


SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

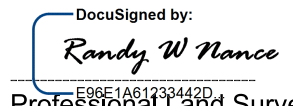
PROJECT REFERENCE NO.	SHEET NO.
U-5112	RW02C-1
Location and Surveys	
ESP ASSOCIATES, INC 3475 LAKEMONT BLVD FORT MILL, SC 29708	
PROJECT SURVEYOR: RANDY W. NANCE	
 LICENSE NO. F-1407	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

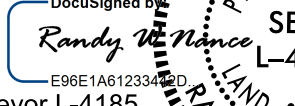
I, Randy W. Nance, PLS, certify that the Project Control was performed under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: 7/25/22 to 8/25/22
 Datum/Epoch: NAD 83/2011
 Published/Fixed-control use: N/A
 Localized around: I5507-14
 Northing: 483188.982
 Easting: 1457726.427
 Combined grid factor: 0.9998488
 Geoid model: GEOID12B (CONUS)
 Units: US Survey Feet

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 7/25/2022 to 8/25/2022, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

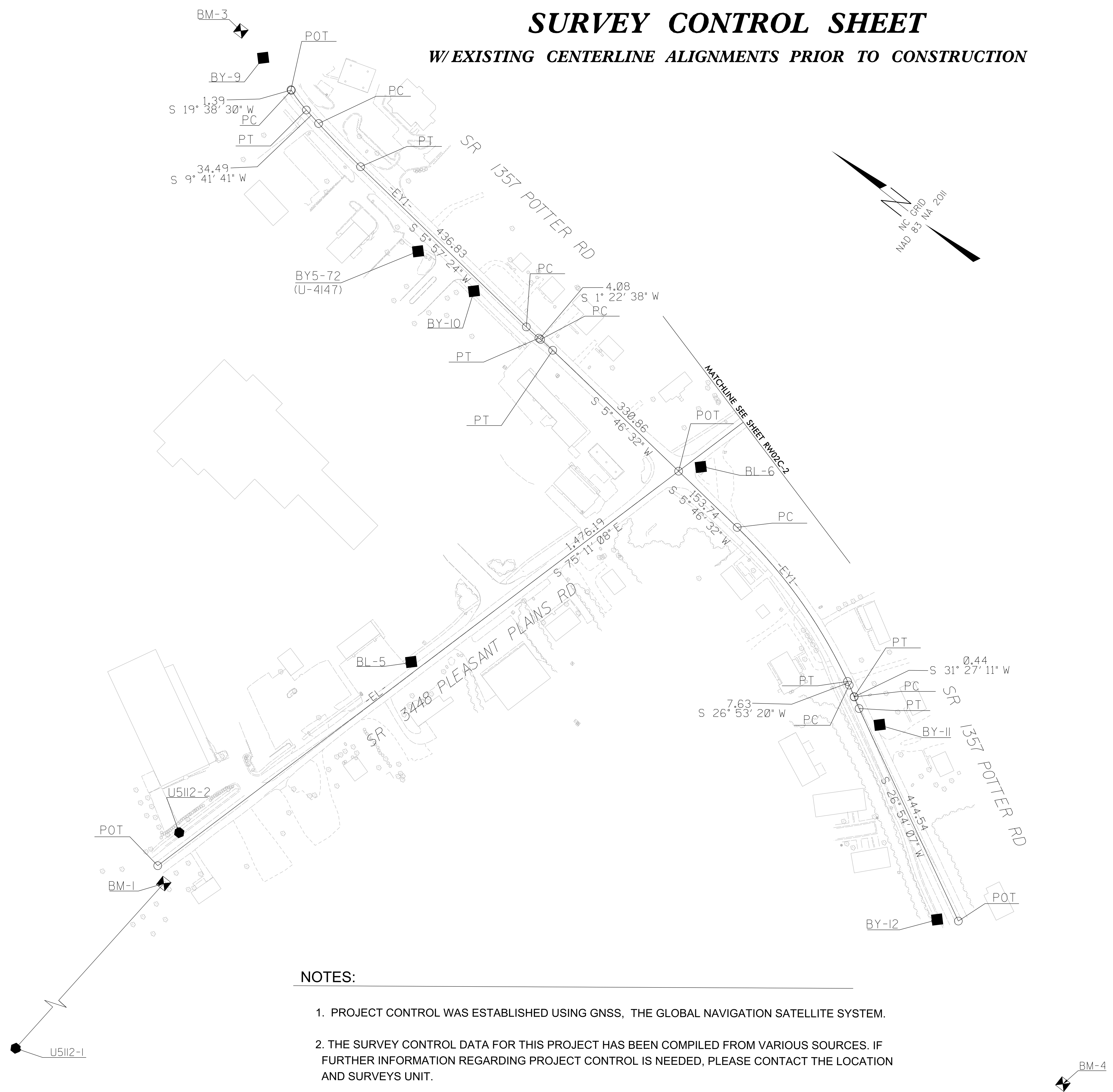
This 28th day of August, 2022.

