

TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING
MAPS AND SURVEYS BRANCH

SURVEY CONTROL DATA

BILTMORE, NORTH CAROLINA
QUADRANGLE 192

BULLETIN TVA-MS-192-C

CHATTANOOGA, TENNESSEE
OCTOBER 1950

SURVEY CONTROL DATA IN QUADRANGLE 192

A 39 (USC&GS, 1932; Buncombe County, North Carolina)

Located about 2.5 miles west along the Southern Railway from Asheville, about 0.7 miles southwest of Emma, about 0.3 miles northeast of milepost 2, about 359 feet northeast of a paved highway grade crossing, about 290 feet northeast of the southwest end of a railway cut, and on the southeast side of the track, in the top of a horizontal rock outcrop. A standard tablet stamped "A 39 1932".

Note: Searched for but not recovered in April, 1942. It was reported that soft rock at the described location had weathered away, possibly destroying bench mark.

ELEVATION: 2094.983 feet or 638.552 meters (C-2)

A 127 (USC&GS, 1935; Buncombe County, North Carolina)

Located at Leicester, 9.1 miles northwest of Asheville, on the property of J. T. Davis, 11 feet southwest of temporary Highway 63, 51.8 feet southwest of Willie Mears Store, 47 feet south of Lester Garage operated by P. G. Miller, 17.2 feet southeast of L. A. Sluter's Store, 1.5 feet east of northwest corner of Davis Store, 2 feet above sidewalk, 70 feet southeast of present post office, 51.8 feet S 53° W of southwest corner of Mears Store. A standard tablet stamped "A 127 1935" and set vertically.

ELEVATION: 2089.884 feet or 636.998 meters (C & T 2)

A 132 (USC&GS, 1935; Buncombe County, North Carolina)

Located 4.6 miles southwest of Leicester, on the property of A. J. Randall, 12 feet southeast of Newfound Road, 12 feet northwest of a wire fence, 100 feet east of Randall's house, 135 feet southwest of large barn, 1000 feet northeast of Zion Hill Church, 61.2 feet northeast of spring house, 87.5 feet southwest of southeast corner of shed. A standard tablet stamped "A 132 1935" and set in concrete post.

Report on Condition (TVA, October, 1941): Recovered in poor condition. The top of the concrete post has been hit by a road grader. The corners of the post and a part of the tablet have been knocked off. The post is loose in the ground.

ELEVATION: 2146.679 feet or 654.309 meters (T-2)

A 134 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 2.9 miles east along the Reems Creek road from the city hall at Weaverville, 0.1 miles west of a cemetery at a side road leading north, 20 yards west of the east edge of a woods, at the east end of a cut, and 8 yards north of the center line of the road. A standard tablet stamped "A 134 1935" and set in the top of a concrete post.

ELEVATION: 2193.352 feet or 668.535 meters (T-2)

A 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located at Asheville, about 1 mile south along the Southern Railway from the station, about 48 yards south of milepost 140, about 47 yards north of a "STATION 1 MILE" sign, at semaphore 140.0, in the top of the northwest corner of the concrete foundation, 5 feet east of the east rail of the west bound main track, and about level with the base of the rail. A standard tablet stamped "A 136 1935".

ELEVATION: 1992.916 feet or 607.442 meters (C-1)

A 138 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 3.2 miles south along U. S. Highways 19 and 23 from the city hall at Weaverville, 0.3 miles south of the junction with U. S. Highways 25 and 70, 0.1 miles south of "The Cedars" tourist home, across the highway from the north end of a white pine hedge enclosing a residence, across the highway from a house reached by six flights of concrete steps, 27.2 feet west of the center line of the highway, 21.5 feet northeast of an 18-inch elm tree and level with the highway. A standard tablet stamped "A 138 1935" and set in the top of a concrete post.

ELEVATION: 2163.562 feet or 659.455 meters (C-2)

A 138 X (USC&GS, 1935; Buncombe County, North Carolina)

Located about 2.8 miles south along U. S. Highway 19 and 23 from the city hall at Weaverville, 60 yards south of a City Service filling station, 24 yards south of the junction of U. S. Highways 25 and 70, 21 yards east of the stone steps leading to the Mrs. M. Sevier residence, 36 feet east of the center line of a dirt road, 30 feet west of the center line of the highway, 15.8 feet southwest from the edge of the curving pavement, and about level with the highway. A standard tablet stamped "A 138 X 1935" and set in the top of a concrete post.

ELEVATION: 2238.211 feet or 682.208 meters (C-2)

A 141 (USC&GS, 1935; Buncombe County, North Carolina)

Located at Candler, 68 feet west of the west end of the Southern Railway station, 13 feet south of the south rail, 5 feet east of the station sign, and about 1 foot lower than the base of the rail. A standard tablet stamped "A 141 1935" and set in the top of a concrete post.

ELEVATION: 2107.886 feet or 642.485 meters (C-1)

A 142 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 1.9 miles west along the Southern Railway from the station at Azalea, about 400 yards east of the siding at Fairview, at bridge 136.2 over U. S. Highway 70, in the top of the southeast end of the southwest abutment and 5.5 feet southeast of the southeast rail. A standard tablet stamped "A 142 1935".

ELEVATION: 2083.313 feet or 634.995 meters (C-1)

A 142 A (USC&GS, 1935; Buncombe County, North Carolina)

Located 1.9 miles west of the station at Azalea, by rail, on the Salisbury to Knoxville Division of the Southern Railway, about 400 yards east of the siding "Fairview", 4.0 feet southeast of the southeast rail, in the center of the southeast end of the northeast abutment of railway bridge No. S 136.2 over U. S. Highway 70, 2 inches below the base of the rails. A 1- by 1-inch outlined square.

ELEVATION: 2083.454 feet or 635.038 meters (C-1)

AKW 256 (TVA, 1941; Buncombe County, North Carolina)

Located about 3 miles northeast of Weaverville, on fence line west of old road on ridge. To reach from Weaverville, begin at traffic light and drive north 1.0 miles on U. S. Highways 19 and 23 to Dula Springs Road right, follow Dula Springs Road 2.0 miles to intersection, bear left 0.8 miles to intersection, take left on field road to end at house, 0.3 miles, end of truck travel. Follow trail leading by barn 500 feet to intersection, take trail right 0.4 miles to gap, follow trail left along center line of spur

ridge 1000 feet to top of ridge, turn left on ridge along fence 500 feet to station. A 1- by 1-inch angle iron driven flush with ground and stamped "AKW 256 1941".

Reference Mark 1: 3.4 feet S 40° E to 12-inch white oak stump on fence line west of trail.

Reference Mark 2: 24.4 feet North to 18-inch dead chestnut on fence line east of trail.

Reference Mark 3: 14.6 feet N 30° E to 16-inch oak on fence line east of trail.

GRID POSITION (N.C.): X = 957,561.6; Y = 736,846.2 (T-4)
ELEVATION: 3571 feet (T-5)

AKW 258 (TVA, 1941; Buncombe County, North Carolina)

Located about 3 miles east of Weaverville. To reach from traffic light in Weaverville, drive south 0.3 miles by school to intersection left, take road left 2.9 miles to intersection with dirt road right, take road right 0.3 miles to intersection left at bridge, take road left 0.1 miles to creek crossing, leave truck and follow creek 300 feet to station, 75 feet west of road and 30 feet west of creek. A nail in root of apple tree.

GRID POSITION (N. C.): X = 957,844.1; Y = 724,008.4 (T-4)
ELEVATION: 2197 feet (T-5)

AKW 259 (TVA, 1941; Buncombe County, North Carolina)

Located about 1-1/2 miles southeast of Weaverville, on outside fence line, about 5 feet west of corner, 300 feet east of barn. To reach from Weaverville traffic light, drive south by school 0.3 miles to intersection left, take road left 1.0 miles to dirt road right, take road right 0.1 miles to intersection, turn left 0.1 miles to barn, walk east along field road between fences 300 feet to station at southeast corner of fence. A 1- by 1-inch angle iron.

Reference Mark 1: 4.1 feet N 65° E to outside corner fence post.

Reference Mark 2: 19.1 feet S 85° W to 3-inch dogwood.

Reference Mark 3: 8.1 feet N 12° E to fence post.

GRID POSITION (N. C.): X = 947,881.1; Y = 723,022.3 (T-4)
ELEVATION: 2084 feet (T-5)

AKW 262 (TVA, 1941; Buncombe County, North Carolina)

Located about 3-1/4 miles west of Alexander, on north end of hill at base of 3-inch scrub pine. To reach from Alexander Post Office, drive across bridge over French Broad River 2.0 miles to crossroads and end of pavement, turn right 0.6 miles to intersection, turn left 0.5 miles to T-road left, turn left through gap in fence line 150 feet to field road right, take road right 300 feet to station. A 1- by 1-inch angle iron stamped "AKW 262 1941" and driven flush with ground.

Reference Mark 1: 800 feet N 18° E to east edge of east chimney on white house in hollow.

Reference Mark 2: 800 feet S 84° E to center line of west gable of tin roof barn.

Reference Mark 3: 1400 feet S 50° E to center line of transmission pole.

GRID POSITION (N. C.): X = 910,115.5; Y = 735,388.6 (T-4)
ELEVATION: 2164 feet (T-5)

ALLEY (USC&GS, 1933; Buncombe County, North Carolina)

Located in Asheville, on southwest corner at intersection of alleys behind Sears Roebuck and Bon Marche stores, directly north across street from Flat Iron Building, and at northeast corner of parking lot. Surface mark is a standard bronze tablet set in the top of a square block or post of concrete. Underground mark is a block of concrete 3 feet below the ground containing at the center of its upper surface a standard bronze tablet.

GEODETIC POSITION: Lat. = 35°35'43.952"; Long. = 82°33'19.480" (C-2)
unchecked position)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Feet
Asheville	3°57'49"	183°57'49"	1.831230	222.44

Azimuth from station of most southerly ornamental cross on east face of highest part of Arcade Building is 78°21'19".

ASHEVILLE (USC&GS, 1933; Buncombe County, North Carolina)

Located in Asheville, in center of 4-inch ventilating pipe in northwest corner of roof of Flat Iron Building, 7.9 feet from inside northwest corner of parapet. Station mark is a standard disk station mark.

Reference marks are standard reference disks.

Reference Mark 1 is in northwest concrete pier of northeast radio tower, and 26.90 meters (88.25 feet) from station in geodetic azimuth 251°57'.

Reference Mark 2 is in northwest pier of southwest radio tower, and 18.32 meters (60.10 feet) from station in geodetic azimuth 348°14'.

GEODETIC POSITION: Lat. = 35°35'41.757"; Long. = 82°33'19.666" (C-2)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Pisgah	44°17'06.3"	224°10'05.0"	4.418405	16.3
Spivey	94 21 51.0	274 18 29.0	3.942555	5.4

Azimuth from station to black water tank in West Asheville is 61°23'15".
Station ALLEY is 67.800 meters (222.44 feet) from station in azimuth 183°57'49".

GRID POSITION (N. C.): X = 943,216.11; Y = 690,363.43 (C-2)

B 39 (USC&GS, 1932; Buncombe County, North Carolina)

Located at Asheville, in the Southern Railway yards, about 0.9 miles northwest of the station, about 590 feet southeast of the southeast end of bridge No. 142.0 over French Broad River, about 150 feet east of the city boundary line, about 40 feet north of the Southern Railway maintenance limit sign, on the northeast side of the track, and about 7 feet east of the end of a cut. A standard tablet stamped "1988.218 B 39 1932" and set in the top of a horizontal rock outcrop.

ELEVATION: 1987.916 feet or 605.918 meters (C-1)

B 127 (USC&GS, 1935; Buncombe County, North Carolina)

Located 1.1 miles west of Leicester, 10.2 miles northwest of Asheville, on the property of the Leicester Methodist Church, 16 feet northwest of temporary Highway 63, 25 feet east of a T-road north of temporary Highway 63, 250 feet east of Jarrett Apartment House, 2 feet northwest of wire fence, 41.0 feet north of telephone pole 2973, 17.7 feet N 80° E of 10-inch pine tree at fence corner. A standard tablet stamped "B 127 1935" and set in the top of a concrete post.

ELEVATION: 2124.930 feet or 647.680 meters (C & T-2)

B 132 (USC&GS, 1935; Buncombe County, North Carolina)

Located 5.6 miles southwest of Leicester, on the property of J. C. Plammons, 9 feet northwest of Newfound Road, 47 feet southeast of Plammons' house, 11.3 feet northeast of telephone pole, 150 feet west of bridge over Newfound Creek, 38 feet west of garden, 16 feet west of driveway. A standard tablet stamped "B 132 1935" and set in the top of a concrete post.

ELEVATION: 2193.165 feet or 668.478 meters (T-2)

B 134 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 1.9 miles southeast along the Reems Creek road from the city hall at Weaverville, at the junction of the Eller Cove road, 56 yards east of a brown and white frame house, 58.8 feet northwest of a timber bridge over Reems Creek, 12 yards south of the center line of the Reems Creek road, and 7 yards west of the Eller Cove road. A standard tablet stamped "B 134 935" and set in the top of a concrete post.

Report on Condition (TVA, January, 1942): Station is in a poor location, on the edge of a road which is graded from time to time and on the edge of a cultivated field. It will probably be struck by either road machinery or farm implements.

ELEVATION: 2078.808 feet or 633.622 meters (T-2)

B 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located at Biltmore, on the Salisbury to Knoxville Division of the Southern Railway, in the north face of the railway station, 10.5 feet south of the south rail of the tracks leading to Hendersonville, 2.2 feet west of the northeast corner of the station, 2.3 feet above the concrete platform, and set vertically. A standard tablet stamped "B 136 1935".

ELEVATION: 1995.724 feet or 608.298 meters (C-1)

B 138 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 2.1 miles south along U. S. Highways 19 and 23 from the city hall at Weaverville, 0.7 miles north of the junction with U. S. Highways 25 and 70, 28 yards east of an old brick building, 17 yards northeast of an old brick chimney, 27 feet west of the center line of the highway, 24.5 feet south of the center line of a dirt road, 16.6 feet west of the west edge of the pavement, and about level with the highway. A standard tablet stamped "B 138 1935" and set in the top of a concrete post, projecting about 4 inches above ground.

ELEVATION: 2126.000 feet or 648.006 meters (C-2)

B 141 (USC&GS, 1935; Buncombe County, North Carolina)

Located 11.9 miles southwest of Buncombe County Court House in Asheville, via U. S. Highways 19 and 23 and Pisgah Highway, 1.0 miles southwest of Candler Post Office via Pisgah Highway, on highway-right-of-way, 2.1 miles southwest of U. S. Highways 19 and 23, on east side of Pisgah Highway, 22.7 feet from center line of highway, 125 feet north of T-road intersection from northwest, 100 feet southeast of one-story frame house that sits across road on 20 foot road bank, 140 feet northeast of F. D. Brendell's mailbox. A standard tablet stamped "B 141 1935" and set in concrete post.

Reference Mark 1: 12.5 feet N 30° W to east edge of concrete pavement.

Reference Mark 2: 53.0 feet N 50° E to telephone pole.

Reference Mark 3: 55.0 feet S 30° W to 8-inch hickory tree.

ELEVATION: 2210.225 feet or 673.678 meters (T-2)

BATTERY PARK (USGS, 1934; Buncombe County, North Carolina)

Located in the city of Asheville, on the extreme top of the Battery Park Hotel, directly over elevator motor room in center of building, about 1 foot from inside corner of parapet in northwest corner of roof of penthouse. Station is center of cast iron guard over 3-inch drain pipe, "X" filed in top of guard.

GEODETIC POSITION: Lat. = 35°35'46.924"; Long. = 82°33'25.428" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Spivey	93°22'46.6"	273°19'27.9"	3.934779	5.3
Woolsey	165 03 57.9	345 03 40.3	3.471158	1.8
Asheville	317 40 02.7	137 40 06.0	2.333232	0.1

BILTMORE 1 (USGS, 1934; Buncombe County, North Carolina)

Located about 1 mile northeast of Weaverville, on clearest top of Hamburg Mt., on property owned by Mrs. S. M. Alsobrook. To reach from Asheville, drive north to Weaverville, from center of this town drive north 0.35 miles and turn right, proceed 0.2 miles to road fork, turn left and follow winding road through gate for 1.2 miles to top of mountain and station. Station is drill hole in rock in place under 12-inch locust tree.

GEODETIC POSITION: Lat. = 35°42'16.150"; Long. = 82°32'55.642" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Zillicoa	89°58'35.2"	269°55'35.3"	3.889325	4.8
Britten	243 56 50.4	63 58 19.2	3.628966	2.6
Rice	315 20 31.5	135 22 35.1	3.880012	4.7

GRID POSITION (N. C.): X = 946,623.9; Y = 730,141.2 (G-3)

ELEVATION: 2824 feet (T-5)

BILTMORE 2 (USGS, 1934; Buncombe County, North Carolina)

Located about 4-1/2 miles east of Juno and 4 miles north of Asheville, on Gooch Peak in an apple orchard owned by Jack Westall. To reach from Asheville Post Office drive north on Highway 70 about 3 miles to Beaverdam Country Club, thence continue on Highway 70 for a distance of 1.2 miles to crossroads in town of Woodfin, turn right onto Pine View Road and keep straight at all intersections for 0.5 miles to road fork with garage on each side of road, turn right and follow winding road, 1.6 miles to peak. Drill hole in rock outcrop.

GEODETIC POSITION: Lat. = 35°39'04.459"; Long. = 82°34'06.848" (G-3)

To Station	Geodetic Azimuth		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Zillicoa	134°43'26.9"	314°41'08.7"	3.923706	5.2
Britten	215 48 58.9	35 51 09.2	3.981893	6.0
Rice	265 52 49.8	85 55 34.9	3.853794	4.4

GRID POSITION (N. C.): X = 940,058.8; Y = 710,983.5 (G-3)

ELEVATION: 3018 feet (T-5)

BILTMORE 3 (USGS, 1934; Buncombe County, North Carolina)

Located about 6 miles northwest of Asheville and 1 mile west of Olivette on a wooded knoll owned by H. A. Slunder. To reach from Asheville Post Office, drive north on Highway 70 about 3 miles to Beaverdam Lake Country Club, thence continue on Highway 70, a distance of 1.2 miles to crossroads in town of Woodfin, turn left and drive 1.1 miles to road fork, turn sharp right onto Highway 63 and drive 1.7 miles to crossroad, turn right onto the Marshall Road and drive 2.5 miles to road fork, turn right and drive 1.0 miles to road fork, turn right and drive 0.1 miles to road fork, turn left and drive 0.1 miles. Station is drill hole in rock outcrop with triangle blazed on 20-inch oak tree.

GEODETIC POSITION: Lat. = 35°39'19.990"; Long. = 82°37'49.847" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
High Knob	109°59'08.3"	289 54 53.9	4.067102	7.3
Boyd	140 05 35.9	320 02 08.2	4.144587	8.7
Zillicoa	176 15 42.3	356 15 34.1	3.735132	3.4

GRID POSITION (N. C.): X = 921,725.6; Y = 713,219.8 (G-3)

BILTMORE 4 (USGS, 1934; Buncombe County, North Carolina)

Located about 9 miles northwest of Asheville and 2 miles northeast of Leicester, on flat wooded knoll owned by Sam Israel. To reach from Asheville, drive north on Highway 63 about 7 miles to Juno, bear right on dirt road about 4 miles to crossroads, continue straight ahead 800 feet to field road right, turn right on field road 1000 feet to woods line east. Station is at base of 24-inch blazed white pine and about 75 feet east of road in edge of woods. A drill hole in rock outcrop.

GEODETIC POSITION: Lat. = 35°40'42.861"; Long. = 82°40'59.791" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
High Knob	103°00'21.9"	282°57'58.2"	3.803130	3.9
Boyd	152 50 35.4	332 48 58.4	3.961547	5.7
Zillicoa	237 00 40.0	57 02 22.5	3.721850	3.3

GRID POSITION (N. C.): X = 906,373.0; Y = 722,169.9 (G-3)

ELEVATION: 2220 feet (T-5)

BILTMORE 5 (USGS, 1934; Buncombe County, North Carolina)

Located about 11 miles northwest of Asheville, and approximately 3.5 miles southwest of Leicester, on southwest butt of Hanlon Mt. on property of Mrs. C. C. Hutcheson. To reach from Asheville, drive north on Highway 63, 11.5 miles to Leicester, continue straight ahead on Highway 63 for 1.9 miles to T-road, turn left and proceed 0.15 miles to private road to left, turn left and proceed 0.3 miles, leave car here and follow old sled road up southwest end of mountain about 1 mile to station. Station is drill hole in rock directly under 18-inch blazed locust tree.

