

OFFICE COPY HOLD

THIRD ORDER LEVELS
SEA LEVEL DATUM OF 1929

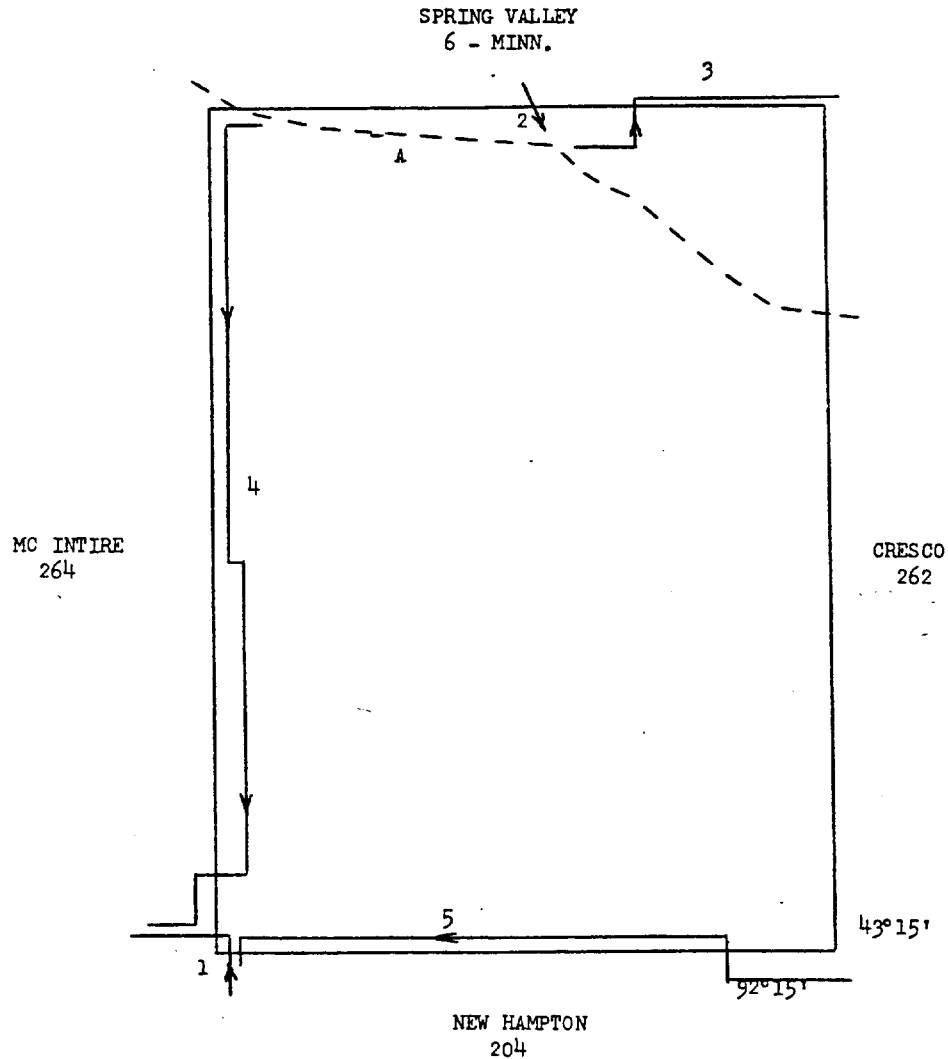
Final Adjustment of 1973

Howard County

Edition of : 5-1-73
PR: AKH/gh/ob

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

43-092-24
LIME SPRINGS QUADRANGLE
263 - IOWA
N4315-W9215/15
DIAGRAM NK 15-2
MASON CITY



N.G.S.
(USC&GS) VERTICAL CONTROL DATA

A. Quadrangle No. 430922

263-B

LINE 1

FEET

C. L. Crutchfield, 1969; Book CV-2434

NEW HAMPTON QUAD. - 240

- 13.0 Elma, 3.0 mi W. of; 0.2 mi N. of the cor. of secs. 3, 4, 9 and 10, T. 97 N., R. 14 W., 1160 ft N. and 24 ft W. of crossroads, 24 ft W. and 1.4 ft lower than center N.-S. gravel rd. at a small drain crossing, top of the W. end of a large concrete tile culvert, a standard tablet stamped "24 CLC 1969 1196" 1195.768
- 13.1 Reference Mark, 41 ft E. and 0.6 ft higher than tablet; top of the E. end of a large concrete tile culvert, a chiseled square (Note: Chiseled square is on top of the second joint W. of the E. end of the first joint) 1196.35

