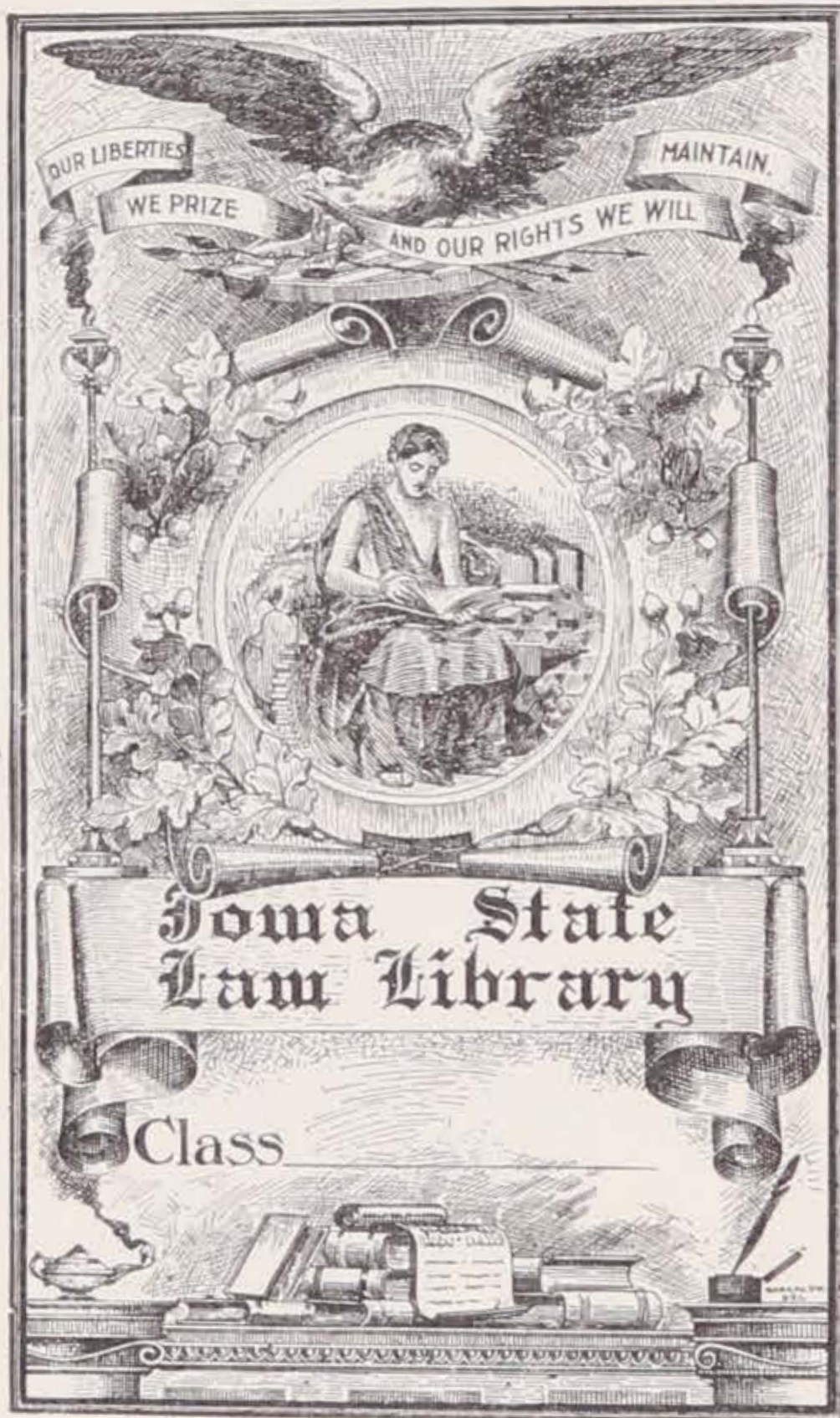


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LINN COUNTY
SECOND ORDER TRAVERSE

IOWA GEODETIC SURVEY



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Work Projects Administration
IOWA GEODETIC SURVEY
WPA Project No. 665-72-3-79.
Des Moines, Iowa
1940

This report has been prepared by the Iowa Geodetic Survey, a state-wide project of the Work Projects Administration, under the sponsorship of the United States Coast and Geodetic Survey and the Engineering Experiment Station of Iowa State College.

All computations and results were prepared by WPA Project #4485.

IOWA GEODETIC SURVEY

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SECOND ORDER BENCH MARKS

LINN COUNTY, IOWA

CONTENTS

	Page
General Statement- Second-order Traverse	1
The Plane Coordinate System for Iowa	1
Monuments and Markers	3
Resetting Monuments and Bench Marks	3
Field Procedure	7
Computations	8
Descriptions of Triangulation Stations	11
Descriptions of Bench Marks in	
Loop I	19
Loop II	25
Loop III	29
Loop IV	34
Loop V	44
Loop VII	48
Loop VIII	52
Loop IX	55
Loop X	57a
Loop XI	63
Loop XII	65
Loop XIV	71
Loop XV	73
Loop XVI	75
Loop XVII	80
Loop XVIII	86
Loop XIX	91
Loop XX	95
Loop XXI	98
Loop XXII	101
Indexes:	
Geographic Positions of Junction Points	107
Geographic Positions of Triangulation Stations ..	107
Coordinates	109
Traverse Loops	121
Cities	125
Map, indicating Second-order Traverse Loops. Frontispiece	
Sketch, indicating Standard Markers	3a
Diagram on Resetting Monuments (Fig. 2)	6a

LINN COUNTY, IOWA
General Statement
Second-order Traverse

1

This report comprises the results of Second-order Traverse executed in Linn County, Iowa, under various emergency agencies and projects set up for the purpose of furnishing employment to engineers and semi-professional personnel.

All operations have been executed under U. S. Coast & Geodetic Survey specifications. Obviously, many difficulties were encountered due to shifting and part-time employment periods, and to lack of high-grade equipment. Notwithstanding these drawbacks, results to specifications have been demanded and secured, although a revision of specifications caused a certain amount of extra work.

Permanency of monument location has been sought for, but in some instances has been difficult to secure due to natural conditions combined with traverse limitations. In some cases monuments were placed closer than desirable to traveled ways, or in other less protected locations due to consideration of measurement and sight facilities. Some monuments have been buried under ground when they were necessarily placed within the limits of cultivated fields. Unless otherwise stated all monuments are concrete, - with brass caps.

THE PLANE COORDINATE SYSTEM
for IOWA.

In order to employ a system of rectangular coordinates throughout an extended area, and hold the scale error determinant and within reasonable limit, it is necessary to select a type or method or projection which will conform to the area under consideration.

The Lambert Conformal Projection has been considered as most adaptable to the State of Iowa by the U. S. Coast & Geodetic Survey, which bureau has established a standard system of projection for each state in the Union. The following paragraphs are quoted from the Bureau's Special Publication #193:-

"NEED OF PLANE SYSTEMS COVERING GREATER AREAS"

"The progressive engineers of the country have become convinced that there is need for plane-coordinate systems that can be extended over wider territory without the introduction of discrepancies that vitiate the value of the work. Of course, if all engineers would

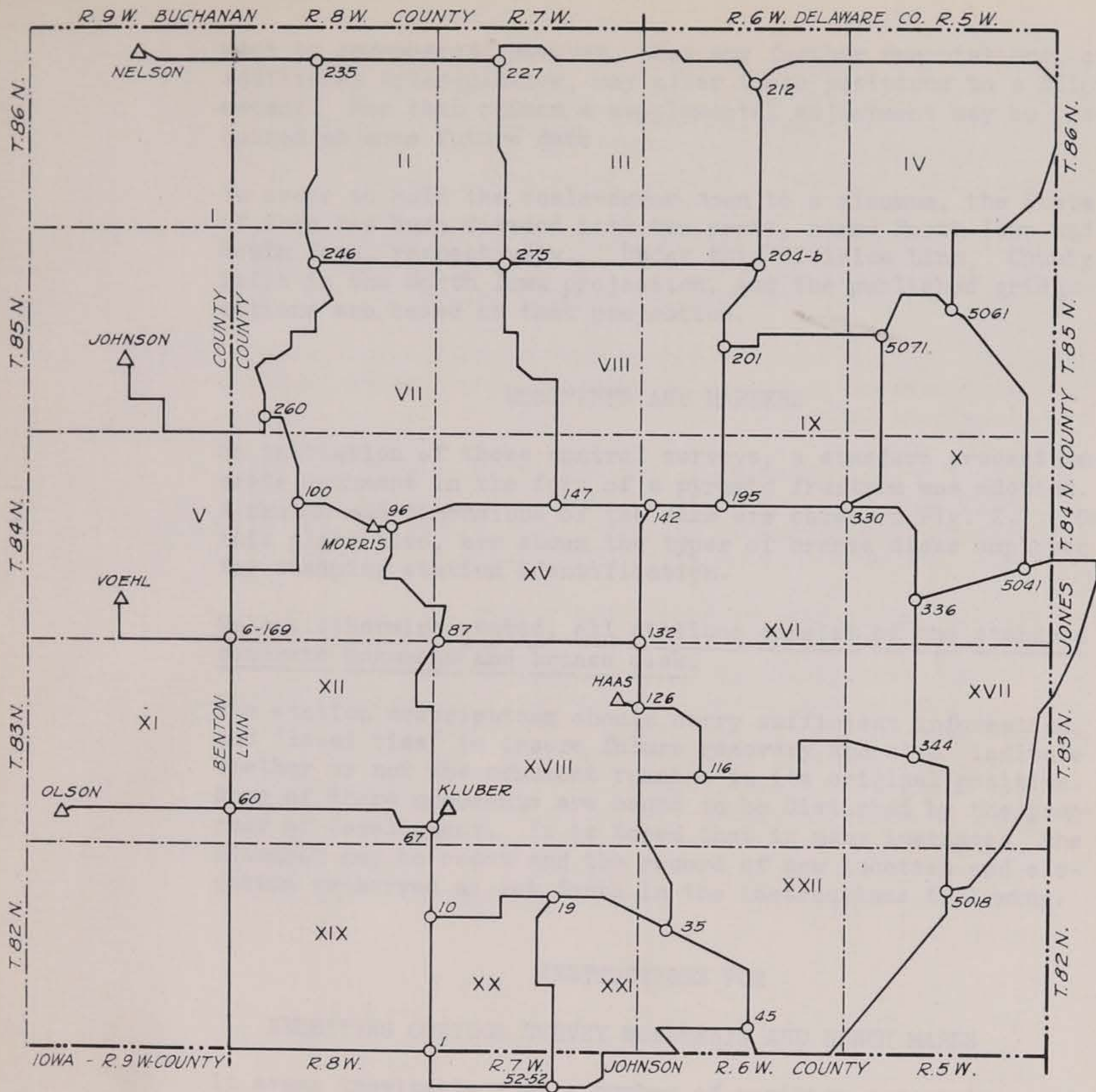
use geodetic computations, there would not be need for such aids, but they do not favor this method for handling the situation. Work is started as a limited project for which a local coordinate system is amply sufficient and it is only when the undertaking is broadened to wider fields that the difficulties arise. When it becomes necessary to make use of the national control surveys to serve as a basis for local work the need for the more extensive coordinate system is most painfully evident. It is quite a task to base local engineering work on basic control that has been computed geodetically; that is, the results of which are expressed in latitudes, longitudes, azimuths, and lengths. It can be done of course, but not as satisfactorily as it could be done if the control work were computed directly on a plane-coordinate system. These are the reasons that have led to the insistent demand for the establishment of systems for whole states, or for as large sections of each state as could be constructed without the introduction of too many complications in the method of using the system when it is once established.

"Advantages to Local Surveyors"

"The Coast & Geodetic Survey has already some 40,000 miles of control surveys fairly evenly distributed throughout the country at large. This network is being rapidly extended, - and soon any place in the country will be near enough to this control system to make it a valuable asset as a basis for any engineering work. If the extended plane-coordinate systems are established and this control work is computed on the resulting grids, then the local surveyor can start this work from neighboring control points and make all his computations on the general plane system, just as he could do on any local system he might establish. He would have the added advantage that his work would be coordinated with the general control system of the country, and, therefore, if his work should be preserved, it could form the control for future engineering operations in that vicinity."

Control traverse, as laid out and executed by the Iowa Geodetic Survey, supplements the triangulation control which has been established by the U. S. Coast & Geodetic Survey.

The map of Linn County (Fig. 1) indicates how the Second-order traverse loops were laid out to include the location of seven U. S. Coast & Geodetic Survey triangulation stations. These seven triangulation stations were assumed as fixed points, inasmuch as the geographical and grid positions have been determined and published by the U. S. Coast & Geodetic Survey. It

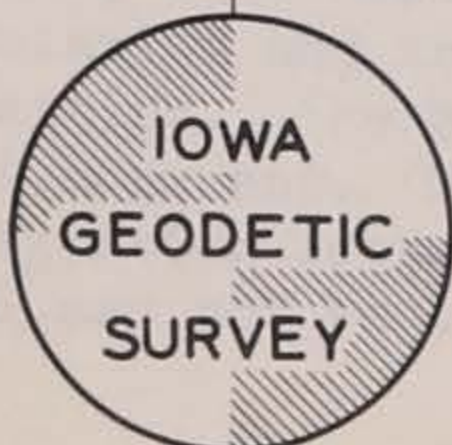




LINN COUNTY
SECOND ORDER TRAVERSE

**ADDITIONAL
LOOPS**



VI - JOHNSON TO MORRIS
 XIII - OLSON TO KLUBER
 XIV - MORRIS - 142 - HAAS

MARCH 1940



SCALE  MILES

LEGEND

 - U.S.C. & G.S. TRIANGULATION STATION
 - JUNCTION POINT ALSO TRAVERSE STATION
 ROMAN NUMERALS INDICATE LOOP NUMBERS

must be remembered, however, that any further computations, or additional triangulation, may alter these positions to a slight extent. For that reason a supplemental adjustment may be required at some future date.

In order to hold the scale-error down to a minimum, the State of Iowa has been divided into two parts, named North Iowa and South Iowa, respectively. Under this division Linn County falls in the North Iowa projection, and the published grid positions are based on that projection.

MONUMENTS AND MARKERS

On initiation of these control surveys, a standard precast concrete monument in the form of a pyramid frustrum was adopted. A sketch and dimensions of the same are shown on Fig. 2. On this plate also, are shown the types of bronze disks employed for stamping station identification.

Unless otherwise stated, all stations consist of the standard concrete monument and bronze disk.

The station descriptions should carry sufficient information, and "local ties" to insure future recovery and also indicate whether or not the monument remains in its original position. Some of these monuments are bound to be disturbed by the progress of development. It is hoped that in many instances the monument may be reset and the record of new location and elevation preserved as set forth in the instructions following.

INSTRUCTIONS FOR

RESETTING CONTROL SURVEY MONUMENTS AND BENCH MARKS

It seems inevitable that a number of position monuments, and bench marks, which have been set by the U. S. Coast & Geodetic Survey and by the U. S. Geological Survey and supporting organizations working in cooperation with the above agencies must necessarily be moved in the improvement and extension of highways.

It should be kept in mind that two distinct classes of monuments will be encountered, viz: bench marks, perpetuating elevations only, and triangulation and traverse monuments perpetuating both elevation and position. The bronze disk stamping will indicate the class of each monument. Monuments bearing elevation only are stamped with designation letter, number and date, thus, "M-107, 1934", and may or may not be stamped "B.M. " Triangulation station.

tions show the triangle form molded on the bronze plate, together with the name of the station and date established. All triangulation reference and azimuth monuments bear the name of the triangulation station and "Ref." or "Azim." respectively. Traverse stations bear a numeral designation thus: "57-107".

IN MAKING INQUIRY OR REFERRING TO ONE OF THESE MONUMENTS ANYWHERE, ANY TIME, TO ANY ONE, THE COMPLETE DESIGNATION STAMPING SHOULD BE GIVEN FOR COMPLETE IDENTIFICATION.

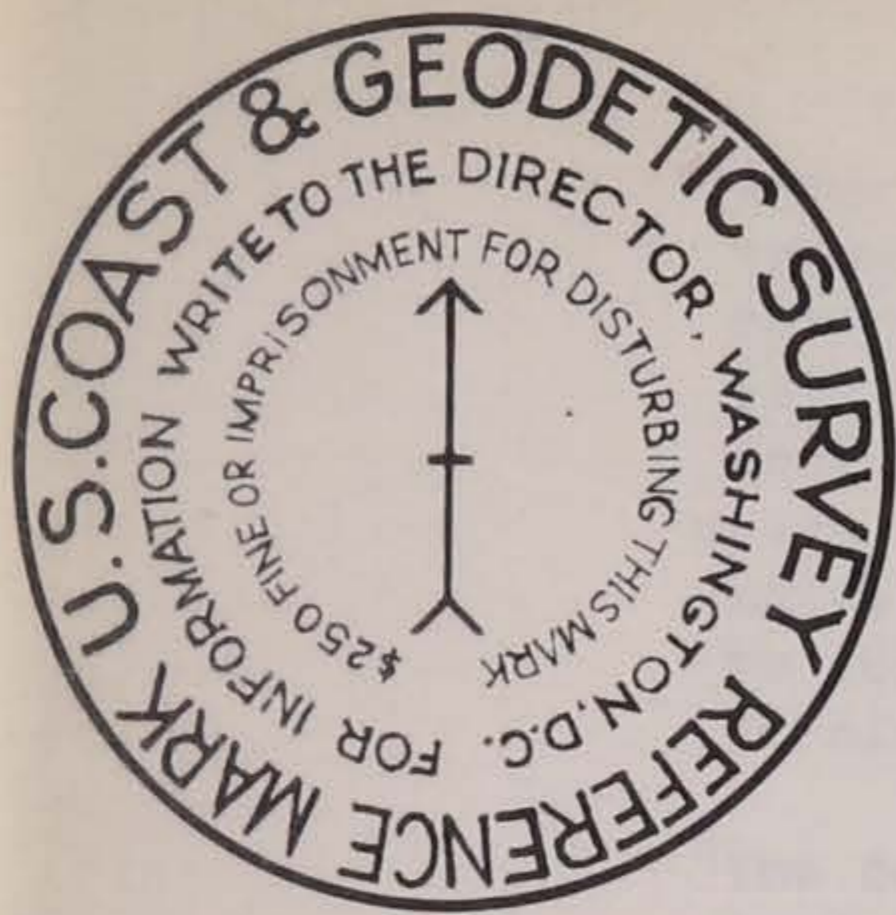
The U. S. Coast & Geodetic Survey has issued the following general instructions in regard to resetting bench marks perpetuating elevations only:

"With special reference to the matter of relocating bench marks when they are found to be in the way of construction, repair, or maintenance projects, this Bureau has worked out a routine method of handling these cases as follows:

"As soon as it becomes known that a mark must be moved, a letter should be sent to the Director, U. S. Coast & Geodetic Survey, Washington, D. C., Atten: Section of Leveling, stating the necessity for moving the mark and giving its designation. The designation consists of the letters, and numbers, found to have been stamped with dies on the disk. It is desirable to furnish a rubbing of the disk as well. A rubbing can be made by placing a piece of medium-weight paper over the disk, then rubbing over the paper with a hard pencil to bring out the legend cast in the disk, especially the letters and numbers stamped on it with dies.

