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UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

BULLETIN 553

RESULTS OF SPIRIT LEVELING IN ILLINOIS

1911 TO 1913, INCLUSIVE

R. B. MARSHALL, CHIEF GEOGRAPHER

WORK DONE IN COOPERATION WITH THE
STATE GEOLOGICAL SURVEY OF ILLINOIS
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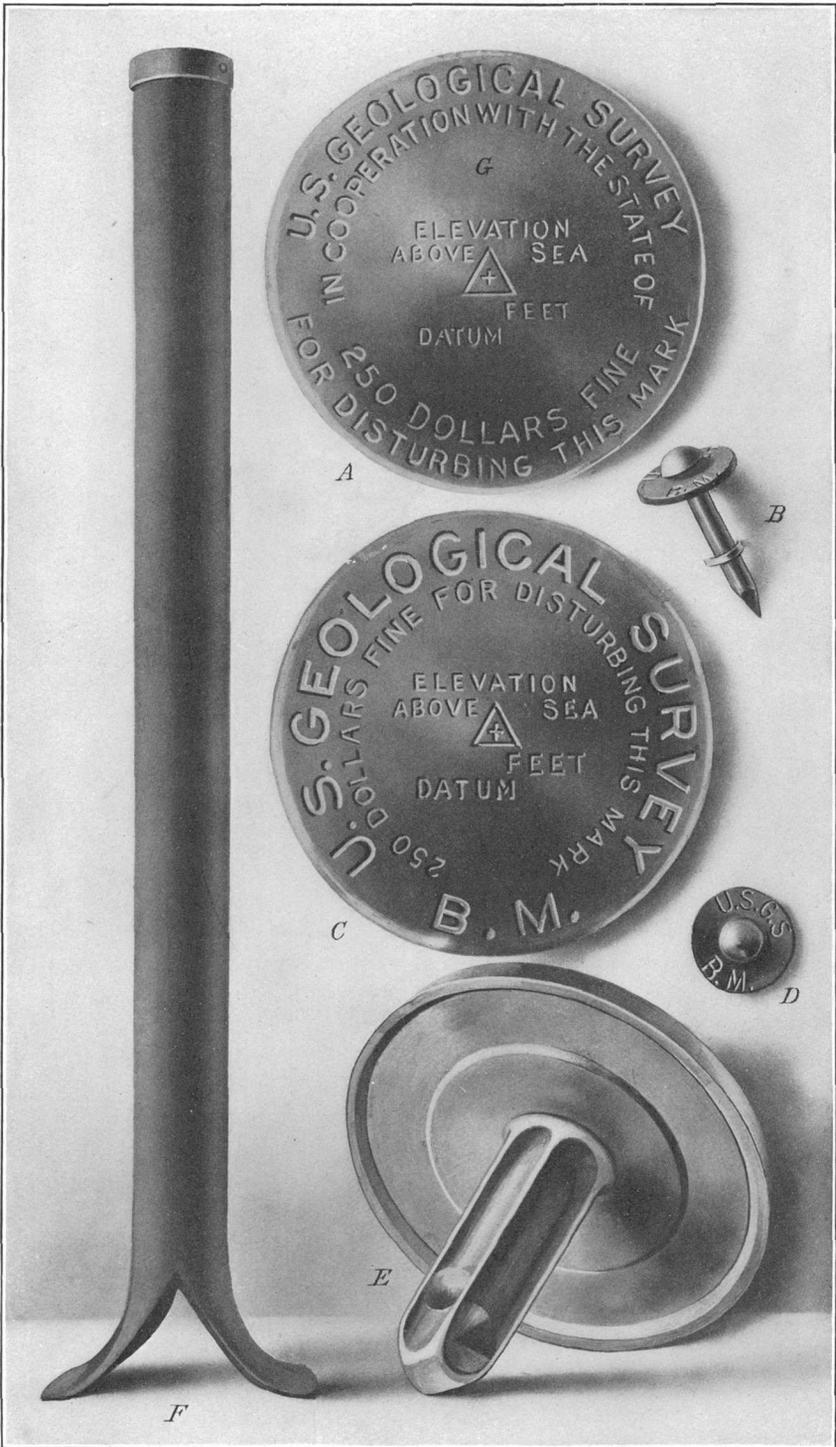
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GEOLOGICAL SURVEY BENCH MARKS.

A, Tablet used in cooperating States. The State name is inserted at G.
 B and D, Copper temporary bench mark, consisting of a nail and copper washer.
 A, C, and E, Tablets for stone or concrete structures.
 F, Iron post used where there is no rock.

RESULTS OF SPIRIT LEVELING IN ILLINOIS, 1911 TO 1913, INCLUSIVE.

R. B. MARSHALL, Chief Geographer.

INTRODUCTION.

Cooperation.—Equal allotments of funds for this work were made by the United States Geological Survey and the State Geological Survey of Illinois.

Previous publication.—The following results of spirit leveling are supplemental to and accord with the elevations contained in Bulletins 421 and 493, and are in agreement with the 1907 adjustment of precise leveling by the Coast and Geodetic Survey, except as modified in the eastern and southeastern parts of the State by an adjustment made in 1912 by the Coast and Geodetic Survey of the precise level lines from Lawrenceburg, Ind., to Olney, Ill., run by the Coast and Geodetic Survey; from Terre Haute, Ind., along the Wabash River to Shawneetown, Ill., run by the United States Corps of Engineers; from Oakland, Ill., to Mitchell, Ind., and from Duquoin, Ill., to Shawneetown, Ill., by the United States Geological Survey. These lines have been fitted to the precise level net, the elevations at Lawrenceburg, Ind., Cairo, Olney, Odin, Duquoin, and Oakland, Ill., being held at the values given by the 1907 adjustment. The elevations of bench marks in other parts of Illinois also remain as determined by the 1907 adjustment, except those in the extreme northwestern part of the State. The elevations of bench marks at East Dubuque are lowered 0.111 foot; a correction of -0.111 foot should therefore be distributed along the lines near the Mississippi River between East Dubuque and Savanna, the elevations at the latter place not being changed.

Corrections to Bulletins 421 and 493 should be noted as follows:

Bulletin 421;

Page 9: Bloomington, at Chicago & Alton R. R. junction (Kansas City division); top of rail. Elevation should be 775.9.

Page 10: Mahomet, 2 miles west of. Should be "east of."

Page 46: Belleville, northeast corner of courthouse yard; iron post stamped "Prim. Trav. Sta. No. 15, Adj 531." The elevation of this should now be 529.411.

Pages 16, 17, 18, 19, and 56 to 63, inclusive, are republished in this bulletin with elevations as corrected by the 1912 adjustment.

Bulletin 493;

Pages 9, 10, and 11, inclusive: Birds and Vincennes quadrangles are republished in this bulletin with elevations as corrected by the 1912 adjustment.

Pages 11 and 12: Lincoln quadrangle republished with corrected descriptions.

Page 67: T. 16 N., R. 10 E., SE. $\frac{1}{4}$ sec. 34, U. S. Corps of Engineers temporary bench mark 324, elevation should be 467.873.

Page 89: Quincy, b. m. 99/2; copper bolt in tile, 484.44; top of iron post, 488.39.

The following quadrangle names have been changed:

Apple River to Elizabeth.

Dawson to Cornland.

Farmer City to Arrowsmith.

Nashville to Hoyleton.

Oakland to Ashmore.

Russellville to Birds.

Saidora to Chandlerville.

St. Charles to Geneva.

Shirley to McLean.

Sidell to Hume.

Windsor to Stewardson.

Personnel.—The field work of 1911 to 1913 was done under the supervision of W. H. Herron, geographer, under the general direction of R. B. Marshall, chief geographer. Credit is given to the different levelmen in the introduction to each list. The office work of computation, adjustment, and preparation of lists was done mainly by S. S. Gannett, geographer, under the general direction of E. M. Douglas, geographer.

Classification.—The elevations are classified as precise or primary, according to the methods employed in their determination. For precise-level lines instruments and rods of the highest grade are used, each line is run both forward and backward, and every precaution is taken to guard against error. The allowable divergence between the forward and the backward lines in feet is represented by the formula $0.017\sqrt{D}$, in which D is the distance in miles between bench marks. For primary lines standard Y levels are used; lines are run in circuits or are closed on precise lines, with an allowable closing error in feet represented by $0.05\sqrt{D}$, in which D is the length of the circuit in miles, sufficient care being given to the work to maintain this standard. For leveling of both classes careful office adjustments are made, the small outstanding errors being distributed over the lines.

Bench marks.—The standard bench marks are of two forms. The first form is a circular bronze or aluminum tablet (*C* and *E*, Pl. I), $3\frac{1}{2}$ inches in diameter and $\frac{1}{4}$ inch thick, having a 3-inch stem, which is cemented in a drill hole in solid rock in the wall of some public building, a bridge abutment, or other substantial masonry structure. The second form (*F*, Pl. I), used where masonry or rock is not available, consists of a hollow wrought-iron post $3\frac{1}{2}$ inches in outer diam-

eter and 4 feet in length, which is set about 3 feet in the ground. The bottom is spread out to a width of 10 inches in order to give a firm bearing on the earth. A bronze or aluminum-bronze cap is riveted over the top of the post. A third style of bench mark, with abbreviated lettering (*B* and *D*, Pl. I), is used for unimportant points. This consists of a special copper nail $1\frac{1}{2}$ inches in length driven through a copper washer $\frac{3}{8}$ inch in diameter. The tablets as well as the caps on the iron posts are appropriately lettered, and cooperation by States is indicated by the addition of the State name (*G*, Pl. I).

The numbers stamped on the bench marks described in the following pages represent the elevations to the nearest foot as determined by the levelman. These numbers are stamped with $\frac{1}{8}$ -inch steel dies on the tablets or post caps, to the left of the word "Feet." The office adjustment of the notes and the reduction to mean sea level datum may so change some of the figures that the original markings are 1 or 2 feet in error. It is assumed that engineers and others who have occasion to use the bench-mark elevations will apply to the Director of the United States Geological Survey, at Washington, D. C., for the adjusted values, and will use the markings as identification numbers only.

Datum.—All United States Geological Survey elevations are referred to mean sea level, which is the level that the sea would assume if the influence of winds and tides were eliminated. This level is not the elevation determined from the mean of the highest and the lowest tides, nor is it the half sum of the mean of all the high tides and the mean of all the low tides, which is called the half-tide level. *Mean sea level is the average height of the water, all stages of the tide being considered.* It is determined from observations made by means of tidal gages placed at stations where local conditions, such as long, narrow bays, rivers, and like features, will not affect the height of the water. To obtain even approximately correct results these observations must extend over at least one lunar month, and if accuracy is desired they must extend over several years. At ocean stations the half-tide level and the mean sea level usually differ but little. It is assumed that there is no difference between the mean sea level as determined from observations in the Atlantic Ocean, the Gulf of Mexico, or the Pacific Ocean.

The connection with tidal stations for bench marks in certain areas that lie at some distance from the seacoast is still uncertain, and this fact is indicated by the addition of a letter or word to the right of the word "Datum" on tablets or posts. For such areas corrections for published results will be made from time to time as the precise-level lines of the United States Geological Survey or other Government organizations are extended.

Topographic maps.—Maps of the following quadrangles, wholly or partly in Illinois, have been published by the United States Geologi-

cal Survey up to December 15, 1913. They may be obtained, unless otherwise noted, at 10 cents each or \$3 for 50 on application to the Director of the Survey, at Washington, D. C.:

Belleville.	Metamora.
Breese.	Milan (Ill.-Iowa).
Calumet (Ill.-Ind.).	Mineral Point (Wis.-Ill.).
Carlyle.	Morris.
Chicago.	Mount Carmel (Ill.-Ind.). ⁴
Clinton (Iowa-Ill.). ¹	Murphysboro.
Colchester.	New Athens.
Cordova (Iowa-Ill.). ¹	New Harmony (Ind.-Ill.). ⁴
Danville (Ill.-Ind.).	New Haven (Ill.-Ind.-Ky.). ⁵
Davenport (Iowa-Ill.). ²	O'Fallon (Mo.-Ill.).
Désplaines.	Okawville.
Dunlap.	Ottawa.
Eldorado. ³	Patoka (Ind.-Ill.). ⁴
Elizabeth.	Peoria.
Evanston.	Peosta (Iowa-Ill.).
Galatia.	Princeton (Ind.-Ill.). ⁴
Goose Lake (Iowa-Ill.). ¹	Riverside.
Hardinville.	Rock Island (Iowa-Ill.). ²
Hennepin.	St. Louis (Mo.-Ill.) double sheet (10 cents).
Herrin.	* St. Louis special (Mo.-Ill.). ⁵
Highwood.	Savanna (Iowa-Ill.).
Joliet.	Springfield.
Kahoka (Mo.-Iowa-Ill.).	Tallula.
Kimmswick (Mo.-Ill.).	Urbana. ³
Lacon.	Waterloo.
Lancaster (Wis.-Iowa-Ill.).	Waukegan (Ill.-Wis.).
Lasalle.	Weingarten (Mo.-Ill.).
Leclaire (Iowa-Ill.). ¹	West Frankfort.
Lincoln.	Wheaton.
Louisiana (Mo.-Ill.).	Wilmington.
Mahomet.	
Marselles.	

PRECISE LEVELING.

Ashmore, Kansas, Marshall, and Paris quadrangles.

CLARK, COLES, AND EDGAR COUNTIES.

The elevations in the following list are the adjusted results of a line of precise levels run from Farrington to Oakland and based upon the 1912 adjustment. They are the Illinois portion of a line run

* Out of print.

¹ Clinton, Goose Lake, and Leclaire sheets, on scale of 1:62500, have been reduced and form parts of Cordova sheet, on scale of 1:125000.

² Davenport sheet, on scale of 1:62500, has been reduced and forms part of Rock Island sheet, on scale of 1:125000.

³ Shows wooded areas.

⁴ Mount Carmel, New Harmony, and Princeton sheets, on scale of 1:62500, have been reduced and form parts of Patoka sheet, on scale of 1:125000.

⁵ Printed at Louisiana Purchase Exposition.

from Mitchell, Ind., to Oakland, Ill. The divergence between the forward and backward lines for the entire distance from Mitchell was 0.215 foot in 132.8 miles and for the Illinois portion alone 0.013 foot in 31.5 miles. The leveling was done in 1907 by C. H. Semper.

**FROM STATE LINE NEAR FARRINGTON NORTHWEST ALONG VANDALIA
R. R. TO OAKLAND.**

MARSHALL QUADRANGLE.

[Latitude 39° 15'–39° 30'; longitude 87° 30'–87° 45'.]

	Feet.
Farrington, in front of station; top of rail.....	570. 8
Farrington, 1.33 miles west of, 0.24 mile southwest of milepost "T H 10," east of track, in top of railroad culvert; aluminum tablet stamped "580".....	579. 526
Ferrell, in front of station; top of rail.....	604. 8
Marley, in front wall of M. E. Church, near northeast corner; alu- minum tablet stamped "644".....	644. 220
Marley, in front of station; top of rail.....	645. 9
Marley, 2.1 miles northwest of, 750 feet southeast of milepost "T H 15," west of track, in top of railroad culvert; aluminum tablet stamped "673".....	673. 209

PARIS QUADRANGLE.

[Latitude 39° 30'–39° 45'; longitude 87° 30'–87° 45'.]

Marley, 4.31 miles northwest of, 100 feet east of road, in front wall of McCall schoolhouse, near southwest corner of building, 300 feet east of track; aluminum tablet stamped "728".....	728. 120
Paris, in front of station; top of rail.....	735. 7
Paris, at east end of Vandalia R. R. freight station, in wall; alumi- num tablet stamped "739".....	739. 271

KANSAS QUADRANGLE.

[Latitude 39° 30'–39° 45'; longitude 87° 45'–88°.]

May, 150 feet southeast of milepost "T H 26," north of track, in top of railroad culvert; aluminum tablet stamped "691".....	690. 457
May, in front of station; top of rail.....	689. 6
May, 1.29 miles west of, 1,050 feet west of road crossing, in top of south end of railroad culvert; aluminum tablet stamped "681".....	680. 566
Redmon, in front of station; top of rail.....	683. 0
Redmon, in front wall of Redmon Bank; aluminum tablet stamped "691".....	690. 322
Borton, 0.51 mile east of, in top of railroad culvert north of track at road crossing; aluminum tablet stamped "664".....	669. 222
Borton, in front of station at crossing of Cincinnati, Hamilton & Dayton Ry.; top of rail.....	664. 9
Isabel, in front of station; top of rail.....	669. 2
Isabel, 2.02 miles west of, 276 feet west of road crossing, 100 feet north of track, in house of Ed. Gobert; aluminum tablet stamped "645".....	644. 685

ASHMOBE QUADRANGLE.

[Latitude 39° 30'-39° 45'; longitude 88°-88° 15'.]

	Feet.
Oakland, 250 feet west of crossing of Toledo, St. Louis & Western R. R., in front wall of J. T. Simms grain elevator; aluminum tablet stamped "659"-----	658. 718
Oakland, at crossing of the Vandalia and Toledo, St. Louis & Western railroads; top of rail-----	656. 6
Oakland, 820 feet south of junction, 60 feet west of track, 140 feet northwest of milepost "St. L. 147," 25 feet south of highway; iron post stamped "652"-----	653. 022

Duquoin, Eldorado, Equality, Galatia, Herrin, Shawneetown, and West Frankfort quadrangles.

FRANKLIN, GALLATIN, PERRY, AND SALINE COUNTIES.

The following are the adjusted results of a line of precise levels run from Duquoin southeastward along the Illinois Central R. R. to Shawneetown. The leveling was done in 1906 by T. A. Green.

FROM DUQUOIN SOUTHEAST ALONG ILLINOIS CENTRAL R. R. TO SHAWNEETOWN.

DUQUOIN QUADRANGLE.

[Latitude 38°-38° 15'; longitude 89°-89° 15'.]

	Feet.
Duquoin, in corner of stone sill at main door of the Duquoin Bank building, opposite Illinois Central R. R. station; bottom of square cut (C. and G. S. bench mark "R ₃ ")-----	462. 477
Duquoin, 600 feet east of station, in east brick wall of Exchange Bank; aluminum tablet stamped "468 1906"-----	468. 427
Duquoin, in front of station; top of rail-----	463. 7
Duquoin, 3.2 miles east of, 60 feet west of creek, 40 feet north of railroad, just south of fence corner; iron post stamped "396 1906"-----	396. 404

HERRIN QUADRANGLE.

[Latitude 37° 45'-38°; longitude 89°-89° 15'.]

McDonald, in front of station; top of north rail-----	395. 9
McDonald, 1 mile southeast of, 60 feet north of milepost "East St. Louis 77-Eldorado 44"; iron post stamped "402 1906"-----	401. 893
Mulkeytown, in front of station; top of rail-----	424. 4
Mulkeytown, 324 feet south of station, in east side of corner stone at hall of Modern Woodmen of America; aluminum tablet stamped "449 1906"-----	449. 017
Christopher, in front of station; top of rail-----	438. 9
Christopher, in southwest corner of Christopher National Bank; aluminum tablet stamped "443 1906"-----	443. 855
Buckner, in front of station; top of rail-----	408. 5
Christopher, 2.8 miles east of, 348 feet west of small railroad bridge over stream, 150 feet southeast of house occupied by Isaac Denton; iron post stamped "392 1906"-----	392. 955

WEST FRANKFORT QUADRANGLE.

[Latitude 37° 45'–38°; longitude 88° 45'–89°.]

	Feet.
Christopher, 5.7 miles east of, 150 feet southeast of road crossing, at northwest corner of house occupied by W. M. Wolf; iron post stamped "438 1906"-----	439. 145
Benton, 1,507 feet north of station, just south of west entrance to Franklin County courthouse, in stone step; aluminum tablet stamped "474 1906"-----	475. 814
Benton, in front of station; top of rail-----	470. 7
Benton, 0.3 mile east of, at junction of the Chicago & Eastern Illinois and Illinois Central railroads; top of rail-----	471. 1
Benton, 2.3 miles southeast of, 90 feet north of milepost "E. St. Louis 92–Eldorado 29"; iron post stamped "405 1906"-----	406. 586
Smothers, in front of station; top of rail-----	481. 5
Smothers, 260 feet southeast of road crossing, at northwest corner of store kept by M. M. Moore; iron post stamped "479 1906"-----	479. 972
Parrish, 200 feet northeast of road crossing, at southwest corner of store kept by Brown & Moore; iron post stamped "438 1906"-----	439. 476
Parrish, in front of station; top of rail-----	438. 1
Thompsonville, 600 feet south of road crossing, 100 feet east of brick schoolhouse; iron post stamped "Prim. Trav. Sta. No. 4, 494, 1906"-----	495. 374
Thompsonville, in front of station; top of rail-----	499. 9

GALATIA QUADRANGLE.

[Latitude 37° 45'–38°; longitude 88° 30'–88° 45'.]

West End, 75 feet north of station, in south wall of West End rolling mill; aluminum tablet stamped "429 1906"-----	430. 477
West End, 60 feet east of station; top of rail-----	425. 9
Rileyville, in front of station; top of rail-----	398. 9
Rileyville, 0.71 mile southeast of, 20 feet northwest of cattle guard, in corner of fence at point where county road jogs north from railroad; iron post stamped "392 1906"-----	393. 188
Galatia, 0.3 mile west of station, at Galatia rolling mill, in southwest side of foundation of old elevator; aluminum tablet stamped "397 1906" ¹ -----	398. 149
Galatia, in front of station; top of rail-----	401. 5
Galatia, 3.18 miles southeast of, 20 feet south of milepost "E. St. Louis 114–Eldorado 7," inside of fence; iron post-----	394. 363
Raleigh, in front of station; top of rail-----	407. 2
Raleigh, 1.59 miles east of, 70 feet west of milepost "E. St. Louis 117–Eldorado 4," 62 feet south of center of track; iron post stamped "390 1906"-----	391. 057

ELDORADO QUADRANGLE.

[Latitude 37° 45'–38°; longitude 88° 15'–88° 30'.]

Eldorado, 30 feet south of southwest corner of Grand Hotel, at edge of pavement; iron post stamped "388 1906"-----	387. 858
Eldorado, just east of station, at junction of Big Four Route and Louisville & Nashville R. R.; top of rail-----	391. 9

¹ This bench mark is probably destroyed.

	Feet.
Grayson, 30 feet west of station; top of rail-----	407.1
Grayson, 0.49 mile southeast of, 40 feet north of center of track; inside wire fence; iron post stamped "1906"-----	392.600

EQUALITY QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88° 15'-88° 30'.]

Grayson, 3.1 miles southeast of, 40 feet northwest of road crossing, on west side of road; iron post stamped "1906"-----	362.993
Equality, at northwest corner of Louisville & Nashville R. R. station; iron post stamped "1906"-----	362.219
Equality, in front of station; top of north rail-----	362.9
Equality, 2.7 miles southeast of, 100 feet southeast of E. P. Fowler's residence, 40 feet north of track, in fence corner; iron post stamped "1906"-----	376.865
Equality, 5.7 miles southeast of, 60 feet north of milepost "St. Louis 138-Shawneetown 6"; iron post stamped "1906"-----	353.084

SHAWNEETOWN QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88°-88° 15'.]

Cypress Junction (Junction post office), at crossing of Louisville & Nashville and Baltimore & Ohio Southwestern railroads; top of rail-----	355.9
Cypress Junction, 30 feet east of station; top of rail-----	358.0
Cypress Junction, 2.5 miles east of, 330 feet west of road crossing, 50 feet north of milepost "St. Louis 141-Shawneetown 5"; iron post stamped "1906"-----	396.451
Shawneetown, in front of station; top of rail-----	350.1
Shawneetown, at southwest corner of Louisville & Nashville R. R. station; iron post stamped "1906"-----	349.534
Shawneetown, 100 feet east of southeast corner of "Riverside Hotel," in northeast corner of concrete gun rack; aluminum tablet stamped "1906"-----	365.785

PRIMARY LEVELING.

Carbondale, Equality, Marion, Shawneetown, and Stonefort quadrangles.

GALLATIN, SALINE, AND WILLIAMSON COUNTIES.

The elevations in the following list were determined by primary leveling extended from the precise-level line Duquoin to Shawneetown. The leveling was done in 1911 by R. G. Clinite.

CARBONDALE QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 89°-89° 15'.]

Bench mark south of Fordville.

	Feet.
T. 9 S., R. 2 E., sec. 8, southeast corner of L road north, opposite road east, 26 feet southwest of center of road, 9 feet north of telephone pole; iron post stamped "455 Ill"-----	455.654

EQUALITY QUADRANGLE.

[Latitude 37° 30'–37° 45'; longitude 88° 15'–88° 30'.]

From Equality southwest along highway to Rudement.

	Feet.
Equality, at northwest corner of Louisville & Nashville R. R. station; iron post stamped "362 1906"-----	362. 219
Equality, at southeast edge of town, steel highway bridge over Saline River; chiseled square on northeast wing wall, marked "356.4"----	356. 34
Equality, 0.9 mile south of, at northwest corner of road forks, at southeast corner of yard fence; spike in root of oak tree, marked "358.9"-----	358. 87
Equality, about 1 mile due southwest of (air line), at jog in road to south, on west side of north-south road, 60 feet southwest of center of road; spike in root of oak tree, marked "355.0"-----	355. 00
T. 9 S., R. 8 E., 0.25 mile north by 0.25 mile east of center sec. 30, at L road south, in southeast corner; nail in root of small elm tree 100 feet northeast of bridge, marked "345.3"-----	345. 29
T. 9 S., on Saline-Gallatin county line, 0.25 mile east of Horseshoe post office, on south side of road, 180 feet north of small house; iron post stamped "362 III"-----	362. 433
Horseshoe, 0.6 mile west of; spike in root of 24-inch oak tree in center of road, marked "379.6"-----	379. 72
T. 9 S., R. 7 E., near north center sec. 35, at junction of river road and mountain road, in northwest corner of road forks; spike in root of 19-inch white-oak tree, marked "357.9"-----	357. 86
T. 9 S., R. 7 E., southwest corner of sec. 34, at road forks, at Sulphur Springs, 85 feet southeast of spring; chiseled square on limestone rock, marked "366.4"-----	366. 40
Tps. 9 and 10 S., R. 7 E., between secs. 3 and 34, in southeast corner of road forks, 27 feet southeast of road center, 1 foot outside of rail fence; iron post stamped "Prim. Trav. Sta. No. 21, Illinois, 1911 388"-----	388. 563
T. 9 S., R. 7 E., 0.25 mile west of southeast corner of sec. 32, in northwest corner of L road south; spike in root of oak tree, marked "357.8"-----	357. 74
T. 10 S., R. 7 E., near quarter corner west side of sec. 5, at road forks; chiseled circle, on northeast concrete wing of small bridge over tributary to Saline River, marked "351.2"-----	351. 22
T. 10 S., R. 7 E., 0.25 mile west of quarter corner between secs. 5 and 8, at private road west, on stone 5 feet west of center of road; chiseled square marked "398.8"-----	398. 83
T. 10 S., R. 7 E., 0.25 mile west of center of sec. 8, on south side of east-west road at foot of center of T road north, 7 feet east of fence corner; iron post stamped "374 III"-----	374. 510
T. 10 S., R. 7 E., in southeast corner of sec. 7, in northwest corner of jog in road, at L road west; nail in root of 20-inch elm tree, marked "370.0"-----	369. 96
T. 10 S., R. 6 E., 0.25 mile east of quarter corner south side of sec. 12, at T road south, 1.5 feet east of quarter section corner stone; nail in root of 20-inch gum tree, marked "357.0"-----	356. 98
T. 10 S., R. 6 E., 0.25 mile east of center of sec. 13, on west side of road, 1 mile north of Rudement; nail in root of oak tree, marked "362.4"-----	362. 43

	Feet.
T. 10 S., R. 6 E., 0.25 mile east of center of sec. 24, in northeast corner of crossroads at Rudement, in southwest corner of school yard; iron post stamped "Prim. Trav. Sta. No. 8, Ill, 1911, 399"-----	399. 408

MARION QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88° 45'-89°.]

From Absher west along highway to New Dennison, thence north to point near Pittsburg.

T. 9 S., R. 4 E., 0.25 mile south by 0.25 mile west of center of sec. 34, at L road west about 0.75 mile due west of Absher, on south side of road west, opposite road north, 1 foot north of fence; iron post stamped "449 Ill"-----	449. 336
T. 9 S., R. 4 E., 0.25 mile south of center of sec. 33, at crossroads, in southwest corner of crossroads; nail in root of 24-inch white-oak tree marked "450.0"-----	450. 11
T. 9 S., R. 4 E., 0.25 mile south of quarter corner between secs. 32 and 33; chiseled hole on top of one-sixteenth-section corner stone marked "465.7"-----	465. 75
T. 9 S., R. 4 E., center of southeast quarter of sec. 31, in northeast corner of crossroads, 10 feet east of fence corner and 1.3 feet outside rail fence; iron post stamped "473 Ill"-----	473. 143
T. 9 S., Rs. 3 and 4 E., at quarter corner between secs. 36 and 31; chiseled hole on top of quarter-section corner stone marked "463.9"-----	464. 00
T. 9 S., R. 3 E., near center of sec. 36, at south side of intersection of east-west road with road southeast; chiseled circle on top of stone marked "475.2"-----	475. 26
T. 9 S., R. 3 E., sec. 35, 1 mile east of Dennison, in northwest corner of T road north; spike in base of telephone pole marked "461.8"-----	461. 92
New Dennison, on east side of Illinois Central R. R. right of way, on south side of public road, 108 feet northwest of church, 190 feet southeast of station, at northwest corner of small warehouse belonging to E. L. Welborn; iron post stamped "439 Ill"-----	438. 872
T. 9 S., R. 3 E., northwest corner of sec. 26, in southeast corner of crossroads; spike in base of telephone pole marked "460.2"-----	460. 26
T. 9 S., R. 3 E., northeast corner of sec. 22, 4 miles due east of Marion, in southwest corner of road crossing, 11 feet west of corner fence post, 1.3 feet north of fence; iron post stamped "Prim. Trav. Sta. No. 11, Ill, 1906, 458"-----	458. 386
T. 9 S., R. 3 E., near southwest corner of sec. 14, at bridge over ditch tributary to Crab Orchard Creek; spike in top of post in northeast wing wall marked "438.7"-----	438. 78
T. 9 S., R. 3 E., 0.25 mile south of quarter corner west side of sec. 11, on north side of east-west road, 1 foot southwest of corner fence post of garden; iron post stamped "451 Ill"-----	451. 122

From New Dennison southwest along highway to Pulleys Mill, thence north to point near Fordville.

New Dennison, on east side of Illinois Central R. R. right of way, on south side of public road, at northwest corner of small warehouse belonging to E. L. Welborn, 190 feet southeast of station, 108 feet northwest of church; iron post stamped "439 Ill"-----	438. 872
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	Feet.
T. 10 S., R. 3 E., 0.25 mile east of center of sec. 3, on small wooden bridge over Saline River; copper nail in east end of beam near center of bridge floor, east side, marked "432.6"-----	432. 72
T. 10 S., R. 3 E., 0.25 mile east of center of sec. 10, at T road west, copper b. m. nail in root of oak tree in northwest corner of road forks, marked "454.7"-----	454. 77
Willeford, about 0.6 mile west of, in southwest corner of crossroads, 200 feet west of church, 5.5 feet west of telephone pole; iron post stamped "460 Ill"-----	460. 216
T. 10 S., R. 3 E., at quarter corner between secs. 9 and 16, at T road south; chiseled square on quarter-section corner stone marked "461.9"-----	462. 03
T. 10 S., R. 3 E., quarter corner between secs. 16 and 21, at crossroads; chiseled square on quarter-section stone marked "537.6"-----	537. 67
T. 10 S., R. 3 E., 0.25 mile north of center of sec. 21, at crossroads; chiseled square on quarter-section stone marked "529.2"-----	529. 32
T. 10 S., R. 3 E., center of northeast quarter of sec. 20, on east side of north-south road opposite T road west, 24 feet west of hedge fence; iron post stamped "534 Ill"-----	534. 231
T. 10 S., R. 3 E., about 0.25 mile east of center of sec. 20, in northeast corner of road forks; copper nail in root of small hickory tree, marked "527.3"-----	527. 35
T. 10 S., R. 3 E., sec. 30, in southwest corner of jog in road to west; copper nail in root of elm tree marked "534.1"-----	534. 21
T. 10 S., R. 3 E., 0.25 mile south of northwest corner of sec. 30, on range-line road to Marion, at T road east, on east side of north-south road, 54 feet south of sixteenth-section corner stone, in sandstone rock; aluminum tablet stamped "550 Ill"-----	550. 272
T. 10 S., R. 3 E., 0.25 mile south of northwest corner of sec. 31, at T road east, in northeast corner of road forks; spike in root of oak tree, marked "467.6"-----	467. 64
T. 10 S., R. 2 E., quarter corner east side of sec. 36, on bridge over Saline River; chiseled square on top of northeast wing wall, marked "472.1"-----	472. 14
T. 10 S., R. 2 E., 0.25 mile west of center of sec. 36, on top of large bowlder opposite private road south, at foot of bluff; chiseled square marked "483.8"-----	483. 86
T. 10 S., R. 2 E., 0.25 mile east of center of sec. 35, on north side of road, 4 feet south of stone fence at drain; chiseled square on top of rock, marked "541.1"-----	541. 14
T. 10 S., R. 2 E., at center of sec. 35, at jog in road, at T road north, 2 feet east of rail fence, 26 feet west of center of north-south road; iron post stamped "583 Ill"-----	582. 901
T. 10 S., R. 2 E., 0.25 mile east by 0.25 mile south of center of sec. 34, at road forks, 2 feet northeast of mail boxes; chiseled square on rock near road center, marked "576.0"-----	576. 03
T. 10 S., R. 2 E., near southwest corner of sec. 34, at T road north, 360 feet west of store known as Pulleys Mill; rock in northwest corner of road forks, 3 feet southwest of corner fence post, marked "595.9"-----	595. 94
T. 10 S., R. 2 E., center of southwest quarter of sec. 27, in northwest corner of crossroads; nail in root of oak tree, marked "543.3"-----	543. 36

	Feet.
T. 10 S., R. 2 E., 0.25 mile east of northwest corner of sec. 27, in southwest corner of road forks, 27 feet southeast of small plank culvert; iron post stamped "538 Ill"-----	538. 763
T. 10 S., R. 2 E., 0.25 mile west of center of sec. 22, in southeast corner of crossroads; nail in root of dead butternut tree, marked "505.5"-----	505. 56
T. 10 S., R. 2 E., 0.25 mile east of southwest corner of sec. 15, jog in road to west, on north side of center of road; nail in root of small hickory tree, marked "510.4"-----	510. 45
T. 10 S., R. 2 E., center of south side of sec. 16, 250 feet north of crossroads, 4.7 feet northeast of northeast corner of J. W. Moulton's yard; iron post stamped "Prim. Trav. Sta. No. 12, Ill, 1911, 509"-----	509. 162
T. 10 S., R. 2 E., center of sec. 16, at T road south; chiseled square on quarter-section corner stone, marked "528.3"-----	528. 35
T. 10 S., R. 2 E., about 0.3 mile east of center of sec. 16, in northeast corner of road forks; nail in 32-inch white-oak tree, marked "549.0"-----	549. 09
T. 10 S., R. 2 E., 0.25 mile east of center of sec. 9, on west side of north-south road, opposite T road east; copper nail in root of small oak tree, marked "540.8"-----	540. 88
T. 10 S., R. 2 E., 0.25 mile east of center of sec. 4, in southeast corner of crossroads, about 0.25 mile east of Chamness, in northwest corner of churchyard; iron post stamped "457 Ill"-----	457. 187
Tps. 9 and 10 S., R. 2 E., 0.25 mile east of quarter corner between secs. 33 and 4, at crossroads; chiseled square on top of one-sixteenth corner stone, marked "429.9"-----	429. 92
T. 9 S., R. 2 E., 0.25 mile north by 0.25 mile east of center of sec. 33, iron bridge over Crab Orchard Creek, in northwest wing wall; iron plug 2 inches above concrete wall, marked "413.0"-----	413. 06
T. 9 S., R. 2 E., 0.25 mile west of southeast corner of sec. 28, 25 feet east of southeast corner of intersection with dim east-west roads; chiseled square on top of stone, marked "427.1"-----	427. 18
T. 9 S., R. 2 E., 0.25 mile west of southeast corner of sec. 21, at T road west, in northwest corner of road forks, 11 feet north of corner fence post; iron post stamped "431 Ill"-----	431. 688
T. 9 S., R. 2 E., 0.25 mile west of northeast corner of sec. 21, at T road south; chiseled square on quarter-section stone, marked "419.3"-----	419. 36
T. 9 S., R. 2 E., center of north side of sec. 16, at T road south, in southwest corner of road; copper nail in root of wild cherry tree, marked "448.4"-----	448. 45

SHAWNEETOWN QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88°-88° 15'.]

From Shawneetown southwest along highways to Saline mines, thence northwest to Cypress Junction.

Shawneetown, at southwest corner of Louisville & Nashville R. R. station; iron post stamped "1906"-----	349. 534
Shawneetown, 1.9 miles south of, on east side of road, opposite two-story white house; copper nail in root of 48-inch elm tree, marked "348.8"-----	348. 74

	Feet.
Shawneetown, 2.9 miles south of, on west side of road, 1.3 feet south of fence corner of Green Canady's yard; iron post stamped "360 Ill"-----	360. 521
Shawneetown, 3.9 miles south of, on west side of road, 160 feet south of gatepost; copper nail in root of 30-inch oak tree, marked "362.8"-----	362. 81
Shawneetown, 4.9 miles south of, on west side of road; copper nail in root of 26-inch black-oak tree, marked "360.7"-----	360. 69
Shawneetown, 6.0 miles south of, in southeast corner of road forks, 100 feet south of center of road junction; iron post stamped "Prim. Trav. Sta. No. 18, 357, Ill"-----	357. 299
Saline Mines, 120 feet south of store, 70 feet south of well; chiseled square on top of stone at base of 8-inch forked locust tree, marked "359.2"-----	359. 16
Saline Mines, 1.25 miles northwest of, on north side of road, 80 feet southeast of small white cottage; copper nail in root of 14-inch double locust tree, marked "436.9"-----	436. 84
Saline Mines, 1.8 miles northwest of, on south side of road; nail in root of 26-inch white-oak tree, marked "466.8"-----	466. 79
Saline Mines, 2.85 miles northwest of, in southwest corner of road forks, 64 feet southwest of 42-inch black-oak tree; iron post stamped "388 Ill"-----	388. 088
T. 10 S., R. 9 E., about 0.4 mile east of center of sec. 17, at secondary road north-south, in southeast corner of road crossing; chiseled square on stone, marked "397.1"-----	397. 11
T. 10 S., R. 9 E., about 0.45 mile east of center of sec. 18, in northwest corner of road forks; copper nail in 10-inch hickory tree, marked "345.4"-----	345. 34
T. 10 S., R. 9 E., about 0.1 mile east of center of sec. 7, at L road east, on north side of east-west road, 20 feet east of fence corner; iron post stamped "353 Ill"-----	352. 917
T. 10 S., R. 9 E., southeast corner of sec. 6, at jog in road north, 10 feet west of road corner; nail in 11-inch evergreen tree, marked "400.1"-----	400. 11
T. 10 S., R. 9 E., 0.5 mile west of center of sec. 5, at T road south, on north side of east-west road; nail in 12-inch locust stump, marked "421.6"-----	421. 61
T. 9 S., R. 9 E., about 0.05 mile west of center of sec. 31, at road forks, set on north side of east-west road, 46 feet northeast of center of road forks; iron post stamped "354 Ill"-----	354. 744
T. 9 S., R. 9 E., 0.25 mile south of northeast corner sec. 31, at T road north, near road center; copper nail in root of 32-inch elm tree, marked "360.2"-----	360. 25
T. 9 S., R. 9 E., 0.25 mile north of quarter corner between secs. 29 and 30, 6 feet southwest of quarter-section stone, at jog in road to east; copper nail in root of 36-inch oak tree, marked "373.4"-----	373. 38
Cypress Junction (Junction post office), at point of switch at junction of Louisville & Nashville and Baltimore & Ohio Southwestern railroads; top of rail marked "357.0" (tracks here have been raised 1.2 feet; old elevation was 355.9—see Bulletin 421, p. 19)-----	357. 0
Equality, 5.7 miles southeast of, 60 feet north of milepost "St. Louis 138—Shawneetown 6"; iron post stamped "1906"-----	353. 084

From Saline Mines southwest to Cadiz. (Double spur line.)