LIME SPRINGS QUAD. - 263

- 13.8 UE 24 A; 0.7 mi N. along a co. rd. from tablet; 35 ft N. and 33 ft E. and 0.2 ft higher than crossroads, on the S. side of a power pole, a rail spike 1234.67

MC INTIRE QUAD. - 264

- 14.8 UE 24 B; 0.7 mi N. and 0.97 mi W. along a co. rd. from tablet; 9 ft S. and 18 ft W. and 0.2 ft higher than center bridge over a small creek; top of the SW. concrete bridge abutment, a chiseled square 1159.94
- 15.8 Elma, 1.0 mi N. and 5.0 mi W. of; near the cor. of secs. 5, 6, 31 and 32; T. 97 and 98 N., R. 14 W., 210 ft N. and 10 ft W. and 1.6 ft lower than crossroads, in the center of the W. headwall of a concrete box culvert, a standard tablet stamped "25 CLC 1969 1151" 1150.804

LINE 2

L. M. Tackett, 1963; Book CV-1624

SPRING VALLEY QUAD. - 6

- 15.7 Reference Mark, 12 ft S. and 106 ft of T-rd. E., a chiseled square in center of S. headwall of culvert, 8 ft above the drain 1226.77
- 15.8 Chester, Iowa, City Limits; T. 100 and 101 N., R. 13 W., at cor. secs. 34 and 35; quarter cor. sec. 10, on Minnesota and Iowa State line; 40 ft N. and 340 ft E. and 3.9 ft lower than T-rd. E., a standard tablet in top of concrete post, stamped "1225 16 LMT 1963" 1224.733

LIME SPRINGS QUAD. - 263

- 16.8 Chester, about 0.2 mi W. along the C. M. St. P. & P. RR. from the station at; 78 ft W. of the center of sec. line rd. crossing, 46.4 ft S. of the S. rail of the main track; 33 ft W. of a cor. post of right-of-way fence and 2.5 ft N. of the fence; a USC&GS standard disk stamped "M 41 1934" projecting 3 in. 1225.191

LINE 3

L. M. Tackett, 1963; Book CV-1624

LIME SPRINGS QUAD. - 263

- 0.0 USC&GS "M 41 1934" (Described in Line 2) 1225.191
- 1.2 UE M 41 A; T. 100 N., R. 13 W., in SW. cor. sec. 11; 9 ft N. and 58 ft E. and 1.8 ft lower than center of bridge; held on top of bolt holding bridge railing; on bridge pier on upstream side; 12 ft above the water 1216.6
- 2.4 UE M 41 B; T. 100 N., Rs. 12 and 13 W., at quarter cor. between secs. 12 and 13; 33 ft N., and 50 ft E. and 1.9 ft higher than T-rd. W., a rail spike in the NW. side of power pole 1274.44

LINE 3 (Cont'd)

