

THIRD-ORDER LEVELS
SEA LEVEL DATUM OF 1929

Final Adjustment of 1970

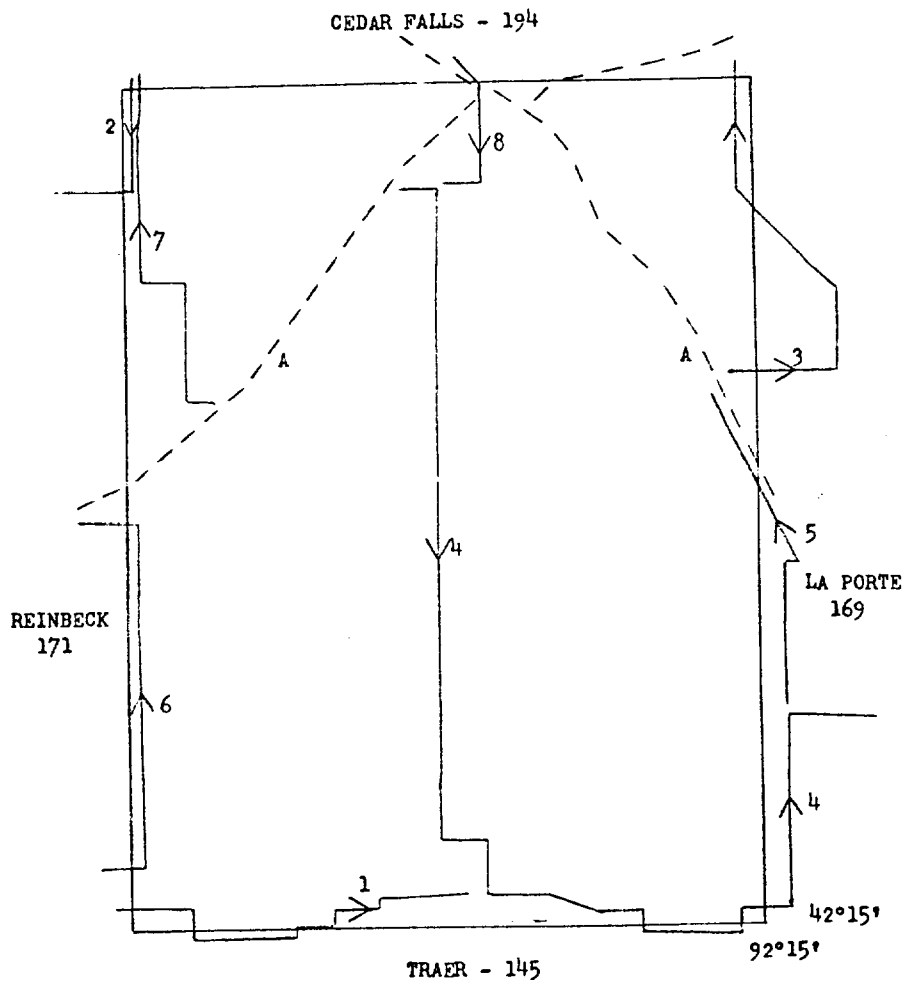
Blackhawk, Tama and Benton
Counties

Edition of: 9-25-70

PR: ADP/GH/ob

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATERLOO QUADRANGLE
170 - IOWA
N4215-W9215/15
DIAGRAM NK 15-5
WATERLOO