	Feet.
Saline Mines, 120 feet south of store, 70 feet south of well, at base of 8-inch forked locust tree; chiseled square on top of stone, marked "359.2"-----	359.16
Saline Mines, 0.4 mile southwest of, south bank of Saline River, 100 feet southwest of ferry landing; copper nail in 14-inch oak tree, marked "347.6"-----	347.59
Saline Mines, 0.9 mile southwest of, on north side of road, 50 feet east of mail box; copper nail in root of 27-inch oak tree, marked "357.2"-----	357.22
Saline Mines, 1.8 miles southwest of, in southwest corner of road forks; copper nail in root of 24-inch black-oak tree, marked "389.7"-----	389.74
Saline Mines, 2.5 miles southwest of, on south side of road, 180 feet east of bridge across ravine; chiseled square on small shale ledge, marked "382.5"-----	382.53
Saline Mines, 3.6 miles southwest of, on top of large flat rock on west side of road; chiseled square marked "402.6"-----	402.56
Cadiz (otherwise known as Johnson's Store), on west side of north-south road, opposite T road east; iron post stamped "573 Ill"-----	572.891

STONEFORT QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88° 30'-88° 45'.]

From Rudement west along highway to sec. 20, T. 10 S., R. 5 E., thence north and west to Absher.

T. 10 S., R. 6 E., at quarter corner on west side of sec. 24 at T road east, in southeast corner of road forks; nail in top of corner fence post marked "395.7"-----	395.70
T. 10 S., R. 6 E., at quarter corner on north side of sec. 23, on south side of center of road; nail in root of elm tree marked "364.9"-----	364.96
Mitchellsville, 0.4 mile south of, in southeast corner of road forks, on south side of east-west road, 65 feet east of north-south road; nail in top of white-oak stump marked "404.5"-----	404.56
T. 10 S., R. 6 E., near center of sec. 22, about 1 mile south of Mitchellsville, on east side of north-south road, 1 foot west of fence; iron post stamped "406 Ill"-----	406.495
T. 10 S., R. 6 E., 0.25 mile east by 0.25 mile south of center of sec. 21, at jog in road to south, in northwest corner of angle in road; copper nail in root of oak tree, marked "377.5"-----	377.54
T. 10 S., R. 6 E., 0.25 mile north of southwest corner of sec. 21, 40 feet southwest of plank bridge; copper nail in root of gum tree marked "367.6"-----	367.58
T. 10 S., R. 6 E., 0.25 mile south by 0.25 mile west of center of sec. 20, at southeast corner of crossroads; on sandstone rock marked "450.0"-----	450.04
T. 10 S., R. 6 E., 0.25 mile south of quarter corner west side of sec. 20, on top of one-sixteenth-section corner stone; chiseled square marked "480.3"-----	480.32
T. 10 S., R. 6 E., 0.25 mile south of center of sec. 19, on south side of east-west road, 36 feet southeast of center of road forks, 5 feet east of corner fence post, 1 foot outside of fence; iron post stamped "395 Ill"-----	395.289

	Feet.
T. 10 S., R. 6 E., quarter corner north side of sec. 19, on east side of road, at T road west; copper nail in top of corner fence post marked "425.1"-----	425.12
T. 10 S., R. 6 E., northwest corner of sec. 19, on east side of range line, at L road south, on west side of J. Pankey's yard; copper nail in root of tree marked "400.3"-----	400.37
T. 10 S., on line between Rs. 5 E. and 6 E., about 0.25 mile north of quarter corner between secs. 19 and 24; chiseled circle on one-sixteenth-section corner stone marked "388.5"-----	388.57
T. 10 S., R. 5 E., center of sec. 24, 50 feet northeast of center of road forks at T road south, on north side of east-west road; on rock marked "414.5"-----	414.50
T. 10 S., R. 5 E., quarter corner west side of sec. 24, 60 feet east of center of road forks, near center of east-west road; copper nail in root of 30-inch oak tree marked "431.5"-----	431.50
T. 10 S., R. 5 E., 0.25 mile south of northeast corner of sec. 23, in southwest corner of T road west, 6 feet west of corner of fence; iron post stamped "Prim. Trav. Sta. No. 9, Ill, 1911, 400"-----	400.779
T. 10 S., R. 5 E., 0.25 mile north of center of sec. 22, on small wooden bridge over Saline River; copper nail in northeast corner of bridge floor marked "385.6"-----	385.66
T. 10 S., R. 5 E., 0.25 mile north of center of sec. 21, at crossroads; spindle of wagon axle embedded in center of road, said to be section mark, marked "429.8"-----	429.87
T. 10 S., R. 5 E., 0.25 mile north of center of sec. 20, at Big Four Route crossing, 600 feet north of Saline tank, about 2.3 miles northeast of Stonefort, at south side of wagon road, on west side of railroad right of way, 1 foot east of corner fence post; iron post stamped "410 Ill"-----	410.664
T. 10 S., R. 5 E., quarter corner east side of sec. 17, at T road east, stump at head of lane to west, 100 feet west of railroad crossing; nail in root marked "407.1"-----	407.13
T. 10 S., R. 5 E., sec. 8, at northeast corner of T road south; painted circle on south end of galvanized drain pipe marked "385.4"-----	385.50
T. 10 S., R. 5 E., north of center of sec. 8, at T road north, south side of east-west road, 3 feet west of gate post, 18 feet west of quarter-section corner stone; iron post stamped "495 Ill"-----	494.934
T. 10 S., R. 5 E., corner of secs. 5, 6, 7, and 8, at private road south; chiseled square on top of corner stone marked "427.4"-----	427.47
T. 10 S., R. 5 E., 0.25 mile west of quarter corner between secs. 6 and 7, 0.25 mile east of county line; chiseled circle on top of sixteenth-section corner stone marked "395.8"-----	395.88
T. 10 S., R. 5 E., southwest corner of sec. 6, in northeast corner of road intersection; copper nail near base of corner fence post marked "409.2"-----	408.32
Tps. 9 and 10 S., R. 4 E., quarter corner between secs. 1 and 36, at northeast corner of T road east, 15 feet north of corner post; iron post stamped "434 Ill"-----	434.541
T. 9 N., R. 4 E., 0.25 mile south of center of sec. 35, 0.5 mile east of Absher, in northeast corner of jog in road; nail in root of cottonwood tree marked "423.0"-----	423.04
Absher, about 0.9 mile northwest of, in southwest corner of crossroads; spike in root of dead oak tree marked "530.8"-----	530.83

Eldorado, Enfield, and New Haven quadrangles.

GALLATIN, HAMILTON, SALINE, AND WHITE COUNTIES.

The following elevations were determined by primary leveling connected with the precise-level line from Duquoin to Shawneetown, which crosses the Eldorado quadrangle. The work was done in 1905 by C. B. Blair.

ENFIELD QUADRANGLE.

[Latitude 38°-38° 15'; longitude 88° 15'-88° 30'.]

From Stokes along Big Four Route to Norris City.

	Feet.
Stokes, southeast corner of yard of J. Pyles's store; iron post stamped "415 Adj"-----	414.368

ELDORADO QUADRANGLE.

[Latitude 37° 45'-38°; longitude 88° 15'-88° 30'.]

From Norris City along highways west and south to Broughton, thence along Louisville & Nashville R. R. to Eldorado, thence east along highway to Ridgway, thence north to Omaha, thence along Baltimore & Ohio Southwestern R. R. to Norris City.

Norris City, at main entrance to north side of Cumberland Presbyterian Church, in stone sill; aluminum tablet stamped "444 Adj"-----	443.676
Norris City, 3.5 miles west of, at northeast corner of Jennings schoolhouse; iron post stamped "410 Adj"-----	409.852
Broughton, 3 miles north of, at southeast corner of forks of road; iron post stamped "371 Adj"-----	371.033
Broughton, northeast corner of cinder platform of Louisville & Nashville R. R. station; iron post stamped "379 Adj"-----	378.546
Francis Mills, northeast corner of cinder platform; iron post stamped "371 Adj"-----	371.016
Eldorado, 10 feet south of southwest corner of Grand Hotel; iron post stamped "388 Adj"-----	387.858
Eldorado, 3.5 miles east of, at jog in road, 3 feet northeast of oak tree, in middle of road; iron post stamped "373 Adj"-----	373.085
Eldorado, 6.5 miles east of, in front wall at northeast corner of Zion Church; aluminum tablet stamped "390 Adj"-----	389.762
Ridgway, stone foundation of Catholic Church, at southeast corner, east of front entrance; aluminum tablet stamped "377 Adj"-----	376.970
Omaha, 90 feet south of station, 12 feet east of track; iron post stamped "367 Adj"-----	366.921
Middlepoint, at northeast corner of cinder platform; iron post stamped "433 Adj"-----	432.706

From point near Omaha east along highway 2.7 miles.

Omaha, 2.7 miles east of, in southwest angle of forks with road running south; iron post stamped "405 Adj"-----	405.207
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NEW HAVEN QUADRANGLE.

[Latitude 37° 45'-38°; longitude 88°-88° 15'.]

From point near Norris City east along highway to Little Chain.

Iron, northeast corner of junction, 5 feet west of southwest corner of warehouse; iron post stamped "463 Adj"-----	462.896
Herald, 3 feet east of northeast corner of schoolhouse; iron post stamped "430 Adj"-----	429.940

	Feet.
Emma, 0.5 mile south of, southeast of junction of T road north with east-west road; iron post stamped "366 Adj"-----	366.057
Little Chain, 1 mile west of, southwest corner of road forks; iron post stamped "367 Adj"-----	366.616
From point near Emma south along highway to Inman, thence west to point near Ridgway.	
New Haven, at northwest corner of Scudmore & Mathia bank; aluminum tablet stamped "370 Adj"-----	370.271
Inman, 0.5 mile east of, southeast corner of forks of roads; iron post stamped "379 Adj"-----	378.598

From New Haven west along highway to point near Omaha.

Omaha, 6.5 miles east of, northeast of junction of east-west road with T road south, 12 feet west of 2-foot hickory tree; iron post stamped "387 Adj"-----	387.123
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From New Haven east along highway to Wabash River.

Ragland Island, 1.5 miles south of, just above Loop Slough, 75 feet south of large high-water barn; iron pipe marked "U. S. Eng'r" (U. S. E. C. bench mark No. 38, elevation 343.802)-----	346.282
Ragland Island, 1.5 miles south of, 75 feet south of barn, 3 feet east of U. S. E. C. bench mark; iron post stamped "346 Adj"-----	346.151
From St. Patrick's Church south and east to Round Pond School, thence north to Wabash River.	

St. Patrick's Church, 0.75 mile south of, east line of sec. 25, T. 8 S., R. 9 E., northeast corner of road fork; iron post stamped "366 Adj"-----	366.052
Round Pond, at northeast corner of schoolhouse; iron post stamped "362 Adj"-----	362.309

Galatia and West Frankfort quadrangles.

FRANKLIN, HAMILTON, SALINE, AND WILLIAMSON COUNTIES.

The following elevations were determined by primary leveling connected with the precise-level line from Duquoin to Shawneetown, which crosses Galatia and West Frankfort quadrangles. The work was done mostly in 1906 by F. C. Higley, but part of that in West Frankfort quadrangle was done in 1907 by Henry Bücher, all under State cooperation, and the standard bench marks are stamped with the State name.

GALATIA QUADRANGLE.

[Latitude 37° 45'-38°; longitude 88° 30'-88° 45'.]

From Raleigh north to point near Walpole, thence west to point 2 miles north of Thompsonville.	
Raleigh, 2.5 miles north of, at township-line road, north line of sec. 3, T. 8 S., R. 6 E., at southeast corner of road crossing; iron post stamped "400 1906"-----	401.536
Raleigh, 5.5 miles north of, north line of sec. 22, T. 7 S., R. 6 E., on county line, southwest of road corners; iron post stamped "381 1906"-----	381.763

	Feet.
Raleigh, 7.7 miles north of, 1 mile southeast of Walpole, 0.25 mile south of section line, southeast of road corner; iron post stamped "409 1906"-----	409.841
Walpole, 0.75 mile due north of, southwest of road fork, at intersection of township line road; iron post stamped "443 1906"-----	443.905
Walpole, 4.1 miles west of, at southwest corner of sec. 36, T. 6 S., R. 5 E., just northeast of road corner; iron post stamped "478 1906"-----	478.995
Walpole, 5 miles west of, 575 feet west of half-section line of sec. 3, T. 7 S., R. 5 E., north side of New Haven road, 6 feet west of 6-inch walnut tree, at south road in J. Webber's field; iron post-----	441.572
Walpole, 8.5 miles west of, southeast corner of intersection of county-line road and New Haven road, 40 feet east of county line; iron post stamped "593 1906"-----	593.864

From Raleigh south to township line, thence west to Attilla.

Raleigh, 1.6 miles south of, corner of secs. 21, 22, 27, and 28, T. 8 S., R. 6 E., at southeast corner where road turns south; iron post stamped "373"-----	373.162
Raleigh, 4.28 miles south of, north of center of sec. 4, T. 9 S., R. 6 E., 0.33 mile south of township line, southeast of second right angle in road south; iron post stamped "363"-----	362.919
Raleigh, 5 miles southwest of, southeast of crossroads at Mount Moriah Church, 0.25 mile west of corner of Raleigh and Harrisburg townships; iron post stamped "459 1906"-----	459.367
Mount Moriah, 2.94 miles west of, southwest of crossroads at center of Brushy Township, at town hall; iron post stamped "402 1906"-----	402.169
Rock Creek Township, near northeast corner of, 0.5 mile west of Saline County line, on east-west road to Attilla; iron post stamped "487 1906"-----	487.410

WEST FRANKFORT QUADRANGLE.

[Latitude 37° 45'-38°; longitude 88° 45'-89°.]

From Attilla west to White Ash, thence north to Benton.

Attilla, in front of two-story brick church; iron post stamped "558 1906"-----	557.930
Attilla, 2.8 miles west of, near corner of Tps. 8 and 9 S., Rs. 3 and 4 E., 58 feet north of center of railroad track, east of north-south township-line road; iron post stamped "467 1906"-----	467.118
Pittsburg, northwest corner of lot 1, block 21, in front of drug store; iron post stamped "464 1906"-----	464.395
White Ash, about 2 miles east of, northeast of road corner at witness tree, between railroad right of way and township-line road; iron post stamped "477 1906"-----	477.527
White Ash, southwest of intersection of Chicago & Eastern Illinois R. R. switch and Johnston City-Marion road, 60 feet south of center of track; iron post stamped "449 1906"-----	449.007
Johnston City, 1.6 miles south of, in corner northwest of first road crossing north of city limits; iron post stamped "459 1906"-----	459.729
West Frankfort, 2 miles south of, on first half-section line north of county line at road crossing, 55 feet east of center of Chicago & Eastern Illinois R. R. track, southeast of road corner; iron post stamped "439 1906"-----	439.537

	Feet.
West Frankfort, across road directly north of railroad station, 25 feet north of north side of walk, between railroad right of way and store wall; iron post stamped "408 1906"-----	407. 949
West Frankfort, 0.81 mile south of, 1,200 feet south of Chicago & Eastern Illinois R. R. coal chutes, at west road, southwest of road corner; iron post stamped "396 1906"-----	396. 016
Benton, 4.76 miles south of, at township-line road crossing, southeast of corner; iron post stamped "411 1906"-----	411. 022

From Thompsonville north 2 miles.

Tps. 5 and 6 S., R. 4 E., corner of secs. 33, 34, 4, and 3, 3 miles west of county line, 30 feet southwest of road, 2 feet north of township line, in field of Akin Plaster; iron post stamped "459 1906"-----	460. 456
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From West Frankfort west to Chicago, Burlington & Quincy R. R.

T. 7 S., R. 2 E., near southwest corner of sec. 22, dim crossroads, on south side of road, 8 feet north of fence, 40 feet west of fence corner, 30 feet east of 3-foot white-oak tree; iron post stamped "396 Adj"-----	396. 036
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From White Ash southwest along Missouri Pacific Ry. to sec. 32, T. 9 S., R. 2 E.

T. 8 S., R. 2 E., southwest corner of sec. 35, on north side of Coal Belt Electric Ry. and 270 feet west of its line before it makes the curve to join the Missouri Pacific Ry. extension to the Cartersville District mine, 0.9 foot south of fence, 8.2 feet west of trolley pole; iron post stamped "471 Adj"-----	471. 757
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Carmi, Mount Carmel, New Harmony, and Sumner quadrangles.

EDWARDS, LAWRENCE, RICHLAND, WABASH, AND WHITE COUNTIES.

The following elevations were determined by primary leveling extended from Olney and from the precise-level line from Duquoin to Shawneetown.

The work was done as follows: In Mount Carmel quadrangle mostly in 1902 by H. G. Lowe, but partly in 1908 by W. A. Gelbach; in Sumner quadrangle mostly in 1908 by W. A. Gelbach, but partly in 1907 by Henry Bücher; in Carmi quadrangle mostly in 1908 by W. A. Gelbach, but partly in 1905 by C. S. Blair. The standard bench marks established during and since 1905 are stamped to show State cooperation.

MOUNT CARMEL QUADRANGLE.

[Latitude 38° 15'–38° 30'; longitude 87° 45'–88°.]

	Feet.
From Grayville northeast along Big Four Route via Cowling, Keensburg, and Schrodts station to Mount Carmel.	
Grayville, at milepost E. 32, at northwest corner of bridge 289; head of bolt-----	386. 76
Grayville, 100 feet south of station, 6 feet east of track; iron post stamped "392 Vin"-----	392. 513

	Feet.
Cowling, SE. $\frac{1}{4}$ sec. 25, T. 2 S., R. 14 W., 8 inches north from north-east corner of Big Four Route station, 6 inches above ground; iron post stamped "397 Vin"-----	397. 212
Keensburg, SW. $\frac{1}{4}$ sec. 9, T. 2 S., R. 14 W., northwest corner of frame M. E. Church, in north face of foundation wall; aluminum tablet stamped "430 Vin"-----	430. 072
Sugar Creek (Schrodts station), SE. $\frac{1}{4}$ sec. 35, T. 1 S., R. 13 W., 1 foot north of northeast corner of Peter Schrodts's store; iron post stamped "458 Vin"-----	458. 466
Mount Carmel, at southwest side of courthouse, in southeast wing on west sill in wall; bronze tablet stamped "465 Vin"-----	465. 241
From Mount Carmel west along Southern Ry. to Belmont.	
Maud, sec. 28, T. 1 S., R. 13 W., northeast corner of Christian Church, in east face of foundation wall; bronze tablet stamped "442 Vin"-----	441. 784
From Keensburg northwest to Belmont, thence west along Southern Ry. to Browns.	
Bellmont, SW. $\frac{1}{4}$ sec. 31, T. 1 S., R. 14 W., at southwest corner of town hall, in south wall, 3 feet above ground; aluminum tablet stamped "431 Vin"-----	431. 246
Browns, sec. 4, T. 2 S., R. 14 W., at southeast corner of red brick M. E. Church, in south wall, 3 feet above ground; aluminum tablet stamped "402 Vin"-----	402. 128
From Grayville north along Illinois Central R. R. and public roads via Browns to Bone Gap.	
Bone Gap, sec. 8, T. 1 S., R. 14 W., northwest corner of Miss M. D. Rice's millinery store, in north face of brick foundation; bronze tablet stamped "459 Vin"-----	459. 146
From Bone Gap along public roads via Gards Point and Friendsville to Patton, thence south along Big Four Route to Mount Carmel.	
Gards Point, sec. 31, T. 1 N., R. 13 W., at east side of northeast corner of Lick Prairie Church; iron post stamped "434 Vin"-----	433. 728
Patton, sec. 34, T. 1 N., R. 12 W., 1 foot southwest of southeast corner of frame building of J. W. Elliott, 8 inches above ground; iron post stamped "416 Vin"-----	416. 446
From Mount Carmel north to Patton. ¹	
Mount Carmel, on pier of Southern Ry. bridge; zero of gage-----	372. 45
Grand Rapids, land side of Government locks; top of coping of pier (Wabash River Survey bench mark)-----	396. 771
Patton, northwest of, at corner of secs. 20, 21, 23, and 29, T. 1 N., R. 12 W., in front of T road west; iron post stamped "416 1908"-----	416. 893
CARMI QUADRANGLE.	
[Latitude 38°-38° 15'; longitude 88°-88° 15'.]	
From Grayville southwest along Big Four Route to Norris City.	
Carmi, 2 blocks east of station, at southwest corner opposite electric plant, in root of large tree; spike-----	398. 00
Carmi, in stone step at west side of main entrance to First Presbyterian Church; aluminum tablet stamped "399"-----	398. 777

¹ Circuit run in 1907 by W. A. Gelbach.

	Feet.
Brownsville, at southwest corner of stone platform; iron post stamped "417"-----	416. 528
From Brownsville east to Maunie.	
Brownsville, 1.5 miles south of, at southeast corner of crossroads; iron post stamped "442 1908"-----	442. 218
T. 6 S., R. 9 E., quarter corner between secs. 9 and 10, at T road west, in center of triangular grass plot in road fork; iron post stamped "360 1908"-----	360. 038
T. 5 S., R. 9 E., southwest corner of sec. 36, in front of T road north; iron post stamped "424 1908"-----	423. 764
Epworth, 2 miles south of, at northeast corner of crossroads, 15 feet east of corner fence post; iron post stamped "398 1908"-----	398. 274
Maunie, on Louisville & Nashville R. R. bridge over Wabash River, on coping at south end of east pier, 1 foot from edge; chiseled circle (Wabash River Survey bench mark 32)-----	373. 296
Maunie, in middle of northwest face of foundation wall of Methodist Church, 2 feet above ground; aluminum tablet stamped "375 Illinois 1903"-----	375. 171
From Maunie north to point near Grayville.	
T. 5 S., R. 10 E., northeast corner of sec. 24, in front of T road east; iron post stamped "369 1908"-----	369. 218
T. 5 S., R. 14 W., near corner of secs. 5, 6, 7, and 8, in southwest corner of school yard, in front of T road west; iron post stamped "378 1908"-----	378. 400
Phillipstown, 1 mile north of, at northeast corner of crossroads, on bank; iron post stamped "498 1908"-----	498. 100
Calvin, Union (Methodist and Baptist) Church, in middle of north foundation wall, about 1.5 feet above ground; aluminum tablet stamped "448 Illinois 1908"-----	448. 458
T. 3 S., R. 14 W., at corner of secs. 29, 30, 31, and 32; on top of corner stone-----	402. 51
T. 3 S., R. 14 W., at corner of secs. 19, 20, 29, and 30, in front of and 20 feet east of center line of T road south; iron post stamped "398 1908"-----	397. 906
From point near Grayville west to Little Wabash River, thence south to Carmi.	
T. 3 S., R. 10 E., corner of secs. 22, 23, 26, and 27, in front of T road south; iron post stamped "392 1908"-----	392. 224
High Shoals, 0.75 mile west of bridge over Little Wabash River, in front of T road south; iron post stamped "383 1908"-----	383. 503
Tps. 3 and 4 S., R. 10 E., 0.25 mile east of quarter corner between secs. 32 and 5, at southeast corner of T road south, 4 feet south of corner fence post; iron post stamped "383 1908"-----	382. 692
T. 4 S., R. 10 E., middle of sec. 21, at northeast corner of T road north; iron post stamped "390 1908"-----	390. 013
T. 4 S., R. 10 E., quarter corner between secs. 28 and 29, in southeast corner of school yard, at northwest corner of crossroads, in tree root; nail-----	386. 74
Simpson switch on Big Four Route, 3.25 miles northeast of Carmi, 80 feet north of track, on west side of wagon road, by wire fence; iron post stamped "388 1908"-----	388. 449

	Feet.
Carmi, 0.25 mile northeast of, 400 feet east of junction of Louisville & Nashville and Big Four tracks, near railroad crossing, 6 feet north of Big Four track, east of railroad bridge over Little Wabash River, in southeast corner of bridge, on railing; top of bolt head-----	381.99
From Little Wabash River west to Burnt Prairie, thence south to Brownsville.	
T. 3 S., R. 9 E., quarter corner between secs. 23 and 24, in front of T road south, at corner of house yard; iron post stamped "386 1908"-----	385.711
T. 3 S., R. 9 E., quarter corner between secs. 20 and 21, in front of T road south; iron post stamped "425 1908"-----	425.155
T. 4 S., R. 9 E., quarter corner between secs. 8 and 9, at northeast corner of crossroads; iron post stamped "388 1908"-----	387.633
T. 4 S., R. 9 E., quarter corner between secs. 29 and 32, at southwest corner of school yard, at northeast corner of T road east; iron post stamped "388 1908"-----	388.569
Trumbull, 0.1 mile west of, at southeast corner of crossroads, at foot of bank; iron post stamped "419 1908"-----	419.397

NEW HARMONY QUADRANGLE.

[Latitude 38°-38° 15'; longitude 87° 45'-88°.]

Near Grayville.

Grayville, Illinois Central R. R. bridge over Wabash River, south end of east bank pier; U. S. E. □ B. M. (Wabash River Survey b. m.)-----	389.096
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SUMNER QUADRANGLE.

[Latitude, 38° 30'-38° 45'; longitude, 87° 45'-88°.]

From Point 4 miles east of Olney east along Baltimore & Ohio Southwestern R. R. to Claremont, thence north along highways to Hickory Point School.¹	
Claremont, 0.36 mile west of station, south end of small artificial lake, in top of east wing of masonry dam, 0.9 foot from west edge and 1.8 feet from north edge; aluminum tablet stamped "498 Adj"-----	498.826
Claremont, at station crossing; top of south rail-----	509.8
From point near Claremont east along highway to sec. 5, T. 3 N., R. 13 W., thence north 1 mile.	
T. 4 N., R. 14 W., southwest corner of sec. 36, at northeast corner of crossroads, on east side of road, 0.7 foot west of fence, 22 feet north of fence corner; iron post stamped "509 Adj"-----	510.263
T. 3 N., R. 13 W., 0.25 mile east of northwest corner of sec. 4, at T road, 0.7 foot north of fence, 24.5 feet east of telegraph pole, about 11 feet east of center line of north-south road; iron post stamped "483 Adj"-----	484.085
T. 4 N., R. 13 W., 0.25 mile east of northwest corner of sec. 33, at T road, on west side of road, 2.2 feet east of fence, in concrete post flush with ground; aluminum tablet stamped "Prim. Trav. Sta. No. 10, 489, Adj"-----	490.408

¹ Mean of direct and reverse leveling.

From sec. 5, T. 3 N., R. 13 W., east to sec. 32, T. 4 N., R. 12 W., thence north to Fairview Church.

	Feet.
Union Chapel (U. B.), southwest corner sec. 36, T. 4 N., R. 13 W., at northeast corner of crossroads, 1.1 feet west of fence, 62 feet north of fence; iron post stamped "570 Adj"-----	571.168
T. 3 N., R. 12 W., northwest corner of sec. 4, at crossroads, on south side of State road, on bank a little east of center of road to north, 0.9 foot north of fence, 18.5 feet east of telegraph pole; iron post stamped "457 Adj"-----	457.461

From point 2 miles north of Bridgeport south to Grant School, thence west 5.6 miles, thence north to Sumner.

Bridgeport, 100 feet north of railroad, on front face at southeast corner of yellow brick building owned by F. W. Cox, about 3 feet above sidewalk; aluminum tablet stamped "449 1908"-----	448.591
T. 3 N., R. 12 W., corner of secs. 20, 21, 28, and 29, at northwest corner of crossroads; iron post stamped "489 1908"-----	489.774
Grant School, corner of secs. 4, 5, 8, and 9, T. 2 N., R. 12 W., at northwest corner of crossroads, in southeast corner of school yard; iron post stamped "446 1908"-----	446.992
T. 2 N., R. 13 W., quarter corner between secs. 4 and 9, at southwest corner of crossroads, 3 feet west of corner of John White's yard; iron post stamped "476 1908"-----	477.374
Sumner, on Main Street, 250 feet south of railroad, at northeast corner of street crossing, in brick building owned by Mart Wagner, in south face 1 foot from southwest corner and 3 feet above ground; aluminum tablet stamped "461 Illinois 1908"-----	462.148
Sumner, railroad crossing on Main Street; top of rail-----	460.5

From point 5.6 miles west of Grant School west to Brownsville, thence north to Claremont.

T. 2 N., Rs. 13 and 14 W., corner of secs. 1, 6, 7, and 12, on Lawrence-Richland county line, at northwest corner of crossroads, in root of tree; spike-----	538.00
Preston School, corner of secs. 3, 4, 9, and 10, T. 2 N., R. 14 W., in front of T road east, 600 feet south of T road west, in southeast corner of school yard; iron post stamped "456 1908"-----	456.344
Black Oak School, corner of secs. 27, 28, 33, and 34, T. 3 N., R. 14 W., at northwest corner of crossroads, in southeast corner of school yard, in tree root; spike-----	497.30
T. 3 N., R. 13 W., at corner of secs. 21, 22, 27, and 28, at southwest corner of crossroads, by picket fence; iron post stamped "506 1908"-----	505.920
Claremont, in front of station; top of rail-----	509.7

From Grant School south to point near Patton.

T. 2 N., R. 12 W., quarter corner between secs. 20 and 21, at northeast corner of crossroads, in southwest corner of school yard; iron post stamped "445 1908"-----	445.841
T. 1 N., R. 12 W., corner of secs. 8, 9, 16, and 17, at northwest corner of crossroads, near picket fence; iron post stamped "462 1908"-----	462.525

From point 5.6 miles west of Grant School south and east via Friendsville to point near Patton.

	Feet.
T. 2 N., R. 13 W., quarter corner between secs. 21 and 28, in front of T road west at schoolhouse, 4 feet south of corner fence post; iron post stamped "460 1908"-----	460. 836
Lancaster, 400 feet east by 400 feet south of middle of sec. 4, T. 1 N., R. 13 W., in west face of Lutheran Church, under window south of entrance, about 2.5 feet above ground; aluminum tablet stamped "494 Illinois 1908"-----	494. 784
Stoeltz School, quarter corner between secs. 20 and 21, T. 1 N., R. 13 W., at southwest corner of crossroads, in northeast corner of school yard; iron post stamped "459 1908"-----	459. 631
Friendsville, quarter corner between secs. 23 and 24, T. 1 N., R. 13 W., in east side of brick house of Dr. C. S. Couch, near southeast corner, about 3 feet above ground; bronze tablet stamped "482 Vin"-----	481. 972

From Stoeltz School west to Pinhook, thence north to Brownsville.

T. 1 N., Rs. 13 and 14 W., 0.25 mile north of quarter corner between secs. 19 and 24, in front of and about 20 feet south of center line of T road east; iron post stamped "409 1908"-----	409. 660
Pinhook, quarter corner between secs. 21 and 22, T. 1 N., R. 14 W., at northeast corner of T road north; iron post stamped "435 1908"-----	435. 811
Tps. 1 and 2 N., R. 14 W., about 0.1 mile east of quarter corner between secs. 4 and 33, at northwest corner of crossroads, opposite small white house; iron post stamped "458 1908"-----	458. 616
Redhead School, quarter corner between secs. 16 and 21, T. 2 N., R. 14 W., at southwest corner of crossroads, in northeast corner of school yard; iron post stamped "462 1908"-----	462. 784
Preston School, corner of secs. 3, 4, 9, and 10, T. 2 N., R. 14 W., in front of T road east, 600 feet south of T road west, in southeast corner of school yard; iron post stamped "456 1908"-----	456. 344

Birds, Hardinville, Moonshine, Newton, Rosehill, and Vincennes quadrangles.

CLARK, CRAWFORD, CUMBERLAND, JASPEB, LAWRENCE, AND RICHLAND COUNTIES.

The elevations in the following list were determined by primary leveling and accord with the 1912 adjustment. Additional elevations in this vicinity are given in Bulletin 421; those published in Bulletin 493 and determined by H. W. Peabody in 1910 are republished in this bulletin with corrections.

The leveling was done in 1911 by R. G. Clinite.

BIRDS QUADRANGLE.

[Latitude 38° 45'-39°; longitude 87° 30'-87° 45'.]

	Feet
From Allison west, north, and west along highway to Fairview schoolhouse.	
Allison (abandoned post office), T road west at, corner of secs. 23, 24, 25, and 26, T. 4 N., R. 11 W.; chiseled circle in northeast corner of corner stone, marked "429.8"-----	429. 64
T. 4 N., R. 11 W., corner of secs. 22, 23, 26, and 27, T road north; chiseled cross on top of section corner stone, marked "426.0"-----	425. 83

	Feet.
T. 4 N., R. 11 W., southeast corner of sec. 15, in northwest corner of T road west; copper nail in root of elm tree, marked "420.0"-----	419. 89
T. 4 N., R. 11 W., southwest of center of sec. 15, on north side of roadway, 50 feet northeast of woodland fence corner; copper nail in root of 10-inch oak stump, marked "417.7"-----	417. 53
T. 4 N., R. 11 W., quarter corner south side of sec. 16, in bottoms, about 850 feet east of Otter Pond drainage ditch, at northwest corner of woodland, 3 feet north of fence; copper nail in root of 26-inch elm tree, marked "414.9"-----	414. 79
T. 4 N., R. 11 W., southeast corner of sec. 17, in northwest corner of crossroads, 58 feet north of east-west road; copper nail in root of 30-inch sycamore tree, marked "414.4"-----	414. 25
T. 4 N., R. 11 W., northeast corner of sec. 19, in southwest corner of crossroads; nail in top of oak stake 3 inches square, marked "441.8"-----	441. 70
Fairview schoolhouse, 3 feet north of northwest corner of school yard, southwest corner of sec. 18, T. 4 N., R. 11 W.; iron post stamped "442 Ill 1910"-----	441. 630

From northeast corner of sec. 18, T. 4 N., R. 12 W., south along public roads to point about 1 mile southwest of Pinkstaff.

T. 4 N., R. 12 W., northeast corner of sec. 18, southwest corner of crossroads, south side of road, 1.3 feet north of fence, 22 feet west of north-south fence line, on west side of road; iron post stamped "436. Adj"-----	436. 334
Embarrass River, 0.5 mile east of, at northwest corner of Ziegler farm, in base of 15-inch gatepost, south side; spike-----	426. 11
Pinkstaff, 1.5 miles west of, in south root of 30-inch oak tree, at road north; spike-----	436. 81
T. 5 N., R. 12 W., center of east side of sec. 10, 2.5 miles west of Pinkstaff, at northwest corner of crossroads; iron post stamped "438 Ill 1910"-----	437. 464
Pinkstaff, 2.5 miles west of, 50 feet south of southeast corner of crossroads; spike-----	438. 21
Pinkstaff, 0.5 mile west by 0.5 mile south of, in front of house at T road west; spike in west root of 24-inch oak tree-----	440. 12

HARDINVILLE QUADRANGLE.

[Latitude 38° 45'-39°; longitude 87° 45'-88°.]

From sec. 29, T. 6 N., R. 14 W., northeast to sec. 2, T. 6 N., R. 14 W.

T. 6 N., R. 14 W., 0.25 mile north by 0.09 mile east of southwest corner of sec. 20, on east side of road, 100 feet northeast of schoolhouse; copper nail in root of 15-inch oak tree marked "478.4"-----	478. 38
T. 6 N., R. 14 W., center of SE. ¼ sec. 17, at T road south, north side of east-west road, 27 feet northeast of center of road; copper nail in stump marked "485.2"-----	485. 15
T. 6 N., R. 14 W., 0.2 mile north of southeast corner of sec. 17, T road north; tile drain in southeast corner of road marked "468.9"-----	468. 81
T. 6 N., R. 14 W., quarter corner east side of sec. 17, T road east; nail in west end of small bridge across north-south road marked "466.8"-----	466. 70

	Feet.
T. 6 N., R. 14 W., quarter corner east side of sec. 17, T road east, on west side of north-south road, 42 feet northwest of small bridge, 1 foot outside of fence; iron post stamped "465 Ill"-----	465. 239
T. 6 N., R. 14 W., about 500 feet east of quarter corner west side of sec. 16; chiseled square on northwest corner of bridge over North Fork marked "469.8"-----	469. 75
T. 6 N., R. 14 W., 0.2 mile north of southwest corner of sec. 11, at T road south; copper nail in west end of plank culvert marked "494.7"-----	494. 60
T. 6 N., R. 14 W., 0.2 mile east of southwest corner of sec. 2, outside of dim T road west, 15 feet east of north-south fence; iron post marked "478 Adj"-----	478. 367
From sec. 2, T. 6 N., R. 14 W., northeast to sec. 36, T. 7 N., R. 14 W.	
T. 6 N., R. 14 W., 0.2 mile east of southwest corner of sec. 2, outside of dim T road west, 1.3 feet south of fence, 15 feet east of north-south fence at fence corner; iron post stamped "478 Adj"-----	478. 367
T. 6 N., R. 14 W., near quarter corner west side of sec. 1, opposite T road east; copper nail in corner fence post marked "504.9"-----	504. 93
T. 7 N., R. 14 W., southwest corner of sec. 36, in northwest corner of Mike Diedrich's yard; copper nail in root of sycamore tree marked "497.1"-----	497. 13
From sec. 3, T. 5 N., R. 14 W., along roads via Green Briar store to point $\frac{1}{2}$ mile north of southwest corner of sec. 4, T. 5 N., R. 13 W.	
T. 5 N., R. 14 W., southeast corner of sec. 3, northwest corner of crossroads, west side of road, 6 feet east of fence, 4 feet north of fence corner; iron post stamped "462 Adj"-----	463. 263
Green Briar, 1 mile west by 1.8 miles south of, 170 feet south of second-class road east, in northwest root of 24-inch tree; copper nail-----	442. 61
Green Briar, 0.5 mile east by 0.5 mile north of, at southwest corner of crossroads, in end of culvert; copper nail-----	445. 82
Hardinville, 2.5 miles west of, in center of south side of 100-foot iron bridge over North Fork of Embarrass River; painted spike-----	445. 77
T. 5 N., R. 13 W., 0.25 mile north of southwest corner of sec. 4, southeast corner of road at T on south side of main road, 0.9 foot north of fence, 39 feet east of north-south fence line; iron post stamped "463 Adj"-----	463. 826
From northeast corner of sec 34, T. 5 N., R. 14 W., along wagon road to point 1.5 miles east of Linder schoolhouse.	
T. 5 N., R. 14 W., northeast corner of sec. 34, southwest corner of crossroads, west side of road, 1.1 feet east of fence, 7 feet south of fence corner; iron post stamped "496 Adj"-----	496. 574
Linder schoolhouse, 1 mile east of, at northeast corner of crossroads, in root of 24-inch oak tree; copper nail-----	448. 50
From Westport via wagon road to Chauncey.	
Westport, sec. 32, T. 5 N., R. 12 W., at southwest corner of iron truss bridge over Embarrass River, in highest part of masonry support, 1.1 feet from east edge, 0.3 foot from south edge; aluminum tablet stamped "437 Adj"-----	437. 339

	Feet.
Pleasant Ridge schoolhouse, 0.25 mile east by 0.5 mile north of, 300 feet north of house on east, on east side of road at foot of hill, in west root of 40-inch oak tree; copper nail.....	431.01
Pleasant Ridge schoolhouse, 1 mile north of, 150 feet west of forks, in south root of 30-inch oak tree; copper nail.....	430.77
Pleasant Ridge schoolhouse, 0.25 mile west by 1 mile north of, at southwest corner of crossroads, in root of 12-inch tree; copper nail.....	436.29
Chauncey, 1.8 miles north by 3.25 miles east of, on south bank of Embarrass River, in sharp bend, in east root of 20-inch tree; copper nail.....	434.57
Chauncey, 1.8 miles north by 0.25 mile east of, 150 feet west of house on north, in north root of double 15-inch tree on north side of road; copper nail.....	485.31
Chauncey, southwest corner of sec. 28, T. 5 N., R. 13 W., at northeast corner of crossroads, 1.2 feet west of fence, 6.6 feet north of fence corner; iron post stamped "488 Adj".....	488.708

MOONSHINE QUADRANGLE.