GEODETIC POSITION: Lat. = 35°38'26.498"; Long. = 82°44'29.583" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Big Butt	47°34'12.0"	227°32'10.9"	3.850500	4.4
Doggett	142 42 28.0	322 39 33.4	4.094521	7.7
High Knob	170 44 50.4	350 44 29.1	3.756257	3.5

GRID POSITION (N. C.): X = 888,558.6; Y = 709,040.0 (G-3)

ELEVATION: 3197 feet (T-5)

BILTMORE 6 (USGS, 1934; Buncombe County, North Carolina)

Located about 3 miles northeast of Asheville, on Rich Mountain, at the junction of Sunset Mt. and Piney Mt. To reach from Asheville Post Office, take Highway 25 toward Weaverville, a distance of 1.2 miles, turn right on Highway 694 (Scenic Highway) and drive 6.7 miles toward Sunset Mt. to Mt. Meadows Gap, turn left on dim road 1.3 miles to top of Rich Mountain. Station is a drill hole in rock set in place under 20-inch blazed walnut tree.

GEODETIC POSITION: Lat. = 35°37'33.851"; Long. = 82°30'45.261" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Spivey	77°33'53.7"	257°29'01.7"	4.111447	8.0
Rice	211 51 21.6	31 52 09.1	3.589796	2.4
Cedar Cliff	324 57 31.5	144 59 37.4	3.977405	5.9

GRID POSITION (N. C.): X = 956,359.9; Y = 701,235.4 (G-3)

ELEVATION: 3535 feet (T-5)

BILTMORE 7 (USGS, 1934; Buncombe County, North Carolina)

Located about 7-1/2 miles west of Asheville and 3 miles south of Leicester, on a partly cleared knob owned by H. S. Hampton. To reach from Asheville Post Office, drive north on Highway 63 about 11 miles to Leicester, thence continue straight ahead 2.9 miles to crossroad, turn left and drive 2.3 miles, turn right and proceed 1.0 miles, turn right and proceed 0.2 miles, leave car and follow old sled road west to cultivated field near top of ridge, proceed straight ahead through woods and about 200 yards to top of ridge and station. Station is drill hole in rock set in place under 18-inch blazed oak tree.

GEODETIC POSITION: Lat. = 35°36'43.840"; Long. = 82°41'10.458" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Big Butt	81°02'51.3"	260°58'54.7"	4.015788	6.4
High Knob	146 02 31.3	326 00 14.0	4.025524	6.6
Zillicoa	204 36 39.7	24 38 28.4	4.051502	7.0

GRID POSITION (N. C.): X = 904,596.5; Y = 698,053.6 (G-3)

ELEVATION: 3153 feet (T-5)

BILTMORE 12 (USGS, 1934; Buncombe County, North Carolina)

Located about 4 miles northwest of Asheville, on wooded knoll owned by Camp Ben Lippen. To reach from Asheville Post Office, drive south on Patten Avenue, 0.7 miles to Spring Street, turn right and proceed 3.2 miles to road fork on left of which is sign "Ben Lippen", turn right and drive 0.1 miles, leave car and follow trail 1/4 mile north to crest of knob. Station is drill hole in rock outcrop directly under blazed 20-inch poplar tree.

GEODETIC POSITION: Lat. = 35°36'44.514"; Long. = 82°36'55.211" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Zillicoa	170°23'55.9"	350°23'15.9"	4.015339	6.4
Rice	246 57 39.4	67 02 02.5	4.091410	7.7
Cedar Cliff	292 54 35.7	113 00 16.9	4.205006	10.0

GRID POSITION (N. C.): X = 925,658.8; Y = 697,346.8 (G-3)

ELEVATION: 2574 feet (T-5)

13 (USGS, 1934; Buncombe County, North Carolina)

Located about 11 miles west of Asheville, and 3 miles north of a highest point of ridge known as the Pinnacle, on property of Mr. To reach from Asheville, drive west on Highway 19 a distance of 3 miles to crossroads in Luther, turn right and proceed 0.5 miles to top of ridge, proceed straight ahead, 1.1 miles and turn left at road fork, proceed and turn left, proceed 0.5 miles to crossroad, turn sharp right 1.3 miles, leave car here and walk west up side of ridge about 1/2 mile to top of ridge, turn right and walk 1/2 mile out ridge to station. Station is on high, partly cleared peak. A drill hole in rock directly under station.

GRID POSITION: Lat. = 35°34'44.534"; Long. = 82°44'34.687" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Asheville	25°54'53.4"	205°53'39.6"	3.864048	4.5
Bar Butt	111 58 16.6	291 56 18.6	3.740562	3.4

GRID POSITION (N. C.): X = 887,291.8; Y = 686,631.0 (G-3)

14 (USGS, 1934; Buncombe County, North Carolina)

Located about 3 miles southeast of Asheville, in a suburb known as Biltmore, on top of the most westerly of two buildings of Oakdale. To reach from Biltmore Post Office, drive east 2.0 miles to Oakdale Station. Station is the southeast corner of lone 20-inch brick chimney on roof building.

GRID POSITION: Lat. = 35°33'49.421"; Long. = 82°30'46.295" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Asheville	44°28'43.7"	224°24'48.6"	4.163297	9.0
Biltmore 15	73 33 07.2	253 32 15.7	3.366672	1.4
Bar Cliff	278 52 44.8	98 54 51.3	3.743750	3.4

GRID POSITION (N. C.): X = 955,471.8; Y = 678,562.5 (G-3)

15 (USGS, 1934; Buncombe County, North Carolina)

Located about 3 miles south of Asheville, in the suburb of Biltmore, on property owned by W. B. Starnes, 55 feet from corner of Summit St. To reach from Asheville, take Highway 25 to Biltmore Post Office, drive south on Highway 25 toward Hendersonville, 0.6 miles, turn left 1 block, thence left 1 block to residence of Starnes. Station is drill hole in rock under triangle blazed in place under oak tree.

GRID POSITION: Lat. = 35°33'28.039"; Long. = 82°32'14.884" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Bar Cliff	271°26'56.1"	91°29'54.1"	3.887070	4.8
Plant	342 27 19.0	162 28 17.7	3.926346	5.2

GRID POSITION (N. C.): X = 948,080.8; Y = 676,662.0 (G-3)
ELEVATION: 2185 feet (T-5)

16 (USGS, 1934; Buncombe County, North Carolina)

Located about 8 miles west of Asheville, and 2 miles north of edge of woods, on property of Liberty Baptist Church. To reach from Asheville, drive west on Highway 19, a distance of 9.2 miles, turn right on Liberty Baptist Church road, drive 0.3 miles and keep to left at road fork, drive 0.9 miles and turn right, drive 0.6 miles to church, about 600 feet from church. Station is drill hole in rock set in place under oak tree (triangle blazed).

GRID POSITION: Lat. = 35°33'51.520"; Long. = 82°40'55.400" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Asheville	60°28'25.7"	240°25'04.5"	4.000985	6.2
Biltmore 13	106 30 01.5	286 27 54.0	3.760307	3.6
Barney	213 58 25.7	33 59 28.9	3.689840	3.0

GRID POSITION (N. C.): X = 905,192.8; Y = 680,597.7 (G-3)
ELEVATION: 2296 feet (T-5)

20 (USGS, 1934; Buncombe County, North Carolina)

Located in the city of Asheville on Forsythe Street. Station is on a square steeple on a red brick church (North Asheville Church).

GRID POSITION: Lat. = 35°36'20.440"; Long. = 82°33'34.143" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Court House	318°20'04.0"	138°20'26.2"	3.158544	0.9
Battery Park	348 00 34.8	168 00 39.9	3.023653	0.7

GRID POSITION (N. C.): X = 942,161.6; Y = 694,314.7 (G-3)

21 (USGS, 1934; Buncombe County, North Carolina)

Located in the city of Asheville. Station is center of 40 foot diameter on the lawn of the clubhouse of the Asheville Country Club.

GRID POSITION: Lat. = 35°37'10.496"; Long. = 82°32'47.599" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Court House	4°40'15.6"	184°40'10.7"	3.419567	1.6
Asheville	16 26 42.9	196 26 24.2	3.455069	1.8
Battery Park	20 17 28.3	200 17 06.3	3.438698	1.7

GRID POSITION (N. C.): X = 946,183.0; Y = 699,234.6 (G-3)

22 (USGS, 1934; Buncombe County, North Carolina)

Located in the city of Asheville. Station is center of the spire of the First Baptist Church at Woodfin and Oak Streets.

GRID POSITION: Lat. = 35°35'56.063"; Long. = 82°32'52.615" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Court House	15°06'10.4"	195°06'08.4"	2.527106	0.2
Asheville	57 04 48.1	237 04 32.3	2.909142	0.5
Battery Park	71 10 22.3	251 10 03.2	2.940864	0.5

GRID POSITION (N. C.): X = 945,500.2; Y = 691,729.0 (G-3)

23 (USGS, 1934; Buncombe County, North Carolina)

Located in the city of Asheville. Station is center of the 100 foot chimney in the heating plant of the Asheville Normal School.

GRID POSITION: Lat. = 35°34'34.393"; Long. = 82°33'01.861" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Battery Park	165°08'10.9"	345°07'57.2"	3.364122	1.4
Asheville	167 49 02.0	347 48 51.6	3.327139	1.3
Court House	183 47 09.1	3 47 12.5	3.341792	1.4

GRID POSITION (N. C.): X = 944,442.0; Y = 683,504.6 (G-3)

BILTMORE 24 (USGS, 1934; Buncombe County, North Carolina)

Located in the city of Asheville, on the east bank of the French Broad River. Station is center of the 90 foot brick chimney in the "Hans Rees Tannery", north of the Southern Railway roundhouse.

GEODETIC POSITION: Lat. = 35°34'33.823"; Long. = 82°33'58.624" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Battery Park	200°21'01.8"	20°21'21.1"	3.380738	1.5
Court House	215 27 42.0	35 28 18.4	3.433446	1.7

GRID POSITION (N. C.): X = 939,754.3; Y = 683,615.1 (G-3)

BILTMORE 25 (USGS, 1934; Buncombe County, North Carolina)

Located 3 miles southeast of Candler, 0.5 miles north of Taylor's Store on Little Creek. To reach from Candler take Beaver Dam gravel road 2.8 miles, turn left to L. L. Smather's house, on top of long ridge 0.5 miles south of Smather's house, south and east corner of field and southwest corner of timber tract, 30.5 feet west of fence corner, 5.3 feet north of fence line. Station is drill hole in center of triangle in top of rock set in place under pine tree.

Reference Mark is blazed triangle with nail in center on east side of 10-inch pine tree.

GEODETIC POSITION: Lat. = 35°30'02.392"; Long. = 82°40'42.091" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Rocky Face	70°35'58.9"	250°31'44.0"	4.069696	7.3
Smathers	103 11 21.2	283 07 52.4	3.968566	5.8
Spivey	192 10 55.7	12 11 51.1	4.056057	7.1

GRID POSITION (N. C.): X = 905,433.4; Y = 657,408.1 (G-3)
ELEVATION: 2717 feet (T-5)

BILTMORE 26 (USGS, 1934; Buncombe County, North Carolina)

Located 7.0 miles by road south of West Asheville, on a low flat and wooded top, about 2.5 miles west of point where Bent Creek empties into French Broad River and on first top due north of Grassy Knob. To reach from West Asheville, drive south on Brevard Road 5.7 miles to old Bent Creek road, thence right and follow main travelled road 1.3 miles to Y-road in woods, thence right on woods road about 0.1 miles, leave car and walk up ridge north and east to top and station. Station is 20d nail, in root of 10-inch pine tree.

Reference Mark is blazed triangle with nail in center on west side of tree.

GEODETIC POSITION: Lat. = 35°30'53.710"; Long. = 82°37'01.642" (G-3)

Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Grassy	8°27'38.3"	188°27'21.3"	3.702203	3.1
Pine	13 24 49.1	193 24 05.7	3.911432	5.1

checked position (G-3)

BRITTEN (USC&GS, 1933; Buncombe County, North Carolina)

Located on summit of Chestnut Knob, above Britten Cove, about 9 miles north-northeast of Asheville, and 3-1/2 miles northeast of Weaverville, on property of Jim Cole. To reach from main cross streets in Weaverville, go north 0.95 miles on routes 19 and 23, turn right onto gravel road at arrow "Dula Springs 1.5 mi.", proceed 1.5 miles, continue on main road 0.4 miles, keep straight ahead at left fork and again at second left fork, and continue to end of road. Follow sled road and trail about 1-1/4 miles to C. C. Arrington's cabin, and follow trail to right up side of mountain to summit. Station is in center of knob, 33.5 feet north-northeast of 30-inch white oak tree scarred by lightning, 40.6 feet southwest of triple apple trees, and 6.8 feet south of 6-inch walnut tree. Station mark is a standard bronzed tablet wedged in a drill hole in a boulder.

Reference Mark 1 is a standard bronze tablet, with the arrow pointing toward the station wedged in a drill hole in a boulder, 6 feet south of a small clump of chestnut trees, and 23.124 meters (75.87 feet) from station in geodetic azimuth 276°30'.

Reference Mark 2 is a standard bronze tablet, with the arrow pointing toward the station wedged in a drill hole in outcropping bedrock, 3 feet west of rotten-rock outcrop, 10 feet west of 7-inch walnut tree, and 5.268 meters (17.28 feet) from station in geodetic azimuth 158°57'.

Report on Condition (TVA, April, 1941): Station mark has been destroyed. Reference marks are recoverable and station can be replaced from references.

GEODETIC POSITION: Lat. = 35°43'16.768"; Long. = 82°30'23.527" (C-1)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Mitchell	257°29'37.91"	77°38'05.45"	4.3493980	13.9
Bearwallow	334 52 46.98	154 57 59.76	4.5040920	19.8

GRID POSITION (N. C.): X = 959,377.27; Y = 735,820.42 (C-1)

BRITTEN R. M. 2 (USC&GS, 1933; Buncombe County, North Carolina)

For description see triangulation station BRITTEN.

GRID POSITION (N. C.): X = 959,371.6; Y = 735,836.8 (T-4)

ELEVATION: 3857 feet (T-5)

C 39 (USC&GS, 1932; Buncombe County, North Carolina)

Located at Asheville, in the Southern Railway yards, about 1/2 mile north of the station, at the bridge carrying U. S. Highway 23 over the railroad and the French Broad River, at the east end of the bridge, and in the north face of the fourth concrete pier west of the east abutment. A standard tablet stamped "1987.375 C 39 1932" and set vertically.

ELEVATION: 1987.073 feet or 605.661 meters (C-1)

C 127 (USC&GS, 1935; Buncombe County, North Carolina)

Located 2.2 miles west of Leicester, 11.3 miles northwest of Asheville, on property of Mrs. R. A. Duckett, 12 feet northeast of temporary Highway 63, 5 feet northeast of fence, 60 feet northwest of fence corner, 100 feet northeast of a branch, 94.3 feet east of a shed, 500 feet east of a two-story yellow house, 49.6 feet northwest of a power pole, in edge of a sedge field. A standard tablet stamped "C 127 1935" and set in the top of a concrete post.

ELEVATION: 2153.565 feet or 656.408 meters (C & T-2)

C 132 (USC&GS, 1935; Buncombe County, North Carolina)

Located 6.7 miles southwest of Leicester, on property of Phebe Wetherly, 15 feet southeast of Newfound Road, 80 feet southeast of Newfound Creek, 9 feet northeast of a drain, 30 feet northeast of driveway, 54.2 feet north west of unpainted house, 15.5 feet northeast of an 8-inch apple tree. A

standard tablet stamped "C 132 1935" and set horizontally in rock outcrop.
ELEVATION: 2322.052 feet or 707.763 meters (T-2)

C 133 (USC&GS, 1935; Madison County, North Carolina)

Located 12.7 miles southwest of Marshall, on property of A. C. Teague, 20 feet northwest of State Highway 213 at a horseshoe bend in highway, 17 feet east of log house, 7.5 feet southwest of crib, 25 feet west of a drain, 40 feet northwest of a garden. A standard tablet stamped "C 133 1935" and set in the top of a concrete post.

ELEVATION: 2076.577 feet or 632.942 meters (C & T-2)

C 134 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 0.9 miles southeast along the Reems Creek road from the city hall at Weaverville, 94 yards east of a culvert in a turn of the road, at the top of a slight grade, 9 yards south of the center line of the Reems Creek road, and 7 feet northwest of the northeast corner of an abandoned two-story house. A standard tablet stamped "C 134 1935" and set in the top of a concrete post.

Note: Searched for but not recovered in January, 1942. It was reported that house was demolished and mark was probably buried under bricks and stones.

ELEVATION: 2065.645 feet or 629.610 meters (T-2)

C 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located 1.0 miles east of the station at Biltmore by rail, on the Salisbury to Knoxville Division of the Southern Railway, 267 feet east of milepost No. 138, 80 yards west of "Station 1 Mile" sign, at the apex of the first curve in railway east of milepost No. 138, 27.1 feet north of the north rail, in top of large flat topped boulder, 1-1/2 feet below the top of the rails. A standard tablet stamped "C 136 1935".

ELEVATION: 2055.964 feet or 626.659 meters (C-1)

C 138 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 1.0 miles south along U. S. Highway 19 and 23 from the city hall at Weaverville, 21 yards southeast across the highway from a concrete monument, 23 feet north of the north end of a highway culvert, 20.4 feet east of the center line of the highway, 8.5 feet east of the east edge of the pavement, 8 inches west of a fence line, and about level with the highway. A standard tablet stamped "C 138 1935" and set in the top of a concrete post.

ELEVATION: 2051.315 feet or 625.242 meters (C-2)

C 141 (USC&GS, 1935; Buncombe County, North Carolina)

Located 12.9 miles southwest of Buncombe County Court House in Asheville, via U. S. Highway 19 and 23, Pisgah, 2.0 miles southwest of Candler Post Office via Pisgah Highway, on property of Steve Redman, on east side of Pisgah Highway, 25 feet from center line of highway, 16.5 feet west of center line branch, 6.7 feet east of woven wire fence, 23 feet northeast of north gate post, 55 feet west of Steve Redman's one-story house, 88.8 feet northwest of spring, approximately 150 feet north of Y-road intersection from south. A standard tablet set in concrete post.

Reference Mark 1: 7.0 feet Due West to fence post (painted cross)

Reference Mark 2: 19.8 feet Due South to 12-inch walnut tree.

Reference Mark 3: 46.0 feet N 15° E to 12-inch apple tree.

ELEVATION: 2258.581 feet or 688.417 meters (T-2)

CHS 34 (TVA, 1941; Buncombe County, North Carolina)

Located in southeast portion of Quadrangle 192 NE. To reach from court house in Asheville, go northeast on Poplar Street (Highways 70 and 74) for 0.55 miles, turn left and go 500 feet, turn right on temporary Highway 694 (Scenic Drive), go 4.5 miles to sharp bend in road opposite high cut bank. Station is on outside of curve approximately 3 feet from slope on center line of ridge, 200 feet east of drain, 20 feet north of old fence line and 18 feet south of south edge of pavement. A 1- by 1-inch angle iron.

GRID POSITION (N. C.): X = 959,576.6; Y = 702,714.4 (T-4)

ELEVATION: 3347 feet (T-5)

CHS 35 (TVA, 1941; Buncombe County, North Carolina)

Located in extreme northeast corner of Quadrangle 192 SE. To reach from court house in Asheville, go northeast on Poplar Street (Highway 70 and 74) through tunnel, go 1.85 miles to Y-roads at traffic light, turn left, continue on Highway 74 and 70 for 1.65 miles, in all 3.50 miles, turn left on concrete road through woods, go 0.4 miles to N. A. Miller's store and 4-way road intersection, turn right and follow concrete and gravel straight ahead for 2.0 miles to crossroads, turn left, go 172 feet to station, on north side of road, 2.0 feet south of wire fence on bank above road. A 1- by 1-inch angle iron.

Reference Mark 1: 8.99 feet S 88° W to oak stump.

Reference Mark 2: 3.57 feet N 70° E to 3-inch sassafras.

Reference Mark 3: 20.35 feet N 88° E to 6-inch red oak.