DocuSigned by:

 Randy W. Nance
 Professional Land Surveyor L-4185

DocuSigned by:

 Randy W. Nance
 Professional Land Surveyor L-4185

Professional Seal: RANDY W. NANCE, L-4185, 8/28/2022

Professional Seal: RANDY W. NANCE, L-4185, 8/28/2022



NOTES:


1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

29-AUG-2022 07:51
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 Petrucci AT ESP22061517

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
U-5112	RW02C-2
Location and Surveys	
ESP ASSOCIATES, INC 3475 LAKEMONT BLVD FORT MILL, SC 29708	
PROJECT SURVEYOR: RANDY W. NANCE	
 LICENSE NO. F-1407	
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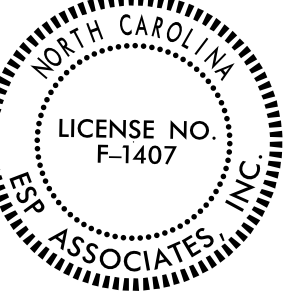
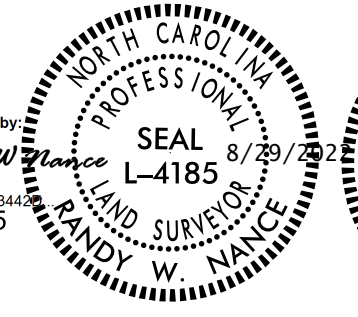
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This 28th day of August, 2022.

DocuSigned by:
Randy W Nance
 Professional Land Surveyor L-4185

DocuSigned by:
Randy W Nance
 Professional Land Surveyor L-4185



REVISIONS


29-AUG-2022 07:51
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 ppetrucci AT ESPSC061517

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SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
U-5112	RW02C-3
Location and Surveys	
ESP ASSOCIATES, INC 3475 LAKEMONT BLVD FORT MILL, SC 29708	
 PROJECT SURVEYOR: RANDY W. NANCE LICENSE NO. F-1407	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	489929.802	1491225.230							
LINE			S 75°11'08.2" E	1476.19					
PC	489552.358	1492652.347							
CURVE			S 75°17'26.2" E	21.00	00°12'35.9(LT)	01°00'00.0"	21.00	10.50	5729.58
PT	489547.027	1492672.655							
LINE			S 75°23'44.1" E	351.01					
PC	489458.521	1493012.328							
CURVE			S 70°27'59.6" E	159.81	09°51'29.1(RT)	06°09'39.0"	160.01	80.20	930.00
PT	489405.086	1493162.945							
LINE			S 65°32'15.0" E	0.75					
PC	489404.774	1493163.631							
CURVE			S 57°40'11.0" E	206.70	15°44'08.0(RT)	07°35'19.8"	207.35	104.33	755.00
PT	489294.231	1493338.289							
LINE			S 49°48'07.0" E	171.65					
PC	489183.441	1493469.400							
CURVE			S 53°50'11.5" E	42.22	08°04'09.0(LT)	19°05'54.9"	42.25	21.16	300.00
PT	489158.530	1493503.481							
LINE			S 57°52'16.0" E	3.04					
PC	489156.914	1493506.055							
CURVE			S 86°54'31.2" E	93.19	58°04'30.3(LT)	59°40'59.2"	97.31	53.30	96.00
PT	489151.888	1493599.113							
LINE			N 64°03'13.7" E	70.69					
POT	489182.817	1493662.677							

