

POSITIONS AND ELEVATIONS OF BENCH MARKS AND HORIZONTAL CONTROL STATIONS

Marker Designation	Elevation Datum	Latitude Longitude		North Carolina Lambert Projection		Grid Azimuth	Descr. Page
		0	1 2	X-Coordinate Y-Coordinate	Az. Mk.	0 1 2	
AKW-4	2401	(T)		801,564	(T)		29
		(5)		751,912	(4)		
AKW-7	3010	(T)		791,155	(T)		29
		(5)		715,009	(4)		
AKW-8	4287	(T)		787,273	(T)		29
		(5)		731,661	(4)		
AKW-9	4486	(T)		789,294	(T)		29
		(5)		697,651	(4)		
AKW-10	3270	(T)		774,619	(T)		30
		(5)		707,769	(4)		
AKW-12	4706	(T)		774,673	(T)		24
		(5)		724,692	(4)		
AKW-14	3755	(T)		778,858	(T)		24
		(5)		728,996	(4)		
AKW-15	4483	(T)		794,119	(T)		24
		(5)		705,471	(4)		
BENT KNEE	4540	(T)	35 38 04.20 (G)	800,134.2 (G)			9
		(5)	83 02 20.66 (7)	710,251.0 (7)			
BUNCHES BALD	5488	(T)	35 30 57.62 (G)	753,557.5 (G)			9
		(5)	83 11 23.37 (7)	669,017.5 (7)			
CATALOO- CHEE	5957	(T)	35 34 46.64 (G)	759,942.0 (G)			25
		(5)	83 10 17.84 (7)	691,923.8 (7)			
CATALOO- CHEE NO. 1	5086	(T)	35 35 04.51 (G)	792,497.8 (G)			9
		(5)	83 03 44.24 (7)	692,380.9 (7)			
CATALOO- CHEE NO. 2A	4072	(T)		787,986	(T)		9
		(5)		732,249	(4)		
CHEROKEE	4662	(T)	35 31 27.42 (G)	739,902.3 (G)			10
		(5)	83 14 10.26 (7)	672,613.7 (7)			
D-144- 1935	2683.151(T) 1936 (6)						11

Marker Designation	Elevation Datum	Latitude Longitude ° ' "	North Carolina Lambert Projection			
			X-Coordinate Y-Coordinate	Az. Mk.	Grid Azimuth ° ' "	Descr. Page
E-144- 1935	2771.495(T) 1936 (6)					10
F-144- 1935	2695.599(T) 1936 (6)					10
G-144- 1935	2640.463(T) 1936 (6)					11
GAGE BM-1 Cataloochee	2465.626(T) 1936 (6)					10
GAGE BM-1 Jonathan	2387.379(T) 1936 (6)					10
H-144- 1935	2601.047(T) 1936 (6)					11
K-144- 1935	2519.255(T) 1936 (6)					12
L-144- 1935	2505.435(T) 1936 (6)					12
LHT-851	2226.521(T) 1936 (6)					12
LHT-852	2849.958(T) 1936 (6)					13
LHT-853	3467.685(T) 1936 (6)					13
LHT-854	3887.939(T) 1936 (6)					13
LHT-855	3461.841(T) 1936 (6)					13
LHT-856	2754.882(T) 1936 (6)					13
LHT-857	2451.514(T) 1936 (6)					13
LHT-858	2397.595(T) 1936 (6)					14
LHT-859	2379.265(T) 1936 (6)					14

Quad. No. 174

Marker Designation	Elevation Datum	Latitude Longitude 0 " "	North Carolina Lambert Projection			
			X-Coordinate Y-Coordinate	Az. Mk.	Grid Azimuth 0 " "	Descr. Page
LHT-869	2793.342(T) 1936 (6)					14
LHT-870	2878.641(T) 1936 (6)					14
LHT-871	2919.701(T) 1936 (6)					15
LHT-872	3019.552(T) 1936 (6)					15
LHT-873	3154.959(T) 1936 (6)					15
LHT-874	3455.404(T) 1936 (6)					15
LHT-875	3848.072(T) 1936 (6)					15
LR-460	5320 (T) (5)		785,636 (T) 681,198 (4)			25
LR-464			809,713 (T) 694,130 (4)			25
LR-466	4418 (T) (5)		746,865 (T) 667,527 (4)			25
LR-467	4810 (T) (5)		773,930 (T) 665,471 (4)			26
LR-469	5510 (T) (5)		773,129 (T) 681,705 (4)			26
LR-470	5620 (T) (5)		772,761 (T) 678,018 (4)			26
LR-471	2514 (T) (5)		811,833 (T) 749,803 (4)			27
LR-472	3506 (T) (5)		808,572 (T) 664,522 (4)			27
LR-473	4882 (T) (5)		777,361 (T) 686,167 (4)			27
LRH-8	5436 (T) (5)		754,788 (T) 667,098 (4)			27

Marker Designation	Elevation Datum	Latitude Longitude		North Carolina Lambert Projection		Az. Mk.	Grid Azimuth	Descr. Page
		O	"	X-Coordinate Y-Coordinate			O	
LRH-10	5071 (T) (5)			797,313 (T) 661,572 (4)				28
M-144- 1935	2479.954(T) 1936 (6)							16
MOUNT STERLING		35 42 07.94 (G) 83 07 20.10 (7)						16
MOUNT STERLING F. T.	5842 (T) (5)	35 42 07.97 (T) 83 07 20.27 (4)		776,448 (T) 735,892 (4)				28
MS-428	3464 (T) (5)			810,240 (T) 675,045 (4)				28
N-24- 1928	4404.0 (G) 1929 (4)							16
N-144- 1935	2615.429(T) 1936 (6)							16
NPS-1	4071.070(T) 1936 (6)							17
NPS-2	4071.822(T) 1936 (6)							17
P-144- 1935	2961.163(T) 1936 (6)							17
Q-144- 1935	3328.211(T) 1936 (6)							17
R-1- 1928	2742.593(T) 1936 (6)							17
R-3- 1928	3563.9 (G) 1929 (4)							18
R-27- 1928	4522.3 (G) 1929 (4)							18
R-144- 1935	3700.979(T) 1936 (6)							18
SPRUCE MTN. F. T.				759,854 (T) 704,355 (4)				28
SUTTON F. T.	3628 (T) (5)	35 44 01.15 (T) 83 03 05.15 (4)		797,937 (T) 746,459 (4)				28

Marker Designation	Elevation Datum	Latitude Longitude			North Carolina Lambert Projection				Descr. Page
		0	1	2	X-Coordinate Y-Coordinate	Az. Mk.	Grid Azimuth	0 1 2	
T-144- 1935	3682.912(T) 1936 (6)								18
TBM-P-46	2477.873(T) 1936 (6)								18
TBM-P-47	2730.630(T) 1936 (6)								18
TT-16-T	2433.520(T) 1936 (6)	35 44 16.94 (G) 83 05 29.89 (7)							18
TT-17-T	3114.948(T) 1936 (6)	35 43 06.54 (G) 83 05 31.26 (7)							19
TT-18-T	3894.3 (G) 1929 (4)	35 42 01.10 (G) 83 05 49.93 (7)							19
TT-19-T	3033.954(T) 1936 (6)	35 40 33.62 (G) 83 05 12.27 (7)							19
TT-20-T	2473.589(T) 1936 (6)	35 40 01.23 (G) 83 04 19.25 (7)							19
TT-22-T	3095.6 (G) 1929 (4)	35 35 49.65 (G) 83 06 06.56 (7)							19
TT-23-T	3753.8 (G) 1929 (4)	35 34 17.66 (G) 83 08 19.39 (7)							19
TT-24-T	4759.4 (G) 1929 (4)	35 32 51.37 (G) 83 10 01.43 (7)							20
TT-25-T	2832 (T) (5)	35 32 33.28 (G) 83 12 59.69 (7)							20
TT-26-T	2384.5 (G) 1929 (4)	35 33 31.44 (G) 83 14 55.76 (7)							20
U-144- 1935	3433.582(T) 1936 (6)								20
USBM- 2169.0	2169.2 (G) 1929 (4)								20
USBM- 2458.1	2458.0 (G) 1929 (4)								20
USBM- 2514.0	2514.4 (G) 1929 (4)								21

