PROJECT REFERENCE NO.	SHEET NO.
R-4753	1C-4
Location and Surveys	

SURVEY CONTROL SHEET R-4753
-FINAL-

-L-

-FINAL- ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	15+50.00	-50.00	589805.26199	761304.38887
L	16+27.37	-50.00	589875.11230	761339.41467
L	18+32.97	-50.00	590057.99435	761437.68920
L	19+94.82	-50.00	590198.79054	761513.28933
L	21+82.72	-50.00	590366.10612	761598.81450
L	26+06.54	-50.00	590641.05233	761958.88723
L	26+61.08	-50.00	590652.21001	762012.27757
L	31+07.55	-50.00	590549.05932	762475.31491
L	33+30.00	-50.00	590415.43016	762653.15408
L	35+00.00	-95.00	590336.01105	762821.30604
L	36+00.00	-85.00	590246.28645	762888.30788
L	38+00.00	-75.00	590059.98200	762992.30358
L	38+02.42	-74.14	590057.44804	762992.70843
L	38+03.59	-98.62	590068.18292	763014.74117
L	39+19.62	-95.96	589965.16731	763068.18001
L	39+98.91	-94.77	589895.06341	763105.25242
L	41+21.21	-94.13	589786.66768	763163.67569
L	42+22.60	-100.44	589698.40768	763217.20917
L	42+51.94	-104.12	589673.52195	763234.09191
L	44+37.26	-37.05	589477.39491	763257.69302
L	44+67.47	-92.26	589475.19321	763320.59133
L	46+01.35	-50.00	589335.40265	763342.38007
L	48+65.62	-50.00	589094.03070	763453.94537
L	49+97.42	-50.00	588973.49325	763507.26610
L	50+94.04	-51.97	588884.85010	763547.77614
L	52+15.00	-50.00	588771.94216	763592.49345
L	52+73.98	-50.00	588717.42401	763614.98408
L	54+77.16	-50.00	588520.03837	763683.30277
L	60+58.84	-50.00	588152.14550	764038.23782
L	61+38.00	-50.00	588119.06120	764118.68323
L	62+58.00	-66.00	588058.01203	764238.57422
L	64+00.00	-50.00	587928.77993	764330.74146
L	65+01.31	-50.00	587829.90523	764381.73678
L	67+50.00	-59.00	587601.77878	764481.16581
L	69+12.39	-50.00	587447.37369	764532.24566
L	73+06.22	-50.00	587039.97542	764596.34212
L	74+34.44	-50.00	586912.01313	764588.30228
L	77+01.89	-50.00	586636.30723	764507.34018
L	77+41.74	-50.00	586601.49858	764487.93807
L	80+59.87	-50.00	586393.10809	764206.94831
L	81+90.61	-50.00	586365.34942	764079.19096
L	82+87.00	-50.00	586352.11835	763975.00898
L	85+00.00	-85.00	586340.59962	763751.84334
L	86+00.00	-60.00	586359.15745	763679.52403
L	87+15.00	-90.00	586294.53657	763624.35022
L	88+20.00	-108.00	586233.01739	763602.24525
L	89+80.00	-113.00	586145.17469	763599.29276
L	90+51.01	-50.00	586077.97335	763558.69029
L	92+47.72	-50.00	585906.90770	763655.82051
L	94+91.46	-50.00	585755.85209	763807.42746
L	98+32.07	-50.00	585517.50011	764076.11465
L	110+45.00	-50.00	584539.04678	764792.93166
L	122+57.61	-50.00	583560.85094	765509.56002
L	123+00.00	-50.00	583532.91095	765532.75316
L	126+50.00	-100.00	583492.30082	765796.96041
L	127+50.00	-140.00	583550.75471	765846.35457
L	128+47.00	-210.00	583635.27520	765846.52804
L	129+56.29	-50.00	583590.88659	766012.93721
L	132+21.81	-50.00	583822.21402	766143.26863
L	137+39.71	-50.00	584123.65920	766596.51728
L	137+39.71	-40.00	584113.72650	766597.67551
L	142+00.00	-40.00	584167.03891	767054.86824
L	142+00.00	-50.00	584176.97161	767053.71001
L	143+98.20	-50.00	584199.92736	767250.57232
L	150+63.03	-50.00	584117.34884	767927.68411
L	150+63.03	-20.00	584089.25805	767917.14915
L	154+51.00	-20.00	583953.02446	768280.41076
L	154+51.00	-50.00	583981.11403	768290.94527
L	154+85.03	-50.00	583969.16581	768322.80441
L	157+37.25	-50.00	583820.02650	768550.41422
L	163+70.68	-50.00	583365.05806	768991.13620
L	166+23.67	-50.00	583143.51465	769142.97300
L	167+64.97	-50.00	583015.20973	769202.15370
L	173+80.16	-50.00	582391.15582	769313.03342
L	181+15.71	-50.00	581657.98730	769253.89482
L	184+78.90	-50.00	581312.12656	769278.43731
L	192+23.25	-50.00	580586.06693	769442.45436
L	194+76.68	-50.00	580343.86902	769505.29173
L	201+02.18	-50.00	579743.69651	769681.47160