[Latitude 39°-39° 15'; longitude 87° 45'-88°.]

From sec. 36, T. 7 N., R. 14 W. north along North Fork Basin to sec. 5, T. 9 N., R. 14 W.

Oblong, 0.9 mile west of, on Indianapolis Southern R. R., in northeast corner of substructure of culvert; copper nail marked "484.8".....	484.78
T. 7 N., R. 14 W., about 0.25 mile north of southwest corner of sec. 35, on southeast wing wall of steel highway bridge over North Fork; chiseled square marked "478.7".....	478.68
T. 7 N., R. 14 W., center SE. ¼ sec. 34, opposite center of T road north, on south side of east-west road, 1 foot outside of fence, 4 feet east of telephone pole; iron post stamped "483 Ill".....	483.282
T. 7 N., R. 14 W., 0.2 mile west of southeast corner of sec. 27, on east side of north-south road, at T road west; copper nail in root of oak tree, marked "477.9".....	477.91
T. 7 N., R. 14 W., 0.2 mile east of center of sec. 27, L road west, southwest corner of road, 5 feet inside of fence; oak tree marked "474.7".....	474.73
T. 7 N., R. 14 W., quarter corner north side of sec. 27, L road west, secondary road east, 100 feet west of corner, 8 feet inside of fence; copper nail in root of 36-inch oak tree, marked "478.9".....	478.96
T. 7 N., R. 14 W., in southwest corner of sec. 22, at northeast corner of crossroads, 3 feet east of corner fence post, 1 foot outside of orchard fence; iron post stamped "492 Ill".....	491.713
T. 7 N., R. 14 W., 0.2 mile south of northeast corner of sec. 21, at L road west; copper nail in root of small ash tree, marked "477.1".....	477.15
T. 7 N., R. 14 W., 0.2 mile west by about 0.05 mile south of northeast corner of sec. 21, on stone in center of crossroads; chiseled circle marked "489.5".....	489.60
T. 7 N., R. 14 W., center of NE. ¼ sec. 16, in southeast corner of T road south; copper nail in root of oak tree, marked "499.8".....	499.85
T. 7 N., R. 14 W., 0.2 mile north of center of sec. 15, in southeast corner of floor of steel bridge over North Fork; copper nail, marked "486.8".....	486.84

	Feet.
T. 7 N., R. 14 W., center of NE. $\frac{1}{4}$ sec. 15, on east side of north-south road, opposite center of T road west, 1 foot west of fence; iron post stamped "487 Ill"-----	486.900
T. 7 N., R. 14 W., 0.2 mile west of southeast corner of sec. 3, jog in road to west; chiseled square on quarter section stone, marked "516.2"-----	516.29
T. 7 N., R. 14 W., quarter corner north side of sec. 3, 40 feet east of center of T road north, on south side of east-west road, 10 feet north of fence; copper nail in top of stump, marked "513.4"-----	513.51
T. 8 N., R. 14 W., quarter corner south side of sec. 27, in northeast corner of crossroads, 6 feet east of corner fence post, 1.3 feet outside of fence; iron post stamped "525 Ill"-----	525.464
T. 8 N., R. 14 W., 350 yards west of quarter corner north side of sec. 34, on south side of road, 30 feet east of culvert; copper nail in root of 20-inch oak tree, marked "493.3"-----	493.43
T. 8 N., R. 14 W., near southwest corner of sec. 28, on top of bluff, 100 yards east of Panther Creek, in front of house on north side of road; copper nail in root of small elm tree, marked "529.3"-----	529.46
T. 8 N., R. 14 W., northwest corner sec. 28, at southeast corner of crossroads, opposite Palmersburg store, chiseled circle in concrete ballast of fence post, marked "530.3"-----	530.42
T. 8 N., R. 14 W., near quarter corner west side of sec. 21, on east side of road, in southwest corner of Roy Steator's yard; copper nail in oak tree, marked "538.4"-----	538.58
T. 8 N., R. 14 W., northwest corner of sec. 21, at T road east, 10 feet south of southeast corner of road forks, 0.8 foot outside of fence; iron post stamped "546 Ill"-----	546.112
T. 8 N., R. 14 W., near quarter corner north side of sec. 15, on small iron bridge over tributary to North Fork; copper nail in south end of floor, marked "510.9"-----	511.10
T. 8 N., R. 14 W., 0.1 mile west of northeast corner of sec. 15, steel highway bridge over North Fork; bolt head on top of southeast cylindrical support, marked "513.1"-----	513.23
Bellair, at northwest corner of village, at northwest corner of road forks, 2.5 feet west of corner fence post; iron post stamped "550 Ill"-----	549.641
Bellair, 0.9 mile east of, T road north, southeast corner of sec. 11, T. 8 N., R. 14 W., in southeast corner of road forks; copper nail in northwest corner of culvert, marked "546.6"-----	546.75
T. 8 N., R. 14 W., corner of secs. 1, 2, 11, and 12; chiseled circle on corner stone, marked "555.5"-----	555.72
T. 9 N., R. 14 W., center of SW. $\frac{1}{4}$ sec. 35, on top of oil pipe at end of jog in road to west, 12 feet southwest of center of road; painted square, marked "566.4"-----	566.65
T. 9 N., R. 14 W., center of SW. $\frac{1}{4}$ sec. 26, at jog in road to west and to north, 15 feet southeast of center of road, 1 foot north of east-west fence line; iron post stamped "568 Ill"-----	567.662
T. 9 N., R. 14 W., center of NW. $\frac{1}{4}$ sec. 26, small iron bridge over tributary of North Fork; spike in top of post in southeast corner of bridge floor, marked "530.4"-----	530.58
T. 9 N., R. 14 W., near northwest corner of sec. 26, steel highway bridge over North Fork; bolt head in northeast cylindrical support, marked "532.8"-----	532.98

	Feet.
Moriah, 1 mile southwest of, at angle in road north, on south side of east-west road; spike in root of 28-inch oak tree, marked "592.6"-----	592.82
Moriah, 0.3 mile west of, in southwest corner of road forks, at T road south; spike in root of walnut tree, marked "593.2"-----	593.46
Moriah, opposite post office, T road east, at southeast corner of Weaver & Sons' store; spike in root of 2-foot oak tree, marked "597.4"-----	597.67
Moriah, at northeast corner of T road east, 16 feet south of post office, 20 feet northeast of road center; iron post stamped "598 Ill"-----	597.818
Moriah, 0.6 mile north of, at crossroads, in northeast corner of road forks; spike in root of maple tree, marked "600.8"-----	601.06
T. 9 N., R. 14 W., 0.2 mile west of northeast corner of sec. 15, 1.1 miles north of Moriah, at T road south; chiseled square on top of quarter section stone, marked "602.1"-----	602.37
T. 9 N., R. 14 W., 0.1 mile north by 0.2 mile east of southwest corner of sec. 11, near center of south side of steel highway bridge over North Fork; spike marked "544.5"-----	544.68
T. 9 N., R. 14 W., near quarter corner south side of sec. 4, T road north, in northwest corner of road forks, 12 feet west of small iron bridge and 100 feet east of church; spike in root of 22-inch elm tree, marked "603.7"-----	603.98
T. 9 N., R. 14 W., quarter corner south side of sec. 4, opposite T road north, on south side of east-west road, 70 feet south of small iron bridge, 120 feet southeast of church, 1 foot outside of fence; iron post stamped "609 Ill"-----	608.845
T. 9 N., R. 14 W., quarter corner north side of sec. 8, in southeast corner of crossroads; spike in root of small walnut tree, marked "615.8"-----	616.05
T. 9 N., R. 14 W., southwest corner of sec. 5, at crossroads, 3.5 miles due south of Casey, at east end of culvert, in northeast corner of crossroads; chiseled square on top of large rock, marked "624.0"-----	624.26

NEWTON QUADRANGLE.

[Latitude 38° 45'-39°; longitude 88°-88° 15'.]

From Newton northeast to Embarrass River.

Newton, 0.3 mile north of, on southwest abutment of railroad bridge over Embarrass River; chiseled square marked "495.9"-----	495.90
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From Ste. Marie east to sec. 29, T. 6 N., R. 14 W.

Ste. Marie, in yard of F. L. Britton, 300 feet south of Cincinnati, Hamilton & Dayton Ry. station, 40 feet east of track; iron post stamped "482 Ill 1910"-----	482.344
Ste. Marie, 0.4 mile northeast of, on top of cylindrical support at southeast corner of steel highway bridge over Embarrass River; chiseled square marked "472.6"-----	472.63
T. 6 N., R. 14 W., in northwest corner of sec. 29, at foot of bluff on east side of road, 90 feet south of jog in road to east; copper nail in top of small oak stump, marked "463.5"-----	463.45

From point 1 mile east by 1 mile north of Linder schoolhouse northwest via Ste. Marie to Newton.

	Feet.
Linder schoolhouse, 1 mile east by 1 mile north of, in root of tree on bank of river at road forks; copper nail.....	450. 73
Rafetown, center of east side of sec. 19, T. 5 N., R. 14 W., 0.25 mile west of iron bridge over Embarrass River, at southwest corner of crossroads; iron post stamped "470 Ill 1910".....	469. 866
Ste. Marie, 3 miles south of, at southeast corner of crossroads; iron post stamped "474 Ill 1910".....	474. 015
Ste. Marie, 1.5 miles south of, 400 feet north of forks, in east root of 20-inch elm on west side of road; copper nail.....	467. 96
Ste. Marie, 0.8 mile south of, in root of 24-inch tree at southeast corner of T road east; copper nail.....	481. 06
Ste. Marie, 300 feet south of Cincinnati, Hamilton & Dayton Ry. station, 40 feet east of track, in yard of T. L. Britton; iron post stamped "482 Ill 1910".....	482. 344
Ste. Marie, 0.25 mile west by 2.25 miles north of, east side of road forks, in north root of 10-inch tree; copper nail marked "469"....	469. 03
Ste. Marie, 0.8 mile west by 2.25 miles north of, in east root of 10-inch tree near log barn; nail.....	469. 20
Ste. Marie, 4.5 miles northwest of, at north side of road forks, 3 feet from southeast corner of cabin, 0.5 mile north of south corner of secs. 11 and 12, R. 11 E.; iron post stamped "472 Ill 1910"....	471. 768
Creeds, 0.8 mile south of station, near gate at end of north-south road, in south root of 24-inch tree; copper nail.....	477. 94
Creeds, 0.5 mile south of station, 300 feet east of woods, on east-west fence line, in east root of 30-inch tree; copper nail.....	476. 68
Newton, 2.25 miles east of, in top of retaining wall at northwest corner of Indianapolis Southern R. R. bridge over Embarrass River; painted bolt.....	491. 20
Newton, 180 feet northwest of station, 70 feet west of railroad crossing, 20 feet west of water plug on south side of road; iron post stamped "512 1906".....	512. 989

ROSEHILL QUADRANGLE.

[Latitude 39°-39° 15'; longitude 88°-88° 15'.]

From Newton north along Embarrass River basin to Greenup.

Newton, 0.6 mile north of, at T road north, 160 feet west of railroad crossing; northeast wing wall of concrete culvert, marked "484.5".....	484. 46
Newton, 1.8 miles northwest of, on east bank of Embarrass River, 10 feet north of private road crossing, quarter corner west side of sec. 25, T. 7 N., R. 9 E.; willow tree marked "485.2".....	485. 20
Newton, 2.5 miles north of, L road north, at quarter corner north side of sec. 25, T. 7 N., R. 9 E.; quarter section stone marked "485.2"....	485. 21
T. 7 N., R. 9 E., quarter corner north side of sec. 25, L road north, 24 feet south of quarter section stone; iron post stamped "486 Ill"....	485. 606
T. 7 N., R. 9 E., center of SE. $\frac{1}{4}$ sec. 23; chiseled square on top of corner stone, marked "487.9".....	487. 94
T. 7 N., R. 9 E., near center of sec. 23, on west side of north-south road; nail in root of oak tree, marked "489.9".....	489. 90

	Feet.
T. 7 N., R. 9 E., north of center of sec. 23, at foot of bluff, on east side of road; copper nail in top of locust stump, marked "499.2"-----	499. 22
T. 7 N., R. 9 E., center of sec. 14, T road south, in southeast corner of road intersection; copper nail in root of 4-foot white-oak tree, marked "558.7"-----	558. 75
T. 7 N., R. 9 E., 0.2 mile east of center of sec. 14, T road north, in northwest corner of road intersection; copper nail in root of black-oak tree, marked "556.0"-----	555. 98
T. 7 N., R. 9 E., about 5 feet south of section stone at corner of secs. 11, 12, 13, and 14, southwest corner of crossroads; copper nail in root of 3-foot black-oak tree, marked "559.9"-----	559. 88
T. 7 N., R. 9 E., in northwest corner of sec. 13, in southeast corner of crossroads, 5 feet east of corner fence post; iron post stamped "561 III"-----	560. 488
T. 7 N., R. 9 E., south of center of sec. 11, on southwest wing wall of concrete bridge over Embarrass River; chiseled square marked "499.9"-----	499. 97
T. 7 N., R. 9 E., near west center of sec. 10, in northeast corner of crossroads, 22 feet east of fence corner; copper nail in root of small elm tree, marked "501.3"-----	501. 38
T. 7 N., R. 9 E., 0.2 mile north of southwest corner of sec. 3, T road west, on top of stone in center of road; chiseled square marked "511.6"-----	511. 62
T. 7 N., R. 9 E., 0.25 mile north of southeast corner of sec. 4, at foot of bluff, in northwest corner of T road west, 38 feet northwest of one-sixteenth section stone; iron post stamped "516 III"-----	516. 527
T. 8 N., R. 9 E., near northwest corner of sec. 34, 20 feet east of old shed on north side of private field road, 250 feet west of river; nail in root of walnut tree, marked "499.6"-----	499. 65
T. 8 N., R. 9 E., quarter corner west side of sec. 27, about 3 miles due west of Rose Hill, on southeast concrete wing wall of steel highway bridge over Embarrass River; chiseled square marked "506.7"-----	506. 79
T. 8 N., R. 9 E., northwest corner of sec. 28, T road east; nail in top of northeast corner fence post, marked "570.1"-----	570. 17
T. 8 N., R. 9 E., at southeast corner of sec. 20, west side of north-south road, at T road east, 1 foot east of fence; iron post stamped "568 III"-----	568. 051
T. 8 N., R. 9 E., quarter corner west side of sec. 21, on east side of road, 50 yards southeast of Jasper Newlin's residence; copper nail in root of tree, marked "575.7"-----	575. 82
T. 8 N., R. 9 E., southeast corner of sec. 16, in northwest corner of crossroads, on southeast corner of cement walk in front of Excelsior School; chiseled and painted square, marked "520.4"-----	520. 65
T. 8 N., R. 9 E., southeast corner of sec. 16, T road north, in west end of plank culvert across north-south road; copper nail marked "503.0"-----	503. 07
T. 8 N., R. 9 E., at northeast corner of sec. 21, on south side of east-west road, opposite center of T road north, 1 foot north of fence line; iron post stamped "503 III"-----	502. 814
T. 8 N., R. 9 E., quarter corner between secs. 9 and 10; chiseled circle on quarter section stone, marked "507.8"-----	507. 93

	Feet.
T. 8 N., R. 9 E., near southwest corner of sec. 3, 3.5 miles due west of Hidalgo, T road north, on northeast wing wall of steel highway bridge over Embarrass River; chiseled square, marked "513.3"-----	513.35
T. 8 N., R. 9 E., 0.25 mile north of southwest corner of sec. 3, on top of one-sixteenth section corner stone; chiseled square marked "509.3"-----	509.43
T. 8 N., R. 9 E., quarter corner between secs. 3 and 4, on top of quarter section corner stone; chiseled square marked "509.9"-----	510.04
Tps. 8 and 9 N., R. 9 E., corner of secs. 3, 4, 33, and 34, on Jasper-Cumberland county line; chiseled square on top of section stone, marked "509.5"-----	509.59
T. 8 N., R. 9 E., 0.2 mile west of northeast corner of sec. 4, L road north, 20 feet southeast of center of road; copper nail in top of oak stump, marked "512.7"-----	512.85
T. 9 N., R. 9 E., 0.2 mile east of center of sec. 33, at southeast corner of crossroads, 1.3 feet south of corner fence post; iron post stamped "515 Ill"-----	515.073
T. 9 N., R. 9 E., 0.2 mile west of northeast corner of sec. 33, 100 feet south of T road south, in southwest corner of floor of small iron bridge over creek; copper nail marked "516.7"-----	516.82
T. 9 N., R. 9 E., near quarter corner south side of sec. 28, in top of southeast cylindrical support of steel highway bridge over Embarrass River; bolt head marked "520.1"-----	520.25
T. 9 N., R. 9 E., near quarter corner north side of sec. 28, T road south, northeast corner of road forks; copper nail in root of oak tree, marked "514.3"-----	514.40
T. 9 N., R. 9 E., 0.25 mile west of northeast corner of sec. 21, at foot of bluff, on east side of road, 3.9 miles southwest of Greenup, 1.5 miles southeast of Jewett, 0.8 mile south of National Road, 20 feet north of fence corner and 116 feet northwest of steel windmill; iron post stamped "522 Ill"-----	521.934
T. 9 N., R. 9 E., near quarter corner north side of sec. 22, at east edge of woods, 15 feet south of rail fence on north side of small field road; nail in root of walnut tree, marked "519.2"-----	519.29
T. 9 N., R. 9 E., near southwest corner of sec. 14, 500 feet west of river; copper nail in root of lone walnut tree at edge of sink basin, marked "523.2"-----	523.37
T. 9 N., R. 9 E., between secs. 13 and 14, on top of quarter section corner stone; chiseled square marked "523.0"-----	523.15
Greenup, 1 mile west of, on National Road, on southeast concrete wing wall of steel highway bridge over Embarrass River; chiseled square marked "536.6"-----	536.73
From sec. 5, T. 9 N., R. 14 W., west along highway to Greenup.	
T. 9 N., R. 14 W., secs. 6 and 7, R. 11 E., secs. 6 and 7, at corner of, on Cumberland-Clark county line, 4.5 miles southwest of Casey; chiseled circle on corner stone, marked "639.3"-----	639.58
T. 9 N., R. 11 E., quarter corner north side of sec. 7, at T road south in southeast corner of road forks; iron post stamped "Prim. Trav. Sta. No. 5, 638"-----	638.028
T. 9 N., R. 11 E., in southwest corner of sec. 6, at crossroads, on top of north end of culvert under east-west road; chiseled square marked "630.7"-----	630.98

	Feet.
T. 9 N., R. 10 E., quarter corner south side of sec. 1, 200 feet southeast of brick schoolhouse, in northeast corner of crossroads; chiseled square on stone, marked "622.0"-----	622.33
T. 9 N., R. 10 E., northwest corner of sec. 12, at southeast corner of crossroads; spike in root of small elm tree, marked "619.5"-----	619.77
T. 9 N., R. 10 E., corner of secs. 3, 4, 9, and 10, 96 feet east of Delno school, at crossroads; chiseled square on top of section stone, marked "605.6"-----	605.95
T. 9 N., R. 10 E., southwest corner sec. 3, at northeast corner of crossroads, diagonally opposite Delno school, 12 feet east of corner fence post, 1.3 feet south of fence; iron post stamped "606 Ill"-----	606.608
T. 9 N., R. 10 E., about 0.2 mile east of southwest corner of sec. 4, I bar in northwest wing wall of small iron bridge over Range Creek; vertical reinforcing-----	556.07
T. 9 N., R. 10 E., corner of secs. 4, 5, 8, and 9, at crossroads; chiseled square on section corner stone, marked "588.3"-----	588.69
T. 9 N., R. 10 E., corner of secs. 5, 6, 7, and 8, at crossroads; chiseled square on section corner stone, marked "590.6"-----	590.99
Greenup, 1.3 miles northeast of, Vandalia station, at crossing with Greenup public road; spike in base of crossing post, marked "599.0"-----	599.33
Greenup, 700 feet northwest of station, 40 feet north of track, 570 feet southeast of milepost "142-105"; iron post stamped "543 1906"-----	543.690

VINCENNES QUADRANGLE.

[Latitude 38° 30'-38° 45'; longitude 87° 30'-87° 45'.]

From Fairview schoolhouse south along public roads to Lawrenceville, thence east along Baltimore & Ohio Southwestern R. R. to Vincennes.

1. 5 N., R. 11 W., southwest corner of sec. 18, Fairview schoolhouse, 3 feet north of northeast corner of school yard; iron post stamped "442 Ill 1910"-----	441.630
Lawrenceville, in iron in center of track on first bend from north end of Cleveland, Cincinnati, Chicago & St. Louis Ry. bridge over Embarrass River; small cross-----	433.09
Lawrenceville, in northwest corner of courthouse yard; iron post stamped "Prim. Trav. Sta. No. 1, 472 Ill 1910"-----	471.997
Lawrenceville Junction, in southwest corner of Cleveland, Cincinnati, Chicago & St. Louis Ry. and Baltimore & Ohio Southwestern R. R. crossing; top of Cleveland, Cincinnati, Chicago & St. Louis Ry. concrete milepost "Dan 102"-----	437.50
Lawrenceville Junction, 1 mile east of, west parapet wall of Baltimore & Ohio Southwestern R. R. bridge over Embarrass River; northeast corner of top stone-----	428.03
May Chapel, 3.5 miles southeast of Lawrenceville, southeast corner of church at northwest corner of crossroads, northeast corner of sec. 9, T. 4 N., R. 11 W.; iron post stamped "426 Ill 1910"-----	425.707
May Chapel, 1.5 miles south of, at northwest corner of road forks, in east root of 20-inch tree; spike-----	418.51
T. 4 N., R. 11 W., southeast corner of sec. 16, 2 miles south of May Chapel, at west side of road, 25 feet west of center of road forks; iron post stamped "411 Ill 1910"-----	411.229

	Feet.
T. 3 N., R. 11 W., 1,390 feet east of corner of secs. 13, 14, 23, and 24, junction of east-west section line road and road south dividing NW. quarter sec. 24, in center of road south, and 20 feet south of center of east-west road; iron post stamped "Prim. Trav. Sta. No. 2 Illinois 410"-----	410.304
Vincennes, in water table of courthouse on Seventh Street side of building; square cut marked "B. M. <input type="checkbox"/> U. S. C. & G. S., A"-----	433.847
From Lawrenceville south along Cleveland, Cincinnati, Chicago & St. Louis Ry. to St. Francisville.	
Lawrenceville Junction, 1 mile south of; top of concrete milepost "Dan 103"-----	427.85
Lawrenceville Junction, 2 miles south of; top of concrete milepost "Dan 104"-----	427.33
Lawrenceville Junction, 3 miles south of; top of concrete milepost "Dan 105"-----	420.31
Billet, 0.4 mile north of; top of concrete milepost "Dan 106"-----	423.11
Billet, 75 feet northwest of station, at northeast corner of lot of Amanda Richardson; iron post stamped "424 Ill 1910"-----	423.983
Billet, 0.7 mile south of; top of concrete milepost "Dan 107"-----	425.41
Billet, 1.7 miles south of, top of concrete milepost "Dan 108"; marked "420"-----	419.95
Billet, 2.7 miles south of; top of concrete milepost "Dan 109"-----	418.46
Billet, 3.7 miles south of; top of concrete milepost "Dan 110"-----	427.20
St. Francisville, 0.2 mile north of; top of concrete milepost "Dan 111"-----	442.99
St. Francisville, top of downstream end of second pier from left bank end of Cleveland, Cincinnati, Chicago & St. Louis Ry. bridge over Wabash River; square cut marked "U. S. E. <input type="checkbox"/> B. M." (Corps of Engineers bench mark)-----	416.544
T. 11 N., R. 11 W., sec. 20, near center of intersection of Cleveland, Cincinnati, Chicago & St. Louis Ry. with road leading west from St. Francisville, in southwest corner, inside wire fence corner, 90 feet southwest of road crossing, 2,000 feet south of St. Francisville railroad station, 25 feet south of east-west road; iron post stamped "Prim. Trav. Sta. No. 3, 440 Ill 1910"-----	440.446
From May Chapel southeast along highway to Plank Road schoolhouse, thence north to Allison.	
May Chapel, 3.5 miles southeast of Lawrenceville, at southeast corner of church, northwest corner of crossroads, northeast corner of sec. 9, T. 3 N., R. 11 W.; iron post stamped "426 Ill 1910"-----	425.707
May Chapel, 0.5 mile southeast of, quarter corner north side sec. 10, T. 3 N., R. 11 W., T road north, 54 feet west of road intersection on north side of east-west road; copper nail in root of double sycamore tree, marked "416.3"-----	416.05
T. 3 N., R. 11 W., west of center of sec. 11, north side of road, 6 feet south of fence; copper nail in root of 34-inch sycamore tree, marked "414.3"-----	414.10
T. 3 N., R. 11 W., quarter corner east side of sec. 11, T road south, southwest corner of road intersection; copper nail in base of telephone pole, marked "416.6"-----	416.32
Plank Road schoolhouse, at northwest corner of building, on top of flat top stone; chiseled square painted "413.8"-----	413.53

	Feet.
T. 3 N., R. 11 W., near northwest corner of sec. 12, crossing of Baltimore & Ohio Southwestern R. R.; top of south rail marked "420.7"	420.49
Plank Road schoolhouse, 0.8 mile north of, T road west, 0.2 mile east of corner of secs. 1, 2, 11, and 12, T. 3 N., R. 11 W., corner fence post on east side of north-south road; copper nail in top, marked "418.5"-----	418.30
T. 3 N., R. 11 W., quarter corner north side of sec. 1, on east side of road northwest, 12 feet south of private road east; copper nail in base of telephone pole, marked "421.5"-----	421.24
T. 3 N., R. 11 W., northwest corner of sec. 1, 55 feet south of southwest corner of road angle, on west side of north-south road; copper nail in top of small oak post, marked "421.8"-----	421.56
Tps. 3 and 4 N., R. 11 W., corner of secs. 1, 2, 35, and 36; chiseled square on corner stone, marked "420.6"-----	420.36
T. 4 N., R. 11 W., southwest corner of sec. 25, T road east, on east side of north-south road; copper nail in top of third fence post from northeast corner, marked "427.6"-----	427.37

Crystal City and Renault quadrangles.

MONROE AND RANDOLPH COUNTIES.

The leveling for the elevations in the following list was done in 1911 by C. R. French. For additional elevations in Renault quadrangle see Bulletin 421.

CRYSTAL CITY QUADRANGLE.

[Latitude 38°-38° 15'; longitude 90° 15'-90° 30'.]

From point about 2 miles southwest of Monroe City southeast along highway to sec. 12, T. 4 S., R. 11 W.

	Feet.
T. 3 S., R. 11 W., 0.1 mile northeast of quarter corner west side of sec. 26, oposite T road south; iron post stamped "398 III"-----	397.918
T. 3 S., R. 11 W., NW. $\frac{1}{4}$ sec. 35, center of highway crossing St. Louis, Iron Mountain & Southern Ry., southbound track; top of west rail, marked "400.5"-----	400.52
T. 3 S., R. 11 W., 0.1 mile northeast of center of SW. $\frac{1}{4}$ sec. 35; top of northwest wing wall of bridge; painted square marked "401.4"-----	401.44
T. 4 S., R. 11 W., center of line between secs. 1 and 2, center of highway crossing St. Louis, Iron Mountain & Southern Ry., northbound track; top of east rail, marked "406.9"-----	406.97
T. 4 S., R. 11 W., center of sec. 1, crossroads at Chalfin Bridge, northwest corner of intersection; iron post stamped "412 III"-----	411.545
T. 4 S., R. 11 W., 0.1 mile southeast of center of NE. $\frac{1}{4}$ sec. 12, house on east side of road, on top of northeast wing wall of bridge; painted square marked "451.4"-----	451.47

RENAULT QUADRANGLE.

[Latitude 38°-38° 15'; longitude 90°-90° 15'.]

From point near Chalfin Bridge southeast along highway to point 2.8 miles south of Marigold.

T. 4 S., R. 10 W., quarter corner north side of sec. 18, in center of road at T road southwest; painted square on top of stone, marked "414.9"-----	414.97
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	Feet.
T. 4 S., R. 10 W., 0.1 mile west of quarter corner south side of sec. 17, at southwest corner of crossroads, 50 feet west of northwest-southeast road; iron post stamped "404 Ill"-----	404. 242
T. 4 S., R. 10 W., sec. 21, 0.4 mile north of Brownsburg, in center of road facing T road southwest; painted square on top of stone, marked "395.9"-----	395. 95
T. 4 S., R. 10 W., 0.6 mile east of Brownsburg, at crossroads, center of triangular mound; iron post stamped "404 Ill"-----	403. 625
T. 4 S., R. 10 W., 1 mile east by 0.6 mile south of Brownsburg, on east side of road facing north side of road southwest; stone marked "385.1"-----	385. 12
T. 4 S., R. 10 W., 1.4 miles north by 0.3 mile west of Renault station, 5 feet northeast of 36-inch sycamore tree, T road southwest, on east side of road; stone marked "386.4"-----	386. 45
T. 5 S., R. 10 W., 0.2 mile north of center of NE. $\frac{1}{4}$ sec. 1, 0.8 mile northeast of Renault station, in east corner of crossroads, near northeast wing wall of bridge; iron post stamped "396 Ill"-----	395. 634
T. 5 S., R. 9 W., SW. $\frac{1}{4}$ sec. 6, 0.2-mile northeast of center of, 15 feet east of locust tree, 200 feet north of northeast corner of house on west side of road, in center of road; stone marked "389.8"-----	389. 85
T. 5 S., R. 9 W., southeast corner sec. 6, 2.2 miles south of Renault, road forks, center of northeast-southwest road; top of rock, marked "408.86"-----	408. 86
Prairie Du Rocher, 3 miles northwest of, on east side of road, about 500 feet southeast of forks of road, 350 feet north of John Levertz's residence, 20 feet north by 5 feet west to center of stone arch culvert; iron post stamped "Prim. Trav. Sta. No. 14, 1909, Ill., 406"---	406. 470
T. 5 S., R. 9 W., 2.5 miles northwest of Prairie Du Rocher, near Monroe-Randolph county line, on top of large rock in center of road; painted square marked "389.0"-----	389. 14
T. 5 S., R. 9 W., 1.7 miles northwest of Prairie Du Rocher, "Big Spring," on west side of road, north side of stream; rock marked "391.8"-----	391. 86
T. 5 S., R. 9 W., 0.5 mile northwest of Prairie Du Rocher, opposite south side of T road southwest, in center of road; stone marked "400.6"-----	400. 65
Prairie Du Rocher, opposite St. Luke's Mills, at southeast corner of T road east; painted square on top of curbing, marked "396.9"---	397. 02
Prairie Du Rocher, center of town, T road southwest; rock on southwest corner, marked "395.4"-----	395. 46
Prairie Du Rocher, south end of town, apple orchard on northeast corner at T street northwest, 6 feet northeast of fence corner; iron post stamped "396 Ill"-----	395. 764
T. 5 S., R. 9 W., 1.5 miles southeast of Prairie Du Rocher, T road northeast; stone at east corner of intersection, marked "402.2"-----	402. 26
T. 5 S., R. 9 W., 2.3 miles southeast of Prairie Du Rocher, opposite T road northeast, on west side of main road; stone at base of 2-foot tree, marked "398.8"-----	398. 89
T. 5 S., R. 9 W., 1.2 miles northwest of Modoc, at T road northeast, west end of rock culvert; middle stone of coping, marked "405.6"---	405. 73
T. 5 S., R. 9 W., southwest edge of town of Modoc, road forks to southwest and southeast, west side of southwest-northeast road, facing southeast road; iron post stamped "391 Ill"-----	390. 642

	Feet.
T. 6 S., R. 8 W., 1.1 miles southeast of Modoc, at T road northeast; rock on north corner of intersection, marked "400.5"-----	400. 62
Marigold, 2.8 miles south of, forks of Kaskaskia road, center of triangular mound; iron post stamped "607"-----	607. 378
From point 1.5 miles south of Red Bud along highway west to Renault, thence north to Burksville.	
T. 4 S., R. 8 W., 1.5 miles south of Red Bud, on line between sections 9 and 16, southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 9, Illinois, 1908, 460"-----	459. 505
T. 4 S., R. 8 W., on line between secs. 8 and 17, 1.5 miles south by 1 mile west of Red Bud, at northeast corner of crossroads; nail in base of telephone pole, marked "511.2"-----	511. 21
T. 4 S., R. 8 W., on line between secs. 7 and 18, 90° bend in road; at northwest corner of road; painted square marked "526.8"-----	526. 78
T. 4 S., R. 8 W., on line between secs. 18 and 19, on west side of road, at private road to east; painted square on top of stone, marked "481.7"-----	481. 74
T. 4 S., R. 9 W., west side of Randolph-Monroe county line, sec. 24, north side of east-west road, at T road south, 6 feet west to white-oak tree; iron post stamped "467"-----	466. 880
T. 4 S., R. 9 W., about 0.3 mile south of center of sec. 24, on northeast wing wall of bridge over Horse Creek; painted square marked "421.05"-----	419. 65
T. 4 S., R. 9 W., on line between secs. 23 and 26, 1.25 miles north by 0.2 mile west of Ames. at northeast corner of crossroads; painted square on top of stone, marked "490.4"-----	490. 47
T. 4 S., R. 9 W., line between secs. 22 and 27, 0.2 mile east of quarter corner, in west floor beam of bridge over Dry Fork Creek; nail marked "485.6"-----	485. 64
T. 4 S., R. 9 W., about 0.4 mile east of north center of sec. 27, in center of road at stone culvert; painted square on top of stone, marked "512.1"-----	512. 11
T. 4 S., R. 9 W., 0.4 mile north of center of sec. 28, T road north, at northwest corner; iron post stamped "556 Ill"-----	556. 348
T. 4 S., R. 9 W., 0.25 mile north of center of sec. 29, on west side of north-south road opposite north side of T road east; painted square on top of stone, marked "639.8"-----	639. 88
Renault, T. 4 S., R. 9 W., sec. 30, in northwest corner of public square; painted square on top of rock, marked "683.7"-----	683. 78
Renault, northwest corner of public square, 1 foot north of telephone pole; iron post stamped "684 Ill"-----	684. 448
T. 4 S., R. 9 W., sec. 30, 0.2 mile northwest of Renault public square, at northeast corner of road forks, on top of stone at side of road; painted square, marked "683.4"-----	683. 43
T. 4 S., R. 9 W., 0.2 mile west of center of NW. $\frac{1}{4}$ sec. 30, private road to southwest, house on northeast side of road at northwest fence corner; painted square on top of stone, marked "701.7"-----	701. 78
T. 4 S., R. 10 W., 1 mile north by 1.1 miles west of Renault, T road southwest, at northwest corner; nail in root of tree, marked "694.5"-----	694. 53

	Feet.
T. 4 S., R. 10 W., forks of Burksville and Maeystown roads, 1.5 miles north by 1.5 miles west of Renault, east side of triangular mound in center of fork; iron post stamped "688 Ill"-----	688.416
T. 4 S., R. 10 W., SE. $\frac{1}{4}$ sec. 13, 0.13 mile south of center of T road east, house at northwest corner of, on top of stone at southeast fence corner; painted square marked "638.9"-----	639.02
T. 4 S., R. 10 W., just east of center of NE. $\frac{1}{4}$ sec. 12, T road east, in mound in center of roads; spike in base of black-oak tree marked "667.7"-----	667.87
T. 4 S., R. 10 W., 0.3 mile south of center of sec. 1, stone in center of private road west, 50 feet east to center of main road; painted square on top of stone marked "677.5"-----	677.72
Burkville, 3 miles south of, line between Tps. 3 S. and 4 S., R. 10 W., in northeast corner of crossroads; mark on stump marked "684.7"-----	684.88
Burkesville, 3 miles south of, line between Tps. 3 S. and 4 S., R. 10 W., in northeast corner of crossroads; iron post stamped "685 Ill"-----	685.054
T. 3 S., R. 10 W., center of sec. 36, on east side of road, at St. Joe; mark on root of tree marked "705.9"-----	706.10
T. 3 S., Rs. 9 and 10 W., line between secs. 25 and 30, center, northwest corner of roads at private road west; nail in top of stump, marked "685.2"-----	685.43
T. 3 S., R. 10 W., line between secs. 24 and 25, center of east half, 6 feet west of center of road, opposite private road east; painted square on top of stone, marked "637.6"-----	637.82

Lincoln quadrangle.

LOGAN AND SANGAMON COUNTIES.

The elevations in the following list were determined by primary-level lines extending east from the precise level line of the Corps of Engineers, United States Army, along Illinois River.

The leveling was done by E. M. Bandli in 1909.

LINCOLN QUADRANGLE.

[Latitude 40°-40° 15'; longitude 89° 15'-89° 30'.]

From Lincoln east to Skelton, thence south to Mount Pulaski, thence west to Elkhart.

	Feet.
T. 20 N., R. 2 W., southwest corner of sec. 27, in northeast corner of crossroads, 36 feet northeast of road intersection, 7 feet north of telephone pole, 6 feet west of hedge fence; iron post stamped "592"-----	592.486
Skelton, east of center of sec. 36, T. 20 N., R. 2 W., 50 feet northwest of intersection of road and Illinois Central R. R., 36 feet north of track, 2 feet south by 2 feet west of northwest corner fence post; iron post stamped "611"-----	611.482
T. 19 N., R. 1 W., northwest corner of sec. 19; 60 feet from southeast corner of crossroads, 2 feet east of southeast corner fence post; iron post stamped "635"-----	635.873
T. 19 N., R. 2 W., south center of sec. 35, in northwest corner of crossroads, in concrete post; aluminum tablet stamped "613"-----	613.326
T. 18 N., R. 2 W., southwest corner of sec. 10, in northeast corner of crossroads, 21 feet east of corner fence post, 2 feet from fence, 40 feet from road intersection northeast; iron post stamped "614"-----	614.435

	Feet.
T. 18 N., R. 2 W., southeast corner of sec. 12, 10 feet north of road on township line, 4 feet from fence; iron post stamped "601"-----	601. 294
T. 18 N., R. 3 W., near southeast corner of sec. 9, south of main road, 7 feet east of telephone pole east of private road south, 1 foot from fence; iron post stamped "575"-----	575. 107
From Elkhart north via Burton View 16 miles, thence east to Lawndale, thence south 4 miles.	
Elkhart, southwest corner of sec. 7, T. 18 N., R. 3 W., 3 feet east of railroad signpost, 15 feet northeast of road, 13 feet east of Chicago & Alton R. R. tangent; iron post stamped "592"-----	592. 492
T. 19 N., R. 4 W., southeast corner of sec. 25, 2 feet from telephone pole, in southwest corner of T road, 40 feet southwest of road intersection; iron post stamped "588.1"-----	588. 113
T. 19 N., R. 3 W., southeast corner of sec. 18, about 6 miles north of Elkhart, in northwest corner at T road north, 2 feet south of fence, 13 feet west of northwest corner, 40 feet northwest of road intersection; iron post stamped "570.3"-----	570. 387
T. 19 N., R. 4 W., near northeast corner of sec. 12; aluminum tablet stamped "595"-----	595. 600
T. 20 N., R. 3 W., southwest corner of sec. 19, in northeast corner of crossroads, 2 feet east of fence, 14 feet north of road, 20 feet east of road intersection, north of telephone pole; iron post stamped "570.3"-----	570. 500
T. 20 N., R. 3 W., southwest corner of sec. 6, 3 miles north of Burton View, 3 feet from fence opposite road north, 12 feet south of road intersection; iron post stamped "551"-----	551. 600
T. 20 N., R. 3 W., east of center of sec. 33, 30 feet southwest of crossroads, in northeast corner of school yard, 5 feet from corner fence post; iron post stamped "577.6"-----	577. 671
T. 20 N., R. 3 W., near north center of sec. 2, 2 feet from west fence, 27 feet southeast of road intersection, 9 feet southeast of the southeast corner fence post; iron post stamped "577"-----	577. 213
T. 20 N., R. 2 E., northeast corner of sec. 5, 3 miles west of Lawndale, 20 feet north of T road, 4 feet east of telephone pole, 3 feet south of hedge; iron post stamped "580"-----	579. 777
Lawndale, near station, 90 feet northwest of first road and track intersection south of station, 3 feet west of telephone pole, 40 feet west of Chicago & Alton R. R., near north center of sec. 2, T. 20 N., R. 2 W.; iron post stamped "596"-----	596. 489
T. 20 N., R. 2 W., southwest corner of sec. 13, 3 miles south of Lawndale, in northeast corner of crossroads, 4 feet south of telephone pole, 36 feet northeast of road intersection, 15 feet north of hedge corner; iron post stamped "616"-----	615. 882

From Lincoln north 3 miles.

