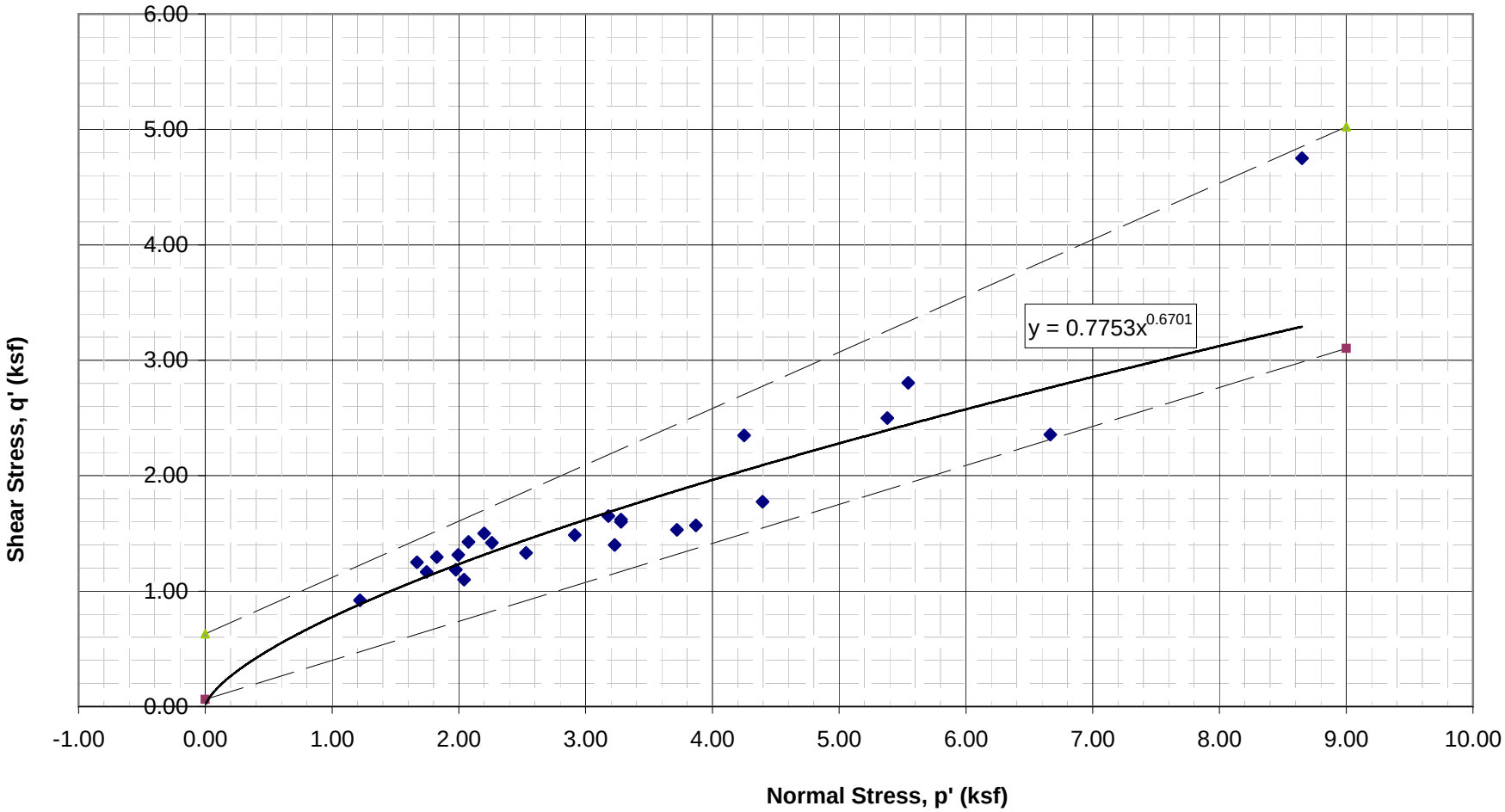


Figure C-5b
Drained Friction Angle vs. Plasticity Index