"Upon receipt of this information, this office will send a new disk properly stamped to show that it has been reset. Necessary instructions for the establishment of the new mark and the transfer of elevation will be sent. The proper procedure, in most cases, is to establish the new mark in a safe place nearby and transfer the elevation from the old mark to the new one by means of an engineer's level and rod. The levels should be run in duplicate to avoid the possibility of large errors and all readings should be made to three decimal places in order to preserve the accuracy of the original elevation.

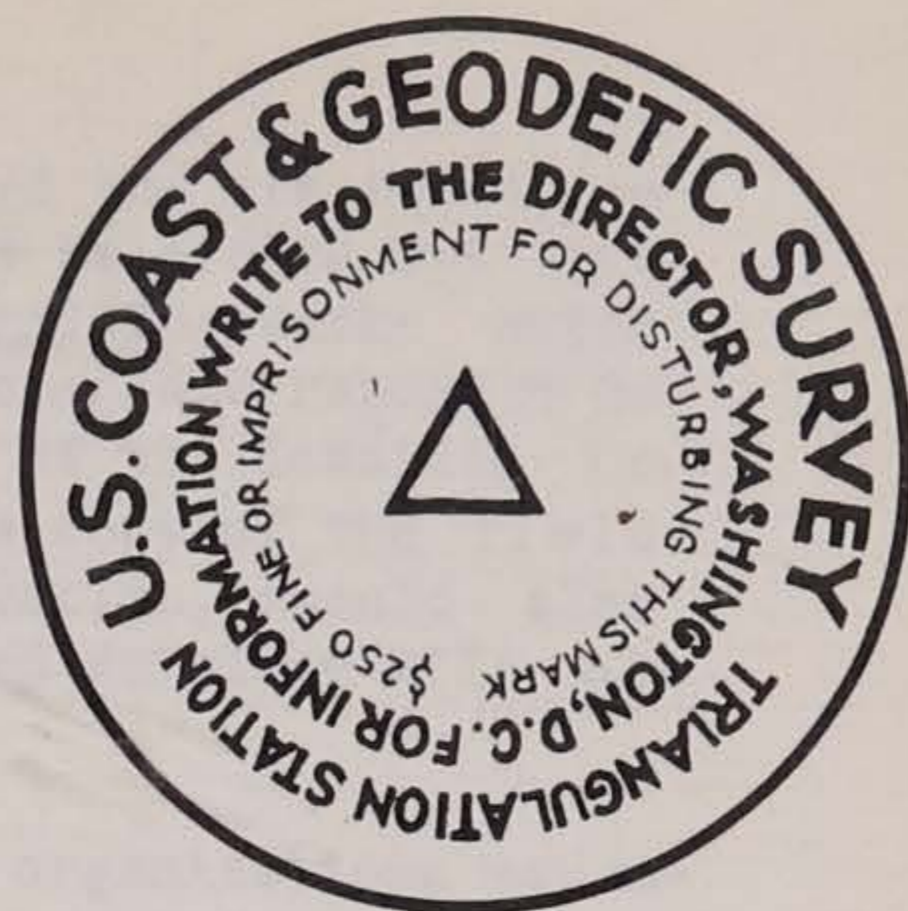
"The old mark should not be disturbed until the observations involved in the transfer have been checked by the observer or the recorder. An assumed elevation for the old mark may be used in the transfer since what we are primarily concerned with, in a case of this sort, is the difference in elevation between the old mark and the new one established to replace it.



A



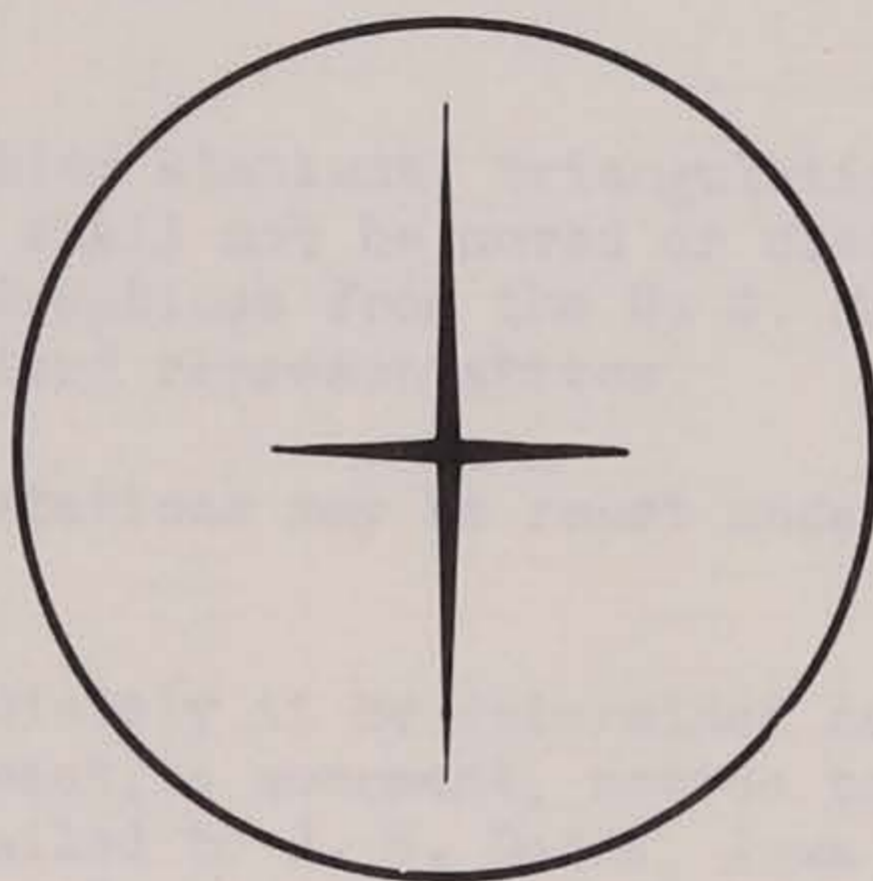
B



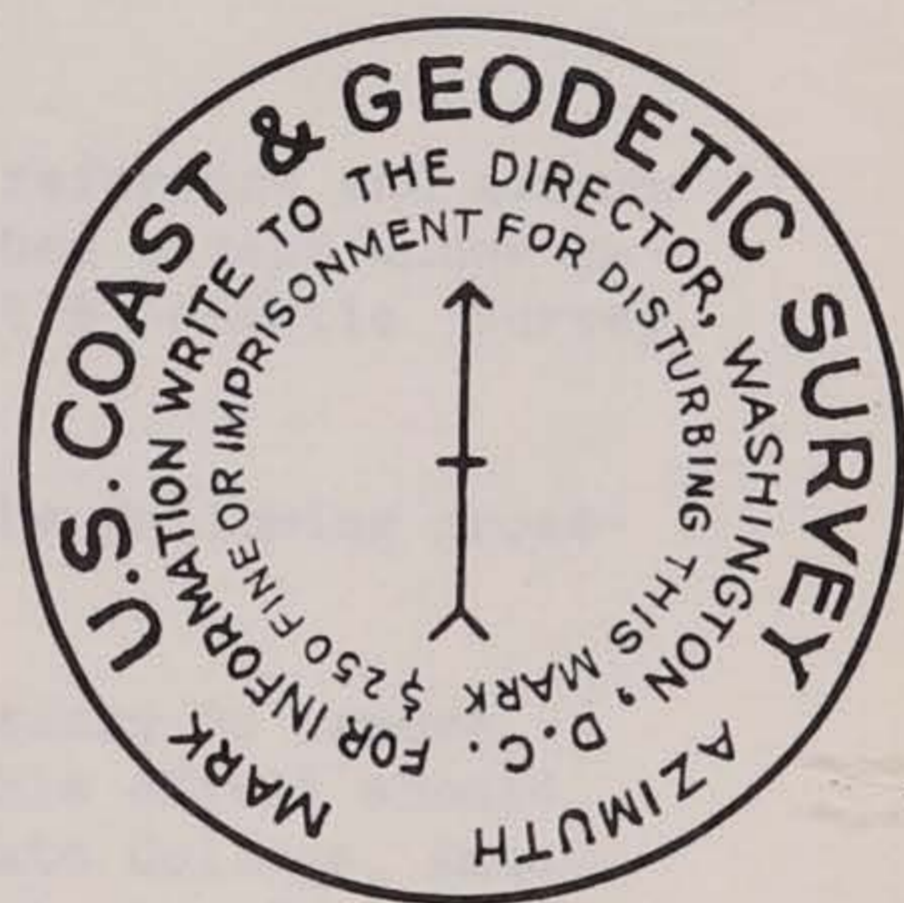
C



D



E



F



G

NOTE—

- A—U.S.C. & G.S. standard Reference Mark disc.
- B—U.S.C. & G.S. standard B.M. disc. (Used by precise level parties.)
- C—U.S.C. & G.S. standard Triangulation station disc.
- D—U.S.C. & G.S. and I.G.S. standard Traverse station disc.
- E—I.G.S. standard corner stone disc.
- F—U.S.C. & G.S. standard Azimuth mark disc.
- G—Standard symbol for I.G.S.

STANDARD MARKERS

"After the new mark has been established and the elevation transferred to it, the old disk should be broken out and returned to this office in a franked mailing sack- which will be supplied for the purpose. A complete report on the action taken, including a description of the location in which the new mark is established and a copy of the field notes involved in the transfer of elevation, should also be forwarded to this office. A franked envelope will be furnished for this purpose."

"The cooperation which individuals and organizations may extend to this office in preserving the bench marks will be a service not only to this bureau and other government surveying organizations, but to anyone who may have occasion to use the marks."

Triangulation stations, triangulation reference and azimuth monuments shall not be moved or disturbed except under specific instructions from the U. S. Coast & Geodetic Survey or authorized representatives.

Traverse stations may be reset under the following procedure:

Immediately it be determined necessary to remove, or reset, a monument, notice to this effect should be mailed to J. S. Dodds, Iowa State College, Ames, Iowa. So long as emergency projects are in operation, cooperation in this work will gladly be given, but once the relief funds are cut off and the organization disbanded there will be no opportunity for field cooperation. It will be necessary that the monuments be moved by highway parties operating in the vicinity, and all notes and data pertaining to the resetting of the same be forwarded to Mr. Dodds' office at Ames.

DO NOT TRY TO RESET THE MONUMENT AT ELEVATION IDENTICAL WITH FORMER POSITION.

The new position for the monument must be carefully selected so that intervisibility is secured with preceding and succeeding monuments in the traverse.

In order to determine the position (co-ordinates) of the monument as reset, both the distance and direction of "Shift" must be carefully observed and recorded.

Carefully set the transit over the monument to be moved; set a substantial Hub (Denoted "A" on the accompanying sketch) with tack, at a convenient distance in the direction which the monument is to be moved; at approximate right angle to the general course of the traverse; carefully measure and record, check measure and record distance between monument and Hub "A". The tape must be held horizontally, if slope measure is taken, the difference of elevation of the points should be determined (by transit or hand level) and recorded so that the horizontal distance may be computed.

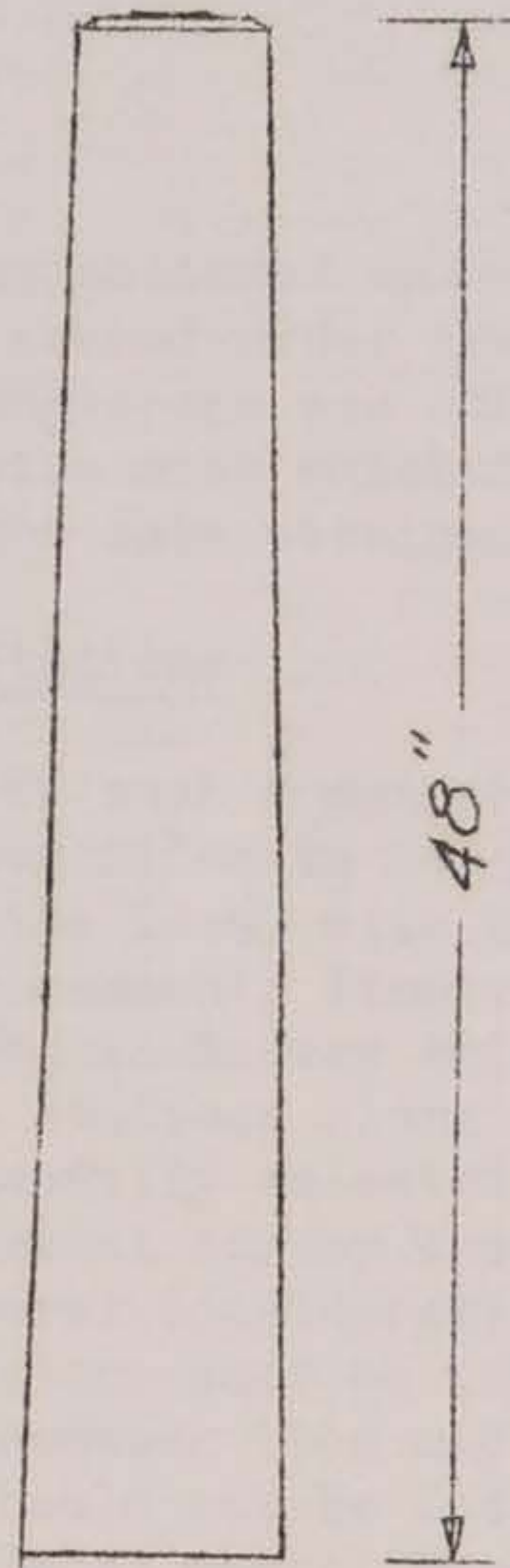
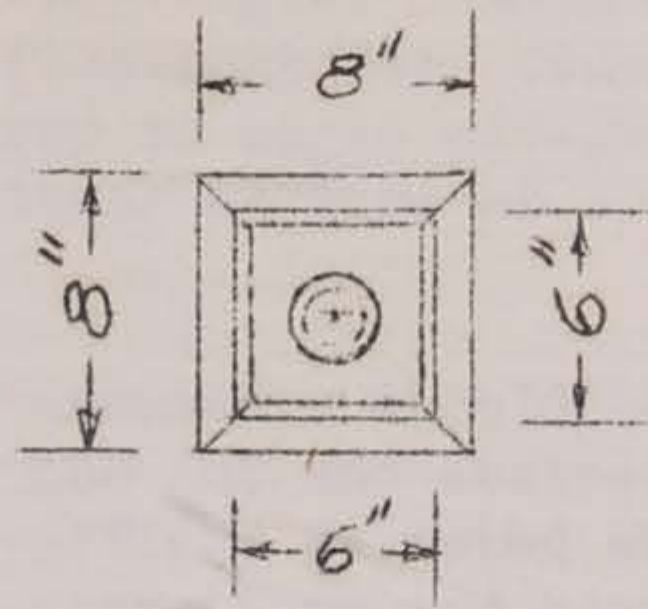
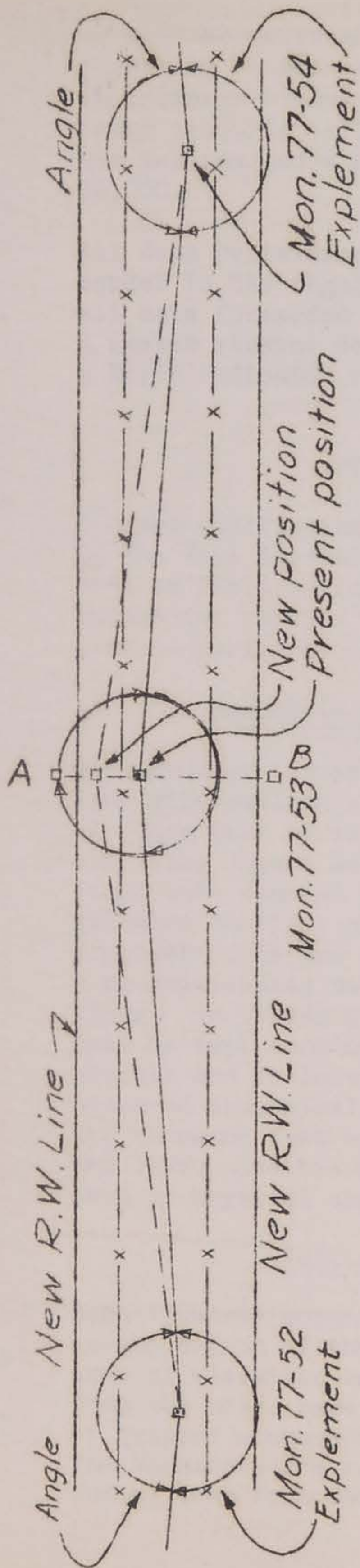
Next, plunge the telescope and set another hub (denoted "B" on the accompanying sketch) across the right-of-way. With the transit still over the undisturbed monument carefully measure the angles from the preceding traverse station to Hub "A", and from Hub "A" to succeeding traverse station. Each of these angles should be read 6 D/R, and the explement or closing angle should also read 6 D/R,-- giving horizontal closure not exceeding 6 seconds. Now set the transit carefully over Hub "A", center on monument and establish tack point in Hub "B"; carefully check the last operation since on it depends the accuracy of direction of "Shift".