US&GS VERTICAL CONTROL DATA

A. Quadrangle no. 420921

170 B

		<u>LINE 1</u>	<u>REINBECK QUAD. - 171</u>	<u>FEEET</u>
		<u>C.L. Crutchfield, 1970; Book CV-2506</u>		
2 47	0.0	Hudson, 10.5 mi S. and 2.75 mi W. of; T. 86 N., R. 14 W., near W. sixteenth cor. between secs. 17 and 20; 38 ft N. and 2 ft W. of center of rd. at fence N.; 4 ft N. of right-of-way fence; in SE. cor. of a pasture; a standard tablet in concrete post; set flush with the ground and stamped "ET 5 JA 1961 998"		997.488
		<u>WATERLOO QUAD. - 170</u>		
47	0.7	UE 5 1 A, 0.7 mi E. along a county rd. from tablet center of concrete bridge, over a small drain, a chiseled square; painted "UE Centerline" (Water -10.0 ft lower than centerline of bridge)		933.6
48	1.3	UE 5 1 B, 1.3 mi E. along a county rd. from tablet centerline of T-rd. W., painted "UE Centerline"		978.8
		<u>TRAER QUAD. 145</u>		
49	1.8	UE 5 1 C, 1.3 mi E. thence 0.5 mi S. along a county rd. from tablet center of crossroads, a chiseled cross in concrete hwy.; painted "UE Centerline"		988.9
50	2.3	UE 5 1 D, 1.8 mi E. thence 0.5 mi S. along a county rd. and hwy. from tablet center of crossroads; a chiseled square, in concrete hwy.; painted "UE Centerline"		985.8
50	2.3	BM USGS ET BUCK Triangulation Station 1970 (Description not available)		994.110
51	2.8	UE 5 1 F, 2.3 mi E. thence 0.5 mi S. along a county rd. and hwy. from tablet 6 ft W. and normal to crossroads, a chiseled square in center of concrete hwy. at W. edge of U.S. Hwy. 63; painted "UE Centerline"		966.0
52	3.6	Buckingham, 1.0 mi S. of; near the center of sec. 23, T. 86 N., R. 14 W., 21 ft S. and 50 ft W. and 3.6 ft lower than center of concrete bridge over a small drain, on the SW. wingwall a standard tablet stamped "6 CLC 1970 882"		882.151
53	3.6	Reference mark, 21 ft N. and 50 ft E. and 3.6 ft higher than tablet, center of concrete bridge over a small drain a chiseled square; painted "RM"		885.79
54	4.3	UE 6 A, 0.7 mi E. along a county rd. from tablet, center of T-rd. W.; painted "UE Centerline"		884.6
		<u>WATERLOO QUAD. - 170</u>		
55	5.4	UE 6 B, 1.7 mi E. NE. along a county rd. from tablet center of rd. at 90 degree turn N. and W. centerline of rd. at curve a RR. spike; painted "UE Centerline"		889.11
56	5.8	UE 6 C, 2.1 mi E.-NE. along a county rd. from tablet center of T-rd. N., a RR. spike 0.2 ft above ground, painted "UE Centerline"		901.45
57	6.6	UE 6 D, 2.8 mi E., NE. along center of county rd. from tablet center of T-rd. W. a RR. spike, painted "UE Centerline"		873.11
58	7.0	Buckingham; 0.25 mi S. and 2.5 mi E. of; near the center of secs. 17 and 18, T. 86 N., R. 13 W., 35 ft S. and 81 ft E. and 3.6 ft lower than center of new crossroads, in the center of the S. headwall of a new concrete box culvert; a standard tablet stamped "7 CLC 1970 881"		880.622

FEET

LINE 1 (Cont'd)

WATERLOO QUAD. - 170

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|------|-----|--|---------|
| 2 59 | 7.0 | Reference mark, 60 ft N. and 0.5 ft higher than tablet, in the center of the N. end of a new concrete box culvert; a chiseled square; painted "BM" | 881.14 |
| 60 | 8.1 | UE 7 A, 1.0 mi E. along a county rd. from tablet center of T-rd. N., new road, a RR. spike; painted "UE Centerline" | 884.1 |
| 61 | 8.3 | Hudson, 10.0 mi S. and 4 3/8 mi E. of, T. 86 N., R. 13 W., near center of NE 1/4 SW 1/4 sec. 16, 135 ft N. and 18 ft E. of center of rd. at driveway NNW., 1 ft N. and 30 ft W. of the SW. corner of corn crib, 3 ft SW. of a powerline pole with meter on pole a standard tablet in concrete post; set 1 in. below the surface of ground and stamped "ET 6 JA 1961 913" | 912.538 |

LINE 2

P.J. Hohenberger, 1969; Book CV-2436

CEDAR FALLS QUAD. - 194

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|-----|-----|--|---------|
| 1 2 | 0.0 | Hudson, 6.75 mi N. and 2.0 mi W. of, T. 89 N., R. 14 W., near S. sixteenth cor. between secs. 21 and 22, 27 ft N. and 28 ft W. of driveway W.; a standard tablet in a concrete post set flush with ground and stamped "ET 1 JA 1961 972" | 971.993 |
|-----|-----|--|---------|

WATERLOO QUAD. - 170

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|---|-----|---|--------|
| 2 | 0.7 | UE 1 JA A, about 0.7 mi S. along gravel rd. from tablet, at center of cross-roads (State Hwy. 57 and N.-S. gravel rd.; a painted square, painted "0.73" | 956.8 |
| 2 | 1.3 | UE 12 RSH A, T. 89 N., R. 14 W., near cor. secs. 27, 28, 33 and 34, 10 ft S., 15 ft E. and 0.2 ft higher than center of bridge; chiseled square on top of SE. concrete wingwall; painted "UE 931.9" Water elev. 923.1 | 931.98 |
| 3 | 2.3 | UE 1 JA B, about 2.35 mi S. along gravel rd. from tablet, at center of T-rd. N. (gravel) | 977.9 |
| 4 | 2.4 | UE 1 JA BB, about 2.4 mi S. along gravel rd. from tablet, at center of T-rd. S. (gravel) | 980.2 |

REINBECK QUAD. - 171

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|---|-----|---|---------|
| 4 | 3.4 | UE 1 JA C, about 2.35 mi S., thence 1.0 mi W. along gravel rds. from BM, at center of T-rd. N., (gravel) | 1001.0 |
| 5 | 4.0 | Hudson, Blackhawk County, 4.5 mi N. and 3.3 mi W. of; Tps. 88 and 89 N., R. 14 W., near quarter cor. between secs. 6 and 32, 0.4 mi E. of cross-roads, 23 ft S. and 2.7 ft lower than rd., on top, in center of a concrete box culvert; a USC&GS and State Survey standard disk stamped (elev. by USGS) | 987.573 |