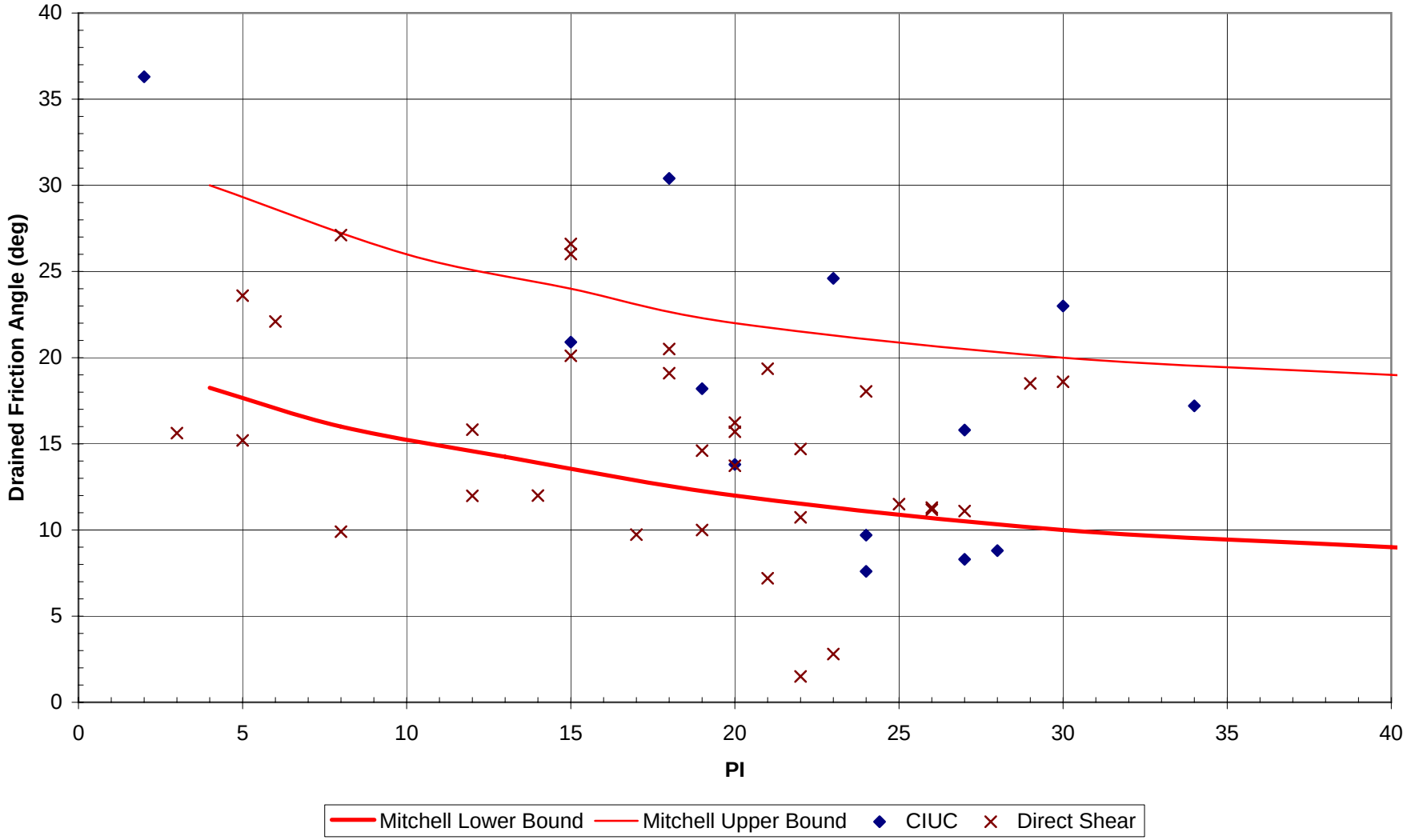


Figure C-4: Summary of Stratum IIa Stress History
Ramp R1 Bridge (Structure 7)