In transferring the elevation from the old station to the new one the same procedure will be followed as recommended by the Coast & Geodetic Survey for the transfer of elevations in resetting the bench marks as set forth above.

The monument may now be moved and reset in concrete; careful manipulation and tamping will be necessary in order that the monument will not "season and settle" off line. The transit will be intermittently centered on Hub "B",-- then on the monument to insure alignment.

The distance from Hub "A" to the new position of monument is now measured and recorded in the same manner as the previous measurement from the original location. The difference between these measurements represent the distance of "Shift".

In case it seems desirable to postpone resetting of the monument until construction work has been finished, a duplicate set of hubs should be kept so as to insure perpetuation of line and position until the monuments shall have been reset; since traverse stations perpetuate both elevation and position, it is necessary that intervisibility be maintained between adjacent monuments. This must be kept in mind in choosing a new location for any given traverse point.



6a

ABOVE: Standard concrete traverse monument used by the Iowa Geodetic Survey.

LEFT: See instructions on Page 6.

NOTE: No monument should be moved if it is possible to preserve its present position.

FIG. 2

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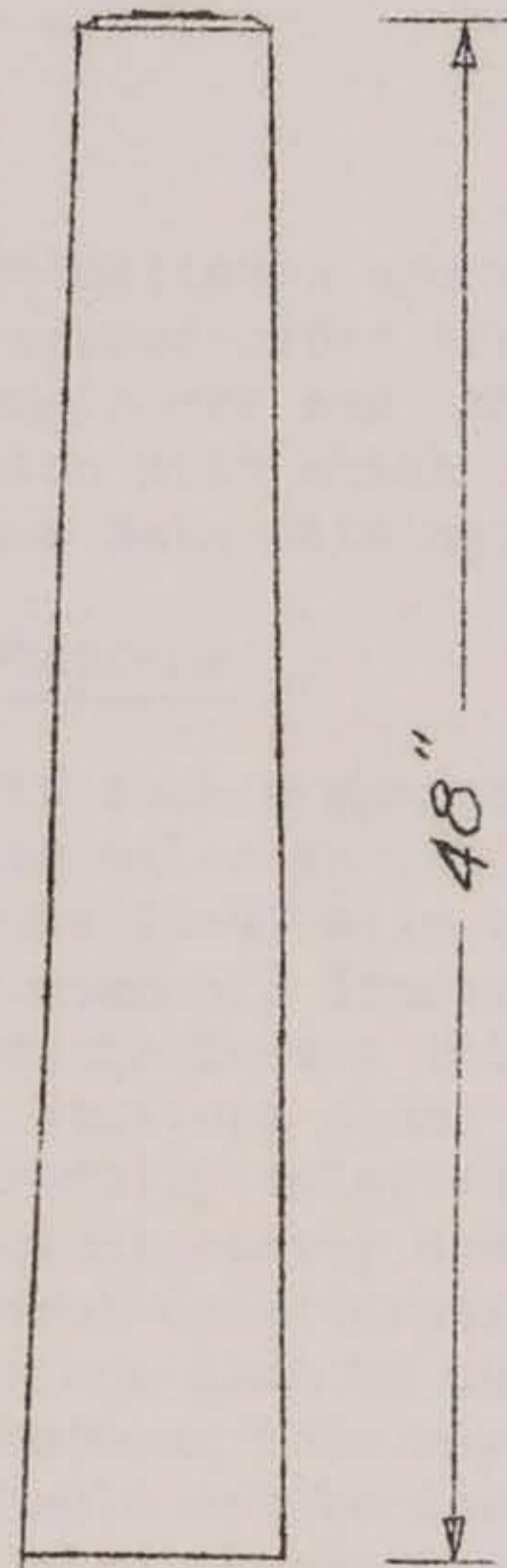
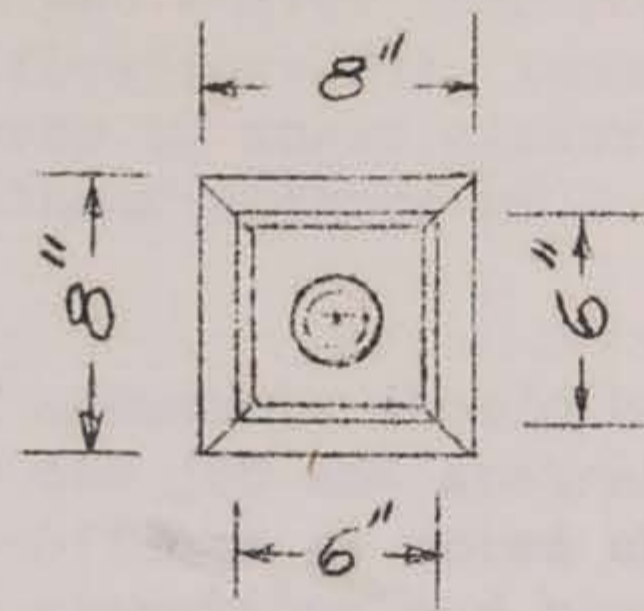
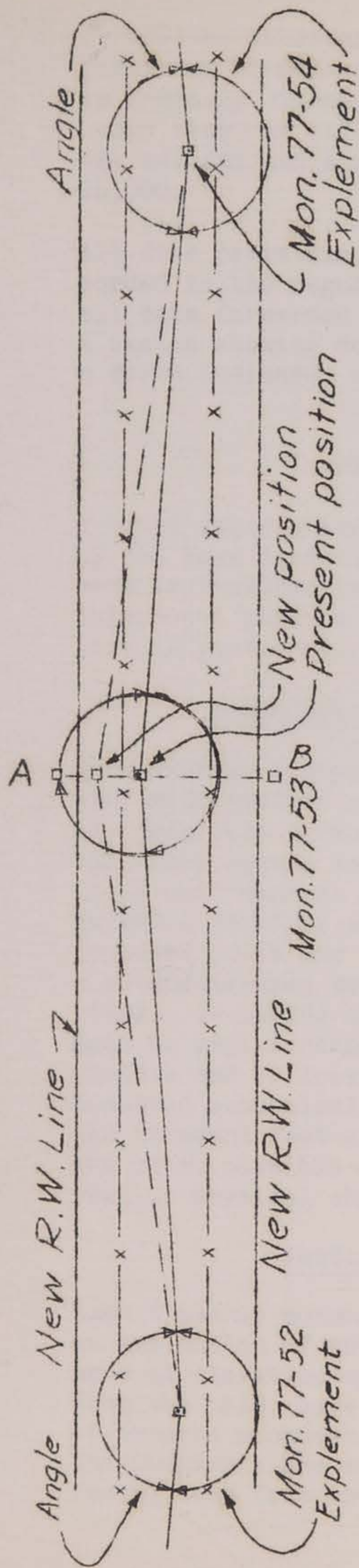
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ABOVE: Standard concrete traverse monument used by the Iowa Geodetic Survey.

LEFT: See instructions on Page 6.

NOTE: No monument should be moved if it is possible to preserve its present position.

FIG. 2

It will be necessary to exercise a little more caution and precision in measuring both distance and angles than is used in ordinary highway work. The specifications for second-order traverse call for a maximum error in angle closure of six seconds and a maximum error in linear closure of 1 in 10,000.

All data pertaining to the moving of monuments should be recorded in the regular field book for the job and abstracts of all data forwarded to the respective offices as noted above. A sketch showing details of transfer operations and bearing a North indicator should accompany the notes.

FIELD PROCEDURE

A brief description of the field method established and used by the Iowa Geodetic Survey in executing second-order traverse is included in this report so that engineers and other interested parties may realize the precision with which the work is performed, and see the value of the data obtained.

Reconnaissance and Location of Stations

Second-order traverse loops are laid out in such a manner that they will enclose an area not more than ten miles in length, nor **less** than three miles in width, with the ideal size being six miles square and preferably following township lines. The loops must connect with U. S. Coast & Geodetic Survey triangulation stations wherever possible. The stations along the proposed route are placed in locations carefully selected in a reconnaissance made in advance of the actual survey operations. In making this reconnaissance several considerations must be kept continually in mind; the stations must be inter-visible and so located that the distance between them may be measured economically and rapidly; they should not be less than one thousand feet apart; they should be placed where there is the least possible chance of their being disturbed through natural or physical changes.

Setting of Monuments

Each traverse monument is set in a mushroom of concrete poured in the bottom of the hole to prevent frost heaving and disturbance of elevation and position. In replacing the earth removed from the hole, care is taken to tamp it back solidly, since loose or cracked monuments are worthless for second-order precision. The monuments are so set that the inscription may be read while facing away from the center of the road. The local description

is prepared at this time and should show the relation of the monument to all pertinent features, either natural or artificial, at the site.

Second-order Chaining

The chaining procedure necessary to meet second-order specifications requires that each course be chained in both directions, forward and back, and that each run check the other within 1:20,000. To meet these limitations the personnel of the party must be very carefully instructed, must observe the utmost care in each operation, and must be alert at all times to avoid errors. The chaining itself is performed with standardized steel tapes carrying a thermometer on each end, stretched with a pull-bar against a spring balance, with markings on tripods whose elevations are carefully observed, and lined-in by the use of a transit.

Second-order Angles

The angle procedure necessary to meet second-order specifications requires that each angle at a station be observed in a clockwise direction through two complete sets of six direct and reverse, reading from 0° and 90° initials, with a ten-second theodolite. The horizontal angle closure by which the sum of the angles differ from 360° should not exceed six seconds. The variation between sets on the same observed angle should not exceed six seconds.

Computations

The computations involved in the adjustment of second-order traverse were performed by the staff project located in Des Moines and operating under WPA Project #4485.

The traverse was computed on the Lambert Grid. The positions of the triangulation stations were converted to X and Y coordinates and the starting azimuths corrected to the grid. Before computation of the traverse itself, two adjustments were necessary, namely azimuth and distance.

The preliminary azimuths were determined as follows: each individual angle was adjusted to close the horizon at 360° . Using these values for the angles each numbered loop was computed and the error of closure determined. The maximum allowable discrepancy in loop closure was held to three seconds per angle. Any larger error called for re-turning of the angles. When all of the loops were closed to these limits the entire layout was solved by a method of least squares. (For a description of the procedure, see U. S. Coast & Geodetic Survey Publication #140.) This involved the simultaneous solution

of twenty-two equations containing fifty-five unknowns. Some experimentation was necessary to arrive at a proper method of weighting and several arrangements were tried before determining a satisfactory method. From the least-squares solution the amount and direction of correction was determined and applied to each angle. This gave the corrected angle at each station.

The grid azimuth from the triangulation stations to the initial loop stations were determined. The azimuth of the first course is the starting azimuth plus the angle at the initial point minus 180° . This procedure is carried forward successively throughout the traverse to the closing station and the azimuths of the different courses determined.

The observed length of each course was corrected to the "adopted length" by the application of three corrections: first, correction for standardization; secondly, correction for temperature; and thirdly, correction for inclination.

Using the adjusted azimuth and the adopted length for each course, the position closure for each loop was computed by latitudes and departures. From this preliminary adjustment the error of closure in X and Y position was determined for each loop, as well as preliminary grid positions. At this stage the scale-correction and sea-level corrections were applied to the courses, revising the X and Y position closure.

Again the least-square method of adjustment was called into use and a complete solution for both X and Y closures was run. This gave the amount and direction (whether plus or minus) of correction to be applied to each course.

From this stage it was a simple procedure to run the coordinates from the adjusted figures.

On Figure 1 the variable in the solution is the length from one junction point to another, involving both the angles and the distances.

JOHNSON

Benton County, Iowa

C.A.S. 1934

This station is about 4 miles NNW of Shellsburg, 5.5 miles SSW of Urbana, on land owned by Earl Johnson, in the SE $\frac{1}{4}$ of Section 21, T-85-N, R-9-W. The surface mark is on a high point in a field which has a road on the N and W sides, 1.0' N of an E-W fence along the S edge of the field. (This is the property line fence between land owned by Mr. Johnson to the N and J. F. Cross to the S); 202.5' E of the center line of the road. Set 6" above surface.

The surface, underground, reference and azimuth marks are bronze tablets set in concrete, as shown on Sketches C, A, and F of Fig. 2.

R. M. #1 is W of the station, 6.0" N of the E-W fence, 107' E of the center line of the road, 182.19" SSE of the reference mark #2. Set 4" above the surface.

R. M. #2 is NW of the station, 3.0' E of the E right-of-way fence of the road, 75.0' S of a curve in the road. Set 3.0" above the surface.

The azimuth mark is SE of the station, in the E right-of-way fence of the first N-S road E of the station, 0.9 mile S of a T-intersection, 200 yards S of some farm buildings on the E side of the road, and 130 yards N of some farm buildings on the W side of the road. Set 1.0" above the surface.

To reach from Shellsburg, go N on County Road "M" 4.65 miles, turn W and follow winding road 1.5 miles to the field in which the station is located.

A light 74' above RIDENOUR comes into view 35' above station.
 A light 15' above VINTON comes into view 40' above station.
 A light 100' above CLARK comes into view 30' above station.
 A light 74' above NELSON comes into view 45' above station.
 A light 74' above MORRIS comes into view 40' above station.
 A light 100' above VOEHL comes into view 25' above station.
 A light 100' above VAN HORNE comes into view 60' above station.
 A light 100' above OLSON comes into view 30' above station.

The height of the telescope above station mark is 77'.

<u>OBJECT</u>	<u>DISTANCE</u>	<u>DIRECTION</u>
Ridenour	Feet	0 00 00.0
R.M. #2	228.72	45 06 12
Azimuth mark, approx.	0.9 mile	233 48 18.3
R. M. #2	95.56	355 23 26

No prominent objects visible from the ground.

This station is about 5.0 miles W of Walker, about 4.5 miles N of Urbana, about 14 miles S of Independence, and about 0.5 miles N and 0.25 mile E of the right-angle turn in Iowa Highway #11 at junction with Iowa Highway #101, in the SW $\frac{1}{4}$ - Section 3, T-86-N, R-9-W, on land owned by Molly and Emma Knutz and occupied by Mr. Charles Nelson. On the highest point of a bare sandy knoll which is on the NW end of ridge (knoll is one of three high points on ridge) about 0.5 mile S of the Buchanan-Benton County line, 59.0' E of a N - S fence line, - 117.0' SSE of a small cedar tree, and 206.0' S of E - W fence line. Surface mark set flush with surface.

The surface, underground, reference and azimuth marks are bronze tablets set in concrete, as shown on Fig. 2, Sketches C, A, and F.

R. M. #1 is SW of the station on the SW slope of the knoll, - 1.0' W of a fence line and about 175.0' SSW of a small cedar tree. Set 6.0" above the surface.

R. M. #2 is NW of the station, 1.0' W of fence line and 33.0' SW of a small cedar tree. Set 6.0" above the surface.

The azimuth mark is about 0.3 mile SW of station, 1.0' E of E right-of-way fence of State Highway #11; 36.0' E of the center line of the highway and 25.0' S of a gateway. Set 6.0" above the surface.

The distance between the reference marks is 150.10'.

A light 87' above BUCHANAN comes into view 24' above station.
 A light 100' above CLARK is visible from the ground at station.
 A light 87' above JENSEN is visible from the ground at station.
 A light 87' above JOHNSON is visible from the ground at station.
 A light 10' above VINTON is visible from the ground at station.
 A light 74' above RIDENOUR is visible from the ground at station.

<u>OBJECT</u>	<u>DISTANCE</u> Feet	<u>DIRECTION</u> 0 00 00.0
Clark		
R. M. #2	106.59	25 35 09
Tank, Municipal, at Walker, Ia.		155 41 46.6
Tank, Municipal, at Urbana, Ia.		235 24 15.1
R. M. #1	89.34	285 56 34
Azimuth Mark	0.3 mile	298 06 36.6

VOEHLBenton County, IowaC.A.S. 1934

This station is about 5.25 miles SSW of Shellsburg by road, and 4.0 miles NW of Atkins, in the $SE\frac{1}{4}$ of Section 28, T-84-N, R-9-W, on land owned by W. M. Voehl, and occupied by M. H. Rinderknecht. The station mark is in a hog lot, about 0.1 mile N of farmhouse, 61.0' N of the NE corner of hog house, 55.0' S of a twin-ash tree. Set 20.0" below surface.

The surface, underground, reference and azimuth marks are bronze tablets set in concrete, as shown in sketches C, A and F of Fig. 2.

R. M. #1 is SSE of station, 30.0' S of gate leading to hog lot, 30.0' E of SE corner of hog house, 1.0' E of fence line. Set 6.0" above surface.

R. M. #2 is NW of station, 1.0' N of fence line, 60.0' W of a twin-ash tree. Set 3.0" above surface.

The azimuth mark is WSW of station, 0.25 mile W of a crossroads just SW of station, 1.0' N of a fence line, Set 4.0" above surface.

To reach from Shellsburg, go S on County Road "M" for 2.0 miles to crossroads, then W 2.3 miles to graveled crossroads, then S on gravel 0.35 mile to T-road, SE on dirt road 0.6 mile to side road leading S, then S 0.5 mile to dirt crossroads, then E 0.1 mile to Rinderknecht's driveway on the N, 0.1 mile N on drive to a gate into barn lot, and NNE through barn lot to the hog house and station.

A 100' signal at VAN HORNE comes into view at 50'.
 A 74' signal at RIDENOUS comes into view at 55'.
 An 87' signal at JOHNSON comes into view at 50'.
 A 74' signal at KLUBER comes into view at 45'.
 A 100' signal at OLSON comes into view at 20'.

The distance between the reference marks is 156.66'

<u>OBJECT</u>	<u>DISTANCE</u>	<u>DIRECTION</u>
Van Horne	Feet	0 00 00.0
R. M. #2	75.38	40 43 36
R. M. #1	92.72	263 27 22
Azimuth mark, approx.	0.35 mile	339 20 10.4

This station is on the SW edge of the city of Cedar Rapids, between the SW and the $SE\frac{1}{4}$ of Section 30, T-83-N, R-7-W, on the line between the land owned by the state and that owned by S. A. Kluber. The mark is set on the slope of a high hill, 1.0' E of N-S fence line which is the city limits, 18' W of the W edge of a deep cut of new highway, 84.0' S of the end of the E-W street, 19.5' SE of the center of an old cistern. Set 5.0" above the surface.