GRID POSITION (N. C.): X = 959,344.0; Y = 698,698.2 (T-4)

ELEVATION: 2335 feet (T-5)

CHS 36 (TVA, 1941; Buncombe County, North Carolina)

Located in west portion of Quadrangle 192 SW. To reach from Asheville, drive west on Highway 19 a distance of 12.7 miles to crossroads in Luther, turn right and proceed 0.5 miles to T-road, keep right, go 0.75 miles to Y-road, keep straight ahead 0.15 miles, turn right and go 0.25 miles, turn left on newly graveled road, follow road 0.95 miles (main traveled road) to station. Station is 200 feet west of low gap in ridge, and is on south side of road and on east bank of large ditch in tree row. A 1- by 1-inch angle iron.

Reference Mark 1: 10.25 feet S 47° E to 2-inch locust.

Reference Mark 2: 2.35 feet S 05° E to 2-inch pine.

Reference Mark 3: 1.60 feet N 65° W to fence post.

GRID POSITION (N. C.): X = 889,582.4; Y = 681,056.4 (T-4)

ELEVATION: 2386 feet (T-5)

CHS 37 (TVA, 1941; Buncombe County, North Carolina)

Located in the southeast corner of Quadrangle 192 SW. To reach from Asheville, drive west on Highways 19 and 23 for 8.15 miles to Enka, turn left and go 0.55 miles, keep left at Esso filling station and go 1.05 miles, turn right and go 2.15 miles, turn right at Sinclair filling station, go 0.85 miles, turn right on a gravel road and go 0.6 miles, turn right at Y-roads and follow dim road 1.0 miles to Forest Service gate, leave the car and follow Forest Service road 3000 feet to low point in saddle and tower for rainfall gauge, turn right on foot trail, follow trail 3000 feet to gap in mountain, turn

right and follow dim trail 700 feet to top of ridge and clearing. Station is at southwest corner of clearing 2.0 feet lower in elevation than highest point on ridge, 12 feet southeast of path. A 1- by 1-inch angle iron.

Reference Mark 1: 18.61 feet Due West to 8-inch hickory.

Reference Mark 2: 6.85 feet N 73° E to 8-inch locust.

Reference Mark 3: 6.53 feet S 68° E to 6-inch locust.

GRID POSITION (N. C.): X = 919,221.6; Y = 660,681.0 (T-4)

ELEVATION: 2861 feet (T-5)

CHS 38 (TVA, 1941; Buncombe County, North Carolina)

Located in south central portion of Quadrangle 192 SW. To reach from Asheville, drive west on Highways 23 and 19, 8.15 miles to Enka, turn left, go 0.55 miles, turn right at Esso filling station, go 0.15 miles to Enka Lake, turn right crossing spillway of dam, go 1.3 miles to Y-road intersection, turn right go 0.17 miles to highest point on road, leave car and follow fence west 500 feet to angle point in fence line. Station is 2.0 feet north of fence and driven flush with ground. A 1- by 1-inch angle iron.

Reference Mark 1: 11.45 feet N 27° E to fence post.

Reference Mark 2: 1.68 feet S 24° E to fence post.

Reference Mark 3: 14.78 feet S 12° W to fence post.

GRID POSITION (N. C.): X = 906,900.7; Y = 668,643.1 (T-4)

ELEVATION: 2372 feet (T-5)

CHS 39 (TVA, 1941; Buncombe County, North Carolina)

Located in west central portion of Quadrangle 192 SE. To reach from Asheville, drive west on Highways 19 and 23, 8.15 miles to Enka, turn left toward Enka rayon mills, go 0.55 miles to Esso station, keep left, go 1.05 miles, turn right on concrete, go 0.90 miles, turn left at huge cut in bank, go 0.3 miles along edge of woods to Y-road intersection, turn right, go 300 feet to house on top of hill, park car and go 200 feet to northeast corner of garden. Station is in portion of garden never plowed, driven flush with ground. A 1- by 1-inch angle iron.

Reference Mark 1: 6.00 feet S 38° W to fence post.

Reference Mark 2: 5.24 feet N 12° W to corner fence post.

Reference Mark 3: 6.38 feet S 73° E to corner fence post.

GRID POSITION (N. C.): X = 922,765.0; Y = 670,126.4 (T-4)

ELEVATION: 2172 feet (T-5)

CHS 40 (TVA, 1941; Buncombe County, North Carolina)

Located in southwest corner of Quadrangle 192 SW. To reach from Asheville, drive west on Highways 19 and 23, 12.7 miles to Y-roads at Luther, turn left and go 0.15 miles to railroad, turn left and go 0.30 miles, turn right and go 0.35 miles, turn right and go 0.15 miles, turn right and go 0.10 miles, turn left and go 500 feet to small new house in hollow, leave car and follow trail around east side of house through pines, 700 feet to gate on top of hill and fence line, turn left and walk along fence and center line of ridge 800 feet to 36-inch lone tree. Station is 4.0 feet N 59° W from tree and 107 feet S 70° W from angle point in fence line, driven flush with ground. A 1- by 1-inch angle iron.

Reference Mark 1: 3.69 feet S 59° E to 36-inch oak.

Reference Mark 2: 33.00 feet S 43° W to 4-inch pine on fence line.

Reference Mark 3: 65.16 feet N 62° W to 8-inch locust.

GRID POSITION (N. C.): X = 885,322.8; Y = 669,405.8 (T-4)

ELEVATION: 2558 feet (T-5)

CHS 41 (TVA, 1941; Buncombe County, North Carolina)

Located in northeast portion of Quadrangle 192 SE. To reach from court house in Asheville, go northeast on Poplar Street (Highways 70 and 74) 0.55 miles, turn left and go 500 feet, turn right on temporary Highway 694 (Scenic Drive) and go 3.3 miles, turn right at Mt. Olive Church road, go 0.4 miles along top of ridge to Mt. Olive Church and station. Station is 115 feet northeast from church, 30 feet east of 12-inch pine and 20 feet east of center line of road. A 1- by 1-inch angle iron.

Reference Mark 1: 22.46 feet N 74° E to 20-inch chestnut stump.

Reference Mark 2: 32.46 feet N 15° W to 18-inch chestnut stump.

Reference Mark 3: 35.60 feet N 71° W to 14-inch pine tree.

GRID POSITION (N. C.): X = 955,673.4; Y = 698,762.0 (T-4)

ELEVATION: 3150 feet (T-5)

CHS 42 (TVA, 1941; Buncombe County, North Carolina)

Located in southeast corner of Quadrangle 192 NE. To reach from Asheville, the Square, drive north on Highways 19 and 23 and Merriman Avenue, 2.3 miles to Dixie Home Stores, turn right on Grocelyn Avenue, go 2 blocks to Griffin Boulevard, follow boulevard 0.25 miles, turn left and go 0.5 miles, turn right and go 0.20 miles, turn left on gravel road, and go 0.55 miles to Y-road, turn left, follow winding road, circling completely around hill, follow to highest point. Station is 25 feet southeast of highest point and 2.0 feet lower in elevation than high point. A 1- by 1-inch angle iron.

Reference Mark 1: 19.87 feet S 49° W to 40-inch oak.

Reference Mark 2: 39.80 feet N 40° W to 12-inch oak.

Reference Mark 3: 10.09 feet N 36° E to 20-inch oak.

GRID POSITION (N. C.): X = 948,008.2; Y = 703,572.8 (T-4)

ELEVATION: 2732 feet (T-5)

COURTHOUSE (USGS, 1934; Buncombe County, North Carolina)

Located in the city of Asheville, on top of Buncombe County Court House, 6.3 feet from the inside corner of parapet on the northwest corner of building. Station is center of 2-inch ventilation pipe, 6.3 feet from inside corner of parapet at northwest corner of road (not to be confused with drain pipe 3.5 feet from corner).

GEODETIC POSITION: Lat. = 35°35'45.518"; Long. = 82°32'56.099" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Asheville	78°56'41.3"	258°56'27.5"	2.781384	0.4
Battery Park	93 21 31.3	273 21 14.2	2.868983	0.5
Woolsey	152 39 38.0	332 39 03.3	3.514217	2.0

GRID POSITION (N. C.): X = 945,174.6; Y = 690,673.8 (G-3)

D 39 (USC&GS, 1932; Buncombe County, North Carolina)

Located at Asheville, 48 feet southwest of the southwest corner of the Southern Railway station, about 21 feet northeast of the northeast wooden bent of the overhead walkway over the track, about 5 feet northeast of the northeast rail of a spur track, and about 4.8 feet above ground in the top of a horizontal shelf of rock. A standard tablet stamped "1988.877 D 39 1932".

ELEVATION: 1988.572 feet or 606.118 meters (C-1)

7 (USC&GS, 1935; Buncombe County, North Carolina)
 Located 3.2 miles northwest of Leicester, 12.3 miles northwest of Asheville, on Sandy Mush Road right-of-way, at intersection of temporary Highway and Sandy Mush Road, 7 feet southwest of Sandy Mush Road, 7 feet west of y Mush Road sign, 26 feet northeast of branch, 61.5 feet southeast of rete culvert over Austin Branch, 96.4 feet south of northeast corner of Plemmons' Service Station. A standard tablet stamped "D 127 1935" and in the top of a concrete post.
 ELEVATION: 2155.747 feet or 657.073 meters (C & T-2)

3 (USC&GS, 1935; Madison County, North Carolina)
 Located 11.6 miles southwest of Marshall, on property of A. F. Teague, intersection of State Highway 312 and road to Teague Chapel, 9 feet south of Highway 213, 39.4 feet northwest of A. F. Teague's house, 18 feet h of a drain, and 13.2 feet southwest of a 10-inch apple tree, 13.2 feet ° W of 10-inch apple tree. A standard tablet stamped "D 133 1935" and in the top of a concrete post.
 ELEVATION: 2085.727 feet or 635.731 meters (C & T-2)

4 (USC&GS, 1935; Buncombe County, North Carolina)
 Located at Weaverville, in the east face of the city hall, 26.4 feet of the center line of U. S. Highways 19 and 23, 5.5 feet north of the east (southeast ?) corner of the building, 5.4 feet south of the front ance, and about 2 feet above the walk. A standard tablet stamped "D 134" and set vertically.
 ELEVATION: 2175.724 feet or 663.162 meters (C & T-2)

6 (USC&GS, 1935; Buncombe County, North Carolina)
 Located 2.0 miles east of the passenger station at Biltmore, by rail, the Salisbury to Knoxville Division of the Southern Railway, 11-1/2 rails of milepost No. 137, at the top of long hill, 6 feet north of the north , on the southeast corner of the concrete foundation of semaphore signal r No. S 136.9, and level with base of rails. A standard tablet stamped 36 1935".
 ELEVATION: 2126.216 feet or 648.072 meters (C-1)

8 (USC&GS, 1935; Buncombe County, North Carolina)
 Located about 1.0 miles north along U. S. Highway 19 and 23 from the hall at Weaverville, at the junction of the Alexander road, 30.2 feet east of the northeast corner of the Kennedy Shell service station, 21.8 west of the center line of the highway, 12.2 feet west of the west edge he pavement, and about 1 foot higher than the highway. A standard tablet ped "D 138 1935" and set in the top of a concrete post projecting 2 inches e ground.
 ELEVATION: 2207.397 feet or 672.816 meters (C & T-2)

1 (USC&GS, 1935; Buncombe County, North Carolina)
 Located 13.9 miles southwest of Buncombe County Court House in Asheville, U. S. Highways 19 and 23 (Pisgah Highway), 3.0 miles southwest of U. S. Office in Candler, via Pisgah Highway, at Gladdy School. A standard et stamped "D 141 1935" and set in concrete post.
 Note: Mark was found protruding 3 feet above ground in 1939. A new marker "LET 1753" was set near by.
 ELEVATION: 2285.547 feet or 696.636 meters (T-2)

(USC&GS, 1932; Buncombe County, North Carolina)
 Located at Biltmore, in the Southern Railway yards, about 336 feet west he station, about 2-1/2 rails east of an interlocking tower, at bridge 9.1 over Swannanoa River, in the top of the west back wall of the abut-, and 17 feet south of the south rail. A standard tablet stamped "1994. E 39 1932".
 ELEVATION: 1993.825 feet or 607.719 meters (C-1)

7 (USC&GS, 1935; Buncombe County, North Carolina)
 Located 4.5 miles northwest of Leicester, 13.6 miles northwest of ville, on property of W. H. Gillespie, 14 feet west of temporary Highway 6 feet east of driveway, 125 feet south of Gillespie's house, 35.7 feet east of barn, near southeast corner of Gillespie's yard, 39.0 feet ° W to telephone pole. A standard tablet stamped "E 127 1935" and set of concrete post.
 ELEVATION: 2169.727 feet or 661.334 meters (C & T-2)

3 (USC&GS, 1935; Madison County, North Carolina)
 Located 10.5 miles southwest of Marshall, on property of L. F. Freeman, east northeast of State Highway 213 at a horseshoe bend in highway, 400 southeast of house occupied by Mr. Frisbee, 32 feet east of bridge over anch, 65 feet east of road leading to Mr. Frisbee's house, 2 feet north- of wire fence, 32.4 feet N 44° W of 12-inch white oak tree, 32.0 feet ° E of northwest corner of bridge. A standard tablet stamped "E 133" and set in the top of a concrete post.
 ELEVATION: 2075.964 feet or 632.755 meters (C & T-2)

8 (USC&GS, 1935; Buncombe County, North Carolina)
 Located about 2.0 miles north along U. S. Highways 19 and 23 from the hall at Weaverville, about 200 yards south of a bridge over Flat Creek, yards southeast of a dairy barn, 150 feet north of a large sign board, east west of the highway, 43 feet northeast of a wire fence, 41.2 feet -southwest of a 2-inch maple tree, 26.1 feet west of a 5-inch plum tree, et west of the old highway, and 6 feet north of a field road. A stand- tablet stamped "E 138 1935" and set in the top of a concrete post.
 ELEVATION: 2084.287 feet or 635.292 meters (T-2)

3 (USC&GS, 1935; Buncombe County, North Carolina)
 Located at Alexander, on the Salisbury to Knoxville Division of the hern Railway, 150 yards northwest of the station, 55 yards northwest of way crossing, 25 yards northwest of semaphore signal tower No. S 152.4 he east corner of the concrete foundation of mail crane, 6.1 feet south- of the southwest rail of the main track, level with the base of the s. A standard tablet stamped "E 143 1935".
 ELEVATION: 1791.138 feet or 545.940 meters (C-1)

(USGS, 1934; Buncombe County, North Carolina)
 Located about 7 miles southwest of Asheville. To reach from Asheville, e west on Highway 19 for a distance of 8.0 miles to Enka factory. Stat- is the center of lone brick chimney of the Enka factory, about 150 feet

GEODETIC POSITION: Lat. = 35°32'42.344"; Long. = 82°39'10.582" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Pisgah	35°29'41.2"	215°26'04.0"	4.211332	10.1
Smathers	76 08 05.3	256 03 43.2	4.068304	7.3
Spivey	180 54 07.6	0 54 09.9	3.791864	3.8

GRID POSITION (N. C.): X = 913,588.9; Y = 673,288.9 (G-3)

F 39 (USC&GS, 1932; Buncombe County, North Carolina)
 Located at Biltmore, on the Southern Railway, about 10-1/2 rails south- east of the southeast end of the station, about 27 feet southeast of the southeast end of the platform, west of the track, at an automatic signal, and in the top of the northeast corner of the concrete base. A standard tablet stamped "1992.493 F 29 1932".
 ELEVATION: 1992.142 feet or 607.206 meters (C-2)

F 127 (USC&GS, 1935; Buncombe County, North Carolina)
 Located 5.3 miles northwest of Leicester, 14.4 miles northwest of Ashe- ville, on property of Hezekiah Miller, 15 feet northeast of temporary Highway 63, about 1000 feet southeast of Union Grove School, 600 feet east of Miller's house, 5 feet northeast of fence, on the point of hill at a sharp bend in highway, 400 feet east of Miller's Dairy. A standard tablet stamped "F 127 1935" and set in the top of a concrete post.
 ELEVATION: 2261.439 feet or 689.288 meters (C & T-2)

F 127 X (USC&GS, 1935; Buncombe County, North Carolina)
 Located 5.9 miles northwest of Leicester, 15.0 miles northwest of Asheville, on property of Hezekiah Miller, 28 feet southwest of temporary Highway 63, 16 feet southwest of wire fence, 700 feet south of Union Grove Church, 150 feet southwest of Wade Houston's house, 61.0 feet southwest of 16-inch walnut tree, at a horseshoe bend in highway, 110 feet north of a spring, about 10 feet above level of highway. A standard tablet stamped "F 127 X 1935" and set in the top of a large boulder.
 ELEVATION: 2262.735 feet or 689.683 meters (C & T-2)

F 127 Y (USC&GS, 1935; Buncombe County, North Carolina)
 Located 5.9 miles northwest of Leicester, 15.0 miles northwest of Asheville, on property of Hezekiah Miller, 84 feet southwest of temporary Highway 63, 700 feet south of Union Grove Church, 210 feet southwest of Wade Houston's house, 70 feet southwest of spring, 74 feet southwest of wire fence, about 22 feet above level of highway. A standard tablet stamped "F 127 Y 1935" and set in the top of large boulder, 6 feet above the ground.
 ELEVATION: 2277.387 feet or 694.149 meters (C & T-2)

F 133 (USC&GS, 1935; Madison County, North Carolina)
 Located 9.4 miles southwest of Marshall, on property of M. F. Reemes, 9 feet southeast of State Highway 213, 2.2 feet southwest of old store build- ing, 42.5 feet north of M. F. Reemes' house, 1 foot northwest of fence, 5 feet south of mailbox, 60 feet west of Simmons Branch, 90 feet southwest of Wood bridge over Simmons Branch. A standard tablet stamped "F 133 1935" and set in concrete post.
 ELEVATION: 2001.220 feet or 609.973 meters (C & T-2)

F 136 (USC&GS, 1935; Buncombe County, North Carolina)
 Located 1.0 miles northwest of the station at Alexander by rail, on the Salisbury to Knoxville Division of the Southern Railway, 0.6 miles southeast of milepost No. 154, 15 rails southeast of "Station 1 Mile" sign, 17.0 feet northwest of the southwest end of railway pipe culvert, 8.0 feet southwest of the southwest rail, set vertically in the face of a large boulder, 3 feet above the ground and 20 inches above the top of the rails. A standard tablet stamped "F 136 1935".
 ELEVATION: 1775.623 feet or 541.211 meters (C-1)

F 138 (USC&GS, 1935; Buncombe County, North Carolina)
 Located about 3.0 miles north along U. S. Highways 19 and 23 from the city hall at Weaverville, about 0.3 miles south of a church at Stockville, 75 feet east of the junction of the Pine Knoll Tourist Camp road, on the B. H. Jeeks property, 31.3 feet northeast of the northwest corner of the Lewis Higgen corn mill, 87.1 feet southwest of a power transmission line pole, 60 feet northwest of a drain, 16.8 feet southeast of the highway, and 7 feet southeast of a wire fence. A standard tablet stamped "F 138 1935" and set in the top of a concrete post.
 ELEVATION: 2162.256 feet or 659.057 meters (T-2)

F 143 (USC&GS, 1935; Buncombe County, North Carolina)
 Located at Alexander, on the Salisbury to Knoxville Division of the Southern Railway, 80 yards northwest of the station, 24 yards northeast of the northeast rail of the main track, on the northwest end of the southwest abutment of highway bridge over French Broad River, 9.0 feet northwest of the center line of the bridge, 18 inches below the floor of the bridge. A standard tablet stamped "F 143 1935".
 ELEVATION: 1790.032 feet or 545.603 meters (C-1)

FB 47 (USED, 1925; Madison County, North Carolina)
 Located 1 mile upstream from Volga, at Southern Railway bridge across Sandymush Creek, on top of left bank abutment, downstream side. Chiseled cross.
 ELEVATION: 1726.5 feet (E-4)

FB 48 (USED, 1925; Buncombe County, North Carolina)
 Located 2.5 miles downstream from Alexander, on left bank of French Broad River, 100 feet downstream from milepost No. 155, 50 feet downstream from water tank, on east abutment of concrete railway culvert. Chiseled cross painted red.
 ELEVATION: 1751.8 feet (E-4)

FB 49 (USED, 1925; Buncombe County, North Carolina)
 Located at Alexander, on highway bridge over French Broad River, top of left bank concrete abutment, upstream side. Chiseled cross.
 ELEVATION: 1789.47 feet (T-3)

FB 50 (USED, 1925; Buncombe County, North Carolina)
 Located 2.5 miles upstream from Alexander, on left bank of French Broad River, 100 feet downstream from milepost No. 150, on west end of concrete railway culvert. Chiseled cross painted red.
 ELEVATION: 1863.8 feet (E-4)