LINE 3

R.S. Heglin, 1961; Book CV-1382

WATERLOO QUAD. - 170

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|-----|--|---------|
| 0.0 | Washburn, about 0.5 mi N. along the Chicago, Rock Island and Pacific RR. from; at bridge 1439, and in the top of the E. end of the S. abutment; a State Survey standard disk stamped "7-3" (elev. by USC&GS) | 831.822 |
| 1.3 | UE 73 A, T. 88 N., R. 12 W., near W. sixteenth cor. between secs. 21 and 28, 30 ft S., 21 ft E. and 1.8 ft lower than T-rd. N.; RR. spike in powerline pole, painted "UE 828.6" | 828.58 |

FEET

LINE 3 (Cont'd)

LA PORTE QUAD. - 169

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| 2.5 | UE 73 B, T. 88 N., R. 12 W., near center of N $\frac{1}{2}$ sec. 21, 105 ft E., 26 ft N. and 0.5 ft lower than rd. fork, 9 ft SW. of RR.; RR. spike in powerline pole | 828.80 |
| 3.4 | Reference mark, 156 ft SW. of tablet at SE. corner of field, 95 ft S., 40 ft W. and 4.7 ft lower than rd. at drive E.; RR. spike in powerline pole | 826.22 |
| 3.4 | Gilbertville, 0.5 mi N. and 1.0 mi W. of, T. 88 N., R. 12 W., near center of SW $\frac{1}{4}$ sec. 15, 50 ft N. and 33 ft E. of rd. at drive E., in concrete post; standard tablet stamped "1 RSH 1961 831" | 830.749 |
| 4.5 | UE 1 RSH A, T. 88 N., R. 12 W., near center of SW $\frac{1}{4}$ sec. 10, 60 ft S., 35 ft W. and 1.9 ft higher than rd. fork; RR. spike in power line pole | 853.83 |
| 5.6 | UE 1 RSH B, T. 88 N., R. 12 W., near E. sixteenth cor. between secs. 4 and 9, 75 ft S., 120 ft E. and 0.5 ft lower than rd. fork; RR. spike in telephone pole | 836.52 |
| 6.6 | UE 1 RSH C, T. 88 and 89 N., R. 12 W., near cor. secs. 4, 5, 32 and 33, 48 ft S., 100 ft W. and 4.2 ft lower than rd. at street SW.; chiseled square in NE. footing of water tank | 859.57 |
| 7.0 | Reference mark, 105 ft SW. of tablet, 47 ft S. and 31 ft W. of RR. crossing; RR. spike in powerline pole | 856.69 |
| 7.0 | Elk Run Heights, 0.2 mi N. of, T. 89 N., R. 12 W., near S. sixteenth cor. between secs. 33 and 34, 40 ft N., 31 ft E. and 1.4 ft higher than RR. crossing, in concrete post; standard tablet stamped "2 RSH 1961 860" | 859.699 |
| 7.8 | UE 2 RSH A, T. 89 N., R. 12 W., cor. secs. 27, 28, 33 and 34, 19 ft N., 16 ft W. and 0.8 ft lower than crossroads, chiseled square on concrete culvert | 857.20 |

CEDAR FALLS QUAD. - 194

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|-----|---|---------|
| 8.7 | UE 2 RSH B, T. 89 N., R. 12 W., cor. secs. 21, 22, 27 and 28, 32 ft S., 16 ft W. and 1.4 ft higher than crossroads; chiseled square, in concrete culvert; headwall | 874.68 |
| 9.7 | Dewar, about 2.1 mi SW. along the Chicago Great Western RR. from, about 500 ft SE. of E. Waterloo Township School 8, 41.5 ft SW. of pole 267+19, 46 ft S. of the center of the track, and 31 ft E. of the center of a rd. crossing; a standard disk stamped "P 11 1933" and set in the top of a concrete post | 876.652 |

LINE 4

R.S. Heglin, 1961; Book CV-1382

WATERLOO QUAD. - 170

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|-----|--|---------|
| 0.0 | Waterloo, about 3.5 mi S. along the Chicago Great Western RR. from, 17 ft E. of pole 275+23, 36 ft N. of the center of a rd. crossing, 46.5 ft E. of the center of the track and 3 ft W. of a fence corner; a standard disk (USC&GS) stamped "M 11 1933" and set in the top of a concrete post | 860.110 |
| 0.9 | UE M11 A, Waterloo, 21 ft S., 55 ft W. and 0.2 ft lower than T-intersection of Ansborough Ave. with Ridgeway Ave.; RR. spike in powerline pole | 923.48 |
| 1.7 | UE M 11 B, T. 88 N., R. 13 W., near N. sec. cor. between secs. 8 and 9, at S. edge of Waterloo city limits, 125 ft N., 42 ft W. and 5.5 ft lower than crossroads; RR. spike in powerline pole | 930.23 |
| 2.8 | Reference mark, 275 ft SW. of tablet, 37 ft S., 30 ft E. and 1.3 ft lower than crossroads; RR. spike in telephone pole | 968.08 |