The surface, underground, reference and azimuth marks are bronze tablets set in concrete, as shown on Fig. 2, Sketches C, A, and F.

R. M. #1 is NW of station on the N edge of the right-of-way of the E-W street, 1.0' S of fence line, 32.0' N of the center of street. Set 8.0" above the surface.

R. M. #2 is N of station in fence line which is the city limits, 22.0' S of the center of the E-W street. Set 5.0" above the surface.

The azimuth mark is NW of the station on the N edge of the right-of-way of First Avenue, W on property of Frank Dusek, 29.0' N of the center of the street, 5.0' W of Mr. Dusek's property line. Set 4.0" above the surface.

The distance between reference marks is 244.29'.

To reach from Cedar Rapids, go W on U. S. Highway #30 to a crossroads marked by "Dine-A-Mite" Inn in the NW corner and the Bendek Greenhouses in the SE corner, S on crossroad for 0.6 mile to side road leading E, go E for 0.5 mile to end of road and station.

The above description is for the original position of Station Kluber and is the one on which all calculations in this book are based. Because of a road relocation it was necessary to relocate the station recently. The new position is about 135.0' N of the former position and new ties are as follows:

- 232.0' E of Reference Mark #1
- 63.62' N of Reference Mark #2
- 235.7' NW of N edge of State Highway #149
- 276.0' NE of SE corner of Greenhouse
- 278.7' E of SE corner House

MORRISLinn County, IowaC.A.S. 1934

This station is about 1.5 miles SW of Toddville, about 3.0 miles NE of Palo, in the SW $\frac{1}{4}$ of Section 14, T-84-N, R-8-W, in the SW corner of the pasture that is on the E side of the grounds of Monroe Township School #1; 14.0' N of right-of-way fence, 16.0' E of property line fence, 22.0' NE of the fence corner post, 54.0' ESE of the SE corner of school house, and 33.0' N of center line of the E-W dirt road. - Set 12.0" below the surface.

The surface, underground, reference and azimuth marks are bronze tablets set in concrete, as shown on Fig. 2, Sketches C, A and F.

R. M. #1 is ESE of station, 1.0' S of right-of-way fence, -- 20.0' N of center line of road, 97.0' E of the fence corner post. Set 5.0" above the surface.

R. M. #2 is NNW of station, 6.0" W of the property line fence in E edge of school yard, 46.0' NE of NE corner of the school house, 102.0' N of center line of road, 126.35' NW of R. M. #1. Set 8.0" above the surface.

The azimuth mark is approximately 1.0 mile NNW of station, - 24.0' E of center line of N-S dirt road, 1.0' E of right-of-way fence, and 66.0' S of an E-W T-fence. Set 12.0" above the surface.

To reach from Palo, go E and S on gravel road, 1.0 mile to the side road leading E at the railroad track, eastward -- over a winding dirt road that crosses the Cedar River 1.7 mile to turn N, 0.5 mile N to turn E, 1.3 miles E to T-road, 1.3 miles N to a side road leading W, then W on this road - 0.4 mile to schoolhouse and station on the N.

A 74' signal at KLUBER comes into view at 40'.
 A 100' signal at OLSON is visible from the ground.
 A 100' signal at VOEHL is visible from the ground.
 An 87' signal at JOHNSON comes into view at 20'.
 A 74' signal at HAAS comes into view at 30'.

The height of the light above surface mark is 74'.
 The height of the telescope above surface mark is 64'.

<u>OBJECT</u>	<u>DISTANCE</u>	<u>DIRECTION</u>
Kluber	Feet	0 00 00.0
Azimuth mark	1.0 mile NNW	167 24 44.3
R. M. #2	69.65 NNW	181 25 08
R. M. #1	82.05 ESE	293 57 01

This station is about 3.5 miles NE of the center of Cedar Rapids, about 2.0 miles SSW of Marion, 0.3 mile E of city limits of Cedar Rapids, in the SW $\frac{1}{4}$ of Section 12, T-83-N, R-7-W, on the land owned by Joe Haas. It is the highest point of small knoll, 83.0' N of the center line of the road, 55.0' N of the right-of-way fence, 125.0' E of a fence, 62.0' SSE of a 36.0" basswood tree, and 64.0' ESE of a 36" basswood tree. Set 12.0" below the surface.

The surface, underground, reference and azimuth marks are bronze tablets set in concrete, as shown on Fig. 2, Sketches C, A and F,

R. M. #1 is SE of the station, 1.0' N of the S right-of-way fence of the road, 25.0' S of the center line of the road at a slight curve in the road, and at the W end of a cut bank. Set 7.0" above the surface.

R. M. #2 is SW of the station, 36.0' N of the center line of the road, 10.0' N of the corner fence post at W end of a gate, 1.0' E of the fence. Set 7.0" above the surface.

The azimuth mark is W of the station, about 170.0' N of center line of the E-W road past the station (30th Street), 15.0' E of the center line of a N-S road (city limits road), and 1.0' W of the right-of-way fence. Set 10.0" above the surface

To reach the station from downtown Cedar Rapids, go NE - on First Avenue E (U.S. Highway #161) from the river for 2.9 miles, - to 30th Street which is just S of a viaduct over a railroad, then E on 30th Street for 1.1 mile to station.

The distance between reference marks is 202.85' (Horizontal)
The height of light above station mark is 23 meters.
The height of telescope above station mark is 20 meters.

A light 74' above KLUBER comes into view 40' above station.
A light 74' above MORRIS comes into view 30' above station.

<u>OBJECT</u>	<u>DISTANCE</u> Feet	<u>DIRECTION</u> 0 00 00.0
Kluber		
R.M.#2 (horizontal distance)	124.37	07 26 20
Azimuth mark	0.3 mile	32 34 33.4
R. M. #1 (horizontal distance)	139.09	266 53 22
Tank, Municipal, at Cedar Rapids		321 22 06.6

OLSONBenton County, IowaC.A.S. 1934

This station is located about 3.5 miles SE of Newhall, 3.5 miles N of Norway, in NW $\frac{1}{4}$ of Section 32, T-83-N, R-9-W, on land owned and occupied by J. P. Olson. The mark is about 0.4 mile ENE of Mr. Olson's house on the S slope of a high hill. It is between two fields, 1.0' N of E-W fence line, 164.0' W of N-S fence line, 0.1 mile S of U.S. Highway #30, Set 4.0" above the surface.

The surface, underground, reference and azimuth marks are bronze tablets set in concrete, as shown on sketches C, A, and F of Fig. 2.

R. M. #1 is NE of station on the E edge of the N field, - 1.0' N of fence line, 75.0' N of E-W fence line. Set 6.0" above the surface.

R. M. #2 is SE of station on the E edge of the S field, - 1.0' W of N-S fence line, 75.0' S of E-W fence line. Set 4.0" above the surface.

The azimuth mark is SW of the station, about 0.1 mile S of Mr. Olson's house, on the E edge of a cultivated field, 1.0' W of fence line, 36.0' W of the center of road. Set 6.0" above the surface.

To reach from Vinton, go S on U. S. Highway #218 to junction with U. S. Highway #30, go E on U. S. Highway #30 for 4.9 miles to crossroad, go S on the State Highway #201 for 0.2 mile to Mr. Olson's house on the E of the road, E and S thru driveway 0.05 mile to gate into barnyard, pass through gate and go 0.2 mile E in wide lane to a gate in the SE corner, go N 0.15 mile to E-W fence line, turn E and go 0.2 mile to the station on N side of the fence.

The 100' towers at VOEHL, AMANA, BLAIRS, and YOUNG are visible from the ground.

An 87' tower at JOHNSON is visible from the ground.
 A 74' tower at KLUBER is visible from the ground.
 A 100' tower at VAN HORNE comes into view 45' above ground.
 A 74' tower at MORRIS comes into view 45' above ground.

The distance between the reference marks is 149.46'.
 The height of the telescope above station mark is 90'.

<u>OBJECT</u>	<u>DISTANCE</u>	<u>DIRECTION</u>
Van Horne	Feet	0 00 00.0
R. M. #1	176.69	125 55 41
R. M. #2	182.94	176 00 11
Spire, United An- gelical Church (Lutheran) VG	2.5 mile	255 00 38.8
Azimuth mark, approx.	0.45 mile	351 20 24.8

LINN COUNTY, IOWA

Second-order Bench Marks

LOOP I

Line: JOHNSON to 57-260

JOHNSON: See Page 11.

Johnson Azimuth Mark: See Page 11.

- 6-120 In Section 28, T-85-N, R-9-W, 3.25 miles N and 1 mile W of intersection of Iowa Highway #202 with County Road "M", in Shellsburg, on W side of the dirt road, 22' W of the W road fence, 23' W of witness post, on the E side of the section.
- 6-121 In Section 33, T-85-N, R-9-W, 3 miles N and 1 mile W of the intersection of Iowa Highway #202 with County... Road "M", in Shellsburg, at NE corner of the section and 425' W of the schoolhouse, 28.0' NE of the third telephone pole W of the schoolhouse, 4.4' N of S road fence and 3.6' NE of the witness post.
- 6-122 In Section 27, T-85-N, R-9-W, 3 miles N and 0.75 mile W of intersection of Iowa Highway #202 with County Road "M", in Shellsburg, on the first hill E of the schoolhouse, 7.6' S of witness post, 17.6' SW of W gatepost in drive opposite the farmhouse, 50.1' NW of the root of a 14" pine tree, 51.0' NE of the base of a 16" catalpa tree, on the S side of the section.
- 6-123 In Section 27, T-85-N, R-9-W, 2.75 miles N of Iowa Highway #202 in Shellsburg, on County Road "M", 124.8' NE of NE corner of the Oak Grove Church, 59.0' N of a spike in a 14" maple tree on SE intersection, 6.6' SW of spike in corner post and 5.0' SW of the witness post.
- 6-124 In Section 35, T-85-N, R-9-W, 2.5 miles N of Iowa Highway #202 in Shellsburg, on County Road "M", 38.8' SE of spike in telephone pole, 27.6' SE of spike in the corner post, 8.2' SW of cross on concrete brace post, 4.0' SW of the witness post, 23.2' NW of spike in top of the fence post, on W side of the section.
- 6-125 In Section 35, T-85-N, R-9-W, 2 miles N of Iowa Highway #202 in Shellsburg, on County Road "M", 47.5' NE of spike in base of a 32" maple tree, 2.5' S of the witness post, 1.0' W of E road fence, on W side of section.

- 6-126 In Section 3, T-84-N, R-9-W, 1.75 miles N of Iowa Highway #202 in Shellsburg, on County Road "M", 4.0' SE of cross on concrete corner post, 14.0' SE of the brace post to pole #3887; 77.2' W of cross in concrete corner post at SE corner of intersection, and 3.0' W of the witness post.
- 6-127 In Section 2, T-84-N, R-9-W, 1.75 miles N and 0.5 mile E of intersection of Iowa Highway #202 and County Road "M" in Shellsburg, 51.3' S of spike in telephone pole #3867, 3.7' NW of witness post, 16.6' NE of spike in a 20" maple tree.
- 57-300 In Section 31, T-85-N, R-6-W, 4.25 miles S and 2.75 miles W of Center Point, 1 mile W of the Lewis Bottom schoolhouse on N side of the road, 24.0' N of center line of road, 1.8' S of N road fence, 28.2' W of corner post at SW corner of the yard, 54.2' E of E gate post to the Elizabeth Lampman residence, 61.5' NW of a double spike in telephone pole #3799, and 2.3' SW of witness post.
- 57-258 In Section 6, T-84-N, R-8-W, 2 miles W and 4.25 miles S of Center Point, on the first hill W of the Lewis Bottom schoolhouse, on S side of the unsurfaced road, 30.0' S of the center line of unsurfaced road, 2.0' NE of witness post, 53.4' E of spike in sixth telephone pole W of road intersection, and 164.4' SE of concrete corner post on yard fence of the F. D. Pickerill property.
- 57-257 In Section 32, T-85-N, R-8-W, 1.25 miles W and 4 miles S of Center Point, 0.2 mile S of the Pleasant Ridge cemetery, 1.8' W of E road fence, 100.2' S of a corner post to the R. B. Murray yard which is also the $S\frac{1}{4}\frac{1}{4}$ line, 112.6' SE of a concrete corner post on $\frac{1}{4}\frac{1}{4}$ line fence to the W, 27.0' E of center line of the road, and 3.0' NW of the witness post.
- 57-260 In Section 29, T-85-N, R-8-W, 1.25 miles W and 3 miles S of Center Point, on E side of County Road "Z" 406.0' S of S gatepost to the Lewis R. Kelly residence, 168.0' N of the corner post on $S\frac{1}{4}\frac{1}{4}$ section line to the E, 2.0' S of the witness post, 0.6' W of E road fence, 33.0' E of the center line of County Road "Z".

Line 57-260 to 57-246

- 57-260 See page 20.
- 57-259 In Section 30, T-85-N, R-8-W, 2 miles W and 2.25 miles S of Center Point, on W side of County Road "Z", at entrance to the S. A. Mobry residence, 14.9' S of corner post on section line between Sections 19 and 30; 3.6' E of W road fence, 4.0' NE of witness post, 30.0' W of center line of County Road "Z"; 30.0' S of center line of private drive to the Mobry residence.
- 57-256 In Section 19, T-85-N, R-8-W, 2.25 miles S, and 1.5 miles W of Center Point, 0.5 mile W of river bridge, on the S side of County Road "Z"; 50.7' S of S gatepost, 6.0' SW of the corner post at W road fence, 2.5' SW of an 8" elm tree, 2.5' NW of witness post, 2.0' W of the N-S fence line, 22.8' W of spike in a 32" oak tree.
- 57-255 In Section 20, T-85-N, R-8-W, 2 miles S and 1.5 miles W of Center Point, at S end of the Cedar River bridge on W side of County Road "Z", 14.4' SW of W point of abutment at S end of the river bridge, 33.0' W of the E point of abutment, 3.0' W of witness post, in west bank. Set 8" above surface.
- 57-254 In Section 20, T-85-N, R-8-W, 1.5 miles S and 1.25 miles W of Center Point, 0.25 mile S and 0.25 mile W of the Caldwell schoolhouse, on right-of-way adjoining the W. & L. Miller property, 5.0' N of S road fence, 28.0' S of the center line of County Road "Z", 2.5' NE of witness post, 167.2' E of NE corner of yard fence to first residence N of river bridge. Station #254 is on a line with center line of river bridge across the Cedar River.
- 57-253 In Section 20, T-85-N, R-8-W, 1.5 miles S and 1 mile W of Center Point, 0.3 mile S of the Caldwell schoolhouse, on triangle of road crossing S of the County Road "Z", 25.7' NE of a spike in a 30" elm tree, 79.7' NW of W gatepost to the George E. Martin residence, 41.0' NW of spike in a 28" elm tree, 99.7' NE of E gatepost of the farm drive at the Martin residence.
- 57-252 In Section 17, T-85-N, R-8-W, 1 mile S and 0.75 mile W of Center Point, about 200' NE of the Caldwell schoolhouse, 27.5' NE of a spike in a 16" elm tree at NE corner, 87.2' NE of the school flag pole,

118.2' NW of W gatepost to the Jesse E. Caldwell residence, 1.3' S of N road fence, 4.0' W of witness post, and 3.0' SW of corner post.

- 57-251 In Section 21, T-85-N, R-8-W, 1.5 miles S of Center Point, at turn of County Road "Z", 53.1' E of spike in a corner post at SW intersection, 26.0' E of center line of road, 26.2' S of fence corner at $\frac{1}{4}$ section line of Section 21; 62.0' SW of SW corner of the John F. Newland residence, 1.5' W of E road fence, and 3.0' S of a witness post.
- 57-250 In Section 16, T-85-N, R-8-W, 0.5 mile S of Center Point, on the W side of County Road "Z", 147.3' SW of the corner post on east side of the road, 42.0' W of the center line of road, 4.0' S of witness post, on right-of-way adjoining property of F. L. Yost, 225.0' N of corner post on $\frac{1}{2}$ section line between the Leo Lizicar and F. L. Yost properties.
- 57-249 In Section 15, T-85-N, R-8-W, in SE corner of Center Point, near NW corner of Section 15, on S side of pavement on Iowa Highway #11; 27.9' S and 40° W of the SW edge of pavement, 97.1' N of S fence of road right-of-way, 56.0' E of E road fence line of road S, and 105.0' SE of center of flume on N edge of pavement.
- 57-248 In Section 16, T-85-N, R-8-W, 0.4 mile S of Center Point, on the W side of Iowa Highway #11, opposite the pavement station #833 + 42'; 31.0' W of W edge of the pavement, 15.3' SE of spike in power pole, and 3.0' NE of a witness post.
- 57-247 In Section 9, T-85-N, R-8-W, on S edge of Center Point on E side of Iowa Highway #11, opposite pavement station #856 + 50'; 13.3' E of E edge of pavement and 26.5' SW of corner post at SE intersection.
- 57-246 In Section 9, T-85-N, R-8-W, in Center Point, on W side of Iowa Highway #11, opposite pavement station #885 + 48'; 26.8' W of W edge of pavement, 63.6' S of a water hydrant, 42.9' NE of a 12" walnut tree, and 2.7' E of E edge of the sidewalk.
- Line 57-246 to 57-235
- 57-246 See above
- 57-245 In Section 9, T-85-N, R-8-W, on N edge of Center Point, on the E side of Iowa Highway #11, opposite the pavement station #898 + 75.5'; 39.0' E of E edge of pavement, 21.0' SW of spike in telephone pole, and 3.5' W of a witness post.