FB 51 (USED, 1925; Buncombe County, North Carolina)

Located at Craggy, 35 feet downstream from station on State Highway bridge across French Broad River, on base of third concrete approach pier from left bank abutment, 4 feet above ground. Chiseled cross painted red.
ELEVATION: 1948.52 feet (E-3)

FB 52 (USED, 1925; Buncombe County, North Carolina)

Located 2.5 miles upstream from Craggy Station, at Bingham School highway bridge across French Broad River, on top of left bank concrete abutment, downstream side. A chiseled cross painted red.
ELEVATION: 1971.81 feet (E-3)

FB 53 (USED, 1925; Buncombe County, North Carolina)

Located at Asheville, on Southern Railway bridge across French Broad River, 500 feet upstream from Murphy Junction, on top of left bank pier, upstream side. Chiseled cross painted red.
ELEVATION: 1990.30 feet (E-3)

FB 54 (USED, 1925; Buncombe County, North Carolina)

Located at Asheville, near highway bridge across French Broad River at mouth of Swannanoa River on left bank of river, 180 feet west of bridge and on knoll at forks of road. Top of iron pipe set in concrete monument.
ELEVATION: 2011.426 feet or 613.084 meters (T-2)

FB 55 (USED, 1925; Buncombe County, North Carolina)

Located at Asheville, on right bank of Swannanoa River, 0.75 miles upstream from junction of French Broad and Swannanoa Rivers, 100 feet north-east of railway bridge and 250 feet north of water's edge, in clump of pine trees at forks of road. Top of concrete monument, location marked by two pine trees showing three hacks and a blaze.
ELEVATION: 2015.8 feet (E-4, unchecked spur)

FB 56 (USED, 1925; Buncombe County, North Carolina)

Located on Biltmore Estate directly opposite top of Strawberry Hill, on right bank of French Broad River, 2 miles upstream from junction of French Broad and Swannanoa Rivers, on roadway running parallel to river, 45 feet from water's edge on west wingwall of concrete culvert. A chiseled cross.
ELEVATION: 1980.99 feet (E-3)

G 39 (USC&GS, 1932; Buncombe County, North Carolina)

Located about 2.0 miles southeast along the Southern Railway from Biltmore, 0.4 miles north of bridge W 2.5 over State Highway 69, about 225 yards south of milepost 2, about 30 feet northeast of a whistle post, about 10 feet east of the east rail, and about 2.8 feet above ground, in the top of a horizontal shelf of rock. A standard tablet stamped "2126.347 G 39 1932".
ELEVATION: 2125.983 feet or 648.001 meters (C-2)

G 127 (USC&GS, 1935; Buncombe County, North Carolina)

Located 6.4 miles northwest of Leicester, 15.5 miles northwest of Asheville, on property of J. C. Austin, 25 feet north of temporary Highway 63 at a horseshoe bend in highway, 50.9 feet northwest of a spring house, 97.6 feet southwest of a barn, 100 feet west of Austin's house, 40 feet southwest of group of four haystacks. A standard tablet stamped "G 127 1935" and set in the top of rock outcrop.
ELEVATION: 2137.637 feet or 651.553 meters (C & T-2)

G 133 (USC&GS, 1935; Madison County, North Carolina)

Located 8.4 miles southwest of Marshall, on property of M. L. Treadaway, 12 feet south of State Highway 213, 425 feet southwest of M. L. Treadaway's house, 15 feet north of a branch, 11.8 feet southeast of fence corner, 110 feet east of old road, 20 feet east of a sawdust pile. A standard tablet stamped "G 133 1935" and set in the top of a concrete post.
ELEVATION: 2075.547 feet or 632.628 meters (C & T-2)

G 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located 2.1 miles northwest of the station at Alexander, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 55 yards west of "Water Half Mile" sign, on the south end of the east abutment of railway bridge No. S 154.6 over Whitter Creek, 6 feet south of the south rail, 8 inches below the base of the rails. A standard tablet stamped "G 136 1935"
ELEVATION: 1755.869 feet or 535.190 meters (C-1)

GAGE BM 1 (USGS, ? ; Buncombe County, North Carolina)

Located about 7 miles south of Asheville, at Bent Creek, near State Highway 191, on French Broad River at mile 157.7, at base of ladder to gaging station tower. A standard USGS gaging station tablet.
ELEVATION: 2006.600 feet or 611.613 meters (T-2)

GAGE BM 2 (USGS, 1934, French Broad River; Buncombe County, North Carolina)

Located on left bank of French Broad River at mile 157.7, 100 feet downstream from mouth of Bent Creek, 0.5 miles downstream from Sandy Bottom, and about 7 miles south of Asheville, near State Highway 191. Top of 3/4 inch pipe set in masonry of headwall at gage well.
ELEVATION: 2003.22 feet (T-3)

GAGE BM 2 (USGS, 1920, Swannanoa River; Buncombe County, North Carolina)

Located on right side of Swannanoa River, 1.6 miles upstream from mouth, at Biltmore Avenue concrete bridge, about 300 feet upstream from Southern Railway bridge at Biltmore, at U. S. Highway 25 bridge over Swannanoa River, 10 feet upstream from downstream edge of bridge, 6.54 feet above gage zero. Top of round iron bolt, leaded in face of right bridge abutment.
ELEVATION: 1983.12 feet (G-3)

GAGE BM 3 (USGS, 1934, French Broad River; Buncombe County, North Carolina)

Located on left bank of French Broad River at mile 157.7, 100 feet downstream from mouth of Bent Creek, 0.5 miles downstream from Sandy Bottom, and about 7 miles south of Asheville, near State Highway 191, set in concrete anchorage block for stream gaging cable on left bank of French Broad River, 11.94 feet above gage zero. A standard bronze reference tablet.
ELEVATION: 2007.850 feet or 611.994 meters (T-2)

GAGE BM 3 (USGS, 1934, Swannanoa River; Buncombe County, North Carolina)

Located on left bank of Swannanoa River, 1.6 miles upstream from mouth, 100 feet downstream from Biltmore Avenue concrete bridge and 200 feet upstream from Southern Railway bridge at Biltmore, in top of concrete head wall of gage intake, 6.85 feet above gage zero. A standard USGS reference

tablet set in top of concrete headwall.

ELEVATION: 1983.43 feet (T-3)

GAGE BM 5 (USGS, 1922; Buncombe County, North Carolina)

Located on right side of French Broad River at mile 145.8, 2.2 miles downstream from Southern Railway station at Asheville, on right downstream end of Pearson concrete arch highway bridge, 21.88 feet above gage zero. Circular cut in concrete on right, downstream end of concrete highway bridge.
ELEVATION: 1972.17 feet (T-3)

GAGE BM 6 (USGS, 1922; Buncombe County, North Carolina)

Located near right side of French Broad River at mile 145.8, 2.2 miles downstream from Southern Railway station at Asheville, at Pearson concrete arch highway bridge, in concrete block 17 feet shoreward from gage shelter, 5.03 feet above gage zero. Standard bronze reference tablet set in concrete block.
ELEVATION: 1955.30 feet (T-3)

H 39 (USC&GS, 1932; Buncombe County, North Carolina)

Located about 4.3 miles south along the Southern Railway from Biltmore, about 0.9 miles south of Buena Vista, about 0.4 miles south of milepost 4, about 100 yards north of a county road crossing, about 12 feet northwest of a siding frog, 7.5 feet east of the east rail, and about 4 feet above ground, in the face of a rock cut. A standard tablet stamped "2276.232 H 39 1932" and set vertically.
ELEVATION: 2275.858 feet or 693.683 meters (C-2)

H 133 (USC&GS, 1935; Madison County, North Carolina)

Located 7.2 miles southwest of Marshall, on property of P. Ball, 22 feet northwest of State Highway 213, 65 feet northwest of a barn, 37.7 feet east of P. Ball's house, 10 feet east of a drain, 35.4 feet southwest of storm pit, at a horseshoe bend in highway. A standard tablet stamped "H 133 1935" and set in the top of a concrete post.

Report on Condition (TVA, May, 1941): Damaged. Monument was broken off flush with ground and cap removed. Occupants of house nearby say that this damage is the result of frost and weather. Their statements indicate that the top of the monument is now about 1/2 foot lower than the original elevation of the cap.
ELEVATION: 2172.768 feet or 662.261 meters (C & T-2)

H 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located 3.0 miles northwest of the station at Alexander, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 0.45 miles south-east of milepost No. 156, about 30 yards east of the small home of Rubin Martin, 6 yards north of "Water Half Mile" sign, on the north end of the west headwall of concrete railway culvert, 8.1 feet west of the west rail, 18 inches below the rails. A standard tablet stamped "H 136 1935".
ELEVATION: 1743.182 feet or 531.323 meters (C-1)

J 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 1.0 miles northwest along the Southern Railway from the station at Craggy, about 15-1/2 rails south of milepost 147, about 70 yards north of the west end of a dam across French Broad River, 226 feet south of a "Station 1 Mile" sign, at a culvert, in the top of the south end of the west concrete headwall, 15 feet west of the west rail, and about 3 feet lower than the rail. A standard tablet stamped "J 136 1935".
ELEVATION: 1932.476 feet or 589.020 meters (C-1)

K 39 (USC&GS, 1932; Buncombe County, North Carolina)

Located about 1.7 miles northwest along the Asheville and Morristown line of the Southern Railway from the station at Asheville, about 0.4 miles southeast of milepost No. 143, about 0.6 miles northwest of the northwest end of the bridge over French Broad River, in a rock cut, about 114 feet southeast of the northwest end of the cut, about 12 feet southwest of the southwest rail, and about 1.5 feet above the ground, in a horizontal shelf of rock. A standard tablet stamped "1981.125 K 39 1932".
ELEVATION: 1980.820 feet or 603.755 meters (C-1)

K 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located 2.0 miles northwest of the station at Craggy, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 94 yards southeast of milepost No. 148 and "Water Half Mile" sign, 10 yards west of a rail rest, 5 feet southwest of the southwest rail, set on top of a large outcropping rock, 1-1/2 feet above the rails. A standard tablet stamped "K 136 1935".
Note: Searched for but not recovered, January, 1942.
ELEVATION: 1909.835 feet or 582.119 meters (C-1)

L 39 (USC&GS, 1932; Buncombe County, North Carolina)

Located about 0.6 miles southeast along the Southern Railway from the station at Craggy, about 0.2 miles northwest of milepost 145, about 120 yards southeast of a small dwelling, in a shallow cut, about 60 feet southeast of the northwest end of the cut, about 8.3 feet southwest of the southwest rail, and in the top of a horizontal rock outcrop. A standard tablet stamped "1951.125 L 39 1932".
ELEVATION: 1950.806 feet or 594.607 meters (C-1)

L 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located 3.4 miles south of the station at Alexander, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 620 feet northwest of milepost No. 149, in the center of the southwest headwall of concrete railway culvert, 6.4 feet southwest of the southwest rail, 18 inches below the top of the rails. A standard tablet stamped "L 136 1935".
ELEVATION: 1884.445 feet or 574.380 meters (C-1)

LHT 1753 (TVA, 1939; Buncombe County, North Carolina)

Located 13.9 miles southwest of Buncombe County Court House in Asheville, via U. S. Highway 19, 23, and Pisgah Highway, 3.0 miles southwest of U. S. Post Office in Candler, via Pisgah Highway, on property of the Buncombe County Board of Education, on Gladly School campus, 19 feet north of end of concrete steps to schoolhouse, in corner of school, 24.8 feet north of entrance to school building, 59 feet east of east edge of concrete pavement, 47 feet south of well house, 5 feet west of west wall of school building. A standard tablet stamped "LHT 1753 1940" and set in concrete post.

Reference Mark 1: 10.0 feet N 45° E to extreme northwest corner of school building.

Reference Mark 2: 19.8 feet S 75° W to north end of bottom step to school building.

Reference Mark 3: 70.0 feet N 25° W to center line of Pisgah Highway.

ELEVATION: 2284.753 feet or 696.394 meters (T-2)

LHT 1800 (TVA, 1939; Buncombe County, North Carolina)

Located 1.3 miles west of Carrier Bridge over French Broad River, 1.5 miles southeast of U. S. Post Office in West Asheville via Highway 191 and Carrier Bridge Road, 0.8 miles west of end of pavement on Carrier Bridge Road, 0.4 miles east of State Highway 191, on north side of Carrier Bridge Road, 28 feet from center line of road, 17 feet south of path, 7 feet north of edge of road bank, 150 feet west of intersection of concrete paved street intersection road, 150 feet north of small one-story frame house, 300 feet southwest of sand loading derrick pole, 84.4 feet northeast of power pole, with transformer No. 046/3 on pole, 800 feet southwest of large two-story frame stucco house on hill. A standard tablet stamped "LHT 1800 1941" and set in concrete post.

Reference Mark 1: 18.2 feet S 65° W to 15-inch black walnut tree.

Reference Mark 2: 52.5 feet N 20° W to 20-inch maple tree.

Reference Mark 3: 67.3 feet N 35° E to 8-inch apple tree.

ELEVATION: 1986.938 feet or 605.620 meters (T-2)

LHT 1801 (TVA, 1939; Buncombe County, North Carolina)

Located 1.8 miles south of U. S. Post Office, in West Asheville, 12.6 miles north of Mills River via N. C. Highway 191, 2.1 miles north of Venable School, on the property of Mrs. Tilson or highway right-of-way, 0.5 miles south of Asheville city limits, on west side of highway, 28 feet from center line of highway, 180 feet south of intersection of Bear Creek Road with State Highway 191, 150 feet southeast of two-story frame house, 19 feet southwest of power pole painted PBM, 104 feet northwest of two mailboxes on crest of hill, approximately 4 feet above surface of highway. A standard tablet stamped "LHT 1801 1941" and set in concrete monument.

Reference Mark 1: 20.3 feet N 10° W to 30-inch red oak tree.

Reference Mark 2: 29.7 feet N 75° W to 18-inch white oak tree.

Reference Mark 3: 38.0 feet S 05° W to 30-inch white oak tree.

ELEVATION: 2135.665 feet or 650.952 meters (T-2)

LHT 1802 (TVA, 1939; Buncombe County, North Carolina)

Located 2.8 miles south of U. S. Post Office in West Asheville, 11.6 miles north of Mills River, 1.1 miles northeast of Venable School, on Highway 191 right-of-way, 1.5 miles south of Asheville city limits, on east side of highway, 205 feet from center line of highway, 0.7 miles south of Inanda Church house, opposite T-road intersection to west, R. F. McLeod's private road, 37.8 feet southeast of Citizen-Times paper box, 1.4 feet west of woven wire fence of the Biltmore Company. A standard tablet stamped "LHT 1802 1941" and set in concrete post.

Reference Mark 1: 11.3 feet S 10° W to 20-inch red oak tree (painted PBM).

Reference Mark 2: 54.5 feet N 70° W to 18-inch red oak tree.

Reference Mark 3: 37.0 feet N 10° W to 24-inch red oak tree.

Note: It was reported in March, 1950 that this mark was in danger of being destroyed by road construction.

ELEVATION: 2181.282 feet or 664.856 meters (T-2)

LHT 1803 RESET (TVA, 1939, RESET, 1950; Buncombe County, North Carolina)

Located 3.9 miles south of U. S. Post Office in West Asheville, on State Highway 191, 10.5 miles north of Mills River, on property of Venable School, 59 feet west of the center line of highway, 4.5 feet southwest of concrete curb along southwest side of drive leading to school, 138 feet southeast of the southeast corner of three-story brick school building. A standard tablet stamped "LHT 1803 RESET 1950" and set in the top of a concrete post.

Reference Mark 1: 19.0 feet West to 14-inch spruce.

Reference Mark 2: 24.0 feet Northwest to 12-inch spruce.

Reference Mark 3: 18.0 feet Southeast to 8-inch evergreen.

ELEVATION: 2182.02 feet (T-3)

LHT 1804 (TVA, 1939; Buncombe County, North Carolina)

Located 5.0 miles south of U. S. Post Office in West Asheville, 9.4 miles north of Mills River, via Highway 191, on property of Gilbert Morris, 1.1 miles south of Venable School, 25.5 feet east of center line of highway, 31 feet north of crossroad, 7.6 feet east of concrete watering trough, 10 feet east of corner post of barbed wire fence, 55 feet east of Bent Creek Ranch sign, in southwest corner of young pine grove. A standard tablet stamped "LHT 1804 1941".

Reference Mark 1: 45.8 feet Due West to telephone pole across highway.

Reference Mark 2: 6.7 feet S 70° E to 20-inch maple tree (painted PBM).

Reference Mark 3: 62.5 feet S 10° W to water hydrant across highway.

Note: It was reported in March, 1950 that monument was in danger of being destroyed by road construction.

ELEVATION: 2087.768 feet or 636.353 meters (T-2)

LR 607 (TVA, 1941; Henderson County, North Carolina)

Located about 14 miles northwest of Hendersonville. To reach from intersection of U. S. Highway 25 and State Highway 191 go 15.6 miles on Highway 191, turn left and go 1.8 miles to Y-intersection, turn right and go 0.4 miles to T-intersection. Turn left and go 0.6 miles to point 200 feet beyond center of U curve. Station is 80 feet west of this point. A 1- by 1-inch angle iron stamped "TVA LR 607".

Reference Mark 1: 1.3 feet N 74° W to nail and washer in 10-inch pine.

Reference Mark 2: 16.9 feet S 85° E to nail and washer in 8-inch pine.

Reference Mark 3: 19.1 feet S 35° E to nail and washer in 6-inch pine.

GRID POSITION (N. C.): X = 922,345.4; Y = 657,088.8 (T-4)

ELEVATION: 2256 feet (T-5)

LR 657 (TVA, 1941; Buncombe County, North Carolina)

Located about 4.9 miles north of Asheville, and approximately 3.1 miles southeast of Weaverville. To reach from Pack Square in Asheville drive north on U. S. Highway 19 and 23, 2.4 miles, turn right on Beaverdam Road and drive 0.6 miles, turn left on Elk Mountain Road and go 2.4 miles to

Town Mountain Gap, leave car and walk east through apple orchard 1500 feet to top of mountain. Station is on highest point on knoll and 24 feet northwest of old concrete water storage tank. A 1- by 1-inch angle iron stamped "TVA LR 657".

Reference Mark 1: 9.85 feet S 64° W to 2-inch locust.

Reference Mark 2: 24.35 feet N 25° W to drill hole in southeast corner concrete water storage tank.

Reference Mark 3: 12.1 feet N 60° E to 2-inch sassafras.

GRID POSITION (N. C.): X = 949,650.1; Y = 713,208.1 (T-4)

ELEVATION: 3196 feet (T-5)

LR 658 (TVA, 1941; Buncombe County, North Carolina)

Located about 4.3 miles north of Asheville and approximately 3.1 miles southeast of Weaverville. To reach from Pack Square in Asheville, drive north on U. S. Highway 19 and 23, 2.4 miles to Beaverdam Road, turn right and go 0.6 miles to Elk Mountain Road, turn left and drive 2.4 miles to Town Mountain Gap, on south side of road about 3 feet from top of back slope and directly across road from highway sign "Side Road Right". A 1- by 1-inch angle iron stamped "TVA LR 658".

Reference Mark 1: 40.65 feet N 45° E to highway sign on north side of road.

Reference Mark 2: 15.25 feet S 05° W to 6-inch poplar.

Reference Mark 3: 13.7 feet S 80° W to 3-inch locust.

GRID POSITION (N. C.): X = 948,468.6; Y = 712,717.7 (T-4)

ELEVATION: 2884 feet (T-5)

LR 659 (TVA, 1941; Buncombe County, North Carolina)

Located about 5.0 miles north of Asheville. To reach from Pack Square in Asheville, drive north on U. S. Highway 23 and 19 for 2.4 miles to Beaverdam Road, turn right and go 0.6 miles, turn left on Elk Mountain Road and drive 4.6 miles. Station is on south side of road at intersection of T-trail in parking space. A 1- by 1-inch angle iron.

Reference Mark 1: 105.75 feet N 02° E to highway curve left sign.

Reference Mark 2: 136.35 feet N 48° E to highway curve right sign.

Reference Mark 3: 33.50 feet S 86° E to 6-inch twin locust stump.