FEET

LINE 4 (Cont'd)

WATERLOO QUAD. - 170

2.8	Hudson, 2.5 mi N., 4.0 mi E. of, T. 88 N., R. 13 W., near cor. secs. 8, 9, 16 and 17, 301 ft S. and 35 ft W. of crossroads, in a concrete post; standard tablet stamped "TT 7 JSC 1961 965"	964.961
3.8	UE 7 JSC A, T. 88 N., R. 13 W., near cor. secs. 16, 17, 20 and 21, 35 ft N., 32 ft W. and 2.1 ft lower than crossroads; RR. spike in powerline pole	948.09
4.8	UE 7 JSC B, T. 88 N., R. 13 W., near cor. secs. 20, 21, 28 and 29, 34 ft S., 34 ft W. and 2.8 ft lower than crossroads; RR. spike in telephone pole	937.08
5.8	Reference mark, 363 ft N. of tablet; 49 ft N., 31 ft E. and 4.1 ft lower than crossroads; RR. spike in power line pole	949.63
5.8	Hudson, 0.5 mi S. and 4.0 mi E. of, T. 88 N., R. 13 W., near cor. secs. 28, 29, 32 and 33, 312 ft S. and 30 ft E. of crossroads, in a concrete post; standard tablet stamped "TT 8 JSC 1961 948"	947.562
6.8	UE 8 JSC A, Tps. 87 and 88 N., R. 13 W., near cor. secs. 4, 5, 32 and 33, 34 ft N., 37 ft W. and 3.7 ft lower than T-rd. W.; RR. spike in power line pole	956.09
7.9	UE 8 JSC B, T. 87 N., R. 13 W., near cor. secs. 4, 5, 8 and 9, 43 ft S., 37 ft W. and 3.8 ft lower than crossroads; RR. spike in gate post	954.39
8.8	UE 8 JSC C, T. 87 N., R. 13 W., near cor. secs. 8, 9, 16 and 17, 38 ft N., 31 ft E. and 4.2 ft lower than crossroads; RR. spike in telephone pole	939.01
9.4	Reference mark, 327 ft N. of tablet, 118 ft N., 34 ft E. and 0.1 ft higher than rd. a drive E.; RR. spike in power line pole	978.23
9.4	Hudson, 4.0 mi S. and 4.0 mi E. of, T. 87 N., R. 13 W., near quarter cor. between secs. 16 and 17, 209 ft S. and 33 ft E. of rd. at drive E., 2 ft W. of T-fence E., in concrete post; standard tablet stamped "6 RSH 1961 978"	977.467
9.8	UE 6 RSH A, T. 87 N., R. 13 W., near cor. secs. 16, 17, 20 and 21, 54 ft S., 11 ft E. and 0.8 ft lower than crossroads; chiseled square on E. edge of concrete bridge deck (water elev. 920.9)	928.47
10.9	UE 6 RSH B, T. 87 N., R. 13 W., near cor. secs. 20, 21, 28 and 29, 178 ft S., 14 ft W. and 0.1 ft higher than crossroads; on top of NW. concrete wingwall of bridge; chiseled square (water elev. 914.7)	922.20
11.9	UE 6 RSH C, T. 87 N., R. 13 W., near cor. secs. 28, 29, 32 and 33, 42 ft N., 34 ft E. and 3.9 ft lower than crossroads; RR. spike in powerline pole	981.95
12.8	Reference mark, 160 ft NE. of tablet, 200 ft N. and 30 ft E. of rd. at drive E.; RR. spike in powerline pole	961.93
12.9	Hudson, 7.5 mi S., 4.0 mi E. of, Tps. 86 and 87 N., R. 13 W., near cor. secs. 4, 5, 32 and 33, 51 ft N., 28 ft W. and 1.0 ft higher than rd. at drive E., in concrete post; standard tablet stamped "7 RSH 1961 968"	967.794
13.3	UE 7 RSH A, T. 86 N., R. 13 W., near quarter cor. between secs. 4 and 5, 18 ft N., 32 ft E. and 1.0 ft higher than rd. at drive E.; a RR. spike in power line pole	976.81
14.3	UE 7 RSH B, T. 86 N., R. 13 W., near quarter cor. between secs. 8 and 9, 35 ft S., 47 ft E. and 1.0 ft lower than T-rd. N.; RR. spike in powerline pole	991.56
15.1	UE 7 RSH C, T. 86 N., R. 13 W., near N. sixteenth cor. between secs. 16 and 17, 18 ft S., 35 ft E. and 0.3 ft lower than center of rd. at fence W.; RR. spike in powerline pole	929.26

FEET

LINE 4 (Cont'd)