- 57-244 In Section 4, T-85-N, R-8-W, 1 mile N of Center Point, on the W side of Iowa Highway #11, opposite the pavement station #938 + 50': 80.2' W of W edge of the pavement, 2.5' E of W fence line, 2.0' NE of witness post, and 5.5' NE of corner post on pasture fence.
- 57-243 In Section 33, T-86-N, R-8-W, 2 miles N of Center Point on the W side of Iowa Highway #11, opposite the pavement station #983 + 13': 59.6' W of W edge of pavement, 98.8' N of corner post on NW intersection, 1.0' E of W road fence, and 2.5' NE of the witness post.
- 57-242 In Section 28, T-86-N, R-8-W, 3.4' miles S of Walker, on the E side of Iowa Highway #11, opposite pavement station #1028 + 80': 47.2' E of E edge of pavement, 20.2' S of spike in power pole, 4.6' W of E road fence, and 3.0' NW of witness post.
- 57-241 In Section 21, T-86-N, R-8-W, 2.35 miles S of Walker, on the E side of Iowa Highway #11, opposite pavement station #1088 + 32'; 39.0' E of E edge of pavement, 66.2' SW of spike in power pole, 51.0' SW of corner post on property line, and 4.0" above the surface of the ground.
- 57-240 In Section 9, T-86-N, R-8-W, 0.7 mile S of Walker, on the W side of Iowa Highway #11, opposite the pavement station #1168 + 60.0'; 36.7' W of W edge of pavement, 11.3' NE of SE corner of yard fence, 114.2' S of spike in base of a 16" maple tree, 4.0' SE of witness post, 8.0' E of W road fence, and on the top of first rise S of Walker.
- 57-239 In Section 9, T-86-N, R-8-W, 0.5 mile S of Walker, on E side of Iowa Highway #11, opposite pavement station #1195 + 44'; 46.0' E of E edge of pavement, 1.5' NW of N gate, 57.0' S of power pole, 1.5' S of a witness post.
- 57-235 In Section 9, T-86-N, R-8-W, at NE corner of a cemetery in Walker, on S side of Iowa Highway #11, opposite pavement station #1212 + 15'; 41.0' S of N edge of pavement, 40.0' NE of NE corner of base of the Zabokrtsky tombstone, 6.0' E of the corner post at NE corner of cemetery, and 3.5' E of witness post.

Line 57-235 to NELSON

- 57-235 See above.

SECOND-ORDER BENCH MARKS

- 57-236 In Section 5, T-86-N, R-8-W, 0.5 mile W of Walker, on the N side of Iowa Highway #11, opposite pavement station #1237 + 46.0'; 49.2' W of corner post at NW corner of the Donnelly yard, 18.5' N of N edge of pavement, opposite a large grove of jack pine trees at W side of the farmhouse.
- 57-237 In Section 5, T-86-N, R-8-W, 1.1 Mile W of Walker, on N side of Iowa Highway #11, opposite pavement station #1295 + 90'; 16.3' N of N edge of pavement, 96.0' E of spike in corner post at SW corner of yard fence, 28.8' SW of spike in a 14" pine tree, 4.0' S of witness post, and on right-of-way adjoining the H. W. Stunkard property.
- 57-238- In Section 7, T-86-N, R-8-W, 1.5 miles W of Walker, on S side of Iowa Highway #11, opposite pavement station #1287 + 71'; 21.8' S of S edge of pavement, 22.4' NE of spike in the NW corner post to yard fence, 5.0' NE of witness post, and on the right-of-way adjoining the John Barnard, Jr., property.
- 6-111 In Section 1, T-86-N, R-9-W, about 3 miles W of Walker, at SE corner of Section 1; 1 mile S of the Buchanan County line, 0.25 mile W of the Linn County line, on the N side of Iowa Highway #11, opposite pavement station #21 + 68'; 18.4' N of N edge of pavement, 68.0' NE of blaze in a 10" spruce tree, 81.0' N of the spike in base of a 24" pine tree, and 3.0' SE of a witness post.
- 6-112 In Section 12, T-86-N, R-9-W, 3.75 miles W of Walker, at NW corner of Section 12, 2 miles E of junction of Iowa Highways #11 and #101, 1 mile W of Linn County line, on S side of Iowa Highway #11, opposite pavement station #70 + 54'; 15.5' S of S edge of pavement, 9.1' NE of spike in corner post at NW corner of section, and 3.0' NW of witness post.
- 6-113 In Section 11, T-86-N, R-9-W, at NW corner, 4 miles W of Walker, 2 miles W of Linn County line, 1 mile E of junction of Iowa Highways #11 and #101, on S side of Iowa Highway #11, opposite pavement station #102 + 25'; 31.8' S of N edge of pavement, and 3.0' NE of witness post.

6-114 In Section 3, T-86-N, R-9-W, near $\frac{1}{4}$ corner of Section 3; 4.5 miles W of Walker, about 0.5 mile E of junction of Iowa Highways #11 and #101, on N side of Iowa Highway #11, opposite pavement station #199 + 18'; 42.0' N of N edge of pavement - and 2.5' SE of witness post.

NELSON: See page 12.

LOOP II

Line 57-246 to 57-275

57-246 See page 22.

57-282 In Section 4, T-85-N, R-8-W, at NE corner of Center Point, on N side of County Road "W", 53.0' NE of the center line of E headwall of a $3\frac{1}{2}' \times 3'$ concrete box culvert, 14.4' E of telephone pole, 136.0' NW of NW corner of power sub-station, and 2.0' SW of a witness post.

57-281 In Section 10, T-85-N, R-8-W, 0.6 mile E of Iowa Highway #11, at N edge of Center Point, 2.3' NW of a witness post, 2.1' N of S road fence, and 103.1' E of corner post of a pasture fence running to the S, 35.3' W of spike in power pole, opposite W grove line of the J. Parized farm, 59.6' SW of spike in a 32" cottonwood tree, and on right-of-way adjoining property of Mr. A. R. Shearer.

57-280 In Section 3, T-85-N, R-8-W, 3.5 miles W of Alice, on N side of County Road "W", 3.2' SW of witness post, 2.3' S of N road fence, 26.0' N of center line of County Road "W", 7.5' E of E gate post, 22.5' E of W gatepost to field drive on N side of road, 111.7' NE of spike in power pole, opposite the Fanny Green residence, on the right of-way adjoining the Fanny Green property.

57-279 In Section 11, T-85-N, R-8-W, 2 miles E of Center Point, 0.2 mile E of the Northwood school house, on S side of County Road "W", 4.3' S of S road fence, 50.0' S of witness post, 4.7' SW of W gatepost to field drive on S side of the road, 24.0' SW of power pole, on rightof-way adjoining property of Eva G. Milner.

57-278 In Section 12, T-85-N, R-8-W, 1.5 miles W of Alice, on S side of County Road "W", 3.2' NW of witness post, 3.0' N of S road fence, 62.2' W of spike in power pole, 30.0' S of center line of County Road "W", on right-of-way adjoining property of J. J. Murphy.

SECOND ORDER BENCH MARKS
LOOP II

- 57-277 In Section 7, T-85-N, R-7-W, 0.5 mile W of Alice, on S side of County Road "W", 2.8' N of witness post, 3.5' N of S road fence, 41.5' W of corner post on $\frac{1}{4}$ $\frac{1}{4}$ section line running to the S, 30.0' S of center line of County Road "W", 77.6' SW of corner post on $\frac{1}{4}$ $\frac{1}{4}$ section line running to the N, on line with N face of power pole to the W, on the right-of-way adjoining the property of J. E. Cumberland.
- 57-276 In Section 5, T-85-N, R-7-W, 0.5 mile E of Alice, on N side of County Road "W", 7.0' S of witness post, 8.0' S of N fence line, 53.2' N of spike in power pole, 24.0' N of center line of County Road "W", 104.6' E of spike in a four-trunk maple tree, 92.0' W of corner post on $\frac{1}{4}$ section line to N, and on right-of-way adjoining property of John E. Simmen.
- 57-275 In Section 8, T-85-N, R-7-W, 1 mile E of Alice, at intersection of County Roads "T" and "W" on line with E edge of concrete base of sub-station, 2.8' NE of witness post, 6.4' N of NE corner of power sub-station, 26.0' NE of NW corner of power sub-station, 61.5' W of corner post at SE corner of intersection (Also the NW corner of Section 9).
- Line 57-275 to 57-227
- 57-275 See above
- 57-294 In Section 33, T-86-N, R-7-W, 1 mile E and 1.3 mile N of Alice, on E side of County Road "T", 3.0' W of witness post, 6.0' W of E fence line, 28.0' E of the center line of County Road "T", 88.2' NE of spike in base of a 10" pine tree in NE corner of yard of Mr. L. A. Arne, S of spike in power pole 138.1', and on the right-of-way adjoining property of Jesse Mettler.
- 57-295 In Section 29, T-86-N, R-7-W, 1 mile E and 2.2 mile N of Alice, on W side of the County Road "T", 4.8' SE of witness post, 19.4' SE of S gatepost to the J. H. Fuessley yard, 57.9' SW of N gatepost to the Edwin Kruse residence, 58.6' W of S gatepost to the Fuessley house, - 62.0' N of N gatepost to the Fuessley house and 116.8' SW of spike in a power pole, 33.6' SE of the N gatepost of the Fuessley yard.

- 57-296 In Section 28, T-86-N, R-7-W, 1 mile E and 2.7 miles N of Alice, on E side of County Road "T", 1.6' W of E road fence, 1.9' NW of witness post, 30.0' E of center line of County Road "T", 29.2' S of spike in power pole #302; 2.0' E of line of power pole to N, and on right-of-way adjoining property of the Henderson Company.
- 57-297 In Section 20, T-86-N, R-7-W, 3 miles S of Troy Mills on W side of County Road "T", at $\frac{1}{4}$ section-line, 2.2' NE of witness post, 18.5' S of N gate post, 22.2' N of spike in power pole, 84.4' NW of corner post at SW corner of the Arthur F. Cook yard, 99.5' SW of corner post at SW corner of house yard fence of the Cook property, 2.0' E of corner post at $\frac{1}{4}$ section line on W side of the road.
- 57-298 In Section 17, T-86-N, R-7-W, 2.4 miles S of Troy Mills on E side of County Road "T", 3.7' NW of witness post, 9.0' W of E road fence, 77.8' N of spike in power pole, opposite the Edward Fiala residence, 123.2' NE of N gatepost to the Fiala yard, and on the right-of-way adjoining the Fiala property.
- 57-299 In Section 8, T-86-N, R-7-W, 1.4 miles S of Troy Mille on E side of County Road "T", 5.6' E of witness post, 29.0' S of center line drive to the G. Cook residence, 43.2' SW of steel corner post, 20.2' NW of extreme NE edge of concrete steps, and 50.0' W of the George H. Cook residence.
- 57-227 In Section 8, T-86-N, R-7-W, 0.5 mile S of Troy Mills at intersection of County Roads "S" and "T", 47.2' SW of a double spike in corner post (NW corner of NE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 8), 47.6' W of spike in power pole, 6.0' S of center line of house on E side of road, 3.0' NE of witness post, 8.0' N of a projection of S road fence on County Road "S".
- Line 57-227 to 57-235
- 57-227 See above
- 57-228 In Section 6, T-86-N, R-7-W, 1 mile W and 0.5 mile S of Troy Mills, on the N side of County Road "S", 3,2' SE of witness post, 77.0' SE of spike in telephone pole, 11.0' S of N road fence, 20.0' SW of spike in corner post, 122.0' E of center line of W wing of the J. H. Sherron residence.

- 57-229 In Section 1, T-86-N, R-8-W, 2.1 miles W and 0.5 mile S of Troy Mills, on N side of County Road "S", 24.7' W of corner post at SE corner of SW $\frac{1}{4}$ of SE $\frac{3}{4}$ of Section 1; 35.2' SE of SE corner of the Emmet G. Needles residence, 13.2' N of N road fence, and 13.5' N of witness post.
- 57-230 In Section 1, T-86-N, R-8-W, 2.25 miles W and 0.5 mile S of Troy Mills, on N side of County Road "S", 27.3' SE of W gatepost of the Caroline Arnald residence, 12.0' S of N road fence, 6.0' S of witness post, 75.5' SE of a spike in a 14" ash tree, 38.0' from center line of W wing of the Arnald residence.
- 57-231 In Section 11, T-86-N, R-8-W, 2 miles E of Iowa Highway #11 W of Walker, on S side of County Road "S", 57.5' S of steel corner post at SE corner of SE $\frac{1}{4}$ of SW $\frac{3}{4}$ of Section 2; 83.1' SW of spike in corner post at NE corner, 62.5' W of spike in corner post at SE intersection, 5.0' NE of witness post, 9.0' N of S road fence,
- 57-232 In Section 2, T-86-N, R-8-W, 1.5 miles E of Walker, on N side of County Road "S", 1.5 miles E of Iowa Highway #11 at curve W of Walker, 63.3' NE of fence corner post on section line between Sections 10 and 11; 21.0' NE of spike in section fence line corner post between Sections 2 and 3, and 47.0' W of center line of W wing of house.
- 57-233 In Section 10, T-86-N, R-8-W, 0.75 mile E of Walker on S side of County Road "S"; 75.2' SW of W gatepost of the L. A. Andrew residence and 88.0' SE of yard corner post in SW corner, 3.0' N of S road fence, 4.5' NW of a witness post, 20.0' E of center line of W wing of the Andrew residence.
- 57-234 In Section 4, T-86-N, R-8-W, at W city limits of Walker, on County Road "S" on N side of W city limits, 46.0' NW of spike in telephone pole, 118.8' NW of NW corner porch at residence E of the Standard Oil Station, tile foundation; 12.8' SW of spike in power pole, 6.7' SE of witness post, 8.0' S of N road fence, 1 block E of the Standard Oil Station, and 4" above surface of the ground.
- 57-235 See page 23.

LOOP III.

Line 57-275 to 57-204b

- 57-275 See page 26.
- 57-274 In Section 3, T-85-N, R-7-W, 2.25 miles E of Alice, on N side of County Road "W", 0.25 mile E of W cupalo of schoolhouse, 7.0' S of witness post, 13.0' E of center line of farm drive to the K. G. Schmichle residence, 19.0' N of center line of County Road "W", 16.5' SE of E gatepost to the farm, 80.6' NE of power pole (second E of road intersection), 33.0' W of spike in a 14" elm tree.
- 57-273 In Section 10, T-85-N, R-7-W, 2.8 miles E of Alice, on S side of County Road "W", 0.8 mile E of W cupalo of schoolhouse, 26.0' S of center line of County Road "W", 3.2' N of witness post, 4.0' N of S road fence, 42.2' E of spike in power pole, on right-of-way adjoining property of W. B. Andrew, J. T. Davis and H. A. W. Koch.
- 57-272 In Section 12, T-85-N, R-7-W, 4.25 miles E of Alice on S side of County Road "W", 2.7' N of a witness post, 3.5' N of S road fence, 28.0' S of center line of County Road "W", 64.5' W of spike in power pole, 130.1' SE of corner post on $W\frac{1}{4}\frac{1}{4}$ section line to the N, on right-of-way adjoining property of Florence Ewin, and 112.0' E of $W\frac{1}{4}\frac{1}{4}$ section line.
- 57-271 In Section 1, T-85-N, R-7-W, 1 mile W of Rogers, at the township line on N side of the County Road "W", 2.6' SE of witness post, 1.7' S of N road fence, 30.0' N of the center line of County Road "W", 56.7' N of NW corner of the John Anderson yard, 97.2' NW of steel corner post at NE corner of yard which is also the NE corner of Section 12; 79.5' W of corner post at SE corner of Section 1, and on right-of-way adjoining the property of B. Norris.
- 57-270 In Section 8, T-85-N, R-6-W, 0.25 mile E of Rogers, on S side of County Road "W", 3.4' S of witness post, 3.3' S of S road fence, 30.0' S of center line of County Road "W", 62.0' SW of 16" concrete corner post at SW corner of the O. C. Brewer yard, and on the right-of-way adjoining the Harlan H. Briggs property.

- 57-269 In Section 9, T-85-N, R-6-W, 1.2 miles E of Rogers, on S side of County Road "W", 1.9' NE of witness post, 21.0' S of center line of County Road "W", 40.0' W of center line of the farm drive to the F. D. Lockwood home, 53.0' S of spike in a 20" box elder tree on the right-of-way adjoining property of F. D. Lockwood.
- 57-268 In Section 3, T-85-N, R-6-W, near W edge of Central City, at entrance of the St. Clark cemetery W of city, - 7.2' SE of witness post, 7.7' S of W gatepost to entrance of St. Clark Cemetery, 15.1' SW of E gatepost to the cemetery, 6.2' NE of telephone pole, 7.0' W of center line to drive of cemetery, and 29.0' N of center line of the County Road "W".
- 57-204b In Section 10, T-85-N, R-6-W, 0.5 mile S of Central City. An iron rod driven in shoulder of road 4.0' E of E curb at paving station #658 on Iowa Highway #13.
- Line 57-204b to 57-212
- 57-204b See above
- 57-205 In Section 3, T-85-N, R-6-W, on S city limits of Central City, on E side of Iowa Highway #13, opposite pavement station #691 + 57'; 6.7' E of E edge of the pavement, 74.5' SW of city water hydrant, 55.7' NW of NE corner of second house on E side of street on S edge of Central City.
- 57-206 In Section 34, T-86-N, R-6-W, about 1 mile N of Central City, on E side of Iowa Highway #13; 11.5' E of the E edge of pavement slab, 2.0' NW of witness post, opposite pavement station #753 + 47', on the first hill N of Central City, located at face of slope on a 35' cut, on right-of-way adjoining property of Ottis Pike, and about 400' N of center of Section 34.
- 57-207 In Section 27, T-86-N, R-6-W, 1 mile N of Central City on W side of Iowa Highway #13; 23.5' W of W edge of pavement, 2.0' N of witness post, opposite pavement station #776 + 59'; at $\frac{1}{4}$ section corner between Sections 27 and 34, on the right-of-way adjoining property of Geo. Masterhans, directly N of the diagonal road running to NW.
- 57-208 In Section 27, R-6-W, T-86-N, 1.9 miles N of Central City, on E side of Iowa Highway #13; 39.4' E of E edge of pavement, 1.5' W of E road fence, 1.5' N of witness post, and opposite pavement station #853 + 6'.