FEET

SPRING VALLEY QUAD. - 6

- 3.4 Chester, 1934; Station is about 2.0 mi E. of Chester, Iowa, on N. Minnesota side of the Minnesota-Iowa State line rd.; in SW $\frac{1}{4}$ sec. 37, T. 101 N., R. 12 W., about 900 ft W. of farmhouse owned by Rasmus Oswald, 700 ft E. of center of T-rd. S.; 28 ft N., 188 ft E. and 2.0 ft lower than rd. at fence N.; about 11 ft S. of right-of-way fence, projecting 1 ft above the ground, stamped "CHESTER 1934" 1312.401
- 3.4 Reference Mark No. 1, 105 ft E. of station, 28 ft N. of center of rd. and 11 ft S. of right-of-way fence, projecting 1 ft above the ground 1312.419
- 3.7 Azimuth Mark, E. of the station, 28 ft S. of the center of State Line Rd.; 5 ft W. of telephone pole, 6 in. N. of right-of-way fence, 80 ft W. of 10 in. triple oak; the mark projects 7 in., stamped "CHESTER 1934" 1310.487
- 4.1 UE Chester A; Ts. 100 and 101 N., R. 12 W., near cor. secs. 7, 31 and 32, 17 ft S. and 39 ft W. and 2.9 ft lower than crossroads, a punched hole in the S. end of steel pipe culvert 1280.37
- 5.2 UE Chester B; Ts. 100 and 101 N., R. 12 W., near cor. secs. 8, 32 and 33; 11 ft S. and 79 ft E. and 3.4 ft lower than T-rd. S., a chiseled square, on SE. wingwall of a culvert, 6 ft above the drain 1257.70
- 6.1 UE Chester C; Ts. 100 and 101 N., R. 12 W., near cor. secs. 9, 33 and 34; 25 ft S., 11 ft E., and 2.9 ft lower than rd. at field rd. entrance S.; a punched hole in the E. end of steel pipe culvert 1282.5

PRESTON QUAD. - 5

- 7.2 Granger Azimuth, SSW. of station, about 0.5 mi W. of T-rd. intersection, 30 ft N. of the center of State Line Rd.; in E.-W. fence line and opposite lane to dwelling; the mark projects 12 in., stamped "GRANGER 1934" (9.6 ft lower than T-rd. N. that is 412 ft W.) 1293.765

LINE 4

C. D. Lien, 1971; Book CV-2748

LIME SPRINGS QUAD. - 263

- 1 2 0.0 USC&GS BM "W 148 1934" About 1.1 mi SE. along the Chicago and Milwaukee, St. Paul & Pacific RR. from the station at LeRoy, Mower County; about 0.6 mi NW. of MP 41, 38 ft N. of the center of a gravel rd. (Minn. & Iowa State line), 25.4 ft SW. of the SW. rail and about 5.0 ft N. of a pole, set on top of a concrete post which projects 0.3 ft above ground, a standard USC&GS disk stamped "W 148 1934" 1268.081
- 2 0.4 UE 148 A; 0.4 mi W. along rd. from tablet; a rail spike in center rd. at T-rd. E., painted "UE Centerline" 1283.2
- 3 1.5 UE 148 B; 0.4 mi W. and 1.15 mi S. along rd. from tablet; a rail spike in center rd. at field approach W. 1323.1
- 4 2.5 Reference Mark, 154 ft N., 14.7 ft E. of tablet; and 25.5 ft E., 12.3 ft S. of center rd. at field approach E., a chiseled square on a rock 1294.83
- 5 2.5 Riceville, 7.4 mi N., 3 mi E. of; T. 100 N., R. 14 W., near the N. sixteenth cor. of secs. 21 and 22, 12.7 ft N., 12.7 ft E. of and same elev. as center of bridge, set in the NE. cor. of a concrete bridge over a small drain, a standard tablet stamped "1 CDL 1971" 1298.069
- 6 3.3 UE 148 A; 0.8 mi S. along rd. from tablet; 45.5 ft S., 22.2 ft W., and 3.6 ft lower than crossroads, a punched hole in a metal culvert 1331.40

LINE 4 (Cont'd)