Marker Designation	Elevation Datum	Latitude Longitude	North Carolina Lambert Projection			
			X-Coordinate Y-Coordinate	Az. Mk.	Grid Azimuth	Descr. Page
		0' "			0' "	
USBM- 2560.1	2559.8 (G) 1929 (4)					20
USBM- 2560.4	2560.6 (G) 1929 (4)					21
USBM- 2714.0	2714.4 (G) 1929 (4)					21
USBM- 2744.3	2744.5 (G) 1929 (4)					21
USBM- 2760.3	2760.5 (G) 1929 (4)					21
USBM- 2772.9	2773.5 (G) 1929 (4)					21
USBM- 2817.5	2817.7 (G) 1929 (4)					21
USBM- 2821.6	2821.8 (G) 1929 (4)					21
USBM- 2858.4	2858.9 (G) 1929 (4)					21
USBM- 2917.8	2918.0 (G) 1929 (4)					22
USBM- 2996.9	2996.5 (G) 1929 (4)					22
USBM- 3027.1	3027.6 (G) 1929 (4)					22
USBM- 3122	3122.1 (G) 1929 (4)					22
USBM- 3300.9	3301.1 (G) 1929 (4)					22
USBM- 3370.7	3370.9 (G) 1929 (4)					22
USBM- 3454.3	3454.4 (G) 1929 (4)					22
USBM- 3464	3463.9 (G) 1929 (4)					22

Marker Designation	Elevation Datum	Latitude Longitude o ' "	North Carolina Lambert Projection			
			X-Coordinate Y-Coordinate	Az. Mk.	Grid Azimuth	Descr. Page
USBM- 3965	3965.2 (G) 1929 (4)					22
USBM- 4090.5	4090.6 (G) 1929 (4)					21
USBM- 4350.9	4351.5 (G) 1929 (4)					23
USBM- 4355.0	4355.6 (G) 1929 (4)					23
USBM- 4492	4492.6 (G) 1929 (4)					23
V-144- 1935	2985.381(T) 1936 (6)					23
W-144- 1935	2765.183(T) 1936 (6)					23
WHIMS KNOB			764,118 (T) 681,769 (4)			23

DESCRIPTIONS OF BENCH MARKS AND HORIZONTAL CONTROL STATIONS

QUAD. NO. 174 - CATALOOCHEE, NORTH CAROLINA

BENT KNEE - Station is in Haywood County, North Carolina, about 18 miles, by road, north of Waynesville, on a peak known as Bent Knee Knob. From Waynesville follow highway via Dellwood and Jonathan to Cove Creek, follow road up Cove Creek leading to Cataloochee, to top of mountain. Station is about $\frac{1}{2}$ mile east of road on highest point, north slope of mountain is cleared of timber around station. Station is a bronze tablet set in exposed rock a little west of highest point. Signal: Quadripod of poles with center pole bearing flags.

BUNCHES BALD - Station is in Swain-Jackson Counties, North Carolina, about 10 miles northeast of Cherokee and about 11 miles northwest of Waynesville on crest of bald hilltop locally known as Bunches Bald. To reach from junction of State Routes 107 and 112 at Cherokee, drive south on 112 toward Bryson City 0.3 mile, turn left on side road leading up Suco Creek Valley for 2 miles to road forks at Wright Creek, turn left on gravel road leading up Wright's Creek for 2.1 mile to road forks at Big Witch Creek (church building at forks), turn right on dirt road 0.95 mile to road forks, turn left on dirt road 4.05 miles to road forks at top of mountain, turn right on mountain road 1.1 miles to road forks, turn left following ridge road 2.3 miles to top of ridge and gap on ridge, arrow below 2 blazes to left of road on 42 inch oak tree, leave car here and turn left on ridge trail for about 1000 feet in a westerly direction to station. Station is a standard tablet, not stamped in square boulder about 4 inches above ground. No reference marks were found.

CATALOOCHEE NO. 1 - Station is in Haywood County, North Carolina, about 5 miles, airline, northwest of Dellwood, on the highest point of Purchase Knob, on property owned by Jim Boyd and Vernon Campbell. To reach from Dellwood Postoffice drive north on State Highway 284, 2.5 miles, thence left on Hemphill Road 2.2 miles, thence right of Hemphill School on private road 1.1 miles to residence of Mrs. Emma Rose. Leave car and follow old sled road about 1.5 miles to pasture field, follow ridge east and a little south to highest point (a wooded top) and station. Station is a drill hole in rock set in place. Signal: Pole with 2 white flags mounted in top of 40 inch oak tree and centered over station mark.

Reference Mark: A triangle made of nails on side of signal tree
3.27' distant and bears N 80° W from station mark.

CATALOOCHEE NO. 2A - Station is in Haywood County, North Carolina, about 3 miles due east of Mt. Sterling at point at which wagon road passes from grassy field on the south through gate into and along edge of woods on the north. This station is about $\frac{1}{2}$ mile southwest of Flag C₁₁/2. Station is a drill hole in rock at east end of gate triangle blazed on tree which acts as gate post.

CHEROKEE - Station is in Swain-Jackson Counties, North Carolina, about 6 miles northeast of Cherokee and about $10\frac{1}{2}$ miles north of Sylva on high east point locally known as "Barnett Knob", and on or near the boundary line between Swain and Jackson Counties. To reach from junction of State Routes 107 and 112 at Cherokee, drive south on 112 toward Bryson City 0.3 mile to side road, turn left on dirt road leading up Suco Valley for 2 miles to road forks at Wright's Creek, turn left on gravel road leading up Wright's Creek for 2.1 mile to road forks (church at forks) turn right on dirt road leading Big Witch Creek for 0.95 mile to a road fork, turn left on dirt road for 4.05 mile to road forks at top of mountain, turn left about 300 feet to road fork, turn left on ridge road keeping right hand road for 1.05 mile to top of ridge. Leave car here and take ridge trail northwesterly for about $\frac{1}{4}$ mile to station. Station is a standard tablet set in boulder and centered under steel fire tower on crest of wooded hilltop, stamped "CHEROKEE-1934". Signal: 60 foot steel fire tower.

E-144-1935 - Station is in Haywood County, North Carolina, at Dellwood, at junction of North Carolina Highways 284 and 293, on R/W property, 46 yards east of Dellwood Baptist Church, 12 feet east of 30 inch poplar tree, 2 feet north of fence line, 24 feet west of spring. Station is a standard USC&GS disc set in concrete monument and stamped "E-144-1935".

Reference Mark 1: 33' NE to W end of culvert.

Reference Mark 2: 48' N to center line of Highway 293.

Reference Mark 3: 12' W to 30" poplar tree.

F-144-1935 - Station is in Haywood County, North Carolina, 1 mile north of junction of North Carolina Highways 293 and 284 at Dellwood, 70 feet west of center line of North Carolina Highway 284, at road intersection west approximately 300 feet north of large tin roofed barn, approximately 600 feet north of large 2 story frame house with stone chimneys on north and south ends, 7 feet north of center line of side road, 1 foot north of east and west fence line. Station is a standard USC&GS disc set in concrete monument and stamped "F-144-1935".

Reference Mark 1: 17.5' E to corner fence post.

Reference Mark 2: 29.5' NE to telephone pole.

Reference Mark 3: 70' E to C/L of N.C. Highway 284.

GAGE BM-1 (Cataloochee Creek) - Bench Mark is in Haywood County, North Carolina, just above Little Cataloochee Creek and 2-miles north of Cataloochee, on left bank of Cataloochee Creek, on State Highway 284 over Cataloochee Creek, at base of tree 25 feet downstream from gage shelter, on left bank of Cataloochee Creek just below bridge. Bench Mark is a standard bronze reference tablet set in concrete block.

GAGE BM-1 (Jonathan Creek) - Bench Mark is in Haywood County, North Carolina, 22 miles north of Waynesville, 5.5 miles north of Cove Creek Gap at

Cataloochee Creek, 4.4 miles south of Sterling Gap, about 0.75 mile upstream from mouth of Jonathan Creek, about 2 miles downstream from mouth of Cove Creek and Cove Creek Postoffice, on North Carolina State Highway No. 284, on property of Great Smoky Mountains National Park, at intersection of Highway 284 and Cataloochee Creek, at gaging station control about 50 feet from gage, 3,485 feet above gage zero. Station is a standard USGS marker set in concrete post and stamped.

Reference Mark 1: 58' W to center line of road.
Reference Mark 2: 30' S to gaging building.
Reference Mark 3: 31' E to water's edge Cataloochee Creek.
Reference Mark 4: 57' S to corner of bridge.

GAGE BM-3 - Bench Mark is in Haywood County, North Carolina, just above Little Cataloochee Creek, 2 miles north of Cataloochee, on right bank of Cataloochee Creek, on State Highway 284 bridge over Cataloochee Creek, in line with downstream side of bridge and 57 feet to right of abutment, 16.69 feet above gage zero. Bench Mark is a standard tablet in ledge rock. (Same as TT-20-T).