GRID POSITION (N. C.): X = 956,411.9; Y = 713,432.2 (T-4)

ELEVATION: 3310 feet (T-5)

LR 660 (TVA, 1941; Buncombe County, North Carolina)

Located about 3.2 miles north of Asheville. To reach from Pack Square in Asheville, drive 2.4 miles north on U. S. Highways 23 and 19, turn right on Beaverdam Road and drive 2.6 miles, turn left on Y-road and drive 0.3 miles. Station is on west side and approximately 85.0 feet along T-road. Point is directly under fence and between 8th and 9th fence post from road. A 1- by 1-inch angle iron.

Reference Mark 1: 3.25 feet N 30° W to fence post.

Reference Mark 2: 20.0 feet N 60° E to fence post east of road.

Reference Mark 3: 76.4 feet S 50° E to power pole.

GRID POSITION (N. C.): X = 955,518.5; Y = 709,591.3 (T-4)

ELEVATION: 2319 feet (T-5)

LR 661 (TVA, 1941; Buncombe County, North Carolina)

Located about 6 miles northeast of Asheville, and 1 mile west of Olivette. To reach from Asheville Post Office, drive north on Highway 70 about 3 miles to Beaverdam Lake Country Club, thence continue on Highway 70 a distance of 1.2 miles to crossroads in town of Woodfin, turn left and drive 1.1 miles to road fork, turn sharp right onto Highway 63 and drive 1.7 miles to crossroads, turn right onto the Marshall Road and drive 2.5 miles to fork, turn right and drive 1.0 miles to fork, turn right and drive 0.1 miles to forks, turn left and drive 0.5 miles to barn, 70 feet west of barn, on road which continues through barn hall. A 1- by 1-inch angle iron.

Reference Mark 1: 70.3 feet S 20° E to northeast corner of barn.

Reference Mark 2: 73.8 feet S 15° W to northwest corner of barn.

GRID POSITION (N. C.): X = 922,937.2; Y = 713,354.6 (T-4)

ELEVATION: 2076 feet (T-5)

LR 662 (TVA, 1941; Buncombe County, North Carolina)

Located about 11.1 miles northwest of Asheville. To reach from Asheville, drive north on State Highways 191 and 63 about 4.0 miles to Craggy, turn left on Highway 63 across French Broad River and proceed 7.0 miles to Leicester, continue from Leicester 1.2 miles on Highway 63, turn left on T-road and drive 1.1 miles, turn right and go 0.4 miles to two-story white house, walk northwest along trail 1500 feet to top of ridge. Station is directly on top of ridge and about 200 feet southwest of fence over ridge. A 1- by 1-inch angle iron stamped "TVA LR 662".

Reference Mark 1: 16.0 feet S 60° E to 4-inch stump.

Reference Mark 2: 87.50 feet S 30° W to 10-inch apple tree.

Reference Mark 3: 77.30 feet S 65° W to 24-inch dead chestnut.

GRID POSITION (N. C.): X = 891,014.4; Y = 711,507.2 (T-4)

ELEVATION: 2876 feet (T-5)

LR 691 (TVA 1941; Buncombe County, North Carolina)

Located about 12.2 miles northwest of Asheville. To reach from Asheville, drive north on State Highways 191 and 63 about 4.0 miles to Craggy, turn left on Highway 63 and go 7.0 miles to Leicester, continue on Highway 63 for 2.0 miles, turn left on S. Turkey Creek Road and go 1.0 miles, turn right on T-road and go 0.4 miles to fence. Station is about 70 feet north-east of road and 3.0 feet northwest of fence. A 1- by 1-inch angle iron stamped "TVA LR 691".

Reference Mark 1: 3.7 feet S 25° W to fence post.

Reference Mark 2: 29.55 feet S 57° W to 12-inch pine.

Reference Mark 3: 24.1 feet N 50° E to 4-inch pine.

GRID POSITION (N. C.): X = 886,976.3; Y = 714,246.7 (T-4)

ELEVATION: 2306 feet (T-5)

LR 692 (TVA, 1941; Buncombe County, North Carolina)

Located about 10.4 miles northwest of Asheville. To reach from Asheville, drive north on State Highways 191 and 63 for about 4.0 miles to Craggy, follow Highway 63 left across French Broad River for 3.5 miles to Juno, turn right on dirt road and go 3.8 miles to crossroads, continue straight 1.1 miles, turn left and go 0.1 miles, turn right and go 0.5 miles to T-road north. Station is 2 feet south of edge of road, directly opposite T-road north, and 2 feet northwest of 30-inch oak. A 1- by 1-inch angle iron stamped "TVA LR 692".

Reference Mark 1: 1.9 feet N 70° E to root of 30-inch oak.
 Reference Mark 2: 1.5 feet S 70° E to 30-inch oak.
 Reference Mark 3: 7.0 feet S 50° W to 3-inch oak.
 GRID POSITION (N. C.): X = 900,973.2; Y = 726,623.4 (T-4)
 ELEVATION: 2184 feet (T-5)

LR 693 (TVA, 1941; Buncombe County, North Carolina)

Located about 10.0 miles northwest of Asheville. To reach from Asheville, go north on State Highways 191 and 63 for about 4.0 miles to Craggy, turn left across river on Highway 63 and proceed 3.5 miles to Juno, turn right on dirt road and go 3.8 miles to crossroads, continue straight 0.9 miles, walk northeast 400 feet to top of ridge. A 1- by 1-inch angle iron stamped "TVA LR 693".

Reference Mark 1: 14.44 feet N 30° W to 8-inch pine.
 Reference Mark 2: 14.20 feet S 80° E to 3-inch pine.
 Reference Mark 3: 41.24 feet S 70° W to 3-inch pine.
 GRID POSITION (N. C.): X = 905,034.7; Y = 724,638.9 (T-4)
 ELEVATION: 2142 feet (T-5)

LR 694 (TVA, 1941; Buncombe County, North Carolina)

Located about 7.6 miles northwest of Asheville. To reach from Asheville follow State Highways 63 and 191 north about 4.0 miles to Craggy, turn left on Highway 63 and proceed 3.5 miles to Juno, turn right on dirt road and drive 1.9 miles to the home of P. H. Pounders. Station is about 4 feet south of edge of road and between two oaks in P. H. Pounders yard. A 1- by 1-inch angle iron stamped "TVA LR 694".

Reference Mark 1: 5.1 feet S 80° E to 15-inch oak.
 Reference Mark 2: 8.0 feet N 80° W to 12-inch oak.
 Reference Mark 3: 36.5 feet S 40° E to northwest corner of P. H. Pounders' house.

GRID POSITION (N. C.): X = 912,857.6; Y = 714,725.6 (T-4)
 ELEVATION: 2100 feet (T-5)

LR 695 (TVA, 1941; Buncombe County, North Carolina)

Located about 7.9 miles northeast of Asheville. To reach from Asheville, drive north on U. S. Highways 25 and 70 about 10.5 miles to Alexander, turn left across French Broad River and proceed on pavement 1.6 miles, turn left and take right fork of Y-road, drive 0.7 miles to bridge and walk east 500 feet to intersection of woods line north and south and fence line east and west. Point is under east-west fence, 2 feet east of fence along woods line. A 1- by 1-inch angle iron stamped "TVA LR 695".

Reference Mark 1: 19.83 feet S 05° W to fence post.
 Reference Mark 2: 2.15 feet West to corner post at intersection of east-west fence and north-south fence.

GRID POSITION (N. C.): X = 922,518.5; Y = 725,764.0 (T-4)
 ELEVATION: 2005 feet (T-5)

LR 696 (TVA, 1941; Buncombe County, North Carolina)

Located about 8.1 miles north of Asheville. To reach from Asheville, drive north on U. S. Highways 70 and 25 about 10.5 miles to Alexander, turn left across French Broad River and follow pavement-- miles, turn left and take left fork of Y-road, go 0.9 miles to T-drive southwest. Point is about 25 feet southwest of road. A 1- by 1-inch angle iron stamped "TVA LR 696".

Reference Mark 1: 38.84 feet N 20° E to 3-inch pine.
 Reference Mark 2: 45.45 feet North to 6-inch pine.
 Reference Mark 3: 52.08 feet N 15° W to 4-inch pine.
 GRID POSITION (N. C.): X = 924,604.8; Y = 727,531.2 (T-4)
 ELEVATION: 2110 feet (T-5)

LR 698 (TVA, 1941; Buncombe County, North Carolina)

Located about 3.5 miles northeast of Weaverville. To reach from post office in Weaverville, drive north on U. S. Highways 19 and 23 for 1.0 miles, turn right on Dula Springs Road for 0.8 miles, turn left on T-road and drive 0.2 miles, turn right on ridge road and go 1.0 miles to field and end of auto travel, walk northeast along trail 1500 feet to field and apple orchard. Point is 5 feet northwest of trail. A 1- by 1-inch angle iron stamped "TVA LR 698".

Reference Mark 1: 46.90 feet N 59° W at 6°21'36" to 18-inch apple tree.
 Reference Mark 2: 102.65 feet N 43° E to apple tree.
 Reference Mark 3: 22.6 feet N 75° E to 5-inch apple tree.

GRID POSITION (N. C.): X = 951,873.8; Y = 735,568.2 (T-4)
 ELEVATION: 3166 feet (T-5)

LR 699 (TVA, 1941; Buncombe County, North Carolina)

Located about 2.4 miles north of Weaverville. To reach from post office in Weaverville, drive north on U. S. Highways 19 and 23 for 1.0 miles, turn right on Dula Springs Road for 0.8 miles, turn left on T-road and drive 0.4 miles, turn left at barn on woods road and go 0.7 miles to field on ridge. Point is under 10-inch pine on southeast side of trail. A 1- by 1-inch angle iron stamped "TVA LR 699".

Reference Mark 1: 60.35 feet N 81° E to 30-inch hickory.
 Reference Mark 2: 0.6 feet N 48° W to 10-inch pine.
 Reference Mark 3: 8.24 feet S 24° W to 10-inch pine.

GRID POSITION (N. C.): X = 949,236.5; Y = 738,041.5 (T-4)
 ELEVATION: 2780 feet (T-5)

LR 700 (TVA, 1941; Buncombe County, North Carolina)

Located about 10.3 miles northwest of Asheville. To reach from Asheville, drive north on U. S. Highways 70 and 25 about 10.5 miles to Alexander, continue on U. S. Highway 70 and 25, 1.2 miles to Sinclair service station, turn right and drive 11 miles to rock quarry, take left fork of Y-roads and go 0.5 miles to T-road, turn left and drive 0.8 miles, turn sharp right on Y-road and drive 0.7 miles, turn right on Y-road and go 0.1 miles to fence intersection north of road. Point is 6.42 feet southeast (?) of large oak in fence corner. A 1- by 1-inch angle iron stamped "TVA LR 700".

Reference Mark 1: 6.42 feet S 20° E to 30-inch oak.
 Reference Mark 2: 7.02 feet N 75° E to first fence post north of 30-inch oak.

Reference Mark 3: 12.32 feet N 18° E to fence post.
 GRID POSITION (N. C.): X = 920,926.0; Y = 738,730.7 (T-4)
 ELEVATION: 2064 feet (T-5)

LR 701 (TVA, 1941; Buncombe County, North Carolina)

Located about 8.5 miles northwest of Asheville. To reach from Asheville drive north on U. S. Highways 70 and 25 for 10.0 miles, turn right on

on paved road and go 1.2 miles, turn sharp left on dirt road 0.3 miles, turn left on woods road and drive 1.3 miles to field road intersection. Station is about 33 feet northeast of intersection of road, about 2 feet south of fence and on top of knoll. A 1- by 1-inch angle iron stamped "TVA LR 701".

Reference Mark 1: 2.25 feet N 25° E to 3-inch oak.
 Reference Mark 2: 12.15 feet S 66° W to 2-inch oak.
 Reference Mark 3: 13.8 feet N 26° W to 6-inch oak.

GRID POSITION (N. C.): X = 925,527.9; Y = 735,102.8 (T-4)
 ELEVATION: 2082 feet (T-5)

LR 702 (TVA, 1941; Buncombe County, North Carolina)

Located about 8.6 miles north of Asheville. To reach from Asheville, drive north on U. S. Highways 70 and 25 10.0 miles, turn right on paved road go 1.7 miles, turn left on T-road, go 1.2 miles, go right on Y-roads, drive 0.4 miles, turn left, go 0.2 miles, leave car and walk west 1000 feet to top of hill, about 50 feet west of crest of hill under a lone walnut tree, 2.3 feet S 33° W to walnut tree. A 1- by 1-inch angle iron stamped "TVA LR 702".

GRID POSITION (N. C.): X = 930,572.1; Y = 737,453.6 (T-4)
 ELEVATION: 2034 feet (T-5)

LR 704 (TVA, 1941; Buncombe County, North Carolina)

Located about 11.4 miles northwest of Asheville. To reach from Asheville, drive north on U. S. Highways 70 and 25 about 10.5 miles to Alexander, turn left across river and proceed 3.3 miles to end of pavement, take right fork and go 0.1 miles, turn left on Y and go 1.5 miles, turn right on Marshall Road and go 1.45 miles, turn left and go 0.35 miles, turn right for 0.2 miles, turn left 0.3 miles to point. Point is at edge of field 150 feet south of road and about 300 feet northeast of residence. A 1- by 1-inch angle iron stamped "TVA LR 704".

Reference Mark 1: 6.95 feet North to 9-inch sassafras.
 Reference Mark 2: 31.75 feet South to 6-inch sassafras.

GRID POSITION (N. C.): X = 899,352.4; Y = 734,813.7 (T-4)
 ELEVATION: 2242 feet (T-5)

LR 705 (TVA, 1941; Madison County, North Carolina)

Located about 8.0 miles southwest of Marshall. To reach from Marshall drive south on State Highway 213 for 11.9 miles, leave car and walk east along ridge 1500 feet. Station is in corner of field at woods intersection about 125 feet south of fence and woods intersection. A 1- by 1-inch angle iron stamped "TVA LR 705".

Reference Mark 1: 4.1 feet S 10° W to 3-inch pine.
 Reference Mark 2: 8.9 feet S 30° E to 3-inch pine.
 Reference Mark 3: 8.1 feet North to 1-inch oak.

GRID POSITION (N. C.): X = 889,931.8; Y = 736,330.6 (T-4)
 ELEVATION: 2215 feet (T-5)

LR 706 (TVA, 1941; Buncombe County, North Carolina)

Located about 8.4 miles northwest of Asheville. To reach from Asheville drive 10.5 miles north on U. S. Highways 70 and 25 to Alexander, turn left across river and drive 1.8 miles on pavement, turn left at French Broad School and drive 1.4 miles, turn left on "Y" 0.25 miles. Point is east of road under fence about 40.0 feet southeast of wood line at road. A 1- by 1-inch angle iron stamped "TVA LR 706".

Reference Mark 1: 41.20 feet N 80° W to 15-inch twin pine.
 Reference Mark 2: 10.70 feet S 45° E to 2-inch oak.
 Reference Mark 3: 7.45 feet N 25° W to fence post.

GRID POSITION (N. C.): X = 915,920.3; Y = 724,462.5 (T-4)
 ELEVATION: 2156 feet (T-5)

M 136 (USC&GS, 1935; Buncombe County, North Carolina)

Located 2.2 miles south of the station at Alexander, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 0.2 miles north-east of milepost No. 150, in the center of the west headwall of concrete railway culvert, 10.5 feet west of the west rail, 2-1/2 feet below the rails. A standard tablet stamped "M 136 1935".

ELEVATION: 1861.788 feet or 567.474 meters (C-1)

ME 327 (TVA 1941; Buncombe County, North Carolina)

Located in northeast corner of Quadrangle 192 SE. To reach from Asheville, drive southeast along U. S. Highways 70 and 74 for 2.25 miles to forks of U. S. Highways 70 and 74, take Highway 70 to left, go 1.65 miles, turn left and go north along county road 0.15 miles, take left and go 0.35 miles to house on right. Stop car and walk west along fence and woods line about 700 feet to northwest corner of pasture and station. A 1- by 1-inch angle iron.

Reference Mark 1: 34.6 feet N 73° E to 8-inch post oak.
 Reference Mark 2: 16.4 feet N 36° W to fence corner.
 Reference Mark 3: 12.7 feet S 43° W to fence post.

GRID POSITION (N. C.): X = 959,575.4; Y = 690,210.6 (T-4)
 ELEVATION: 2184 feet (T-5)

MS 432 (TVA, 1940; Madison County, North Carolina)

Located in northwest corner of Quadrangle 192 NW. To reach from Canton, at the intersection of bridge over railroad and Church Street, cross bridge and proceed one block to Newfound Street, turn right on Newfound Street and proceed 11.15 miles, keeping main road known as Newfound Road to Hall's Service Station and four-way intersection, take middle road, still Newfound Road and proceed 2.65 miles to intersection of Newfound Road and State Highway 63, turn left on State Highway 63 and proceed on black top for 2.90 miles to Y-road intersection, turn right leaving black top, but keeping State Highway 63, and go 1.70 miles to Y-road intersection, turn right on Meadowtown Road and proceed 2.05 miles to intersection of Meadowtown Road and State Highway 213, turn left on State Highway 213 and proceed 0.35 miles to Y-road intersection, turn right, leaving State Highway 213 and proceed 0.7 miles to triangular intersection, turn right and proceed up poor road, keeping right for 0.80 miles to one-story log and frame house, park car and walk north along center line of ridge, bearing northeast to top of ridge, keep right follow along edge of woods to southeast corner of said woods and station, on center line of ridge. A 1- by 1-inch angle iron stamped "MS 432".

Reference Mark 1: 12.60 feet South to 12-inch locust tree.
 Reference Mark 2: 3.95 feet Southeast to 6-inch chestnut snag.
 Reference Mark 3: 4.36 feet Northwest to 3-inch locust tree.

GEODETIC POSITION: Lat. = 35°44'33.28"; Long. = 82°44'59.75" (T-4)
 GRID POSITION (N. C.): X = 887,470.9; Y = 746,191.0 (T-4)
 ELEVATION: 2829 feet (T-5)

MS 433 (TVA, 1940; Buncombe County, North Carolina)

Located in west central portion of Quadrangle 192 NW, on top of Grassy

To reach from Canton, at the intersection of bridge over railroad and Rich Street, cross bridge and proceed one block to Newfound Street, turn right on Newfound Street and proceed 11.15 miles, keeping main road, known as Found Road to Hall's Service Station, and four-way intersection, take the road, still Newfound road and proceed 2.65 miles to intersection of Found road and State Highway 63, turn left on Highway 63 and proceed on the top for 2.90 miles to Y-road intersection, turn right, keeping Highway 63 and go 1.70 miles to Y-road intersection and store, park car at intersection and walk in a northwest direction up wooded road for 1100 feet to top of cleared knoll. Station is in the east corner of fence. A 1- by 1-inch angle iron stamped "MS 433".

Reference Mark 1: 8.30 feet N 18° W to fence post.
Reference Mark 2: 8.56 feet S 16° W to fence post.
Reference Mark 3: 3.79 feet S 80° E to corner fence post.
GRID POSITION (N. C.): X = 888,884.3; Y = 729,219.2 (T-4)
ELEVATION: 2692 feet (T-5)

616 (TVA, 1941; Buncombe County, North Carolina)

Located on right bank of Swannanoa River, at south edge of State Highway 81, at intersection of Highway 81 and Y-road north, 0.2 miles west of garage, 0.9 miles east of intersection of State Highway 81 and U. S. Highway 25. A 1- by 1-inch angle iron stamped "MS 616" and driven flush with surface of highway.

Reference Mark 1: 63.12 feet S 54° W to tack and washer in guard post.
Reference Mark 2: 38.72 feet N 11° E to tack and washer in telephone pole.
Reference Mark 3: 7.46 feet S 29° E to tack and washer in telephone pole.
GRID POSITION (N. C.): X = 950,574.5; Y = 681,917.1 (T-3)
Grid Azimuth to MS 617 (distance 389.9 feet): 64°05'20".
ELEVATION: 1997.9 feet (T-4)

617 (TVA, 1941; Buncombe County, North Carolina)

Located on right bank of Swannanoa River, at south edge of State Highway 81, at curve in highway, 350 feet west of intersection of State Highway 81 and Y-road north, 0.85 miles east of intersection of State Highway 81 and Highway 25, also 0.25 miles west of WPA garage. A 1- by 1-inch angle iron stamped "MS 617" and driven flush with surface of highway.