FEET

LIME SPRINGS QUAD. - 263

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|----|------|-----|---|----------|
| 1 | 7 | 4.2 | UE 1 B; 1.8 mi S. along rd. from tablet; 20.8 ft S., 13 ft E., and 2 ft higher than center bridge over Staff Creek; 428 ft N. of crossroads, a chiseled square on the top of the SE. cor. of a concrete railing, 17 ft higher than water | 1294.56 |
| 8 | 5.3 | | Reference Mark, 78 ft N., 29 ft W. of tablet; 36.7 ft N., 23 ft E. of crossroads, a chiseled square on a rock | 1335.63 |
| 9 | 5.3 | | Riceville, 4.5 mi N., 3 mi E. of; T. 99 and 100 N., R. 14 W., sec. cors. 3, 4, 33 and 34; 40 ft S., 50 ft E. of and 3.4 ft lower than crossroads, 6.3 ft S., 1.5 ft W. of a fence cor., 1.5 ft W. of witness post, and 5.6 ft S. of a power pole, set on top of a 1/2 in. steel rod and encircled by a 6 in. tile, a standard tablet stamped "2 CDL 1971", steel rod driven to the depth of 15 ft | 1335.310 |
| 10 | 6.3 | | UE 2 A; 1 mi S. along rd. from tablet; a rail spike in center crossroads, painted "UE Centerline" | 1375.1 |
| 11 | 6.8 | | UE 2 B; 1.5 mi S. along rd. from tablet; 22.5 ft N., 42.5 ft W., and 2.7 ft lower than crossroads, a chiseled "X" on a metal culvert, painted "UE" | 1365.98 |
| 12 | 7.3 | | UE 2 C; 2 mi S. along rd. from tablet; 6 ft N., 56.3 ft W. of and 3.0 ft lower than center rd. at E.-W. fence lines, and 6 ft N., 4 ft W. of a fence cor., a chiseled square on a rock, painted "UE" | 1374.68 |
| 13 | 8.3 | | Reference Mark, 58.8 ft N., 60.8 ft E. of tablet and 40.5 ft S., 23.7 ft W. of crossroads, a chiseled "X" on a metal culvert | 1338.92 |
| 14 | 8.3 | | Riceville, 1.5 mi N., 3.0 mi E. of; T. 99 N., R. 14 W., at sec. cors. 15, 16, 21 and 22; 98 ft S., 85 ft W. of and 0.5 ft lower than crossroads and 29.5 ft N., 85 ft W. of center rd. at approach W., set in the SE. cor. of a concrete step foundation, a standard tablet stamped "3 CDL 1971" | 1343.529 |
| 15 | 9.3 | | UE 3 A; 1.0 mi S. along rd. from tablet; 14.6 ft S. of center rd. at drive W. and opposite fence E., on top of a 1/2 in. iron rod in center rd. used for sec. cor., painted "UE Centerline" | 1313.4 |
| 16 | 9.8 | | UE 3 B; 1.5 mi S. along rd. from tablet; 15 ft S., 21 ft E. of and 3.0 ft higher than center bridge and 223 ft W. of T-rd. N., a chiseled square on top of the SE. cor. of a concrete wingwall on bridge over Little Wapsipinicon River; 13.6 ft above water | 1268.89 |
| 17 | 10.3 | | UE 3 C; 1.5 mi S., 0.5 mi E. along rd. from tablet; 81 ft S., 52.5 ft W. of and 3.3 ft lower than center rd. at T-rd. N. and 2 ft N. of a fence cor., on top of a quarter in. reinforcement rod in a 3 x 3 concrete post, painted orange, painted "UE" | 1311.87 |
| 18 | 11.3 | | UE 3 D; 2.5 mi S., 0.5 mi E. along rd. from tablet; center crossroads | 1262.0 |
| 19 | 11.5 | | Riceville, 1.25 mi S., 3.5 mi E. of; T. 99 N., R. 14 W., near the S. sixteenth cor. of sec. 34; 23.6 ft S., 11.7 ft E. of and 0.4 ft higher than center bridge over the Little Wapsipinicon River, and 144 ft N., 11.7 ft E. of center rd. at drive W., set in the SE. cor. of a concrete bridge, a standard tablet stamped "4 CDL 1971" | 1244.500 |
| 20 | 11.6 | | Reference Mark, 126 ft S., 57.6 ft W. of tablet and 18.7 ft N., 37.5 ft W. of center rd. at drive W., a chiseled "X" on a metal culvert | 1235.81 |
| 21 | 12.3 | | UE 4 A; 0.7 mi S. along rd. from tablet; 21.7 ft N., 50.6 ft W. of and 2.0 ft lower than crossroads, a punched hole in a metal culvert, painted "UE" | 1237.84 |