WATERLOO QUAD. - 170

- 15.7 Hudson, 10.0 mi S. and 4 3/8 mi E. of, T. 86 N., R. 13 W., near center of NE 1/4 SW 1/4 sec. 16, 135 ft N. and 18 ft E. of center of rd. at driveway NNW., 1 ft N. and 30 ft W. of the SW. cor. of corn crib, 3 ft SW. of a powerline pole with meter on pole; a standard tablet in concrete post, set 1-in. below the surface of ground and stamped "ET 6 JA 1961 913" 912.538
- 15.7 Reference mark, 146 ft SE. of tablet, 30 ft N., 118 ft E. and 3.8 ft lower than rd. at drive N.; RR. spike in powerline pole 905.92
- 16.5 UE 6 JA A, T. 86 N., R. 13 W., near center of SW 1/4 sec. 15, 25 ft S., 23 ft E. and 1.3 ft lower than rd. at drive N. at Geneseo School; RR. spike in power line pole 891.61
- 17.5 UE 6 JA B, T. 86 N., R. 13 W., near quarter cor. between secs. 14 and 15, 29 ft S., 87 ft W. and 0.8 ft lower than T-rd. S.; RR. spike in power line pole 898.22
- 18.4 UE 6 JA C, T. 86 N., R. 13 W., near cor. secs. 13, 14, 23 and 24, 30 ft S., 170 ft W. and 4.8 ft lower than rd. at drive N.; RR. spike line pole 873.95
- 19.1 Reference mark, 522 ft WSW. of tablet, 32 ft S. and 320 ft W. of rd. at drive S.; RR. spike in power line pole 936.16
- 19.1 LaPorte City, 4.0 mi S. and 6.0 mi W. of, T. 86 N., R. 13 W., near quarter cor. between secs. 13 and 24, 26 ft N., 42 ft E. and 0.5 ft lower than rd. at drive N., 5 ft NW. of SW. cor. of cemetery fence corner, in concrete post; standard tablet stamped "8 RSH 1961 922" 921.880
- 20.1 UE 8 RSH A, T. 86 N., R. 12 and 13 W., near quarter cor. between secs. 19 and 24, 33 ft S., 44 ft W. and 0.2 ft lower than T-rd. E.; RR. spike in telephone pole 869.12
- 21.0 UE 8 RSH B, T. 86 N., R. 12 W., near quarter cor. between secs. 19 and 20, 34 ft N., 265 ft W. and 13.3 ft lower than N.-S. rd. in line with rd. W.; RR. spike, in power line pole 905.19
- 21.9 UE 8 RSH C, T. 86 N., R. 12 W., near W. sixteenth cor. between secs. 17 and 20, 14 ft S., 9 ft W. and 0.3 ft lower than center of small bridge; chiseled square on SW. wingwall 848.42
- 22.5 UE 8 RSH D, T. 86 N., R. 12 W., near cor. secs. 16, 17, 20 and 21, 19 ft N., 24 ft W. and 1.2 ft higher than crossroads; chiseled square on top of NW. headwall of concrete culvert 875.17
- 23.0 Reference mark, 124 ft NE. of tablet, 96 ft N., 31 ft E. and 2.4 ft lower than rd. at field entrance W.; RR. spike in telephone pole 943.06
- 23.0 Dysart, 5.0 mi N. and 2.5 mi E. of, T. 86 N., R. 12 W., near quarter cor. between secs. 20 and 21, 10 ft S. and 32 ft W. of center of rd. at field entrance W., 3 ft SE. of S. gate post; a standard tablet in a concrete post stamped "ET 7 JA 1961 944" 943.987

LA PORTE QUAD. - 169

- 24.5 UE 7 JA A, T. 86 N., R. 12 W., near cor. secs. 15, 16, 21 and 22, 34 ft S., 33 ft W. and 2.4 ft lower than crossroads; RR. spike in powerline pole 911.59
- 25.5 UE 7 JA B, T. 86 N., R. 12 W., near cor. secs. 9, 10, 15 and 16, 32 ft S., 48 ft E. and 6.2 ft lower than T-rd. E.; RR. spike in powerline pole 827.77
- 26.2 La Porte City, 2.25 mi S. and 2.5 mi W. of; T. 86 N., R. 12 W., near the N. sixteenth cor. between secs. 9 and 10, 26 ft S. and 27 ft W. of T-drive W., in a concrete post; flush with the ground; a standard tablet stamped "TT 9 JSC 1961 834" 833.947

		<u>FEET</u>
<u>LINE 4 (Cont'd)</u>		
<u>LA PORTE QUAD. - 169</u>		
26.2	Reference mark, 342 ft NE. of tablet, 309 ft N., 28 ft E. and 0.8 ft lower than rd. at drive W.; RR. spike in power line pole	833.75
27.1	UE 9 JSC A, T. 86 N., R. 12 W., near quarter cor. between secs. 3 and 4, 34 ft N., 34 ft E. and 0.4 ft lower than crossroads; RR. spike in powerline pole	893.87
28.5	UE 9 JSC B, T. 87 N., R. 12 W., near cor. secs. 3, 4, 33 and 34, 22 ft S., 28 ft W. and 1.7 ft higher than crossroads; chiseled square on top of concrete culvert headwall	905.02
29.5	UE 9 JSC C, T. 87 N., R. 12 W., near cor. secs. 26, 27, 34 and 35, 42 ft N., 32 ft W. and 2.3 ft higher than crossroads; RR. spike in powerline pole	894.07
31.4	La Porte City, at the C.R.I. and P. RR. station, in front of office window, and in the top of the concrete wall of a basement-window grill; a State Survey standard disk stamped "7-1" (Elev. by USC&GS)	818.939