-L-

-FINAL- ROW MARKER IRON PIN AND CAP-E

L	209+52.69	-50.00	578902.89313	769852.32759
L	209+60.41	-50.00	578895.22544	769853.21658
L	213+19.67	-59.97	578539.50617	769904.48996
L	214+50.00	-56.80	578401.32183	769907.85668
L	214+50.00	60.02	578403.78069	769791.06485
L	213+19.67	60.04	578525.68600	769785.28844
L	210+41.20	50.00	578803.46389	769763.18552
L	209+52.69	50.00	578891.37632	769752.99299
L	201+02.18	50.00	579715.53012	769585.52029
L	194+76.68	50.00	580315.70264	769409.34042
L	192+23.25	50.00	580564.03214	769344.91223
L	184+78.90	50.00	581290.09176	769180.89518
L	181+15.71	50.00	581666.02735	769154.21856
L	173+80.16	50.00	582399.19588	769213.35716
L	167+64.97	50.00	582973.32547	769111.34781
L	166+23.67	50.00	583101.63039	769052.16711
L	163+70.68	50.00	583295.48087	768919.30992
L	157+37.25	50.00	583750.44932	768478.58793
L	154+85.03	50.00	583875.53390	768287.68938
L	150+63.03	50.00	584023.71692	767892.56908
L	143+98.20	50.00	584100.60038	767262.15466
L	137+39.71	50.00	584024.33222	766608.09962
L	132+21.81	50.00	583773.12790	766230.39241
L	129+56.29	50.00	583541.80047	766100.06099
L	127+97.00	50.00	583408.59697	765978.27742
L	126+96.00	78.00	583331.07430	765883.76830
L	126+37.00	82.00	583310.70641	765814.17808
L	119+20.00	96.00	583746.91321	765192.26305
L	119+20.00	50.00	583774.09836	765229.37056
L	110+45.00	50.00	584479.94877	764712.26304
L	98+32.07	50.00	585458.40211	763995.44603
L	97+30.81	50.00	585531.23135	763934.65347
L	95+95.19	50.00	585615.65100	763839.78546
L	94+91.46	50.00	585668.71268	763758.36910
L	92+47.72	50.00	585857.53220	763568.86041
L	90+51.01	50.00	586028.59784	763471.73019
L	89+37.00	50.00	586158.62277	763433.15710
L	88+87.00	95.00	586224.73851	763390.96792
L	88+17.00	145.00	586337.65436	763371.87993
L	87+65.00	145.00	586408.67775	763412.88775
L	86+72.00	96.00	586467.80314	763545.55662
L	86+08.00	50.00	586461.94733	763639.61658
L	83+96.48	50.00	586458.08380	763871.96351
L	81+90.61	50.00	586463.06938	764057.95871
L	80+59.87	50.00	586490.82806	764185.71605
L	77+41.74	50.00	586650.18549	764400.59058
L	77+01.89	50.00	586684.99414	764419.99268
L	74+34.44	50.00	586918.28375	764488.49907
L	73+06.22	50.00	587046.24603	764496.53892
L	69+12.39	50.00	587410.76028	764439.18945
L	65+01.31	50.00	587793.29182	764288.68057
L	60+58.84	50.00	588056.94295	764007.63597
L	56+72.00	50.00	588302.53938	763676.68199
L	56+72.00	30.00	588313.91384	763693.13257
L	54+77.16	30.00	588498.30239	763606.31220
L	52+77.23	29.61	588684.10771	763542.60682
L	51+48.72	29.81	588802.77994	763493.43519
L	49+97.42	32.08	588940.29047	763432.19982
L	48+65.62	33.29	589060.33495	763377.77238
L	43+97.93	28.89	589482.91981	763181.11484
L	43+96.28	30.00	589483.89272	763179.38273
L	42+81.88	30.00	589586.11001	763128.00216
L	41+70.40	30.00	589684.74901	763077.26693
L	41+68.01	50.00	589677.52592	763058.46740
L	40+67.77	50.00	589765.08976	763011.41216
L	37+27.62	50.00	590063.35843	762847.90221
L	36+00.00	50.00	590162.86293	762782.16873
L	36+00.00	40.00	590169.04245	762790.03089
L	33+98.30	40.00	590302.45138	762653.69026
L	31+07.55	40.00	590477.10786	762421.25025
L	28+77.00	40.00	590564.18885	762228.75275
L	28+54.00	50.00	590558.19254	762206.25550
L	26+61.08	50.00	590554.32469	762032.73396
L	26+06.54	50.00	590543.16701	761979.34362
L	21+82.72	50.00	590320.59151	761687.85618
L	19+94.82	50.00	590153.27592	761602.33100
L	18+31.51	50.00	590007.62072	761524.08741
L	18+31.51	45.87	590009.64353	761520.48873
L	16+27.37	50.00	589829.59768	761428.45635
L	15+50.00	50.00	589761.13055	761394.12413

