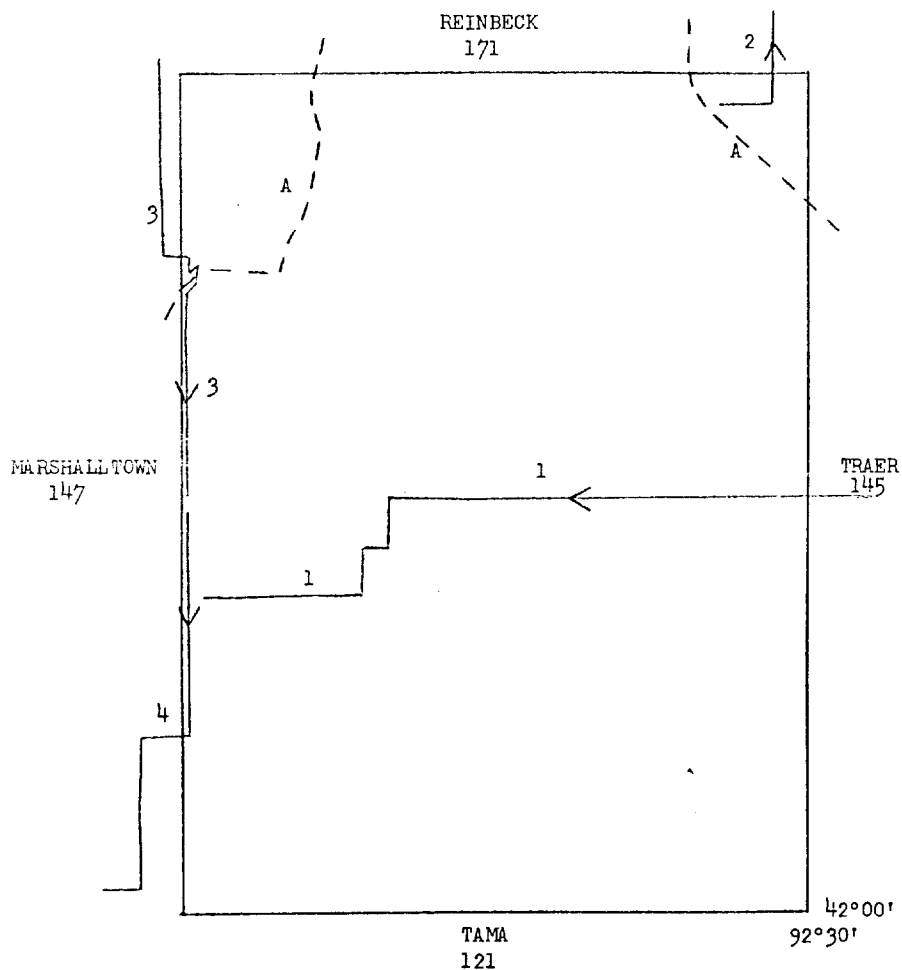


GLADBROOK QUADRANGLE
146 - IOWA
N4200-W9230/15
DIAGRAM NK 15-5
WATERLOO



USC&GS VERTICAL CONTROL DATA
A. Quadrangle 420923

AGB

LINE-1

FEET

C. L. Crutchfield, 1970; Book CV 2506

TRAER QUAD. - 145

3 10 4.3 Traer, 4.5 mi S. and 1.5 mi W. of; near cor. secs. 4, 5, 32 and 33, Tps. 84 and 85 N., R. 14 W., 10 ft S. and 61 ft W. and 0.1 ft higher than crossroads, top of the SE. wheelguard; a standard tablet stamped "9 CLC 1970 926" 925.980

11 4.3 Reference mark, 6 ft S. and 38 ft W. and 0.2 ft lower than tablet, top of the SW. wingwall; a chiseled square, painted "RM" 925.82

GLADBROOK QUAD. - 146

12 5.3 UE 9 A, 1.0 mi W. along a county rd. from tablet, center of crossroads; a RR. spike, painted "UE centerline" 999.6