EY1 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	490637.165	1492538.657							
LINE			S 19°38'30.2" W	1.39					
PC	490635.852	1492538.188							
CURVE			S 14°40'05.8" W	46.81	09°56'48.8(LT)	21°13'14.4"	46.87	23.50	270.00
PT	490590.563	1492526.333							
LINE			S 09°41'41.4" W	34.49					
PC	490556.563	1492520.525							
CURVE			S 07°49'32.5" W	114.16	03°44'17.8(LT)	03°16'26.6"	114.18	57.11	1750.00
PT	490443.468	1492504.981							
LINE			S 05°57'23.6" W	436.83					
PC	490008.999	1492459.650							
CURVE			S 03°40'00.7" W	31.96	04°34'45.8(LT)	14°19'26.2"	31.97	15.99	400.00
PT	489977.103	1492457.606							
LINE			S 01°22'37.8" W	4.08					
PC	489973.020	1492457.508							
CURVE			S 03°34'34.8" W	30.70	04°23'54.0(RT)	14°19'26.2"	30.71	15.36	400.00
PT	489942.381	1492455.593							
LINE			S 05°46'31.9" W	330.86					
POT	489613.202	1492422.298							
LINE			S 05°46'31.9" W	153.74					
PC	489460.242	1492406.827							
CURVE			S 16°19'56.0" W	359.09	21°06'48.4(RT)	05°50'47.4"	361.13	182.64	980.00
PT	489115.643	1492305.849							
LINE			S 26°53'20.2" W	7.63					
PC	489108.839	1492302.398							
CURVE			S 29°10'15.5" W	23.89	04°33'50.5(RT)	19°05'54.9"	23.90	11.95	300.00
PT	489087.978	1492290.753							
LINE			S 31°27'10.7" W	0.44					
PC	489087.606	1492290.526							
CURVE			S 29°10'38.7" W	23.82	04°33'04.1(LT)	19°05'54.9"	23.83	11.92	300.00
PT	489066.805	1492278.911							
LINE			S 26°54'06.6" W	444.54					
POT	488670.375	1492077.775							

EY2 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	489693.789	1493331.497							
LINE			S 32°55'34.5" E	540.96					
PC	489239.720	1493625.543							
CURVE			S 33°02'57.8" E	24.63	00°14'46.6(LT)	01°00'00.0"	24.63	12.31	5729.58
PT	489219.078	1493638.974							
LINE			S 33°10'21.1" E	173.35					
PC	489073.976	1493733.826							
CURVE			S 35°41'28.1" E	671.41	05°02'14.0(LT)	00°45'00.0"	671.63	336.03	7639.44
PT	488528.673	1494125.539							
LINE			S 38°12'35.1" E	14.24					
POT	488517.480	1494134.349							

EY2A POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	489371.229	1493540.381							
LINE			N 63°16'56.8" E	14.23					
PC	489377.625	1493553.088							
CURVE			N 88°11'00.9" E	252.63	49°48'08.2(RT)	19°05'54.9"	260.76	139.26	300.00
PT	489385.633	1493805.593							
LINE			S 66°54'55.0" E	7.19					
POT	489382.815	1493812.205							

I, Randy W. Nance, PLS certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision using GPS control provided by NCDOT; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 07/25/2022 to 08/25/2022, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 26th day of August, 2022, Documented by: Randy W. Nance, License No. F-1407