-Y1REV-

-FINAL- ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1REV	10+00.00	15.00	589632.20800	763263.65606
Y1REV	10+77.49	15.00	589570.34112	763310.31237
Y1REV	11+21.20	15.00	589535.40773	763334.78914
Y1REV	11+21.20	30.00	589527.23505	763322.21110
Y1REV	11+43.88	30.00	589508.92141	763333.64345
Y1REV	11+79.67	-30.00	589487.74627	763397.36477
Y1REV	12+51.00	-30.00	589416.63106	763391.86829

-Y2-

-FINAL- ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	11+00.00	24.52	588854.77961	763611.47752

-Y3A-

-FINAL- ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y3A	10+68.88	-30.00	583306.20275	765744.49976
Y3A	11+40.74	-30.00	583272.78134	765644.60950
Y3A	12+46.77	-30.00	583313.65518	765546.77028
Y3A	14+23.66	-30.00	583435.79865	765398.93767
Y3A	17+85.92	-30.00	583737.72989	765198.75612

PDE

-FINAL- ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	23+40.00	-50.00	590505.09720	761701.88758
L	23+40.00	-95.00	590537.49230	761670.65367
L	23+85.00	-95.00	590573.07693	761711.24373
L	23+85.00	-50.00	590537.87252	761739.27317
L	46+55.00	-65.00	589293.12552	763379.22009
L	48+00.00	-64.00	589160.07358	763439.74275
L	49+60.00	-50.00	589007.71737	763492.12678
L	49+60.00	-60.00	589011.76282	763501.27196
L	50+05.00	-60.00	588970.53825	763519.50270
L	50+05.00	-50.10	588966.54470	763510.44392
L	137+39.71	-60.00	584133.59190	766595.35905
L	137+58.00	-60.00	584135.71037	766613.52651
L	137+58.00	-40.00	584115.84498	766615.84298
L	160+00.00	-50.00	583631.30486	768733.22640
L	160+00.00	-75.00	583648.69916	768751.18297
L	160+36.00	-75.00	583622.84170	768776.23076
L	160+36.00	-50.00	583605.44740	768758.27419
L	168+20.00	-50.00	582962.62498	769224.96125
L	168+39.00	-85.00	582956.90576	769264.89820
L	168+69.00	-88.00	582927.83398	769278.97666
L	168+69.00	-50.00	582914.96539	769243.22195
L	186+30.00	-50.00	581164.73977	769311.73202
L	186+30.00	-66.00	581168.26534	769327.33876
L	186+57.00	-66.00	581141.92896	769333.28816
L	186+57.00	-50.00	581138.40340	769317.68141
L	209+36.00	50.00	578907.79100	769751.06210
L	209+36.00	70.00	578905.42131	769731.20298
L	209+10.00	70.00	578930.86872	769728.09935
L	209+10.00	50.00	578933.34164	769747.94587
L	202+20.00	50.00	579603.23165	769617.05310
L	201+65.00	149.00	579629.05636	769507.32817
L	200+70.00	196.00	579705.28190	769436.36814
L	200+57.00	170.00	579725.07883	769457.65385
L	201+40.00	128.00	579658.15926	769520.92493
L	201+85.00	50.00	579636.66783	769607.96248
L	192+15.00	50.00	580572.08350	769343.09342
L	192+15.00	75.00	580566.57480	769318.70789
L	191+68.00	75.00	580612.41960	769308.35154
L	191+68.00	50.00	580617.92830	769332.73707
L	190+05.00	50.00	580776.92198	769296.82036
L	190+05.00	58.00	580775.15919	769289.01699
L	189+75.00	58.00	580804.42183	769282.40655
L	189+75.00	50.00	580806.18462	769290.20992
L	186+60.00	50.00	581113.44234	769220.80032
L	186+60.00	73.00	581108.37434	769198.36563
L	186+25.00	73.00	581142.51409	769190.65346
L	186+25.00	50.00	581147.58209	769213.08815
L	178+45.00	50.00	581935.86005	769175.98371
L	178+45.00	60.00	581936.66406	769166.01609
L	176+93.00	70.00	582088.97598	769168.26934
L	176+93.00	50.00	582087.36797	769188.20460
L	170+45.00	50.00	582718.78712	769194.42732
L	170+45.00	65.00	582715.82455	769179.72279
L	170+20.00	65.00	582738.95428	769174.81151
L	170+20.00	50.00	582742.22253	769189.45113
L	168+61.00	50.00	582888.30564	769146.51028
L	168+61.00	75.00	582879.68284	769123.04441
L	168+10.00	70.00	582926.11983	769110.22040
L	168+10.00	50.00	582933.80945	769128.68306
L	160+45.00	50.00	583529.40585	768692.70985
L	160+45.00	70.00	583515.49041	768678.34459
L	160+08.00	68.00	583543.45768	768654.03756
L	160+08.00	50.00	583555.98158	768666.96629
L	154+36.00	50.00	583892.74937	768241.78546
L	154+36.00	79.00	583865.59612	768231.60210
L	153+98.00	79.00	583878.93983	768196.02197
L	153+98.00	50.00	583906.09308	768206.20533
L	150+25.00	50.00	584036.12717	767858.05942
L	150+25.00	60.00	584026.67205	767854.80355