LINE 4 (Cont'd)

FEET

LIME SPRINGS QUAD. - 263

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|----|------|---|---|---------|
| 1 | 22 | 12.9 | UE 4 B; 1.3 mi S. along rd. from tablet; 20.2 ft S., 12.6 ft W. of and 0.7 ft higher than center of bridge over the Little Wapsipinicon River, a chiseled square on the SW. cor. of the concrete foundation of bridge, painted "UE" | 1221.80 |
| 23 | 13.3 | UE 4 C; 1.7 mi S. along rd. from tablet; 37 ft N., 32 ft E. of and 2.5 ft lower than center rd. at T-rd. E., a rail spike in a cor. fence post, painted "UE" | 1253.80 | |
| 24 | 13.8 | Riceville, 3.5 mi S., 3.5 mi E. of; T. 98 N., R. 14 W., near the quarter cor. between secs. 10 and 15; 18 ft N., 10.5 ft W. of and 0.6 ft higher than center bridge, 118 ft N., 10.5 ft W. of center rd. at T-rd. W. and 216 ft S., 10.5 ft W. of center rd. at RR. crossing, set in the NW. cor. of a concrete bridge over a small creek, a standard tablet stamped "5 CDL 1971" | 1206.715 | |
| 25 | 13.9 | Reference Mark, 34.7 ft S., 99 ft W. of center rd. at T-rd. W. and 152.7 ft S., 89 ft W. of tablet; a chiseled "X" on a metal culvert, on the W. side of a field approach | 1203.79 | |
| 26 | 14.8 | UE 5 A; 0.9 mi S. along rd. from tablet; 30.7 ft N., 26.5 ft W. of and 3.8 ft lower than crossroads, a chiseled square on a concrete culvert, painted "UE" | 1248.05 | |
| 27 | 15.8 | Riceville, 5.5 mi S., 3.5 mi E. of; T. 98 N., R. 14 W., near the quarter cor. between secs. 22 and 27; 26.4 ft S., 30.8 ft E. of and 1.4 ft lower than center rd. at T-rd. W., 2.5 ft S., 1 ft W. of a fence cor., 10 ft S. center of a field approach and 1.5 ft N. of a witness post, set on top of a 1/2 in. copper coated rod encircled by a 6 in. tile, a standard tablet stamped "6 CDL 1971" | 1223.220 | |
| 28 | 15.8 | Reference Mark, 26.4 ft S., 22 ft E., center rd. at T-rd. W. and 9.5 ft W. of tablet; a chiseled "X" on a metal culvert | 1222.21 | |
| 29 | 16.3 | UE 6 A; 0.5 mi S. along rd. from tablet; 56 ft S., 32.5 ft W. of and 0.2 ft lower than center rd. at T-rd. E., a rail spike in E. side of a power pole, painted "UE" | 1252.46 | |
| 30 | 16.8 | UE 6 B; 1 mi S. along rd. from tablet; 23.6 ft S. of and 2.9 ft lower than center rd. at T-rd. N., 11 ft W. of center of a field approach, a chiseled square on a concrete culvert, painted "UE" | 1253.86 | |

MC INTIRE QUAD. - 264

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| 31 | 17.8 | Riceville, 6.5 mi S., 2.5 mi E. of; T. 98 N., R. 14 W., near the quarter cor. between secs. 28 and 33; 35.5 ft N., 44 ft E. of and 1.0 ft lower than crossroads, 35.5 ft N., 11 ft W. of center rd. at field approach N. and 1.7 ft E. of a fence cor. and a witness post, set on top of a 1/2 in. copper coated steel rod driven to the depth of 15 ft and encircled by a 6 in. tile, a standard tablet stamped "7 CDL 1971" | 1250.129 |
| 32 | 17.8 | Reference Mark, 24 ft W. of tablet and 36 ft N. and 20 ft E. of crossroads, a chiseled "X" on a metal culvert | 1248.18 |
| 33 | 18.8 | UE 7 A; 1.0 mi S. along rd. from tablet; 27 ft S., 12 ft W. of and 2.3 ft lower than center rd. at T-rd. N. and 6 ft N., chiseled "X" on a metal culvert | 1180.26 |
| 35 | 20.3 | Elma, 1.0 mi N. and 5.0 mi W. of; near the cor. of secs. 5, 6, 31 and 32; T. 97 and 98 N., R. 14 W., 210 ft N. and 10 ft W. and 1.6 ft lower than crossroads, in the center of the W. headwall of a concrete box culvert, a standard tablet stamped "25 CDL 1969 1151" | 1150.804 |