D-144-1935 - Station is in Haywood County, North Carolina, 3.1 miles west along Lake Shore Drive and North Carolina Highway 284 from Lake Junaluska Postoffice, on North Carolina State Highway 284, 30 feet north of center line of Highway 284, 1 foot west of north and south fence line, approximately 200 feet south of 2 story white frame house, 3 yards north of fence corner, large gate at this corner, 30 feet west of corner of small drain. Station is a standard USC&GS disc in concrete monument and stamped "D-144-1935".

Reference Mark 1: 22.5' E to W end of culvert.
Reference Mark 2: 30' S to center line of Highway 284.
Reference Mark 3: 10' S to corner fence post.

G-144-1935 - (Reset by TVA) Station is in Haywood County, North Carolina, 2 miles north of Dellwood, 49.5 feet east of center line of North Carolina Highway 284, on south side of T road east, just opposite where Jonathan Creek comes to highway from southwest 1000 feet approximately. Station is a standard USC&GS tablet set in precast concrete post and stamped "G-144-1935".

Reference Mark 1: 31.8' S of 36" sycamore tree.
Reference Mark 2: 14.0' S of private road.
Reference Mark 3: 4.0' E of fence corner.

H-144-1935 - Station is in Haywood County, North Carolina, 3.8 miles north of junction of North Carolina Highways 293 and 284 at Dellwood, 17 feet east of corner of Highway 284, on property of North Carolina Highway R/W, 200 feet south of new 1 story stone dwelling with green roof, on south end of east headwall of twin span culvert, 150 feet south of T road intersection, 400 feet northwest of 2 story frame house with 3 brick

chimneys. Station is a standard USC&GS disc in culvert headwall and stamped "H-144-1935". No references available other than corner of road which is already given.

J-144-1935 - Station is in Haywood County, North Carolina, 4.7 miles north of junction of North Carolina Highways 293 and 284 at Dellwood, on North Carolina Highway 284, on school yard property, Rock Hill School, in yard of school, 11 feet above ground, 53 feet west of center line of North Carolina Highway 284, 65 feet north of north auto entrance to school house. Station is a standard USC&GS disc in concrete monument and stamped "J-144-1935". (Destroyed).

Reference Mark 1: 139.0' SW to NW corner of school.

Reference Mark 2: 56.0' SE to gate post.

Reference Mark 3: 20.5' E to fence post.

K-144-1935 - Station is in Haywood County, North Carolina, 5.8 miles north of junction of North Carolina Highways 293 and 284 at Dellwood, on North Carolina Highway 284, at point where old road comes together, 150 feet (approximately) south of rock bank on west side of road, approximately 400 feet southwest of small boxed house, 185 feet south of corner of road intersection. Station is a standard USC&GS disc in concrete monument and stamped "K-144-1935".

Reference Mark 1: 39.0' E to C/L of Highway 284.

Reference Mark 2: 17.0' W to C/L of old road.

Reference Mark 3: 73.0' N to Highway stop sign.

L-144-1935 - Station is in Haywood County, North Carolina, 6.95 miles north of junction of North Carolina Highways 293 and 284 at Dellwood, on North Carolina Highway 284, in angle formed by intersection of old and new road, approximately 0.15 mile south of Cove Creek, 142 feet south of center line of intersection of old Highway 284 and new Highway 284. Station is a standard USC&GS disc in concrete post and stamped "L-144-1935".

Reference Mark 1: 31.0' W to C/L of old road.

Reference Mark 2: 50.0' E to C/L of new road 284.

Reference Mark 3: 61.9' N to Highway stop sign.

LHT-851 - Station is in Haywood County, North Carolina, 29.7 miles southeast of Newport, 2 miles southeast of Mt. Sterling, on North Carolina State Highway 284, on property of North Carolina State Highway 284, 100 feet southeast of intersection of North Carolina State Highway 284 and Y road southeast to M. K. Sutton's house, 800 feet west of M. K. Sutton's house, 14 feet east of North Carolina State Highway 284, 16 feet west of old road, 3 feet northwest of fence corner. Station is a standard TVA tablet set in top of precast concrete post and stamped "LHT-851-1938".

Reference Mark 1: 23.8' N 14° E to lone post.

Reference Mark 2: 3.0' S 30° E to fence corner.

LHT-852 - Station is in Haywood County, North Carolina, 25 miles north of Waynesville, 3 miles north of Sterling Gap, on North Carolina State Highway 284, on Mount Sterling School property, 200 feet, approximately, west of school building, 23.5 feet southwest to 4 inch pine tree, 64 feet northwest to center of highway, 75 feet southwest to fence corner. Station is a standard TVA marker set in top of rock outcrop and stamped "LHT-852-1938".

LHT-853 - Station is in Haywood County, North Carolina, 27.7 miles north of Waynesville, 1.2 miles north of Sterling Gap, 1.8 miles south of Mount Sterling School, on North Carolina State Highway 284, on property of Great Smoky Mountains National Park, at horseshoe bend in road, on north edge of small branch, at north side of hollow, 64 feet to center of road, 8.5 feet north to triple maple tree, 39.5 feet east to 36 inch birch tree. Station is a standard TVA marker set in rock outcrop and stamped "LHT-853-1938".

LHT-854 - Station is in Haywood County, North Carolina, 26.5 miles north of Waynesville, at Sterling Gap, on North Carolina State Highway 284, on property of Great Smoky Mountains National Park, 45 feet northeast of high point in road at Sterling Gap, 30 feet east at corner of highway center line. Station is a standard TVA marker set in top of concrete post and stamped "LHT-854-1938".

LHT-855 - Station is in Haywood County, North Carolina, 25.4 miles north of Waynesville, 1.15 miles south of Sterling Gap, 3.25 miles north of Cataloochee Creek (all distances by speedometer) on North Carolina State Highway 284, on property of Great Smoky Mountains National Park, on outside of sharp turn in highway, 30 feet east of corner of highway, 13.8 feet north of 12 inch oak tree, 2 feet west of 12 inch maple tree. Station is a standard TVA marker set in top of rock outcrop and stamped "LHT-855-1938".

LHT-856 - Station is in Haywood County, North Carolina, 23 miles north of Waynesville, 3.4 miles south of Sterling Gap, 6.5 miles north of Cove Creek Gap, 1 mile north of Cataloochee Creek (all distances by speedometer), on North Carolina State Highway 284, on property of Great Smoky Mountains National Park, on outside of sharp curve in highway at extreme north end of curve, 12 feet north of corner of highway. Station is a standard TVA marker set vertically in rock outcrop and stamped "LHT-856-1938".

LHT-857 - Station is in Haywood County, North Carolina, 0.8 mile north of Cove Creek, on North Carolina State Highway 289, on property of W. C. Morrow, 20 feet east of North Carolina State Highway 289, 140 feet southeast of W. C. Morrow's house, 10 feet south of Morrow Branch, 50

feet west of Jonathan Creek, 46.4 feet east of old store building, 46.6 feet northwest of bridge across Jonathan Creek. Station is a standard TVA tablet set in top of precast concrete post and stamped "LHT-857-1938".
Reference Mark 1: 46.6' S 39° E to NW corner of bridge.
Reference Mark 2: 46.4' N 82° W to NE corner of old store.

LHT-858 - Station is in Haywood County, North Carolina, 1.9 miles north of Cove Creek, on North Carolina State Highway 289, on property of W. E. Yarbrough, 15 feet south of North Carolina State Highway 289, 35 feet south of Jonathan Creek, 39.1 feet northeast of W. E. Yarbrough's house, 160 feet southwest of Tom Yarbrough's house, 175 feet west of swinging bridge across Jonathan Creek, in northeast corner of yard, about 4 feet above level of highway. Station is a standard TVA tablet set in top of precast concrete post and stamped "LHT-858-1938".
Reference Mark 1: 39.1' S 68° W to NE corner of house.
Reference Mark 2: 32.2' N 9° E to 14" hemlock tree.

LHT-859 - Station is in Haywood County, North Carolina, 2.6 miles northeast of Cove Creek, on North Carolina State Highway 289, on property of Liberty Church, 34 feet southeast of North Carolina State Highway 289, 22 feet northwest of Jonathan Creek, 49.8 feet west of Liberty Church, 300 feet southeast of Allen Davis's house, 150 feet southeast of a log barn, in west edge of church yard, about 5 feet below level of highway. Station is a standard TVA tablet set in top of precast concrete post and stamped "LHT-859-1938".
Reference Mark 1: 15.1' N 54° W to 20" red oak tree.
Reference Mark 2: 49.8' N 78° E to SW corner of church.

