

LEVELING  
ATIONAL GEODETIC VERTICAL DATUM OF 1929

35-079-11  
CHAPEL HILL QUADRANGLE  
NORTH CAROLINA  
N3545-W7900/15  
DIAGRAM NI 17-3  
RALEIGH

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Chatham, Durham, and Orange Counties

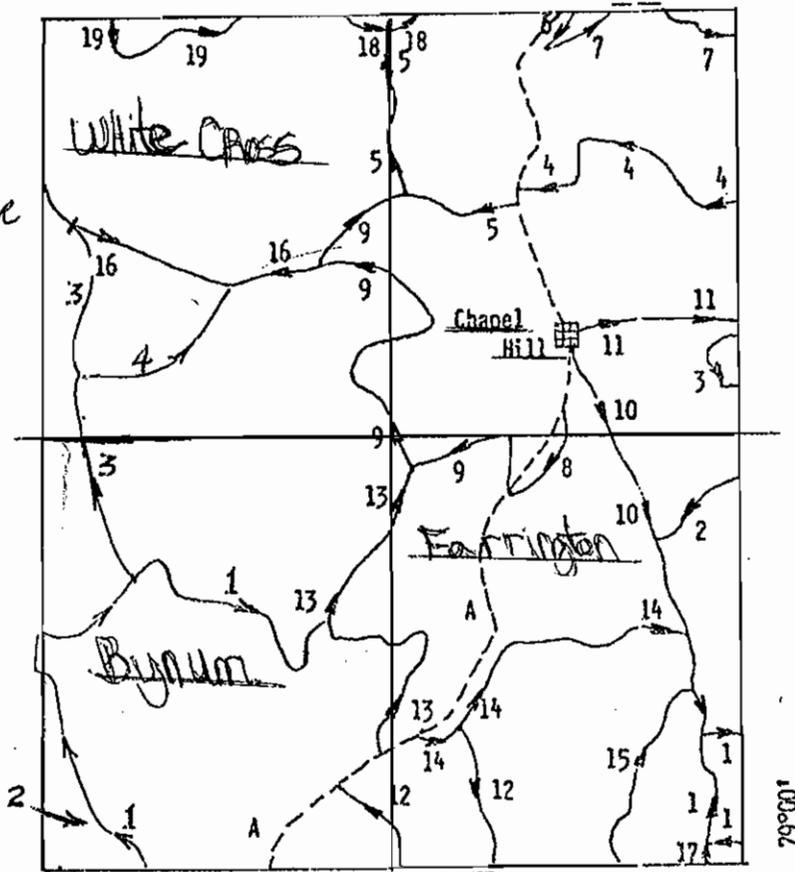
Final adjustment of 1974

Edition of 1/28/75

PR: WSM/rmc

NGVD 29  
Elevations

HILLSBORO  
(212)



DURHAM SOUTH  
(180)

PITTSBORO  
(147)

35°45'

SEE  
30TH ENGINEER  
ATTACHMENT  
FOR LINES  
IN GREEN

SAXAPANAW  
(182)

NGS (USC&GS) VERTICAL CONTROL DATA

A. Quadrangle 350791



## ISOLATED BENCH MARKS (By W. C. Hall, 1897; Book 5008)

Feet

- Chapel Hill; at University of North Carolina; NE. of NW. entrance to Phillips Hall; in face of NW. concrete wall of NE. basement entrance; standard tablet stamped "501" (Tied by NGS, 1935) 500.655
- Chapel Hill, 3.7 mi N. of station, along RR.; 2.5 mi S. of Blackwood; at Hutchins; 0.5 mi S. of mile-post no. 6; 19.5 rails S. of station sign; 18 ft E. of E. rail; 2 ft lower than track; on iron post; standard cap stamped "548.378" (Tied by NGS, 1935) 548.470

LINE 1.