T. 20 N., R. 2 W., northwest corner of sec. 30, center of road; point on section corner stone, marked "588.3"-----	588. 22
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Marseilles, Odell, Ottawa, and Streator quadrangles.

GRUNDY, KENDALL, LIVINGSTON, MARSHALL, AND LA SALLE COUNTIES.

The leveling for the elevations in the following list was done in 1911 by R. G. Clinite.

OTTAWA QUADRANGLE.

[Latitude 41° 15'-41° 30'; longitude 88° 45'-89°.]

	Feet.
From point 1.25 miles north of Utica east along highways to Ottawa.	
Utica, 1.25 miles north of, at quarter corner between secs. 4 and 5, T. 33 N., R. 2 E., at northwest corner of crossroads, on east-west fence line, 3.7 feet east of fence corner; iron post stamped "Prim. Trav. Sta. No. 8, 619"-----	619.081
T. 33 N., R. 2 E., at quarter corner between secs. 3 and 4, at south-east corner of crossroads, in root of 54-inch double cottonwood tree; copper nail stamped "612.5"-----	612.45
T. 33 N., R. 2 E., at quarter corner between secs. 2 and 3, at north-west corner of crossroads; chiseled square on large rock, marked "628.5"-----	628.45
T. 33 N., R. 2 E., at quarter corner between secs. 1 and 2, at north-east corner of crossroads; chiseled square on northwest wing wall of stone bridge, marked "627.8"-----	627.82
T. 33 N., R. 2 E., at quarter corner between secs. 1 and 2, at south-west corner of crossroads, 1.6 feet east of fence corner; iron post stamped "628 III"-----	628.400
T. 33 N., R. 3 E., northeast corner of sec. 7, at southwest corner of crossroads, 6 feet northeast of corner of hedge fence; iron post stamped "601 III"-----	601.309
T. 33 N., R. 3 E., southeast corner of sec. 5, at T road north, in north-west corner of junction of roads; chiseled square on large rock, marked "596.4"-----	596.42
T. 33 N., R. 3 E., corner of secs. 3, 4, 9, and 10; chiseled square on section stone, marked "582.4"-----	582.38
Ottawa, 1.8 miles west of, northeast corner of T road north; chiseled square on rock, marked "499.9"-----	499.92
Ottawa, on west wall of LaSalle County courthouse, about 1.5 feet above sidewalk; aluminum tablet stamped "486 III"-----	485.730
From point near Waltham east and south along highways to Ottawa.	
T. 34 N., R. 2 E., northeast corner of sec. 5, southwest corner of junction of two T roads, south side of road, 9.5 feet west of fence corner, 1.1 feet north of fence; iron post stamped "673"-----	672.676
Tps. 34 and 35 N., R. 2 E., secs. 33 and 34 (T. 35 N.), Jog in north-south road, at foot of center of road to north; chiseled square on section stone, marked "702.9"-----	702.90
T. 34 N., R. 2 E., northwest corner of sec. 2, southeast corner of crossroads, in root of 20-inch box-elder tree; copper nail stamped "668.7"-----	668.76
T. 35 N., R. 2 E., quarter corner south side of sec. 35, T road north, 75 feet north of center of east-west road, on east end of drain under road to north; chiseled square on stone, marked "665.3"-----	665.31

	Feet.
T. 34 N., R. 2 E., northeast corner of sec. 2, in southwest corner of T road south, 4 feet west of corner fence post, 2 feet north of fence; iron post stamped "658 III"-----	658. 250
T. 34 N., R. 2 E., northeast corner of sec. 1, in southwest corner of crossroads, in top of post 2 by 4 by 26 inches driven flush with surface of ground, 2.6 feet northeast of corner of hedge fence; copper nail stamped "652.6"-----	652. 61
T. 34 N., R. 3 E., northwest corner of sec. 5, T road south; chiseled square on section stone, marked "637.5"-----	637. 55
T. 34 N., R. 3 E., southeast corner of sec. 6, at northwest corner of crossroads, 3 feet east of corner fence post; iron post stamped "630 III"-----	630. 355
T. 34 N., R. 3 E., northeast corner of sec. 9, at southwest corner of crossroads, in top of corner fence post; copper nail stamped "627.0"-----	627. 02
T. 34 N., R. 3 E., southeast corner of sec. 3, at northwest corner of crossroads, 1.6 feet southeast of corner fence post; iron post stamped "625 III"-----	625. 515
T. 34 N., R. 3 E., near northeast corner of sec. 15, on west side of north-south road, on south side of private lane to west, 20 feet west of corner fence post, in root of 16-inch hedge-thorn tree; copper nail stamped "625.9"-----	625. 92
T. 34 N., R. 3 E., southeast corner of sec. 22, at northwest corner of T road west, 1.5 feet northeast of corner fence post; iron post stamped "623 III"-----	623. 485
T. 34 N., R. 3 E., northeast corner of sec. 34, at southwest corner of crossroads, on south wall of concrete culvert; chiseled circle marked "624.1"-----	624. 18
T. 34 N., R. 3 E., quarter corner east side of sec. 34, at T road west, in northwest corner of bridge floor; copper nail stamped "611.1"-----	611. 14
T. 34 N., R. 3 E., southeast corner of sec. 34, T road north; chiseled square on section stone, marked "616.4"-----	616. 47
Ottawa, east end of north abutment of Lasalle Street Bridge over Illinois & Michigan Canal; chiseled square on stone in top course, marked "491.3"-----	491. 38
Ottawa, in southeast corner of public park, 0.8 foot inside of low stone wall, 10 feet west of intersection of sidewalks; iron post stamped "483 III"-----	483. 404
 From point 1 mile south of Prairie Center east and south along highway and Chicago, Burlington & Quincy R. R. via Serena, Hedron, and Dayton to Ottawa.	
Prairie Center, northeast corner of sec. 36, T. 35 N., R. 2 E., at southwest corner of cross roads, 10 feet east of yard fence belonging to G. W. Jones; sharp corner of small rock, marked "671.0"-----	670. 99
T. 35 N., R. 2 E., at southeast corner of sec. 24, northwest corner of crossroads, 4.5 feet southeast of corner fence post; iron post stamped "672 III"-----	672. 228
T. 35 N., R. 3 E., near northwest corner of sec. 29, on south end of concrete wall of drain; chiseled square marked "670.2"-----	670. 21
T. 35 N., R. 3 E., near quarter corner south side of sec. 20, in top of wall north end of drain; chiseled square on stone, marked "654.5"-----	654. 50

	Feet.
T. 35 N., R. 3 E., west of quarter corner north side of sec. 28, on southwest corner of concrete floor of bridge over East Fork of Buck Creek; painted square marked "649.0"-----	648.97
T. 35 N., R. 3 E., about 0.4 mile west of northeast corner of sec. 28, in southeast corner of road forks, 1.3 feet northeast of corner fence post; iron post stamped "661 Ill"-----	661.099
T. 35 N., R. 3 E., near quarter corner south side of sec. 22, 3.6 feet south of fence, on rock on north side of road; chiseled square marked "649.7"-----	649.71
T. 35 N., R. 3 E., quarter corner south side of sec. 23, in northwest corner of crossroads, 1 foot south of corner fence post; chiseled square on large stone, marked "643.7"-----	643.72
T. 35 N., R. 3 E., quarter corner south side of sec. 24, northwest corner of crossroads, in southeast corner of school yard, in root of 18-inch maple tree; copper nail stamped "641.0"-----	640.99
T. 35 N., R. 4 E., near southwest corner of sec. 19, on west side of north-south road, 220 feet north of road to east, north side of road to west, 16 feet west of fence corner; iron post stamped "642 Ill"-----	642.432
T. 35 N., R. 4 E., about 0.25 mile east of northwest corner of sec. 28, about 2.2 miles west of Serena, on top of north end of west concrete abutment of highway bridge over Indian Creek; chiseled square, marked "577.8"-----	577.77
T. 35 N., R. 4 E., quarter corner between secs. 22 and 27, about 1 mile west of Serena, at southeast corner of crossroads, 4.5 feet south of corner fence post, 1 foot west of fence; iron post stamped "629. Ill"-----	629.364
Wedron, 2 miles north of, jog in road to east, dim secondary road west, in southwest corner of road forks, in top of 20-inch oak stump; copper nail stamped "629.9"-----	629.86
Wedron, 0.5 mile north of, on west end of north abutment of highway bridge over Indian Creek, in fourth course from top; chiseled square marked "518.5"-----	518.45
Wedron, in front of station; top of rail-----	523.9
Wedron, at southeast side of station platform; iron post stamped "521 Ill"-----	521.679
Dayton, 2.2 miles north of, southeast corner of small trestle, mile-board "74.52," in sleeper resting on wooden pile; copper nail stamped "527.9"-----	527.92
Dayton, in front of station; top of rail of main track-----	542.2
Dayton, east side of Chicago, Burlington & Quincy R. R. right of way, 210 feet southeast of station, 1 foot south of garden fence; iron post stamped "542 Ill"-----	542.137
Ottawa, 1.8 miles northeast of, at crossing of wagon road and Chicago, Burlington & Quincy R. R., north side of right of way, west side of road; chiseled square on large rock, marked "495.3"-----	495.26
Ottawa, in northeast corner of city, at foot of East Joliet Street, east end of north walk; chiseled square on paving brick, marked "483.1"-----	483.13
Ottawa, in southeast corner of public (Washington) park, 0.6 foot inside of low stone wall, 10 feet west of intersection of sidewalks; iron post stamped "483 Ill"-----	483.404

From bridge 1 mile south of Utica south along highways to Vermillion.

	Feet.
Utica, 1 mile south of, on wagon bridge over Illinois River, in top of concrete cap of first pier south of north end; aluminum tablet stamped "468"-----	467.707
Utica, 2.4 miles south of, at southeast corner of crossroads, 8 feet north by 20 feet west to corner of secs. 20, 21, 28, and 29, T. 33 N., R. 2 E., in south end of plank culvert; copper nail stamped "644.5"-----	644.47
T. 33 N., R. 2 E., quarter corner south side of sec. 22, at jog in road south (there is also a road north leading to Illini Park), in root of 18-inch hickory tree opposite road to south; copper nail stamped "627.8"-----	627.72
T. 23 N., R. 2 E., 0.25 mile west of southeast corner of sec. 27, 40 feet west of center of private road south, in center of east-west road; chiseled circle on stone, marked "669.0"-----	668.98
T. 33 N., R. 2 E., 0.25 mile east of southwest corner of sec. 26, opposite T road south, 1.3 feet south of fence, north side of east-west road; iron post stamped "663 Ill"-----	662.992
T. 32 N., R. 2 E., 0.25 mile east of northwest corner of sec. 2, southwest corner of crossroads, 8 feet northeast of fence corner; chiseled circle on top of stone, marked "692.8"-----	692.71
T. 32 N., R. 2 E., 0.25 mile north by 0.25 mile east of southwest corner of sec. 2, at southeast corner of road forks, opposite store, 2.7 feet northwest of fence corner; painted square on rock, marked "687.5"-----	687.37

From Ottawa east and south to point 2 miles west by 1 mile north of Union School.

Ottawa, 1.1 miles south of, in locality known as South Ottawa, in southwest corner of intersection of State and Campbell streets, 8 feet north of water trough; chiseled circle on stone, marked "541.7"-----	541.73
Ottawa, 2.4 miles southeast of, at southwest corner of jog in road to south, on rock at base of corner fence post; chiseled square marked "570.8"-----	570.77
T. 33 N., R. 4 E., northeast corner of sec. 20, 3.7 miles southeast of Ottawa, southeast corner of T road east, 6.5 feet northeast of corner of hedge fence; iron post stamped "610 Ill"-----	610.269
T. 33 N., R. 4 E., northwest corner of sec. 21, southeast corner of T road south, on rock on top of south end of drain; chiseled circle marked "639.3"-----	639.25
T. 33 N., R. 4 E., southwest corner of sec. 21, northeast corner of T road west, on southeast corner of wing wall of bridge; chiseled circle marked "618.4"-----	618.38
T. 33 N., R. 4 E., northwest corner of sec. 33, 6.7 miles southeast of Ottawa, in southeast corner of crossroads, 6 feet south of corner fence post, 3 feet west of fence; iron post stamped "618 Ill"-----	618.333
Tps. 32 and 33 N., R. 4 E., corner of secs. 4, 5, 32, and 33, at T road east; chiseled circle on section stone, marked "608.2"-----	608.20
T. 32 N., R. 4 E., corner of secs. 4, 5, 8, and 9, at crossroads; chiseled circle on section stone, marked "624.5"-----	624.50
T. 32 N., R. 4 E., southwest corner of sec. 9, at northeast corner of crossroads, 1.6 feet southwest of corner fence post; iron post stamped "614 Ill"-----	614.248

	Feet.
T. 32 N., R. 4 E., corner of secs. 9, 10, 15, and 16, at crossroads; chiseled circle on section stone, marked "629.8"-----	629.76
From point 1.2 miles west by 0.5 mile north of Grand Ridge west along highways to Clayton School.	
Grand Ridge, 1.2 miles west by 0.5 mile north of, 20 feet south by 20 feet west of quarter corner between secs. 14 and 15, T. 32 N., R. 3 E., southeast corner of T road west; iron post stamped "Prim. Trav. Sta. No. 5, 1911, Illinois, 641"-----	641.636
T. 32 N., R. 3 E., quarter corner east side of sec. 16, 2.2 miles west by 0.5 mile north of Grand Ridge, at northwest corner of crossroads; spike in base of telephone pole, marked "648.6"-----	648.60
T. 32 N., R. 3 E., quarter corner between secs. 16 and 17, at crossroads; chiseled square on section stone, marked "655.1"-----	655.14
T. 32 N., R. 3 E., quarter corner east side of sec. 8, at southwest corner of crossroads, 3.6 feet east of hedge corner; iron post stamped "649 Ill"-----	649.121
T. 32 N., R. 3 E., near quarter corner east side of sec. 7, 30 feet east by 80 feet north to quarter corner between secs. 7 and 8, southwest corner of crossroads, on concrete retaining wall; chiseled circle marked "658.0"-----	658.01
T. 32 N., R. 2 E., near quarter corner east side of sec. 12, at southwest corner of crossroads, in root of 10-inch thorn tree; spike marked "682.4"-----	682.41
T. 32 N., R. 3 E., about 0.25 mile south of northwest corner of sec. 18, on east side of north-south road opposite T road west; chiseled circle marked "688.8"-----	688.81
T. 32 N., R. 2 E., 0.25 mile south by 0.25 mile east of northwest corner of sec. 13, at Newell schoolhouse (District 86), on south side of road, opposite center of T road north, 1.5 feet north of fence; iron post stamped "695 Ill"-----	695.417
T. 32 N., R. 2 E., 0.25 mile east by 0.15 mile north of southwest corner of sec. 11, 60 feet northeast of junction of T road north and Farm Ridge road, in stump of 12-inch hedge thorn; copper nail stamped "662.8"-----	662.81
Vermillionville, at east edge of village, at south side of road forks, near quarter corner between secs. 9 and 10, T. 32 N., R. 2 E., 2 feet east and 1 foot north of junction of fences on Farm Ridge and Ottawa roads; iron post stamped "644 Ill"-----	644.383
T. 33 N., R. 2 E., quarter corner between secs. 32 and 33, in southwest corner of yard of Clayton School (district 169), opposite center of T road, 7.8 feet east of old fence corner, 1.1 feet north of old fence; iron post stamped "651"-----	650.559

MARSEILLES QUADRANGLE.

[Latitude 41° 15'-41° 30'; longitude 88° 30'-88° 45'.]

From point 2 miles west by 1 mile north of Union School to point 1 mile north of Union School.

T. 32 N., R. 4 E., near northeast corner of sec. 14, 250 feet east to corner of secs. 11, 12, 13, and 14 (at crossroads), on top of south-east wing wall of bridge over creek; chiseled circle marked "666.1"-----	666.08
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ODELL QUADRANGLE.

[Latitude 41°-41° 15'; longitude 88° 30'-88° 45'.]

From Union School west 1 mile.

	Feet.
Union schoolhouse, 6 miles east of Grand Ridge, at northwest corner of crossroads, 30 feet east by 25 feet south to corner of secs. 13, 14, 23, and 24, T. 32 N., R. 4 E. (center of crossroads); iron post stamped "Prim. Trav. Sta. No. 4, 1911, Illinois, 672"-----	672.618

STREATOR QUADRANGLE.

[Latitude 41°-41° 15'; longitude 88° 45'-89°.]

From point 1 mile west of Union School to point 1.2 miles west of Grand Ridge.

T. 33 N., R. 4 E., near southeast corner of sec. 17, in center of east-west road, 35 feet east to corner of secs. 16, 17, 20, and 21 (at crossroads); chiseled circle on large stone, marked "623.9"-----	623.93
T. 32 N., R. 4 E., southwest corner of sec. 18, 1 mile east of Grand Ridge, northeast corner of crossroads, 4 feet north of fence corner, 1.3 feet west of fence; iron post stamped "642 Ill"-----	641.763
Grand Ridge, in northwest corner of village, at southwest corner of crossroads, diagonally opposite public-school building, 3 feet north of sidewalk intersection; chiseled circle on flagstone, marked "643.4"-----	643.40
T. 32 N., R. 3 E., corner of secs. 14, 15, 22, and 23, 1.2 miles west of Grand Ridge, T road east; chiseled circle on section stone, marked "643.8"-----	648.82

Avon, Canton, and Galesburg quadrangles.

FULTON AND KNOX COUNTIES.

The elevations in the following list were determined by primary leveling and accord with Bulletin 493. Additional elevations in Canton quadrangle will be found in the bulletin mentioned.

The leveling was done in 1911 by J. B. Leavitt.

AVON QUADRANGLE.

[Latitude 40° 30'-40° 45'; longitude 90° 15'-90° 30'.]

From point 3.9 miles west of Fairview west along electric railroad to Ellisville, thence south along highway along Spoon River to Seville.

	Feet.
Fairview, 5.3 miles west of, bridge over Coal Creek; bolt in northeast corner marked "528.25"-----	528.27
T. 8 N., R. 2 E., near center of sec. 28, at Ellisville station, in northeast corner of foundation of water tank; copper nail marked "525.477"-----	525.50
T. 8 N., R. 2 E., near center of sec. 28, at Ellisville station, 30 feet north of water tank; iron post stamped "524.08"-----	524.101
Ellisville station, 0.25 mile south of, in southeast corner of iron bridge; bolt marked "526.00"-----	526.03

	Feet.
T. 8 N., R. 2 E., sec. 33, 1.1 miles south of Ellisville station, at south-west corner of culvert; bolt in iron railing, marked "585.94"-----	585.97
Tps. 7 and 8 N., R. 2 E., quarter corner between secs. 5 and 32, at T road south; cross on stone, marked "510.057"-----	510.09
Tps. 7 and 8 N., R. 2 E., between secs. 32 and 5, bridge over Spoon River at Ellisville, in south side of east pier; aluminum tablet stamped "517.44"-----	517.480
T. 7 N., R. 2 E., sec. 8, where road turns west, in root of black-oak tree; copper nail marked "647.32"-----	647.36
T. 7 N., R. 2 E., sec. 7, quarter corner at T road west; cross on corner stone, marked "646.525"-----	646.57
T. 7 N., R. 2 E., sec. 18, 1/16th corner at T road north; cross on corner stone, marked "518.205"-----	518.25
Babylon, 170 feet west of bridge over Spoon River, on southeast corner of culvert; cross marked "504.344"-----	504.40
Babylon, bridge over Spoon River, in northwest corner of west pier; aluminum tablet stamped "508.57"-----	508.625
Babylon, 2.2 miles south of, at northeast corner of T road north, opposite Pleasant Valley schoolhouse; copper nail in fence post, marked "503.323"-----	503.39
Babylon, 2.2 miles south of, 1.5 miles west of Diltz Bridge, opposite Pleasant Valley schoolhouse, at northeast corner of T road north; iron post stamped "500.45"-----	500.509
Pleasant Valley schoolhouse, 2.2 miles south of, in southwest corner of culvert over drainage ditch; nail head marked "493.47"-----	493.54
T. 6 N., R. 2 E., sec. 6, 900 feet west by 300 feet north of Whites Ferry Bridge, east side of road, at T road north; copper nail in top of fence post, marked "491.96"-----	492.04
T. 6 N., R. 2 E., sec. 6, 900 feet west of Whites Ferry Bridge, north side of road at jog north; iron post stamped "489.87"-----	489.947
T. 6 N., Rs. 1 and 2 E., quarter corner between secs. 1 and 6; copper nail in root of walnut tree, marked "605.92"-----	605.99
T. 6 N., R. 1 E., sec. 1, in hollow in root of white-oak tree, in center of road at T road east; copper nail marked "505.87"-----	505.95
T. 6 N., R. 1 E., sec. 12, 3.4 miles north of Seville; copper nail in tree root, marked "616.74"-----	616.82
T. 6 N., R. 1 E., secs. 12 and 13, quarter corner at T road north; cross on corner stone, marked "616.12"-----	616.12
T. 6 N., R. 1 E., secs. 12 and 13, quarter corner; cross on corner stone, marked "613.98"-----	614.07
Seville, 0.8 mile north of, in southeast corner of steel bridge; bolt on rail, marked "495.32"-----	495.41
From Ellisville north along highway to New London. (Spur line run twice.)	
Ellisville, 1.2 miles north of, 330 feet north of station board marked "Ellisville"; copper nail in crosstie, marked "515.95"-----	515.99
Ellisville, 2.3 miles north of, 150 feet north of road crossing, at west side of railroad track; copper nail in post, marked "521.36"-----	521.41
T. 8 N., R. 2 E., secs. 16 and 21, 180 feet south of milepost 22, 50 feet west of railroad track; iron post stamped "518.74"-----	518.791

	Feet.
Ellisville, 3.8 miles north of, in southwest corner of trestle; bolt marked "526.31"-----	526.35
Ellisville, 4.3 miles north of, on trestle north of road crossing; bolt in northwest corner, marked "524.65"-----	524.66
London Mills, on platform of Chicago, Burlington & Quincy R. R. station; bolt in northwest corner, marked "534.71"-----	534.70
London Mills, bridge over Spoon River; cross on west railing, marked "538.59"-----	538.67
London Mills, bridge over Spoon River, in southwest corner of south pier; aluminum tablet stamped "534.22"-----	534.206

From New London north 2.3 miles.

T. 9 N., R. 2 E., corner of secs. 27, 28, 33, and 34, at T road west; nail head in culvert, marked "609.55"-----	609.57
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CANTON QUADRANGLE.

[Latitude 40° 30'-40° 45'; longitude 90°-90° 15'.]

From Fairview west 3.9 miles along electric railroad.

Fairview, 2.2 miles west of, in southwest corner of bridge; copper nail marked "611.64"-----	611.66
Fairview, 2.6 miles west of, at east side of road crossing; cross cut in south rail of track, marked "598.77"-----	598.78
Fairview, 2.6 miles west of, 30 feet north of railroad track, on east side of road; iron post stamped "600.18"-----	600.195

From Way School southeast to Slough Island School, thence west to London Mills.

T. 9 N., R. 2 E., near northeast corner of sec. 26, bridge over Spoon River, at south end of middle pier; cross on top stone, marked "541.22"-----	541.34
T. 9 N., R. 2 E., near quarter corner south side of sec. 25, bridge over Littlers Creek, in southwest corner; bolt (?) marked "536.53"-----	536.69
T. 9 N., R. 2 E., quarter corner near center of sec. 36, at northeast corner of crossroads, south of Slough Island schoolhouse; iron post stamped "612.40" (levelman should have tied to bench mark 629.917)-----	612.571

GALESBURG QUADRANGLE.

[Latitude 40° 45'-41°; longitude 90° 15'-90° 30'.]

From point 2.3 miles north of New London north 0.5 mile and east along highway to Way School.

T. 9 N., R. 2 E., quarter corner between secs. 21 and 22, at southwest corner of T road south; iron post stamped "Prim. Trav. Sta. No. 24, 632.00"-----	632.062
T. 9 N., R. 2 E., quarter corner between secs. 22 and 23, in center of crossroads, at Way School; cross on large stone, marked "625.11"-----	625.20

Alton, Edwardsville, Gillespie, Mount Olive, and New Douglas quadrangles.

MACOUPIN, MADISON, AND MONTGOMERY COUNTIES.

The elevations in the following lists were determined by primary leveling and accord with the 1907 adjustment and Bulletin 421.

The leveling was done in 1912 in Alton, Edwardsville, Gillespie, and New Douglas quadrangles by R. G. Clinite and in Litchfield quadrangle by R. G. Clinite and S. R. Archer.

NEW DOUGLAS QUADRANGLE.

[Latitude 38° 45'-39°; longitude 89° 30'-89° 45']

From Highland north along highway to New Douglas.

	Feet.
Highland, in First National Bank Building; aluminum tablet stamped "545 Ill"-----	544.680
T. 4 N., R. 5 W., quarter corner north side of sec. 32, southwest corner of road forks, on northwest concrete wing wall of tile culvert; chiseled circle marked "535.6"-----	535.64
T. 4 N., R. 5 W., corner of secs. 28, 29, 32, and 33, center of cross-roads; chiseled circle on section stone, marked "536.3"-----	536.35
T. 4 N., R. 5 W., northeast corner of sec. 29, southwest of cross-roads, 1 foot west of mail box; copper nail in top of wooden peg, marked "541.7"-----	541.69
T. 4 N., R. 5 W., quarter corner west side of sec. 21, east side of north-south road, opposite T road west, 20 feet east by 10 feet south of half-section stone; iron post stamped "535 Ill 1912"-----	535.328
T. 4 N., R. 5 W., 0.2 mile south of quarter corner west side of sec. 16, opposite private road west, 1 foot west of north-south fence; copper nail in top of wooden stake, marked "544.8"-----	544.85
T. 4 N., R. 5 W., 0.2 mile north of quarter corner east side of sec. 15, northwest corner of T road west, at north end of drain; copper nail in top of small post, marked "550.7"-----	550.71
T. 4 N., R. 5 W., near southwest corner of sec. 9, at junction of angle road to northeast 60 feet southeast of road forks, 1 foot inside of fence; copper nail in top of 14-inch oak stump, marked "519.2"-----	519.23
T. 4 N., R. 5 W., 0.25 mile east of southwest corner of sec. 4, 1 mile south of Grant Fork, on east side of road, 800 feet south of small creek; copper nail in root of 20-inch oak tree, marked "530.0"-----	530.03
Grant Fork, opposite post office, northeast corner of street intersection, 1 foot south of telephone pole; iron post stamped "538 Ill 1912"-----	537.613
T. 5 N., R. 5 W., 0.2 mile east of southwest corner of sec. 28, opposite T road west; copper nail in root of 30-inch cottonwood tree, marked "555.7"-----	555.71
T. 5 N., R. 5 W., 0.2 mile east of northwest corner of sec. 28, southwest corner of cross roads; copper nail in west end of plank culvert, marked "546.3"-----	546.32
T. 5 N., R. 5 W., 0.2 mile east of corner of secs. 16, 17, 20, and 21, on section line, opposite center of T road west; iron post stamped "560 Ill 1912"-----	560.058

	Feet.
T. 5 N., R. 5 W., 0.2 mile north of corner of secs. 16, 17, 20, and 21, on west side of elbow road west to north, 15 feet west by 10 feet north of quarter-section stone, 1 foot east of fence; copper nail in top of wooden stake, marked "570.0"-----	570.07
T. 5 N., R. 5 W., northeast corner of sec. 17, southwest corner of crossroads, diagonally opposite Rockwell School, 5 feet northeast of corner of hedge fence; chiseled square on stone (not a section stone), marked "583.4"-----	583.45
T. 5 N., R. 5 W., northeast corner of sec. 8, southwest corner of crossroads, in south end of plank culvert; copper nail marked "595.5"-----	595.54
T. 5 N., R. 5 W., northwest corner of sec. 4, southeast corner of crossroads, 35 feet east by 25 feet south of section corner; iron post stamped "602 Ill 1912"-----	601.697
T. 6 N., R. 5 W., northwest corner of sec. 33, opposite private road west, in south end of bridge floor; copper nail marked "607.6"-----	607.65
T. 6 N., R. 5 W., northwest corner of sec. 28, southeast corner of T road south, 20 feet east by 15 feet south of center of roads; copper nail in top of stump of telephone pole, marked "616.6"-----	616.67
T. 6 N., R. 5 W., quarter corner between secs. 21 and 28, northwest corner of crossroads, in northwest wing wall of culvert; copper nail in top of post, marked "607.0"-----	607.05
New Douglas, at crossing of Toledo, St. Louis & Western R. R. (Clover Leaf Route), 180 feet east of station; top of rail of siding, marked "608.6"-----	608.64
New Douglas, southeast corner of main north-south street and east-west alley, 30 feet south of saloon owned by Chris. Schallenberg; iron post stamped "619 Ill 1912"-----	618.988
T. 6 N., R. 5 W., center of sec. 9, center of crossroads; chiseled square on section stone, marked "608.5"-----	608.57
T. 6 N., R. 5 W., 0.5 mile north of quarter corner south side of sec. 4, on road along Madison-Montgomery county line, at T road south, in north end of plank culvert; copper nail marked "608.2"-----	608.29
T. 6 N., R. 5 W., 0.5 mile north of quarter corner south side of sec. 5, on road along Madison-Montgomery county line, opposite center of T road north, on south side of road, 1 foot north of fence; copper nail in top of stake, marked "614.4"-----	614.47

MOUNT OLIVE QUADRANGLE:

[Latitude 39°-39° 15'; longitude 89° 30'-89° 45']

From center of sec. 28, T. 7 N., R. 6 E., east to east side of sec. 32, T. 7 N., R. 4 W., thence north to sec. 16, T. 8 N., R. 4 W., thence west to sec. 19, T. 8 N., R. 5 W.	
T. 7 N., R. 6 W., 0.2 mile west of center of sec. 26, southwest corner of crossroads, 20 feet south by 16 feet west of center of crossroads; iron post stamped "636 Ill 1912"-----	636.111
T. 7 N., R. 6 W., near quarter corner between secs. 25 and 26, 0.5 mile east of Illinois Central R. R. crossing, in north end of small plank bridge; painted spike head marked "626.0"-----	626.07
T. 7 N., R. 5 W., 0.2 mile west of center of sec. 30, opposite center of T road south, in west end of plank culvert of road leading into meadow; copper nail marked "624.1"-----	624.24

	Feet.
T. 7 N., R. 5 W., 0.2 mile west of northeast corner of sec. 31, in northeast corner of crossing of Big Four Route and wagon road, on north end of tile drain; painted square marked "630.5"-----	630.62
T. 7 N., R. 5 W., northwest corner of sec. 33, T road south, at southeast corner of road forks, at fence corner; iron post stamped "618"	618.174
T. 7 N., R. 5 W., northeast corner of sec. 33, secondary road south, southwest corner of road forks, inside of fence corner, in top of small stump; copper nail marked "606.9"-----	607.02
T. 7 N., R. 5 W., south center of southeast quarter of sec. 27, 120 feet west of quarter section line crossing, on north side of road, at west end of hedge fence, in root of 12-inch hedge tree; copper nail marked "603.1"-----	603.22
T. 7 N., R. 5 W., north center sec. 35, southwest corner of T road west, on top of south end of steel drain under road to west; painted square marked "577.5"-----	577.57
T. 7 N., R. 5 W., 0.8 mile south of center of sec. 35, southeast corner at T road east, at fence corner; iron post stamped "588"-----	588.271
T. 7 N., R. 5 W., south center of northwest quarter of sec. 36, on top of quarter section stone in center of road; chiseled square marked "584.8"-----	584.94
T. 7 N., R. 5 W., north center of southeast quarter of sec. 36, on south side of road at T road north, on east side of private road to south, on top of east end of drain; painted square marked "573.7"-----	573.81
T. 7 N., R. 4 W., center of sec. 31, at T road south, 0.5 mile north by 0.2 mile west of Sorento, on north side of road, 30 feet east of center of roads; copper nail in root of tree marked "584.8"-----	584.95
T. 7 N., R. 4 W., east center sec. 31, northwest corner of T road north, 60 feet west of center of road forks, stepping stone in front of house; painted square on top of southeast corner marked "586.4"-----	586.56
T. 7 N., R. 4 W., east center of sec. 32, northwest corner of bend in road to west, at fence corner; iron post stamped "584"-----	584.135
T. 7 N., R. 4 W., 0.2 mile north of east center of sec. 32, northeast corner of Toledo, St. Louis & Western R. R. crossing on north-south public road; railroad spike in foot of warning post marked "569.6"-----	569.74
T. 7 N., R. 4 W., 0.1 mile north of southwest corner of sec. 27, northeast corner of Toledo, St. Louis & Western R. R. crossing, on north-south public road; railroad spike in warning post marked "521.7"-----	521.88
T. 7 N., R. 4 W., near south center of southwest quarter of sec. 22, at south side of east entrance to Panania public-school building; iron post stamped "595"-----	595.619
T. 7 N., R. 4 W., 0.1 mile south of northeast corner of sec. 21, northwest corner of T road west, in base of corner fence post; copper nail marked "599.5"-----	599.62
T. 7 N., R. 4 W., near center of sec. 15, northeast corner of T road east, in top of east end of plank drain under north road; copper nail marked "599.2"-----	599.38
T. 7 N., R. 4 W., 0.25 mile south of north center of sec. 15, southeast corner of T road south, in base of telephone pole; copper nail marked "603.5"-----	603.68

	Feet.
T. 7 N., R. 4 W., 0.2 mile east of southwest corner of sec. 11, on north side of east-west road at T road south, 30 feet northwest of center of road forks, at fence line; iron post stamped "615"-----	614.968
T. 7 N., R. 4 W., 0.2 mile north of center of sec. 11, northwest corner of road intersection, in root of 14-inch thorn tree; copper nail marked "620.0"-----	620.19
T. 7 N., R. 4 W., 0.1 mile south of quarter corner north side of sec 2, opposite center of T road south, 6 feet south of small double elm tree, 2 feet south of fence; copper nail in top of wooden peg, marked "612.2"-----	612.37
T. 8 N., R. 4 W., 0.2 mile east by 0.2 mile north of center of sec. 34, northwest corner of road forks, on line with north-south rail fence, 30 feet north of center of road, 2 feet east of small walnut sapling; iron post stamped "607 Ill 1912"-----	607.534
T. 8 N., R. 4 W., just north of center of sec. 27, 240 feet northwest of road forks, southeast corner of steel highway bridge over Shoal Creek, on concrete block supporting bridge post; painted square marked "536.1"-----	536.26
T. 8 N., R. 4 W., about 0.1 mile east by 0.05 mile north of southwest corner of sec. 22, southeast corner at T road south, in east end of plank culvert; copper nail marked "627.1"-----	627.24
T. 8 N., R. 4 W., about 0.2 mile northeast of center of sec. 16, 75 feet east by 60 feet north of center of crossroads, 3 feet southwest of hedge corner; iron post stamped "626 Ill 1912"-----	625.994
T. 8 N., R. 4 W., quarter corner between secs. 16 and 17, center of crossroads; chiseled square on section stone, marked "633.8"-----	634.01
T. 8 N., R. 4 W., 0.2 mile west of center of sec. 17, southeast corner of road forks, 36 feet northwest of two-story frame house, in root of 8-inch elm tree; copper nail marked "631.2"-----	631.41
T. 8 N., R. 4 W., 0.1 mile northwest of center of sec. 18, 120 feet west of T road north, at steel bridge over Shoal Creek, in southeast corner of bridge floor; copper nail marked "550.6"-----	550.74
Shoal Creek; surface of water at bridge, Sept. 12, 1912-----	536
T. 8 N., R. 5 W., quarter corner east side of sec. 13, 20 feet west by 45 feet south of center of road forks, west side of township line, 1.5 feet south of telephone pole at T road east; iron post stamped "549 Ill 1912"-----	549.648
T. 8 N., R. 5 W., 0.2 mile north of quarter corner west side of sec. 13, northeast corner of elbow road west to north, at old secondary road south, in root of 40-inch oak tree; copper nail marked "637.7"-----	637.92
T. 8 N., R. 5 W., about 0.2 mile south by 0.2 mile east of center of sec. 14, in southwest concrete wing wall of small iron bridge over creek; bottom of chiseled square marked "517.7"-----	517.90
T. 8 N., R. 5 W., southwest corner of sec. 14, 30 feet east by 5 feet north of road intersection at T road west; iron post stamped "Prim. Trav. Sta. No. 73, 654, 1911"-----	653.837
T. 8 N., R. 5 W., northwest corner of sec. 22, southeast corner of crossroads, on south end of tile drain; painted square marked "651.0"-----	651.20
T. 8 N., R. 5 W., 0.2 mile west of quarter corner south side of sec. 16, northeast corner of T road north, 2 feet east of corner fence post; copper nail in top of wooden stake, marked "670.0"-----	670.18