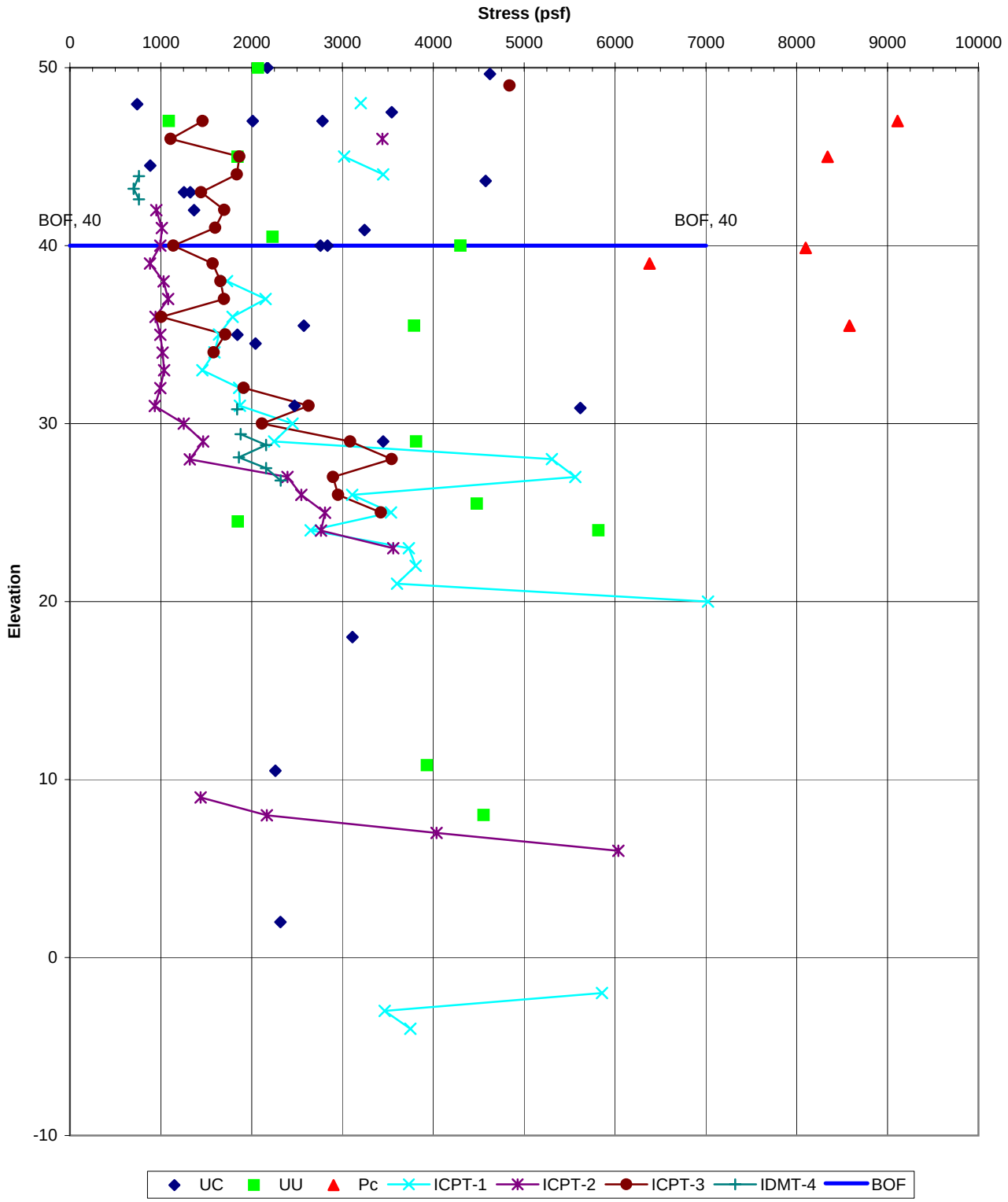