By B. B. Chamblin, 1938; Book B 7852

- Bells, 70 ft S. of SE. corner of church; 100 ft W. of Masonic Hall; 125 ft N. and 225 ft E. of centerline of crossroads; 2 ft W. of 10-in. hickory tree; in granite ledge; standard tablet stamped "17 8C 1938" (Reported destroyed, 1951) 234.838
- Reference mark; 80 ft N. of tablet; 35 ft E. of church; on granite; chiseled square 238.79
- Farrington, 0.7 mi S. of; 0.1 mi S. of North Carolina Geodetic Survey station "N Δ C 520"; 369 ft S. of centerline of rd. at junction of T-rd. E.; 24 ft E. of centerline of rd.; in woods; in concrete post; North Carolina Geodetic Survey standard azimuth mark disk stamped "N + C 520" (Reported not found, 1972) 219.550
- Farrington, 0.5 mi S. of; 810 ft S. of S. end of hwy. bridge over New Hope Creek; 675 ft N. of centerline of rd. at junction of T-rd. E.; at extension of property line of R. I. Dean and W. E. Stone; 375 ft S. of 1½ story frame house of P. I. Dean; 24 ft E. of centerline of rd.; in woods; in concrete post; NCGS standard disk stamped "N Δ C 520" (Reported not found, 1972) 221.864

LINE 2.

By B. B. Chamblin, 1938; Book B 7853

- Farrington, 3.5 mi N. of; 0.1 mi E. and 3.8 mi SW. of Barbee Chapel; about 250 ft N. of junction of Y-rd.; between rds.; 28 ft N. of centerline of E.-W. rd.; in concrete post; NCGS standard disk stamped "N Δ C 615" (Reported not found, 1972) 256.608
- Farrington, 3.4 mi N. of; 670 ft SW. of NCGS station "N C 615"; 490 ft NE. of wooden bridge over Cub Creek; 20 ft NW. of centerline of rd.; in concrete post; NCGS standard disk stamped "N + C 615" (Reported not found, 1972) 237.822

LINE 3.

By B. B. Chamblin, 1938; Book B 7853

There are no permanent marks in this line in this quadrangle.

NGVD 29  
Elevations

1946

LINE 4.feet

By B. B. Chamblin, 1946; Book V 243

Durham, 8.9 mi SW. of, along U. S. Highway 15, thence 0.5 mi N. along dirt rd.; 17 ft N. and 102 ft E. of intersections of rds.; 18 ft SE. of centerline of dirt rd.; 6 ft SW. of 16-in. walnut tree; in concrete post; standard tablet stamped "TT 1 FLS 1946" (Reported destroyed, 1959) 360.775

Reference mark; 6 ft N. of tablet; 18 ft E. of centerline of rd.; in root on W. side of 15-in. walnut tree; copper nail and washer 360.24

Durham, 8.9 mi SW. of, along U. S. Highway 15, thence 2.3 mi NW. along dirt rd.; 123 ft NW. of NW. corner of barn; 94 ft S. of large oak tree on N. side of rd.; 20 ft SW. of centerline of dirt rd.; in concrete post; standard tablet stamped "TT 2 FLS 1946" 511.700

Reference mark; 290 ft W. of tablet; 10 ft S. of tobacco barn; 25 ft N. of centerline of rd.; in root on SE. side of 36-in. oak tree; copper nail and washer 505.75

McDuffie Church; 178 ft N. of NW. corner of church building; 28 ft W. of centerline of rd.; in concrete post; NCGS standard disk stamped "NC 532" 561.480

Reference mark; 100 ft S. of tablet; 26 ft W. of centerline of rd.; in root of twin oak tree; copper nail and washer 558.86

"C 152 1935" (NGS) 533.057

NGVD 29  
ElevationsLINE 5.

By B. B. Chamblin, 1946; Book V 243

"C 152 1935" (NGS) (Also in line 4) 533.057

Chapel Hill, 4.4 mi NW. of, along State Highway 96; 74 ft S. and 12 ft E. of centerline of crossroads; 30 ft SW. of centerline of hwy.; in concrete post; standard tablet stamped "TT 3 FLS 1946" 553.240

Reference mark; 100 ft N. of tablet; 40 ft N. and 10 ft E. of centerline of crossroads; 10 ft N. of well; in concrete post; NCGS standard disk stamped "NC 439" 551.98

Chapel Hill, 4.4 mi NW. of, along State Highway 86, thence 2.2 mi NW. along clay rd.; 25 ft NE. of centerline of rd.; 6 ft N. and 57 ft E. of centerline of rd. at junction of T-rd.; in concrete post; standard tablet stamped "TT 4 FLS 1946" (Reported not found, 1968) 556.790