PUE

-FINAL- ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	29+76.00	-50.00	590620.35186	762350.54328
L	29+76.00	-70.00	590638.82081	762358.21777
L	29+95.00	-68.00	590628.38205	762377.11506
L	29+95.00	-50.00	590612.02079	762369.61112
L	105+37.00	-50.00	584948.84330	764492.71385
L	105+15.00	-219.00	585066.46602	764616.04226
L	105+55.00	-224.00	585037.15347	764643.71489
L	105+78.00	-50.00	584915.76916	764516.94403
L	165+22.00	-50.00	583238.62029	769091.02233
L	165+67.00	-223.00	583281.51331	769266.77951
L	165+97.00	-213.00	583242.62516	769276.09135
L	165+60.00	-50.00	583203.90838	769111.94321
L	99+80.00	50.00	585339.06957	764082.86931
L	99+80.00	60.00	585333.15977	764074.80245
L	99+59.00	62.00	585348.91821	764060.77850
L	99+59.00	50.00	585356.00998	764070.45873
L	57+61.00	50.00	588227.56608	763737.34442
L	58+14.00	83.00	588162.85804	763756.69283
L	57+62.00	96.00	588195.17656	763704.66140
L	25+29.00	50.00	590523.50771	761912.89149
L	25+29.00	62.00	590512.31656	761917.22255
L	25+04.00	64.00	590502.11690	761897.98559
L	25+04.00	50.00	590514.88935	761892.25282

DUE

-FINAL- ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	164+19.00	50.00	583262.10124	768949.62253
L	164+19.00	127.00	583212.19857	768890.98190
L	164+87.00	152.00	583153.16998	768905.16242
L	165+30.00	50.00	583178.53123	769010.69164

PDE

-FINAL- ROW MARKER PERMANENT EASEMENT-E

L	149+80.00	60.00	584040.03872	767813.86065
L	149+80.00	50.00	584049.59359	767816.81098
L	137+70.00	50.00	584027.84057	766638.18632
L	137+39.71	55.00	584019.36587	766608.67873
L	126+96.00	109.00	583301.59021	765893.34371
L	126+75.00	109.00	583293.87420	765866.91101
L	126+75.00	78.02	583323.86006	765859.12585
L	116+06.00	50.00	584027.39782	765043.80284
L	116+06.00	60.00	584021.48802	765035.73597
L	115+86.00	60.00	584037.62175	765023.91637
L	115+86.00	50.00	584043.53155	765031.98323
L	112+47.00	50.00	584316.99816	764831.64101
L	112+47.00	73.00	584303.40562	764813.08722
L	112+22.00	73.00	584323.57278	764798.31272
L	112+22.00	50.00	584337.16532	764816.86650
L	105+76.00	50.00	584858.28460	764435.09341
L	105+76.00	69.00	584847.05598	764419.76637
L	105+40.00	72.00	584874.32374	764396.07103
L	105+40.00	50.00	584887.32530	764413.81813