	Feet.
T. 8 N., R. 5 W., 0.2 mile west of northeast corner of sec. 20, opposite T road north, 25 feet east by 14 feet south of quarter section stone; iron post stamped "671 Ill 1912"-----	671.095
T. 8 N., R. 5 W., 0.05 mile west of quarter corner east side of sec. 19, on west side of Illinois Traction System right of way, on north side of wagon road, at Grosenheider crossing; painted square on tile drain, marked "676.7"-----	676.95
T. 8 N., R. 5 W., quarter corner west side of sec. 19, on Montgomery-Macoupin county line, southeast corner of secondary T road south, jog in east-west road, in east end of plank drain; copper nail marked "685.1"-----	685.35
From T. 8 N., R. 4 W., sec. 16, north to T. 9 N., R. 4 W., sec. 16, thence west to T. 9 N., R. 6 W., sec. 14.	
T. 8 N., R. 4 W., 0.4 mile east of center of sec. 9, at elbow road east to north, in south end of plank drain; copper nail marked "616.4"-----	616.62
T. 8 N., R. 4 W., 0.2 mile west of quarter corner south side of sec. 3, northwest corner of T road north, 10 feet east of corner fence post, in top of oak stump; copper nail marked "629.8"-----	629.95
T. 9 N., R. 4 W., southeast corner of sec. 33, northwest corner of T road north, 2 feet east of corner of hedge fence, at base of telephone pole; copper nail in top of wooden peg, marked "624.0"-----	624.21
T. 9 N., R. 4 W., southwest corner of sec. 27, northeast corner of road forks, 27 feet east by 14 feet north of section stone; iron post stamped "734 Ill 1912"-----	734.138
Butler, on main north-south street, opposite scales in front of two-story frame building, on south end of tile drain under concrete sidewalk crossing; painted square marked "628.3"-----	628.50
T. 9 N., R. 4 W., just west of quarter corner south side of sec. 16, northeast corner of crossroads, in north end of plank drain; copper nail marked "637.2"-----	637.35
T. 9 N., R. 4 W., about 0.2 mile west of quarter corner north side of sec. 16, at southeast corner of T road south, 120 feet south by 28 feet east of road center; iron post stamped "649 Ill 1912"-----	649.514
T. 9 N., R. 4 W., southwest corner of sec. 9, northeast corner T road north, 8 feet east of corner of hedge fence, in stump of telephone pole; copper nail marked "642.3"-----	642.52
T. 9 N., R. 4 W., southeast corner of sec. 7, northwest corner of T road north, in north end of plank drain; copper nail marked "663.6"-----	663.80
T. 9 N., Rs. 4 and 5 W., corner of secs. 7, 12, 13, and 18, center of elbow road west to south; chiseled square in top of section stone, marked "669.2"-----	669.36
T. 9 N., R. 5 W., center of sec. 13, at elbow road west to south, 14 feet west of center of turn; copper nail in top of wooden peg, marked "685.8"-----	686.04
T. 9 N., R. 5 W., quarter corner north side of sec. 24, 18 feet east by 15 feet south of center of crossroads, opposite Victory school-house; iron post stamped "665 Ill 1912"-----	665.362

	Feet.
T. 9 N., R. 5 W., 0.3 mile north by 0.2 mile east of center of sec. 23, southwest corner of road forks, 200 feet southwest of ford over Shoal Creek, 30 feet south of center of road forks; copper nail in top of wooden stake, marked "572.4"-----	572. 57
T. 9 N., R. 5 W., about 0.2 mile east of quarter corner south side of sec. 15, northeast corner T road north, in east end of plank drain; copper nail marked "673.0"-----	673. 22
T. 9 N., R. 5 W., northeast corner of sec. 21, 30 feet west by 22 feet south of center of crossroads; iron post stamped "668 Ill 1912"---	668. 585
T. 9 N., R. 5 W., northwest corner of sec. 21, southeast corner of crossroads, in south end of plank drain; copper nail marked "662.9"---	663. 10
T. 9 N., R. 5 W., southeast corner of sec. 18, northwest corner of crossroads, in west end of small plank bridge; copper nail marked "661.7"-----	661. 96
T. 9 N., R. 6 W., southeast corner of sec. 13, on west side of Montgomery-Macoupin County line, northwest corner of crossroads, jog in east-west road, 4 feet west of corner fence post, 1.7 feet south of fence; iron post stamped "668 Ill 1912"-----	667. 802
T. 9 N., R. 6 W., northeast corner of sec. 23, 12 feet west of fence on section line north-south, south side of road, in root on north side of 20-inch maple tree; copper nail marked "666.5"-----	666. 70
T. 9 N., R. 6 W., southwest corner of sec. 14, northeast corner at T road north, in east end of plank drain; copper nail marked "664.9"	665. 16
From T. 7 N., R. 6 W., sec. 26, north to T. 9 N., R. 6 W., sec. 34.	
T. 7 N., R. 6 W., northwest corner of sec. 26, northwest corner of William Saatkamp's pasture lot, at T road north, 0.5 foot north of corner fence post; copper nail in top of wooden peg, marked "645.1"-----	645. 24
T. 7 N., R. 6 W., southeast corner of sec. 15, northwest corner of crossroads, in west end of plank drain; copper nail marked "654.9"-----	654. 99
T. 7 N., R. 6 W., 0.2 mile south of northwest corner of sec. 14, 400 feet south of Wabash R. R. track, 300 feet west of dwelling house, on stone in center of north-south road; chiseled circle marked "666.3"-----	666. 43
T. 7 N., R. 6 W., 0.2 mile south of quarter corner between secs. 10 and 11, at crossing of Wabash R. R. spur and wagon road, on south end of tile drain; painted square marked "666.0"-----	666. 07
Mount Olive, in west edge of town; southeast corner of school yard; iron post stamped "681 Ill 1912"-----	681. 044
T. 7 N., R. 6 W., center of sec. 2, southeast corner of T road south, in east end of plank culvert; copper nail marked "684.8"-----	684. 91
T. 7 N., R. 6 W., 0.2 mile east of northeast corner of sec. 2, 40 feet east of jog in road at township line, in root of 15-inch cherry tree in stubble field; copper nail marked "686.7"-----	686. 74
T. 8 N., R. 6 W., southeast corner of sec. 26, northwest corner of crossroads, in north end of plank culvert; copper nail marked "683.4"---	683. 44
T. 8 N., R. 6 W., quarter corner between secs. 23 and 24, southwest corner of crossroads, 18 feet south by 15 feet west of quarter section stone; iron post stamped "Prim. Trav. Sta. No. 63, 675 Ill 1911"---	674. 767
T. 8 N., R. 6 W., 0.2 mile west of center of sec. 23, at jog in road south to west, 3 feet south of telephone pole; copper nail in top of wooden stake, marked "665.0"-----	665. 08

	Feet.
T. 8 N., R. 6 W., quarter corner between secs. 13 and 14, at T road west; chiseled square on quarter section stone, marked "669.7"-----	669.51
T. 8 N., R. 6 W., quarter corner west side of sec. 12, northeast corner at T road east, in east end of plank drain; copper nail marked "669.4"-----	669.24
T. 8 N., R. 6 W., quarter corner west side of sec. 1, 20 feet north by 4 feet east of intersection at T road south; iron post stamped "670 Ill 1912"-----	669.832
T. 8 N., R. 6 W., center of sec. 2, northwest corner of intersection of east-west public road and north-south private road, at foot of post at J. Boehmes mail box; painted square on stone, marked "661.4"-----	661.20
T. 8 N., R. 6 W., 0.2 mile east of center of sec. 3, northeast corner of T road east, north end of plank culvert; copper nail in floor, marked "663.0"-----	662.87
T. 9 N., R. 6 W., quarter corner south side of sec. 34, northwest corner of crossroads, in north end of plank drain; spike marked "670.0"-----	669.80
T. 9 N., R. 6 W., quarter corner north side of sec. 34, 32 feet south by 24 feet east of center of crossroads intersection; iron post stamped "664 Ill 1912"-----	663.932

GILLESPIE QUADRANGLE.

[Latitude 39°-39° 15'; longitude 89° 45'-90'.]

From Staunton west to T. 7 N., R. 8 W., center of sec. 35.

T. 7 N., R. 6 W., 0.2 mile east of center of sec. 28, center of T road east; chiseled square on stone, marked "644.8"-----	644.87
Staunton, in east edge of city, east basement window south side of St. Michael's School building, on stone sill; chiseled circle marked "623.7"-----	623.82
Staunton, southeast corner of public park; iron post stamped "622 Ill 1912"-----	621.964
T. 7 N., R. 6 W., 0.2 mile west of quarter corner north side of sec. 31, 1 mile west of Staunton, southwest corner of private road south, on rock 2 feet northeast of gate post; painted square, marked "561.2"-----	561.34
T. 7 N., R. 7 W., 0.2 mile south by 0.2 mile west of center of sec. 25, 2.1 miles west of Staunton, 600 feet west of bridge over Cahokia Creek, on north side of road, 1 foot east of north-south fence line; iron post stamped "522 Ill 1912"-----	522.532
T. 7 N., R. 7 W., 0.2 mile west of center of sec. 26, at T road north, on stone in center of road; chiseled circle marked "593.2"-----	593.30
T. 7 N., R. 7 W., quarter corner between secs. 26 and 27, at southeast corner of T road south, in root of 12-inch sassafras tree; copper nail marked "593.5"-----	593.66
T. 7 N., R. 7 W., center of sec. 28, 16 feet south by 12 feet west of center of crossroads; iron post stamped "Prim. Trav. Sta. No. 64, 600 Ill 1911"-----	599.706
T. 7 N., R. 7 W., center of sec. 33, northeast corner of crossroads, 14 feet north of gate, 1 foot west of rail fence; copper nail in top of wooden peg, marked "590.3"-----	590.43
T. 7 N., R. 7 W., 0.4 mile south by 0.2 mile east of center of sec. 32, at southeast corner of road forks, in northwest corner of bridge floor; head of wire spike painted "539.3"-----	539.41

	Feet.
T. 7 N., R. 7 W., 0.3 mile south of quarter corner between secs. 31 and 32, northeast corner of crossroads, 6 feet east of corner fence post, 2 feet south of fence; iron post stamped "590 Ill 1912"-----	590. 111
T. 7 N., R. 8 W., quarter corner east side of sec. 36, northwest corner of crossroads, 6 feet south of telephone pole, 1 foot north of mail box; head of wire spike in top of wooden peg, marked "614.1"-----	614. 25
T. 7 N., R. 8 W., 0.2 mile east by 0.1 mile north of quarter corner west side of sec. 36, at small steel bridge over creek; bottom of square cut in southwest wing wall, marked "569.8"-----	569. 92
T. 7 N., R. 8 W., 0.3 mile west of center of sec. 35, 12 feet east by 15 feet south of center of crossroads; iron post stamped "619 Ill 1912"-----	619. 558
From T. 8 N., R. 6 W., sec. 15, west to T. 8 N., R. 8 W., sec. 23, thence south to T. 7 N., R. 8 W., sec. 35.	
T. 8 N., R. 6 W., quarter corner between secs. 15 and 22, northwest corner of road forks, at foot of bluff, 18 feet north of 14-inch elm tree in center of north side of triangular grass plot, in top of 24-inch elm stump; copper nail marked "603.3"-----	603. 36
T. 8 N., R. 6 W., 0.2 mile east of quarter corner between secs. 16 and 21, at crossroads; chiseled square on section stone, marked "638.3"-----	638. 32
T. 8 N., R. 6 W., 0.2 mile east of northwest corner of sec. 21, opposite T road north, 4 feet west of telephone pole, 1 foot north of fence; iron post stamped "645 Ill 1912"-----	644. 660
T. 8 N., R. 6 W., 0.2 mile west of quarter corner between secs. 17 and 20, southeast corner of crossroads, in south end of plank culvert; copper nail marked "644.6"-----	644. 59
Gillespie, concrete doorstep of Gillespie National Bank building, on northeast corner; painted square marked "660.3"-----	660. 35
T. 8 N., R. 7 W., northwest corner of sec. 24, at T road north, 14 feet south by 11 feet east of section stone; iron post stamped "662 Ill 1912"-----	662. 018
T. 8 N., R. 7 W., southwest corner of sec. 14, northeast corner of T road north, in east end of plank drain; copper nail marked "659.4"-----	659. 45
T. 8 N., R. 6 W., corner of secs. 15, 16, 21, and 22, at center of crossroads, in root of burned stump; copper nail marked "653.0"-----	653. 03
T. 8 N., R. 6 W., at quarter corner between secs. 21 and 22, southwest corner of T road west, in south end of plank culvert; copper nail marked "659.3"-----	659. 30
T. 8 N., R. 6 W., quarter corner between secs. 20 and 21, 27 feet west by 18 feet north of center of intersection of crossroads; iron post stamped "Prim. Trav. Sta. No. 67, 661 Ill 1911"-----	661. 420
T. 8 N., R. 6 W., 0.2 mile west of center of sec. 20, southeast corner of crossroads (private road north), in south end of plank culvert; copper nail marked "657.1"-----	657. 13
T. 8 N., R. 6 W., southeast corner of sec. 18, northwest corner of T road west, 2 feet south of telephone pole, in top of 10-inch white oak stump; copper nail marked "637.5"-----	637. 54
T. 8 N., R. 6 W., near northwest corner of sec. 19, 90 feet east of township line, just east of crossroads, on south end of small bridge; head of spike painted "641.7"-----	641. 65

	Feet.
T. 8 N., R. 8 W., southeast corner of sec. 14, 18 feet north by 24 feet west of center of crossroads; iron post stamped "643 Ill 1912"-----	643.338
T. 8 N., R. 8 W., northeast corner of sec. 22, southwest corner of T road south, at corner of fence line, in stump at base of 10-inch osage tree; nail marked "642.0"-----	642.02
T. 8 N., R. 8 W., southwest corner of sec. 23, northeast corner of crossroads, 25 feet north by 22 feet east of center of road intersection; iron post stamped "651 1912"-----	651.407
T. 8 N., R. 8 W., southeast corner of sec. 27, 40 feet north of center of crossroads, in west end of plank culvert; copper nail marked "654.5"-----	654.43
T. 8 N., R. 8 W., at center of sec. 35, at T road south; chiseled square on half section stone, marked "653.7"-----	653.71
T. 8 N., R. 8 W., at quarter corner south side of sec. 35, 16 feet north of fence on township line, 22 feet west of north-south half-section line; iron post stamped "667 Ill 1912"-----	666.860
T. 7 N., R. 8 W., at center of sec. 2, at secondary road east, jog in north-south road, in east end of plank culvert; copper nail marked "658.5"-----	658.48
T. 7 N., R. 8 W., quarter corner between secs. 2 and 11, southwest corner of T road west, in root of 20-inch locust tree; copper nail marked "660.2"-----	660.15
T. 7 N., R. 8 W., quarter corner north side of sec. 14, at southeast corner of crossroads; bottom of square cut in top of concrete cap to tile drain, marked "656.0"-----	656.00
Bunker Hill, in main part of town, in base on west side of Lincoln Monument; aluminum tablet stamped "669 Ill 1912"-----	668.582
T. 7 N., R. 8 W., 0.1 mile north by 0.1 mile east of quarter corner south side of sec. 23, west side of road, opposite T road east, 7 feet east of center of gate in north-south fence; chiseled square on stone, marked "641.4"-----	641.34
T. 7 N., R. 8 W., center of sec. 26, northeast corner of crossroads, in north end of bridge; copper nail marked "634.7"-----	634.71
From T. 8 N., R. 8 W., sec. 22, north to Macoupin, thence east to T. 9 N., R. 6 W., sec. 34.	
T. 8 N., R. 8 W., 0.2 mile west of quarter corner north side of sec. 22, southeast corner at T road south, in top of 36-inch cottonwood stump; copper nail marked "632.4"-----	632.41
T. 8 N., R. 8 W., at corner of secs. 9, 10, 15, and 16, elbow road north to west with secondary road east, in north end of plank bridge; copper nail marked "628.1"-----	628.11
T. 8 N., R. 8 W., at quarter corner between secs. 9 and 16, at T road east, 18 feet east by 25 feet north of center of road intersection; iron post stamped "Prim. Trav. Sta. No. 66, 628 Ill 1911"-----	628.191
Plainview, east edge of town, at Chicago & Alton R. R. crossing; top of round battery box 5 feet west of warning post, marked "617.3"-----	617.28
T. 8 N., R. 8 W., quarter corner south side of sec. 3, southeast corner of T road north, in south end of plank bridge; copper nail marked "623.7"-----	623.68

	Feet.
T. 8 N., R. 8 W., quarter corner east side of sec. 3, northwest corner of elbow road east to north, in west end of plank drain; copper nail marked "622.1"-----	622.04
T. 9 N., R. 8 W., about 0.25 mile north of southeast corner of sec. 34, at T road east, 27 feet north of intersection, 3 feet east of north-south fence line on west side of road; iron post stamped "585 Ill 1912"-----	584.653
T. 9 N., R. 8 W., 0.1 mile east of southwest corner of sec. 26, at T road west, 20 feet west by 25 feet north of center of road intersection, in top of wooden peg; copper nail marked "594.2"-----	594.13
T. 9 N., R. 8 W., near quarter corner west side of sec. 26, opposite center of T road south, on east-west fence line, at southwest corner of W. H. Rhode's yard, on stone near mail box; chiseled circle marked "606.9"-----	606.82
Macoupin, 0.8 mile south of, at bridge of Chicago & Alton R. R. over Macoupin Creek, north stone abutment, west side, in top course; chiseled square marked "529.2"-----	529.10
Macoupin, 200 feet southwest of station, 20 feet east by 28 feet south of center of road forks; iron post stamped "533 Ill 1912"-----	532.636
T. 9 N., R. 8 W., 0.1 mile west of quarter corner east side of sec. 23, at top of bluff, south side of wagon road, at west edge of meadow, in root of 10-inch hickory tree; copper nail marked "607.7"-----	607.63
T. 9 N., R. 8 W., near quarter corner east side of sec. 24, at top of bluff, 200 feet west of bridge over small creek, on north side of road, opposite two-story frame house, 4 feet east of gate to wheat field; nail in top of wooden stake, marked "615.7"-----	615.59
T. 9 N., R. 7 W., 0.1 mile south of quarter corner east side of sec. 19, southwest corner at T road west, 4 feet west of corner fence post, 1 foot north of fence; iron post stamped "625 Ill 1912"-----	624.650
T. 9 N., R. 7 W., 0.2 mile north of center of sec. 20., at T road west. 20 feet north of road intersection; nail in top of stake, marked "623.7"-----	623.62
T. 9 N., R. 7 W., 0.2 mile south of northwest corner of sec. 16, northeast corner at T road east, in north end of plank drain; copper nail marked "624.3"-----	624.22
T. 9 N., R. 7 W., 0.2 mile north by 0.2 mile west of center of sec. 15, opposite T road north, 20 feet south of road intersection, 2 feet north of east-west hedge fence; iron post stamped "633 Ill 1912"-----	632.407
T. 9 N., R. 7 W., 0.2 mile south of center of sec. 15, northeast corner at T road east, on north end of tile drain; painted square marked "679.2"-----	679.07
T. 9 N., R. 7 W., 0.2 mile south of center of sec. 14, elbow road east to south; chiseled square on section stone, marked "638.0"-----	637.87
T. 9 N., R. 7 W., southwest corner of sec. 13, at elbow road east to south, 18 feet east of center of bend in road; copper nail in wooden peg, marked "640.1"-----	640.02
T. 9 N., R. 7 W., about 0.2 mile east by 0.2 mile north of center of sec. 24, opposite center of T road west, 300 feet south of iron bridge over Honey Creek, 30 feet east of elm tree in center of grass plot; iron post stamped "589 Ill 1912"-----	589.338

	Feet.
T. 9 N., R. 6 W., quarter corner west side of sec. 18, northeast corner at T road east, 1 foot southwest of corner fence post; copper nail in top of wooden peg, marked "641.2"-----	641.03
T. 9 N., R. 6 W., 0.1 mile south of quarter corner east side of sec. 18, opposite T road east, 30 feet north by 26 feet west of center of road intersection; copper nail in top of wooden peg, marked "638.3"---	638.19
T. 9 N., R. 6 W., center of sec. 16, southwest corner at T road west, 25 feet west of center of road, 12 feet west of forked peach tree; iron post stamped "659 Ill 1912"-----	659.339
T. 9 N., R. 6 W., 0.2 mile north of southeast corner of sec. 16, northwest corner at T road west, 16 feet west of corner fence post, 1 foot west of telephone pole; copper nail in top of wooden peg, marked "662.5"-----	662.32
T. 9 N., R. 6 W., 0.1 mile east of southwest corner of sec. 22, southwest corner at T road north, in top of stump of corner fence post of yard fence; copper nail marked "667.7"-----	667.56

EDWARDSVILLE QUADRANGLE.

[Latitude 38° 45'-39°; longitude 89° 45'-90°.]

From T. 7 N., R. 8 W., sec. 35, southwest to T. 6 N., R. 8 W., sec. 30.

T. 6 N., R. 8 W., 0.2 mile east of southwest corner of sec. 2, on west side of main road, opposite T road east, at northeast corner of William Weisemann's yard, 1 foot south of corner fence post; spike in top of wooden stake, marked "609.5"-----	609.62
T. 6 N., R. 8 W., 0.2 mile west of southeast corner of sec. 10, at jog to west in north-south road, in north end of plank culvert; spike painted "588.7"-----	588.85
T. 6 N., R. 8 W., 0.1 mile east of center of sec. 15, southwest corner of crossroads, south end of drain; spike with copper b. m. washer in small oak post, marked "569.8"-----	569.93
T. 6 N., R. 8 W., 0.1 mile northeast of center of sec. 22, southwest corner of Edwardsville and Alton roads (highways), 2 feet west by 1 foot north of corner fence post; iron post stamped "577 Ill 1912"-----	577.283
T. 6 N., R. 8 W., 0.3 mile south by 0.1 mile east of center of sec. 21, at small bridge over Indian Creek, on top course of southwest stone wing wall; chiseled square marked "520.3"-----	520.49
T. 6 N., R. 8 W., at southeast corner of sec. 20, northwest corner at T road north, in west end of plank drain; spike with copper b. m. washer marked "565.5"-----	565.64

ALTON QUADRANGLE.

[Latitude 38° 45'-39°; longitude 90°-90° 15'.]

From T. 6 N., R. 8 W., sec. 30, southwest to Woodriver.

T. 6 N., R. 8 W., 0.2 mile west of northeast corner of sec. 30, southeast corner of T road east, 30 feet southeast of center of roads, 10 feet south of corner fence post, 1 foot west of fence; iron post stamped "551 1912"-----	551.633
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	Feet.
T. 6 N., R. 9 W., 0.2 mile south of quarter corner east side of sec. 25, northwest corner of road forks, 3 feet south of fence, in root of 14-inch oak tree; spike with copper b. m. washer, marked "530.3"-----	530. 44
T. 6 N., R. 9 W., 0.2 mile south by 0.2 mile east of center of sec. 36, southeast corner at T road east, 1 foot east of telephone pole; head of wire nail in top of wooden stake, marked "471.6"-----	471. 73
T. 5 N., R. 9 W., 0.1 mile east of northwest corner of sec. 1, opposite center of private road north, 2 feet east of telephone pole, 1 foot north of fence; iron post stamped "457 Ill 1912"-----	457. 522
T. 5 N., R. 9 W., northwest corner of sec. 2, at T road south, 25 feet southeast of center of road intersection, 8 feet north of 20-inch elm tree; copper nail in top of wooden stake, marked "483.0"-----	483. 15
T. 6 N., R. 9 W., quarter corner south side of sec. 34, 14 feet north by 16 feet east of center of crossroads intersection, in root of 14-inch elm tree; copper nail marked "497.8"-----	497. 97
T. 6 N., R. 9 W., quarter corner south side of sec. 33, on west side of junction of Springfield and Hillsboro roads, 2 feet north of fence on township line; iron post stamped "509 Ill 1912"-----	509. 372
T. 5 N., R. 9 W., near quarter corner north side of sec. 8, 200 feet west of road forks, 50 feet east of bridge over Wood River, 500 feet east of Chicago, Burlington & Quincy R. R. track in Upper Alton, in root of 36-inch sycamore tree; copper nail marked "442.7"-----	442. 86
Alton, in southwest corner of lot containing village hall (former village of Upper Alton); iron post stamped "545 Ill 1912"-----	545. 456
Alton, at foot of Washington Street, on south side of East Second Street, 400 feet east of Illinois Glass Works, 8 feet north of Big Four Route tracks, 10 feet west of telephone pole; chiseled square on top of curbstone, marked "437.5"-----	437. 65
Alton, southeast corner of vinegar works; high-water mark (1883) cut in stone, marked "424.7"-----	424. 88
Alton, 2.5 miles southeast of, south abutment of Illinois Terminal R. R. bridge over Wood River, east side of bridge seat; bottom of square cut in capstone, marked "428.4"-----	428. 56
Alton, 3.7 miles southeast of, 0.8 mile northwest of Wood River, on north side of Chicago, Peoria & St. Louis Ry. of Illinois track, 450 feet west of milepost "St. Louis 21"; railroad tie spike driven horizontally in telegraph pole, marked "430.0"-----	430. 23
Wood River, 200 feet west of Chicago & Alton R. R. station, south abutment east side of small trestle under Chicago, Peoria & St. Louis Ry. of Illinois tracks, 300 feet south of mileboard "St. Louis 20"; railroad spike driven vertically in east end of cap beam, marked "429.9"-----	430. 13
Edwardsville Crossing, 100 meters south by 500 meters west of, 1 mile above upper mouth of Missouri River, 500 meters from left bank, just back of slough or ditch, 200 meters west of north-south wagon road, 70 meters north of north edge of timber; flat stone and iron pipe (Miss. R. Comm. stone-line b. m. 59-2) top of pipe-----	419. 08
Top of stone-----	413. 98

Baldwin and Chester quadrangles.

RANDOLPH COUNTY.

The elevations in the following list were determined by primary leveling and accord with Bulletins 421 and 493, to which refer for additional elevations in these quadrangles.

The leveling was done in 1912 by R. G. Clinite.

BALDWIN QUADRANGLE.

[Latitude 38°-38° 15'; longitude 89° 45'-90°.]

From T. 6 S., R. 6 W., sec. 7, east to T. 6 S., R. 6 W., sec. 15.

	Feet.
T. 6 S., R. 6 W., quarter corner between secs. 7 and 18, in front of T road west; iron post stamped "546 1908"-----	544.405
T. 6 S., R. 6 W., 0.2 mile west of center of sec. 17, at T road south, in center of grass plat; copper nail in top of wooden peg, marked "550"-----	549.56
T. 6 S., R. 6 W., at center of sec. 16, opposite T road south, 60 feet east of rail fence, in top of small oak stump; copper nail marked "482"-----	481.82
T. 6 S., R. 6 W., just west of northeast corner of sec. 15, 20 feet east by 14 feet north of center of crossroads; iron post stamped "Prim. Trav. Sta. No. 21, 457 Illinois 1908"-----	456.867

CHESTER QUADRANGLE.

[Latitude 37° 45'-38°; longitude 89° 45'-90°.]

From sec. 15, T. 6 S., R. 6 W., south to Chester.

T. 6 S., R. 6 W., east and north of center of sec. 22, on west side of floor of small iron bridge over Little Marys Creek; copper nail marked "426"-----	426.06
T. 6 S., R. 6 W., near quarter corner south side of sec. 22, opposite secondary T road west; 8 feet west of rail fence corner, in stump of telephone pole; copper nail marked "541"-----	540.66
Bremen, H. Schroeder's store; east side of concrete base of porch post-----	564.71
T. 6 S., R. 6 W., just east of quarter corner south side of sec. 27, opposite H. Schroeder's residence at Bremen, on fence line, 10 feet west of telephone pole; keel mark on stone-----	562.28
Bremen, H. Schroeder's store, 15 feet east of concrete base of porch post; iron post stamped "566"-----	565.605
Bremen, T road east at store; marked "561.6"-----	561.6
T road south; marked "546.3"-----	546.3
T. 6 S., R. 6 W., near quarter corner east side of sec. 33, northwest corner of T road west, in north end of plank bridge; copper nail marked "526.9"-----	526.90
T. 7 S., R. 6 W., just northeast of center of sec. 4, on south stone abutment east wing of wooden bridge over Little Mary River; bottom of chiseled square in top of second course, marked "398.5"-----	398.48
T. 7 S., R. 6 W., about 0.3 mile northwest of center of sec. 9, opposite center of T road south; copper nail in top of wooden peg, marked "534.7"-----	534.68

	Feet.
T. 7 S., R. 6 W., 0.3 mile northwest of center of sec. 8, northeast corner of crossroads, opposite Union School, in root of 10-inch sycamore tree at corner of fence; copper nail marked "528.5"-----	528.48
T. 7 S., R. 6 W., 0.3 mile northwest of center of sec. 8, southeast corner of Union schoolyard; iron post stamped "532"-----	532.103
T. 7 S., R. 6 W., near southwest corner of sec. 7, northeast corner of T road north, on east end of tile drain; painted square marked "590.6"-----	590.56
Chester, at east edge of town, southwest corner of first north-south street on Sparta road, on concrete block 3 feet southeast of telephone pole; painted square marked "639.2"-----	639.09
Chester, German Lutheran Church (St. Johans), in center on top stone of second step of entrance; painted square marked "675.1"-----	675.08
Chester, in west corner of German Lutheran Church yard; iron post stamped "668"-----	667.884
Chester, opposite Randolph County courthouse, in northwest corner of First State Bank building; aluminum tablet stamped "635 Ill 1912"-----	634.979
Chester, 1,240 meters (4,068 feet) below, 1.3 meters (4.3 feet) east of southwest corner of Cole Brothers stone elevator; copper bolt in front wall (U. S. Corps of Engineers b.m. 39)-----	381.163

Colchester and Macomb quadrangles.

McDONOUGH AND SCHUYLER COUNTIES.

The following elevations were determined by primary leveling and accord with Bulletin 493, to which refer for additional elevations in these quadrangles.

The leveling was done in 1912 by R. G. Clinite.

COLCHESTER QUADRANGLE.

[Latitude 40° 15'—40° 30'; longitude 90° 45'—91°.]

From T. 4 N., R. 3 W., sec. 6, east along highways to T. 4 N., R. 3 W., quarter corner east side of sec. 5.

	Feet.
T. 4 N., R. 3 W., at quarter corner east side of sec. 6, northwest corner of T road west, 12 feet west of corner fence post, 2 feet south of fence, 20 feet northwest of road intersection; iron post stamped "Prim. Trav. Sta. No. 59, 1910, 663 Ill 1909"-----	661.978
T. 5 N., R. 3 W., 0.2 mile east of southwest corner of sec. 32, at northwest corner of T road north, in north end of bridge floor; copper nail marked "649.2"-----	649.18
T. 4 N., R. 3 W., 0.2 mile west of northeast corner of sec. 5, at southwest corner of T road south, 35 feet west of center of road, in south end of drain; copper nail marked "665.2"-----	665.27
T. 4 N., R. 3 W., quarter corner east side of sec. 5, at T road south, in north end of plank culvert; copper nail marked "658.8"-----	658.78

From T. 3 N., R. 3 W., sec. 5, east, north, and east along highways to T. 3 N., R. 3 W., point just east of quarter corner south side of sec. 6.

T. 3 N., R. 3 W., corner north side between secs. 4 and 5, at T road south; chiseled square on section stone, marked "644.9"-----	644.63
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	Feet.
T. 3 N., R. 3 W., at northeast corner of sec. 6, southwest corner of T road south, at McDonough-Schuyler county line, at foot of corner fence post; tack in top of stake, marked "590.1"-----	589. 86
T. 3 N., R. 3 W., corner of secs. 5, 6, 7, and 8, at Guinea schoolhouse and church, in center of T road west; chiseled square on top of section-corner stone, marked "596.4"-----	596. 17
T. 3 N., R. 3 W., just east of quarter corner south side of sec. 6, 0.5 mile west of Guinea schoolhouse and church, on north side of main road, opposite T road south, 20 feet north of center of roads, 15 feet west of telephone pole, 4 feet south of fence; iron post stamped "590 Ill"-----	589. 689

MACOMB QUADRANGLE.

[Latitude 40° 15'-40° 30'; longitude 90° 30'-90° 45'.]

From point near Macomb south along highways to Mount Zion School.

T. 6 N., R. 3 W., at center of sec. 35, 1 mile west of Macomb, at T road south, 30 feet southeast of road intersection, 2 feet north of fence and 5 feet east of southeast corner fence post; iron post stamped "696"-----	695. 555
Macomb, at west edge of Western Illinois State Normal School campus, on spillway of small lake, south side of channel; painted square on concrete wall, marked "672.6"-----	672. 61
Macomb, near northwest corner of Western Illinois State Normal School campus, 400 feet northwest of main building, 100 feet west of brick well house; iron post stamped "702.3 Ill 1912"-----	702. 234
Macomb, at southwest corner of South Johnson and West Woodbury streets; top of nut on water hydrant, marked "690.5"-----	690. 49
T. 5 N., R. 3 W., quarter corner east side of sec. 12, at southwest corner of T road west, at south end of drain; copper nail in top of small cedar post, marked "697.1"-----	697. 03
T. 5 N., R. 2 W., quarter corner west side of sec. 18, at northeast corner of crossroads, 1 foot west of corner fence post; iron post stamped "627 Ill 1912"-----	626. 627
T. 5 N., R. 2 W., quarter corner west side of sec. 19, at T road east; chiseled square on half-section stone, marked "645.2"-----	645. 05
T. 5 N., R. 2 W., southeast corner of sec. 24, at T road west; chiseled square on section stone, marked "663.3"-----	663. 21
T. 5 N., R. 2 W., at southwest corner of sec. 30, at northeast corner of crossroads, 2 feet west of corner fence post, in top of stump of telephone pole; copper nail marked "643.0"-----	642. 81
T. 4 N., R. 2 W., at northwest corner of sec. 6, on east side of main road, opposite T road west, 14 feet south of east-west fence, 2 feet west of north-south fence; iron post stamped "634 Ill 1912"-----	633. 740
T. 4 N., R. 2 W., at northwest corner of sec. 7, at southeast corner of crossroads, at base of telephone pole; copper nail in top of wooden peg, marked "636.4"-----	636. 17
T. 4 N., R. 3 W., 0.25 mile north of, southeast corner of sec. 12, at southwest corner of crossroads, on east side of railroad track, in east end of cross sill of small platform; copper nail marked "641.7"-----	641. 57

	Feet.
T. 4 N., R. 2 W., at northwest corner of sec. 19, at southeast corner of crossroads (jog in east-west road), 60 feet south of corner fence post, west of fence; iron post stamped "642 Ill 1912"-----	642. 041
T. 4 N., R. 2 W., quarter corner west side of sec. 30, opposite T road west, at base of telephone pole; copper nail in top of wooden stake, marked "653.0"-----	652. 77
T. 4 N., R. 3 W., about 90 feet north of southeast corner of sec. 25, opposite center of road east (jog in east-west crossroads), 2 feet east of north-south fence on west side of road; copper nail in top of wooden peg, marked "642.0"-----	641. 83
T. 3 N., R. 3 W., at northeast corner of sec. 1, in southwest corner of crossroads, on south side of McDonough-Schuyler county line, 28 feet southwest of section corner stone, 3 feet northeast of corner of hedge, 7 feet northwest of telephone pole; iron post stamped "680 Ill 1912"-----	679. 927
T. 3 N., R. 3 W., quarter corner north side of sec. 1, at T road south, in southwest corner, 1 foot northeast of southwest corner fence post; copper nail in top of small wooden stake, marked "669.2"---	669. 04
T. 3 N., R. 3 W., 210 feet west of corner on north side between secs. 1 and 2, on south side of road, opposite two-story white house, east edge of wood lot, 5 feet north of fence, 4 feet east of 12-inch white-oak tree, in top of 14-inch oak stump; copper nail marked "639.3"---	639. 08
T. 3 N., R. 3 W., corner on north side between secs. 2 and 3, at west edge of Reddings wood lot; chiseled square on section stone, marked "649.3"-----	649. 08
T. 3 N., R. 3 W., near northwest corner of sec. 3, on south side of east-west road, opposite T road north, 2 feet north of fence; copper nail in top of wooden stake, marked "670.2"-----	669. 97
T. 4 N., R. 3 W., just east of quarter corner south side of sec. 33, on north side of east-west road, opposite T road south (jog in crossroads), 180 feet east of T road north, 150 feet southeast of Mount Zion schoolhouse, 2 feet south of fence; iron post stamped "Prim. Trav. Sta. No. 58, 656 Illinois 1910"-----	655. 642

From T. 4 N., R. 3 W., sec. 4, east to T. 4 N., R. 2 W., sec. 6.

T. 4 N., R. 3 W., quarter corner west side of sec. 3, at crossroads, 35 feet northeast of intersection, 5.5 feet east of corner fence post, 1 foot south of fence; iron post stamped "638 Ill 1912"-----	637. 777
T. 4 N., R. 3 W., quarter corner between secs. 2 and 3, center of crossroads; chiseled square on section stone, marked "602.9"-----	602. 93
T. 5 N., R. 3 W., at southwest corner of sec. 35, 25 feet north of intersection at T road south, 7.5 feet south of east-west fence; copper nail in top of stake, marked "644.6"-----	644. 64
T. 4 N., R. 3 W., at corner on north side between secs. 1 and 2, at jog in north-south road at crossroads; chiseled square on section stone, marked "635.3"-----	635. 36

From T. 5 N., R. 2 W., sec. 30, east and north along highways to northwest corner of T. 6 N., R. 1 W., sec. 33.

T. 5 N., R. 2 W., corner of secs. 29, 30, 31, and 32, at crossroads at Ebenezer Church and school; chiseled square on section stone, marked "639.3"-----	639. 16
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	Feet.
T. 5 N., R. 2 W., quarter corner south side of sec. 28, 35 feet north-west of crossroads intersection, 5 feet west of corner fence post, 1 foot south of fence; iron post stamped "Prim. Trav. Sta. No. 46, 627 Illinois 1911"-----	626.589
T. 5 N., R. 2 W., at southeast corner of sec. 28, northwest corner of crossroads, on west end of galvanized drain under north-south road; painted square marked "634.2"-----	634.13
T. 5 N., R. 2 W., quarter corner between secs. 27 and 34, at T road north; chiseled square on section stone, marked "624.3"-----	624.27
T. 5 N., R. 2 W., at northwest corner of sec. 35, 25 feet southeast of center of crossroads, at south end of drain; copper nail in top of small post, marked "628.9"-----	628.87
T. 5 N., R. 2 W., at northwest corner of sec. 36, on south side of east-west road, 32 feet southeast of section corner, 8 feet east of gate post, 1 foot north of fence; iron post stamped "648 Ill 1912"-----	647.753
T. 5 N., R. 2 W., at southeast corner of sec. 25, at jog in road, northwest corner T road west, at base of northwest corner fence post; copper nail in top of wooden peg, marked "653.7"-----	653.66
T. 5 N., R. 1 W., quarter corner south side of sec. 30, in northeast corner of T road north, 3 feet west of telephone pole; copper nail in top of small post, marked "661.8"-----	661.74
T. 5 N., R. 1 W., at northwest corner of sec. 32, at southeast corner of crossroads, on south end of iron drain tube; painted square marked "655.3"-----	655.31
T. 5 N., R. 1 W., northeast corner of sec. 32, southwest corner of crossroads, 20 feet southwest of section corner stone, 3.5 feet south of corner fence post, 1 foot east of fence; iron post stamped "650 Ill 1912"-----	650.154
T. 5 N., R. 1 W., at northwest corner of sec. 28, east side of north-south road, opposite T road west, on concrete base of corner fence post; chiseled circle marked "649.1"-----	649.06
T. 5 N., R. 1 W., quarter corner west side of sec. 21, southeast corner at T road east, on east end of drain tube; painted square marked "634.3"-----	634.33
T. 5 N., R. 1 W., quarter corner east side of sec. 17, 45 feet north-west of crossroad intersection, 4 feet north of corner fence post, 1 foot east of fence; iron post stamped "646 Ill 1912"-----	645.733
T. 5 N., R. 1 W., quarter corner east side of sec. 8, northwest corner of crossroads, at base of corner fence post; tack in top of wooden stake, marked "648.3"-----	648.26
T. 5 N., R. 1 W., at quarter corner east side of sec. 5, at southwest corner of crossroads, on concrete base to corner fence post; chiseled square marked "657.4"-----	657.43
T. 5 N., R. 1 W., northeast corner of sec. 5, southwest corner at T road west, on south end of iron drain tube; painted square marked "660.1"-----	660.10
T. 6 N., R. 1 W., northwest corner of sec. 33, 4.5 miles west of New Philadelphia, 30 feet southeast of crossroads intersection, 2 feet north of fence, 4 feet east of corner fence post; iron post stamped "675 Ill 1909"-----	675.152

From T. 3 N., R. 3 W., sec. 1, along highways east and north to T. 5 N.,
R. 1 W., sec. 32.