Reference mark; 300 ft NE. of tablet; 17 ft SE. of centerline of rd.; in root on W. side of 15-in. oak tree; copper nail and washer 562.95

Chapel Hill, 8.5 mi NW. of, along State Highway 86, thence 1.4 mi SE. along dirt rd.; 18 ft N. and 18 ft W. of centerline of rd. at junction of T-rd.; about 2 ft higher than surface of rd.; in cultivated field; in concrete post; standard tablet stamped "TT 5 FLS 1946" (Reported not found, 1960) 557.474

Reference mark; 0.2 mi NE. of tablet; 17 ft NW. of centerline of rd.; in yard of residence; in root on SE. side of 40-in. oak tree; copper nail and washer 559.87

1946

LINE 6.Feet

Blackwood Station, 0.2 mi N. of; in concrete post; NCGS standard disk stamped "NC 856"  
 "Z 151 1935" (NGS) 469.853  
 487.289

LINE 7.

By B. B. Chamblin, 1946; Book V 243

Blackwood, 4.8 mi NE. of, along dirt rd.; at Mt. Sinai Baptist Church; 113 ft NE. of centerline of rd.; 8 ft SE. of cornerstone; in concrete post; standard tablet stamped "TI 8 FLS 1946" (Reported not found, 1964) 463.229

Reference mark; 80 ft SW. of tablet; 34 ft E. of centerline of rd.; in root on W. side of 18-in. oak tree; copper nail and washer 460.76

LINE 8.

By B. B. Chamblin, 1946; Book V 243

"C 92 1935 RESET 1941" (NGS) 314.186

"D 92 1935" (NGS) 537.066

LINE 9.NGVD 29  
Elevations

By B. B. Chamblin, 1946; Book V 243

"D 92 1935" (NGS) (Also in line 8) 537.066

Chapel Hill Post Office, 4.6 mi SW. of, along U. S. Highway 15 to fork of rd. at Chatham-Orange County line, thence 1.6 mi NW. along dirt rd.; 45 ft S. and 40 ft E. of intersection of rds.; 14 ft SE. of small maple tree in SW. corner of cemetery; in concrete post; standard tablet stamped "TI 9 FLS 1946" 471.250

Reference mark; 600 ft SW. of tablet; 100 ft SW. of residence; 11 ft NW. of centerline of rd.; in root on NE. side of 18-in. oak tree; copper nail and washer 502.21

Chapel Hill; on property of C. D. Wilson; in grass triangle formed by rd. and driveway; 28 ft W. of centerline of rd.; 24 ft S. of centerline of N. driveway; 20 ft N. of centerline of S. driveway; Soil Conservation Service standard disk stamped "NCA 6 1937" 542.918

Chapel Hill; on property of R. B. Neville; at side of grass triangle formed by junction of rd. and lane N. to dwelling; 18 ft N. of centerline of rd.; 2.5 ft NE. of mailbox; SCS standard disk stamped "NCA 5 1937" (Reported not found, 1968) 505.878

Reference mark; 520 ft E. of tablet; 20 ft E. of tobacco barn; 35 ft N. and 55 ft W. of centerline of rd. at junction of T-rd. S.; in root on NE. side of 15-in. oak tree; copper nail and washer 510.17

LINE 9 (Cont'd)

feet

Chapel Hill Post Office, 4.3 mi NW. of, along State Highway 54, thence 1.8 mi SE. along dirt rd.; 250 ft W. of T-rd.; 90 ft S. of 14-in. pipe culvert; 84 ft SW. of centerline of rd.; 3 ft SE. of 12-in. poplar tree; in embedded boulder; standard tablet stamped "TT 10 FLS 1946" 455.412

Reference mark; 120 ft NW. of tablet; 24 ft S. of centerline of rd.; in root on E. side of 24-in. hickory tree; copper nail and washer 451.65

Chapel Hill Post Office, 4.3 mi NW. of, along State Highway 54; 71 ft S. and 3 ft E. of centerline of rd. at junction of T-rd. S.; 73 ft SW. of SW. corner of concrete culvert; in cultivated field; in concrete culvert; standard tablet stamped "TT 11 FLS 1946" 35 55 28.17  
79 07 19.05  
495.327 *Not Found - probably destroyed by Hwy Construct SWB 11/02/93*