L	98+60.00	50.00	585435.87191	764011.95171
L	98+60.00	84.00	585415.77859	763984.52438
L	98+32.07	82.00	585439.49075	763969.63207
L	91+08.00	50.00	585979.03652	763499.87086
L	91+08.00	59.00	585974.59273	763492.04445
L	90+91.00	60.00	585988.88219	763482.78101
L	90+91.00	50.00	585993.81974	763491.47702
L	84+90.00	50.00	586473.04266	763779.46636
L	84+90.00	64.00	586486.87085	763781.65297
L	84+70.00	64.00	586483.64339	763801.61945
L	84+70.00	50.00	586469.82300	763799.38410
L	82+70.00	50.00	586452.87991	763986.57160
L	82+70.00	80.00	586482.80726	763984.48514
L	82+32.00	80.00	586486.18252	764016.77549
L	82+32.00	50.00	586456.47060	764020.92302
L	71+42.00	50.00	587201.06886	764492.12706
L	71+42.00	65.00	587199.27728	764477.23444
L	71+18.00	65.00	587221.34648	764474.28051
L	71+18.00	50.00	587223.53451	764489.12007
L	70+29.00	50.00	587305.94979	764472.77071
L	70+29.00	90.00	587296.23668	764433.96793
L	70+10.00	90.00	587312.77981	764429.64079
L	70+10.00	50.00	587323.30986	764468.22989
L	66+15.00	50.00	587687.49604	764330.30643
L	66+15.00	62.00	587683.10243	764319.13969
L	65+92.00	62.00	587704.50535	764310.71860
L	65+92.00	50.00	587708.89896	764321.88534
L	62+70.00	50.00	587962.85913	764171.13072
L	62+70.00	73.00	587945.77121	764155.73582
L	62+46.00	73.00	587959.11951	764140.18483
L	62+46.00	50.00	587976.92640	764154.74212
L	31+45.00	40.00	590454.61160	762451.18920
L	31+45.00	47.00	590449.01537	762446.98417
L	31+20.00	47.00	590464.03333	762426.99765
L	31+20.00	40.00	590469.62956	762431.20268
L	30+62.00	40.00	590500.89616	762386.55478
L	30+62.00	44.00	590497.50213	762384.43806
L	30+43.00	44.00	590506.44466	762369.50409
L	30+43.00	40.00	590509.91306	762371.49663
L	28+77.00	48.00	590556.35678	762227.12222
L	28+54.00	55.00	590553.25756	762205.45177
L	26+61.08	60.00	590544.53591	762034.77841
L	26+06.54	60.00	590533.37847	761981.38926
L	23+84.00	50.00	590459.08245	761800.86143
L	23+84.00	83.00	590433.30921	761821.47066
L	23+31.00	90.00	590399.19983	761793.85664
L	23+31.00	50.00	590427.46429	761765.55257
L	20+04.00	50.00	590161.44901	761606.50876
L	20+04.00	65.00	590154.62617	761619.86724
L	19+83.00	65.00	590135.76454	761610.20599
L	19+83.00	50.00	590142.63115	761596.86997