	Feet.
T. 4 N., R. 2 W., 25 feet east of southwest corner of sec. 32, 0.5 mile west of Doddsville, north side of road, 4 feet east of east end of gate; copper nail in top of stake, marked "682.9"-----	682.76
T. 4 N., R. 2 W., quarter corner south side of sec. 32, northeast corner of T road north, east edge of Doddsville, in east end of plank drain; copper nail marked "681.4"-----	681.17
T. 3 N., R. 2 W., near quarter corner north side of sec. 4, 50 feet southwest of center of crossroads intersection, on south end of tile drain; painted square marked "662.3"-----	662.16
T. 3 N., R. 2 W., just east of center of sec. 4, on west side of north-south road, 45 feet northwest of center of junction with T road east, 12 feet north of gate, at base of telephone pole; copper nail in wooden stake, marked "662.5"-----	662.34
T. 3 N., R. 2 W., quarter corner east side of sec. 4, 25 feet west of center of Macomb & Western Illinois Ry. track, on north side of wagon road, 1.3 feet south of fence; iron post stamped "660 Ill 1912"-----	660.011
T. 3 N., R. 2 W., quarter corner east side sec. 3, northwest corner of crossroads, 1.5 feet southwest of corner fence post, at base of telephone pole; copper nail in wooden stake, marked "655.7"-----	655.57
T. 3 N., R. 2 W., quarter corner east side of sec. 2, northwest corner at T road north, 1 foot east of corner fence post, in top of 12-inch oak stump; copper nail marked "649.8"-----	649.68
T. 3 N., R. 2 W., center of sec. 1, northwest corner at T road west, in floor at west end of small bridge; copper nail marked "638.9"-----	638.73
T. 4 N., R. 2 W., center of sec. 36, on west side of north-south road, opposite center of T road east, 1 foot east of fence and on line with east-west fence, 16 feet west of center of road junction; iron post stamped "658 Ill 1912"-----	657.734
T. 4 N., R. 1 W., 0.25 mile east of center of sec. 31, northwest corner of crossroads, 2 feet southeast of corner fence post, at base of telephone pole; copper nail in top of wooden stake, marked "658.3"-----	658.14
T. 4 N., R. 1 E., at center of sec. 32, northwest corner at T road north (private road south), diagonally opposite Bethany Church, at base of corner fence post; copper nail in wooden peg, marked "654.1"-----	653.94
T. 4 N., R. 1 W., center of sec. 29, northeast corner of crossroads, 1 foot west of corner fence post; copper nail in stump of telephone pole, marked "661.5"-----	661.36
T. 4 N., R. 1 W., quarter corner east side of sec. 28, on south side of east-west road, opposite T road north, 19 feet south of center of road junction, 1 foot north of fence; iron post stamped "656 Ill 1912"-----	656.372
T. 4 N., R. 1 W., southwest corner of sec. 17, northwest corner of crossroads, 6 feet east of corner of hedge fence, at base of telephone pole; copper nail in top of stake, marked "676.6"-----	676.52
T. 4 N., R. 1 W., southeast corner of sec. 8, northwest corner of crossroads, 39 feet northwest of section corner stone, 2 feet east of fence, 6 feet north of corner fence post; iron post stamped "669 Ill 1912"-----	669.372

	Feet.
T. 4 N., R. 1 W., at northwest corner of sec. 9, southeast corner of crossroads, in bridge timber at south end of drain; copper nail marked "680.2" -----	680.11
T. 4 N., R. 1 W., northeast corner of sec. 5, southwest corner of crossroads (Jog in north-south road at township line), on west end of iron drain tube; painted square marked "652.6" -----	652.57

Carlyle and Centralia quadrangles.

CLINTON AND MARION COUNTIES.

The following elevations were determined by primary leveling based upon Coast and Geodetic Survey levels (1907 adjustment) and accord with Bulletins 421 and 493.

The leveling was done in 1912 by R. G. Clinite.

CARLYLE QUADRANGLE.

[Latitude 38° 30'-38° 45'; longitude 89° 15'-89° 30'.]

	Feet.
From Hoffman south along highways to quarter corner between secs. 13 and 24, T. 1 N., R. 2 W.	
Hoffman, 200 feet west of station, 50 feet north of railroad track; iron post stamped "Prim. Trav. Sta. No. 3, 456 Illinois 1907" -----	456.185
Hoffman, 0.8 mile south of, opposite center of T road west; iron post stamped "Prim. Trav. Sta. No. 2, 456 Illinois 1907" -----	456.224
Hoffman, 1.2 miles south of, at T road east, quarter corner between secs. 13 and 24, T. 1 N., R. 2 W.; painted square on half-section stone, marked "445.6" -----	445.61

CENTRALIA QUADRANGLE.

[Latitude 38° 30'-38° 45'; longitude 89°-89° 15'.]

From quarter corner between secs. 13 and 24, T. 1 N., R. 2 W., east along highways to point 3.5 miles west of Centralia, thence north and west along highways to point 1.5 miles northwest of Boulder.	
T. 1 N., R. 1 W., near southeast corner of sec. 18, on west bank of Crooked Creek, at northwest corner of road forks, 45 feet west of west abutment of steel bridge, 2 feet outside of fence; iron post stamped "446 Ill" -----	446.213
T. 1 N., R. 1 W., near northeast corner of sec. 20, at T road south, in west end of plank culvert; copper nail marked "459.7" -----	459.77
T. 1 N., R. 1 W., at northwest corner of sec. 22, T road south, in east end of plank culvert; copper nail marked "470.7" -----	470.78
Centralia, 3.5 miles west of, quarter corner between secs. 15 and 22, T. 1 N., R. 1 W., opposite center of T road north, 2 feet north of east-west fence; iron post stamped "475 Ill" -----	475.392
T. 1 N., R. 1 W., about 0.2 mile north of center of sec. 15, at northeast corner of road forks, 35 feet north of center of road forks; copper nail in top of wooden peg, marked "473.1" -----	473.22
T. 1 N., R. 1 W., about 0.2 mile east of quarter corner between secs. 9 and 10, at northeast corner of road crossing on Southern Ry., on top of east end of drain tile; painted square, marked "464.4" -----	464.46

	Feet.
T. 1 N., R. 1 W., northwest corner of sec. 10, at northwest corner of school yard, in root of 24-inch maple tree; copper nail marked "468.0"-----	468.08
T. 2 N., R. 1 W., southeast corner of sec. 33, at northwest corner of crossroads, 2.5 feet north of corner fence post, 1.3 feet east of fence; iron post stamped "469 III"-----	469.554
T. 2 N., R. 1 W., quarter corner between secs. 33 and 34; chiseled circle on half-section stone at crossroads, marked "471.6"-----	471.68
T. 2 N., R. 1 W., quarter corner east side of sec. 28, at northeast corner of school yard, in root of 32-inch maple tree; copper nail marked "474.1"-----	474.16
T. 2 N., R. 1 W., southwest corner of sec. 22, 33 feet northeast of center of crossroads, in east end of bridge floor; copper nail marked "477.2"-----	477.19
Shattuc, at crossing of Baltimore & Ohio Southwestern and Chicago, Burlington & Quincy railroads; top of rail-----	471.5
Shattuc, 600 feet west of station, 50 feet north of Baltimore & Ohio Southwestern R. R. track; iron post stamped "463 III"-----	463.234
Shattuc, 1.2 miles north of, on west side of road, 2 feet outside of fence and on line with east-west fence; copper nail in top of peg driven flush with surface of ground, marked "480.5"-----	480.47
T. 2 N., R. 1 W., southwest corner of sec. 4, at northwest corner of crossroads, in west end of plank culvert; copper nail marked "478.1"-----	478.10
T. 2 N., R. 1 W., northwest corner of sec. 3, southeast corner of crossroads, 3 feet north of fence; iron post stamped "485 III"-----	484.719
T. 3 N., R. 1 W., southwest corner of sec. 27, in northeast corner of crossroads, in north end of plank culvert; copper nail marked "480.8"-----	480.72
T. 3 N., R. 1 W., 0.2 mile north of southwest corner of section 22, in center of east side of bridge floor over Brewster Creek; copper nail marked "462.7"-----	462.65
T. 3 N., R. 1 W., southwest corner of sec. 15, on east side of north-south road, opposite T road west, 2 feet outside of fence; iron post stamped "465 III"-----	464.523
Boulder, about 0.5 mile east of (T. 3 N., R. 1 W., southeast corner of sec. 17), at northwest corner of crossroads, in top of hedge-thorn stump; copper nail marked "467.0"-----	466.84
Boulder, at north side of town, at road crossing on Chicago, Burlington & Quincy R. R., on west side of track, on north end of tile drain; painted square marked "461.6"-----	461.41
Boulder, 1.5 miles northwest of, east side of railroad crossing, north side of wagon road; iron post stamped "442"-----	442.459
From point 3.5 miles west of Centralia to Centralia, thence north along highways to point 1 mile south of Pakota, thence west to point 1.5 miles east of Boulder.	
T. 1 N., R. 1 W., quarter corner north side of sec. 23, at T road south, in grass plot at road intersection, in root of 30-inch elm tree; copper nail marked "481.4"-----	481.50
T. 1 N., R. 1 W., quarter corner between secs. 13 and 24, at T road south; painted square on section stone, marked "475.4"-----	475.56

	Feet.
T. 1 N., R. 1 W., about 0.25 mile east of center of sec. 24, at T road south, on north side of east-west road; iron post stamped "Prim. Trav. Sta. No. 168, 496, 1911"-----	496. 161
Centralia, at northeast corner of intersection of South Locust and Sangamon streets, in plank culvert; copper nail marked "491.7"__	491. 96
Centralia, east side of post office, in granite sill of north window; aluminum tablet stamped "493 Illinois 1912"-----	492. 938
Centralia, north side of city, on west side of North Locust Street, opposite coal mine, on west side of small plank bridge; copper nail in top of 2-inch by 10-inch post, marked "484.5"-----	484. 73
Centralia, 2.2 miles north of, Illinois Central R. R. bridge over Crooked Creek, on west side of south abutment; painted square on top course, marked "472.4" (C. and G. S. b. m. M. 3 was not found) -----	472. 57
Centralia, 2.9 miles north of, on east side of Chicago Branch of Illinois Central R. R., at northwest corner of road forks, 1.3 feet west of end of crossing fence; near quarter corner west side of sec. 32, T. 2 N., R. 1 E.; iron post stamped "491 Ill"-----	491. 237
T. 2 N., R. 1 E., near quarter corner north side of sec. 32, at T road north, 60 feet southeast of Illinois Central R. R. crossing, in root of sycamore tree in grass plat; copper nail marked "493.2" -----	493. 40
T. 2 N., R. 1 E., quarter corner between secs. 20 and 29, at crossroads; chiseled square on section stone, marked "500.8"-----	501. 01
T. 2 N., R. 1 E., about 400 feet south of quarter corner north side of sec. 20, in southwest corner of bridge floor; copper nail marked "494.9" -----	495. 05
Sandoval, crossing of Baltimore & Ohio Southwestern R. R. at Mine No. 1; top of rail-----	509. 8
Sandoval, northeast edge of town, quarter corner north side of sec. 17, T. 2 N., R. 1 E., east of north-south road, south of T road east; iron post stamped "514 Ill"-----	514. 217
Sandoval, about 1.3 miles north of, west side of Illinois Central R. R., south side of wagon road; iron post stamped "Prim. Trav. Sta. No. 167, 515 Illinois 1911"-----	515. 625
T. 2 N., R. 1 E., southeast corner of sec. 5, T road north, in west end of plank culvert; copper nail marked "519.6"-----	519. 74
T. 2 N., R. 1 E., near northeast corner of sec. 5, jog to west in north-south road, opposite center of T road north; iron post stamped "517 Ill"-----	517. 613
T. 3 N., R. 1 E., northeast corner of sec. 32, in southwest corner of crossroads, on tile drain; painted square marked "520.9"-----	521. 08
T. 3 N., R. 1 E., northwest corner of sec. 28, in southeast corner of T road south, in plank culvert; copper nail marked "525.7"-----	525. 87
T. 3 N., R. 1 E., near quarter corner south side of sec. 16, at southeast corner of road forks, 3 feet north of corner fence post, 0.5 foot west of fence; iron post stamped "478 Ill"-----	478. 325
T. 3 N., R. 1 E., 0.25 mile north of center of sec. 16, at T road east, on top of gate post to F. Mundy's yard; copper nail marked "500.1" -----	500. 28
T. 3 N., R. 1 E., 0.25 mile south of center of sec. 9, in northeast corner of crossroads, in root of 12-inch maple tree; copper nail marked "507.9"-----	508. 07

	Feet.
T. 3 N., R. 1 E., quarter corner between secs. 4 and 9; chiseled square on half-section stone, marked "508.1"-----	508. 22
Patoka, 1 mile south of, on east side of Illinois Central R. R., south side of wagon road, 2 feet north of fence, about 700 feet west of quarter corner north side of sec. 4, T. 3 N., R. 1 E.; iron post stamped "498 Ill"-----	497. 969
T. 4 N., R. 1 E., near southeast corner of sec. 32, in northwest corner of bridge floor; copper nail marked "483.3"-----	483. 43
T. 4 N., R. 1 E., southwest corner of sec. 31, in northwest road corner at T road north; spike in base of telephone pole, marked "501.6"---	501. 68
T. 5 N., R. 1 E., southwest corner of sec. 31, northeast corner of cross-roads, in northeast corner of bridge floor; copper nail marked "482.5"-----	482. 63
T. 3 N., R. 1 W., northeast corner of sec. 2, at southwest corner of crossroads, opposite Toad Island schoolhouse, 1.5 feet southwest of telephone pole; iron post stamped "482 Ill"-----	481. 909
T. 3 N., R. 1 W., quarter corner north side of sec. 2, at T road east, in southwest corner of bridge floor; copper nail marked "455.3"---	455. 36
T. 3 N., R. 1 W., northwest corner of sec. 11, in east end of small bridge; copper nail marked "455.1"-----	455. 16
T. 3 N., R. 1 W., near northwest corner of sec. 14, in northwest corner of floor of bridge over East Fork; copper nail marked "460.4"-----	460. 41
T. 3 N., R. 1 W., about 0.25 mile east of center of sec. 15, northeast corner at T road north, near base of corner fence post; copper nail marked "482.2"-----	482. 27
T. 3 N., R. 1 W., quarter corner east side of sec. 16, near center of T road south, in top of small brace post to telephone pole; copper nail marked "478.7"-----	478. 75
From Centralia to point 5 miles east, thence north via Odin to quarter corner north side of sec. 1, T. 3 N., R. 1 E., thence west to point 1 mile south of Patoka.	
Centralia, on south side of East Broadway Street, at east corner of 1300 block, in root of 30-inch maple tree; copper nail marked "506.0"-----	506. 21
T. 1 N., R. 1 E., center of sec. 16, at northeast corner of crossroads, in north end of plank culvert; copper nail marked "514.1"-----	514. 31
T. 1 N., R. 1 E., quarter corner west side of sec. 15, northeast road corner at T road north; iron post stamped "513 Ill"-----	513. 040
T. 1 N., R. 1 E., about 2,000 feet east of center of sec. 15, bridge over small creek, on west end of south abutment; painted square marked "486.7"-----	487. 00
T. 1 N., R. 1 E., near center of sec. 14, bridge over Raccoon Creek on east end of north abutment; painted square marked "483.8"-----	484. 01
T. 1 N., R. 1 E., about 800 feet south of center of sec. 13 at T road north; east end of plank culvert, marked "517.3"-----	517. 57
T. 1 N., R. 1 E., center of sec. 13, on east side of road, at northwest corner of Frank Klimes's orchard, 1 foot inside of fence; iron post stamped "525 Ill"-----	525. 250
T. 1 N., R. 1 E., quarter corner west side of sec. 12, on south side of east-west road, 120 feet east of T road north; in 27-inch oak stump; copper nail marked "520.0"-----	520. 32

	Feet.
T. 1 N., R. 1 E., quarter corner west side of sec. 1, northeast road corner at T road north, in east end of plank culvert; copper nail marked "517.7" -----	517.95
T. 2 N., R. 1 E., about 0.25 mile north of southeast corner of sec. 35, southwest corner at T road west, 300 feet north of iron bridge over Crooked Creek, 1.2 feet inside of field fence; iron post stamped "472 Ill" -----	472.318
Robinette, at Illinois Southern Ry. crossing; top of rail-----	524.9
T. 2 N., R. 1 E., 0.25 mile south of quarter corner west side of sec. 25, southeast corner of T road east, in south end of plank culvert; copper nail marked "525.4" -----	525.74
T. 2 N., R. 1 E., corner of secs. 23, 24, 25, and 26, at center of crossroads; chiseled circle on section stone, marked "515.9" -----	516.16
T. 2 N., R. 1 E., 35 feet west of corner of secs. 13, 14, 23, and 24, on fence line opposite center of T road east, 1 mile south of Odin, in 12-inch oak tree; copper nail marked "520.2" -----	520.48
Odin, 125 feet south of Illinois Central and Baltimore & Ohio Southwestern railroad crossing, in northeast corner of street intersection; iron post stamped "526 Ill 1912" -----	526.785
Odin, station of Baltimore & Ohio Southwestern and Illinois Central railroads, east end of long arched culvert; cut on coping stone, marked "B. M. V." (C. & G. S. b. m.) -----	527.654
Note.—Letter "B" and cut square are still intact, other letters are obliterated. B. M. on Craig's brick store was not recovered.	
Odin, about 1.5 miles northeast of, 0.14 mile south of northeast corner of sec. 12, T. 2 N., R. 1 E., on south side of Illinois Central R. R. on west side of wagon road; painted square on tile drain, marked "544.3" -----	544.58
T. 2 N., Rs. 1 and 2 E., corner of secs. 1 and 6, at crossroads; chiseled square on stone, marked "546.2" -----	546.48
T. 3 N., R. 1 E., near quarter corner east side of sec. 36, 1.8 feet east of corner fence post at northwest corner of road forks, flush with surface of ground; iron post stamped "548 Ill 1912" -----	547.864
T. 3 N., R. 1 E., near quarter corner east side of sec. 25, at northwest corner of secondary road forks, in root of 12-inch oak tree; copper nail marked "557.6" -----	557.81
T. 3 N., Rs. 1 and 2 E., corner of secs. 19, 30, 24, and 25, at crossroads; chiseled circle on section stone, marked "548.6" -----	548.86
T. 3 N., R. 2 E., nearly 0.12 mile north of southwest corner of sec. 18, on east side of road, opposite center of T road west, 1.3 feet west of fence; iron post stamped "542 Ill 1912" -----	542.123
T. 3 N., R. 2 E., about 0.25 mile south of northwest corner of sec. 18, in southeast corner at T road east, in root of 15-inch elm tree; copper nail marked "544.7" -----	544.86
T. 3 N., R. 2 E., about 0.25 mile south of northwest corner of sec. 7, on east side of road, on line with east-west fence and 2.7 feet west of north-south fence; copper nail in top of small post, marked "547.1" -----	547.30
T. 3 N., R. 2 E., about 0.25 mile south of quarter corner west side of sec. 6, bridge over East Fork of Kaskaskia River, in northeast corner of floor; top of spike marked "494.9" -----	495.03

	Feet.
T. 3 N., R. 1 E., quarter corner north side of sec. 1, on east side of elbow road east to south, 2 feet west of rail fence; iron post stamped "536 Ill 1912"-----	536.164
T. 4 N., R. 1 E., southwest corner of sec. 36, in northeast corner of crossroads, in plank culvert; copper nail marked "526.7"-----	526.86
T. 3 N., R. 1 E., 0.25 mile east of quarter corner north side of sec. 3; chiseled circle on quarter section stone, marked "518.1"-----	518.22

Edgington and Milan quadrangles.

MERCER AND ROCK ISLAND COUNTIES.

The elevations in the following list were determined in 1913 by C. R. French and depend on heights of bench marks near west border of Milan quadrangle.

EDGINGTON QUADRANGLE.

[Latitude 41° 15'-41° 30'; longitude 90° 45'-91°.]

From Edgington south along highways to SE. $\frac{1}{4}$ sec. 29, T. 15 N., R. 3 W.

	Feet.
Edgington, northeast corner of sec. 18, T. 16 N., R. 3 W., southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 39, 785, Illinois, 1910"-----	784.515
Edgington, 1 mile south of, northwest corner of sec. 20, T. 16 N., R. 3 W., southeast corner of crossroads, on east property line, 12 feet north of fence, top of short post formerly part of culvert head wall; copper nail marked "743.36"-----	743.30
T. 16 N., R. 3 W., SE. $\frac{1}{4}$ sec. 19, about middle of east line, north end of concrete carriage block in front of residence on west side of road; painted square marked "760.34"-----	760.26
T. 16 N., R. 3 W., NE. $\frac{1}{4}$ sec. 30, center near north line, southeast end of southeast steel wing wall of bridge over Copperas Creek; painted square marked "695.65"-----	695.56
T. 16 N., R. 3 W., NE. $\frac{1}{4}$ sec. 31, about center of north line, southwest corner of crossroads, 20 feet west of fence, 5 feet north of fence; iron post stamped "Prim. Trav. Sta. No. 35, 779, Illinois, 1910"-----	778.465
T. 16 N., R. 3 W., SE. $\frac{1}{4}$ sec. 31, about center of south line, on west side of T road north, 100 feet north of county-line road, west end of 3-foot galvanized iron culvert; painted square marked "763.19"-----	763.07
T. 15 N., R. 3 W., northwest corner of sec. 5, southeast corner of T road south, 75 feet south of county-line road; spike in second fence post south of corner post, marked "790.55"-----	790.42
T. 15 N., R. 3 W., northwest corner of sec. 8, southeast corner of crossroads, on east side of 4-foot cottonwood tree; copper nail marked "803.38"-----	803.24
T. 15 N., R. 3 W., SW. $\frac{1}{4}$ sec. 8, 0.2 mile north of southwest corner, east end of south abutment of bridge over Illinois Slough; chiseled square marked "735.20"-----	735.03
T. 15 N., R. 3 W., southeast corner of NE. $\frac{1}{4}$ sec. 18, northwest corner of crossroads, 2 feet east of fence, 12 feet north of fence; iron post stamped "777 Ill"-----	776.236
T. 15 N., R. 3 W., center of S. $\frac{1}{2}$ NE. $\frac{1}{4}$ sec. 19, second fence post north of gate leading to residence of S. N. Perry; copper nail on knob on side of post, marked "667.65"-----	667.45

	Feet.
Camp Creek, bridge over-----	662. 6
Camp Creek; surface of water September 2, 1913-----	649
T. 15 N., R. 3 W., center of NE. $\frac{1}{4}$ sec. 30, south side of road opposite center of T road north, 15 feet east of fence line; copper nail in east end of brace post, marked "750.30"-----	750. 09
T. 15 N., R. 3 W., northwest corner of SE. $\frac{1}{4}$ sec. 29, southeast corner of T road south, 5 feet east of fence, in brace post; copper nail marked "739.22"-----	738. 99
From NE. $\frac{1}{4}$ sec. 30, T. 15 N., R. 3 W., west and north through Eliza to Wrayville, thence east to Edgington.	
T. 15 N., R. 3 W., NE. $\frac{1}{4}$ sec. 30, about middle of west line, southeast corner of road forks, 1.5 feet east of fence line, 0.5 foot north of fence; iron post stamped "750 Ill"-----	749. 369
T. 15 N., R. 3 W., southwest corner of NE. $\frac{1}{4}$ sec. 25, southwest corner of schoolhouse yard (District No. 33), in root of 3-foot oak tree; copper nail marked "740.65"-----	740. 43
T. 15 N., R. 4 W., southeast corner of NE. $\frac{1}{4}$ sec. 26, northwest corner of crossroads; chiseled square on 3-foot rock-----	729. 64
T. 15 N., R. 4 W., southeast corner of NE. $\frac{1}{4}$ sec. 27, near northwest corner of crossroads, north end of 12-inch cast-iron drain pipe; painted square marked "630.95"-----	630. 73
T. 15 N., R. 4 W., northwest corner of SW. $\frac{1}{4}$ sec. 27, southeast corner of crossroads, 1 foot west of corner fence post; iron post stamped "715 Ill"-----	715. 015
T. 15 N., R. 4 W., southeast corner of NE. $\frac{1}{4}$ sec. 28, northwest corner of crossroads, north end of 12-inch cast-iron drain pipe; painted square marked "696.37"-----	696. 14
T. 15 N., R. 4 W., southwest corner of NW. $\frac{1}{4}$ sec. 28, northeast corner of T road east, in base of corner fence post; spike marked "694. 03"-----	693. 80
T. 15 N., R. 4 W., southwest corner of sec. 20, on east side of road, opposite center of T road west, 10 feet north of fence line; iron post stamped "687 Ill"-----	686. 294
T. 15 N., R. 5 W., northeast corner of sec. 25, south side of road opposite center of T road north, 5 feet north of corner fence post; chiseled square on stone, marked "669. 09"-----	668. 847
T. 15 N., R. 5 W., northeast corner of sec. 26, southwest corner of T road south, 45 feet above center of roads, in top of corner fence post; copper nail marked "668.08"-----	667. 83
T. 15 N., R. 5 W., southeast corner of sec. 22, 0.5 mile south of Petersburg, on west side of road opposite center of T road east, 1.5 feet east of fence, 2.5 feet north of north gate post; iron post stamped "674 Ill"-----	674. 202
T. 15 N., R. 5 W., about middle of east line of SE. $\frac{1}{4}$ sec. 22, northwest corner of T road west, in root of cherry tree; copper nail marked "675.84"-----	675. 59
T. 15 N., R. 5 W., near west line about middle of SW. $\frac{1}{4}$ sec. 22, northeast corner of T road east, 75 feet north of center of T road, on southwest corner of cement walk leading to Madrew Bear's residence; painted square marked "681.99"-----	681. 74
T. 15 N., R. 5 W., near northeast corner of SE. $\frac{1}{4}$ sec. 21, inside row of rivets at south end of west truss of bridge over Eliza Creek; head of 12th rivet from bottom, marked "592.04"-----	591. 79

	Feet.
Eliza, T. 15 N., R. 5 W., center of sec. 16, on south side of road opposite center of T road north, 1 foot north of fence, 65 feet west of fence; iron post stamped "695 Ill"-----	695.125
T. 15 N., R. 5 W., about middle of west line of sec. 16, southeast corner of T road east, south end of wooden drain pipe; copper nail marked "691.92"-----	691.66
T. 15 N., R. 5 W., southeast corner of NW. $\frac{1}{4}$ sec. 9, northwest corner of road forks, southeast corner of schoolhouse yard, in root of 3-foot oak tree; copper nail marked "716.72"-----	716.45
T. 15 N., R. 5 W., southeast corner of SW. $\frac{1}{4}$ sec. 4, northwest corner of crossroads; copper nail at base of 30-inch oak tree, marked "730.78"-----	730.51
T. 15 N., R. 5 W., northeast corner of NW. $\frac{1}{4}$ sec. 4, southwest corner of T road south, at county line, 5 feet east of post, 5 feet south of fence, top of short post; copper nail marked "758.94"-----	758.66
T. 15 N., R. 5 W., about center of north line of NW. $\frac{1}{4}$ sec. 3, on south side of county line road opposite west line of T road north, 1.5 feet north of fence; iron post stamped "752 Ill"-----	752.016
T. 16 N., R. 5 W., southwest corner of sec. 27, northeast corner of T road east, in knot on northeast side of corner fence post; copper nail marked "736.92"-----	736.64
T. 16 N., R. 5 W., northeast corner of NW. $\frac{1}{4}$ sec. 28, southwest corner of crossroads, in root on northeast side of 18-inch oak tree; copper nail marked "668.68"-----	668.40
Wrayville, near center of sec. 21, T. 16 N., R. 5 W., 500 feet south of bridge over Copperas Creek, northeast corner of road forks, opposite and in line with south side of church, 2 feet west of fence; iron post stamped "585 Ill"-----	584.445
T. 16 N., R. 5 W., middle of south line of SW. $\frac{1}{4}$ sec. 22, on south side of road opposite east line of T road north, opposite center of secondary road to west, 3 feet south of fence, 2 feet above ground, in brace post at angle in fence; copper nail marked "644.28"-----	643.98
T. 16 N., R. 5 W., southeast corner of sec. 22, 115 feet west of T road south, on north side of road, in root of tree; copper nail marked "694.01"-----	693.72
T. 16 N., R. 5 W., northeast corner of sec. 26, at T road west, on top of stone in center of roads; chiseled square marked "729.98"-----	729.67
T. 16 N., R. 5 W., 0.2 mile south of northeast corner of sec. 25, on west side of road, 200 feet north of John Powell's residence, 1.5 feet east of fence, 1.5 feet north of gate leading to Powell's barn; iron post stamped "738 Ill"-----	737.793
T. 16 N., R. 4 W., near northwest corner of SW. $\frac{1}{4}$ sec. 19, stone on west side of road opposite center of road to east, 20 feet east of corner fence post; chiseled square marked "646.82"-----	646.51
T. 16 N., R. 4 W., northeast corner of SE. $\frac{1}{4}$ sec. 19, south side of road, opposite west line of T road north; spike in base of telephone pole, marked "692.85"-----	692.53
T. 16 N., R. 4 W., southwest corner of NE. $\frac{1}{4}$ sec. 20, 75 feet east of T road south, on southeast corner of concrete step in front of schoolhouse, marked "725.92"-----	725.60
T. 16 N., R. 4 W., southwest corner of NW. $\frac{1}{4}$ sec. 21, northeast corner of T road north, 10 feet east of corner fence post, in brace post; copper nail marked "729.48"-----	729.16

	Feet.
T. 16 N., R. 4 W., northeast corner of sec. 20, on west side of road opposite center of T road east, 2 feet east of fence, 2 feet south of south gate post; iron post stamped "652 III"-----	651.370
T. 16 N., R. 4 W., southwest corner of sec. 15, northeast corner of crossroads; spike in base of 18-inch hickory tree, marked "722.60"-----	722.28
T. 16 N., R. 4 W., northwest corner of sec. 15, southeast corner of T road east, in fence corner, in root of 18-inch box elder tree; copper nail marked "750.59"-----	750.26
T. 16 N., R. 4 W., southeast corner of sec. 10, on north side of road, opposite west line of T road south, southeast corner of Buffalo Center schoolhouse yard; iron post stamped "753 III"-----	752.776
T. 16 N., R. 4 W., NE. $\frac{1}{4}$ sec. 14, northwest corner, southeast corner of crossroads; spike in base of corner fence post, marked "755.32"-----	754.99
T. 16 N., R. 4 W., middle of south line of sec. 12, at crossroads, 50 feet north of east-west road, in center of road to north, in root on south side of 4-foot tree; copper nail marked "768.64"-----	768.30
T. 16 N., R. 3 W., southwest corner of sec. 7, 1 mile west of Edgington, 2.5 feet on east side of road, opposite center of road to west; chiseled square stamped "779.69"-----	779.34

MILAN QUADRANGLE.

[Latitude 41° 15'-41° 30'; longitude 90° 30'-90° 45'.]

Bench marks east of Edgington.

T. 16 N., R. 3 W., quarter corner between secs. 10 and 15, 78 feet north of road, 20 feet east of road; iron post stamped "792"-----	790.448
T. 16 N., R. 3 W., center of south line of sec. 9, on south side of road, 75 feet west of T road north, in root of 24-inch tree; copper nail marked "793.55"-----	793.53

Bench marks near secs. 27, 28, and 29, T. 15 N., R. 3 W.

T. 15 N., R. 3 W., southwest corner of NE. $\frac{1}{4}$ sec. 28, northwest corner of crossroads, on 18-inch stone in front of church; chiseled square marked "764.64"-----	764.39
T. 15 N., R. 3 W., about middle of east line of NE. $\frac{1}{4}$ sec. 27 (?), southwest corner of crossroads, 30 feet west of fence, 7 feet south of fence, in oak stump; spike marked "778.2"-----	778.13

Marseilles quadrangle.

GRUNDY, KENDALL, AND LA SALLE COUNTIES.

The elevations in the following list were determined by primary leveling and accord with Bulletin 493.

The leveling was done in 1913 by C. R. French.

MARSEILLES QUADRANGLE.

[Latitude 41° 15'-41° 30'; longitude 88° 30'-88° 45'.]

From Marseilles south along highway to northeast corner of sec. 14, T. 32 N., R. 4 E., thence east 11 miles, thence north to point near Fivemile Bridge over canal, thence southwest to point 3.6 miles northeast of Seneca.

	Feet.
Marseilles, east wing wall of north abutment of highway bridge over Illinois River, in top of northeast end stone of eighth course below the bridge seat stone; copper bolt (U. S. C. E. p. b. m. 86)---	481.902

	Feet.
T. 33 N., R. 4 E., 1 mile south of Marseilles, northwest corner of NE. $\frac{1}{4}$ sec. 25, northwest corner of T road; painted square on top of post, marked "T. B. M. 520.1"-----	520.13
T. 33 N., R. 4 E., SW. $\frac{1}{4}$ sec. 24, northeast corner of T road southwest, on southeast corner of cement walk leading to residence on Glenview farm; painted square marked "T. B. M. 526.3"-----	526.32
T. 33 N., R. 4 E., middle of west edge of SE. $\frac{1}{4}$ sec. 26, 2 miles southwest of Marseilles, northwest corner of T road northeast, northwest corner of yard to Larson's residence; iron post stamped "713 Ill"-----	713.418
T. 33 N., R. 4 E., about middle of north edge of NE. $\frac{1}{4}$ sec. 35, at T road west; center of roads-----	709
T. 32 N., R. 4 E., northeast corner of sec. 2, southwest corner of crossroads, on top of 3-foot rock; chiseled square, painted on pole "709.99"-----	709.97
T. 32 N., R. 4 E., northeast corner of sec. 11, southwest corner of crossroads, on west end of wooden culvert; painted square, painted on pole 717.67-----	717.65
T. 32 N., R. 4 E., northwest corner of sec. 13, southeast corner of crossroads, 2 feet south of fence corner, 1 foot west of fence; iron post stamped "668 Ill"-----	667.950
T. 32 N., R. 5 E., southwest corner of sec. 7, northeast corner of crossroads, west end of north concrete headwall of culvert; chiseled square painted "705.52"-----	705.50
T. 32 N., R. 5 E., southwest corner of sec. 8, northeast corner of crossroads, 2 feet east of fence corner, 1 foot south of fence; iron post stamped "721 Ill"-----	721.207
T. 32 N., R. 5 E., southeast corner of sec. 8, northwest corner of roads, at base of corner fence post; painted mark, painted on post 716.15-----	716.11
T. 32 N., R. 5 E., northeast corner of sec. 16, southwest corner of crossroads, on west end of 15-inch vitrified drainpipe; painted mark-----	690.45
T. 32 N., R. 5 E., southeast corner of sec. 10, northwest corner of crossroads, 2 feet north of fence corner, 1 foot east of fence line; iron post stamped "676 Ill"-----	675.796
T. 32 N., R. 5 E., southeast corner of sec. 11, northwest corner of crossroads, at southeast corner of Chas. Maier's yard; painted square on willow tree, marked "669.83"-----	669.79
T. 32 N., R. 5 E., southeast corner of sec. 12, northwest corner of crossroads, on west end of vitrified drainpipe; painted square marked "652.42"-----	652.37
T. 32 N., R. 6 E., 170 feet east of northwest corner of sec. 18, southwest corner of southwest concrete wing wall of bridge over Hog Run; chisel mark painted "655.21"-----	655.16
T. 32 N., R. 6 E., southwest corner of sec. 8, northeast corner of crossroads; iron post stamped "659 Ill"-----	659.100
T. 32 N., R. 6 E., southwest corner of SE. $\frac{1}{4}$ sec. 8, 690 feet west of west line of F. E. Hollenbeck's residence, on north side of road; chiseled square on 2-foot rock-----	655.55
T. 32 N., R. 6 E., middle of south edge of SE. $\frac{1}{4}$ sec. 9, bridge over Bills Run, on southwest concrete wing wall, 2 feet west of west edge of floor; chiseled square marked "638.84"-----	638.78

	Feet.
T. 32 N., R. 6 E., southwest corner of sec. 11, northeast corner of crossroads, on north and east side of streams, 1 foot east of fence corner, 1 foot south of fence; iron post stamped "626 Ill"-----	626. 189
T. 32 N., R. 6 E., southeast corner of sec. 3, northwest corner of crossroads; paint mark on root of 18-inch elm tree, marked "633.18"-----	633. 11
T. 33 N., R. 6 E., southwest corner of sec. 35, northeast corner of T road east, on east end of 18-inch vitrified drainpipe; painted square marked "621.73"-----	621. 66
Wauponsee, 1.25 miles west of Kankakee & Seneca branch railroad crossing; center of highway, top of south rail-----	626. 0
T. 33 N., R. 6 E., southwest corner of NW. $\frac{1}{4}$ sec. 35, at northeast corner of T road west; chiseled square on top of 3-foot rock, marked "621.57"-----	621. 50
T. 33 N., R. 6 E., southwest corner of NW. $\frac{1}{4}$ sec. 26, northeast corner of crossroads, 3 feet east of fence corner, 1 foot south of fence; iron post stamped "606 Ill"-----	606. 396
T. 33 N., R. 6 E., SW. $\frac{1}{4}$ sec. 23, 20 feet south of northwest corner of, southeast corner of crossroads; iron post stamped "Illinois River Survey, U. S. Lat. 41° 19' 10'', Long. 88° 30' 58'', 594"-----	593. 421
T. 33 N., R. 6 E., about middle of S. $\frac{1}{2}$ SE. $\frac{1}{4}$ sec. 15, on south bank of Illinois River; painted mark on stump, marked "492.74"-----	492. 64
T. 33 N., R. 6 E., about center of NE. $\frac{1}{4}$ sec. 15, north side of river road, 1,100 feet southwest of Fivemile Bridge over canal, in field about 60 feet north of road, opposite lane to south; on top of 4-foot rock; chiseled square-----	497. 73
From Fivemile Bridge along highways north 2.4 miles, thence west 9 miles, thence south to Marseilles.	
T. 33 N., R. 6 E., NE. $\frac{1}{4}$ sec. 15, northwest corner of T road north, 65 feet west of Ed. McNelli's mail box, on top of 3-foot rock; chiseled square-----	512. 00
Rock Island R. R. crossing, 0.5 mile north of Fivemile Bridge, at center of highway; top of north rail-----	520. 3
T. 33 N., R. 6 E., NE. $\frac{1}{4}$ sec. 10, northwest corner of T road west (Bluff Road), 50 feet north of Gust. Peterson's mail box; chiseled square on stone-----	539. 70
T. 33 N., R. 6 E., northwest corner of sec. 11, 75 feet northwest of Young's schoolhouse, in center line of roads at T road east, on 3-foot stone; chiseled square-----	561. 23
T. 34 N., R. 6 E., southeast corner of sec. 34, about 2.25 miles north of Fivemile Bridge, northwest corner of crossroads, 3 feet north of fence, 1.5 feet east of fence; iron post stamped "590 Ill"-----	590. 346
T. 34 N., R. 6 E., southwest corner of sec. 34, 5 feet east of section line, in center of north end of stone slab cover to drain; chiseled square-----	600. 65
T. 33 N., R. 6 E., northeast corner of sec. 5, southwest corner of crossroads, 15 feet west of corner fence post, in base of 2 by 6 inch brace post on fence; copper nail-----	611. 04
T. 34 N., R. 6 E., southwest corner of sec. 32, northeast corner of crossroads, 12 feet north of corner fence post, 1 foot west of fence; iron post stamped "618 Ill"-----	618. 258