LHT-869 - Station is in Haywood County, North Carolina, 6.1 miles northwest of Waynesville, 1.1 miles west of Delwood, on North Carolina State Highway 293, on property of Verlin R. Evans, about 500 feet south of Jonathan Creek, 59.0 feet north of center line of Highway 293, 20 feet southwest of southwest corner of residence of V. R. Evans, in yard. Station is a standard TVA tablet set in precast concrete post and stamped "LHT-869".
Reference Mark 1: 20' SW of SW corner of stone house.
Reference Mark 2: 59' N of C/L of North Carolina Highway 293.
Reference Mark 3: 70' NE of telephone pole painted "PBM".

LHT-870 - Station is in Haywood County, North Carolina, 2 miles west of Dellwood, on State Highway 293, on property of Charley Owens 200 feet southwest of 2 story white frame house 0.35 mile east of old road intersection with new highway, 1.5 feet inside of fence line, 77 paces west of center line of culvert under highway, 90 feet east of log barn, across road and 100 feet west of large twin locust tree. Station is a standard TVA tag stamped "LHT-870-1938".
Reference Mark 1: 50.7' E to telephone pole.
Reference Mark 2: 87.2' W to SE corner of crib.
Reference Mark 3: 22' S to C/L of highway.

LHT-871 - Station is in Haywood County, North Carolina, 3 miles west from Dellwood, on State Highway 293, on property of A. L. Silar, 600 feet west of long curve in highway, 400 feet east of stone hungalow, 105 feet north of northeast corner of A. L. Silar's residence, on east edge of lawn under power line. Station is a standard TVA tablet set in precast concrete post and stamped "LHT-871-1938".

Reference Mark 1: 34.5' N to C/L of highway.
Reference Mark 2: 79' NE to telephone pole painted "PBM".
Reference Mark 3: 59' W of C/L of driveway under power line.

LHT-872 - Station is in Haywood County, North Carolina, 4 miles west of Dellwood, at Maggie, on North Carolina State Highway 293, on property of Northern M.E. Church, 3 feet east of Southwest corner of church, 250 feet, approximately, west of T road intersection to south up Campbell's Creek, 12 feet northeast of fence corner. Station is a standard TVA disc in concrete monument and stamped "LHT-872-1938".

Reference Mark 1: 3.9' NW to SW corner of church.
Reference Mark 2: 58.0' E to telephone pole.
Reference Mark 3: 29.5' S to C/L of Highway 293.

LHT-873 - Station is in Haywood County, North Carolina, 5 miles west of Dellwood, 1 mile west of Maggie, on North Carolina State Highway 293, on property of Mehaffey Bros., approximately 400 feet east of Mill Dam, 225 feet west of T road intersection north and bridge across creek, 75 feet east of old quarry site, 7 feet above road. Station is a standard TVA disc in rock outcrop and stamped "LHT-873-1938".

Reference Mark 1: 39.0' N to C/L of road.
Reference Mark 2: 76.5' NW to telephone pole.
Reference Mark 3: 18.8' N to woven wire fence.

LHT-874 - Station is in Haywood County, North Carolina, 6 miles west of Dellwood, 2 miles west of Maggie, on North Carolina State Highway 293, on property of North Carolina State Highway R/W, approximately 0.1 mile southwest of Y road to Black Camp Gap intersection to west, across road from lone spruce tree, 100 feet southwest of cut on highway on north edge of cleared field, thickly covered with stumps and rocks. Station is a standard TVA tablet set in precast concrete monument, stamped "LHT-874-1938".

Reference Mark 1: 24' NW to C/L of road.
Reference Mark 2: 1' SE to woven wire fence.
Reference Mark 3: 73' E to concrete culvert.

LHT-875 - Station is in Haywood County, North Carolina, 3 miles southwest of Maggie, 7 miles southwest of Dellwood, on North Carolina State Highway 293, on highway R/W, on south bank of Deep Ravine, 30 feet south of south end of road fill, 30 feet south of south end of 50 foot cut, 1000 feet southeast of hairpin turn on road in valley (Black Camp Gap Road). Station is a standard TVA tablet set in precast concrete post and stamped "LHT-875-1938".

Reference Mark 1: 22' S to 36" oak stump.
 Reference Mark 2: 50.3' E to C/L of highway.
 Reference Mark 3: 20' W to fence line.

M-144-1935 - Station is in Haywood County, North Carolina, at Cove Creek, at junction of North Carolina State Highways 284 and 289, on property of R. T. Boyd, 25 feet west of North Carolina State Highway 289, 40 feet north of North Carolina State Highway 284, 50 feet west of Jonathan Creek, 49.5 feet south of highway bridge over Cove Creek, 5.7 feet east of R. T. Boyd's store, 100 feet northwest of steel bridge over Jonathan Creek, 1 foot below elevation of store floor. Station is a standard USC&GS tablet set in top of rock outcrop and stamped "M-144-1935".

Reference Mark 1: 5.7' S 55° W to SE corner of store.
 Reference Mark 2: 49.5' N 5° E to SW corner of bridge.

MOUNT STERLING - Station is in Haywood County, North Carolina, about 4 miles south of the town of Mount Sterling, 1 mile west of the road from there to Cataloochee, on peak known as Mount Sterling. Station is best reached by trail from old point of intersection, which is located in W.G.B. Messer's general store on Little Cataloochee Creek. From Ola, follow trail up middle fork of Little Cataloochee Creek past residence of Mr. Woody to cleared field about 1 mile, turn right to top of spur and follow well defined trail to top of main ridge, turn the west slope of the highest peak and about 300 feet from station. Station may also be reached by following road from Cataloochee or Mount Sterling to top of divide, thence following main lead west to top. Although the latter route is shorter it is a more difficult being partly through laurel thicket and no definite trail. Station is a bronze tablet set in top of oval stone which is set in ground and projecting 2 inches above the surface, located on highest point 15 feet southeast of signal and observation tower. Signal: A tree braced with fallen trees in top of which was erected an observation platform.

N-24-1928 - Station is in Swain County, North Carolina, 2.8 miles northwest of Black Camp Gap, 270 feet west of junction of railroad, 3 feet south of south rail. Station is a bronze tablet set in top of boulder and stamped "N-24-1928", and painted "U.S.P.B.M. 4403.4".

N-144-1935 - Station is in Haywood County, North Carolina, 0.8 mile west of Cove Creek, on North Carolina State Highway 284, on property of Cove Creek Church, 65 feet southwest of North Carolina State Highway 284, 35 feet southwest of right fork of Cove Creek, 3 feet northeast of Cove Creek Church, 150 feet northwest of a blue and white house, 120 feet northwest of wood bridge over right fork of Cove Creek, in church yard. Station is a standard USC&GS tablet set in top of precast concrete post and stamped "N-144-1935".

Reference Mark 1: 36.3' S 85° E to 14" walnut tree.
 Reference Mark 2: 6.6' S 10° E to SE corner of church.

NPS-1 - Station is in Haywood County, North Carolina, 5.4 miles northwest of Cove Creek, at Cove Creek Gap, 30 feet east of center line of Highway 284 in Cove Creek Gap, 3.4 feet south of NPS sign "Entrance Cove Creek Gap". Station is a USDI $2\frac{1}{2}$ inch bronze tablet set in concrete post.

Reference Mark 1: 74.0' E of USDI #2.
Reference Mark 2: 30.0' E of C/L of road at Cove Creek Gap entrance.
Reference Mark 3: 35.0' W of 50' Radio Aerial Pole.

NPS-2 - Station is in Haywood County, North Carolina, 5.4 miles northwest of Cove Creek, at Cove Creek Gap, on North Carolina State Highway 284, 29 feet west of center line of Highway 284, in Cove Creek Gap. Station is a USDI $2\frac{1}{2}$ inch bronze tablet set in concrete post.

Reference Mark 1: 52' E of 50' Radio Aerial Pole.
Reference Mark 2: 29.0' W of center line of road at Cove Creek gap entrance.
Reference Mark 3: 22.5' S of S end guard post.

P-144-1935 - Station is in Haywood County, North Carolina, 1.9 miles northwest of Cove Creek, on North Carolina State Highway 284, on property of Noble Long, 18 feet west of North Carolina State Highway 284, 150 feet east of right fork of Cove Creek, 9.8 feet north of a shed, 7.9 feet northeast of a 14 inch apple tree, 250 feet southeast of Noble Long's house, 5 feet below level of Highway 284. Station is a standard USC&GS tablet set in top of precast concrete post and stamped "P-144-1935".

Reference Mark 1: 9.8' S 10° E to NE corner of shed.
Reference Mark 2: 7.9' S 52° W to 14" apple tree.