Reference Mark 1: 76.16 feet S 81° W to tack and washer in telephone pole.
Reference Mark 2: 34.12 feet N 22° W to tack and washer in telephone pole.
Reference Mark 3: 37.72 feet S 85° E to tack and washer in 6-inch maple.
GRID POSITION (N. C.): X = 950,223.8; Y = 681,746.7 (T-3)
Grid Azimuth to MS 616 (distance 389.9 feet): 244°05'20".
ELEVATION: 1995.5 feet (T-4)

618 (TVA, 1941; Buncombe County, North Carolina)

Located at east end of Southern Railway station, on south shoulder of highway, at northeast edge of overhead highway bridge on right bank of Swannanoa River, at point where said highway at depot and overhead highway bridge intersect. A 1- by 1-inch angle iron stamped "MS 618".

Reference Mark 1: 21.85 feet S 44° W to north corner of concrete column (highway bridge) iron footing protection angle.
Reference Mark 2: 56.60 feet N 55° W to top of iron post.
Reference Mark 3: 47.93 feet S 10° E to north edge of center concrete column of highway bridge.
GRID POSITION (N. C.): X = 945,113.1; Y = 680,694.2 (T-3)
Grid Azimuth to MS 619 (distance 525.0 feet): 4°02'50".
ELEVATION: 2002.4 feet (T-4)

619 (TVA, 1941; Buncombe County, North Carolina)

Located 500 feet south of Southern Railway station, on right bank of Swannanoa River, at southeast edge of Southern Railway yards, 490 feet south of intersection of highway bridge and railroad, 330 feet northwest from the water's edge of Swannanoa River. A 1- by 1-inch angle iron stamped "MS 619".

Reference Mark 1: 11.35 feet N 86° W to tack in end of cross tie.
Reference Mark 2: 6.09 feet N 17° W to tack in end of cross tie.
Reference Mark 3: 12.83 feet N 34° E to tack in end of cross tie.
GRID POSITION (N. C.): X = 945,076.0; Y = 680,170.6 (T-3)
Grid Azimuth to MS 618 (distance 525.0 feet): 184°02'50".
ELEVATION: 1990.2 feet (T-4)

620 (TVA, 1941; Buncombe County, North Carolina)

Located on right bank of French Broad River, on left bank of small stream, 40 feet east from east edge of Riverside Drive, 0.35 miles north of Southern Railway roundhouse, just west of Southern Railway tracks. A 1- by 1-inch angle iron stamped "MS 620".

Reference Mark 1: 26.68 feet S 55° W to tack and washer in telephone pole.
Reference Mark 2: 8.34 feet West to tack and washer in telephone pole.
Reference Mark 3: 21.17 feet N 30° E to tack and washer in 4-inch ash.
GRID POSITION (N. C.): X = 940,555.4; Y = 681,833.3 (T-3)
Grid Azimuth to MS 621 (distance 1082.7 feet): 148°29'40".
ELEVATION: 1974.0 feet (T-4)

621 (TVA, 1941; Buncombe County, North Carolina)

Located on right bank of French Broad River, on west edge of Riverside Drive, 0.6 miles north of railroad roundhouse, 500 feet southwest from Lumber Plant, 300 feet west from sink and Southern Railway tracks. A 1- by 1-inch angle iron stamped "MS 621".

Reference Mark 1: 25.77 feet S 17° W to tack in power pole.
GRID POSITION (N. C.): X = 939,989.6; Y = 682,756.4 (T-3)
Grid Azimuth to MS 620 (distance 1082.7 feet): 328°29'40".
ELEVATION: 1975.2 feet (T-4)

622 (TVA, 1941; Buncombe County, North Carolina)

Located 1.5 miles airline north of railroad roundhouse, 0.15 miles east of bridge and Riverside Drive intersection at Olive Manufacturing Company, on right bank of French Broad River, on northeast edge of Riverside Drive, 700 feet north of viaduct, at south fenced boundary of Olive Mfg. Co.

A 1- by 1-inch angle iron stamped "MS 622".

Reference Mark 1: 3.48 feet N 40° E to iron fence post.
Reference Mark 2: 25.48 feet N 37° W to tack and washer in power pole.
Reference Mark 3: 36.12 feet West to tack and washer in power pole.

GRID POSITION (N. C.): X = 939,040.0; Y = 687,867.6 (T-3)
ELEVATION: 1971.3 feet (T-4)

MS 623 (TVA, 1941; Buncombe County, North Carolina)

Located 0.95 miles south of Woodfin (airline), at intersection of east end of Pearson Bridge and Riverside Drive on right bank of French Broad River, on west shoulder of Riverside Drive. A 1- by 1-inch angle iron stamped "MS 623".

Reference Mark 1: 39.78 feet S 21° W to tack and washer in power pole.
Reference Mark 2: 3.88 feet S 80° W to tack and washer in post.
Reference Mark 3: 9.64 feet N 08° E to tack and washer in post.
GRID POSITION (N. C.): X = 936,911.8; Y = 695,534.4 (T-3)
Grid Azimuth to MS 624 (distance 1501.7 feet): 199°44'00".
ELEVATION: 1964.9 feet (T-4)

MS 624 (TVA, 1941; Buncombe County, North Carolina)

Located 0.75 miles south of Woodfin, (airline) 0.30 miles north of Pearson Bridge, 300 feet north of T-road intersection on right bank of French Broad River. A 1- by 1-inch angle iron stamped "MS 624", on east shoulder of Riverside Drive.

Reference Mark 1: 52.02 feet N 46° W to 3-inch ironwood with tack and washer.
Reference Mark 2: 41.09 feet S 64° W to tack and washer in power pole.
Reference Mark 3: 34.45 feet S 48° E to tack and washer in 6-inch pine.
GRID POSITION (N. C.): X = 937,418.6; Y = 696,947.9 (T-3)
Grid Azimuth to MS 623 (distance 1501.7 feet): 19°44'00".
ELEVATION: 1963.3 feet (T-4)

MS 625 (TVA, 1941; Buncombe County, North Carolina)

Located 150 feet east of entrance to quarry at State Prison, No. 1002, on right bank of French Broad River, on south shoulder of State Highway 63, 0.9 miles (airline) from Woodfin. A 1- by 1-inch angle iron stamped "MS 625".

Reference Mark 1: 51.47 feet S 20° E to 6-inch willow tree, a nail and washer.
Reference Mark 2: 81.15 feet N 83° W to tack and washer in telephone pole.
Reference Mark 3: 82.03 feet N 50° E to tack and washer in telephone pole.
GRID POSITION (N. C.): X = 932,455.7; Y = 701,299.2 (T-3)
Grid Azimuth to MS 626 (distance 1250.7 feet): 91°59'10".
ELEVATION: 1957.0 feet (T-4)

MS 626 (TVA, 1941; Buncombe County, North Carolina)

Located 1.2 miles (airline) from Woodfin, at west edge of State Prison No. 1002 grounds, near curve in highway on south shoulder of State Highway 63, on right bank of French Broad River. A 1- by 1-inch angle iron stamped "MS 626".

Reference Mark 1: 52.73 feet S 50° E to corner post with tack and washer.
Reference Mark 2: 68.38 feet S 22° W to 8-inch locust with tack and washer.
Reference Mark 3: 90.27 feet S 69° W to 3-inch twin silver birch with tack and washer.
GRID POSITION (N. C.): X = 931,205.6; Y = 701,342.5 (T-3)
Grid Azimuth to MS 625 (distance 1250.7 feet): 271°59'10".
ELEVATION: 1948.7 feet (T-4)

MS 630 (TVA, 1941; Buncombe County, North Carolina)

Located in East Asheville, on the right bank of Swannanoa River, on the north shoulder of U. S. Highway 70, at the south end of the Municipal Golf Course, at T-road to the Golf Club House. A 1- by 1-inch angle iron stamped "MS 630".

Reference Mark 1: 21.85 feet N 55° W to east edge of manhole.
Reference Mark 2: 51.17 feet S 11° E to tack in phone pole.
Reference Mark 3: 1.46 feet N 24° W to tack in power pole.
GRID POSITION (N. C.): X = 957,514.9; Y = 682,489.2 (T-3)
Grid Azimuth to MS 631 (distance 3181.2 feet): 242°04'20".
ELEVATION: 2017.7 feet (T-4)

MS 633 (TVA, 1941; Buncombe County, North Carolina)

Located in extreme south central portion of Quadrangle 192 NW. To reach from Asheville, drive northwest from Pack Square on Highway 63 through Woodfin past prison camp, crossing French Broad River on Highway 63 bridge, and continue from bridge along Highway 63 for 5.3 miles west to T-road south at curve, turn left on T-road and drive 0.3 miles to T-road west, follow T-road 1.0 miles to Y-road south, drive south on Y-road for 0.6 miles to curve at woods edge, park car and walk west for 250 feet past crest of rise in grass field. Here near small bushes is station. A 1- by 1-inch angle iron stamped "MS 633".

Reference Mark 1: 21.52 feet N 45° W to tack in stump.
Reference Mark 2: 9.78 feet S 65° W to tack in stump.
GRID POSITION (N. C.): X = 903,147.8; Y = 703,520.8 (T-4)
ELEVATION: 2253 feet (T-5)

MS 634 (TVA, 1941; Buncombe County, North Carolina)

Located in the northeast corner of Quadrangle 192 SW. To reach from Woodfin in North Asheville, drive northwest along Highway 63 for 1.90 miles to T-road west, turn left crossing French Broad River keeping Highway 63 for 1.20 miles to T-road southwest, turn left and drive 1.0 miles on gravel road to T-road north, turn right and drive 0.40 miles to gap in fence on both sides of road, park car and walk west up grassy slope for 1300 feet to top of grassy slope near pine wood thicket. A 1- by 1-inch angle iron stamped "MS 634" and driven flush with ground.

Reference Mark 1: 168.10 feet N 81° W to 20d spike 6 feet above ground in 14-inch poplar tree.
Reference Mark 2: 213.25 feet S 21° W to 20d spike 6 feet above ground in 12-inch pine tree.

GRID POSITION (N. C.): X = 921,621.7; Y = 702,100.3 (T-4)
ELEVATION: 2194 feet (T-5)

MS 635 (TVA, 1941; Buncombe County, North Carolina)

Located in northwest corner of Quadrangle 192 SW, 1.1 miles northeast along center line of ridge from Biltmore 13 triangulation station and 0.5 miles west along ridge from Hooker Gap. To reach from post office at Asheville, drive south 0.1 miles to Patten Avenue, turn right onto Patten Avenue and go 0.3 miles to intersection at Southern Dairies, turn left and follow U. S. Highways 23 and 19 and State Highway 191, crossing river bridge and proceeding into West Asheville along Haywood Road for 2.0 miles in all to intersection of Haywood road and Burton Street, turn right and follow concrete highway for 6.75 miles to T-road left at bridge, turn left and drive 4.8 miles to crossroads, turn left and drive 1.1 miles to T-road right, turn right and follow poor dirt road 0.75 miles to sharp curve at small house, park car and climb S 7° W 1250 feet up ridge to highest top. Here, set directly under 14-inch locust tree is station. A 1- by 1-inch angle iron stamped "MS 635".

Reference Mark 1: 14.60 feet S 48° W to tack in fence post.
Reference Mark 2: 1.74 feet S 16° E to tack in 14-inch locust (signal tree)
Reference Mark 3: 30.90 feet N 26° W to tack in 6-inch apple tree.

GRID POSITION (N. C.): X = 892,002.0; Y = 690,721.5 (T-4)
ELEVATION: 3212 feet (T-5)

MS 636 (TVA, 1941; Buncombe County, North Carolina)

Located in the northeast portion of Quadrangle 192 SW on top of High Top Mountain. To reach from post office in Asheville, drive south 0.1 miles to Patten Avenue, turn right and drive along U. S. Highways 23 and 19, and State Highway 191 for 0.30 miles to Southern Dairies, turn left and follow said highways 2.0 miles crossing river bridge to intersection of Haywood Road and Burton Street in West Asheville, turn right on Bruton Street and follow concrete road for 6.70 miles to T-road intersection at bridge, turn left on gravel road for 0.25 miles, T-road intersection, turn left on Dix Creek No. 2 road and drive 0.40 miles to crossroads, keep straight and drive 0.95 miles to T-road, keep right and drive 0.20 miles to Y-road, keep left and go 0.35 miles to T-road, turn left and drive up steep rocky road for 0.55 miles to old frame house, park car and walk in southerly direction 1500 feet to low saddle, turn left and walk east following trail around north side of ridge to hollow running south, turn south and walk up through old orchard to saddle turn east along center line of ridge and climb to top of high wooded top. A 1- by 1-inch angle iron stamped "MS 636" and set directly under 18-inch hickory tree.

Reference Mark 1: 9.00 feet N 50° E to tack in 14-inch chestnut snag.
Reference Mark 2: 1.16 feet S 62° E to tack in 18-inch hickory tree.

GRID POSITION (N. C.): X = 907,937.5; Y = 689,684.0 (T-4)
ELEVATION: 3528 feet (T-5)

MS 637 (TVA, 1941; Buncombe County, North Carolina)

Located in the north central portion of Quadrangle 192 SW. To reach from post office at Asheville, drive south 0.1 miles to Patten Avenue, turn right and drive along U. S. Highways 23 and 19 and State Highway 191 for 0.30 miles to Southern Dairies, turn left and follow said highways for 2.0 miles crossing river bridge to intersection of Haywood Road and Bruton Street in West Asheville, turn right on Bruton Street and follow concrete road for 6.70 miles to T-road intersection at bridge, turn left on gravel road for 0.25 miles, T-road intersection, turn left on Dix Creek No. 2 road and drive 0.40 miles to crossroads, keep straight and drive 0.95 miles to T-road keep right and drive 0.20 miles to Y-road, keep left and drive 0.25 miles to left bend in road. Park car and walk north up cultivated field 100 feet south of woods edge. Station is a 20d nail in top of 8-inch stump.

GRID POSITION (N. C.): X = 904,724.4; Y = 694,119.8 (T-4)
ELEVATION: 2416 feet (T-5)

MS 638 (TVA, 1941; Buncombe County, North Carolina)

Located in the northeast corner of Quadrangle 192 SW. To reach from post office at Asheville, drive south 0.1 miles to Patten Avenue, turn right and go 0.30 miles on U. S. Highways 23 and 19 and State Highway 191 to Southern Dairies, turn left and follow said highway 2.0 miles to West Asheville at intersection of Bruton Street and Haywood Road, turn right on Bruton Street and follow concrete road for 3.1 miles to T-road left, turn left and drive 0.1 miles to T-road, keep left and drive 0.55 miles to crossroads, turn right and drive up steep road 0.90 miles to dim road right, turn right and drive through gap in fence bearing right to center line of ridge and drive 0.20 miles to lone pine tree. A 1- by 1-inch angle iron stamped "MS 638" and 2 feet southeast of base of tree.

Reference Mark 1: 3.25 feet N 68° W to tack in south side of 10-inch pine.
Reference Mark 2: 3.40 feet N 48° W to tack in north side of 10-inch pine.

GRID POSITION (N. C.): X = 919,506.1; Y = 692,017.1 (T-4)
ELEVATION: 2643 feet (T-5)

MS 639 (TVA, 1941; Buncombe County, North Carolina)

Located in the northwest portion of Quadrangle 192 SE, about 400 feet south of Eliada Orphan's Home. To reach from post office at Asheville, drive south 0.1 miles to Patton Avenue, turn right on Patton and drive 0.30 miles follow U. S. Highways 23 and 19 and State Highway 191 to Southern Dairies, turn left and follow said highways for 2.0 miles crossing river (French Broad) to West Asheville at intersection of Haywood Road and Bruton Street, turn right on Bruton Street and follow concrete road 3.2 miles to Y-road at store, turn right and continue up gravel road keeping left, then right 0.45 miles to top of ridge and Eliada Orphan's Home property. Station is 400 feet south of large brick building on top of small knoll covered with stumps. A 1- by 1-inch angle iron stamped "MS 639" and set in east side of 8-inch pine stump.

Reference Mark 1: 4.57 feet N 77° W to tack and washer in 10-inch pine stump.
Reference Mark 2: 10.04 feet N 37° E to tack and washer in 10-inch pine stump.
Reference Mark 3: 8.87 feet S 12° E to tack and washer in poplar stump.

GRID POSITION (N. C.): X = 924,610.7; Y = 692,345.4 (T-4)
ELEVATION: 2279 feet (T-5)

MS 640 (TVA, 1941; Buncombe County, North Carolina)

Located in the vicinity of West Asheville, near Green Hill Cemetery, in northwest portion of Quadrangle 192 SW. To reach from post office at Asheville, drive south 0.10 miles to Patton Avenue, turn right and drive 0.30 miles on Patton Avenue to Southern Dairies, turn left and follow U. S. Highways 23 and 19 and State Highway 191 for 2.0 miles crossing French Broad River to West Asheville at intersection of Haywood Road and Bruton Street, turn right on Bruton and drive approximately 0.80 miles to crossroads, turn right and drive north 0.35 miles to crossroad, turn right and drive 0.40 miles just past Y-road intersection to dim drive north, turn left and drive up dim drive to wood shop on right of drive. Station is on north side of road, 4 feet north of wire fence 100 feet east of one-story frame house. A 1- by 1-inch angle iron stamped "MS 640".

Reference Mark 1: 33.25 feet S 10° W to tack and washer in fence post.

Reference Mark 2: 4.93 feet S 45° E to tack and washer in fence post.

Reference Mark 3: 5.76 feet S 89° W to tack and washer in fence post.

GRID POSITION (N. C.): X = 934,109.3; Y = 688,844.5 (T-4)
ELEVATION: 2124 feet (T-5)

MS 641 (TVA, 1941; Buncombe County, North Carolina)

Located in the southeast corner of Quadrangle 192 SE. Station is in the Biltmore Forest region of 400 Vanderbilt Road. To reach from Packs Square in the city of Asheville, drive south along U. S. Highways 25 for 2.25 miles to community of Biltmore and five-point intersection, turn right on Vanderbilt Road and drive 2.60 miles to T-drive southeast at 400 Vanderbilt Road, drive southeast 400 feet to house. Station is 100 feet north of house set in clump of 6-inch pine trees, 6 feet north of circular flower bed. A 1- by 1-inch angle iron stamped "MS 641" and driven flush with ground.

Reference Mark 1: 23.45 feet N 02° E to tack in 6-inch pine tree.

Reference Mark 2: 16.87 feet S 72° E to tack in 6-inch pine tree.

Reference Mark 3: 17.40 feet N 74° W to tack in 6-inch pine tree.

GRID POSITION (N. C.): X = 946,920.2; Y = 667,174.0 (T-4)
ELEVATION: 2197 feet (T-5)

N 35 (TVA, 1937; Madison County, North Carolina)

Located on the right bank of the French Broad River at mile 131.9, in root at northwest side of 12-inch poplar, 10 feet west of well house, 50 feet south of residence of J. E. Pike on U. S. Highways 25 and 70 opposite mouth of Sandymush Creek. Nail.

ELEVATION: 1729.71 feet (T-3)

N 36 (TVA, 1937; Buncombe County, North Carolina)

Located at mile 135.3 of French Broad River, right bank of river, 5.5 feet west of U. S. Highways 25 and 70, 5.2 feet northwest of post at south end of highway guard rail, and 800 feet south of culvert over Flat Creek, on U. S. Highways 25 and 70, about 1 mile below Alexander. Top of large stone on fill.

ELEVATION: 1774.56 feet (T-3)

N 37 (TVA, 1937; Buncombe County, North Carolina)

Located at mile 145.1 of French Broad River, on right bank of river, at west side of railroad tracks of spur to National Casket Company plant, spike is in 30th tie north of switch at gate at south end of yard, 30 feet southeast of fire hydrant, marked by nail in tie at side of spike. Track spike.

ELEVATION: 1959.00 feet (T-3)

N 38 (TVA, 1937; Buncombe County, North Carolina)

Located at mile 149.1 of French Broad River, on right bank of river and left bank of Swannanoa, in upstream buttress of concrete steps leading from road to yard to J. T. Redman's house, 50 feet from left bank of Swannanoa River, on property of J. T. Redman, first house on left of road leading from Biltmore gate to Biltmore Estate and Biltmore Dairy, house is stucco. Chiseled square.

ELEVATION: 1982.39 feet (T-3)

N 39 (TVA, 1937; Buncombe County, North Carolina)

Located on right bank of river, in east end of right abutment at site of bridge, now abandoned. Point is 4.5 feet from end of abutment, 25 feet south of trail along river, 7.3 feet west of 36-inch white oak, mile 149.7 of French Broad River, about 500 feet upstream from end of cultivated field on right bank. Chiseled semi-circle.