13 6.3 UE 9 B, 2.0 mi W. along a county rd. from tablet, center of crossroads; a RR. spike, painted "UE centerline" 1014.2

14 7.3 UE 9 C, 3.0 mi W. along a county rd. from tablet, center of T-rd. S.; a RR. spike, painted "UE centerline" 1018.5

15 7.8 UE 9 D, 3.5 mi W. along a county rd. from tablet, center of crossroads; a RR. spike, painted "UE centerline" 1011.4

16 8.8 UE 9 E, 4.5 mi W. along a county rd. from tablet, center of E.-W. rd. at N.-S. U.S. Hwy. 63; a RR. spike, painted "UE centerline" 1017.6

17 8.9 Garwin, 2.0 mi N. and 4.5 mi E. of; near center secs. 3, and 34, Tps. 84 and 85 N., R. 15 W., 605 ft N. and 18 ft E. and 5.9 ft lower than crossroads, in the center of the E. headwall of a concrete box culvert; a standard tablet stamped "10 CLC 1970 1012" 1011.691

18 9.0 Reference mark, 36 ft W. and 0.3 ft lower than tablet, in the center of the W. headwall of a concrete box culvert; a chiseled "X"; painted "RM" 1011.41

20 10.1 UE 10 A, 1.0 mi W. along a county rd. from tablet, center of crossroads; a RR. spike painted "UE centerline" 1013.0

21 10.6 UE 10 B, 1.5 mi W. along a county rd. from tablet, center of T-rd. S.; a RR. spike, painted "UE centerline" 1006.1

22 10.6 Garwin, 2.0 mi N. and 3.5 mi E. of; near cor. secs. 4, 5, 32 and 33, Tps. 84 and 85 N., R. 15 W., 35 ft S. and 300 ft W. and 7.4 ft lower than T-rd S., in the center of the E. headwall of a concrete spillway; a standard tablet stamped "11 CLC 1970 999" 998.722

23 10.6 Reference mark, 21 ft W. and 0.1 ft lower than tablet, in center of W. headwall of a concrete spillway; a chiseled square, painted "RM" 998.62

24 11.6 UE 11 A, 1.0 mi W. along a county rd. from tablet, center of crossroads; a RR. spike, painted "UE centerline" 985.7

25 12.6 UE 11 B, 2.0 mi W. along a county rd. from tablet, center of crossroads; a RR. spike, painted "UE centerline" 991.9

26 13.3 Garwin, 2.0 mi N. and 0.8 mi E. of; 0.3 mi E. of the cor. secs. 1, 2, 35 and 36, Tps. 84 and 85 N., R. 16 W., 8 ft S. and 12 ft W. and 0.1 ft higher than center of concrete bridge over a drainage ditch; top of the SW. wingwall; a standard tablet stamped "12 CLC 1970 922" 921.733

LINE 1 (Cont'd)