Reference mark; 80 ft NE. of tablet; 60 ft E. of centerline of crossroads; in center of S. concrete headwall of culvert; chiseled square 494.36

Chapel Hill Post Office, 6.1 mi NW. of, along State Highway 54, thence 1.0 mi NW. along dirt rd.; 600 ft N. of Bethel Church; 40 ft S. and 12 ft W. of centerline of crossroads; 17 ft W. of 36-in. poplar tree; in concrete post; standard tablet stamped "TT 12 FLS 1946" (Reported not found, 1968) 581.276

Reference mark; 14 ft E. of tablet; 35 ft S. of centerline of crossroads; in root on NE. side of 36-in. poplar tree; copper nail and washer 581.54

LINE 10.

NGVD 29  
Elevations

By B. B. Chamblin, 1946; Book V 243

Chapel Hill Post Office, 1.9 mi S. of, along U. S. Highway 15, thence 2.6 mi SE. along dirt rd.; 8 ft S. and 54 ft E. of centerline of rd. at junction of T-rd. E.; 8 ft E. of 10-in. black-gum tree; in concrete post; standard tablet stamped "TT 13 FLS 1946" 292.199

Reference mark; 0.3 mi E. of tablet; at Mt. Carmel Church; in triangle formed by rd. junction at Durham-Orange County line; in root on SW. side of 24-in. oak tree; copper nail and washer 297.65

LINE 11.

By B. B. Chamblin, 1946; Book V 243

Chapel Hill; in front of library at University of North Carolina; on line between centers of library in S. buildings; 2.6 mi N. of small brick ditch encircling the circular intersection of seven gravel walks; in concrete; NGS standard triangulation station disk stamped "UNIVERSITY 1933" 487.453

Reference mark no. 1; 729 ft NE. of station; 68 ft SW. of SW. corner of Grimes Dormitory; in concrete post; NGS standard reference mark disk stamped "UNIVERSITY NO 1 1933" 477.141

LINE 12.

By B. B. Chamblin, 1946; Book V 330

"H 92 1935" (NGS) 481.393

202  
1030

LINE 12 (Cont'd)

Feet

"G 92 1935" (NGS)

369.586

Mt. Gilead Church, 0.7 mi N. of; 23 ft S. and 27 ft W. of centerline of rd. at junction of T-rd. W.;  
in concrete post; standard tablet stamped "1 BC 1946"

473.064

Reference mark; 120 ft W. of tablet; 30 ft N. of centerline of rd.; in root on E. side of 36-in.  
oak tree; copper nail and washer

474.86

"J 92 1935" (NGS) (Reported not found, 1964)

322.535

LINE 13.NGVD 29  
Elevations

By B. B. Chamblin, 1947; Book V 330

Bynum, 1.7 mi NE. of, along U. S. Highway 15, thence 1.2 mi N.; at top of hill; 135 ft N. of centerline  
of rd. at junction of private rd. E.; 40 ft NE. of NE. corner of residence; 35 ft W. of centerline  
of rd.; in concrete post; standard tablet stamped "4 BC 1947"

483.292

Reference mark; 80 ft E. of tablet; 45 ft E. of centerline of rd.; in root on N. side of 24-in. cherry  
tree; copper nail and washer

484.22

Bynum, 1.7 mi NE. of, along U. S. Highway 15, thence 3.2 mi N.; 35 ft S. of dwelling; 21 ft N. of  
centerline of rd.; in concrete post; standard tablet stamped "5 BC 1947" (Reported not found, 1964)

484.006

Reference mark; 50 ft W. of tablet; 20 ft SW. of dwelling; in root on SE. side of 30-in. oak tree;  
copper nail and washer

487.56

Manns Chapel, 2.2 mi SW. of; 0.8 mi NE. of Mt. Pleasant Church; 65 ft E. of centerline of rd. at  
junction of Y-rd.; in concrete post; standard tablet stamped "6 BC 1947" (Reported not found, 1964)

525.891 (522)

Reference mark; 70 ft NW. of tablet; 20 ft N. of centerline of rd.; in root on N. side of 12-in. gum  
tree; copper nail and washer

523.61

Manns Chapel; 840 ft SE. of; 30 ft N. and 55 ft W. of centerline of rd. at junction of I-rd. N.;  
in concrete post; standard tablet stamped "7 BC 1947"

597.245

Reference mark; 840 ft NW. of tablet; 80 ft S. and 30 ft E. of centerline of rd. at junction of  
Y-rd.; 60 ft E. of church; in churchyard; in root on N. side of 18-in. oak tree; copper nail  
and washer

584.39

LINE 14.

