

SURVEY CONTROL SHEET U-3338-B

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL10	BL-10	176751.6070	2336376.3996	36.02	11-16.83	31.22 LT
BL11	BL-11	177283.2704	2336260.7555	37.05	16-60.93	31.83 LT
U33381	U3338-1	176940.5726	2333752.3135	28.77	18-56.41	2556.01 LT
BL12	BL-12	177901.0270	2336136.0089	36.54	22-91.09	23.12 LT
BL13	BL-13	178315.5855	2336069.9919	36.25	27-10.16	0.00 LT
BL14	BL-14	178704.5974	2335984.9549	34.10	31-08.43	0.84 LT
BL15	BL-15	179338.2014	2335872.6590	36.62	37-51.46	23.38 RT
BL16	BL-16	179612.7201	2335786.5225	36.80	40-37.98	2.75 LT
FRANKLINI	NCGS FRANKLIN	179887.5296	2335751.4725	39.58	43-13.99	21.10 RT
BL17	BL-17	180082.4922	2335683.7889	39.32	45-18.85	3.83 LT
BL18	BL-18	180571.0904	2335577.4395	38.98	50-18.89	4.46 LT
KEERR1	NCGS KEERR	181239.1825	2335403.2979	40.46	57-03.49	43.77 LT
BL19	BL-19	181886.5648	2335493.6304	37.42	63-49.18	26.00 RT
BL20	BL-20	182247.5226	2335454.4098	36.85	67-07.81	30.63 LT
BL21	BL-21	182587.9705	2335476.6217	35.94	70-48.94	24.90 LT
BL22	BL-22	183315.8606	2335566.0821	36.16	77-00.30	29.27 RT
BL31	BL-31	183475.4431	2335513.8465	35.19	79-37.17	30.62 LT
BL23	BL-23	183978.9100	2335537.5822	32.33	84-41.20	31.25 LT
CAMA1	NCGS CAMA	183540.3786	2346038.5285	40.92	85-10.81	10478.6184 RT
BL24	BL-24	184622.0398	2335573.0594	29.94	90-85.29	25.90 LT
BL25	BL-25	184925.6892	2335576.1580	29.87	93-88.74	38.49 LT
U33383	U3338-3	185305.8906	2332347.7416	32.81	96-12.43	3281.5100 LT
U33384	U3338-4	185868.4900	2331254.2131	29.41	101-13.51	4400.5703 LT
U33385	U3338-5	185575.2836	2338177.2299	18.67	101-63.31	2528.1399 RT
U33386	U3338-6	185689.8529	2339349.6781	19.01	103-34.42	3693.8788 RT
ILMA1	NCGS ILM A	189756.6495	2332699.6837	26.29	OUTSIDE PROJECT LIMITS	
ILMB1	NCGS ILM B	189210.8582	2335309.7000	8.48	OUTSIDE PROJECT LIMITS	

BL POINT	DESC.	NORTH	EAST	ELEVATION	Y STATION	OFFSET
BL10	BL-10	176751.6070	2336376.3996	36.02	11-61.16	3.73 RT

BL POINT	DESC.	NORTH	EAST	ELEVATION	YA STATION	OFFSET
BL10	BL-10	176751.6070	2336376.3996	36.02	OUTSIDE PROJECT LIMITS	

BY POINT	DESC.	NORTH	EAST	ELEVATION	Y1 STATION	OFFSET
U33382	U3338-2	176815.3425	2334862.2876	32.97	OUTSIDE PROJECT LIMITS	
BY8	BY-8	176968.1864	2335246.6047	30.85	OUTSIDE PROJECT LIMITS	0.00
BY9	BY-9	177147.7303	2335625.2314	29.96	11-53.72	0.00
BY10	BY-10	177239.0001	2335839.3391	30.68	13-87.32	3.04 RT
BY11	BY-11	177283.2704	2336260.7555	37.01	18-07.93	61.62 RT
BY12	BY-12	177410.9902	2336536.0185	37.38	21-05.26	0.42 RT
BY13	BY-13	177456.9654	2336819.5654	38.56	23-92.70	0.77 RT
BY14	BY-14	177466.5947	2337325.7463	39.11	28-99.76	0.00