Q-144-1935 - Station is in Haywood County, North Carolina, 2.9 miles northwest of Cove Creek, on North Carolina State Highway 284, on property of J. Franklin, 35 feet east of North Carolina State Highway 284 at a hairpin curve in highway, 150 feet south of house owned by J. Franklin and rented by H. Rash, 5 feet west of wire fence, 35 feet southwest of intersection of 2 wire fences, 10 feet southeast of a path. Station is a standard USC&GS tablet set in top of precast concrete post and stamped "Q-144-1935".

Reference Mark 1: 20.0' N 42° E to twin 6" white oak tree.
Reference Mark 2: 77.2' S 30° W to mail box post.

R-1-1928 - Station is in Haywood County, North Carolina, 5 miles northwest of Waynesville, on North Carolina Highway 284, 210 feet north of Dellwood Garage, at road fork northwest to Maggie and on south end of cement porch to Ferguson's store. Station is a standard USGS tablet set in concrete porch and stamped "R-1-1928".

Reference Mark 1: 10' W of C/L of Blacktop Highway 284.
Reference Mark 2: 1' N of S edge of concrete porch in front of store.
Reference Mark 3: 3' W of E edge of concrete porch.

R-3-1928 - Station is in Haywood County, North Carolina, 3 miles southwest of Maggie, 60 feet southeast of trestle over Soco Creek, 20 feet southeast of crossing of wagon road to Soco Gap. Station is a bronze tablet in 4 foot boulder, stamped "R-3-1938", about 10 feet above track level.

R-27-1928 - Station is in Swain County, North Carolina, 700 feet northwest of Black Camp Gap, on west side of mountain facing Bunches Creek, 20 feet east of lumber railroad track. Station is a bronze tablet in rock outcrop and stamped "R-27-1928".

R-144-1935 - Station is in Haywood County, North Carolina, 4.2 miles northwest of Cove Creek, on North Carolina State Highway 284, on property of Bob Boyd, 45 feet west of North Carolina State Highway 284 at a hair-pin curve in highway, 45 feet southwest of a branch, 18 feet southwest of old road, 15.2 feet southwest of fence corner at pasture gate, at west edge of log ramp, 40 feet northwest of a branch. Station is a standard USC&GS tablet set in top of precast concrete post and stamped "R-144-1935".
Reference Mark 1: 15.2' N 10° E to fence corner.
Reference Mark 2: 19.1' S 12° E to 3" ash tree.

T-144-1935 - Station is in Haywood County, North Carolina, 1 mile north of Cove Creek Gap, 17.6 miles north of Waynesville, on North Carolina State Highway 284, on property of Great Smoky Mountains National Park, on outside of horseshoe curve, 100 feet, approximately, east of large spruce, approximately in middle of curve, in middle one of 3 hollows, between 2 small rock cuts on east side of road. Station is a standard USC&GS marker set in top of concrete post and stamped "T-144-1935".
Reference Mark 1: 20' to W center line of highway.
Reference Mark 2: 16' E to 24" double pine tree.
Reference Mark 3: 46' N to 15" red oak tree.

TBM-P-46 - Bench Mark is in Haywood County, North Carolina, 16.6 miles north from Waynesville, at Cove Creek, on west wingwall of bridge over Jcnathan Creek. Note: This TBM was used only for check point. Bench Mark is a chiseled square on downstream side of bridge, painted "TBM P-46".

TBM P-47 - Bench Mark is in Haywood County, North Carolina, 0.37 mile north of Mount Sterling School, 12 feet west of center line of road, 300 feet north of sharp curve in road, 4 feet above road. Bench Mark is a chiseled cross in outcropping rock and painted "TBM P-47".

TT-16-T - Station is in Haywood County, North Carolina, 2.2 miles south of Mount Sterling, gap at top of mountain opposite Mount Sterling, 3.5 miles south of, at sharp bend, in road, stream crossing, 30 feet west of road. Station is a standard USGS bronze tablet set in top of large out-

crop of rock and stamped "TT-16-T-1928".

TT-17-T - Station is in Haywood County, North Carolina, 4.1 miles south of Mount Sterling, on what is known as the old State Road, 1.8 miles north of gap at top of mountain, on north side of stream crossing, at rock wall culvert 15 feet south and 33 feet west of third class road southwest. Station is a standard USGS bronze tablet set in top of rock outcrop and stamped "TT-17-T-1928".

TT-18-T - Station is in Haywood County, North Carolina, 5.7 miles south of Mount Sterling, 6.5 miles northeast of Cataloochee, at gap of mountain opposite Mount Sterling, 35 feet west and 18 feet north of highest point of gap, on west side of road. Station is a standard USGS bronze tablet set in a precast concrete monument and stamped "TT-18-T-1928".

TT-19-T - Station is in Haywood County, North Carolina, 4.1 miles northwest of Cataloochee, on old State Road, 200 feet south where new highway will enter old road, 9 feet north and 14 feet east of the east side of triangle at road forks northwest. Station is a standard USGS bronze tablet set in vertical face of rock outcrop and stamped "TT-19-T-1928".

TT-20-T - Station is in Haywood County, North Carolina, 9.8 miles southeast of Mount Sterling, 2.3 miles north of Cataloochee Post Office, 57 feet east of east end of iron bridge over Big Cataloochee Creek, 18 feet east of road fork. Station is a standard USGS bronze tablet set in top of large rock outcrop and stamped "TT-20-T-1928". (Same as GAGE-BM-3).

TT-22-T - Station is in Haywood County, North Carolina, 3.8 miles south and west of Cataloochee Post Office, on property owned by M. C. Long, on road that leads up Caldwell Creek, 70 feet south $36^{\circ} 50'$ west of road fork northeast that crosses Long Branch. Station is a bronze tablet in top of large boulder 2 feet above ground and stamped "T.T.Sta. No. 22-T-1928".

TT-23-T - Station is in Haywood County, North Carolina, 7.1 miles southwest of Cataloochee Post Office, 4 miles northeast of Black Camp Gap, on Caldwell Creek, 2 feet north of center of trail, 34.5 feet north 4° east of triangular blazed birch tree and 64.4 feet south $79^{\circ} 55'$ east of nail in triangular blazed hemlock tree. Station is a bronze tablet in top of rock outcrop at base of hill and stamped "T.T.Sta. No. 23-T-1928".

TT-24-T - Station is in Swain County, North Carolina, 7.5 miles northeast of Black Camp Gap, 1.5 miles southwest of Paul's Gap, on Suncrest Lumber Company's logging railroad. 20 feet east of track. Station is a bronze tablet in rock outcrop and stamped "T.T.Sta.No.24-T-1928".

TT-25-T - Station is in Swain County, North Carolina, 3 miles northwest of Black Camp Gap, 3.5 miles southeast of Swayney, about 450 feet northeast of junction of Bunches Creek with Hintugee Creek, in small clearing in top of boulder 1 foot above ground. Station is a standard USGS bronze tablet set flush with top of rock and stamped "TT-25-T-1928".

TT-26-T - Station is in Swain County, North Carolina, 1 mile south of Swayney, 6.5 miles northeast of Ravensford, on the Parson's Pulp & Lumber Company's logging railroad, directly opposite the mouth of Bunches Creek, 10 feet west of center line of track. Station is a bronze tablet set in vertical face of rock outcrop and stamped "T.T.Sta.No.26-T-1928", painted "USPBM 2384.1".

U-144-1935 - Station is in Haywood County, North Carolina, 2.2 miles northwest of Cove Creek Gap, 18.8 miles north of Waynesville, on North Carolina State Highway 284, on property of Great Smoky Mountains National Park, at south end of rock cut, at south end of 200 foot tangent. Station is a standard USC&GS marker set in top of rock outcrop and stamped "U-144-1935".

Reference Mark 1: 20' W to center line of road.
Reference Mark 2: 35' N to 26" forked oak tree.
Reference Mark 3: 37' S to 6" sourwood tree.

USBM-2169.0 - Bench Mark is in Haywood County, North Carolina, 1.7 miles south of Mount Sterling, 75 feet southeast of Mitchells Sutton's house. Bench Mark is a copper nail in root of 15 inch locust tree and painted "B.M. 2169.0".

USBM-2458.1 - Bench Mark is in Swain County, North Carolina, at Swayney, 55 feet north of north end of railroad bridge at fork of Big Cove and Straight Fork, 10 feet west of track on top of rock outcrop. Bench Mark is a chiseled square, painted "U.S.B.M. 2458.1".

USBM-2560.1 - Bench Mark is in Swain County, North Carolina, 1 mile northeast of Swayney, 10 rails north of north end of trestle, 10 feet west of track, at bend. Bench Mark is a chiseled square on boulder and painted "U.S.B.M. 2560.1".