LINE 5

R.S. Heglin, 1961; Book CV-1382

LA PORTE QUAD. - 169

0.0	"UE 9 JSC B" (Described in Line 4)	905.02
1.1	UE 9 JSC D, T. 87 N., R. 12 W., near cor. secs. 21, 22, 27 and 28, 309 ft N., 33 ft W. and 5.5 ft lower than crossroads; RR. spike in powerline pole	920.70
1.4	LaPorte City, 1.0 mi N. and 2.5 mi W. of, T. 87 N., R. 12 W., near the S. sixteenth cor. between secs. 21 and 22, 25 ft N. and 32 ft E. of rd. at T-fence W., in a concrete post; standard tablet stamped "TT 10 JSC 1961 903"	903.273
1.4	Reference mark, 82 ft N. and 63 ft W. of tablet, 117 ft N., 31 ft W. and 0.4 ft lower than rd. at fence W.; RR. spike in powerline pole	905.33
2.0	UE 10 JSC A, T. 87 N., R. 12 W., near cor. secs. 21, 22, 15 and 16, 40 ft S., 35 ft W. and 0.1 ft higher than crossroads; RR. spike in powerline pole	853.03
3.0	UE 10 JSC B, T. 87 N., R. 12 W., near cor. secs. 9, 10, 15 and 16, 32 ft S., 47 ft W. and 2.2 ft lower than T-rd. S.; RR. spike in powerline pole	829.84
4.3	Reference mark, 381 ft NE. of tablet, 48 ft N., 36 ft W. and 0.4 ft lower than hwy. at rd. E.-W.; head of bolt in center of top of concrete headwall	829.40
4.3	La Porte City, 3.75 mi N. and 2.5 mi W. of, T. 87 N., R. 12 W., near the N. sixteenth cor. between secs. 9 and 10, 40 ft S. and 420 ft W. of center of rd. at Y-rd. W., 40 ft S. and 15 ft E. of center of rd. at fence S., 5 ft S. and 15 ft E. of fence corner, in concrete post flush with the ground; a standard tablet stamped "TT 11 JSC 1961 832"	832.090
5.7	UE 11 JSC A, Tps. 87 and 88 N., R. 12 W., near quarter cor. between secs. 4 and 33, 175 ft S. along hwy. 23 W., and 1.0 ft higher than center of hwy. at rd. W.; bolt head in center of top of concrete culvert headwall	893.3

WATERLOO QUAD. - 170

6.8	UE 11 JSC B, T. 88 N., R. 12 W., near cor. secs. 28, 29, 32 and 33, 29 ft S., 49 ft W. and 3.8 ft lower than hwy. at rd. W.; RR. spike in powerline pole	828.36
8.0	UE 11 JSC C T. 88 N., R. 12 W., near quarter cor. between secs. 20 and 29, 30 ft S., 99 ft E. and 1.0 ft lower than hwy. at crossroad; RR. spike in powerline pole	834.78

FEET

LINE 5 (Cont'd)

WATERLOO QUAD. - 170

8.0 "7-3 1935" (Described in Line 3) 831.822

LINE 6

R.S. Heglin, 1961; Book CV-1382

REINBECK QUAD. - 171

2.7 Hudson, 10.5 mi S. and 2.75 mi W. of, T. 86 N., R. 14 W., near W. sixteenth cor. between secs. 17 and 20, 38 ft N. and 2 ft W. of center of rd. at fence N., 4 ft N. on N. right-of-way fence, in SE. corner of a pasture; a standard tablet in a concrete post; set flush with ground and stamped "ET 5 JA 1961 998" 997.488

3.7 Reference mark, 243 ft W. of tablet, 245 ft W., 32 ft N. and 4.6 ft lower than center of rd. at fence N.; RR. spike in power line pole 992.30

4.0 UE 5 JA A, T. 86 N., R. 14 W., near cor. secs. 7, 8, 17 and 18, 30 ft E., 34 ft S. and 2.0 ft lower than T-rd. E.; RR. spike in power line pole 980.44

WATERLOO QUAD. - 170

4.9 UE 5 JA B, T. 86 N., R. 14 W., near cor. secs. 8, 9, 16 and 17, 36 ft N., 32 ft W. and 0.7 ft higher than T-rd. N., RR. spike in powerline pole 1001.34