By B. B. Chamblin, 1947; Book V 3302

Chapel Hill, 8.4 mi SW. of, along U. S. Highway 15; 268 ft SW. of Farrington awmill and cotton gin;  
150 ft SW. of old county rd. to Farrington two-story frame house; on bank; 29 ft E. of, and 6 ft  
higher than centerline of hwy; NCGS standard disk stamped "NC 513"

476.489

"F 92 1935" (NGS)

476.856

Line 14 (Cont'd)Feet

Chapel Hill, 7.1 mi SW. of, along U. S. Highway 15, thence 0.9 mi E.; 200 ft N. of residence; 19 ft S. and 21 ft E. of centerline of rd. at junction of private rd. crossing; in concrete post; standard tablet stamped "8 BC 1947" 464.906

Reference mark; 45 ft S. of tablet; on W. edge of private rd.; in root on E. side of 30-in. pine tree; copper nail and washer 462.70

Chapel Hill, 7.1 mi SW. of, along U. S. Highway 15, thence 3.2 mi E.; 2.0 mi NW. of Farrington; 0.5 mi E. of bridge over Herndon Creek; 115 ft SE. of residence; 50 ft N. and 70 ft W. of centerline of rd. at junction of Y-rd.; in concrete post; standard tablet stamped "9 BC 1947" 267.246

Reference mark; 230 ft NW. of tablet; 18 ft NE. of centerline of rd.; in root on W. side of 16-in. oak tree; copper nail and washer 269.40

LINE 15.NGVD 29  
Elevations

By B. B. Chamblin, 1947; Book V3302

Farrington, 3.5 mi SW. of; 20 ft S. and 30 ft W. of centerline of rd. at junction of private rd. E. at top of hill; in concrete post; standard tablet stamped "12 BC 1947" 247.731

Reference mark; 450 ft N. of tablet; in front yard of residence; 25 ft E. of centerline of rd.; in root on W. side of 18-in. gum tree; copper nail and washer 238.54

Farrington, 1.4 mi SW. of; at top of hill; 25 ft S. and 45 ft W. of centerline of rd. at junction of private rd. W.; in concrete post; standard tablet stamped "13 BC 1947" 251.936

Reference mark; 150 ft NE. of tablet; 46 ft E. of centerline of rd.; in root on NW. side of 10-in. oak tree; copper nail and washer 236.18

LINE 16.

By D. R. Deane, 1960; Book AV 816

"TT 11 FLS 1946 495" (Described in line 9) 495.327

Reference mark; 80 ft NE. of tablet; in center of S. concrete headwall of culvert; chiseled square 494.36

U.E., 27 ft N. of, and 6 ft lower than centerline of rd.; on NW. headwall of concrete culvert; chiseled square 540.96

U.E., 27 ft S. of, and 5 ft lower than centerline of rd.; on SW. corner of S. headwall of culvert; chiseled square 477.21

Reference mark; 40 ft S. of tablet; on SE. corner of S. headwall of culvert; chiseled square 534.45

Chapel Hill Post Office, 6.3 mi NW. of; along State Highway 54; 515 ft W. of junction of Highway 54 and Bethel Road; 20 ft N. of, and 3 ft lower than centerline of rd.; in E. side of N. headwall of culvert; standard tablet stamped "200 DRD 1960 535" 535.237

N/E RD. WIDENED, CULVERT REPLACED  
CDA 3/83

LINE 16 (Cont'd)

Feet

Chapel Hill Post Office, 8.2 mi NW. of, along State Highway 54; 53 ft E. of SE. corner of White Cross School; in SE. corner of concrete base of well; standard tablet stamped "201 ORD 1960 560"

OK 3/83 CBA

559.811

Reference mark; 115 ft W. of tablet; at front entrance to school; in first step of westernmost steps