ELEVATION: 1985.81 feet (T-3)

N 40 (TVA, 1937; Buncombe County, North Carolina)

Located at mile 150.7 of French Broad River, on right bank of river, 4 feet upstream from fence, 40 feet south of trail along bank and about 1000 feet upstream from end of cultivated field at small offset in woodland along river bank, directly opposite small white house on left bank. On 8-inch birch.

ELEVATION: 1981.81 feet (T-3)

N 41 (TVA, 1937; Buncombe County, North Carolina)

Located at mile 151.2 of French Broad River, right bank of river, in base of 12-inch leaning birch in northeast angle at T-road intersection 50 feet landward from bank and 30 feet landward from large three pronged sycamore. Nail and washer.

ELEVATION: 1979.33 feet (T-3)

N 42 (TVA, 1937; Buncombe County, North Carolina)

Located at mile 151.8 of French Broad River, on right bank of river, in downstream side of 10-inch water oak, 10 feet riverward from field road along bank and opposite White Creek. Nail and washer.

ELEVATION: 1983.91 feet (T-3)

N 43 (TVA, 1937; Buncombe County, North Carolina)

Located at mile 152.3 of French Broad River, on right bank of river, in base of 18-inch birch, 200 feet upstream from barbed wire fence, opposite small clearing on left bank and 300 feet downstream from point where French Broad angles east. Nail and washer.

ELEVATION: 1985.91 feet (T-3)

N 44 (TVA, 1937; Buncombe County, North Carolina)

Located at mile 152.7 of French Broad River, on right bank of river,

in root of 24-inch tree overhanging bank, 150 feet west of black top road through Biltmore Estate, 10 feet west of wagon road, 200 feet downstream from south end of large field. Nail and washer.
ELEVATION: 1986.59 feet (T-3)

N 45 (TVA, 1937; Buncombe County, North Carolina)
Located at mile 153.2 of French Broad River, on right bank of river, in land side of 8-inch tree, 10 feet riverward from road along river bank, 150 feet above head of island and 75 feet south of corner of small field. Nail and washer.
ELEVATION: 1992.70 feet (T-3)

N 46 (TVA, 1937; Buncombe County, North Carolina)
Located at mile 153.7 of French Broad River, on right bank of river, in 12-inch forked tree leaning over bank, 40 feet west of center line of road along river bank and 1000 feet upstream from road to Biltmore House. Nail and washer.
ELEVATION: 1990.44 feet (T-3)

N 47 (TVA, 1937; Buncombe County, North Carolina)
Located at mile 154.2 of French Broad River, on right bank of river, in base of 24-inch birch, 10 feet riverward from wagon road along top of bank, 1200 feet south of T-road intersection. Nail and washer.
ELEVATION: 1994.80 feet (T-3)

N 48 (TVA, 1937; Buncombe County, Tennessee)
Located at mile 154.6 of French Broad River, on right bank of river, on southeast corner of east headwall of concrete culvert, on road along river bank, 1500 feet north of house on top of hill. A chiseled square.
ELEVATION: 1996.01 feet (T-3)

N 49 (TVA, 1937; Buncombe County, North Carolina)
Located at mile 155.1 of French Broad River, on right bank of river, in base of 12-inch beech, 10 feet from center line of dirt road along top of bank, and 100 feet south of 18-inch poplar which stands along just inside fence. Nail and washer.
ELEVATION: 1996.57 feet (T-3)

N 50 (TVA, 1937; Buncombe County, North Carolina)
Located at mile 155.6 of French Broad River, on right bank of river, in east corner of south headwall of concrete culvert over Dingle Creek, 50 feet from its mouth. A chiseled square.
ELEVATION: 1996.57 feet (T-3)

N 51 (TVA, 1937; Buncombe County, North Carolina)
Located at mile 156.1 of French Broad River, on right bank of river, in root of 30-inch three prong beech, 10 feet riverward from center line of dirt road at top of bank, 400 feet upstream from road intersection. Nail and washer.
ELEVATION: 2003.12 feet (T-3)

N 52 (TVA, 1937; Buncombe County, North Carolina)
Located at mile 156.5 of French Broad River, on right bank of river, in side of 24-inch poplar between river and dirt road and opposite mouth of Austin Branch, about 2 miles below mouth of Bent Creek. Bolt.
ELEVATION: 2004.17 feet (T-3)

N 53 (TVA, 1937; Buncombe County, North Carolina)
Located at mile 157.1 of French Broad River, on right bank of river, in downstream side of 24-inch oak just below top of bank, 10 feet from water's edge and 25 feet from center line of road at sharp turn away from river. Nail and washer.
ELEVATION: 2004.54 feet (T-3)

N 136 (USC&GS, 1935; Buncombe County, North Carolina)
Located 0.9 miles south of the station at Alexander, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 0.4 miles northwest of milepost No. 151, 9 rails north of the "Station 1 Mile" sign, on the south end of the east headwall of concrete culvert over Jenkin's Branch, 12.3 feet east of the east rail, 4 feet below the rails. A standard tablet stamped "N 136 1935".
ELEVATION: 1816.446 feet or 553.654 meters (C-1)

P 29 (TVA, 1938; Buncombe County, North Carolina)
Located about 3.3 miles north along U. S. Highways 19 and 23 from the city hall at Weaverville, about 1.1 miles south of the junction of State Highway 197 at Flat Creek, about 1.0 miles south of the Flat Creek School, at Stockville, on the west side of the highway, 100 feet north of a store, in front of a church, and in the concrete steps. A chiseled square.
ELEVATION: 2222.922 feet or 677.548 meters (T-2)

P 51 (TVA, 1938; Buncombe County, North Carolina)
Located 2.8 miles southwest of Leicester, 1.5 miles northeast of Newfound, at three-point road intersection, on old store concrete porch, 75 feet north of J. F. Hall's service station. A chiseled square.
ELEVATION: 2210.514 feet or 673.766 meters (T-2)

P 58 (TVA, 1938; Buncombe County, North Carolina)
Located in Leicester, in concrete porch in front of stone block building, 2.5 feet east of "A 127", 16 feet west of center line of highway. A chiseled square in concrete porch.
ELEVATION: 2088.129 feet or 636.463 meters (T-2)

P 126 (USC&GS, 1935; Buncombe County, North Carolina)
Located 0.8 miles southeast of the station at Craggy, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 5-1/2 rails east of milepost No. 145, 34 yards west of the "Station 1 Mile" sign, 6 feet south of the south rail of the east bound track, 4 feet above the ground, 3 feet above the level of the rails, set vertically in the face of a large rock. A standard tablet stamped "P 126 1935".
ELEVATION: 1956.771 feet or 596.425 meters (C-1)

P 136 (USC&GS, 1935; Buncombe County, North Carolina)
Located 4.2 miles northwest of the station by rail, on the Salisbury to Knoxville Division of the Southern Railway, 7 yards southeast of railway pipe culvert, on the south corner of the concrete foundation of semaphore signal tower No. S 156.7, 6.0 feet northeast of the northeast rail, level

with the base of the rails. A standard tablet stamped "P 136 1935".
ELEVATION: 1731.903 feet or 527.885 meters (C-1)

P 137 (USC&GS, 1935; Buncombe County, North Carolina)
Located about 1.0 miles north along U. S. Highways 19 and 23 from the city hall at Weaverville, on the Alexander road, 76 feet west of the west end of the George O'laning (Kennedy ?) general store, and filling station, 58.7 feet west of the center line of a road leading north, 25.6 feet north of the center line of the Alexander road, 16.8 feet north of the north edge of the concrete pavement, and about level with the highway. A standard tablet stamped "P 137 1935" and set in the top of a concrete post projecting 4 inches above ground.

Note: Searched for but not recovered, January, 1942. It was reported that rubbish to a depth of about 2-1/2 feet had been piled over area, covering bench mark.
ELEVATION: 2214.116 feet or 674.864 meters (C-2)

Q 126 (USC&GS, 1935; Buncombe County, North Carolina)
Located at Craggy, on the Salisbury to Knoxville Division of the Southern Railway, 50 yards north of the north end of the station, 35 yards north of the first concrete pier, east of tracks of the concrete highway bridge over river, 14 yards east of the east rail of the main track, 6 yards east of the east rail of the east siding, a concrete post 7 inches above the ground. A standard tablet stamped "Q 126 1935".
ELEVATION: 1944.245 feet or 592.607 meters (C-1)

Q 136 (USC&GS, 1935; Madison County, North Carolina)
Located 5.2 miles south of the station at Marshall, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 0.25 miles south of the station "Volga", 0.1 miles south of milepost No. 158, on top of the east corner of concrete box over spring, 10.4 feet west of the west rail of the main track, level with the base of the rails. A standard tablet stamped "Q 136 1935".
ELEVATION: 1729.166 feet or 527.051 meters (C-1)

Q 137 (USC&GS, 1935; Buncombe County, North Carolina)
Located about 1.0 miles north along U. S. Highway 19 and 23 from the city hall at Weaverville, thence 1.1 miles west along the Alexander road, at the intersection of the Garrison road, 52 feet northwest of the center line of main road, 20.8 feet north of the center line of the Garrison road, 33.7 feet west of the center line of a driveway leading to the C. C. Weaver residence, 12.8 feet west of a 10-inch oak tree, and 3 feet higher than the road. A standard tablet stamped "Q 137 1935" and set in the top of a concrete post projecting about 4 inches above ground.
ELEVATION: 2166.236 feet or 660.270 meters (C-2)

R 126 (USC&GS, 1935; Buncombe County, North Carolina)
Located at Asheville City Limits at Murphy Junction, on Emma Road, on the northeast edge of Emma Road set vertically in the northeast headwall of the northwest abutment of the Emma Road underpass under the Southern Railway, 40 feet north of Mill Creek, 300 feet north of Murphy Junction Station, 51.8 feet N 48° W from center line of Emma Road and Southern Railway, 18.4 feet N 31° E from southwest corner of Emma Road bridge over Mill Creek. A standard tablet stamped "R 126 1935" and set vertically in headwall of Southern Railway underpass.
ELEVATION: 1976.282 feet or 602.372 meters (C & T-2)

R 129 (USC&GS, 1935; Buncombe County, North Carolina)
Located about 4.0 miles east along the Reems Creek road from the city hall at Weaverville, about 20 yards west of the junction of the Bulls Gap road, 10 yards south of the center line of the road, 17 yards east of a 16-inch locust tree, and at the northwest corner of an old frame dwelling. A standard tablet stamped "R 129 1935" and set in the top of a concrete post.
Report on Condition (TVA, January, 1942): Recovered as described. Tablet was found badly beaten and the top of the concrete post was chipped. However, tablet was still firmly in place and apparently O.K.
ELEVATION: 2234.825 feet or 681.176 meters (T-2)

R 137 (USC&GS, 1935; Buncombe County, North Carolina)
Located about 1 mile north along U. S. Highways 19 and 23 from the city hall at Weaverville, thence 2.1 miles west along the Alexander road, about 2.2 miles east of the post office at Alexander, at the Y-junction of a road leading to Ramblehurst, 22 yards east of the Ramblehurst Tourist Home sign, 28.4 feet south of the center line of the main road, and about level with the road. A standard tablet stamped "R 137 1935" and set in the top of a concrete post.
ELEVATION: 2178.880 feet or 664.124 meters (C-2)

RCK 13 (TVA, 1939; Buncombe County, North Carolina)
Located 6.1 miles south of U. S. Post Office in West Asheville, 8.3 miles north of Mills River on State Highway 191, 2.2 miles southeast of Venable School building, on northwest wingwall of concrete bridge over Bent Creek, 300 feet south of intersection of Bent Gap Road with Highway 191, 200 feet west of confluence of Bent Creek, into French Broad River, 18 inches west of north end of west guard wall, 2 feet southwest of black and white road signal. A standard tablet stamped "RCK 13 1941" and set horizontally in bridge.
ELEVATION: 2010.698 feet or 612.862 meters (T-2)

RV 30 (Southern Railway, ? ; Buncombe County, North Carolina)
Located at Candler, on the Southern Railway, about 100 yards east of a county road grade crossing, about 200 feet east of the station shed, 25 feet northeast of the northeast corner of a square brick residence, in the top of the northwest corner of an old mail crane base, and 5.6 feet south of the south rail. A standard monel-metal rivet.
ELEVATION: 2106.610 feet or 642.096 meters (C-2)

RV 31 (Southern Railway, ? ; Buncombe County, North Carolina)
Located at Enka, on the Southern Railway, about 500 yards east of the station shed, about 200 yards southwest of milepost No. 6, about 100 feet southeast of the main track, on the siding leading to the Enka Manufacturing Co. plant, about 4.6 feet southeast of the southeast rail of the siding, at the bridge over Hominy Creek, and in the top of the northeast end of the back wall of the northeast abutment. A standard monel-metal rivet.
ELEVATION: 2059.376 feet or 627.699 meters (C-2)

32 (Southern Railway, ? ; Buncombe County, North Carolina)

Located about 0.6 miles northeast along the Southern Railway from Spur Springs, about 0.5 miles northeast of milepost 3, at bridge T 3.5 over U. S. Highway 23, in the top of the northwest end of the northeast abutment, and 5.6 feet northwest of the northwest rail. A standard monel-metal rivet.

ELEVATION: 2081.971 feet or 634.586 meters (C-2)

33 (Southern Railway, ? ; Buncombe County, North Carolina)

Located about 1.1 miles northwest along the Southern Railway from the station at Asheville, about 130 yards northwest of the city boundary line, the southeast end of the bridge No. 142.0 over French Broad River, and the southeast end of the northeast coping. A standard monel-metal rivet.

ELEVATION: 1990.281 feet or 606.639 meters (C-1)

34 (Southern Railway, ? ; Buncombe County, North Carolina)

Located at Asheville, at the Southern Railway passenger station, at south end of the concrete platform between the second and third tracks west of the station, at the south end of the umbrella shed, and in the southwest corner of the platform. A standard monel-metal rivet.

ELEVATION: 1985.528 feet or 605.190 meters (C-1)

35 (Southern Railway, ? ; Buncombe County, North Carolina)

Located at Asheville, in the Southern Railway yards, about 0.8 miles west of the station, about 0.3 miles north of milepost No. 140, across the track from the roundhouse, in the top of the south end of the east headwall at a 24-inch cast iron pipe culvert, and 5.6 feet east of the east rail. A standard monel-metal rivet.

ELEVATION: 1996.804 feet or 608.627 meters (C-1)

36 (Southern Railway, ? ; Buncombe County, North Carolina)

Located at Biltmore, at the east end of the Southern Railway yards, about 100 feet east of an interlocking tower, at bridge S 139.1 over Swannanoa River, in the top of the north end of the west abutment, and 4.5 feet north of the north rail. A standard monel-metal rivet.

ELEVATION: 1993.851 feet or 607.727 meters (C-1)

37 (Southern Railway, ? ; Buncombe County, North Carolina)

Located about 2.3 miles southeast along the Southern Railway from Biltmore, about 0.4 miles south of milepost No. 2, at bridge W 2.5 over U. S. Highway 69, and in the top of the west end of the south abutment. A standard monel-metal rivet.

ELEVATION: 2140.029 feet or 652.282 meters (C-2)

38 (Southern Railway, ? ; Buncombe County, North Carolina)

Located about 3.9 miles south along the Southern Railway from Biltmore, about 0.5 miles south of Buena Vista, at Buena Vista block office, about 18 feet south of milepost No. 4, about 16 feet north of a frog in the south turn-off of a westbound passing siding, and about 13.5 feet west of the west rail of the main track, in the top of an unused concrete switch base. A standard monel-metal rivet.

ELEVATION: 2247.797 feet or 685.130 meters (C-2)

39 (Southern Railway, ? ; Buncombe County, North Carolina)

Located about 2.1 miles north along the Southern Railway from Skyland, about 300 feet south of milepost No. 5, in the northeast quadrant of a farm road crossing, 7.6 feet east of the east rail, at an 18-inch terra cotta pipe culvert under the road, and in the top of the west end of the north headwall. A standard monel-metal rivet.

ELEVATION: 2305.697 feet or 702.778 meters (C-2)

650 (Southern Railway, ? ; Buncombe County, North Carolina)

Located 1.7 miles east of the station at Biltmore, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 24 rails west of milepost No. 137, 8 rails west of road bridge over railway, in the southeast corner formed by the crossing of the railway and private dirt road, 5.2 feet west of the south rail, on the north end of east headwall of road culvert, level with top of rails. A monel-metal rivet.

ELEVATION: 2110.330 feet or 643.230 meters (C-1)

651 (Southern Railway, ? ; Buncombe County, North Carolina)

Located 2.6 miles northwest of the station at Asheville, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 0.4 miles south of milepost No. 144, 10 yards east of power line pole No. 17, in the center of the southwest headwall of railway concrete culvert, 5 feet south of the southwest rail, 3 inches below the base of the rails. A monel-metal rivet.

ELEVATION: 1968.723 feet or 600.068 meters (C-1)

652 (Southern Railway, ? ; Buncombe County, North Carolina)

Located 3.1 miles south of the station at Alexander, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 0.3 miles northwest of milepost No. 149, on the west end of the south abutment of railway bridge 149.3 over Newfound Creek, 5.0 feet west of the west rail, in the top of concrete back wall 2 inches below the base of the rails. A monel-metal rivet.

ELEVATION: 1880.160 feet or 573.074 meters (C-1)

653 (Southern Railway, ? ; Buncombe County, North Carolina)

Located 2.3 miles northwest of the station at Alexander, by rail, on the Salisbury to Knoxville Division of the Southern Railway, 0.2 miles west of the railway bridge over Whittier Branch, 0.2 miles southeast of milepost No. 155, 0.2 miles southeast of railway water tank, in the center of the south headwall of large concrete culvert, 12 feet south of the south rail, 3 feet below the rails. A monel-metal rivet.

ELEVATION: 1751.263 feet or 533.786 meters (C-1)

654 (Southern Railway, ? ; Madison County, North Carolina)

Located about 5.0 miles south along the Southern Railway from the station at Marshall, about 70 yards south of the station sign at Volga, at the southwest corner of the concrete base, 4 feet west of the east rail of the siding, and about level with the base of the rail. A standard monel-metal rivet.

ELEVATION: 1720.708 feet or 524.473 meters (C-1)

S 126 (USC&GS, 1935; Buncombe County, North Carolina)

Located at Emma, 0.9 miles west of Asheville, on the property of the Beaman Lumber Company, 19 feet south of Emma Road, 30 feet north of Southern Railway, 225 feet west of Beaman Lumber Company office, 51.6 feet southeast of J. E. Spears Grocery, 76.3 feet east of old building. A standard tablet stamped "S 126 1935" and set in the top of a concrete post.

ELEVATION: 2074.727 feet or 632.378 meters (C & T-2)

S 137 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 1.2 miles east along the Weaverville road from the post office at Alexander, 0.6 miles east of the junction of U. S. Highway 25 and 70, on the outside of the third curve east of the highway, about 175 yards northeast of the C. C. Fisher mailbox, 21 yards west of a culvert under a fill, 26.1 feet northwest of the center line of the road, 15.7 feet northwest of the northwest edge, 2 yards west of a driveway leading into a field, and 8 inches higher than the road. A standard tablet stamped "S 137 1935" and set in the top of a concrete post.

Report on Condition (TVA, January, 1942); The station was found buried under 8 inches of dirt. As there is a bank directly above the station which is subject to continual caving, it is probable that the station will always be covered with some dirt.

ELEVATION: 1978.113 feet or 602.930 meters (C-2)

SINCLAIR (USGS, 1934; Buncombe County, North Carolina)

Located in the city of Asheville, in the part locally known as West Asheville. Station is the Sinclair filling station at Haywood Road and Fairfax Street on the southwest corner, the filling station building is in the form of a light house tower about 40 feet high and is painted white and green in spiral form. Station is center of tower.

GEODETIC POSITION: Lat. = 35°34'37.609"; Long. = 82°35'30.841" (G-3)

To Station	Geodetic Azimuth	Back Azimuth	Log. Meters	Miles
Pine	15°44'44.5"	195°43'08.2"	4.187816	9.6
Pisgah	41 45 24.9	221 39 40.0	4.352314	14.0
Skyland	323 42 06.4	143 44 59.0	4.101814	7.9

GRID POSITION (N. C.): X = 932,155.9; Y = 684,272.2 (G-3)

SPIVEY (USC&GS, 1933; Buncombe County, North Carolina)

Located on summit of Spivey Mountain, about 5-1/2 miles west of center of Asheville. To reach from West Asheville, follow car line to junction of routes 19, 23, and 191, proceed west 0.9 miles on routes 19 and 23, turn right onto Johnson Boulevard, continue straight ahead to sign "Spivey Mt. Tower", and follow main road to fire tower at summit. Station is in center of roadway circle. Surface mark is a standard bronze tablet set in the top of a square block or post of concrete. Underground mark is a block of concrete 3 feet below the ground containing at the center of its upper surface a standard bronze tablet.