GLADBROOK QUAD. - 146

FEET

3 27	13.3	Reference mark, 8 ft N. and 12 ft E. and 0.1 ft higher than tablet; a chiseled square in center of bridge floor painted "RM"	921.80
28	13.6	UE 12 A, 0.3 mi W. along a county rd. from tablet, center of crossroads; a RR. spike, painted "UE centerline"	948.3
29	14.7	UE 12 B, 0.3 mi W. and 1.0 mi S. along a county rd. from tablet, center of crossroads; a RR. spike painted "UE centerline"	969.5
30	15.1	UE 12 C, 0.8 mi W. and 1.0 mi S. along a county rd. from tablet, center of T-rd. S.; a RR. spike, painted "UE centerline"	964.0
31	16.2	UE 12 D, 0.8 mi W. and 2.0 mi S. along a county rd. from tablet, center of T-rd. N.; a RR. spike in pavement, painted "UE centerline"	898.7
32	16.4	Garwin, near the center of the W. city limits of; 0.2 mi W. of the center of secs. 11 and 14, T. 84 N., R. 16 W., 13 ft N. and 50 ft W. and 0.1 ft higher than center of concrete bridge over a large drain, top of the NW. wingwall; a standard tablet stamped "13 CLC 1970 899"	898.752
33	16.4	Reference mark, 26 ft S. and 0.3 ft higher than tablet, top of the SW. wheelguard; a chiseled square painted "RM"	899.06
34	16.6	UE 13 A, 0.2 mi W. along a county hwy. from tablet, center of T-rd. NW.; a RR. spike, in pavement, painted "UE centerline"	955.8
35	17.6	UE 13 B, 1.2 mi W. along a county hwy. from tablet, center of T-rd. N.; a RR. spike in pavement; painted "UE centerline"	1003.5
36	18.7	UE 13 C, 2.3 mi W. along a county hwy. from tablet, center of crossroads; a RR. spike in pavement; painted "UE centerline"	995.3
37	19.7	UE 13 D, 3.3 mi W. along a county hwy. from tablet, center of crossroads; a RR. spike in pavement; painted "UE centerline"	999.3
38	19.7	Marshalltown, 4.0 mi N. and 8.0 mi E. of, T. 84 N., R. 16 W., near cor. secs. 7, 8, 17 and 18, 179 ft S. and 36 ft W. of center of crossroads, 2 ft E. of fence line, 4 ft W. of pole; in concrete post, standard tablet stamped "TT 17 FJH 1957"	993.753

LINE 2

R. S. Heglin, 1961; Book CV 1382

GLADBROOK QUAD. - 146

0.0	Dinsdale, about 2.1 mi SE. along the Chicago, Rock Island & Pacific RR. from the station at; about 24 poles NW. of milepost 51, at a 5 x 6 ft stone box culvert, in the SE. end of the NE. stone headwall, 10 ft NE. of the center of the track, and about 1 ft lower than the rail; a USC&GS standard disk stamped "F 82 1934"	913.620
1.4	UE F 82 A, T. 86 N., R. 14 W., near cor. secs. 19, 20, 29 and 30, 34 ft N., 41 ft W. and 4.4 ft higher than T-rd. W.; RR. spike in telephone pole	976.88

REINBECK QUAD. - 171

2.7	Hudson, 1.05 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 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, 34 ft S., 30 ft E. and 2.0 ft lower than T-rd. E.; RR. spike in power line pole; painted "UE 980.5"	980.44

LINE 3

FEET

F. J. Heintz, 1958; Book CV 1064

GRUNDY CENTER QUAD. - 172

- 6.3 Conrad, 2.0 mi N. and 6.0 mi E. of; T. 86 N., R. 16 W., near the SW. corner of SE $\frac{1}{4}$ sec. 18, 345 ft S. and 30 ft E. of center of crossroads, 2 ft W. of T-fence E.; in concrete post; standard tablet stamped "TT 6 FJH 1958" 1045.598
- 6.3 Reference mark, spike in pole 100 ft S. of tablet 1054.37

MARSHALLTOWN QUAD. - 147

- 8.4 Conrad, 0.5 mi S. and 6.0 mi E. of; T. 86 N., R. 16 W., near center sec. 31, 13 ft N. and 30 ft E. of center of rd. at field approach E., 2 ft W. of fence, in concrete post; standard tablet stamped "TT 7 FJH 1958" 1046.595
- 8.4 Reference mark, RR. spike in pole 200 ft S. of tablet 1043.99
- 9.3 UE, top of N. rail center of RR. crossing 961.3