USBM-2714.0 - Bench Mark is in Swain County, North Carolina, 3 miles south-east of Swayney, 0.55 mile northeast of mouth of Indian Creek, 5 feet southeast of trail. Bench Mark is a copper nail and washer in root of 24 inch cucumber tree, painted "2714.0".

USBM-4090.5 - Bench Mark is in Swain County, North Carolina, 0.6 mile northeast of Paul's Gap, near head of northwest branch of Caldwell Creek. Bench Mark is a copper nail in root of 30 inch spruce tree growing over branch and painted "B.M. 4090.5".

USBM-2514.0 - Bench Mark is in Swain County, North Carolina, 0.9 mile southeast of Bunches Creek, 50 feet northwest of small stream crossing, northeast side of road. Bench Mark is a chiseled square on large boulder, painted "U.S.B.M. 2514.0".

USBM-2560.4 - Bench Mark is in Haywood County, North Carolina, at Cataloochee, 30 feet northwest of bridge. Bench Mark is a square cut on boulder, painted "B.M. 2560.4".

USBM-2744.3 - Bench Mark is in Haywood County, North Carolina, 1.7 miles southwest of Cataloochee, west side of Caldwell Creek Road. Bench Mark is a copper nail in root of 30 inch chestnut tree, painted "B.M. 2744.3".

USBM-2760.3 - Bench Mark is in Haywood County, North Carolina, 3.4 miles south of Mount Sterling, 10 feet west of old road. Bench Mark is a square cut on flat rock and painted "B.M. 2760.3".

USBM-2772.9 - Bench Mark is in Haywood County, North Carolina, 0.9 mile northwest of Dellwood, on top of concrete abutment at southwest corner of iron bridge over Jonathan Creek. Bench Mark is a drill hole painted "B.M. 2772.9".

USBM-2817.5 - Bench Mark is in Haywood County, North Carolina, 3.5 miles north of Cataloochee, east end of iron culvert under new road. Bench Mark is a chiseled cross painted "B.M. 2817.5".

USBM-2821.6 - Bench Mark is in Haywood County, North Carolina, 0.5 mile north of Cataloochee, 50 feet southwest of road fork. Bench Mark is a copper nail in root of 30 inch chestnut tree and painted "B.M. 2821.6".

USBM-2858.4 - Bench Mark is in Haywood County, North Carolina, 2 miles northwest of Dellwood, 30 feet south of farm road crossing, 3 feet west

of track. Bench Mark is a square cut on lower ledge of rock and painted "B.M. 2858.4".

USBM-2917.8 - Bench Mark is in Haywood County, North Carolina, 3 miles southwest of Cataloochee, 0.5 mile northeast of John Caldwell's farm, on southeast edge of road. Bench Mark is a drill hole on top of large boulder and painted "B.M. 2917.8".

USBM-2996.9 - Bench Mark is in Swain County, North Carolina, 2 miles northeast of Swayney, thence 1 mile southwest of junction of railroad, 4 feet west of track at a point 7 feet southwest of end of trestle over small stream. Bench Mark is a chiseled square on rock ledge and painted U.S.B.M. 2996.9".

USBM-3027.1 - Bench Mark is in Haywood County, North Carolina, 0.5 miles east of Little Cataloochee, Ola Postoffice, on north side of road at sharp bend, 100 feet southeast of house. Bench Mark is a copper nail and washer in root of large chestnut stump, painted "B.M. 3027.1".

USBM-3122 - Bench Mark is in Haywood County, North Carolina, 3.8 miles northeast of Paul's Gap, on north side of Caldwell Creek Road. Bench Mark is a copper nail in root of 30 inch birch tree, painted "B.M. 3122".

USBM-3300.9 - Bench Mark is in Haywood County, North Carolina, 5.2 miles northeast of Cataloochee, on west side of road. Bench Mark is a square cut on top of rock wall culvert, painted "B.M. 3300.9".

USBM-3370.7 - Bench Mark is in Haywood County, North Carolina, 2.8 miles northeast of Paul's Gap, on south edge of trail, at mouth of Ball Branch. Bench Mark is a copper nail in root of 24 inch birch tree and painted "B.M. 3370.7".

USBM-3454.3 - Bench Mark is in Haywood County, North Carolina, 7.4 miles south of Mount Sterling, 1 mile south of Sterling Gap, east edge of road. Bench Mark is a square cut on boulder and painted "B.M. 3454.3".

USBM-3464 - Bench Mark is in Haywood County, North Carolina, 5.3 miles south of Mount Sterling, 20 feet west of road at stream crossing. Bench Mark is a square cut on boulder, painted "B.M. 3464".

USBM-3965 - Bench Mark is in Haywood County, North Carolina, 4.2 miles northwest of Maggie, 60 feet northwest of trestle over Wycle Creek, 30 feet west of track. Bench Mark is a drill hole on top of boulder and painted "B.M. 3965".

USBM-4350.9 - Bench Mark is in Swain County, North Carolina, 1.8 miles northwest of Black Camp Gap, 55 feet southwest of bridge over small stream, 3 feet southeast of rail. Bench Mark is a chiseled square on rock ledge, painted "U.S.B.M. 4350.9".

USBM-4355.0 - Bench Mark is in Swain County, North Carolina, 1.07 miles northwest of Black Camp Gap, 10 feet east of east end of railroad bridge over Bynch Creek, 4 feet north of rail. Bench Mark is a chiseled square on rock ledge, painted "U.S.B.M. 4355.0".

USBM-4492 - Bench Mark is in Swain County, North Carolina, at Black Camp Gap, 50 feet south of low point, 40 feet southeast of railroad switch, on top of north end of old steel hoist drum embedded in bank. Bench Mark is a chiseled cross painted "B.M. 4492".

V-144-1935 - Station is in Haywood County, North Carolina, 20.1 miles north of Waynesville, 3.5 miles northwest of Cove Creek Gap, on North Carolina State Highway 284, on property of Great Smoky Mountains National Park, 15 feet above road, approximately 200 feet south of conspicuous 24 inch pine tree on west side of highway, approximately 200 feet north of 30 inch leaning oak tree on west side of highway. Station is a standard USC&GS marker set in top of concrete post, stamped "V-144-1935".

Reference Mark 1: 43' W to center line of highway.
Reference Mark 2: 9.5' S to 18" red oak tree.
Reference Mark 3: 61.0' W to 16" sourwood tree.

W-144-1935 - Station is in Haywood County, North Carolina, 21 miles north of Waynesville, 4.4 miles north of Cove Creek Gap, on North Carolina State Highway 284, on property of Great Smoky Mountains National Park, approximately 200 feet southwest of 36 inch oak tree on west side of highway, 1.1 mile south of intersection of Highway 284 and Cataloochee Creek. Station is a standard USC&GS marker set in top of concrete post and stamped "W-144-1935".

Reference Mark 1: 28' E to center line road.
Reference Mark 2: 10' NE to 8" white oak tree.
Reference Mark 3: 12' SW to 26" red oak tree.

WHIMS KNOB - Station is in Haywood-Swain Counties, North Carolina, at the summit of Whims Knob on the Haywood-Swain county line about 2 miles northeast of Black Camp Gap and between the headwaters of Caldwell and Buch Creeks. Station Mark: Triangles cut on signal tree. Signal tree is about 65 feet northwest of county corner. Signal: Flag in 16 inch buckeye tree.

AKW-12 - Station is in Haywood County, North Carolina, in Great Smoky Mountains National Park, about 16 miles northwest of Waynesville, and 2 miles south of Mount Sterling Fire Tower. To reach from Waynesville, at Southern Railroad Station - drive north on North Carolina Highway No. 284 23.8 miles to bridge over Cataloochee Creek. Continue 2.7 miles to fork. Bear left on graded dirt road 1.1 miles to old school and farm building at Ola, at bridge across Conrad Branch, turn right up left bank of branch 0.1 mile to gate. Bear right on old logging road up branch 900 feet to fork of creeks. (end of truck travel) - closed). Take trail to left up woody branch 0.8 mile to edge of field at second old farmhouse. Turn left up hollow 3000 feet, keeping main water course, to old railroad grade. Turn right along grade 800 feet to old overhead skidder site on nose of ridge. Station is on centerline main track on centerline of nose of ridge and nearly opposite end of spur. 110 feet south of frog. Station is a 1" x 1" angle iron, stamped "TVA-AKW-12", 0.3 feet above ground.

Reference Mark No. 1:	15.3'	S 20° W	triangle on 3" birch
Reference Mark No. 2:	18.6'	N 69° W	triangle on 6" twin birch.
Reference Mark No. 3:	23.7'	N 50° W	triangle in 3" birch.