LINE 5

FEET

C.D. Lien, 1972; Book CV-2914

NEW HAMPTON QUAD. - 240

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|----|------|------|---|----------|
| 1 | 60 | 17.3 | UE 16 B, 1.0 mi N. and 1.0 mi W. along road from tablet, sec. cors. 3, 4, 9 and 10, 54.5 ft S., 36.5 ft W. of; and 0.6 ft lower than crossroads, 14 ft SE. of a fence corner and 9.5 ft NW. of a power pole, a chiseled square on a rock | 1269.50 |
| 62 | 18.3 | | Reference mark, 11 ft S. centerline of road over drain and 21 ft S., 571 ft E. of tablet, a chiseled square on the W. end of the S. headwall of a concrete box culvert | 1199.15 |
| 63 | 18.4 | | BM 17, New Hampton at the junctions of U.S. Hwy. 18 and 63, 12.0 mi N., 2.0 mi E. of; sec. cors. 4, 5, 8 and 9, 10 ft N. of and 0.2 ft lower than centerline of road over drain, 10 ft N., 433 ft W. of centerline of road at N.-S. fence lines and 10 ft N., 256 ft E. of centerline of road at private drive S. set in the center of N. headwall of a concrete box culvert, a standard tablet stamped "17 CDL 1972" | 1199.217 |
| 65 | 19.3 | | UE 17 A, 1.0 mi W. along road from tablet, a copper nail and washer in centerline of road at T-rd. E. | 1179.32 |

LIME SPRINGS QUAD. - 263

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|----|------|------|--|----------|
| 69 | 20.3 | | New Hampton, at the junctions of U.S. Hwys. 18 and 63 and Elma, at the junction of State Hwy. 272 and county road V 18, T. 97 N., R. 12 W., near the center of sec. 6, 16.1 ft S., 55 ft W. of; and 0.1 ft lower than centerline of bridge over Crane Creek, and 3 ft SW. of a gaging station pipe, set in the SW. cor. of wingwall of bridge, a standard tablet stamped "18 CDL 1972" | 1175.546 |
| 70 | 20.4 | | Reference mark, 314 ft W., 38 ft N. of the W. end of bridge and 44 ft N. and 314 ft W. of tablet, a RR. spike in a tree, first tree W. of bridge | 1169.17 |
| 73 | 21.3 | | UE 18 A, 0.9 mi W. along road from tablet center of sec. 1, 28 ft S., 34 ft E. of; and 1.9 ft lower than crossroads, and 11.4 ft SW. of hwy. mile marker no. 6, a chiseled square on a concrete culvert | 1228.15 |
| 75 | 22.3 | | UE 18 B, 1.9 mi W. along road from tablet, a copper nail and washer in centerline of road at T-rd. S. | 1235.02 |
| 77 | 22.8 | | Elma, at the junctions of State Hwy. 272 and county road V-18, 4.0 mi E. of along State Hwy. 272, T. 97 N., R. 13 W., near the quarter cor. between secs. 2 and 3, 26.4 ft S. of and 4.1 ft lower than centerline of road over drain, 26.4 ft S., 96 ft W. of centerline of road at N.-S. fence lines and 26.4 ft S., 133 ft E. of centerline road at private drive S., set in the SW. cor. of a headwall of a concrete box culvert, a standard tablet stamped "19 CDL 1972" | 1230.756 |
| 78 | 22.8 | | Reference mark, 49 ft N., 18 ft W. of centerline of road at N.-S. fence lines and 75.4 ft N., 77 ft E. of tablet, a punched hole in the W. end of a metal culvert, under a field approach N. | 1229.82 |
| 80 | 23.9 | | UE 19 A, 1.0 mi W. along road from tablet, a copper nail and washer in centerline of road at T-rd. N. | 1263.10 |
| 2 | 4 | 24.9 | UE 19 B, 1.0 mi W. along road from tablet, 60 ft N. of; and 0.9 ft lower than centerline of road at T-rd. S. and 1.8 ft S., 3.0 ft W. of a T-fence N. on top of a rail painted orange and used for a hwy. right-of-way marker, rail projecting 2.0 ft above ground near the quarter cor. between secs. 4 and 5 | 1295.89 |