BY1 POINT	DESC.	NORTH	EAST	ELEVATION	Y2 STATION	OFFSET
BY113	BY1-13	178315.5855	2336069.9919	36.24	10-00.00	0.00 RT
BY116	BY1-16	178440.8101	2337049.3797	38.10	OUTSIDE PROJECT LIMITS	

BY2 POINT	DESC.	NORTH	EAST	ELEVATION	Y3 STATION	OFFSET
BY217	BY2-17	178396.7494	2334570.6595	35.00	OUTSIDE PROJECT LIMITS	
BY214	BY2-14	178704.5974	2335984.9549	34.10	15-87.33	0.00

BY3 POINT	DESC.	NORTH	EAST	ELEVATION	Y4 STATION	OFFSET
BY316	BY3-16	179612.7201	2335786.5225	36.79	OUTSIDE PROJECT LIMITS	
BY318	BY3-18	179744.5960	2336332.9834	39.37	OUTSIDE PROJECT LIMITS	

BY4 POINT	DESC.	NORTH	EAST	ELEVATION	Y5 STATION	OFFSET
BY419	BY4-19	179916.2760	2335115.8837	39.02	10-00.00	0.00
BY417	BY4-17	180082.4922	2335683.7889	39.31	15-90.45	38.83 LT

BY5 POINT	DESC.	NORTH	EAST	ELEVATION	Y6 STATION	OFFSET
BY521	BY5-21	181012.9273	2334380.9279	39.80	OUTSIDE PROJECT LIMITS	
BY522	BY5-22	181116.1538	2334898.0723	40.49	15-07.60	34.71 LT
AKERR1	NCGS KERR	181239.1825	2335403.2979	40.46	20-27.44	47.11 LT
BY523	BY5-23	181348.8224	2335906.5590	40.88	25-42.34	46.06 LT
BY524	BY5-24	181461.3014	2336441.2464	41.33	30-68.68	42.65 LT

BY6 POINT	DESC.	NORTH	EAST	ELEVATION	Y7 STATION	OFFSET
BY625	BY6-25	182142.7349	2335226.1642	36.89	11-26.07	30.97 LT
BY620	BY6-20	182247.5226	2335454.4098	36.84	13-73.53	0.52 RT

BY7 POINT	DESC.	NORTH	EAST	ELEVATION	Y8 STATION	OFFSET
BY726	BY7-26	182637.3357	2335042.5902	35.96	10-00.00	0.00
BY721	BY7-21	182587.9705	2335476.6217	35.94	14-35.92	28.21 RT
BY728	BY7-28	182575.8696	2335896.7371	36.19	18-56.13	19.87 RT

BY8 POINT	DESC.	NORTH	EAST	ELEVATION	Y9 STATION	OFFSET
BY822	BY8-22	183315.8606	2335566.0821	36.15	10-29.27	0.00
BY829	BY8-29	183306.0524	2335771.1008	34.66	12-34.52	0.00

BY9 POINT	DESC.	NORTH	EAST	ELEVATION	Y10 STATION	OFFSET
BY930	BY9-30	183496.3650	2335084.2294	33.86	OUTSIDE PROJECT LIMITS	
BY931	BY9-31	183475.4431	2335513.8465	35.19	13-69.50	0.00 LT

BY10 POINT	DESC.	NORTH	EAST	ELEVATION	Y11 STATION	OFFSET
BY1032	BY10-32	183993.9434	2335344.2818	30.56	11-53.30	0.01 LT
BY1023	BY10-23	183978.9108	2335537.5822	32.30	13-52.50	23.63 RT
BY1033	BY10-33	183906.8450	2335962.6323	30.55	OUTSIDE PROJECT LIMITS	