PDE

-FINAL- ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y3A	17+52.00	-30.00	583709.45904	765217.49980
Y3A	17+28.00	-86.00	583658.51133	765184.08827
Y3A	17+65.00	-100.00	583681.61304	765151.97423

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "R4753 GPS108" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 584298.1040(ft) EASTING: 767738.1110(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977445 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "R4753 GPS108" TO -L- STATION 15+50.00 IS N 49°21′09.2″ W 8,420.43′ ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM IS BASED ON NGS BENCHMARK N508 (ELEV 2144.97 FT.) (NAVD 88)

GEOID MODEL – GEOID03

NOTE: DRAWING NOT TO SCALE

NOTES:

1. *THE SITE CALIBRATION SHOWN IS BASED UPON A NETWORK TIED TO THE HARN (HIGH ACCURACY REFERENCE NETWORK) NAD 83/95 ADJUSTMENT. THIS CALIBRATION WILL ALLOW THE END USER TO WORK WITHIN THE SAME COORDINATE SYSTEM WHEN USING RTK (REAL TIME KINEMATIC) GPS AND A LOCAL BASE STATION. IF ANOTHER SYSTEM SUCH AS VRS (VIRTUAL REFERENCE STATION) IS USED, ADDITIONAL FIELD TIES MAY BE NEEDED TO REDUCE POSSIBLE ERRORS, OR BIASES.*

2. *THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:*
   HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/

   THE FILES TO BE FOUND ARE AS FOLLOWS:
   R4753_LS_GPSCALIB.HTML
   R4753_LS_WGS84.TXT
   R4753_LS_LOCAL.TXT
   R4753_LS_CONTROL.TXT

   THE WGS84 AND LOCAL FILES ARE COMMA DELIMITED AND CAN BE USED TO REPRODUCE THE SITE CALIBRATION FOR THE END USER'S GPS EQUIPMENT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM EXISTING HARN MONUMENTATION
SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.