Reference Mark 1 is a standard reference disk in concrete foundation of southwest leg of tower, and 17.420 meters (57.15 feet) from station in geodetic azimuth 128°30'.

Reference Mark 2 is a standard bronze tablet with the arrow pointing toward the station set at the center of the top of a square block or post of concrete, and 28.984 meters (95.09 feet) from station in geodetic azimuth 220°15'.

GEODETIC POSITION: Lat. = 35°36'03.250"; Long. = 82°39'06.709" (C-2)

To Station	Geodetic Azimuth	Back Azimuth	Log. Meters	Miles
Britten	224°31'22.4"	44°36'27.4"	4.273076	11.7
Bearwallow	300 06 55.2	120 17 11.6	4.490199	19.2
Pisgah	26 09 04.3	206 05 24.6	4.335517	13.5

Azimuth from station to chimney of Enka Rayon Plant is 0°54'00"

GRID POSITION (N. C.): X = 914,655.73; Y = 693,575.08 (C-2)

ELEVATION: 3317 feet (T-5)

T 137 (USC&GS, 1935; Buncombe County, North Carolina)

Located at Alexander, on the Salisbury to Knoxville Division of the Southern Railway, 47 yards west of the west corner of the station, 45 yards southeast of the crossing of the railway and concrete highway, on the northwest corner of the southwest headwall of concrete culvert, 18.0 feet southwest of the southwest rail of the main track, 8.5 feet southwest of the southwest rail of siding, level with the top of rails. A standard tablet stamped "T 137 1935".

ELEVATION: 1791.640 feet or 546.093 meters (C-1)

U 126 (USC&GS, 1935; Buncombe County, North Carolina)

Located 3.0 miles west of Asheville, on property of W. W. Miller, 7 feet northeast of Dryman Mountain Road, 33.6 feet south of Miller's house, 1 foot southwest of wire fence, 20 feet west of driveway to Miller's house, 47.3 feet southwest of shed, 27 feet southeast of concrete steps leading to Miller's house. A standard tablet stamped "U 126 1935" and set in the top of a concrete post.

ELEVATION: 2287.381 feet or 697.195 meters (C & T-2)

U 137 (USC&GS, 1935; Buncombe County, North Carolina)

Located at Asheville, 0.3 miles south of intersection of Hilliard and Lexington Avenues (U. S. Highway 25), 36.5 feet southeast of center of Depot Street and U. S. Highway 25, 18.3 feet southeast of curb, 4 feet above street surface, 1 foot from southwest corner of building, on the southwest corner of vacated dry cleaners building. A standard tablet stamped "U 137 1935" and set vertically.

ELEVATION: 2059.825 feet or 627.836 meters (C-2)

USFS (U. S. Forest Service, ? ; Buncombe County, North Carolina)

Located approximately 8-1/2 miles via Carrier Bridge River Road and State Highway 191 from Asheville Railroad Station, at U. S. Forest Service Bent Creek Experiment Station, in center of a circular driveway inside the station grounds, 300 feet west of Highway 191. A standard tablet set in top of concrete post.

Reference Mark 1: 68.8 feet Southeast to flagpole.

Reference Mark 2: 90.0 feet Northwest to southwest corner of weather data house.

Reference Mark 3: 95.0 feet West to northeast corner of garage.

ELEVATION: 2119.300 feet or 645.964 meters (1-2)

USGS 1996 (USGS, ? ; Buncombe County, North Carolina)

Located at Biltmore, at the northwest corner of the Southern Rail-

way station plaza, 45 feet west of the west curb of the plaza, 27 feet south of the south curb of Lodge Street at the Biltmore Fire Department, in the north face of the stone foundation wall, 6 feet west of the northeast corner of the main part of the building, and about 1-1/2 feet higher than the ground. A standard tablet stamped "1994.437" and set vertically.
ELEVATION: 1994.268 feet or 607.854 meters (C-1)

USGS 2022 (USGS, 1896; Buncombe County, North Carolina)
Located just north of Sandy Bottom, 150 feet beyond bridge over Bent Creek, west of road, in large rock. Copper bolt stamped "USGS 2022".
ELEVATION: 2011.590 feet or 613.134 meters (T-2)

USGS 2216 (USGS, 1932; Buncombe County, North Carolina)
Located at Asheville, on the northeast side of the new post office building, at the main entrance, and in the northeast face of the coping at the east end of the steps. A standard tablet stamped "2216.291" and set vertically.
ELEVATION: 2215.973 feet or 675.430 meters (C-1)

V 38 (USC&GS, 1932; Buncombe County, North Carolina)
Located about 2.3 miles west along the Southern Railway from Candler, about 300 yards east of the station shed at Luthers, on the Southern Railway, about 100 yards east of milepost No. 11, 5.3 feet south of the south rail, and about 3.5 feet above ground, in the top of a horizontal shelf of rock. A standard tablet stamped "2175.340 V 38 1932".
ELEVATION: 2175.068 feet or 662.962 meters (C-2)

V 126 (USC&GS, 1935; Buncombe County, North Carolina)
Located 4.0 miles northwest of Asheville, on property of Mrs. Hattie Palm, 12 feet northwest of Highway 4, 9 feet south of an old road, 200 feet northeast of Mr. Johnson's house, 35 feet east of a sink hole, 37.8 feet north of two mailboxes, 55.6 feet northwest of a telephole at a fence corner. A standard tablet stamped "V 126 1935" and set in the top of a concrete post.
ELEVATION: 2191.196 feet or 667.878 meters (C & T-2)

V 137 (USC&GS, 1935; Buncombe County, North Carolina)
Located at Asheville, at 44 Merriman Avenue, in the east face of the Mrs. Moore red brick apartment building, 45.2 feet west of the center line of the street, 36 feet north of the center line of Marcellus Street, 22.5 feet south of the Merriman Avenue entrance, 2.9 feet north of the northeast corner, about 6 feet higher than the street, and 2.2 feet above the lawn. A standard tablet stamped "V 137 1935" and set vertically.
ELEVATION: 2133.664 feet or 650.342 meters (C-2)

W 38 (USC&GS, 1932; Buncombe County, North Carolina)
Located at Candler, on the Candler School Road, about 60 yards southwest of the Southern Railway station sign, about 130 feet southeast of the southeast rail, at the highway bridge over Hominy Creek, and in the top of the north end of the west parapet. A standard tablet stamped "2106.042 W 38 1932".
ELEVATION: 2105.763 feet or 641.838 meters (C-2)

W 126 (USC&GS, 1935; Buncombe County, North Carolina)
Located 5.0 miles northwest of Asheville, on Highway 4 right-of-way, 5 feet southwest of Highway 4 at intersection of Highway 4 and Mt. Carmel Road on right bank of branch, 100 feet east of W. A. Graves house, 130 feet west of Eugene Russell's house, 2 feet west of east end of south headwall of large culvert, 27 feet southeast of road leading to Thompson's house, 11.7 feet southeast of a telephone pole. A standard tablet stamped "W 126 1935" and set horizontally in southeast end of culvert.
ELEVATION: 2189.471 feet or 667.352 meters (C & T-2)

W 127 (USC&GS, 1935; Buncombe County, North Carolina)
Located 0.3 miles west of Leicester, 9.4 miles northwest of Asheville, on Temporary Highway 63 and Newfound road, on property of Leicester Methodist Church, set vertically on east side of Leicester Methodist Church, 20 feet south of northeast corner, 34 inches above ground surface, directly below bell tower. A standard tablet stamped "W 127 1935".
Note: Original marker was tablet set in concrete monument by USC&GS in 1935. In 1938 TVA level party found monument broken and reset the tablet as described above, and did not change the stamping. The elevation given below results from a combination of the leveling by USC&GS and that by TVA.
ELEVATION: 2146.587 feet or 654.281 meters (C & T-2)

W 137 (USC&GS, 1935; Buncombe County, North Carolina)
Located at Asheville, in the Beaver Lake section, in the north face of the Jax Pax grocery store on Merriman Avenue, 49.2 feet west of the center line of U. S. Highway 25, 14.8 feet south of the center line of Chatham Road, 9.5 feet west of the northeast corner of the building, and 2.5 feet above the walk. A standard tablet stamped "W 137 1935" and set vertically.
ELEVATION: 2079.323 feet or 633.779 meters (C-2)

WATER TANK (USGS, 1934; Buncombe County, North Carolina)
Located about 4 miles southwest of Asheville, at Asheville School (prep school for boys). To reach from Asheville, drive west on Highway 19 a distance of 5.0 miles, take street left for a distance of 0.4 miles to school. Station is center of 70 foot steel water tank.
GEODETTIC POSITION: Lat. = 35°33'53.580"; Long. = 82°37'22.206" (G-3)

To Station	Geodetic Azimuth		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Spivey	146°38'53.1"	326°37'52.3"	3.679852	3.0
Woolsey	219 16 31.3	39 18 31.5	3.914226	5.1
Asheville	241 20 54.6	61 23 15.7	3.842453	4.3

GRID POSITION (N. C.): X = 922,800.9; Y = 680,158.0 (G-3)

WOOLSEY (USGS, 1934; Buncombe County, North Carolina)
Located about 1-1/2 miles north of post office in Asheville, on low top (wooded on north and cleared on south half) known as Lookout Peak, on property owned by O. R. Ravell. Station is about 50 feet south of highest part of ridge, in fence line. To reach from Pack Square in Asheville, drive north to 700 block of Merriman Avenue (also Highways 19 and 23 toward Knoxville), turn left onto Edgewood Road, proceed 4 blocks to Barnard Avenue, turn right onto gravel road and keep to right at all road forks to end of road, leave car and walk north to top and station. A standard tablet stamped "WOOLSEY 1934" and set in stone, set in place.
Reference Mark 1: 27.3 feet N 10° W to drill hole in rock set in place.

Reference Mark 2: 50.4 feet N 25° E to drill hole in rock set in place.

Reference Mark 3: 11.0 feet S 10° E to drill hole in rock set in place.

GEODETTIC POSITION: Lat. = 35°37'19.694"; Long. = 82°33'55.731" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Spivey	73°16'22.2"	253°13'21.1"	3.912417	5.1
Asheville	343 15 32.6	163 15 53.5	3.498569	2.0

GRID POSITION (N. C.): X = 940,595.3; Y = 700,365.4 (G-3)
ELEVATION: 2381 feet (T-5)

USC&GS, 1932; Buncombe County, North Carolina
Located at Hominy, on the Southern Railway, about 55 yards southeast of the southeast corner of the freight station, about 115 feet south of the south rail of the main track, in a small fenced pasture, about 50 yards west of the east fence line, about 30 yards south of the north fence line, and about 42 feet southeast of a small ditch, in the top of a 2- by 3-foot rock outcrop. A standard tablet stamped "2097.601 X 38 1932".
ELEVATION: 2097.322 feet or 639.265 meters (C-2)

X 125 (USC&GS, 1935; Buncombe County, North Carolina)
Located about 1.0 miles northwest along the Southern Railway from the station at Asheville, about 40 yards northwest of a "Station 1 Mile" sign, at bridge 142.0 over French Broad River, in the top of the coping between the tracks, about 2 yards northwest of the southeast end, and about level with the top of the rail. A standard tablet stamped "X 125 1935".
ELEVATION: 1990.613 feet or 606.740 meters (C-1)

X 126 (USC&GS, 1935; Buncombe County, North Carolina)
Located 6.1 miles northwest of Asheville, on property of Davis Nelson, 13 feet northeast of Newfound Road, 4 feet northeast of wire fence, 35 feet northeast of road leading to E. L. Hanley's house, 32 feet north of intersection of drain and road, 59.7 feet north of Hanley's mailbox. A standard tablet stamped "X 126 1935" and set in concrete post.
ELEVATION: 2171.597 feet or 661.904 meters (C & T-2)

X 127 (USC&GS, 1935; Buncombe County, North Carolina)
Located 1.3 miles south of Leicester, on Newfound Road right-of-way, 13 feet northeast of Newfound Road, 12 feet southeast of a T-road northeast from Newfound Road, 3 feet southwest of wire fence, 6 feet south of fence corner, 79 feet southeast of steel bridge over Newfound Creek, 4.4 feet northwest of telephone pole. A standard tablet stamped "X 127 1935" and set in the top of a concrete post.
ELEVATION: 2012.683 feet or 613.467 meters (T-2)

X 137 (USC&GS, 1935; Buncombe County, North Carolina)
Located at Asheville, on U. S. Highways 19, 23 25 and 70, in the Beaver Lake section, about 0.25 miles southeast of Beaver Lake Golf Clubhouse, 0.15 miles northwest of a Sinclair service station, 110 yards northeast of the G. L. Bunnett residence, 46 yards north and across the highway from a highway route marker and junction sign, 31 feet northeast of the center line of the highway, 27.2 feet north of the north end of a culvert and about 1 foot lower than the highway. A standard tablet stamped "X 137 1935" and set in the top of a concrete post.
Note: Searched for but not recovered, May, 1941. Recent fill at the approximate location indicates that monument, if in place, is covered to a depth of about 1 foot.
ELEVATION: 2153.142 feet or 656.279 meters (C-2)

Y 38 (USC&GS, 1932; Buncombe County, North Carolina)
Located at Enka, on the Southern Railway, about 0.3 miles northeast of the station shed, about 0.1 miles southwest of milepost 6, on the spur track to the Enka Manufacturing Company plant, at the bridge over Hominy Creek and in the top of the northwest end of the northeast abutment. A standard tablet stamped "2059.658 Y 38 1932".
ELEVATION: 2059.363 feet or 627.695 meters (C-2)

Y 125 (USC&GS, 1935; Buncombe County, North Carolina)
Located about 2.4 miles northwest along the Asheville to Morristown branch of the Southern Railway from the station at Asheville, about 0.4 miles northwest of milepost 143, about 9 yards southwest of the southwest end of a concrete highway bridge over French Broad River, at a gravel-road crossing, about 4 yards southeast of the center line of the road, and about 4 yards northeast of the northeast rail of the west-bound main track. A standard tablet stamped "Y 125 1935" and set in the top of a concrete post projecting about 6 inches above the ground.
ELEVATION: 1970.583 feet or 600.635 meters (C-1)

Y 126 (USC&GS, 1935; Buncombe County, North Carolina)
Located 7.2 miles northwest of Asheville, on Newfound Road, on property of Dr. C. W. Weaver, 10 feet southwest of road, 37 feet northeast of Gouche's Branch, 60 feet southwest of L. R. Jackson's house, 125 feet south of State Highway Commission house, 42 feet east of spring, 28.8 feet S 69° E from 14-inch aspen tree, 45.9 feet S 22° W from 30-inch aspen tree. A standard tablet stamped "Y 126 1935" and set in concrete post.
ELEVATION: 2004.130 feet or 610.860 meters (C & T-2)

Y 127 (USC&GS, 1935; Buncombe County, North Carolina)
Located 2.3 miles southwest of Leicester, on property of G. F. Brown, 13 feet southwest of Newfound Road, 100 feet southeast of intersection of Newfound Road and Rabbitham Road, 8 feet southwest of wire fence, at northeast edge of strip of woods, 33.3 feet southwest of painted telephone pole, 16.6 feet northwest of 10-inch oak tree. A standard tablet stamped "Y 127 1935" and set in the top of a concrete post.
ELEVATION: 2188.555 feet or 667.073 meters (T-2)

Y 137 (USC&GS, 1935; Buncombe County, North Carolina)
Located at Asheville, near the northwest end of Beaver Lake, at the junction of U. S. Highways 19, 23, 25 and 70 and a road leading to the Beaver Lake bathing beach, 22 yards southwest of the junction, 78 yards northeast of a concrete bridge over a spillway, 26 yards north of and across the side road from a path leading to the flood-gate controls, 21.3 feet northwest of the center line of the side road, and 14.6 feet northeast of an 8-inch maple tree. A standard tablet stamped "Y 137 1935" and set in the top of a concrete post.

Report on Condition (TVA, May, 1941): Monument has been broken off level with the ground. The portion containing the cap was found in position on top of the base and matching it correctly. The top of the portion remaining in the ground is 0.7 feet lower than the original position of the cap.
ELEVATION: 2104.162 feet or 641.350 meters (C-2)

138 (USC&GS, 1932; Buncombe County, North Carolina)

Located about 2.1 miles northeast along the Southern Railway from Enka, about 0.6 miles northeast of Sulphur Springs, on the Southern Railway, about 0.5 miles northeast of Milepost No. 3, at bridge T-3.5 over State Highway 10, and in the top of the northeast end of the southwest abutment. A standard tablet stamped "2083.099 Z 38 1932".

ELEVATION: 2082.798 feet or 634.838 meters (C-2)

125 (USC&GS, 1935; Buncombe County, North Carolina)

Located about 1.9 miles southeast along the Southern Railway from the station at Craggy, 114 feet southeast of milepost No. 144, about 300 yards southwest of the south end of the National Casket Company plant, 7 feet southwest of the southwest rail of the east-bound main track, and about level with the top of the rail, in the top of a large rock. A standard tablet stamped "Z 125 1935".

ELEVATION: 1967.604 feet or 599.727 meters (C-1)

126 (USC&GS, 1935; Buncombe County, North Carolina)

Located 8.1 miles northwest of Asheville, on temporary State Highway 63 right-of-way, 7 feet northeast of Highway 63, 76.8 feet south of concrete bridge over Newfound Creek, 200 feet southwest of Sycamore Valley house, 7.3 feet west of a 5-inch apple tree, 55 feet southwest of Newfound Creek, about 100 feet west of a group of dairy barns. A standard tablet stamped "Z 126 1935" and set in the top of a concrete post.

ELEVATION: 1989.018 feet or 606.254 meters (C & T-2)

127 (USC&GS, 1935; Buncombe County, North Carolina)

Located 3.5 miles southwest of Leicester, on property of Mrs. John Williamson, 10 feet south of Newfound Road, 4 feet south of wire fence, 8.2 feet southwest of power pole No. 50-117-33, 44.2 feet southeast of chicken house, 175 feet southeast of Floyd's Shock's house, in the north edge of a sedge field. A standard tablet stamped "Z 127 1935" and set in the top of a concrete post.

ELEVATION: 2127.020 feet or 648.317 meters (T-2)

137 (USC&GS, 1935; Buncombe County, North Carolina)

Located 4.1 miles southwest of the city Hall at Weaverville, by highway, and 1.0 miles northwest of Beaver Lake bathing beach, on U. S. Highways 5 and 19, 44.8 feet east of center of highway, 26 yards north of the northeast corner of filling station, 23.6 feet northwest of the northwest corner of home of Toney Ball, 20.7 feet north of front walk of residence, on the lawn, 8 inches south of pasture fence line, level with highway surface and in top of a concrete post. A standard tablet stamped "Z 137 1935".

Report on Condition (TVA, January, 1942): The concrete post was recovered. The tablet has been removed.

ELEVATION: 2065.816 feet or 629.662 meters (C-2)

ZILLICOA (USGS, 1934; Buncombe County, North Carolina)

Located about 9 miles north of Asheville and 1 mile west of Alexander on partly cleared top owned by E. V. Marrell. The station is about 300 feet south of a house which is on the extreme top of hill. To reach from Asheville Post Office, drive north of highway toward Knoxville a distance of 10.8 miles, turn left across French River Bridge in town of Alexander, follow main road after crossing bridge 1.8 miles to red brick school building, turn right onto dirt road leading past school, proceed 0.5 miles to home of E. V. Marrell. Station is in field of scrub pines, 300 feet east of house. A standard tablet stamped "ZILLICOA 1934" and set in rock ledge.

Reference Mark 1: 6.3 feet S 55° W to drill hole in rock ledge.

Reference Mark 2: 45.5 feet N 40° W to drill hole in rock ledge.

Reference Mark 3: 46.8 feet N 30° E to drill hole in rock ledge.

GEODETIC POSITION: Lat. = 35°42'15.937"; Long. = 82°38'03.940" (G-3)

To Station	Geodetic Azimuths		Distance	
	Azimuth	Back Azimuth	Log. Meters	Miles
Spivey	7°49'57.0"	187°49'20.4"	4.064233	7.2
Britten	260 45 39.5	80 50 08.2	4.069080	7.3

GRID POSITION (N. C.): X = 921,214.6; Y = 731,039.4 (G-3)

ELEVATION: 2300 feet (T-5)