BY10 POINT	DESC.	NORTH	EAST	ELEVATION	Y12 STATION	OFFSET
BY1032	BY10-32	183993.9434	2335344.2818	30.56	OUTSIDE PROJECT LIMITS	
BY1023	BY10-23	183978.9108	2335537.5822	32.30	OUTSIDE PROJECT LIMITS	
BY1033	BY10-33	183906.8450	2335962.6323	30.55	14-04.37	22.57 RT

BY11 POINT	DESC.	NORTH	EAST	ELEVATION	Y13 STATION	OFFSET
BY1125	BY11-25	184925.6892	2335576.1580	29.07	OUTSIDE PROJECT LIMITS	
BY1134	BY11-34	184887.9548	2335660.9262	27.55	10-48.94	0.00
BY1135	BY11-35	184775.0941	2336114.4358	25.83	15-16.28	0.00

GPS CALIBRATION REPORT

TIP NUMBER	U-3338			
COORDINATE SYSTEM	US STATE PLANE 1983(AT GROUND)	ZONE	1983(AT GROUND)	NORTH CAROLINA 3200
HORIZONTAL DATUM	NAD 1983/95 (CONUS)			
VERTICAL DATUM	NAVD 88	GEODID MODEL	GEODID03 (CONUS) NC SUB GRID	
COORDINATE UNITS	US SURVEY FEET			
DISTANCE UNITS	US SURVEY FEET			
HEIGHT UNITS	US SURVEY FEET			
LOCAL SITE INFORMATION	LOCALIZED AROUND U4718-5			
LATITUDE	34°13'19.57526"N			
LONGITUDE	77°52'57.44291"W			
SITE SCALE FACTOR	0.9999700010			
HEIGHT	-25.519M			
THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION USES A LOCALIZED COORDINATE SYSTEM WHICH IS VERY SIMILAR TO NORTH CAROLINA ZONE 3200 FROM WHICH IT IS DERIVED. PLEASE TAKE CARE IN UTILIZING THESE COORDINATES TO ELIMINATE CONFUSION OF THE TWO SYSTEMS. THIS FILE IS TO AID IN THE USE OF REAL TIME KINEMATIC (RTK) GPS DURING CONSTRUCTION LAYOUT.				

NOTES:

- 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.
 - THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: [HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/) THE FILES TO BE FOUND ARE AS FOLLOWS:
U3338B_LS_CONTROL_090428.TXT
IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT 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.