5.9 Hudson, 8.0 mi S. and 2.0 mi W. of, T. 86 N., R. 14 W., near cor. secs. 4, 5, 8 and 9, 23 ft N., 31 ft W. and 1.3 ft lower than crossroads, 4 ft NE. of fence corner post; in concrete post; a standard tablet stamped "9 RSH 1961 1012" 1012.031

6.9 Reference mark, 345 ft N. of tablet, 370 ft N., 34 ft W. of crossroads, 0.5 ft E. of fence line, a 0.5-in. steel reinforcing rod projecting 3-in. above ground 1014.44

6.9 UE 9 RSH A, T. 86 and 87 N., R. 14 W., near cor. secs. 4, 5, 32 and 33, 2 ft N., 33 ft W. and 0.2 ft lower than rd. at fence E.-W.; RR. spike in telephone pole 994.56

7.9 UE 9 Rsh B, T. 87 N., R. 14 W., near cor. secs. 28, 29, 32 and 33, 30 ft N., 36 ft W. and 0.7 ft lower than crossroads; RR. spike in power line pole 1007.66

8.5 Hudson, 6.0 mi S. and 2.0 mi W. of, T. 87 N., R. 14 W., near quarter cor. between secs. 28 and 29, 86 ft N., 31 ft E. of driveway E., 4 ft SSE. of a telephone pole; a standard tablet in a concrete post set flush with the ground and stamped "ET 4 JA 1961 1020" 1020.462

8.5 Reference mark, 94 ft NW. of tablet, 155 ft N., 31 ft W. and 1.2 ft lower than rd. at drive E.; RR. spike in power line pole 1021.09

9.4 UE 4 JA A, T. 87 N., R. 14 W., near quarter cor. secs. 20 and 21, 30 ft S., 30 ft E. and 2.2 ft lower than T-rd. E.; RR. spike in power line pole 1018.15

10.3 Reference mark, 122 ft SE. of tablet, 89 ft S. and 36 ft E. of RR. crossing, RR. spike in powerline pole 977.04

10.3 Hudson, 3.5 mi S. and 2.0 mi W. of, T. 87 N., R. 14 W., near quarter cor. between secs. 16 and 17, 25 ft S., 37 ft W. and 1.0 ft higher than RR. crossing, 9 ft N. of a gate post and 3 ft W. of a telephone pole, in a concrete post; standard tablet stamped "10 RSH 1961 982" 981.775

10.9 UE 10 RSH A, T. 87 N., R. 14 W., near cor. secs. 8, 9, 16 and 17, 33 ft S., 34 ft E. and 0.8 ft lower than crossroads; RR. spike in powerline pole 948.95

12.1 Hudson, 2.25 mi S. and 2.0 mi W. of, T. 87 N., R. 14 W., near S. sixteenth cor. between secs. 4 and 5, 33 ft N. and 33 ft W. of field entrance E., 13 ft N. and 33 ft W. of field entrance W.; a standard tablet in a concrete post stamped "ET 3 JA 1961 906" 905.804

FEET

LINE 6 (Cont'd)

WATERLOO QUAD. - 170

- 12.1 Reference mark, 118 ft NNW. of tablet, 150 ft N., 11 ft W. and 0.4 ft lower than rd. at field entrance E.; chiseled square in top of concrete culvert headwall 908.74

REINBECK QUAD. - 171

- 13.0 UE 3 JA A, T. 87 N., R. 14 W., near center of SW $\frac{1}{4}$ sec. 5, 40 ft N., 2 ft E. and 2.9 ft lower than rd. at fence N.-S.; RR. spike in powerline pole 898.73
- 14.3 Hicks, about 0.25 mi N. along the C. & GW. RR. from its intersection with the C. & NW. RR. at; 9 ft S. of pole 285+27 about 60 ft E. of a signal tower, 49 ft N. of the center of a rd. crossing, 44 ft E. of the center of the main track, and 4.5 ft W. of a fence corner; a USC&GS standard disk stamped "J 11 1933" and set in the top of a concrete post 899.263