AKW-14 - Station is in Haywood County, North Carolina, about 16 miles northwest of Waynesville, 1.7 miles south of Mount Sterling Fire Tower. To reach from Waynesville, at Southern Railroad Station, drive north on North Carolina Highway No. 284, 23.8 miles to bridge over Cataloochee Creek. Continue 2.7 miles to fork, then bear left 1.1 miles to old school and farm buildings at Ola. Turn right on woods road up left bank of Little Cataloochee Creek 500 feet to gate. Beyond gate bear right 0.2 mile to fork. End of truck travel. Bear right on trail up Andy Branch 1.0 mile to second house. Continue 500 feet along trail to north edge of field. Station is 350 feet North 82° East of this point, on nose of ridge, 7 feet north of rail fence. Station is a 1" x 1" angle iron, stamped "TVA-AKW-14".

Reference Mark No. 1:	14.9'	N 65° E	to 3" sourwood on centerline fence.
Reference Mark No. 2:	5.9'	N 82° E	to 2" locust.
Reference Mark No. 3:	15.2'	S 10° E	to 3" apple on centerline fence.

AKW-15 - Station is in Haywood County, North Carolina, about 8.0 miles northwest of Waynesville, on Great Smoky Mountains National Park Boundary, about 1.5 miles southwest of Cove Creek Gap. To reach from Waynesville Southern Railroad Station, drive north on North Carolina Highway No. 284, 16 miles to Cove Creek Gap (end of truck travel). Go southwest along park boundary 1.5 miles (30 minute walk) to station which is 1000 feet northeast of intersection of main ridge with prominent ridge from east. Station is 4 feet west of centerline of ridge and trail, and 3.5 feet northwest of 12 inch oak with top blown out at west edge of trail. Station is a 1" x 1" angle iron 0.5 feet above ground and stamped "AKW-15-TVA".

Reference Mark No. 1:	3.5'	Southeast	to triangular blaze on 12" oak.
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CATALOOCHEE - Station is in Haywood and Swain Counties, North Carolina, 4 miles north of Black Camp Gap and 2 miles north of Pauls Gap on most southerly high peak of the Cataloochee Mountain, also known as the "Spruce Tops" which is on the divide between the headwaters of Cataloochee Creek on the east and Oconaluftee River on the west. Station is near the center of the highest part of the peak which has a rather rounded summit and is 7 feet south-southeast of the spruce tree used as instrument station and signal. To reach from Black Camp Gap, follow Suncrest Lumber Company Railroad to Pauls Gap, thence follow railroad around west slope of mountain to prominent drain crossing about 1.5 miles from Pauls Gap, then turn right up slope to top. Station is a bronze tablet cemented in large rounded rock set firmly in ground and projecting about 2 inches above surface. Signal is a large standing spruce tree with several other trees cut and fallen into it for braces and with platform built around top.

LR-460 - Station is in Haywood County, North Carolina, on Moody Top about 7 miles northwest from Waynesville. To reach from Waynesville drive 9.6 miles northwest on Soco Gap Road from junction of Highways No. 19 and 23 to gravel road to right marked "Cataloochee Ranch Road". Drive up road up hill 3.0 miles to top of ridge at a barn. Walk up ridge east back of barn 0.75 mile to top of flat knob. Station is near a large fallen dead chestnut tree on or near the crest of knob. Station is a 1" x 1" angle iron stamped "TVA-LR-460".

Reference Mark No. 1:	34.80'	N 10° E	to nail in blazed triangle on 36" oak
Reference Mark No. 2:	9.50'	S 60° E	to nail in blazed triangle on 8" oak
Reference Mark No. 3:	12.35'	S 10° E	to nail in blazed triangle on 6" oak

LR-464 - Station is in Haywood County, North Carolina, about 6.5 miles north of Waynesville. To reach from intersection of North Carolina Highways No. 293 and 284 at Dellwood, continue north on Highway No. 284, 4.6 miles to intersection of farm road east. Continue on farm road 1218 feet to new white house on right with driveway on east side intersection of road. Point is in southeast corner of intersection, 22 feet from centerline of intersection and about 5 feet inside of fence line by a large stone. Station is a 1" x 1" angle iron stamped "TVA-LR-464".

Reference Mark No. 1:	7.43'	N 20° W	to corner fence post.
Reference Mark No. 2:	5.73'	S 70° W	to tack in fence post.

LR-466 - Station is in Jackson County, North Carolina, about 12.5 miles west of Waynesville. To reach from Waynesville, leave the depot and drive 19.4 miles northwest on the Soco Gap Road. Turn left at the intersection of Jenkins Creek Road and drive south 0.8 mile to where road leaves ridge. The point is about 15 feet west of road and about 10 feet northeast of Forest Service Telephone Pole No. 299. Station is a 1" x 1" angle iron stamped "TVA-LR-466".

Reference Mark No. 1: 23.55' N 15° E to triangular blaze in
30" oak.
Reference Mark No. 2: 9.60' N 85° E to nail in Forest Service
Telephone Pole No. 299.
Reference Mark No. 3: 37.32' South to triangular blaze in
10" hickory.

LR-467 - Station is in Haywood County, North Carolina, about 7.4 miles west of Waynesville. To reach from the intersection of North Carolina Highways No. 293 and 284 at Dellwood, continue west on Highway No. 293 for 3.7 miles to Maggie, North Carolina. Turn left at U. S. Post Office and go up Camel Creek Road for 1.3 miles. Turn north and go up hollow by old log cabin to Jimmie's Jumpoff on Satchel Mountain. Point is about 470 feet east from saddle on top of knob, 70 feet east from angle point in ridge line, and 100 feet west of large conspicuous rock. Station is a 1" x 1" angle iron stamped "TVA-LR-467".

Reference Mark No. 1: 8.10' N 15° E to triangular blaze in
12" dead chestnut.
Reference Mark No. 2: 8.68' S 45° W to traingular blaze in
20" chestnut.
Reference Mark No. 3: 27.43' S 60° E to triangular blaze in
16" oak.

LR-469 - Station is in Haywood County, North Carolina, about 8.7 miles northwest from Waynesville. To reach from Waynesville, drive 9.6 miles northwest on Soco Gap Road from junctions of Highways No. 19 and 23 to gravel road to right marked "Cataloochee Ranch Road". Drive up road up-hill 3.0 miles to top of ridge. Then take road to left by barn and follow to "Needs Lick Gap" - the end of road. Continue on trail north and northwest 1 mile to Smoky Mountain National Park boundary. Follow rail fence 1 mile to second gate which is in a gap. Follow fence 1000 feet where it makes an angle. Point is about 50 feet inside Smoky Mountain National Park. Point is about 50 feet west of lone 8 inch balsam. Station is a 1" x 1" angle iron stamped "TVA-LR-469".

Reference Mark No. 1: 18.55' South to 24" twin oak.
Reference Mark No. 2: 15.85' West to 36" forked oak.

LR-470 - Station is in Haywood County, North Carolina, about 8.5 miles northwest from Waynesville. To reach from Waynesville, drive 9.6 miles from junctions of Highways No. 19 and 23 on Soco Gap Road to gravel road to right marked "Cataloochee Ranch Road". Drive up road up hill 3.0 miles to top of ridge. Then take road to left by barn and follow to "Needs Lick Gap" where road ends. Follow trail north and northwest 1 mile to Smoky Mountain National Park boundary. Follow rail fence 1 mile to second gate which is in a gap. Follow trail leading southwest from gap 2000 feet to an old field in gap. Continue south up ridge to highest point. The point is 74 feet east of highest point. Station is a 1" x 1" angle iron and stamped "TVA-LR-470".

Reference Mark No. 1:	38.20'	S 60° E	to triangular blazed 28" oak.
Reference Mark No. 2:	33.95'	N 25° E	to triangular blazed 20" oak.
Reference Mark No. 3:	25.85'	N 50° W	to triangular blazed 30" oak.

LR-471 - Station is in Haywood County, North Carolina, about 18 miles north of Waynesville. To reach from Waynesville Post Office drive north on U. S. Highways No. 19 and 23 about 4 miles to Lake Junaluska. 500 feet beyond Southern Railroad Bridge over highway, turn left on North Carolina Highway No. 209 and go 11.0 miles to Cold Creek. Turn left on North Carolina Highway No. 289, 0.6 mile to junction with North Carolina Highway No. 292. Turn right and continue on North Carolina Highway No. 292, 9.3 miles to Cold Springs Road. Turn left and continue on Cold Springs Road 4.6 miles (1.4 miles from end of road). At this place, cross Cold Springs Creek and climb 800 feet to top of steep ridge south of creek. Point is about 50 feet southeast of highest place, 2.7 feet southeast of lone 18 inch pine tree. Station is a 1" x 1" angle iron stamped "TVA-LR-471".