- 57-209 In Section 15, T-86-N, R-6-W, 3 miles N of Central City, on E side of Iowa Highway #13; 61.4' E of E edge of pavement slab, 4.5' W of E road fence, 3.0' NW of witness post, opposite pavement station #894 + 8.6'; and on section line between Sections 15 and 22.
- 57-210 In Section 15, T-86-N, R-6-W, 1 mile S of Coggon, on E side of Iowa Highway #13; 19.7' E of the E edge of pavement, 3.0' N of witness post, opposite pavement station #931 + 22.3'; opposite the Roy Chesmare residence, and in the NW corner of SW $\frac{1}{2}$ of NE $\frac{1}{4}$ of Section 15.
- 57-211 In Section 10, T-86-N, R-6-W, 0.5 mile S of Coggon, on W side of dirt road running parallel with the Coggon cemetery, at SW corner of cemetery; 0.25 mile W of Iowa Highway #13; 18.2' N of spike in a blaze of 8" white oak tree, 18.5' S of spike in a blaze of 8" elm tree, 2.5' SW of witness post; 7.8' E of W road fence, and 16.1' SW of spike in blaze of 6" wild cherry tree.
- 57-212 In Section 10, T-86-N, R-6-W, on S edge of Coggon, on E side of road, 75.0' E of spike in base of a 12" red oak tree, 2.0' W of E fence line, 81.0' SE of spike in a 16" red oak tree, 2.0' NW of witness post on first hill N of the Coggon cemetery on the first street W of Iowa Highway #13, and 51.0' S of the center line of house on W side of the road.
- Line 57-212 to 57-227
- 57-212 See above.
- 57-213 In Section 10, T-84-N, R-6-W, in Coggon, 1 block S of County Road "S", on SW intersection opposite city park, 156.0' N of center line of Coggon Water Tower, 99.8' SE of SE corner of house on NW intersection, beside the fire station, 10.0' E of the E edge of sidewalk, and 1.0' S of S edge of sidewalk.
- 57-214 In Section 4, T-86-N, R-6-W, about 0.75 mile W of Coggon, 2.5' N of N road fence, 68.0' N of spike in telephone pole #20; 76.2' W of W gatepost, on N side of County Road "S", 78.0' NE of spike in a 12" oak tree, and 2.0' N of witness post.
- 57-215 In Section 4, T-86-N, R-6-W, 1.25 miles W of Coggon on N side of County Road "S", 16.8' N of witness post, 17.7' NE of steel corner post yard fence,

95.0' SW of SW corner of the L. W. Burt residence, 91.2' NE of spike in root of a 48" maple tree, on SW corner of SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 4.

- 57-216 In Section 5, T-86-N, R-6-W, 1.9 miles W of Coggon, on N side of County Road "S", 0.3 mile W of the Quality Ridge School #2, on the Thomas A. McDonald property, 171.5' NE of steel-with-concrete base cornerstone, 20.0' N of N road fence, 2.7' NE of a witness post, 306.7' SW of spike in base of a 36" elm tree that is 250' S of the McDonald residence, and 282.0' E of center line of McDonald residence.
- 52-217 In Section 5, T-86-N, R-6-W, 2.25 miles W of Coggon, 0.6 mile W of the Quality Ridge Schoolhouse #2 on N side of County Road "S", 2.5' N of N road fence, 2.8' NE of spike in corner post, 2.5' NE of witness post, 257.0' NW of spike in base of a 13" lone elm tree.
- 57-218 In Section 5, T-86-N, R-6-W, 2.25 miles W, and 0.25 mile N of Coggon, on E side of County Road "S" at curve, 0.75 mile W and 0.25 mile N of the Quality Ridge schoolhouse #2; 3.5' W of E road fence, 3.0' NW of witness post, 134.5' NE of spike in base of most northerly 30" maple tree on W side of the road, 315.0' S of corner post at NW corner of SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 5, on right-of-way adjoining the Thomas A. McDonald property.
- 57-219 In Section 6, T-86-N, R-6-W, 2.5 miles W of Coggon, on N side of County Road "S", 2.5' SW of a witness post, 10.2' E of E wall of concrete steps, 13.3' SW of spike in blaze of 24" maple tree; 54.4' NE of spike in root of 36" maple tree on S side of road, opposite large house with brick foundation, (property of Castle and Welch).
- 57-220 In Section 1, T-86-N, R-7-W, 4.25 miles E, and 0.5 mile S of Troy Mills, on W side of County Road "S", 2.7' W of W road fence, 2.5' SW of witness post, 195.4' NW of corner post on section line fence at SW corner of Section 6; 254.0' N of 14" x 14" concrete corner post at NE corner of Section 12 and set flush with surface, on the property of Walter S. Bersley.
- 57-221 In Section 11, T-86-N, R-7-W, 5/8 mile S and 3 miles E of Troy Mills, 0.25 mile W of the M. P. Church, on S side of County Road "S", 69.0' SW of corner post at SW corner of Section 1; 0.8' N of

S road fence, 2.5' NW of witness post, 30.0' to W of center line of a road running N between... Sections 1 and 2 (there is no section line fence between Sections 11 and 12- property on both sides of section line owned by Joe Morony).

- 57-222 In Section 3, T-86-N, R-7-W, 2.25 miles E , and 0.5 mile S of Troy Mills, on N side of County road "S", 2.5' NW of witness post, 0.8' S of N road fence, 109.4' W of corner post on section line fence between Sections 2 and 3; 131.6' NW of a corner post on section line between Sections 10 and 11, on right-of-way adjoining property of Mr. William Alfred Bell.
- 57-223 In Section 10, T-86-N, R-7-W, 1.75 miles E, and 0.5 mile S of Troy Mills, on S side of County Road "S", 4.5' N of S road fence, 3.5' NE of witness post, 185.0' E of corner post on property line between the Wm. Cook and R. Starr properties; 210.3' SE of corner post on property line of Wm. Bell and Owen Turner, on the right-of-way adjoining property of Wm. C. Cook, and 203.0' W of W wing of the Wm. A. Bell residence.
- 57-224 In Section 3, T-86-N, R-7-W, 1.25 miles E of Troy Mills on N side of County Road "S", 473.0' N of Section line corner post between Sections 3-4; 473.0' N of witness post, 473.0' N of N road fence, on the property of L. N. and Mary C. Barnhill.
- 57-225 In Section 4, T-86-N, R-6-W, 1 mile E of Troy Mills, on N side of County Road "S", 25.0' N of N road fence, 25.5' N of witness post, 33.0' E of spike in base of 36" oak tree, 42.7' NE of E gate post, 53.7' NE of W gatepost, on the property of Emma Crismore.
- 57-226 In Section 5, T-86-N, R-6-W, in Troy Mills on E side of County Road "S", 6.8' W of W edge of the sidewalk, 2.7' N of N edge of sidewalk, 63.0' E of NE corner of the Cook & Wilson Grocery store, 48.0' NW of NW corner of the residence, and 78.2' SE of NE corner of the Eberle Grocery, and diagonally - across the intersection from the Eberle Grocery.
- 57-227 See page 27.

Line 57-204b to 57-201

57-204b See page 30.

57-204 In Section 10, T-85-N, R-6-W, 0.5 mile SW of Central City, on S side of Iowa Highway #13, opposite pavement station #638 + 83'; 50.5' S of S edge of pavement (slope distance), 3.0' SW of witness post, on the first high bank, 300.0' N of viaduct over the Illinois Central Railroad.

57-203 In Section 9, T-85-N, R-6-W, 1.25 miles SW of Central City, on E side of Iowa Highway #13, opposite pavement station #584 + 77'; 36.2' W of W edge of pavement (slope distance), on first curve S of viaduct of the Illinois Central Railroad, 0.5 mile W of Bunker Hill Schoolhouse #5, on SW corner of SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Section 9, and at top of a 30.0' bank at highway cut.

57-202 In Section 16, T-85-N, R-6-W, about 1.5 miles S and 1 mile W of Central City, 5.75 miles N of the Linn County Home, opposite pavement station #555 + 55.5'; 26.0' E of the E edge of pavement, 33.2' SW of spike in telephone pole #5; 3.0' NW of witness post, opposite middle of the Peter H. Karck residence, 6" above ground, on E side of Iowa Highway #13; 0.5 mile W and 0.5 mile S of Bunker Hill Schoolhouse #5, and near the center of the section.

57-201 In Section 21, T-85-N, R-6-W, about 3.5 miles E of Alburnett, 4.75 miles N of the Linn County Home, opposite pavement station #517 + 75'; and 16.7' E of E edge of pavement, 31.3' NW of steel corner post, 23.2' NW of telephone pole #480, on E side of Iowa Highway #13.

Line 57-201 to 57-5071

57-201 See ~~57-201~~ above.

57-5082 In Section 21, T-85-N, R-6-W, 2.25 miles S and W on Iowa Highway #13; 0.25 mile E of Central City, near SW corner of NE $\frac{1}{4}$ of NE $\frac{1}{4}$, level with the surface, about 2500' W of the Rowley Schoolhouse #8; 1300' E of pavement, 1.6' E of $\frac{1}{4}$ $\frac{1}{4}$ fence N, 5.5' N of the fence corner $\frac{1}{4}$ $\frac{1}{4}$ - fence N, 72.5' N of fence corner $\frac{1}{4}$ $\frac{1}{4}$ fence S, - 11.6' NE of brace post, 4.7' S of brace post, - 42.8' E of power pole, 137.0' W of power pole, and 10.2' NW of foot post.

- 57-5081 In Section 22, T85N, R6W, 2.25 miles S and W on Iowa Highway #13; 0.75 mile E of Central City, near SE corner of NW $\frac{1}{4}$ of NW $\frac{1}{4}$, set level with surface, about 800' SW of farmhouse, 400' NW of farmhouse, 122.4' NW of a telephone pole, 150.2' NW of NW corner of school house, 160.4' NW of a 14" elm tree, 128.5' N of S road fence, 1.5' N of N road fence, 57' E of power pole on N side of the road.
- 57-5080 In Section 22, T-85-N, R-6-W, 3.75 miles W of Waubeek, near NE corner of NW $\frac{1}{4}$ of NW $\frac{1}{4}$, set level with the surface, 200' SE of a farmhouse, 400' NW of a farmhouse, 136.1' S of Section fence E-W, 18.0' SW of end post in a guard rail W of road, 30.4' NW of fourth guard rail post, on W side of road, 81.3' N of the County Elevation marker #1169; 2.0' E of the W road fence, 78.1' SW of power pole, 66.1' NW of end post guard rail E of road.
- 57-5079 In Section 22, T-85-N, R-6-W, 3.25 miles W of Waubeek, in NW corner of NE $\frac{1}{4}$ of NE $\frac{1}{4}$, set level with surface, about 1600' S of a farmhouse, 1000' NW of a farmhouse, 175.7' E of W road fence, 137.1' E of E road fence N and 126.0' E of E road fence S, 1.0' S of Section fence E-W, and 268.5' SE of steel I-beam post.
- 57-5078 In Section 14, T-85-N, R-6-W, 2-5/8 miles W of Waubeek near center line of S edge SW $\frac{1}{4}$, buried 14" deep, about 1500' SE of farmhouse, 800' E of N-S fence, 21.5' N of E-W fence and 102.1' E of fence to S, 83.5' E of clump of willow trees, and 471' E of N-S fence.
- 57-5077 In Section 14, T-85-N, R-6-W, 2.5 miles W of Waubeek, near SE corner of SW $\frac{1}{4}$ set level with surface, about 1300' S of E-W road and 2000' SE of farmhouse, 13.8' W of the section concrete marker, 1.8' N of E-W fence, 52.0' E of fence to the N, and 123.8' SE of 4" spruce tree.
- 57-5076 In Section 14, T-85-N, R-6-W, 2 miles W of Waubeek, in SE corner of SE $\frac{1}{4}$, set level with the surface, about 1200' S of farmhouse, 0.75 mile N of Jordans Grove Schoolhouse #1; 108.4' N of section fence to W, 77.3' N of a power pole, 68.3' NW of telephone pole, 80.4' S of power pole, and 11.8' E of W road fence.

57-5075 In Section 13, T-85-N, R-6-W, 1.75 miles W of Waubeek, near SE corner of SW $\frac{1}{4}$ of SW $\frac{1}{4}$, set level with surface, 7200' NE of farmhouse, 2000' S of a farmhouse, 1.8' N of N road fence, 67.4' N of the S road fence, 97.2' NE of telephone pole, 224.5' NE of corner post fence S, 73.3' E of power pole, and 213.8' E of line of fence to S; 45.3' W of W gate post, N road fence; 77.3' W of power pole, 97.5' NW of telephone pole.

57-5074 In Section 24, T-85-N, R-6-W, 1.5 miles W of Waubeek, near NE corner of NW $\frac{1}{4}$, set level with the surface, 1200' W of farmhouse, 1000' S of a farmhouse, 6.0' NW of a large boulder in fence corner, 2.4' NW of corner post $\frac{1}{4}$ fence S, 89.0' E of telephone pole #140; 94.8' SE of power pole, 64.0' S of N road fence, and 97.5' SW of a power pole.

57-5073 In Section 13, T-85-N, R-6-W, 1 mile W of Waubeek, in SE corner of SE $\frac{1}{4}$, buried 14" deep, 1000' E of a concrete bridge, 800' NW of farmhouse, 89.6' SW of telephone pole, 54.0' SW of 20" box elder, 51.2' W of E road fence N-S, 47.8' NW of corner post, 46.0' N of power pole and 14.3' W of the W road fence.

57-5072 In Section 19, T-85-N, R-5-W, 0.25 mile W of Waubeek, near NE corner of NW $\frac{1}{4}$, set level with surface, about 0.5 mile E of township line, 200' W of $\frac{1}{4}$ line S, 58.2' NE of NE corner of barn, 82.0' NE of NW corner of barn, 199.8' SE of SE corner of house, 217.6' S of S road fence, 35.1' W of an apple tree, and 0.8' N of a fence.

57-5071 In Section 19, T-85-N, R-5-W, on W city limits of Waubeek, near SW corner of NE $\frac{1}{4}$ of NE $\frac{1}{4}$, --- 1000' W of N-S road, 1000' S of E-W road, 376.0' W of fence to S, 216.0' E of fence to N, 1.2' S of E-W fence, 8.0' W of fence post, 3.7' E of a fence post, and 258.6' SE of an 8" mulberry tree in the N fence.

Line 57-5071 to 57-5061

57-5071 See above.

57-5070 In Section 19, T-85-N, R-5-W, in Waubeek, NE corner of NE $\frac{1}{4}$, 1000' E of W city limits, 1000' S of section line road to W, 23.3' E of wagon shed, 7.0' S of clump of elm trees, 87.0' SW of SW cor-

- ner of a dwelling house, 26.8' W of NW corner store building, 224.8' SW of W end of the river bridge and 92.2' W of W edge of sidewalk.
- 57-5069 In Section 17, T-85-N, R-5-W, 0.4 mile NE of Waubeek, near NE corner of SW $\frac{1}{2}$ of SW $\frac{1}{4}$, set level with the surface, 1000' S of a farmhouse, 600' NE of a farmhouse, 18.8' NW of corner post, 28.0' NW of brace in E fence, 29.0' NW of brace in S fence, 2.2' N of E-W fence, 422.8' E of E road fence, 6.0' N of 14" white oak tree, 6.4' E of fence post and 9.3' W of fence post.
- 57-5068 In Section 17, T-85-N, R-5-W, 1 mile NE of Waubeek, on County Road "C", near SW corner of SE $\frac{1}{4}$ of NW $\frac{1}{4}$, buried 14" below surface, 300' N E of a farmhouse 0.75 mile NE of Waubeek, 207.3' N of a 20" black walnut tree, 102.0' NE of the W gatepost, 64.8' E of an apple tree, 194.4' SE of twin black walnut tree, 144.0' SW of a 16" black walnut tree, and 26.2' W of W road fence.
- 57-5067 In Section 17, T-85-N, R-5-W, 1.25 miles NE of Waubeek on County Road "C", near NE corner of SE $\frac{1}{4}$ of NW $\frac{1}{4}$, set level with surface, 800' SW of a farmhouse and 1000' N of a farmhouse, 55.3' NE of a 15" elm tree, 10.3' S of a fence post, 158.2' SW of a 20" elm tree, 176.0' W of a twin butternut tree, and 6.8' N of fence post.
- 57-5066 In Section 8, T-85-N, R-5-W, 1.5 miles NE of Waubeek, on County Road C, in SW $\frac{1}{2}$ of SE $\frac{1}{4}$, set level with surface, about 800' S of intersection of County Roads "C" and "V", 1000' N of a farmhouse, 210.4' N of entrance to Boy Scout Camp, 94.2' N of a telephone pole and 44.8' S of telephone pole, 196.4' SW of corner post SW of garden, 69.6' W of E road fence, 1.4' W of the W road fence.
- 57-5065 In Section 8, T-85-N, R-5-W, 1.5 miles NE on County Road "C" and 0.25 mile E of Waubeek, on County Road "V", near NE corner of SW $\frac{1}{4}$ of SE $\frac{1}{4}$, set level with surface, 1300' W of a farmhouse, 1000' E of a farmhouse, 2.2' E of telephone pole, 30.8' E of 10" walnut tree, 95.4' S of a brace post in an old road fence, 69.0' NW of a guard rail post (slope distance), 63.4' N of a guard rail post (slope distance), 71.6' NE of a guard rail post (slope distance, and 710.6' W of the fence to N.