	Feet.
T. 33 N., R. 5 E., northeast corner of sec. 1, southwest corner of crossroads, in stump of corner fence post; copper nail-----	640.12
T. 33 N., R. 5 E., northeast corner of sec. 2, south side of east-west road, center of north-south road; chiseled square on top of stone--	664.96
T. 34 N., R. 5 E., southeast corner of sec. 34, northwest corner of crossroads, 30 feet west of corner post, 1.5 feet south of fence; iron post stamped "Prim. Trav. Sta. No. 7, 699, Ill., 1912"-----	699.225
Tps. 34 and 35 N., R. 5 E., corner of secs. 3, 4, 33, and 34, in center of crossroads; chiseled square on stone (section cornerstone)----	706.44
T. 34 N., R. 5 E., southwest corner of sec. 33, northeast corner of T road north, in ground end of 4 by 4 inch brace post, 12 feet north of corner post; copper nail-----	710.59
T. 33 N., R. 5 E., northwest corner of sec. 5, 1 mile east of Loring schoolhouse, southeast corner of crossroads, 20 feet east of north-south fence, in base of brace post, 1 foot above ground; copper nail--	720.92
T. 33 N., R. 5 E., southeast corner of NE. $\frac{1}{4}$ sec. 6, at T road north; base of mail box post-----	719.95
T. 33 N., R. 5 E., northeast corner of SW. $\frac{1}{4}$ sec. 6, facing T road south; mark on base of telephone pole-----	737.48
T. 33 N., R. 5 E., about center of north line of SW $\frac{1}{4}$ sec. 7, at angle in road to northeast, lane to west, in center of roadway; chiseled square on top of 2-foot rock-----	699.73
T. 33 N., R. 5 E., about middle of west line of NW. $\frac{1}{4}$ sec. 18, north edge of Marseilles, at road forks, in center of coping of west head wall of culvert; chiseled square-----	556.51
Marseilles, Chicago, Rock Island & Pacific R. R., center of east walk Main Street; north rail of westbound track-----	495.5
 From point 3.8 miles north of Marseilles north to point 1.6 miles north of Norway, thence west to point 1 mile west of Serena.	
T. 33 N., R. 5 E., northwest corner of sec. 6, southeast corner of crossroads, northwest corner of Loring schoolhouse yard, on west fence line produced, 1 foot north of fence; iron post stamped "676 Ill"-----	676.046
T. 34 N., R. 5 E., southwest corner of sec. 30, northeast corner of crossroads, 10 feet east of corner post, in base of brace post on fence; copper nail-----	763.12
T. 34 N., R. 5 E., southwest corner of sec. 19, northeast corner of crossroads, 5 feet west of hedge row, 25 feet north of hedge row, 30 feet north of N. H. Nelson's mail box; iron post stamped "719 Ill"-----	718.983
T. 34 N., R. 4 E., southeast corner of sec. 13, 600 feet north of house on east side of road, on west concrete head wall of culvert; high point (pebble) in painted square-----	682.47
T. 34 N., R. 4 E., about middle of N. $\frac{1}{2}$ NE. $\frac{1}{4}$ sec. 13, bridge over Chicago road over Brumbach Creek, in northwest pier; top of bolt--	627.13
T. 34 N., R. 5 E., about center of sec. 7, 0.5 mile west of Danway, at driveway to barn, in southwest end of wooden drain; copper nail--	647.03
T. 34 N., R. 5 E., south of northeast corner of sec. 7, 0.5 mile north of Danway, southwest corner of crossroads, on south line produced of house, 1.5 feet east of fence, on center line produced of road to south; iron post stamped "643 Ill"-----	642.517

	Feet.
T. 34 N., R. 5 E., near southwest corner of NE. $\frac{1}{4}$ sec. 5, 1.1 miles southwest of Norway, 500 feet north of cemetery, bridge on Chicago road, on northeast concrete wing wall, 1 foot east of bridge floor; chiseled square-----	627. 10
Norway, about center of sec. 33, T. 35 N., R. 5 E., 65 feet east of northeast corner of blacksmith shop, on top of 2-foot rock; chiseled square-----	638. 98
T. 35 N., R. 5 E., about center of SW. $\frac{1}{4}$ sec. 28, at L in road to north, on west wing wall of north abutment of concrete bridge; chiseled square-----	598. 21
T. 35 N., R. 5 E., about middle of north line of sec. 29, north side of road, 2 feet south of fence, 80 feet northeast of guard fence, northeast post to bridge approach, 270 feet east of east end of bridge over Fox River; iron post stamped "528 Ill"-----	528. 127
Fox River; bridge over-----	540. 3
Fox River, under bridge; surface of water July 31, 1913-----	520
T. 35 N., R. 5 E., southwest corner of sec. 19, 600 feet west of school-house, on north end of vitrified drain pipe; painted square-----	620. 40
T. 35 N., R. 4 E., southeast corner of sec. 23, northwest corner of crossroads, southeast corner of Serena, in west end of wooden drain pipe; copper nail-----	631. 14
Serena, in front of station; top of west rail-----	632. 8
T. 35 N., R. 4 E., about middle of south line of SW. $\frac{1}{4}$ sec. 23, northwest corner of crossroads, on west side of Serena, 3 feet south of fence, 15 feet west of fence, on north end of concrete drain; chiseled square-----	630. 82
From point near Norway east and south to point 2.4 miles north of Fivemile Bridge.	
T. 35 N., R. 5 E., NW. $\frac{1}{4}$ sec. 28, 1.5 miles north of Norway, southwest corner of crossroads, in west end of wooden drain pipe; copper nail-----	617. 07
T. 35 N., R. 5 E., northeast corner of NW. $\frac{1}{4}$ sec. 27, intersection of east-west road with Chicago road, 1.5 miles northeast of Norway, near southwest corner of crossroads, 10 feet north of fence, 15 feet east of fence, in south end of wooden drain; nail-----	640. 98
T. 35 N., R. 5 E., southwest corner of sec. 23, north side of road opposite center line of T road south, 3 feet south of hedgerow; iron post stamped "642 Ill"-----	641. 529
T. 35 N., R. 5 E., southeast corner of sec. 23, 210 feet west of section line, in middle of bridge, at base of stiffener; north end of steel floor beam-----	676. 91
T. 35 N., R. 6 E., northwest corner of sec. 30, on east side of road opposite center line of T road west, 4 feet east of fence, 3 feet north of fence; chiseled square on top of 3-foot rock-----	704. 32
T. 35 N., R. 5 E., southeast corner of sec. 25, northwest corner of T road west, 6 feet west of corner post, in brace post, 1 foot above ground; copper nail-----	761. 32
T. 35 N., R. 5 E., northeast corner of SE. $\frac{1}{4}$ sec. 36, northwest corner of intersection of county-line road with telephone road, 12 feet west of corner fence post, 1.5 feet south of fence; iron post stamped "740 Ill"-----	740. 200

	Feet.
T. 35 N., R. 6 E., near southwest corner of NW. $\frac{1}{4}$ sec. 32, under driveway to C. C. Hoge's residence, top of northeast end of stone drain; chiseled square-----	677. 21
T. 35 N., R. 6 E., southeast corner of sec. 29, northeast corner of crossroads, on north end of 15-inch vitrified drainpipe; painted square...	693. 07
T. 35 N., R. 6 E., SW. $\frac{1}{4}$ sec. 27, about middle of south line, on north side of road at northeast corner of crossroads, 90 feet west of corner fence post, 1.5 feet south of fence; iron post stamped "689 Ill"...	689. 353
T. 35 N., R. 6 E., about center of north half of SW. $\frac{1}{4}$ sec. 34, southeast stone wing wall of wooden culvert, 75 feet east of center of north-south road, east end of stone of top course; high point in painted square-----	659. 66
T. 35 N., R. 6 E., about center of sec. 35, southeast corner of crossroads, on concrete base of fence post at corner; high point in painted square-----	645. 62
T. 34 N., R. 6 E., about middle of north line of sec. 2, 150 feet south of Grundy-Kendall county line, on east side of road, 1.5 feet west of fence, in fence line produced on south side of T. Larson's residence; iron post stamped "627 Ill"-----	626. 550
T. 34 N., R. 6 E., southeast corner of SW. $\frac{1}{4}$ sec. 2, northwest corner of crossroads, 50 feet southeast of southeast corner of schoolhouse, on west end of 12-inch drainpipe; painted square-----	606. 65
T. 34 N., R. 6 E., southwest corner of SE. $\frac{1}{4}$ sec. 11, on east line of north-south road, in center of east-west road, in root of 4-foot poplar tree; copper nail-----	607. 21
T. 34 N., R. 6 E., southwest corner of SE. $\frac{1}{4}$ sec. 14, southwest corner of T road east, 1.5 feet north of fence, 25 feet east of corner fence post; iron post stamped "591 Ill"-----	591. 394
T. 34 N., R. 6 E., near southwest corner of NW. $\frac{1}{4}$ sec. 23, northwest wing wall of bridge over Nettle Creek, 11 feet northwest of north end of west truss; high point in chiseled square-----	582. 47
T. 34 N., R. 6 E., southeast corner of sec. 27, northwest corner of T road west, on stone in north end of drain; chiseled square-----	592. 89

Avon quadrangle.

FULTON, KNOX, McDONOUGH, AND WARREN COUNTIES.

The elevations in the following list were determined by primary leveling and accord with Bulletin 493.

The leveling was done in 1913 by C. R. French and W. S. Gehres.

AVON QUADRANGLE.

[Latitude 40° 30'–40° 45'; longitude 90° 15'–90° 30']

From London Mills north and west along highway to sec. 26, T. 9 N., R. 1 E., thence south and east to Ellsville.

	Feet.
London Mills, in southwest corner of south pier of bridge over Spoon River; aluminum tablet stamped "534.22"-----	534. 206
T. 9 N., R. 2 E., 500 feet west of southeast corner of sec. 29, near private road north, in southwest corner of culvert, in end of 6 by 8 inch beam; spike marked "606.1"-----	606. 14

	Feet.
T. 9 N., R. 2 E., southwest corner of SE $\frac{1}{4}$ sec. 29, in west right-of-way line of road north and 11 feet north of north right-of-way line of road west; iron post stamped "653"-----	653.306
T. 9 N., R. 2 E., southwest corner of SW. $\frac{1}{4}$ sec. 29, in southwest corner of T road, in base of telephone pole; spike marked "648.9"-----	648.98
T. 9 N., R. 2 E., northwest corner of NE. $\frac{1}{4}$ sec. 31, in southeast corner of T road south, in base of fence post; spike marked "650.4"-----	650.44
T. 9 N., R. 1 E., southwest corner of SE. $\frac{1}{4}$ sec. 25, southwest corner of T road; spike, marked on pole "666.5"-----	666.53
T. 9 N., R. 1 E., southwest corner of SE. $\frac{1}{4}$ sec. 26, in northeast corner of crossroads, 1.5 feet west of east right-of-way line of road north and 5 feet north of north right-of-way line of road east; iron post stamped "706"-----	705.599
T. 9 N., R. 1 E., southwest corner of SE. $\frac{1}{4}$ sec. 35, southwest corner of T road, in fence post; spike marked "662.1"-----	662.19
T. 8 N., R. 1 E., southeast corner of NW. $\frac{1}{4}$ sec. 2, in northwest corner of T road, in telephone pole; spike marked "651.9"-----	651.95
T. 8 N., R. 1 E., southwest corner of NE. $\frac{1}{4}$ sec. 11, 1 foot west of east right-of-way line of road north, 5 feet north of north right-of-way line of road east; iron post stamped "642"-----	641.708
T. 8 N., R. 1 E., sec. 12, south end of west pier of center span of bridge over Cedar Creek, on end post; chiseled square marked "553.7"-----	553.74
T. 8 N., R. 1 E., southwest corner of NE. $\frac{1}{4}$ sec. 13, in southeast corner of T road, in telephone pole; spike marked "660.8" on pole-----	660.95
T. 8 N., R. 1 E., southwest corner of SE. $\frac{1}{4}$ sec. 13, in southeast corner of T road, in telephone pole; spike marked "647.6" on pole-----	647.68
T. 8 N., R. 1 E., southwest corner of NE. $\frac{1}{4}$ sec. 11, 1 foot west of east right-of-way line of road north and 42 feet north of north right-of-way line of road east; iron post stamped "704"-----	703.871
T. 8 N., R. 1 E., southeast corner of SW. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 24, at intersection of center line of road west with east right-of-way line of road north, in telephone pole; spike, "652.8" marked on pole-----	652.94
T. 8 N., R. 1 E., southwest corner of SW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 25, in northwest corner of T road, in telephone pole; spike, "650.1" marked on pole-----	650.20
T. 8 N., R. 1 E., southwest corner of NW. $\frac{1}{4}$ sec. 36, southeast corner of crossroads, in telephone pole; spike, "621.4" marked on pole-----	621.49
T. 8 N., R. 1 E., southwest corner of sec. 36, 1 foot south of north right-of-way line of road east, 30 feet east of east right-of-way line of road south; iron post stamped "609," "609.079" marked on pole-----	609.209
T. 8 N., R. 1 E., southwest corner of SE. $\frac{1}{4}$ sec. 36, at intersection of center line of road north and south line of road east, in telephone pole; spike, "634.3" marked on pole-----	634.45
T. 8 N., R. 2 E., southwest corner of SE. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 31, north side of road, in telephone pole; spike, "632.6" marked on pole-----	632.79
T. 8 N., R. 2 E., southwest corner of SE. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 32, in northwest corner of T road, in telephone pole; spike, "549.9" marked on pole-----	550.10
Tps. 7 and 8 N., R. 2 E., between secs. 32 and 5, at Ellisville, in south side of east abutment of bridge over Spoon River; aluminum tablet stamped "517.44"-----	517.480

From point 2.4 miles west of Ellisville west along highway to Prairie, thence north and east to sec. 26, T. 9 N., R. 1 E.

	Feet.
T. 7 N., R. 1 E., near northeast corner of NW. $\frac{1}{4}$ sec. 3, north corner of west abutment of bridge; painted corner, "571.0" marked on top chord -----	571.11
T. 7 N., R. 1 E., near southwest corner of NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 3, in southeast corner of T road; iron post stamped "652" (also primary traverse station No. 17, though not stamped to so indicate)---	651.713
T. 7 N., R. 1 E., near southwest corner of NW. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 4, in northwest corner of T road, in telephone pole; spike, "626.7" marked on pole -----	626.77
T. 7 N., R. 1 E., southwest corner of NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 4, on west end of culvert north side of crossroads; nailhead, "638.8" marked on culvert -----	638.86
T. 7 N., R. 1 E., near southwest corner of NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 5, in southeast corner of crossroads, in fence post; spike, "649.1" marked on post-----	649.22
T. 7 N., R. 1 E., near northwest corner of SW. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 6, in northeast corner of T road, in telephone pole; spike, "663.2" marked on pole-----	663.26
T. 7 N., R. 1 W., southeast corner of NE. $\frac{1}{4}$ sec. 1, on corner stone in middle of road; "653.0" painted on stone-----	653.08
T. 7 N., R. 1 W., southwest corner of NW. $\frac{1}{4}$ sec. 1, in northwest corner of crossroads; iron post stamped "668"-----	667.757
T. 7 N., R. 1 W., northwest corner of sec. 1, northwest corner of crossroads, in telephone pole; spike, "680.6" marked on pole-----	680.68
T. 8 N., R. 1 W., northwest corner of sec. 36, in southeast corner of crossroads, in telephone pole; spike, "712.4" painted on pole-----	712.45
T. 8 N., R. 1 W., northwest corner of sec. 25, in northeast corner of crossroads, 2 feet west of east line of road north and 5 feet north of north line of road east; iron post stamped "678"-----	678.424
T. 8 N., R. 1 W., southwest corner of NW. $\frac{1}{4}$ sec. 24, in northeast corner of crossroads, in telephone pole; spike, "650.3" marked on pole -----	650.33
T. 8 N., R. 1 W., near southwest corner of sec. 13, east end of north abutment of bridge over Cedar Creek; chiseled square, "584.9" marked on end post-----	584.91
T. 8 N., R. 1 W., northwest corner of SW. $\frac{1}{4}$ sec. 13, in southeast corner of T road, in telephone pole; spike, "632.1" marked on pole---	632.14
T. 8 N., R. 1 W., southwest corner of NW. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 14, in northwest corner of T road, in telephone pole; spike, "619.3" marked on pole -----	619.28
T. 8 N., R. 1 W., southwest corner of SE. $\frac{1}{4}$ sec. 11, 1 foot west of east line of road north and 10 feet north of north line of road east; iron post stamped "638"-----	638.063
T. 8 N., R. 1 W., southwest corner of NE. $\frac{1}{4}$ sec. 11, in southwest corner of road, in fence post; spike, "647.6" marked on post-----	647.68
T. 8 N., R. 1 W., center of sec. 2, in northwest corner of crossroads, in fence post; spike, "667.3" marked on post-----	667.32
T. 8 N., R. 1 W., northwest corner of NE. $\frac{1}{4}$ sec. 2, on west side of road, in telephone pole; spike, "665.0" marked on pole-----	665.09
T. 9 N., R. 1 W., southwest corner of SE. $\frac{1}{4}$ sec. 26, 1.5 feet south of north line of road east and 41 feet east of east line of road north; iron post stamped "671"-----	670.648

	Feet.
T. 9 N., R. 1 W., southwest corner of SE. $\frac{1}{4}$ sec. 25, east end of culvert on north side of T road; chiseled square, "657.8" marked on stone.	657. 83
T. 9 N., R. 1 E., southwest corner of sec. 30, in northwest corner of T road, in fence post; spike, "651.0" marked on post.	651. 09
T. 9 N., R. 1 E., between secs. 30 and 31, north end of west abutment of bridge over Cedar Creek; chiseled square, "593.0" marked on end post.	593. 03
T. 9 N., R. 1 E., northwest corner of NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 32, in middle of T road; on corner stone, "663.4" marked on fence.	663. 43
T. 9 N., R. 1 E., northwest corner of NE. $\frac{1}{4}$ sec. 32, 2 feet south of north line of road west and 26 feet west of west line of road north; iron post stamped "665"	665. 475
T. 9 N., R. 1 E., southwest corner of sec. 28, in center of crossroads; on corner stone.	647. 48
T. 9 N., R. 1 E., southwest corner of sec. 28, 55 feet west of northwest corner of T road, in telephone pole; spike, "681.3" marked on pole.	681. 30
T. 9 N., R. 1 E., southeast corner of sec. 27, on south side of road, 75 feet east of east line of T road north, in telephone pole; spike, "707.1" marked on pole.	707. 13
T. 9 N., R. 1 E., southwest corner of SE. $\frac{1}{4}$ sec. 26, in northeast corner of crossroads, 1.5 feet west of east right-of-way line of road north, 5 feet north of north right-of-way line of road east; iron post stamped "706"	705. 599

On Double Spur to Avon.

T. 8 N., R. 1 W., northwest corner of sec. 25, in northeast corner of crossroads, 2 feet west of east line of road north, 5 feet north of north line of road east; iron post stamped "678"	678. 424
T. 8 N., R. 1 E., center of SW. $\frac{1}{4}$ sec. 19, on east side of road, in telephone pole; spike, "643.8" marked on pole.	643. 81
Avon, southwest corner of NW. $\frac{1}{4}$ SE. $\frac{1}{4}$ sec. 19, T. 8 N., R. 1 E., in northwest corner of street intersection, 3 feet west of west edge of sidewalk north and 6 feet south of south edge of sidewalk west; iron post stamped "641"	640. 925

From Prairie south and east along highway to sec. 2, T. 6 N., R. 1 E., thence north to sec. 4, T. 7 N., R. 1 E.

T. 7 N., R. 1 W., southwest corner of NW. $\frac{1}{4}$ sec. 1, in northwest corner of crossroads at Prairie; iron post stamped "668 Ill"	667. 757
Chicago, Burlington & Quincy R. R. crossing, westbound track, at center of highway; top of north rail.	665. 1
T. 7 N., R. 1 W., northwest corner of sec. 12, on east side of road, 150 feet south of T road west, on northwest corner of carriage block; painted square.	671. 59
T. 7 N., R. 1 W., southeast corner of sec. 11, at northwest corner of crossroads, 15 feet north of hedgerow, 20 feet east of hedgerow, in top of 4-inch post on south side of west wooden head wall of drain; copper nail.	656. 08
T. 7 N., R. 1 W., southwest corner of sec. 13, at northeast corner of T road north, east end of cast-iron drainpipe; painted square.	636. 72
T. 7 N., R. 1 W., quarter corner between secs. 14 and 23, on north side of road on east line (produced) of T road south, 2 feet south of hedgerow, 20 feet east of fence corner; iron post stamped "668 Ill"	668. 394

	Feet,
T. 7 N., R. 1 W., quarter corner between secs. 23 and 26, at southwest corner of crossroads, 5 feet south of corner fence post, 1 foot east of fence; spike in base of telephone pole.....	634. 42
T. 7 N., R. 1 W., northwest corner of NE. $\frac{1}{4}$ sec. 35, on south concrete head wall of drain, 45 feet east of hedgerow, 15 feet north of fence; chiseled square.....	633. 73
Tps. 6 and 7 N., R. 1 W., quarter corner between secs. 2 and 35, at southeast corner of crossroads, 1.5 feet north of fence, 12 feet east of corner post, on west line of road to north; iron post stamped "633 Ill".....	632. 561
Tps. 6 and 7 N., R. 1 W., southwest corner of sec. 36, on southeast corner of cement walk leading to Geo. Haven's residence; painted square.....	639. 11
T. 7 N., R. 1 E., southwest corner of sec. 31, at northeast corner of crossroads, 15 feet east of corner fence post, intersection of county-line road and township-line road, in base of brace post 1.5 feet above ground; copper nail.....	634. 54
T. 7 N., R. 1 E., quarter corner on south line of sec. 31, north side of road, on center line of T road south, in base of telephone pole; spike.....	628. 40
T. 6 N., R. 1 E., quarter corner on north line of sec. 5, southeast corner of T road south at Barnes schoolhouse, 5 feet south of fence, 7 feet west of fence, in top of low stump; copper nail.....	626. 00
T. 7 N., R. 1 E., southeast corner of sec. 32, at northwest corner of T road north, 10 feet northwest of mail-box post, 1 foot south of fence, 20 feet west of fence; iron post stamped "623 Ill".....	623. 087
T. 6 N., R. 1 E., NW. $\frac{1}{4}$ sec. 4, about middle of south line, at northeast corner of road forks, 20 feet southwest of corner fence post, on north end of 15-inch cast-iron drainpipe; painted square.....	552. 18
T. 6 N., R. 1 E., about middle of east edge of sec. 4, on coping stone at southeast corner of bridge over north branch of Shaw Creek; chiseled square.....	519. 08
T. 6 N., R. 1 E., inside quarter corner of sec. 3, at northwest corner of crossroads, in knot on side of corner fence post; copper nail.....	617. 68
T. 6 N., R. 1 E., at middle of south line of NW. $\frac{1}{4}$ sec. 2, at northeast corner of crossroads, 0.5 foot south by 17 feet east of fence corner; iron post stamped "616 Ill".....	616. 074
T. 7 N., R. 1 E., NW. $\frac{1}{4}$ sec. 35, about middle of south line, 75 feet west of angle in road to west, in north end of wooden drain pipe; copper nail.....	610. 78
Shoal Creek; bridge over.....	558. 8
T. 7 N., R. 1 E., southwest corner of sec. 26, northeast corner of crossroads, 15 feet north of corner fence post, in base of telephone pole; spike.....	582. 64
T. 7 N., R. 1 E., southeast corner of sec. 22, T road south at schoolhouse, in base of brace post on fence facing T road, 2 feet above ground; copper nail.....	624. 74
T. 7 N., R. 1 E., quarter corner between secs. 22 and 27, on stone in center of crossroads; chiseled square.....	624. 08
T. 7 N., R. 1 E., quarter corner south side of sec. 15, north side of road, 10 feet east of line of T road south, 2 feet south of hedgerow; iron post stamped "638 Ill".....	638. 356
T. 7 N., R. 1 E., northeast corner of sec. 21, on south side of road facing T road north, in base of telephone pole; spike.....	638. 11

	Feet.
T. 7 N., R. 1 E., southwest corner of NW. $\frac{1}{4}$ sec. 15, northeast corner of crossroads, 15 feet south by 15 feet west of corner fence post, on top of stone; chiseled square-----	643.39
T. 7 N., R. 1 E., quarter corner east side of sec. 9, at southwest corner of crossroads, in base of telephone pole; spike-----	647.52
T. 7 N., R. 1 E., near quarter corner west side of sec. 3, in southeast corner of T road south; iron post stamped "652 Ill"-----	651.713

Equality, Galatia, Shawneetown, and Stonefort quadrangles.

GALLATIN, HARDIN, POPE, AND SALINE COUNTIES.

The elevations in the following list were determined by primary leveling and accord with the 1912 adjustment.

The leveling was done in 1913 in Galatia quadrangle by R. G. Clinite, in Equality and Stonefort quadrangles by Clinite and F. B. Barrett, and in Shawneetown quadrangle by Barrett. Additional leveling in Equality quadrangle was done in the later part of the season of 1913 by S. R. Archer.

EQUALITY QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88° 15'-88° 30']

From Equality west along highway to point near Harrisburg.

	Feet.
Equality, at northwest corner of Louisville & Nashville R. R. station; iron post stamped "1906"-----	362.219
T. 9 S., R. 8 E., near southeast corner of sec. 18, southwest corner of iron highway bridge over creek; copper nail in bridge floor, marked "348.5"-----	348.51
T. 9 S., R. 7 E., 0.25 mile north of southwest corner of sec. 13, at northeast corner of T road north; chiseled circle on stone 18 inches south of corner fence post, marked "393.5"-----	393.50
T. 9 S., R. 7 E., 0.25 mile north of southwest corner of sec. 14, at northeast corner of T road east, 4 feet east of corner fence post, 1 foot south of fence; iron post stamped "374 Ill 1913"-----	374.151
T. 9 S., R. 7 E., 0.25 mile southwest of northeast corner of sec. 22, northeast corner of T road south; painted square on east end of tile drain, marked "372.5"-----	372.48
T. 9 S., R. 7 E., 0.25 mile north of center of sec. 21, in southwest corner of T road south; copper nail in southwest corner of wooden bridge floor, marked "366.5"-----	366.51
T. 9 S., R. 7 E., 0.25 mile north of center of sec. 20, opposite T road south, 110 feet northwest of store building, 1.6 feet south of road fence; iron post stamped "400 Ill 1913"-----	399.887
T. 9 S., R. 7 E., 0.25 mile north by 0.25 mile west of center of sec. 19, at southwest corner of T road south, near schoolhouse; copper nail in west end of plank bridge, marked "374.3"-----	374.37
T. 9 S., Rs. 6 and 7 E., quarter corner between secs. 13 and 18, elbow road north to west; chiseled square on section rock on township line, marked "367.9"-----	367.98
T. 9 S., R. 6 E., 0.25 mile west of center of sec. 13, 27 feet northeast of center of intersection of road with T road north, 170 feet northeast of 36-inch white-oak tree; iron post stamped "362 Ill 1913"---	361.907

From Horseshoe south along highway to Karbers Ridge, thence west and north-west to Rudement.

	Feet.
T. 9 S., on Saline-Gallatin county line, 0.25 mile east of Horseshoe post office, on south side of road, 180 feet north of small house; iron post stamped "362"-----	362. 433
Horseshoe, 0.6 mile south of, 100 feet east of road forks, on top of iron rail post in southeast corner of small iron bridge; top of bolt marked "364.3"-----	364. 30
T. 9 S., R. 7 E., southeast corner of sec. 36, 1.1 miles south of Horseshoe, opposite T road east, 23 feet north by 7 feet west of center of road intersection; iron post stamped "Prim. Trav. Sta. No. 20, 374, 1911"-----	373. 948
T. 10 S., R. 8 E., northeast of center of sec. 6, southwest corner of T road south, 4.5 feet south of corner fence post; copper nail in top of 14-inch hickory stump, marked "472.4"-----	472. 45
T. 10 S., R. 8 E., quarter corner north side of sec. 8, opposite T road north, secondary road west, 20 feet east by 10 feet south of section stone, 48-inch burr-oak tree; copper nail in root on north side of tree, marked "417.3"-----	417. 34
Kedron, at southwest corner of lot belonging to S. P. Graves, opposite T road west, 60 feet northwest of church, 20 inches inside of fence; iron post stamped "384 Ill 1913"-----	383. 740
T. 10 S., R. 8 E., quarter corner between secs. 16 and 17, at southeast corner of intersection of north-south public road and east-west secondary road, 2 feet south of telephone pole; copper nail in top of wooden peg, marked "401"-----	401. 42
T. 10 S., R. 8 E., near center of sec. 20, 15 feet northwest of center of intersection of crossroads; chiseled square on large rock, marked "381.5"-----	381. 46
T. 10 S., R. 8 E., about 0.25 mile north of center of sec. 29, 0.26 mile north of Moore's store, 4.5 feet northeast of corner of woven-wire fence, in woodland on east side of wagon road; iron post stamped "596 Ill 1913"-----	595. 752
T. 10 S., R. 8 E., near northeast corner of sec. 32, 0.7 mile southeast of Moore's store, on summit of ridge, 800 feet above white cabin, on east side of highway; copper nail in root of 14-inch lone elm tree girdled and marked "733.6"-----	733. 57
T. 11 S., R. 8 E., northwest corner of sec. 4, 160 feet south of Gallatin-Hardin county line, on west side of 54-inch elm tree, on east side of highway; copper nail in top of wooden stake marked "570.9"-----	570. 92
Karbers Ridge, at northwest corner of crossroads, 10 feet north by 2 feet east of southeast corner of yard belonging to F. C. Karber; iron post stamped "605 Ill 1913"-----	604. 539
T. 11 S., R. 8 E., near northwest corner of sec. 8, at northwest corner of T road north, 180 feet north of jog to north, in east-west road, on west side of road; copper nail in top of 12-inch oak stump, marked "569.5"-----	569. 50
T. 11 S., R. 8 E., 0.25 mile south of north quarter corner of sec. 7, on south side of road at T road north; highest point on sandstone rock, marked "528.2"-----	528. 22
T. 11 S., R. 7 E., in NE $\frac{1}{4}$ sec. 12, 10 feet north of road, near mail box, in front of Dick Ledbetter's house; copper nail in root of oak tree, marked "545.6"-----	545. 57

	Feet.
T. 11 S., R. 7 E., 0.1 mile south of center of sec. 12, at T road north, 35 feet west of two mail boxes, 2 feet from rail fence; iron post stamped "519 Ill 1913"-----	519. 323
T. 11 S., R. 7 E., 0.25 mile north of south corner of secs. 11 and 12, roads east, south, west, and southwest; highest point on corner stone, marked "487.2"-----	487. 19
T. 11 S., R. 7 E., in western part of sec. 11, 50 feet east of Rose Creek, 10 feet north of road; copper nail in root of large maple tree, marked "395.5"-----	395. 44
T. 11 S., R. 7 E., in eastern part of sec. 10, on west side of road between house and barn; copper nail in top of small stump, marked "479.1"-----	479. 10
T. 11 S., R. 7 E., 0.5 miles southeast of Herod, at main road fork, left hand to Karbers Ridge, right hand to Golconda; paint spot on highest point of sandstone rock, painted "474.5"-----	474. 45
Herod, 100 feet west of, 2 feet from southwest corner of wagon scales; copper nail in root of maple tree, painted "424.2"-----	424. 20
T. 11 S., R. 7 E., 0.5 mile west of Herod, on north side of road, at road fork; copper nail in top of 6-inch stump, marked "453.5"-----	453. 42
T. 11 S., R. 7 E., at center of sec. 5, 50 feet northeast of right angle in road; iron post stamped "475 Ill 1913"-----	474. 461
T. 10 S., R. 7 E., 500 feet north of Saline-Pope county line, in sec. 32, on east side of road; copper nail in top of 6-inch stump, marked "493.9"-----	493. 88
T. 10 S., R. 7 E., 0.25 mile east of west quarter corner of sec. 32, at road west to house; highest point on large sandstone rock, marked "537.2"-----	537. 17
T. 10 S., R. 7 E., 640 feet north by 0.25 mile east of southwest corner of sec. 29, on west side of road; copper nail in root of large elm tree, marked "608.4"-----	608. 38
T. 10 S., R. 7 E., 660 feet south of north quarter corner of sec. 29, on west side of road near house; copper nail in north end of board culvert, marked "510.4"-----	510. 32
T. 10 S., R. 7 E., 0.5 mile east of Rudement, 20 feet east of T road south, copper nail in south end of board culvert, marked "388.7"-----	388. 60
From Karbers Ridge east along highway to sec. 6, T. 11 S., R. 9 E.	
Karbers Ridge, 0.4 mile east of, just south of road; copper nail in top of 12-inch oak stump, painted "609.6"-----	609. 61
Karbers Ridge, 2.4 miles east of, on north side of road, 0.25 mile west of Mr. Rogers's house; copper nail in root of maple tree, marked "532.5"-----	532. 50
Sparks Hill, 0.8 mile west of, in southwest corner at T road south, 0.25 mile east of Philadelphia Church; iron post stamped "519 Ill 1913"-----	518. 629
Sparks Hill, 60 feet north of post office, 6 feet north of telephone pole; highest point on limestone rock, painted "609.5"-----	609. 55
Sparks Hill, 0.7 mile north of, 500 feet north of lane west to house, on east side of road; copper nail in root of elm tree, marked "698.6"-----	698. 65
T. 11 S., R. 9 E., in sec. 6, in front of first house on road east of range line, just west of mail box, on north side of road; chiseled square on sandstone rock, marked "627.4"-----	627. 45
T. 11 S., R. 9 E., 0.2 mile north by 500 feet east of center of sec. 6, 20 feet southeast of southeast corner of Mr. Moore's garden, on east side of road; iron post stamped "633 Ill 1913"-----	633. 438

From Herod southwest along highways to southwest corner of quadrangle.

	Feet.
Herod, 100 feet west of, 2 feet from southwest corner of wagon scales, in root of maple tree; copper nail marked "424.2"-----	424. 20
T. 11 S., R. 7 E., 0.2 mile northeast of road crossing line between secs. 9 and 16, 20 feet south of private road east, 50 feet south of branch from west, at fence line, east side of road, in root on road side of 1-foot oak tree; 40-penny spike-----	451. 42
T. 11 S., R. 7 E., 0.2 mile east of southwest corner of sec. 9, road crossing east-west section line, on north side of road, 60 feet west of drain from north, at cluster of four 4-inch oak trees, in trunk between south two; 40-penny spike-----	468. 40
T. 11 S., R. 7 E., 60 feet south of north line of SE. $\frac{1}{4}$ sec. 17, ford of Bear Track Branch, east side of road, north bank of branch, in top of bare root on road side of 1-foot poplar tree; 40-penny spike--	450. 86
T. 11 S., R. 7 E., near center of NW. $\frac{1}{4}$ sec. 20, 250 feet north of J. B. Hart's store, east side of road, in root on road side of 2-foot walnut tree; 40-penny spike-----	488. 20
T. 11 S., R. 7 E., near center of SE. $\frac{1}{4}$ sec. 19, at T road west, in triangular grass plat at center of road forks, in top of 2 $\frac{1}{2}$ -foot stump; 40-penny spike-----	568. 30
T. 11 S., R. 7 E., 0.1 mile north of center of NW. $\frac{1}{4}$ sec. 30, on west side of road at T road east, at fence line, in root on road side of 4-inch tree; 40-penny spike-----	541. 69
T. 11 S., R. 7 E., 500 feet north of south center of NW. $\frac{1}{4}$ sec. 30, east side of road at fence line, 50 feet west by 40 feet south of gate to front yard of John Johnson (Hartsville P. O.); iron post stamped "504 Ill"-----	503. 758
T. 11 S., R. 7 E., at west center of SW. $\frac{1}{4}$ sec. 30, center of road at T road south, top of township and $\frac{1}{4}$ -section corner stone; chiseled square-----	508. 58
T. 11 S., R. 6 E., 0.1 mile west of, east center of NW. $\frac{1}{4}$ sec. 36, at bend in road to east, private road west, 30 feet east of stream crossing, 20 feet north of south fence line, 60 feet west of bend in road to east, in root on northeast side of 2 $\frac{1}{2}$ -foot oak tree; 40-penny spike-----	652. 459
T. 11 S., R. 6 E., 0.1 mile west of southeast corner of sec. 36, third-class road to west, in center of roads, in oak tree; 40-penny spike--	717. 6
T. 12 S., R. 6 E., near center of NE. $\frac{1}{4}$ sec. 1, at T road east, 150 feet east of road forks, on north side of road, at southwest corner of graveyard, at fence corner, at schoolhouse and church; iron post stamped "748 Ill"-----	748. 192
T. 12 S., R. 6 E., at south center of SE. $\frac{1}{4}$ sec. 1, bend in road to west, at residence of O. Trammel, on south side of road at bend, on fence line, in root on road side of 16-inch oak tree; 40-penny spike-----	760. 48

GALATIA QUADRANGLE.

[Latitude 37° 45'-38°; longitude 88° 30'-88° 45'.]

Near Harrisburg.

Harrisburg, 0.8 mile north of, at southeast corner of iron bridge over drainage ditch; copper nail in bridge floor marked "361.9"-----	361. 94
Harrisburg, 2.5 miles north of, 20 feet south of iron bridge over drainage ditch; copper nail in top of 26-inch stump, marked "359.7"-----	359. 73

SHAWNEETOWN QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88°-88° 15'.]

Near Saline Mines.

	Feet.
Saline Mines, 2.5 miles southwest of, on top of hill 0.3 mile west of Beaver Creek, on south side of road; copper nail in top of 18-inch oak stump, marked "510.6"-----	510.60
Saline Mines, 1.8 miles southwest of, in southwest corner of road fork; copper nail in root of 24-inch black-oak tree, marked "589.6"-----	589.66
Saline Mines, 0.9 mile west of, on north side of road, 50 feet east of mail box; copper nail in root of 27-inch oak tree, marked "357.2"-----	357.22

STONEFORT QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88° 30'-88° 45'.]

Near Harrisburg.

T. 9 S., R. 6 E., 0.3 mile west of center of sec. 14, 12 feet east of north-south fence line, 40 feet southeast of 14-inch walnut tree, north side of highway; copper nail in top of grade stake marked "358.5"-----	358.52
Harrisburg, at southeast corner of Big Four Route station platform, corner of south edge of third flagstone curbing north of sidewalk; chiseled square marked "368.8"-----	368.89
Harrisburg, southwest corner of courthouse square; iron post stamped "Prim. Trav. Sta. No. 1, 400, 1911"-----	399.536

Brownfield and Golconda quadrangles.**JOHNSON AND POPE COUNTIES.**

The elevations in the following list are based on heights of United States Geological Survey temporary bench marks near Herod and on United States Corps of Engineers bench marks at Golconda.

The leveling was done in 1913 by S. R. Archer.

BROWNFIELD QUADRANGLE.

[Latitude 37° 15'-37° 30'; longitude 88° 30'-88° 45'.]