GLADBROOK QUAD. - 146

- 11.1 Reference mark, top of N. rail center of RR. crossing 975.77
- 11.1 Conrad, 2.5 mi S. and 6.0 mi E. of; T. 85 N., R. 16 W., near NW. cor. of SW $\frac{1}{4}$ sec. 8, 85 ft S. and 36 ft W. of center of RR. crossing, 3 ft N. of fence corner, in concrete post; standard tablet stamped "TT 8 FJH 1958" 972.325
- 11.8 UE, center of crossroads on Hwy. 96 1002.0
- 12.8 UE, RR. spike in pole 40 ft N. and 30 ft E. of center of crossroads 1012.9
- 13.7 Conrad, 5.0 mi S. and 6.5 mi E. of; T. 85 N., R. 16 W., near cor. secs. 19, 20, 29 and 30, 114 ft N. and 35 ft E. of center of crossroads, 3 ft N. and 2 ft E. of fence corner, in concrete post; standard tablet stamped "TT 9 FJH 1958" 974.398
- 13.7 Reference mark, spike in pole 30 ft N. and 40 ft W. of center of crossroads 968.24
- 14.4 UE, center of bridge 961.6
- 16.0 Marshalltown, 6.0 mi N. and 8.0 mi E. of; near cor. secs. 5, 6, 31 and 32, Tps. 84 and 85 N., R. 16 W., 348 ft S. and 32 ft E. of center of T-rd. E., 1 ft W. of T-fence corner post E.; in concrete post; standard tablet stamped "TT 16 FJH 1956" 1014.394

LINE 4

F. J. Heintz, 1957; Book CV 862

GLADBROOK QUAD. - 146

- 3.2 "TT 16 FJH 1956" (described in Line 3) 1014.394
- 3.2 Reference mark, RR. spike 6 ft N. of tablet 1014.67
- 3.9 UE, RR. spike in base pole, 16 ft S. and 30 ft E. of center of rd. at field approach E. 1029.3
- 5.4 Reference mark, RR. spike 4 ft E. of tablet 994.74
- 5.6 Marshalltown, 4.0 mi N. and 8.0 mi E. of, T. 84 N., R. 16 W., near cor. secs. 7, 8, 17 and 18, 179 ft S. and 36 ft W. of center of crossroads, 2 ft E. of fence line, 4 ft W. of pole, in concrete post; standard tablet stamped "TT 17 FJH 1957" 993.753

<u>LINE 4 (Cont'd)</u>	<u>GLADBROOK QUAD. - 146</u>	<u>FEET</u>
6.7 UE, chiseled square, top of concrete curb at NE. corner of small bridge approx. 300 ft N. of crossroads		940.2
7.2 UE, RR. spike in pole 6 ft S. and 28 ft W. of center of private drive W. at top of hill		1004.82
8.3 UE, RR. spike in pole 36 ft S. and 36 ft W. of center of crossroads		976.3
8.4 Marshalltown, 8.0 mi E. of, near cor. secs. 29, 30, 31 and 32, T. 84 N., R. 16 W., at the NW. corner of cemetery, 32 ft N. and 72 ft E. of NE. corner of church, in concrete post; standard tablet stamped "TT 18 FJH 1957"		988.056
8.4 Reference mark, spike in pole approx. 100 ft W. of tablet		986.88
9.5 UE chiseled square, top of concrete headwall at corner wingwall		950.55
10.9 Reference mark, top of bridge bolt on W. guard rail at S. end of bridge, at S. end of span near steel upright girder		849.12
10.9 Marshalltown, 1.0 mi S. and 7.0 mi E. of; near NW. cor. sec. 6, Tps. 83 and 84 N., Rs. 16 and 17 W., 247 ft S. of S. end of steel bridge and 27 ft E. of center of rd., 2 ft W. of pole, in concrete post; standard tablet stamped "TT 19 FJH 1957"		841.962
12.8 Marshalltown, 3.0 mi S. and 7.0 mi E. of; near cor. secs. 7, 12, 13 and 18, T. 83 N., Rs. 16 and 17 W., 84 ft N. and 106 ft W. of center of hwy. 30 at T-rd. N., 2 ft E. of pole; in concrete post; standard tablet stamped "TT 20 FJH 1957"		867.674
12.8 Reference mark, RR. spike in base of power pole; 60 ft E. of tablet		868.52
13.8 UE, top of S. rail center of RR. crossing		939.8
14.1 LeGrand, on the Chicago and Northwestern RR., about 9 poles W. of milepost 143, 138 ft E. of the station, 54 ft N. of center of RR. main track, 20 ft S. of right-of-way fence and about 1 ft higher than the rail; a standard disk stamped "F 83 1934"		938.968