562.20

U.E., 16 ft N. of, and 1 ft lower than centerline of rd.; on NW. headwall of culvert; chiseled square

502.04

\* Chapel Hill Post Office, 10.9 mi NW. of, along State Highway 54; 2.7 mi NW. of White Cross School; 550 ft NW. of centerline of rd. at junction of I-rd. S.; 18 ft S. of, and 2 ft lower than centerline of rd.; in SW. headwall of culvert; standard tablet stamped "202 ORD 1960 521"

N/P 3/83 CBA

521.506

*N/P 3/83 CBA HEADWALL REMOVED & REPLACED BY PIPE*

Reference mark; 36 ft N. of tablet; on NW. headwall of culvert; chiseled square

521.90

Chapel Hill Post Office, 12.6 mi NW. of, along State Highway 54; 1.0 mi SE. of Oaks; at S. end of bridge over Cane Creek; in W. wingwall; standard tablet stamped "GAGING STATION"

459.88 3/83

*RESET IN 1974 IN NEW BRIDGE*

ELEV. NOT RELIABLE CBA

Chapel Hill Post Office, 12.6 mi NW. of, along State Highway 54; 1.0 mi SE. of Oaks; 42 ft N. of S. end of bridge over Cane Creek; in W. wheelguard; standard tablet stamped "GAGING STATION" (Reported not found, 1968) *GONE 3/83 CBA*

460.88

LINE 17.

By D. R. Dean, 1960; Book AV 816

There are no permanent marks in this line in this quadrangle.

NGVD 29  
Elevations

LINE 18.

By J. E. Stoner, 1963; Book AV 1304

1 18 9.35 Reference mark No. 2; 69.9 ft SE. of station; 41 ft E. of 8-in. cedar tree; 27 ft W. of centerline of hwy.; 4 ft W. of rd. bank; in concrete flush with ground; NGS standard reference mark disk stamped "BLACKWOOD NO 2 1954"

595.851

1 19 9.36 Reference mark No. 1; 43.3 ft NE. of station; 54 ft W. of centerline of hwy.; 15 ft S. of powerline pole, fuse 40; near E. edge of bank; in boulder projecting 1 ft; NGS standard reference mark disk stamped "BLACKWOOD NO 1 1954"

597.800

1 20 9.38 Hillsboro, 5.9 mi S. of, along State Highway 86; 10.0 mi W. of Durham; on property owned by Mrs. Dodson; 82 ft W. of centerline of State Highway 86; 52 ft SW. of powerline pole, fuse 40; 8 ft W. of white witness post; in concrete flush with ground; NGS standard triangulation station disk stamped "BLACKWOOD 1954"

598.700

1 21 9.52 Azimuth mark; 0.2 mi S. of station; 36 ft W. of centerline of hwy.; 5 ft E. of 4-in. pine sapling tree; 2 ft N. of white witness post; in concrete flush with ground; NGS standard azimuth mark disk stamped "BLACKWOOD 1954"

592.232

1963

LINE 19.

Feet

- 1 49 10.33 Hillsboro, 0.2 mi S. of post office, along State Highway 86-70 to junction of County Road 1009, thence 0.7 mi right along Road 1009 to junction of County Road 1006, thence 6.5 mi right along Road 1006 to junction of County Road 1115, thence 1.8 mi right along graveled rd. (Road 1115) to gas pipeline crossing; 0.1 mi SW. of wooden bridge over C Cane Creek; 40 ft SE. of centerline of Road 1115; 19 ft SW. of pipeline; in concrete post; standard tablet stamped "ZZ 2 30TH ENGRS 1963"
- 1 53 12.30 Hillsboro, 0.2 mi S. of post office, along State Highway 86-70, to junction of County Road 1009, thence 0.7 mi right along Road 1009 to junction of County Road 1006, thence 6.5 mi right along Road 1006 to junction of County Road 1115, thence 0.2 mi left along graveled rd. (Road 1115) to large culverts passing under rd.; 42 ft NNE. of centerline of Road 1115; 41 ft WNW. of telephone pole; 82 ft NW. of culvert; 2 ft SW. of woods line; in concrete post; standard tablet stamped "ZZ 3 30TH ENGRS 1963"

556.780

585.825

NGVD 29  
Elevations