- 57-5064 In Section 8, T-85-N, R-5-W, near SE corner of NE $\frac{1}{2}$ of SE $\frac{1}{4}$, 1.5 miles NE of Waubeek on County Road "C", and 0.5 mile E of Waubeek on County Road "V", set level with surface, about 500' NW of farmhouse and 500' SE of farmhouse, 64.7' N of S road fence, 106.5' NE of telephone pole, 190.4' E of gatepost on E side of farm drive, 1.6' S of N road fence, - 255.0' NW of corner post section fence S, and 109.5' NW of telephone pole.
- 57-5063 In Section 9, T-85-N, R-5-W, near SE corner of NW $\frac{1}{2}$ of SW $\frac{1}{4}$, 1.5 miles NE of Waubeek on County Road "C" and 0.75 mile E of Waubeek on County Road "V", set level with surface, about 700' NE of the barn, 1270' W of $\frac{1}{2}$ fence N-S, 103.6' NE of corner post S fence, 16.7' E of fence post, 17.6' W of fence post, 2.5' N of N road fence, 82.5' N of S road fence, and 96.5' W of fence to N.
- 57-5062 In Section 9, T-85-N, R-5-W, near NW corner of SW $\frac{1}{2}$ of SE $\frac{1}{4}$, 1.5 miles NE of Waubeek on County Road "C" and 1 mile SE of Waubeek on County Road "V", - buried 14" deep, about 600' W of farmhouse, 1000' S of farmhouse, 329.2' E of $\frac{1}{2}$ fence N-S, 298.7' S of S road fence, 416.4' NW of NW corner of barn, 67.6' N of the E-W fence.
- 57-5061 In Section 16, T-85-N, R-5-W, near NE corner of NE $\frac{1}{2}$, 1.5 miles NE of Waubeek on County Road "C", - 1.25 miles SE of Waubeek on County Road "V", buried 14" deep, about 1000' NW of farmhouse, 800' W of a junction of County Roads "B" and "V", 86.8' S of S gatepost, 173.2' SE of corner post fence W, 172.6' SW of corner post fence E, 34.5' SW of road fence (90° with fence), 109.0' W of 16" black oak tree, and 46' W of telephone pole.
- Line 57-5061 to 57-212
- 57-5061 See above.
- 57-5088 In Section 9, T-85-N, R-5-W, near NE corner of SE $\frac{1}{2}$ of NE $\frac{1}{4}$, 3.5 miles S of Prairieburg, set level with surface, about 500' SE of farmhouse, 0.5 mile S of river bridge, 956.0' N of $\frac{1}{2}$ fence W, 364.4' S of $\frac{1}{4}$ $\frac{1}{4}$ fence E-W, 247.4' S of an 18" walnut tree, 64.6' W of E road fence, and 1.8' E of W road fence.
- 57-5089 In Section 10, T-85-N, R-5-W, near NW corner of NW $\frac{1}{2}$, 3 miles S of Prairieburg, set level with surface, about 2000' S of schoolhouse, 72.0' N of the fence to E, 64.4' E of W road fence, 79.4' SE of

telephone pole, 540.7' S of the Buffalo Creek bridge, 84.0' S of E fence, 149.2' S of S lawn fence, 182.4' S of S line of stone house, 1.9' W of E road fence, 2.8' SW of fence post, 303.5' S of line of section line fence to W between Sections 4 and 9.

57-2615 In Section 4, T-85-N, R-5-W, near SE corner of NE $\frac{1}{4}$, 2.5 miles S of the four corners in the town of Prairieburg, about 0.5 mile S of St. Joseph's cemetery, 1.7' E of W road fence across from the A. T. Hughes residence, 2.4' N and 50° E of post (Redhead), 17.4' S of steel fence post; 14.7' N of corner post, $\frac{1}{4}$ fence to W; 19.3' N and 35° E of brace post, $\frac{1}{4}$ fence to W; 66.0' N and 75° W of corner post (Redhead), 64.3' N and 80° W of S steel gatepost; 63.4' W of E road fence line, 64.0' S and 80° W of N gate (corner) post; 92.2' S and 40° W of a 26" burr oak tree; 63.9' S of line of S side of house, and 36.5' N of line on N side of the barn.

57-2616 In Section 34, T-86-N, R-5-W, near SW corner of SE $\frac{1}{4}$, 2 miles S of Prairieburg, about 3 miles W of SE corner of Boulder Township, in St. Joseph's cemetery-near SW corner; 3.7' N of S cemetery fence (N fence of old road to the E); 70.4' N of S fence of old road - (township line fence); 68.7' N and 5° W of 6" wild cherry tree (Redhead), 12.6' N and 80° W of a steel fence post, 5.8' N and 50° E of a steel fence post, - 58.5' N and 85° E of the angle iron corner post at SW corner of cemetery, 58.4' E of W cemetery fence, and buried 4".

57-2617 In Section 34, T-86-N, R-5-W, near SW corner of SE $\frac{1}{4}$ of SW $\frac{1}{4}$, 2 miles S and 0.3 mile E of Prairieburg, - about 2.75 miles W of SE corner of Boulder Township; - N side of fence; 961.9' E of E cemetery fence, 280.7' E of fence to S, 44.4' N of iron pin under township line fence, 53.6' N and 30° W of an iron pin, 44.8' N and 10° W of large post (Redhead); 47.5' N and 25° E of fence post (Redhead), and buried 22" in pasture.

57-2584 In Section 3, T-85-N, R-5-W, in W edge of NW $\frac{1}{4}$ of NE $\frac{1}{4}$, 2.1 miles S and 0.5 mile E of Prairieburg, about 542.0' S of the Buffalo-Boulder Township line; and 2.5 miles W of E line of Linn County, 0.5 mile E of St. Joseph's cemetery; 42.8' E of iron pin under fence, E side of field; 37.4' N and 60° E of iron pin, under fence, 2.0' S of square concrete block; 90.9' E of line E side of corn crib, 403.6' S of line S end of crib; 35.9' E of line, E legs of windmill; 181.7' W of line W side of house, 343.4' S of line, S side of house, - 75.0' W of line W side of barn; 249.2' W of fence running S from E side of house; 253.0' N and 80° W of

corner post fence to E; 396.4' S and 30° W of the SW corner of house; 411.9' S and 15° E of SE corner of crib; about 265.0' E of $\frac{1}{4}$ section line to N and about 323.0' E of $\frac{1}{4}$ section line to S. Set on an old railroad right-of-way grade, S of farm buildings.

- 57-2582 In Section 2, T-85-N, R-5-W, near NW corner of NE $\frac{1}{4}$ of NW $\frac{1}{4}$, 2 miles S and 1.25 miles E of Prairieburg, about 1.75 miles W of E line of Linn County, 1.25 miles E of St. Joseph's cemetery on E side of E road fence to S, 151.0' N and 10° E of a 48" cottonwood tree (Red head); 66.1' N and 20° E of clump of apple trees (Red head); 9.0' E of iron pin under E road fence to S and 58.9' E of W road fence to S, 12.4' SE of fence post (Redhead); 37.0' S and 15° E of corner post (Redhead) 36.7' S of iron pin under S road fence to E; 52.2' S of line of township line fence to W, and 83.2' S of N road fence to E. Buried 12" under the surface.
- 57-5090 In Section 36, T-86-N, R-5-W, near center line of S edge of SW $\frac{1}{4}$ of SE $\frac{1}{4}$, 2 miles S and 2.75 miles E of Prairieburg; about 3000' NE of farmhouse, and 1200' W of farmhouse; 669.6' E of $\frac{1}{4}$ fence to N, 380.6' N of N road fence, 362.5' S of fence E-W, 447.0' N of S road fence. Buried 14" below surface.
- 53-509 In Section 19, T-86-N, R-4-W, near SW corner NW $\frac{1}{4}$, 3 miles E and $\frac{5}{8}$ miles N of Prairieburg, $3\frac{3}{8}$ miles S of NE corner of Linn County, 1801.8' N of the center line of road to W; 465.3' N of $\frac{1}{4}$ section fence to E; 50.0' N and 10° E of a 7" boxelder tree (Redhead); 75.9' N and 55° E of N gatepost, W road fence (Redhead on top); 7.5' N and 65° E of fence post, E road fence (Redhead on top); 10.4' S and 50° E of brace post, E road fence (Redhead on top); 15.5' S and 30° E of the S gatepost, E road fence (Redhead on top); 8.7' E of high point of large boulder, E road fence, 63.8' E of W road fence. Buried 15" below surface.
- 57-2540 In Section 13, T-86-N, R-5-W, SE corner of NE $\frac{1}{4}$, 3 miles E and 1.5 miles N of Prairieburg, 2.5 miles S of NE corner of Linn County, on W side of road, 3.3' W of W road fence; 68.0' W of E road fence (corner post), 3.0' S and 65° W of fence post (Spike in top), 30.2' N and 15° W of fence post (Red head), 62.8' N and 70° W of 18" two-trunk elm tree (Red head), 1' N of line of $\frac{1}{4}$ fence to E, 405' N of NW corner of a 22' wooden pile bridge; witnessed by stone pile E of W road fence. No fence to W here. Buried 4".
- 53-512 In Section 7, T-86-N, R-4-W, near SW corner SW $\frac{1}{4}$, 2 miles N and 3 miles E of Prairieburg, about 2 miles S of NE corner of Linn County, N of four corners, on

E side of road; 2.1' E of E road fence; 59.6' E of W road fence, 6.9' S of steel fence post, 13.7' N of steel fence post, 264.8' N of the steel corner post of NE corner of intersection, 292.4' N of center line of road to W; 348.3' S of the pump under windmill and 352.3' S of line to the S side of a barn (barn and windmill on W side of road).

57-2542 In Section 12, T-86-N, R-5-W, near NE corner of SE $\frac{1}{4}$, 3 miles E and 2.5 miles N of Prairieburg, about 1.5 miles S of NE corner of Linn County, first knoll S of $\frac{1}{4}$ fence to E-W, on W side of road, 390.9' S of $\frac{1}{4}$ section fence to W, 1.7' W of W road fence, 2.4' W of niggerhead set E of W road fence, 62.4' W of E road fence, 6.5' N of steel fence post, 10.2' S of a steel fence post, 164.7' S of a high point on large white boulder lying 5 feet E of W road fence.

57-2577 In Section 12, T-86-N, R-5-W, near N $\frac{1}{2}$ corner, 3 miles N and 2.5 miles E of Prairieburg, 380.0' W of $\frac{1}{4}$ section line, 33.9' NE of NE corner of a barn, 4.0' N of S right-of-way fence, 61.0' S of N right-of-way fence, 67.7' S of a 20" cottonwood tree, 74.2' SW of steel post at west end of a gateway, 84.9' SW of steel post at E end of the gateway, -99.4' SW of power pole, 27.9' NW of the steel post at the E end of gateway and fence S, and 92.1' SE of power pole. (Relocation 3-23-29, with above new ties).

57-2610 In Section 2, T-86-N, R-5-W, near SW corner of SE $\frac{1}{4}$ of SW $\frac{1}{4}$, 3 miles N and 1.25 miles E of Prairieburg, about one mile S of N line and 1.75 miles W of E line of Linn County; 0.75 mile W of North Union School #4; set E of the 4 corners, 1.6' S of N road fence to E; 60.9' N of S road fence to E; 164.3' E of center line of road to N; 61.1' N and 5 $^{\circ}$ E of corner post fence to S; 54.7' E of line E end of barn; 125.3' N and 35 $^{\circ}$ E of NE corner of brick barn, -137.8' N and 60 $^{\circ}$ E of corner post (Redhead); 130.7' E of a power pole (Redhead); 134.1' E of steel corner post; 9.2' W of power pole (Redhead); and 3.8' S, 60 $^{\circ}$ E of steel fence post.

57-2609 In Section 10, T-86-N, R-5-W, near NE corner of NE $\frac{1}{4}$, 3 miles N and 1 mile E of Prairieburg, about 1 mile S of N line, 2 miles W of E Linn County line; 1 mile W of North Union School #4; 1.5' N of S road fence, 2.7' NW of brace post (Redhead); 8.9' E of fence post (Redhead); 27.6' W of steel corner post, fence to S; 11.2' W of W gatepost (Redhead); 40.1' NW of steel fence post, fence to S; 64.4' S of N road fence, 71.2' S and 25 $^{\circ}$ W of hedge corner post, 81.1' S and 35 $^{\circ}$ E of power pole (Redhead), and 429.0' E of center line of 6" x 6" box culvert #526.

- 57-2611 In Section 3, T-86-N, R-5-W, near SE corner of the SW $\frac{1}{4}$, 0.5 mile E of County Road "B" running to 3 miles N of Prairieburg, about 1 mile S of N Linn County line, 1090.0' W of center line of an 8" x 4" box culvert #1256; 1.6' N of N road fence; on first knoll W of N $\frac{1}{2}$ corner of Section 10; 1.7' N and 10° E of steel fence post; 1.6' N of square concrete block, 67.7' N of S road fence, 6.7' N and 40° E of power pole (Redhead); 125.0' N and 85° W of power pole (Redhead), and 365.0' W of $\frac{1}{2}$ section fence to the N.
- 57-2642 In Section 9, T-86-N, R-5-W, near NE corner of NE $\frac{1}{4}$, 3 miles N of the four corners at Prairieburg, - about 1 mile S of N line and 3 miles W of E line of Linn County; 15.9' N and 10° E of power pole (Redhead); 61.3' S and 5° E of power pole (Redhead); -- 67.0' S of steel corner post; 64.1' S of the U. S. Geological Elevation Post, elevation 1013.0'; 92.2' S and 35° W of angle iron corner post; 41.4' S and 85° W of stop sign post; 59.8' N and 85° W of telephone pole; witnessed by niggerhead to S; in the SW corner of intersection of line of S road fence to W and 2' E of line W road fence to N.
- 57-2681 In Section 5, T-86-N, R-5-W, on E edge of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, 3-1/8 miles N and 1 mile W of four corners of Prairieburg, about 7/8 mile S of N Linn County line, 2 miles E of W line of Boulder Township, 3.5' E of W road fence, 54.0' W of E road fence; 15.5' N of line, on N side of house; 3.5' N and 65° E of a post at N end of front yard fence (Redhead); 54.7' N and 75° E of NE corner of house; 74.7' N and 55° E of SE corner of house foundation; 76.6' N and 5° E of angle iron corner post, in SE corner of yard; - 7.2' E of spike in 20" soft maple tree; 11.1' NE of spike in a 22" soft maple tree; 18.2' N and 15° E of spike in a 16" soft maple tree; 95.4' NW of NW corner of barn, 817.7' N of center line of E-W road at SE corner of the section.
- 57-2717 In Section 5, T-86-N, R-5-W, near SW corner of SW $\frac{1}{4}$, 3 miles N and 2 miles W of the four corners at Prairieburg, about 1 mile S of N line of Linn County, about 1 mile E of W line of Boulder Township, in field in NE corner of intersection, 53.8' N of concrete block under N road fence to E; 60.3' N and 25° W of concrete block N road fence to E; 98.0' E of center line of road to N; 80.2' N and 75° E of the

spike in telephone pole, 81.9' N and 55° E of spike in corner post; 81.5' NE of spike in E gatepost; 68' N and 30° E of spike in power pole, 101.2' N and 65° W of spike in power pole with transformer. Buried 15" below surface.

- 57-2719 In Section 6, T-86-N, R-5-W, near SW corner of SE $\frac{1}{4}$, 3 miles N and 2.5 miles W of four corners of Prairieburg, about 0.5 mile E of W line of Boulder Township, about 1 mile S of N line of Linn County, 80.9' E of line on E side of house, 67.4' N of S road fence; 202.8' E of steel corner post, $\frac{1}{4}$ fence to N; 63.9' N of an 8" cedar tree; 89.6' N and 35° E of NE corner of chicken house; 11.6' N and 65° E of spike in power pole, 84.0' S and 75° E of a 23" cedar tree, 28.5' S and 55° E of a 36" maple tree; 81.4' S and 40° E of SW corner of the garage; 61.0' S and 15° E of forked maple tree, 71.9' S and 25° W of pump under windmill, 37.0' N and 85° W of steel corner post; and 41.9' N-80° W of an 18" elm tree.
- 57-2720 In Section 6, T-86-N, R-5-W, near SE corner of SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 2.65 miles E of Coggon, about 0.25 mile E of township line, about 1 mile S of N line of Linn County, N side of County Road "A", 912.0' E of line of a township line fence to S and the center line of pavement to N, 1.2' W of fence to N, 0.8' S and 1.2' E of spike in brace post; 35.0' E of line, on E side of W house; 118.5' W of line on W side of E house, 8.0' N of spike in corner post, 9.6' N and 15° E of a reinforcing rod, 43.5' N and 60° E of spike in power pole; 133.0' N and 80° W of power pole with transformer, -230.0' W of W lane fence to N, and 75.6' N of S road fence.
- 57-2784 In Section 11, T-86-N, R-6-W, near NW corner of NE $\frac{1}{4}$ of NE $\frac{1}{4}$, on S side of Iowa Highway #13 at S road fence, 1-1/8 miles E of Coggon, 1 mile S of N line of Linn County, 1.25 miles W of E line of Jackson Township, 1.5' S of iron pin under S road fence along Iowa Highway #13; 149.3' E of $\frac{1}{4}$ $\frac{1}{4}$ fence to S, 7.7' W of spike in power pole, 10.4' W of spike in fence post; 6.4' E of spike in fence post, 34.5' S of S edge of pavement, 70.0' S of 20" elm tree, 131.7' S and 5° E of the SW corner of house foundation.
- 57-2812 In Section 2, T-86-N, R-6-W, about 7/8 mile E of E edge of Coggon, about 1 mile S of N Linn County line, 1.5 miles W of E line of Jackson Township, 1.0' S of N road fence along Iowa Highway #13; 6.3' E of steel fence post; 4.9' W of steel fence post; 40.3' N of cross, N edge of pavement; 49.8' N, 30° E of cross, N edge of pavement; 49.1' N of center line of pavement, 16.5' W of spike in corner post of $\frac{1}{4}$ fence to N; and 165.0'

E of E steel gatepost in N road fence; 79.8' E of spike in a telephone pole, 46.1' W of spike in a telephone pole; 141.0' N and 50° W of spike in a power pole on S side of the road.

57-2811 In Section 11, T-86-N, R-6-W, on N edge of NW $\frac{1}{4}$ of NW $\frac{1}{4}$, about 0.5 mile E of Coggon, at E end of a curve in pavement on S side of Iowa Highway #13, - about 1 mile S of N line of Linn County, 1-7/8 mi. W of E line of Jackson Township, 659.0' E of line, Section line to S between Sections 10 and 11; 1.6' N of iron pin under picket fence on S side of the Highway, 7.2' N and 85° E of railroad iron, 27.5' S of center line of pavement, 141.0' W of spike in telephone pole; 78.8' S and 15° E of spike in a power pole; 139.3' SW of spike in power pole, 131.5' N and 5° E of spike in corner post (SW corner of the yard), and 68.0' N of line of N side of house.