BENCHMARKS	BENCHMARKS	BENCHMARKS
BL10 ELEVATION + 36.02	BL24 ELEVATION + 29.94	BY726 ELEVATION + 35.96
N 176752 E 2336376	N 184622 E 2335573	N 182637 E 2335043
L STATION 5+00 0 RIGHT	L STATION 85+05 0 RIGHT	Y8 STATION 10+00 0 RIGHT
CONCRETE MONUMENT WITH REBAR	REBAR & CAP	CONCRETE MONUMENT WITH REBAR
.....
BL11 ELEVATION + 37.05	BL25 ELEVATION + 29.07	BY829 ELEVATION + 34.66
N 177283 E 2336261	N 184926 E 2335576	N 183306 E 2335771
L STATION 10+44 0 RIGHT	L STATION 88+08 0 RIGHT	L STATION 12+35 0 RIGHT
REBAR & CAP	REBAR & CAP	CONCRETE MONUMENT WITH REBAR
.....
BL12 ELEVATION + 36.54	BL31 ELEVATION + 35.19	BY930 ELEVATION + 33.86
N 177901 E 2336136	N 183475 E 2335514	N 183496 E 2335084
L STATION 16+74 0 RIGHT	L STATION 11+98 0 RIGHT	Y10 STATION 10+00
REBAR & CAP	CONCRETE MONUMENT WITH REBAR	N 07' 12' 43.1" W DIST 60.63
.....	.....	CONCRETE MONUMENT WITH REBAR
BL13 ELEVATION + 36.25	FRANKLINI ELEVATION + 39.58	.....
N 179887 E 2335751	N 179887 E 2335751	BY1134 ELEVATION + 27.55
L STATION 20+94 0 RIGHT	L STATION 41+88 0 RIGHT	N 184889 E 2335661
CONCRETE MONUMENT WITH BRASS CAP	NCGS MONUMENT "FRANKLINI"	Y13 STATION 10+49 0 RIGHT
.....	.....	CONCRETE MONUMENT WITH LARGE REBAR
BL14 ELEVATION + 34.10	KEERR1 ELEVATION + 40.46	.....
N 178705 E 2335985	N 181239 E 2335403	BY1135 ELEVATION + 25.83
L STATION 29+81 0 RIGHT	L STATION 55+82 0 RIGHT	N 184775 E 2336114
CONCRETE MONUMENT WITH REBAR	NCGS MONUMENT "KERR"	Y13 STATION 15+16 0 RIGHT
.....	.....	CONCRETE MONUMENT WITH LARGE REBAR
BL15 ELEVATION + 36.62	BL16 ELEVATION + 36.80	.....
N 179338 E 2335873	N 178441 E 2335873	BY116 ELEVATION + 38.10
L STATION 36+25 0 RIGHT	L STATION 36+25 0 RIGHT	CAMA1 ELEVATION + 40.92
REBAR & CAP	REBAR & CAP	N 183540 E 2346039
.....	.....	L STATION 85+11 10479 RIGHT
BL16 ELEVATION + 36.80	BL17 ELEVATION + 39.32	NCGS MONUMENT "CAMA"
N 179613 E 2335787	N 180082 E 2335683	.....
L STATION 34+23 0 RIGHT	L STATION 39+07 0 RIGHT	BY9 ELEVATION + 29.96
CONCRETE MONUMENT WITH BRASS CAP	CONCRETE MONUMENT WITH BRASS CAP	N 177148 E 2335625
.....	.....	L STATION 116+85
BY1032 ELEVATION + 30.56	BY1033 ELEVATION + 30.55	Y1 STATION 10+00
OUTSIDE PROJECT LIMITS	OUTSIDE PROJECT LIMITS	S 68° 07' 47.7" W DIST 266.69
.....	.....	CONCRETE MONUMENT WITH REBAR
BL17 ELEVATION + 39.32	ILMA1 ELEVATION + 26.29	.....
N 180082 E 2335683	N 189757 E 2332700	BY9 ELEVATION + 29.96
L STATION 39+07 0 RIGHT	L STATION 116+85	N 177148 E 2335625
CONCRETE MONUMENT WITH BRASS CAP	L STATION 116+85	Y1 STATION 11+54 0 RIGHT
.....	.....	CONCRETE MONUMENT WITH REBAR
BY1032 ELEVATION + 30.56	BY1033 ELEVATION + 30.55	NCGS MONUMENT "ILM A"
OUTSIDE PROJECT LIMITS	OUTSIDE PROJECT LIMITS	.....
.....	.....	ILMB1 ELEVATION + 8.48
BL18 ELEVATION + 38.98	ILMA1 ELEVATION + 26.29	N 189211 E 2335310
L STATION 48+92 0 RIGHT	L STATION 116+85	L STATION 116+85
CONCRETE MONUMENT WITH BRASS CAP	CONCRETE MONUMENT WITH BRASS CAP	N 18° 23' 19.8" W DIST 2163.15
.....	.....	NCGS MONUMENT "ILM B"
BY1032 ELEVATION + 30.56	BY1033 ELEVATION + 30.55	.....
OUTSIDE PROJECT LIMITS	OUTSIDE PROJECT LIMITS	BY12 ELEVATION + 37.38
.....	.....	N 177411 E 2336536
BL19 ELEVATION + 37.42	BL20 ELEVATION + 36.85	Y1 STATION 21+05 0 RIGHT
N 181887 E 2335494	N 182248 E 2335454	CONCRETE MONUMENT WITH REBAR
L STATION 57+51 0 RIGHT	L STATION 61+14 0 RIGHT	.....
REBAR & CAP	CONCRETE MONUMENT WITH REBAR	BL21 ELEVATION + 35.94
.....	.....	N 182588 E 2335477
BY1032 ELEVATION + 30.56	BY1033 ELEVATION + 30.55	L STATION 64+55 0 RIGHT