LINE 5 (Cont'd)

LIME SPRINGS QUAD. - 263

FEET

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| 2 6 25.3 | Elma, at the junctions of State Hwy. 272 and County road V-18, 1.5 mi E. of along State Hwy. 272, T. 97 N., R. 13 W., near the center of sec. 5, 23 ft S. of and 2.1 ft lower than centerline of road over drain, 23 ft S., 144 ft E. of centerline of road at private drive N. and 69 ft W. of hwy. mile marker number 2, set in the S. headwall of a concrete box culvert, a standard tablet stamped "20 CDL 1972" | 1256.496 |
| 7 25.3 | Reference mark, 92 ft N., 34.5 ft W. of centerline of road, at private drive N., 2 ft W. of a telephone pole and 115 ft N., 178.5 ft W. of tablet, on top of a rail painted orange and used for a hwy. right-of-way marker | 1258.47 |
| 8 25.8 | UE 20 A, 0.5 mi W. along road from tablet, a copper nail and washer in centerline of crossroads | 1268.13 |
| 11 26.8 | UE 20 B, 1.5 mi W. along road from tablet, quarter cor. between secs. 1 and 6, at Elma, at junctions of State Hwy. 272 and county road V 18, 19.8 ft N., 35.3 ft E. of, and 1 ft lower than centerline of road at T-rd. E. and 4.3 ft E. of a stop sign, a chiseled square on the S. end of a concrete side walk | 1189.29 |
| 17 27.7 | UE 20 C, 0.5 mi N. and 2.0 mi W. along road from tablet, and 0.1 mi W. of RR. crossing, a gravel road, 9.7 ft S., 18 ft W. of and 0.2 ft higher than centerline of bridge; a copper nail and washer in the SW. corner of bridge on a bridge piling | 1173.77 |
| 19 28.2 | Reference mark, 160.8 ft E. of tablet, and 12.6 ft N., 47 ft W. of centerline of bridge on top of a spike in a bridge piling in the NW. cor. of bridge | 1168.85 |
| 20 28.2 | Elma, at the junctions of State Hwy. 272 and County road V-18, 0.5 mi N., 0.9 mi W. of; T. 97 and 98 N., R. 14 W., near the sec. cors. 1, 2, 35 and 36, 52.5 ft N., 210 ft W. of; and 0.1 ft higher than centerline of bridge over the Little Wapsipinican River, 52.5 ft N., 292 ft E. of centerline of road at a private drive N. to an old abandoned house and 2.0 ft W. of a fence corner and witness sign, set on top of a 0.5 in copper coated steel rod driven to the depth of 10 ft and encircled by a 6-in. tile set flush with the ground, a standard tablet stamped "21 CDL 1972" | 1168.870 |
| 23 29.2 | UE 21 A, 1.0 mi W. along road from tablet, 32 ft S., 35 ft W. of and 1.6 ft lower than centerline of crossroads, a RR. spike in a corner fence post | 1237.35 |

NEW HAMPTON QUAD. - 263

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|---------|---|----------|
| 27 30.9 | Elma, 3.0 mi W. of, 0.2 mi N. of the cor. secs. 3, 4, 9 and 10, T. 97 N., R. 14 W., 1160 ft N. and 24 ft W. of crossroads, 24 ft W. and 1.4 ft lower than center of N.-S. gravel road at a small drain crossing, top of the W. end of a large concrete tile culvert; a standard tablet stamped "24 CLC 1969 1196" | 1195.768 |
|---------|---|----------|