Reference Mark: 2.70' S 60° E triangle on lone 18" pine.

LR-472 - Station is in Haywood County, North Carolina, about 1.5 miles due north of Waynesville. To reach from Waynesville Depot, continue north on Dellwood Road about 500 feet to Love Lane. Turn left on Love Lane and continue to Ray Avenue. Turn left on Ray Avenue and continue 0.4 mile to gate. Continue through gate and go 1.5 miles up mountain road to sharp bend on top of ridge, which is photo point. Station is 175 feet northeast of sharp bend down the ridge. Station is a 1" x 1" angle iron stamped "TVA-LR-472".

Reference Mark No. 1:	5.72'	S 60° W	to 8" oak
Reference Mark No. 2:	20.59'	S 20° W	to 10" locust
Reference Mark No. 3:	6.60'	S 80° E	to 10" oak

LR-473 - Station is in Haywood County, North Carolina, about 8.6 miles northwest of Waynesville. To reach from Waynesville, drive north 9.6 miles from junction of Highways No. 19 and 23 on Soco Gap Road to gravel road to right, marked "Cataloochee Ranch Road". Drive up road up hill 3.0 miles to top of ridge. Then take road to left by barn and follow to "Needs Lick Gap" where road ends. Continue up trail on foot 0.8 mile northwest to highest point on bald ridge. Continue down northwest ridge 0.5 mile to 48 inch hemlock in small saddle. Station is 145 feet North 46° West up small ridge. Angle iron is directly under flutter-flag signal in 18 inch dead chestnut. Station is a 1" x 1" angle iron stamped "TVA-LR-473". No references.

LRH-8 - Station is in Swain County, North Carolina. To reach from Waynesville, drive west on New Soco Gap Road 14.0 miles to Soco Gap. Continue on gravel road, keeping main road for 4.0 miles. Turn left on side road 0.2 mile to Lickstone Fire Tower. Station is in ground under centerline of tower. Station is a 1" x 1" angle iron stamped "TVA-LRH-8" and set in centerline of Lickstone Fire Tower, 0.6 foot above ground.

LRH-10 - Station is in Haywood County, North Carolina, on Eagle Nest Mountain. To reach from the Southern Railroad Depot at Waynesville, drive west 0.1 mile, turn right 1.25 miles, turn right 4.5 miles on old Hotel Road to gap. Leave car, turn right up ridge for 1200 feet to what is known as North Eagle View and station angle iron is 75 feet west of highest point and is 6 feet west of trail. Station is a 1" x 1" angle iron, 0.7 feet above ground.

Reference Mark No. 1: 17.75' S 60° E to 30" oak.
Reference Mark No. 2: 25.3' S 46° W to 35" chestnut.
Reference Mark No. 3: 20.5' N 20° E to 24" chestnut.

MS-428 - Station is in Haywood County, North Carolina. To reach from Haywood County Court House in Waynesville, drive along State Highway 284 for 1.6 miles to T-road right. Turn right and drive 0.10 mile to Y-roads. Turn left and drive up poor road 0.40 mile. Park car and walk in westward direction for 600 feet to center line ridge. Turn right following old trail and fence line on center line ridge for 1500 feet top of ridge and station. Station is in the northwest corner of woods, 18 feet south of top of ridge and is a 1" x 1" angle iron stamped "MS-428".

Reference Mark No. 1: 21.03' S 36° E to tack in 12" twin apple tree.
Reference Mark No. 2: 11.25' S 50° W to tack in 12" oak tree.
Reference Mark No. 3: 13.06' N 10° W to tack in 12" oak tree.

MOUNT STERLING F. T. - Station is in Haywood County, North Carolina. Center line of fire tower on peak known as Mount Sterling. See description of Mount Sterling Station.

SPRUCE MTN. F. T. - Station is in Haywood and Swain Counties, North Carolina, and is the top of fire tower on Spruce Mountain, about 6.8 miles (airline) north of Soco Bald, and about 4.3 miles (airline) northeast of Whims Knob.

SUTTON F. T. - Station is in Haywood County, North Carolina, about 2.7 miles (airline) north of dam on Pigeon River forming Waterville Lake.

AKW-4 - Station is in Haywood County, North Carolina, 18.0 miles north of Waynesville. To reach from Waynesville Depot, drive north on North Carolina Highway No. 284 about 23.5 miles to Mt. Sterling Gap, turn right on dirt road and go 4.5 miles to Sutton Fire Tower. End of truck travel. Go west (no trail) 500 feet to centerline of hollow. Turn north and continue down hollow 0.75 mile to trail. Turn right on trail 0.3 mile to top of ridge. Turn left on trail down ridge 0.5 mile to second field. Station is 130 feet southwest of north corner of field and 20 feet southeast centerline of ridge. Station is a 1" x 1" angle iron stamped "TVA-AKW-4".

AKW-7 - Station is in Haywood County, North Carolina, about 11.0 miles north of Waynesville. To reach from Waynesville Depot, drive north on North Carolina Highway No. 284 for 21.5 miles to station. Station is on east side of road, 23 feet from centerline, on nose of ridge and 15 feet above centerline of road. It is 0.6 mile by road south of junction of Highway No. 284 and road to CCC Camp. It is 65 feet north of triangle blazed 24 inch red oak on west side of highway. Station is a 1" x 1" angle iron, stamped "TVA-AKW-7".

Reference Mark No. 1:	1.6'	N 32° E	triangle in 3" sourwood.
Reference Mark No. 2:	6.35'	S 45° E	triangle in 6" red oak.
Reference Mark No. 3:	64.6'	S 32° W	triangle in 24" red oak across road.

AKW-8 - Station is in Haywood County, North Carolina, about 20.0 miles northwest of Waynesville. To reach from Waynesville Depot, drive north on North Carolina Highway No. 284 for 23.5 miles to Mount Sterling Gap. Turn right on dirt road and continue 1.0 mile to Y-intersection. Take right and continue 1000 feet to top of ridge. Station is 3 feet south of lone 10-inch locust tree on south end of ridge. Station is a 1" x 1" angle iron, stamped "TVA-AKW-8".

Reference Mark No. 1:	2.60'	North	to triangular blaze in 10" locust.
Reference Mark No. 2:	80.2'	S 15° E	to triangular blaze in 28" red oak.
Reference Mark No. 3:	89.6'	S 27° W	to triangular blaze in 9" white oak.

AKW-9 - Station is in Haywood County, North Carolina, about 8.5 miles northwest of Waynesville. To reach from Waynesville Depot, go north on North Carolina Highway No. 284 for 11.5 miles to Cove Creek, North Carolina, continue on Highway No. 284 for 0.9 mile to T-road left. Turn left and go 1.7 miles on Cove Creek Road to Y-intersection at Suttontown School. Bear right at fork and continue on new dirt road 1.0 mile. Then continue on foot about 0.5 mile to log house in field. Turn right on skid road up creek and continue to cornfield on top of mountain 0.5 mile. Station is in southwest corner of barbed wire fence intersection in edge of woods on top of ridge. Station is a 1" x 1" angle iron stamped "TVA-AKW-9".

Reference Mark No. 1:	23.0'	S 60° W	to triangular blazed 16"
		twin oak.	
Reference Mark No. 2:	1.1'	North	to triangular blazed corner
		fence post.	
Reference Mark No. 3:	30.2'	N 35° E	to triangular blazed 18" oak.

AKW-10 - Station is in Haywood County, North Carolina, about 11.5 miles northwest of Waynesville, 5.5 miles south of Mount Sterling Fire Tower. To reach from Waynesville at Southern Railroad Station, drive north on North Carolina Highway No. 284, 22.2 miles to fork. Bear left on Cataloochee Road 0.9 mile to bridge across Cataloochee Creek at CCC Camp. Cross bridge turning up creek 3.5 miles to fork at Nellie Schoolhouse. Bear left across bridge 0.2 mile to fork. Bear right on old lumber road up Shanty Branch 0.8 mile (end of truck travel). Go right, up nose of ridge 300 feet to station on nose of ridge at blazed oak. Station is a 1" x 1" angle iron 0.4 feet above ground and stamped "TVA-AKW-10".

Reference Mark No. 1:	19.3'	N 67° E	to triangular blaze on 18"
		white oak.	
Reference Mark No. 2:	3.0'	S 15° E	to triangular blaze on 9"
		pine.	
Reference Mark No. 3:	3.0'	S 85° W	to triangular blaze on 12"
		red oak.	