	Feet.
From northeast corner of quadrangle south along highways to point near Golconda.	
T. 12 S., R. 6 E., south center of SE. $\frac{1}{4}$ sec. 2, 175 feet south of bend in road to south, 12 feet west of west fence line, 15 feet south of fence corner, in root on south side of 18-inch oak tree; 40-penny spike-----	662.01
T. 12 S., R. 6 E., at center of SE. $\frac{1}{4}$ sec. 11, on west side of north-south road, in top of 2-foot oak stump; 40-penny spike-----	731.6
T. 12 S., R. 6 E., 200 feet north of south center of SE. $\frac{1}{4}$ sec. 11, northwest corner of T road west, at fence line; iron post stamped "754 III"-----	753.482
T. 12 S., R. 6 E., 0.1 mile south of north center of SE. $\frac{1}{4}$ sec. 14, in front and 20 feet north of residence of Silas Barger, on west side of road, in root on west side of 2-foot oak tree; 40-penny spike-----	707.34

	Feet.
T. 12 S., R. 6 E., north center of NW. $\frac{1}{4}$ sec. 23, 0.3 mile north of Raum, southeast corner of T road east, near fence corner, in root on north side of 14-inch hickory tree; 40-penny spike-----	688. 14
Raum, 0.1 mile south of center of NW. $\frac{1}{4}$ sec. 23, T. 12 S., R. 6 E., 50 feet south of R. R. Taylor's store, in front yard of house standing on west side of road, northeast corner of concrete platform to well; chiseled square-----	711. 51
T. 12 S., R. 6 E., center of NW. $\frac{1}{4}$ sec. 26, 0.9 mile south of Raum, 8 feet east of north-south fence line, inside of fence, east side of road at T road west and private road east, in root on west side of 2-foot oak tree; copper nail-----	716. 49
T. 12 S., R. 6 E., 0.1 mile east by 125 feet south of north center of NW. $\frac{1}{4}$ sec. 35, 150 feet north of Joseph Robinson's residence, northeast corner of road intersection at private road east, at fence corner; iron post stamped "771 Ill"-----	770. 899
T. 12 S., R. 6 E., 0.1 mile south by 0.1 mile east of north center of NW. $\frac{1}{4}$ sec. 35, west side of north-south road, north side of west road at T road west, in root on east side of 8-inch oak tree; copper nail-----	741. 71
T. 13 S., R. 6 E., near north center of NE. $\frac{1}{4}$ sec. 2, road crossing east-west township line, 20 feet south of township line, on west side of road, in root on west side of 1-foot walnut tree; copper nail-----	435. 94
T. 13 S., R. 6 E., 0.1 mile west of east center of sec. 2, on half-section line, at northeast end of small plank drain at T road west, on top of stone; chiseled square-----	495. 52
T. 13 S., R. 6 E., southwest corner of sec. 1, on east side of road at private road west, 5 feet north of section line, in fence corner, in root on west side of 2 $\frac{1}{2}$ -foot oak tree; copper nail-----	419. 09
T. 13 S., R. 6 E., east center of sec. 11, on half section line, southwest corner of T road west, on top at east end of log (partly buried); copper nail-----	421. 57
T. 13 S., R. 6 E., near east center of SE. $\frac{1}{4}$ sec. 11, 90 feet north of T road west, on west side of road at fence line; iron post stamped "441 Ill"-----	440. 721
T. 13 S., R. 6 E., near center of sec. 13, on east side of road, at residence of H. W. Wellman, in base of south post of gate to barnyard; copper nail-----	530. 13
T. 13 S., R. 6 E., 0.1 mile west by 0.1 mile north of southeast corner of sec. 13, southwest corner of T road northwest, on top of rock; chiseled square-----	523. 27
Golconda, T. 13 S., R. 6 E., near east center of SE. $\frac{1}{4}$ sec. 24, 500 feet northeast of station, on north abutment of Illinois Central R. R. trestle bridge over highway, in top of west end of timber sleeper; copper nail-----	350. 07
From Golconda west along Illinois Central R. R. to New Brownfield, north along highways to Eddyville, and east to northeast corner of quadrangle.	
T. 13 S., R. 6 E., near south center of NW. $\frac{1}{4}$ sec. 25, southwest corner of road crossing, inside of fence line, in base of telegraph pole; spike-----	349. 84
T. 13 S., R. 6 E., near south center of sec. 26, 30 feet south of mile-post R. 14-G. 2, 90 feet south of private crossing, on top of east end of stone culvert under railroad; chiseled square-----	359. 89

	Feet.
T. 13 S., R. 6 E., 0.2 mile northeast of south center of SW. $\frac{1}{4}$ sec. 35, in front of residence of S. B. White, 200 feet south of private crossing, in stone culvert G. R. 151.26 under railroad; aluminum tablet stamped "394"-----	393. 815
T. 13 S., R. 6 E., south center of SW. $\frac{1}{4}$ sec. 35, east side of track, north side of road, road crossing on east-west township line, on top of east end of stone culvert under railroad; chiseled square-----	406. 20
T. 14 S., R. 6 E., near center of SE. $\frac{1}{4}$ sec. 3, opposite and 5 feet west of milepost R. 12-G. 4, 10 feet west of Homberg station board, north side of track, at small drain from north, on top of projecting rock; chiseled square-----	393. 76
T. 14 S., R. 6 E., near east line of SW. $\frac{1}{4}$ sec. 3, 200 feet west of private road crossing, north side of track, on top of stone culvert No. G. R. 149.60 under railroad; chiseled square-----	365. 46
T. 14 S., R. 6 E., in SE. $\frac{1}{4}$ sec. 4, northeast corner of Homberg station platform, in top of plank curbing; copper nail-----	369. 51
T. 14 S., R. 6 E., east center of SW. $\frac{1}{4}$ sec. 4, 0.3 mile west of Homberg station, 240 feet north of cattle guard, at rear of house standing on south side of railroad, southeast corner of stone railroad culvert G. R. 148.80; aluminum tablet stamped "361"-----	360. 783
T. 14 S., R. 6 E., near center of sec. 5, 400 feet east of private-road crossing, and one-half north-south section line, in top of south end of stone culvert No. G. R. 147.86; chiseled square-----	350. 05
T. 14 S., R. 6 E., near north center of sec. 6, 1.2 miles southeast of Brownfield station, 1,050 feet south of Brownfield station board, 800 feet north of milepost R. 9-G. 7, west side of track, top of north end of stone culvert No. G. R. 146.85 under railroad; chiseled square--	348. 84
T. 13 S., R. 5 E., near center of SE. $\frac{1}{4}$ sec. 35, 600 feet east of New Brownfield station, on south side of road crossing, west end of railroad culvert No. G. R. 145.80, in top; chiseled square-----	348. 81
New Brownfield, in front of station; top of rail-----	348. 6
New Brownfield, 0.5 mile north of, 0.3 mile east by 0.1 mile south of northwest corner of sec. 36, T. 13 S., R. 5 E., 400 feet south of road crossing, fifth bolt head north of bridge number, west side of track; top of trestle bridge No. G. R. 145.17, painted white-----	348. 16
T. 13 S., R. 5 E., west center of sec. 25, 40 feet east of bend in highway to north, on section line, north side of railroad, north side of road, in root on west side of 6-inch elm tree; copper nail-----	347. 33
T. 13 S., R. 5 E., near east center of NE. $\frac{1}{4}$ sec. 26, southwest corner of crossroads, at fence corner; iron post stamped "Prim. Trav. Sta. No. 9, 396, Ill., 1913"-----	396. 140
T. 13 S., R. 5 E., east center of NE. $\frac{1}{4}$ sec. 23, north end of jog in road to east of north-south section line, south side of road, in root on north side of 2 $\frac{1}{2}$ -foot oak tree; copper nail-----	401. 51
T. 13 S., R. 5 E., at center of sec. 14, second-class road northeast, 12 feet southeast of fence corner, 11 feet northeast of 6-inch walnut tree, 15 feet south of Jas. A. Clitcher's mail box, 2 feet south of south wagon track, on top of corner stone; chiseled square-----	361. 12
T. 13 S., R. 5 E., 0.25 mile west of southeast corner of sec. 11, bend in road to north leaving east-west section line, 8 feet north of section line on east side of road, in root on road side of 3-forked walnut tree; copper nail-----	600. 64

	Feet.
T. 13 S., R. 5 E., 400 feet north of south center of NW. $\frac{1}{4}$ sec. 12, at bend in road to north, at house on south side of road, quarter section-line fence east side of road to north, first post south of fence corner and gate, in projection on east side; copper nail.....	658. 52
T. 13 S., R. 5 E., at south center of SW. $\frac{1}{4}$ sec. 1, 0.3 mile south by 0.25 mile east of Rock, second-class road to south on quarter-section line, north side of and 15 feet east of road forks, at fence line; iron post stamped "650 1913".....	649. 849
T. 13 S., R. 5 E., 115 feet west of southeast corner of sec. 1, 150 feet east of Matthew Sistler's residence, on north side of road, in root on road side of 15-inch hickory tree; copper nail.....	696. 80
T. 13 S., R. 6 E., near west center of SE. $\frac{1}{4}$ sec. 6, southwest corner of road forks, 3 feet above road, on top of sandstone rock; chiseled square.....	652. 05
T. 12 S., R. 5 E., near center of SE. $\frac{1}{4}$ sec. 35, road forks at ford of Quarrel Creek, north road leads to Eddyville, northwest road to Glendale, 55 feet southeast of ford, 90 feet southeast of road forks, at east road-fence line; iron post stamped "497 Ill".....	496. 431
T. 12 S., R. 6 E., 0.1 mile east of northwest corner of sec. 31, road crossing east-west section line, private road to east, fourth-class road to west, southwest corner of roads, at fence line, in root on east side of 6-inch gum tree; copper nail.....	586. 98
T. 12 S., R. 6 E., 0.1 mile east of west center of sec. 30, T road east on half section line, fourth-class road west, southeast corner of road intersection, in root on northwest side of 18-inch oak tree; copper nail.....	606. 34
T. 12 S., R. 6 E., about 0.1 mile east of northwest corner of sec. 30, on east side of road at south edge of timber, 40 feet southeast of branch crossing, road crossing east-west section line, in root on road side of 2 $\frac{1}{2}$ -foot oak tree; copper nail.....	548. 72
T. 12 S., R. 6 E., 0.1 mile east of west center of SW. $\frac{1}{4}$ sec. 19, second-class road to southwest, on east side of road, north side of branch, at fence line, in root on road side of 2-foot oak tree; copper nail....	520. 61
T. 12 S., R. 5 E., east center of sec. 24, private road east, northwest corner of T road west to Glendale, at fence line; iron post stamped "515 Ill".....	515. 260
T. 12 S., R. 6 E., 100 feet east of west center of NW. $\frac{1}{4}$ sec. 18, at residence of Tom Palmer, on east side of road, 20 feet south of T road west, in front of gate to front yard, in root on road side of 6-inch catalpa tree; copper nail.....	667. 908
T. 12 S., R. 6 E., near south center of NW. $\frac{1}{4}$ sec. 7, 0.8 mile southwest of Eddyville, on half section line is road west, 50 feet north of private road, on west edge of road, on top of large flint rock; chiseled square.....	609. 93
T. 12 S., R. 6 E., 0.1 mile east of north center of sec. 7, 0.4 mile south of Eddyville, 750 feet south of road southeast, on west side of road at fence line; iron post stamped "682".....	682. 065
T. 12 S., R. 6 E., 400 feet south of northwest corner of sec. 8, 15 feet north of center of T road southeast, on top of rock outcrop; chiseled square.....	618. 13
T. 12 S., R. 6 E., north center of sec. 8, southeast corner of road intersection, private roads north and south, on road side in root of 1-foot oak tree; copper nail.....	606. 86

	Feet.
T. 12 S., R. 6 E., 0.1 mile north by 300 feet east of west center of sec. 4; southeast corner of T road east, in base of corner fence post; copper nail.....	612. 33
T. 12 S., R. 6 E., near west center of SW. $\frac{1}{4}$ sec. 3, 0.2 mile south of road forks, 20 feet south of front of house on east side of road, southeast corner of yard, on east road-fence line; iron post stamped "428 Ill 1913".....	428. 235
T. 12 S., R. 6 E., 0.1 mile south of center of NW. $\frac{1}{4}$ sec. 10, 440 feet south of second-class road west, private road east, on west side of north-south road inside of fence, in root on west side of 14-inch gum tree; copper nail.....	460. 94
Lusk Creek, at ford; surface of water October 25, 1913.....	379
T. 12 S., R. 6 E., near southeast corner of SW. $\frac{1}{4}$ sec. 10, 120 feet south of ford of Lusk Creek, northeast corner of T road east, on west bank of branch from south, in root on northwest side of 2-foot elm tree; copper nail.....	380. 96
T. 12 S., R. 6 E., near center of NW. $\frac{1}{4}$ sec. 14, 100 feet south of residence of Joseph Buchanan standing on west side of road, 50 feet east by 15 feet north of northeast corner of barn, on line of road fence, in root on road side of 14-inch oak tree; copper nail.....	669. 18
T. 12 S., R. 6 E., 200 feet north of south center of SE. $\frac{1}{4}$ sec. 11, northwest corner of T road west, at fence line; iron post stamped "754 Ill".....	753. 482

GOLCONDA QUADRANGLE.

[Latitude 37° 15'-37° 30'; longitude 88° 15'-88° 30'.]

Bench marks at Golconda.

T. 13 S., R. 7 E., near southwest corner of sec. 19, Golconda, northwest corner of Pope County courthouse, under fire-alarm bell; iron post stamped "Prim. Trav. Sta. No. 354, Ill., 1913".....	353. 632
Golconda, 12 feet south by 8 feet west of north gate of entrance to Pope County courthouse yard; top of copper plate (U. S. C. E. b. m.).....	352. 824
Golconda, in downstream side of brick warehouse on wharf, stone tablets; high-water mark 1883.....	349. 277
High-water mark 1884.....	351. 80
High-water mark 1913.....	350. 747
Golconda, 0.8 mile southwest of, on south side at center of Illinois Central R. R. wooden-trestle viaduct No. G. R. 153.21; top bolt which fastens bridge number to bridge, painted white.....	351. 427

APPENDIX A.

ELEVATIONS ADJUSTED BY THE COAST AND GEODETIC SURVEY FROM PRECISE LEVELING.

Birds, Carmi, Merom, Mount Carmel, Vincennes, and Shawneetown quadrangles.

CLARK, CRAWFORD, LAWRENCE, AND WHITE COUNTIES.

The elevations of bench marks in the following list were determined by a line of precise levels run by the United States Corps of Engineers in 1911 along Wabash River from Terre Haute, Ind., to its mouth, thence down Ohio River to Shawneetown, Ill., and Blackburn, Ky. Connections were made with precise-level bench marks of the United States Geological Survey at Terre Haute, Ind., Blackburn, Ky., and Shawneetown, Ill., and with the precise-level bench mark of the Coast and Geodetic Survey at Vincennes, Ind., also with bench marks of the Ohio River Survey near the mouth of Wabash River. This line formed part of the precise-level net adjustment made by the Coast and Geodetic Survey in 1912.

The instruments used were Kern precise levels belonging to the Mississippi River Commission. The methods adopted for this survey were the same as those in use by that commission.

The standard permanent bench mark established by this survey is a concrete slab surmounted by an iron pipe. The slab measures 16 inches by 16 inches by 4 inches and is set about 3 feet underground. Elevations were taken on a copper bolt embedded in concrete at the center of the slab. The iron pipe surmounting the slab is 4 inches in diameter and 4 feet long and has a cap bolted to its top. Elevations were taken on the center of the cap, which is directly above the bolt in the slab.

The bench-mark pipes established during previous surveys and connected with (1911) are 3-inch iron pipes, 5 feet long, and are set about 4.5 feet in the ground. Elevations on these were taken on the knob on the cap of the pipe.

The abbreviations R. B. and L. B. refer to the right and left banks, respectively, of Wabash River.

MEROM QUADRANGLE.

[Latitude 39°-39° 15'; longitude 87° 30'-87° 45'.]

Along Wabash River.

	Feet.
York, near, on R. B., at upper end of Chenoweth's Reach, about 330 feet west of river bank, 16 feet west of road running approximately north-south at this point, in fence corner formed by yard and poultry fences, about 65 feet southeast of southeast corner of two-story green brick house belonging to M. C. Chenoweth; bolt in slab-----	454.020
Cap on pipe (Wabash River Survey p. b. m. 8)-----	458.089
York, near, 165 feet from top of R. B., in southeast corner of barnyard of G. H. Whitlock, 100 feet east of southeast corner of G. W. Whitlock's dwelling house, 60 feet west of 24-inch blazed water-maple tree; bolt in slab-----	443.904
Cap on pipe (Wabash River Survey p. b. m. 9)-----	447.946
York, about 165 feet north of top of R. B., in northeast corner of vacant lot, at southwest corner of intersection of ferry road with first street parallel to river, 50 feet southwest of street intersection on property of Mrs. J. H. Rook; bolt in slab-----	446.383
Cap on pipe (Wabash River Survey p. b. m. 10)-----	450.439
Raccoon Creek, 0.25 mile southwest of mouth of, at point where river makes a very sharp bend and shows a rock ledge on R. B., on property of Oliver Meeker, about 200 feet north of center of lane in a group of trees surrounding an old cabin, 40 feet southeast of southeast corner of cabin, 40 feet east of northeast corner of small one-room building, blazed 16-inch sycamore tree NE. 16 feet, blazed split-bodied water-maple tree W. 16 feet; bolt in slab-----	451.531
Cap on pipe (Wabash River Survey p. b. m. 11)-----	455.574
Hutsonville, on R. B., at west or main entrance to public-school building, in north end of lowest stone step; center of chiseled square, marked "U. S. \square B. M." (Wabash River Survey, p. b. m. Hutsonville)-----	451.489
Hutsonville, on R. B., in southwest corner of public-school yard, about 2 blocks west and one-half block south from ferry landing, about 3 feet east of east edge of sidewalk fence and 2 feet north of east-west property fence; bolt in slab-----	447.274
Cap on pipe (Wabash River Survey p. b. m. 12)-----	451.334
Hutsonville, 4 miles below, about 250 feet west of river bank, on west side of road along levee which runs northwest-southeast at this point, 130 feet south of point where road turns east to Harney's ferry, on property of John Colliflower, about 150 feet east of southeast corner of his dwelling house, 3 feet south of his south garden fence, 2 feet west of road fence, 10 feet north of small apple tree; bolt in slab-----	437.733
Cap on pipe (Wabash River Survey p. b. m. 13)-----	441.787
Merom, opposite, on R. B., 130 feet back from top of high bank, 50 feet north of road leading down to Merom Ferry, on south end of lowest of eight steps leading to porch of dwelling of J. E. Plunkett, cross in center of chiseled square, marked "U. S. B. M." (Wabash River Survey p. b. m. Plunkett)-----	438.583

Feet.

Merom, opposite, about 200 feet back from top of high bank, on R. B., 100 feet west of dwelling house of J. E. Plunkett, in southeast corner of garden, about 25 feet north of road leading down to Merom Ferry; bolt in slab-----	434. 957
Cap on pipe (Wabash River Survey p. b. m. 14)-----	439. 013

BIRDS QUADRANGLE.

[Latitude 38° 45'-39°; longitude 87° 30'-87° 45'.]

Along Wabash River.

Russellville, on R. B., 300 feet from river bank, in southwest corner of lot owned by James Broyle, on east side of public road leading north to Palestine, Ill., and south to Vincennes, Ind., 100 feet above point where road turns east to ferry, just across road from town house, 30 feet northwest of frame house at corner, 35 feet north to 30-inch cottonwood tree, 30 feet south to 40-inch maple tree; bolt in slab-----	427. 236
Cap on pipe (Wabash River Survey p. b. m. 20)-----	431. 308
Russellville, about 5 miles below, 0.25 mile below point formerly known as Belgrade Landing, on east side of Russellville-Vincennes main public road, 0.8 mile below schoolhouse, 125 feet southwest of house owned and occupied by W. H. Wathem, 2 feet inside of prop- erty line fence, in line with fence separating barnyard and lawn, on R. B.; bolt in slab-----	422. 353
Cap on pipe (Wabash River Survey p. b. m. 21)-----	426. 400

VINCENNES QUADRANGLE.

[Latitude 38° 30'-38° 45'; longitude 87° 30'-87° 45'.]

Along Wabash River.

Vincennes, about 3 miles above, on R. B., 150 feet back from bank, on inside face 4 feet from top of levee, 15 feet north of center line of main public road at point where road crosses levee, about 0.25 mile east of where said road turns north, 200 feet south of barn with red tin roof which is property of E. W. Hedden, 4 feet west of E. W. Hedden's R. F. D. mail box; bolt in slab-----	421. 226
Cap on pipe (Wabash River Survey p. b. m. 22)-----	425. 238
Vincennes, opposite, on upstream end of Illinois abutment of Balti- more & Ohio R. R. bridge over Wabash River, about 2 feet north of bridge seat of first Illinois span, near center; cross chiseled on top stone, marked "U. + S. p. b. m." (Wabash River Survey p. b. m. "B. & O. No. 1")-----	420. 403

MOUNT CARMEL QUADRANGLE.

[Latitude 38° 15'-38° 30'; longitude 87° 45'-88°.]

Along Wabash River.

Mount Carmel, 2 miles above, on land wall of Grand Rapids lock, point where coping stones meet near upper heel post; knob on cap (Wabash River Survey p. b. m. No. 13 set by 1903 Survey, also U. S.°G. S. b. m. described in Bulletin 421 on page 57)-----	396. 771
Mount Carmel, 2 miles above, on land wall of Grand Rapids lock, near point where three coping stones meet near upper heel post; 1-inch square cut in masonry, marked "U. S.°P. B. M." (Wabash River Survey p. b. m. "Grand Rapids")-----	396. 766

CARMi QUADRANGLE.

[Latitude 38°-38° 15'; longitude 88°-88° 15'.]

Along Wabash River.

Maunie, 1.8 miles below Louisville & Nashville R. R. bridge, on L. B., in line with upper side of steel tower supporting telephone wires crossing river, 30 feet toward river from base of tower; iron pipe and cap, knob on cap (Wabash River Survey p. b. m. 33 set by 1903 survey)-----	Feet. 360.727
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SHAWNEETOWN QUADRANGLE.

[Latitude 37° 30'-37° 45'; longitude 88°-88° 15'.]

Along Ohio River.

Shawneetown, 100 feet east of southeast corner of Riverside Hotel, in northeast corner of gunrack; aluminum tablet stamped "1906" (Wabash River Survey p. b. m. "Riverside"=U. S. G. S. b. m. described in Bulletin 421 on page 19)-----	365.785
Shawneetown, at southwest corner of Louisville & Nashville R. R. station; iron post stamped "1906" (Wabash River Survey p. b. m. "Station"=U. S. G. S. b. m. described in Bulletin 421 on page 19)-----	349.534

APPENDIX B.

PRIMARY LEVELING ALONG WABASH RIVER BY THE U. S. CORPS OF ENGINEERS.

Birds, Carmi, Marshall, Merom, New Harmony, New Haven, and Vincennes quadrangles.

CRAWFORD, GALLATIN, LAWRENCE, MARSHALL, WABASH, AND WHITE COUNTIES.

Most of the following bench marks from Terre Haute along Wabash River to its mouth are situated near the river banks, the maximum distance of any therefrom being about 1 mile. They were established by the U. S. Corps of Engineers in 1911, and the results are published by permission of the Chief of Engineers, U. S. Army.

The latitudes and longitudes were determined by a careful traverse line, measured forward and backward with steel tape, the limit of closure being 1:15,000, and the azimuth, the mean of six angles, was frequently checked by star observations, for which a triangulation, 10-second transit was used. The line was adjusted between United States Geological Survey primary traverse station 22 at Terre Haute, Ind., and Coast and Geodetic Survey station Merom College, at Merom, Ind., and between the latter station and the Coast and Geodetic Survey astronomical station at Vincennes, Ind. No adjustment was made below Vincennes, Ind.

Elevations were determined by careful duplicated ordinary-level connections with precise-level bench marks of this survey (1911), whose elevations are based on the 1912 adjustment value of the Coast and Geodetic Survey bench mark A 3 at Vincennes, Ind., 433.847 feet above sea level.

The bench mark is the top of an iron post 2 inches in diameter, unless otherwise described.

MARSHALL QUADRANGLE.

[Latitude 39° 15'–39° 30'; longitude 87° 30'–87° 45'.]

At Bohn Ferry on Wabash River.

	Feet.
Darwin, 1.5 miles below, at Bohn Ferry, 50 feet from top of river bank, in public road, 50 feet in front of house of James Bohn, 5 feet north of center line of road to ferry; iron pipe (U. S. Corps of Engineers b. m. 16). Latitude 39° 15' 34.15". Longitude 87° 36' 19.18"	463.52

MEROM QUADRANGLE.

[Latitude 39°-39° 15'; longitude 87° 30'-87° 45'.]

From point 3 miles below Darwin southerly along Wabash River to point 1.5 miles below Merom Ferry.

	Feet.
Darwin, 3 miles below, 7 miles above York, 500 feet from top of river bank, in dooryard of Frank Prevo, owner, 50 feet northeast of his house, 5 feet south of east-west fence, 30 feet west of north-south fence, under cherry tree; iron pipe (U. S. Corps of Engineers b. m. 17). Latitude 39° 14' 50.03''. Longitude, 87° 35' 53.00''-----	475. 10
Darwin, 6 miles below, 2.7 miles above Niles Landing, 500 feet from top of river bank, 3 feet west of north-south fence along public road, 100 feet across road to house owned by Philip Rhoades, Frank Marlow, tenant; iron pipe (U. S. Corps of Engineers b. m. 18). Latitude 39° 14' 09.99''. Longitude 87° 34' 47.04''-----	455. 59
York, 5 miles above, 0.5 mile above Niles Landing, 0.25 mile back from river bank, on land owned by Archibald Davidson, in field on west side of road leading to Niles Landing, 75 feet southwest of fence corner, 150 feet southwest of residence of Charles Strong, 14 feet to 10-inch blazed mulberry tree; iron pipe. U. S. Corps of Engineers b. m. 19.	
York, 2 miles above, 150 feet back from river bank, 150 feet west of house, Mrs. Griffith, owner, John Ingram, tenant; iron pipe (U. S. Corps of Engineers b. m. 20). Latitude 39° 11' 17.54''. Longitude 87° 37' 30.81''-----	454. 67
York, 1.5 miles above, 1,000 feet back from river bank, on land of A. J. Merrying, 150 feet east of angling road, 60 feet east of small plank culvert, 250 feet east of new mill, at edge of field, 6 feet north of center line of east-west road; iron pipe (U. S. Corps of Engineers b. m. 21). Latitude 39° 11' 12.07''. Longitude 87° 37' 42.78''-----	438. 98
York, in southwest quarter of, at west end of street that post office is on, 300 feet north of residence of S. R. Freeman, 350 feet northwest of residence rented by Nellie Dudley; iron pipe (U. S. Corps of Engineers b. m. 22). Latitude 39° 10' 06.51''. Longitude 87° 38' 30.80''-----	448. 36
York, 1.5 miles below, 525 feet above Greens Ripple, 700 feet back from river, on bluff bank, 100 feet from top of bank, on land of Kate Root, 110 feet from 20-inch blazed white oak; iron pipe (U. S. Corps of Engineers b. m. 23). Latitude 39° 09' 15.28''. Longitude 87° 39' 12.81''-----	454. 83
York, 2 miles below, 0.25 mile back from river, on top of bluff bank, on land owned by George Musgrave, 30 feet north of private lane leading to river, 500 feet east of house owned by Levi Swinger and rented by O. C. Scotten; iron pipe (U. S. Corps of Engineers b. m. 24). Latitude 39° 08' 54.74''. Longitude 87° 39' 36.28''-----	454. 72
Hutsonville, 2.5 miles above, 600 feet from river, 15 feet south of road to Rock Bar Ferry, 3 feet north of east-west fence along road; iron pipe (U. S. Corps of Engineers b. m. 25). Latitude 39° 08' 00.02''. Longitude 87° 39' 34.58''-----	454. 95

	Feet.
Hutsonville Ferry, 0.5 mile above, 15 feet south of center line of east-west road leading to river, in north part of Hutsonville, 250 feet back from river bank and angle in road, 4 feet north of east-west fence along road, 60 feet southwest of southwest corner of house; Geo. Parker, owner, and Sallie Ayres, renter; iron pipe (U. S. Corps of Engineers b. m. 26). Latitude 39° 06' 57.18''. Longitude 87° 39' 20.63''-----	448. 53
Hutsonville Ferry, 0.5 mile below, 0.25 mile from river at southwest corner of timber, on land of Henry Wolverton, in northwest corner of field, 3 feet southeast of fence corner, 0.25 mile from red barn with hexagonal cupola, 600 feet from cannery; iron pipe (U. S. Corps of Engineers b. m. 27). Latitude 39° 06' 03.61''. Longitude 87° 38' 53.98''-----	456. 58
Merom, 3.2 miles above, 4 miles below Hutsonville on land of W. J. Colliflower, 500 feet above Harness Landing, 300 feet back from river bank, on top of levee, at angle of public road, 10 feet south of center line of lane leading over levee through open timber strip to river, 30-inch blazed locust tree 15 feet north on top of levee; iron pipe (U. S. Corps of Engineers b. m. 28). Latitude 39° 05' 05.93''. Longitude 87° 37' 13.02''-----	447. 56
Merom, 2 miles above, 1 mile below Harness Landing, 250 feet back from river, on top of second levee, at edge of timber strip, on land of E. A. Goodman, 0.25 mile below house owned by Fred Pierce; iron pipe (U. S. Corps of Engineers b. m. 29). Latitude 39° 04' 44.75''. Longitude 87° 35' 54.15''-----	446. 24
Merom Ferry landing, 500 feet above and 0.5 mile back from, on top of levee running north-south along private lane leading north from public east-west road, on land of J. W. Wright, 600 feet back from river, house rented by A. E. Lane 600 feet north, about 8 feet south of center line of junction of old east-west levee with main north-south levee; 25 feet southeast of old levee is dead-tree snag; iron pipe (U. S. Corps of Engineers b. m. 30). Latitude 39° 03' 32.57''. Longitude 87° 34' 51.95''-----	444. 88
Merom Ferry, 1.5 miles below, 125 feet back from river bank, on top of levee, at edge of timber strip and cultivation, on land of R. J. White, 65 feet north of shack owned by R. J. White on levee; iron pipe (U. S. Corps of Engineers b. m. 31). Latitude 39° 02' 30.02''. Longitude 87° 34' 53.74''-----	441. 35

BIRDS QUADRANGLE.

[Latitude 38° 45'–39°; longitude 87° 30'–87° 45']

From point 2.5 miles above Russellville southerly along Wabash River to point 6 miles above Vincennes.

Russellville, 1 mile above, 300 feet from top of river bank, on top of levee, on land of Mr. Bugg, tenant, 0.5 mile below shack of Joe Stanley, outside of levee, iron bridge on public road directly west about 0.5 mile, 500 feet below mouth of Busseron Creek on opposite bank; iron pipe (U. S. Corps of Engineers b. m. 42). Latitude 38° 50' 02.46''. Longitude 87° 31' 37.32''-----	432. 46
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	Feet.
Russellville, in southwest corner of, on road leading west from ferry landing, 800 feet from river, 15 feet south of hedge along road, 20 feet south of junction of north street and east-west road; iron pipe (U. S. Corps of Engineers b. m. 43). Latitude 38° 48' 59.54". Longitude 87° 31' 53.78"-----	426.09
Russellville, 1.25 miles below, 75 feet from top of river bank, on top of levee, on land of C. N. Vennard, 4-foot stump on bank of river, house of Vennard on gravel road about 0.25 mile west of bench mark; iron pipe (U. S. Corps of Engineers b. m. 44). Latitude 38° 48' 09.31". Longitude 87° 30' 55.03"-----	431.47
Russellville, 3 miles below, 660 feet up levee from river, on top of levee, on land of A. B. Cunningham, 35 feet above wire fence across levee, 0.25 mile below house of G. I. Lemmons, renter, near levee; iron pipe (U. S. Corps of Engineers b. m. 45). Latitude 38° 47' 09.57". Longitude 87° 30' 16.68"-----	430.68
Vincennes, 8 miles above, on land of Hines Walthon, on top of levee, 100 feet from river, 0.25 mile above large red barn with cupola, Alexander Lago, owner, about 500 feet from tenant house; iron pipe (U. S. Corps of Engineers b. m. 46). Latitude 38° 46' 17.70". Longitude 87° 30' 55.93"-----	431.01
Vincennes, 6 miles above, on top of levee, 150 feet from river bank. 135 feet below house of Wm. Weitz, owner; iron pipe (U. S. Corps of Engineers b. m. 47). Latitude 38° 45' 09.39". Longitude 87° 30' 14.16"-----	429.05

VINCENNES QUADRANGLE.

[Latitude 38° 30'-38° 45'; longitude 87° 30'-87° 45'.]

From point 3.5 miles above Vincennes southerly along Wabash River to point 0.5 mile below Vincennes.

Vincennes, 3.5 miles above, 200 feet from river on levee, at point where old State road crosses levee, on land of E. W. Hadden; iron pipe (U. S. Corps of Engineers b. m. 48) Latitude 38° 43' 35.59". Longitude 87° 30' 37.71"-----	427.30
Vincennes, 1 mile above, 3,000 feet above Baltimore & Ohio Southwestern R. R. bridge, at side of wagon road, on top of levee, on land of Robeson Bros.; iron pipe (U. S. Corps of Engineers b. m. 49) Latitude 38° 41' 37.74". Longitude 87° 31' 24.46"-----	425.51

NEW HARMONY QUADRANGLE.

[Latitude 38°-38° 15'; longitude 87° 45'-88°.]

From New Harmony southerly along Wabash River to point 3.6 miles above Maunie.

New Harmony cut-off, on right bank of, on Ribeyre's Island, 90 feet from old river, 300 feet from Ribeyre's private ferry crossing cut-off, 20 feet from 24-inch blazed elm tree, azimuth 330°, 45 feet from 36-inch blazed sycamore tree, azimuth 233° 30' 45 feet from 18-inch blazed sycamore tree, azimuth 118°; iron pipe (U. S. Corps of Engineers b. m. 95) Latitude 38° 07' 41.84". Longitude 87° 56' 54.01"-----	371.62
New Harmony, 2 miles below, 0.6 mile above mouth of New Harmony cut-off, on Ribeyre's Island, at edge of corn field, 4 feet from top of high bank, 40 feet above lower end of small patch of timber, 300 feet below falls in cut-off; iron pipe (U. S. Corps of Engineers b. m. 96) Latitude 38° 06' 33.21". Longitude 87° 57' 15.53"-----	368.90

	Feet.
New Harmony, 9 miles below, 1.4 miles above Winklers Ferry, 100 feet from old river, 0.6 mile up old river from mouth of cut-off, 4 feet from southeast corner of barn on land of Arthur Dransfield; iron pipe (U. S. Corps of Engineers b. m. 97) Latitude 38° 05' 40.04''. Longitude 87° 58' 09.62''-----	374.17
New Harmony, 10.4 miles below, 6.6 miles above Maunie, at road forks, on upstream side of fork leading to Winklers Ferry, 600 feet from river, 2 feet from fence, downstream fork runs to a house 300 feet from bench mark, Arthur Dransfield, owner, Ed. Kimball, renter, Lee Woods owns land on north side of road; iron pipe (U. S. Corps of Engineers b. m. 98) Latitude 38° 05' 21.74''. Longitude 87° 57' 38.60''-----	370.69
Winkler's ferry, 1.6 miles below, 5 miles above Maunie, 400 feet from river along private road, 2 feet from garden fence, 200 feet from big barn, 200 feet from house, Martin Golden, owner, Chas. Horton, renter, opposite Warwick's ripple; iron pipe (U. S. Corps of Engineers b. m. 99) Latitude 38° 04' 18.10''. Longitude 87° 58' 03.89''-----	366.62
Maunie, 3.6 miles above, 1.7 miles below Mink Island, 100 feet from river, 80 feet from shed, 100 feet below house where Roy Monday lives, on land of Charles Elliott; iron pipe (U. S. Corps of Engineers b. m. 100) Latitude 38° 03' 31.05''. Longitude 87° 59' 11.92''-----	366.11

CARMI QUADRANGLE.

[Latitude 38°-38° 15'; longitude 88°-88° 15'.]

At point 1.7 miles above Maunie.

Maunie, 1.7 miles above, 0.5 mile below Twin Sister Island No. 2, 500 feet from river, in corner of garden, 12 feet from fence along road and 2 feet from fence between garden and yard, 150 feet southwest of barn, 100 feet south of house of Frank Sefied, owner, John Anselment, renter; iron pipe (U. S. Corps of Engineers b. m. 101) Latitude 38° 03' 22.99''. Longitude 88° 01' 09.11''-----	368.01
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NEW HAVEN QUADRANGLE.

[Latitude 37° 45'-38°; longitude 88°-88° 15'.]

At Rising Sun village.

Rising Sun village, 0.3 mile southeast of, under center of steel telephone tower on west side of river; iron post stamped "Prim. Trav. Sta. No. 27, 1908, Illinois." Latitude 37° 59' 45.20''; longitude 88° 01' 25.49'', by U. S. Engineers. Latitude 37° 59' 49.0''; longitude 88° 01' 21.9'', by U. S. G. S., from Henderson, Ky., astronomic station -----	370.32
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APPENDIX C.

SECONDARY ELEVATIONS.

Secondary elevations from records and topographic maps of the United States Geological Survey, including altitudes of well-known summits, water-surface elevations of prominent lakes, and other useful elevations are given below. These elevations are approximate only and should not be used for accurate work.

Locality.	Quadrangle.	County.	Elevation.
			<i>Fect.</i>
Alkin.....	Galatia.....	Franklin.....	472
Blairsville.....	Herrin.....	Williamson.....	399
Blue Mound.....	Champaign.....	Mahomet.....	748
Butlers Lake, water surface.....	Waukegan.....	Lake.....	694
Cahokia.....	St. Louis.....	St. Clair.....	410
Calamus Lake, water surface.....	Okawville.....	Washington.....	395
Cedar Point.....	La Salle.....	La Salle.....	659
Centerville.....	Mahomet.....	Piatt.....	696
Charles Mound, the highest point in the State thus far determined.	Elizabeth.....	Jo Daviess.....	1,241
Clifford.....	Herrin.....	Williamson.....	396
Cloverdale.....	Wheaton.....	Dupage.....	764
Crainville.....	Herrin.....	Williamson.....	455
Damiansville.....	Breese.....	Clinton.....	418
Depue.....	Hennepin.....	Bureau.....	487
East Peoria.....	Peoria.....	Tazewell.....	472
Emma.....	New Haven.....	White.....	370
Gossett.....	Eldorado.....	do.....	474
Gurnee.....	Waukegan.....	Lake.....	679
Herrin.....	Herrin.....	Williamson.....	415
Horseshoe Lake, water surface.....	St. Louis.....	Madison.....	402
Hudson Mound.....	Elizabeth.....	Jo Daviess.....	1,170
Itasca.....	Wheaton.....	Dupage.....	707
Ladd.....	La Salle.....	Bureau.....	651
Lake Michigan, water surface.....	Calumet, Chicago, Evanston, Waukegan.	Cook-Lake.....	582
Matthews.....	Murphysboro.....	Perry.....	392
Matthews Junction.....	do.....	Perry-Jackson.....	392
Michigan Lake, water surface.....	Calumet, Chicago, Evanston, Waukegan.	Cook-Lake.....	582
Nameoki.....	St. Louis.....	Madison.....	423
Old Duquoin.....	Herrin.....	Perry.....	448
Ontarioville.....	Wheaton.....	Cook-Dupage.....	816
Pittsburg Lake, water surface.....	St. Louis.....	St. Clair.....	410
Peoria Lake, water surface.....	Peoria.....	St. Clair.....	436
Pleasant Hill.....	Elizabeth.....	Jo Daviess.....	965
Prairie du Pont.....	St. Louis.....	St. Clair.....	414
Reeves.....	Herrin.....	Williamson.....	428
Rochester.....	Springfield.....	Sangamon.....	578
Russell.....	Waukegan.....	Lake.....	677
St. Libory.....	Okawville.....	St. Clair.....	426
Selbytown.....	Springfield.....	Sangamon.....	590
Sherman.....	do.....	do.....	581
Shiloh.....	Belleville.....	St. Clair.....	653
Squirrel Grove Mound.....	Elizabeth.....	Jo Daviess.....	1,194
Terrapin Ridge.....	do.....	do.....	1,041
Texas City.....	Eldorado.....	Saline.....	368
Thomasboro.....	Urbana.....	Champaign.....	731
Warrenville.....	Wheaton.....	Dupage.....	723
Wayne.....	do.....	do.....	758
Yochs.....	St. Louis.....	St. Clair.....	574

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