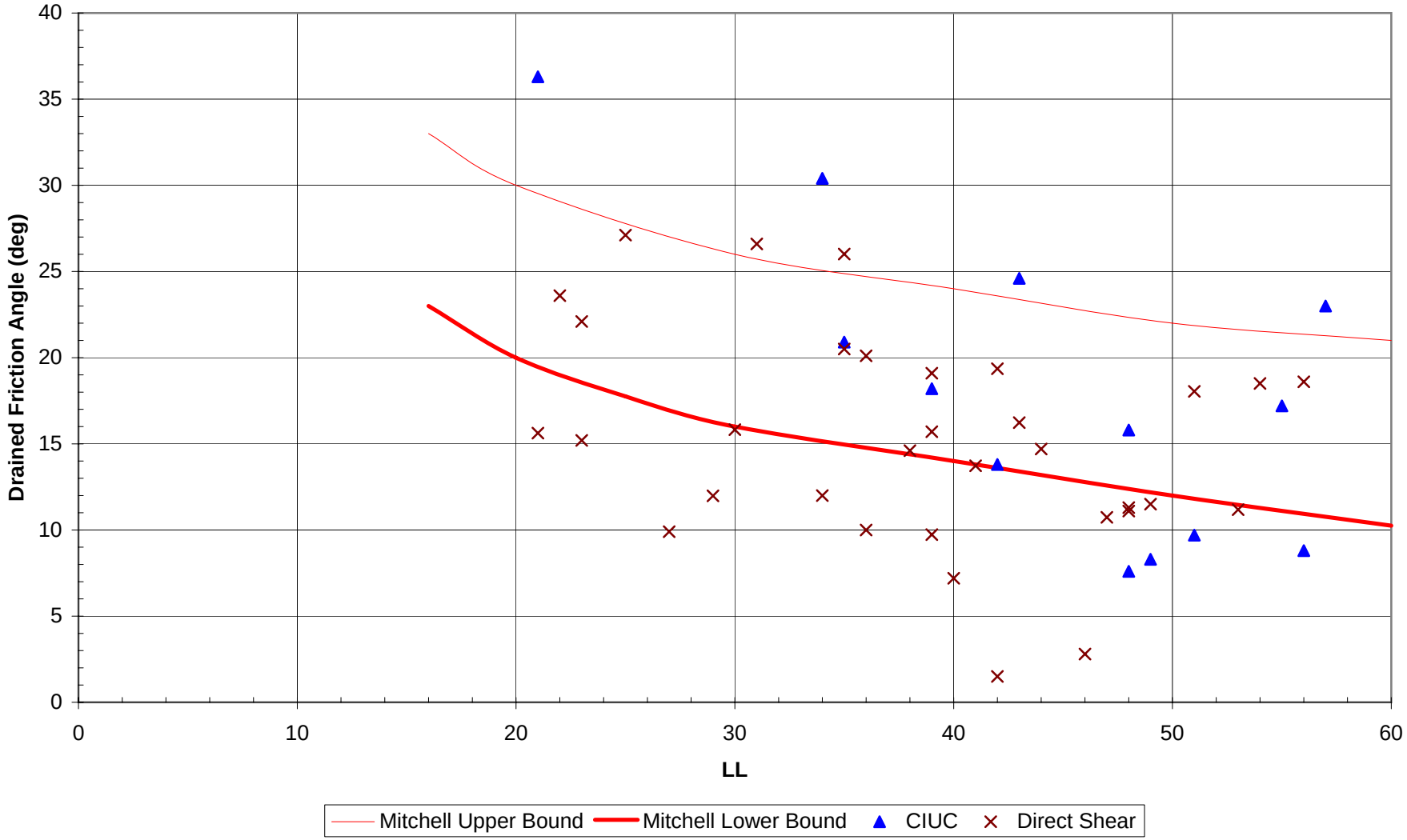