LINE 7

R.S. Heglin, 1961; Book CV-1382

WATERLOO QUAD. - 170

- 0.0 Hudson, about 58 yards S. of the C. & GW. RR. station, 17 ft S. of pole 281+11 about 40 ft N. of the center of a rd. crossing, 62 ft E. of the center of the main track, and 4 ft N. of a powerline pole; a USC&GS standard disk stamped "K 11 1933" and set in top of a concrete post 888.834
- 1.0 USGS Gaging station, T. 88 N., R. 14 W., near center sec. 27, 16 ft NW. along hwy., 26 ft NE. and 2.3 ft lower than center of hwy. at NW. end of bridge; brass tablet in concrete support of steel walk to gaging station 889.796
- 1.0 UE K 11 A, T. 88 N., R. 14 W., near quarter cor. between secs. 27 and 28, 31 ft N., 32 ft W. and 0.8 ft lower than T-rd. N.; RR. spike in telephone pole 880.33
- 2.0 Hudson, 1.0 mi N. and 1.0 mi W. of, T. 88 N., R. 14 W., near quarter cor. between secs. 21 and 22, 32 ft N., 34 ft W. and 2.2 ft higher than rd. at drive W., 12 ft N. and 1 ft W. of fence corner post; a standard tablet in a concrete post; stamped "11 RSH 1961 938" 937.750
- 2.0 Reference mark, 126 ft NE. of tablet, 142 ft N. and 32 ft E. of rd. at drive W.; RR. spike in powerline pole 945.07
- 2.5 UE 11 RSH A, T. 88 N., R. 14 W., near cor. secs. 15, 16, 21 and 22, 35 ft N., 30 ft E. and 1.2 ft higher than crossroads; RR. spike in power line pole 922.59
- 3.5 UE 11 RSH B, T. 88 N., R. 14 W., near cor. secs. 9, 10, 15 and 16, 33 ft S., 30 ft E. and 1.9 ft lower than T-rd. S., RR. spike in power line pole 990.45
- 4.4 Hudson, 2.5 mi N. and 1.75 mi W. of, T. 88 N., R. 14 W., near center of NW $\frac{1}{4}$ sec. 16, about 600 ft S. and about 1320 ft E. of a T-rd. N., 6 ft S. and 4 ft W. of a T-fence W., 15 ft W. of center of cow lane E. and S.; a standard tablet in a concrete post set flush with ground and stamped "ET 2 JA 1961 1019" 1019.402
- 4.4 Reference mark, 18 ft MNE. of tablet, 24 ft NW. of center of cow lane E. and S.; RR. spike in 10-in. tree 1019.41
- 4.7 UE 2 JA A, T. 88 N., R. 14 W., near cor. secs. 8, 9, 16 and 17, 34 ft N., 35 ft W. of T-rd. N.; RR. spike in power line pole 1006.97
- 5.7 UE 2 JA B, T. 88 N., R. 14 W., near cor. secs. 4, 5, 8 and 9, 33 ft S., 32 ft W. and 1.9 ft lower than crossroads; RR. spike in power line pole 999.34
- 6.6 Reference mark, 147 ft NE. of tablet, 50 ft S. and 33 ft E. of T-rd. S.; RR. spike in powerline pole 978.38

LINE 7 (Cont'd)

WATERLOO QUAD. - 170

FEET

- 6.6 Hudson, 4.5 mi N. and 2.0 mi W. of, Tps. 88 and 89 N., R. 14 W., near cor. secs. 4, 5, 33 and 34, 50 ft N., 36 ft W. and 0.4 ft lower than T-rd. N., 2 ft SW. of fence corner post, in concrete post; a standard tablet stamped "12 RSH 1961 977" 977.518
- 7.7 UE 12 RSH A, T. 89 N., R. 14 W., near cor. secs. 27, 28, 33 and 34, 10 ft S., 15 ft E. and 0.2 ft higher than center of bridge; chiseled square on top of SE. concrete wingwall (water elev. 923.1) 931.98
- 8.6 UE 12 RSH B, T. 89 N., R. 14 W., near cor. secs. 21, 22, 27 and 28, 5 ft N. and 35 ft E. and 2.8 ft higher than rd. at fence W.; PR. spike in power line pole 941.22

CEDAR FALLS QUAD. - 194

- 9.0 Reference mark, 79 ft SE. of tablet, 34 ft S., 27 ft W. and 2.1 ft lower than rd. at drive W.; RR. spike in powerline pole 971.04
- 9.0 Hudson, 6.75 mi N. and 2.0 mi W. of, T. 89 N., R. 14 W., near S. sixteenth cor. between secs. 21 and 22, 27 ft N. and 28 ft W. of driveway W.; a standard tablet in a concrete post set flush with ground and stamped "ET 1 JA 1961 972" 971.993

LINE 8

R.S. Heglin, 1961; Book CV-1382

CEDAR FALLS QUAD. - 194

- 17.5 Waterloo, T. 89 N., R. 13 W., near the quarter cor. between secs. 22 and 27, 43 ft N. and 47 ft W. of intersection of Cleveland and Main Streets, 64 ft S. and 58 ft W. of RR. crossing in a concrete post; standard tablet stamped "TT 1 JSC 1961 854" 854.500
- 17.5 Reference mark, 155 ft SSE. of tablet, 100 ft S., 18 ft W. and 1.6 ft higher than T-street W.; RR. spike in power line pole 855.59

WATERLOO QUAD. - 170

- 18.4 UE 1 JSC A, Waterloo at Cleveland St., 0.35 mi S. of its jct. with Hwy. 218, 61 ft S., 20 ft W. and 0.3 ft higher than center of bridge over Black Hawk Creek; chiseled square on concrete curbing that continues around end of SW. wingwall (water 10.0 ft lower) 851.68
- 19.3 UE 1 JSC B, Waterloo, near intersection of Campbell St. and Ansborough Ave., 14 ft N., 60 ft E. and 3.7 ft lower than Campbell St. crossing of C. & GW. RR. tracks; RR. spike in telegraph pole 856.37
- 20.3 UE M 11 A (Described in Line 4) 923.48