Seal: RANDY W. NANCE, PROFESSIONAL SURVEYOR, LICENSE NO. F-1407, 8/23/2022

Professional Land Surveyor L-4185


- NOTES:**
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
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REVISIONS

29-AUG-2022 07:51
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 Petrucci AT ESP52061517

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
U-5112	RW02C-4
Location and Surveys	
ESP ASSOCIATES, INC 3475 LAKEMONT BLVD FORT MILL, SC 29708	
PROJECT SURVEYOR: RANDY W. NANCE	
 LICENSE NO. F-1407	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		U5112-1	490008.1210	1489626.4520	775.10
2		U5112-2	489936.2470	1491299.5460	776.94
5		BL-5	489789.4450	1491825.1480	777.67
6		BL-6	489585.0250	1492454.4090	774.98
7		BL-7	489403.9230	1493200.2120	768.53
8		BL-8	489131.1180	1493506.5490	760.38
3		U5112-3	489194.3300	1493685.4820	758.25

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
9		BY-9	490715.8950	1492553.5840	783.63
10		BY-10	490128.9370	1492451.7410	780.63
306		BL-6	489585.0250	1492454.4090	774.98
11		BY-11	489016.9430	1492278.6080	775.31
12		BY-12	488703.8270	1492055.2000	769.00

BY2	POINT	DESC.	NORTH	EAST	ELEVATION
13		BY-13	489430.2420	1493530.7200	762.96
303		U5112-3	489194.3300	1493685.4820	758.25
4		U5112-4	488347.1740	1494244.4140	754.12

.....
 BM1 ELEVATION = 776.26
 N 489900 E 1491206
 6 INCH SURVEY NAIL AT BASE OF BIRCH TREE

.....
 BM2 ELEVATION = 755.12
 N 489074 E 1493781
 MAG NAIL IN SW CONER CONC PAD FOR TELPED 624

.....
 BM3 ELEVATION = 782.97
 N 490781 E 1492568
 MAG NAIL IN NW CORNER TRAFFIC SIGNAL BOX

.....
 BM4 ELEVATION = 760.09
 N 488324 E 1491957
 MAG NAIL NW CORNER OF CONC PAD FOR WINDSTREAM PED 645

.....
 BM1 ELEVATION = 776.26
 N 489900 E 1491206
 BL STATION 20+82.00 40 RIGHT
 6 INCH SURVEY NAIL AT BASE OF BIRCH TREE

.....
 BM2 ELEVATION = 755.12
 N 489074 E 1493781
 BL STATION 47+49.00
 S 38+29'40.8" E DIST 153.24
 MAG NAIL IN SW CONER CONC PAD FOR TELPED 624

.....
 BM3 ELEVATION = 782.97
 N 490781 E 1492568
 BY1 STATION 5+00.00
 N 12+23'57.4" E DIST 66.31
 MAG NAIL IN NW CORNER TRAFFIC SIGNAL BOX

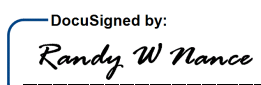
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 BM4 ELEVATION = 760.09
 N 488324 E 1491957
 BY2 STATION 5+62.00 1923 RIGHT
 MAG NAIL NW CORNER OF CONC PAD FOR WINDSTREAM PED 645

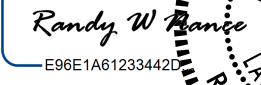
U-4714 CONTROL TIES

Point	North	East	Station	Elevation
35	489,244.6020	1,493,672.7420	0+00.00	758.9090
	Data Set : TRAV_JG Feature : 4020_BL35 Description : U4147			
72	490,258.8240	1,492,445.9160	0+00.00	782.4230
	Data Set : TRAV_JG Feature : 4020_BY5 Description : U4147			
202	490,068.0680	1,493,118.4230	0+00.00	766.8350
	Data Set : TRAV_JG Feature : 4020 Description : U3825			

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Seal: SEAL L-4185
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