Figure C-5a
Drained Friction Angle vs. Liquid Limit



FIELD CLASSIFICATION SYSTEM FOR SOIL EXPLORATION

COHESIONLESS SOILS
(Silt, Sand, Gravel, and Combinations)

Density

Very Loose	4 blows/ft or less
Loose	5 to 10 blows/ft
Medium Dense	11 to 30 blows/ft
Dense	31 to 50 blows/ft
Very Dense	51 blows/ft or more

Relative Proportions

Descriptive Term	Percent
Trace	1 to 10
Little	11 to 20
Some	21 to 35
And	35 to 50

Particle Size Identification

Boulders		12 inches diameter or more
Cobbles		3 to 12 inch diameter
Gravel	Coarse:	3/4 to 3 inch diameter
	Fine:	1/4 to 3/4 inch diameter
Sand	Coarse:	2 mm to 1/4 inch (diameter of pencil lead)
	Medium:	0.425 to 2 mm (diameter of broom straw)
	Fine:	0.075 to 0.425 mm (diameter of human hair)
Silt		0.005 to 0.075 mm (Cannot see particles)

COHESIVE SOILS
(Clay, Silt, and Combinations)

Consistency

Very Soft	2 blows/ft or less
Soft	3 to 4 blows/ft
Medium Stiff	5 to 8 blows/ft
Stiff	9 to 15 blows/ft
Very Stiff	16 to 30 blows/ft
Hard	31 blows/ft or more

Plasticity

Degree of Plasticity	Plasticity Index
No to Slight	0 - 4
Slight	5 - 7
Medium	8 - 22
High to Very High	over 22

Soil Classifications on Test Boring Logs are made by visual-manual inspection of samples. Soil classification symbols using lower case letters are based on a visual-manual classification. Soil classification symbols using upper case letters are based on laboratory testing.

Standard Penetration Test - Driving a 2.0-inch OD, 1 3/8-inch ID sampler a distance of 1.0-foot into undisturbed soil with a 140-lb hammer free falling a distance of 30.0-inches. It is required to drive the spoon 6.0-inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating and making the test are recorded each 6.0-inches of penetration on the Test boring Log (Example 6-8-9, 8+9=17 blows/ft). (ASTM D-1586)

Strata Changes - In the column "Soil Descriptions" on the Test Boring Logs, the horizontal lines represent strata changes. A solid line represents an actually observed change, a dashed line represents an estimated change.

Ground Water - Observations were made at the time indicated. Porosity of soil strata, weather conditions, site topography, etc. may cause changes in the water levels indicated on the Test Boring Log.

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Consulting Engineers
81 Mosher Street
Baltimore, Maryland 21217-4250
(410) 728-2900

Title:			Figure No:
FIELD CLASSIFICATION SYSTEM FOR SOIL EXPLORATION			C-5
Drawn: JLT	**Approved:** EMK	**Date:** April 2004	**Comm No:** General

DELAWARE DEPARTMENT OF TRANSPORTATION
AASHTO CLASSIFICATION OF SOILS AND SOIL-AGGREGATE MIXTURES

General Classification	Granular Materials (35% or Less Passing 0.075 mm)							Silt-Clay Materials (More than 35% Passing 0.075 mm)					Organic Soils
Group Classification — **Group**	**A-1**		**A-3**	**A-2**				**A-4**	**A-5**	**A-6**	**A-7**		**A-8**
Sub-Group	**A-1-a**	**A-1-b**		**A-2-4**	**A-2-5**	**A-2-6**	**A-2-7**				**A-7-5**	**A-7-6**	
Graphic	A	B		4	5	6	7				5	6	
Sieve Analysis, % Passing													
2.00 mm (No. 10)	50 Max	-	-	-	-	-	-	-	-	-	-	-	See Note 1
0.425 mm (No. 40)	30 Max	50 Max	51 Min	-	-	-	-	-	-	-	-	-	
0.075 mm (No. 200)	15 Max	25 Max	10 Max	35 Max	35 Max	35 Max	35 Max	36 Min	36 Min	36 Min	36 Min	36 Min	
Characteristics of Fraction	-		-	-	-	-	-	-	-	-	-	-	See Note 1
Passing 0.425 mm (No. 40)	-		-	-	-	-	-	-	-	-	-	-	
Liquid Limit	-		-	40 Max	41 Min	40 Max	41 Min	40 Max	41 Min	41 Max	41 Min	41 Min	
Plasticity Index	6 Max		NP	10 Max	10 Max	11 Min	11 Min	10 Max	10 Max	11 Min	11 Min	11 Min	
Usual Types of Significant Constituent Materials	Stone Fragments, Gravel and Sand		Fine Sand	Silty or Clayey Gravel and Sand				Silty Soils		Clayey Soils			Organic Soils

Plasticity Index of A-7-5 Subgroup is Equal to or Less Than LL Minus 30

Plasticity Index of A-7-6 Subgroup is Greater Than LL Minus 30

Note 1-Classification Based on Visual Inspection and not on Sieve Analysis or Atterberg Limits