57-5091 In Section 10, T-86-N, R-6-W, near NE corner of NW $\frac{1}{4}$ of NE $\frac{1}{4}$, 0.25 mile E of Coggon, 41.3' S of a telephone pole #5; 6.4' S of S edge of pavement, 81.5' SE of extreme N end of NE wing of bridge, - 75.7' NE of extreme S end of SE wing of bridge, - 76.8' E of steel section of bridge, 24.2' S of N edge of pavement, 2.3' S of guard cable, 2.8' SW of guard rail post (8th post E of bridge), 7.4' SE of guard rail post (7th post E of bridge). Set flush with surface.

57-212 See page 31.

LOOP V

Line VOEHL to 6-169

VOEHL See page 13.

6-115 In Section 28, T-84-N, R-9-W, 2 miles S, 1.5 miles W of Shellsburg, 3.5 miles W of Linn County line, 1.25 miles N of Fremont Township line, SW of triangulation station VOEHL, 1.2' W of the W road fence, 129.0' S of spike in corner post of E-W fence line, 11.2' SW of spike in the fence post, 4.7' NW of spike in fence post, and 2.5' NW of witness post.

6-116 In Section 33, T-84-N, R-9-W, at center of the section, 2.5 miles S and 1.5 miles W of Shellsburg, 3.5 miles W of Linn County line, 0.5 mile N of Fremont Township line, 111.1' NW of corner post of E $\frac{1}{4}$ section line fence, 7.7' W of the W

fence line, along unsurfaced road, 48.0' NW of NE corner post of grove fence, and 8.7' W of witness post.

- 6-117 In Section 3, T-83-N, R-9-W, at NW corner of section, 3 miles S and 1 mile W of Shellsburg, 3 miles W of the Linn County line on township line, 78.0' SE of corner post on N section line fence, 15.1' SE of spike in a 24" maple tree, 1.0' N of S fence line, along a crushed rock road, 29.2' NE of a power pole, and 3.0' SE of witness post.
- 6-118 In Section 34, T-84-N, R-9-W, 3 miles S and 0.5 mile W of Shellsburg, 2.5 miles W of the Linn County line on township line, on N side of crushed rock road, 24.1' SW of spike in power pole at end of transmission line, 22.4' SE of spike in 20" elm tree, 25.5' SW of SW corner post of yard fence, 3.0' SE of witness post.
- 6-119 In Section 2, T-83-N, R-9-W, 3 miles S and 0.5 mile E of Shellsburg, 1.5 miles W of the Linn County line, 16.8' W of spike in corner post, 1.0' N of S road fence, along crushed rock road, 12.0' E of spike in telephone pole, and 3.0' SE of the witness post.
- 6-169 In Section 36, T-84-N, R-9-W, on E side and center of section, 3 miles N and 0.5 mile E of Atkins, 21.6' W of witness post, 21.0' W of W fence, 170.0' SE of spike in 30" twin cottonwood tree in pasture on W side of road, 43.3' SW of spike in a 12" wild cherry tree on W side of the road. Buried 12" below surface.
- Line 6-169 to 57-100
- 6-169 See above.
- 57-183 In Section 31, T-84-N, R-8-W, in W edge of NW $\frac{1}{4}$, 2 miles W and 1.2 miles S of Palo, 2.8' SW of witness post, 2.5' W of E fence, 27.6' S of N gate post, 7.0' S of telephone pole, 57.7' W of SW corner of the J. Everett's barn, 51.4' E of S gate post to yard entrance on W side of road, on Benton and Linn County lines. Set flush with surface.
- 6-170 In Section 25, T-84-N, R-9-W, in SE $\frac{1}{4}$ of SE $\frac{1}{4}$, 2.5 miles S and 1 mile E of Shellsburg, 1.8' SW of witness post, 2.0' E of W fence, 31.0' SE of spike

in a 20" elm tree, 74.9' N of spike in corner post at S edge of the garden, nearly in line with N edge of corncrib, 92.4' NW of spike in telephone pole on the E side of road. Set flush with surface.

- 57-184 In Section 30, T-84-N, R-8-W, in NW corner of NW $\frac{1}{4}$ of NW $\frac{1}{4}$, 2 miles W of Palo, 1.8' W of E fence, 1.4' W of witness post, 3.6' NW of spike in fence post; 124.0' S of SE corner post at intersection, 7 miles N of U.S. Highway #30 on county road between Benton and Linn Counties. Set flush with surface.
- 57-185 In Section 19, T-84-N, R-8-W, on S side of SW $\frac{1}{4}$, - 1.5 miles W of Palo, 7.0' N of witness post, 12.0' N of telephone pole #367; 7.0' N of N fence, 126.5' NE of telephone pole #368; 0.25 mile E of W side of Linn County. Buried 16" below surface.
- 57-186 In Section 30, T-84-N, R-8-W, in NE $\frac{1}{4}$ of NE $\frac{1}{4}$, 1 mile W of Palo, 88.7' S of SE corner of brick building on N side of road, 84.0' SW of telephone pole #340, - 1.7' N of witness post, 62.0' S of N fence, just W of farm drive, 37.6' E of spike in 24" elm tree. The Ed Oyer farmstead is S of the monument, 1 mile E of the W limits of Linn County. Set flush with surface.
- 57-187 In Section 20, T-84-N, R-8-W, in NE corner of the intersection of County Roads "M" with "Z", 3.0' N of witness post, 3.5' NW of telephone pole #1 in Palo, - 34.8' SW of SW corner of store located on NE corner of intersection, 74.6' SE of SE corner of the Coast-to-Coast Store on NW corner of intersection.
- 57-188 In Section 20, T-84-N, R-8-W, 2.0' W of witness post, 13.8' NW of spike in corner post, 13.6' SW of a spike in post, and 4.0' W of E road fence along County Road "Z", 0.5 mile N of Palo.
- 57-189 In Section 20, T-84-N, R-8-W, 0.75 mile N of Palo on W side of County Road "Z", on N edge of grove on the Etta McCorkle farm, 2.0' SE of witness post, 7.3' NE of spike in 14" maple tree, 12.5' NW of spike in a 12" maple tree, 38.6' W of spike in corner post. Set flush with surface.
- 57-190 In Section 16, T-84-N, R-8-W, 1 mile N of Palo on County Road "Z", on E edge of S abutment of the 150' concrete bridge, 30.0' N of witness post.

57-100 In Section 8, T-84-N, R-8-W, in SE corner of Section, 2 miles N of Palo, 3.0' NW of witness post, 46' E of spike in telephone pole, 19.1' W of spike in corner post, 48.0' NW of spike in corner post, on NW corner of intersection between County Road "Z" and a dirt road, on right-of-way adjoining the Wm. H. Rehdir property, and 0.9 mile N of bridge.

Line 57-100 to 57-260

57-100 See above.

57-267 In Section 9, T-84-N, R-8-W, 2.3 miles N of Palo, 31.0' E of center line of County Road "Z", 73.5' SE of corner post at SE corner of yard fence, 94.5' S of the corner post at $S\frac{1}{4}$ section line corner post, 4.0' NW of witness post, on right-of-way adjoining the L. J. Schurtlift property.

57-266 In Section 4, T-84-N, R-8-W, 3.4 miles N of Palo, at curve on County Road "Z", 9.0' S of a 12" oak corner post at SE corner of intersection, 1.3' W of the E road fence, 3.0' SE of witness post, 153.0' NE of spike in corner post on W side of road at curve, on the right-of-way adjoining the Martha A. Melton property.

57-265 In Section 5, T-84-N, R-8-W, 0.5 mile W and 5 miles S of Center Point, on W side of County Road "Z"; 19.0' N of center line of private lane to the U. S. Mather residence, 29.0' NE of S gatepost to the Mather property, 18.0' NE of N gatepost to Mather residence; 5.6' E of witness post, 47.5' NE of corner post at NE corner of yard.

57-264 In Section 5, T-84-N, R-8-W, 0.5 mile W and 4.75 miles S of Center Point, 0.2 mile E of Church M. P., 63.0' NE of center line of County Road "Z", 29.0' NE of NE road fence, 29.3' NE of witness post, 36.5' E of E gatepost to the U.S. Mather property, 116.7' NW of spike in a 14" lone oak tree.

57-263 In Section 32, T-85-N, R-8-W, $\frac{5}{8}$ mile W and 3.75 miles S of Center Point, 437.0' S of S end of bridge #1867 over creek, 34.0' E of center line of County Road "Z", 39.5' S of S gatepost to entrance of field, 1.5' W of E road fence, 2.6' SE of witness post, on right-of-way adjoining the John Lewis property.

57-262 In Section 32, T-85-N, R-8-W, 0.75 miles W and 3.5 miles S of Center Point, on right-of-way adjoining the C. I. Lewis property, 43.0' N of the center line of County Road "Z", 81.5' W of corner post at extreme SW corner of yard fence of the Lewis property, 3.6' SE of witness post, 3.0' S of the N road fence, 81.0' NW of a 6" x 6" concrete post in S road fence at curve.

57-261 In Section 32, T-85-N, R-8-W, 1.25 miles W and 3.75 miles S of Center Point, at curve in County Road "Z", on right-of-way adjoining the R. B. Murray estate, 7.0' E of corner post at SE intersection, 1.8' N of S road fence, 30.0' S of the center line of road, 3.0' E of witness post, 75.0' E of N gatepost on W side of road.

57-260 See Page 20.

LOOP VII

Line 57-100 to MORRIS

57-100 See page 63.

57-99 In Section 9, T-84-N, R-8-W, on SW corner of $SE\frac{1}{4}$ of $SE\frac{1}{4}$, 2.5 miles N and 0.75 mile E of Palo, 22.3' N of spike in telephone pole, 46.2' E of spike in a corner post, 21.9' SW of spike in post, on E side of the road at the turn, on right-of-way adjoining the John Beatty property. Set flush with surface.

MORRIS Azimuth Mark: See page 15.

MORRIS: See page 15.

Line MORRIS to 57-96

MORRIS: See page 15.

57-97 In Section 14, T-84-N, R-8-W, in NE corner of $SE\frac{1}{4}$ of $SW\frac{1}{4}$, 0.5 mile S and 1.5 miles W of Toddville, - 0.5' N of S fence, 2.0' SE of witness post, 53.6' SW of a spike in corner post at SE corner of farm, 37.0' S of N fence, 52.6' SE of spike in 12" oak tree in farmyard, 83.5' SE of SE corner of S part of house.

57-96 In Section 14, T-84-N, R-8-W, in SE corner of NW $\frac{1}{4}$ of SE $\frac{1}{4}$, 1 mile W and 1 mile S of Toddville, on NW corner of road intersection, 42.8' W of spike in corner post, 16.3' N of spike in corner post, -20.2' SW of spike in corner post, 4.0' SE of witness post, 0.3 mile E of Feather Mound Schoolhouse #1, on right-of-way adjoining the Cedar Rapids National Bank property. Set flush with surface.

Line 57-96 to 57-147

57-96 See above.

57-155 In Section 13, T-84-N, R-8-W, 0.75 mile S and 0.75 mile W of Toddville, 1.5' W of witness post, 50.4' SE of an 8" oak tree with spike in it, 106.0' S of spike in a 34" cottonwood tree, 6.0' N of the fence line, between the E and N forks of a private drive which are at E edge of a grove next to drive, Set flush with surface.

57-154 In Section 13, T-84-N, R-8-W, in NW $\frac{1}{4}$, 0.5 mile S and 0.5 mile W of Toddville, 0.7' E of a fence, 6.0' N from bent spike in top of post, 2.5' NE of witness post, 20.0' N of spike in top of the fence post, 125.0' N of spike in corner post at intersection of N-S and E-W fences, about 40.0' W is a N-S fence going S from same E-W fence, 36.4' S of S gatepost of a wire field gate; cultivated land to the E of monument and wooded pasture to the W. Set flush with ground.

57-153 In Section 13, T-84-N, R-8-W, in center of the section, 0.5 mile S and 0.25 mile W of Toddville, 2.0' S of fence, 109.5' E of spike in corner post, 17.7' E of spike in fence post, 32.0' W of spike in fence post, 74.6' W of spike in corner post of intersection of E-W fence with one going N, about due N of E edge of grove to the S, on top of high hill in field. Set flush with the ground.

57-152 In Section 18, T-84-N, R-7-W, in center of the NW $\frac{1}{4}$, 0.5 mile E and 0.25 miles S of Toddville, -52.4' SE of spike in top of fence post, 22.6' E of N-S fence, 23.2' E of a witness post, 32.0' NE of bent spike in top of corner post at intersection of the N-S fence with fence going E; 24.3' N of E-W fence, S of set of farm buildings and just E of E fence around hog lot, on S side of road, -about 250.0' S of road. Buried 4" below surface.

- 57-151 In Section 7, T-84-N, R-7-W, on S side of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, 1 mile E of Toddville, 1.5' S of N fence, 2.0' SW of witness post, 6.0' SW of spike in top of corner post at intersection of E-W fence with one going N, 9.0' E of spike in telephone pole; 64.8' N of the corner post on S side of road intersection of the E-W fence with one going S, almost on a line with a prolongation of the N-S fence, at SE corner of an old orchard, about 0.4 mile W of Iowa Highway #11. Set flush with surface.
- 57-150 In Section 17, T-84-N, R-7-W, in NW corner, 1.25 miles E of Toddville, 86.0' SW of slab station #413- on Iowa Highway #11; 1.7' NW of corner post at SW corner of intersection, 1.8' N of S fence, 2.0' E of a witness post, 92.6' SE of spike in corner post at NW corner of intersection, 42.0' W of slab, on right-of-way adjoining the H. & S. Kine property, 0.45 mile W of Little Head Schoolhouse #5, on first hill W of schoolhouse. Set flush with surface.
- 57-149 In Section 8, T-84-N, R-7-W, in SE $\frac{1}{4}$ of SE $\frac{1}{4}$, E of Toddville 2 miles, 2.3' S of witness post, 26.8' E of SE corner of buildings, 80.5' N of spike in silo, -- 47.3' NW of spike in telephone pole, 65.0' SW of the E gatepost on N side of road, just W of field drive opposite farm drive, 0.6 mile E of Iowa Highway #11, 0.4 mile W of the Waterloo, Cedar Falls & Northern Railroad tracks, 0.15 mile E of Little Head Schoolhouse #5 on first rise E of schoolhouse. Set flush with surface.
- 57-148 In Section 9, T-84-N, R-7-W, in SE $\frac{1}{4}$, 3 miles E of Toddville, 1.8' N of witness post, 39.2' S of SE corner of the F. Thomas house, 51.0' SW of SW corner of combined garage and woodshed, 42.8' W of spike in a corner post which is also the W gatepost, 59.5' NW of W gatepost on S side of road, 0.7 mile W of Big Head Schoolhouse #9; 0.1 mile E of the Illinois Central Railroad tracks. Set flush with surface.
- 57-147 In Section 15, T-84-N, R-7-W, on N side of NE $\frac{1}{4}$, - 4 miles E of Toddville, 1.0' N of S fence, 7.45' NE of spike in telephone pole, 428.0' E of a large concrete post on S side of road just E of the Frazee Building, 49.3' S of concrete post on N side of the road marked by a cross half way up on E side of the post, 0.35 mile W of Dry Creek bridge and on first rise W of bridge, 0.2 mile E of Big Head Schoolhouse #9. Set flush with surface.

Line 57-147 to 57-275

- 57-147 See page 50.
- 57-283 In Section 10, T-84-N, R-7-W, 3.5 miles S and 1.5 miles W of Alburnett, 0.1 mile N of Big Head Schoolhouse #9; 72.6' N of steel corner post on the pasture fence, 2.0' W of E road fence, 2.8' NW of witness post, 35.4' E of center line of road, and on the right-of-way adjoining the J. W. Frazee property.
- 57-284 In Section 3, T-84-N, R-7-W, 1.5 miles W and 2.75 miles S of Alburnett, 1 mile N of Big Head Schoolhouse #9, 17.0' N of center line of farm drive to the Kate Blum property, 21.0' W of center line of road, 18.0' E of corner post at SE corner of yard around barn, 1.9' SE of witness post, 89.3' NE of face of a 48" maple tree S of barn.
- 57-285 In Section 3, T-84-N, R-7-W, 1.5 miles W and two miles S of Alburnett, on E side of Highway, 1.7 miles N of the Big Head Schoolhouse #9; 17.2' NW of NW corner of garage to the E. L. and H. H. Blackford residence, 22.6' NW of SW corner of the garage, 27.5' SW of corner post at NW corner of the orchard, 64.0' SE of corner post on W side of road, 3.0' NW of witness post, 180.0' SE of center line of the Illinois Central Railroad track at road crossing.
- 57-286 In Section 34, T-85-N, R-7-W, 1.5 miles W and one mile S of Alburnett, 3.5' NE of witness post, 25.0' W of center line of road, 56.3' W of spike in base of a 28" maple tree on E side of road, 56.9' SW of spike in base of a 26" maple tree, 56.6' NW of fence corner at NW corner of the John Karch yard, 157.0' S of corner post on W side of road, on the right-of-way adjoining the Wade Maier property.
- 57-287 In Section 27, T-85-N, R-7-W, 1.5 miles W of Alburnett, on NW corner of SE intersection island, 2.5' NW of witness post, 34.0' SE of intersection of highways, 62.0' E of spike in telephone pole at SW island at intersection, 85.9' NW of spike in telephone pole at SW end of SE curve, on line with S road fence running to E, 3.0' W of line of power poles running to N, 95.7' NW of large fence post on SE curve fence at intersection, 151.0' S of spike in power pole at NE curve of intersection.
- 57-288 In Section 28, T-85-N, R-7-W, 2.3 miles W of Alburnett, on first hill E of power sub-station, 2.0' S of N road fence, 2.3' SW of witness post, 29.0' N of

center line of road, 64.7' W of spike in power pole, on the right-of-way adjoining property of Edgar Lanning.

- 57-289 In Section 21, T-85-N, R-7-W, 1.25 miles E and 2.8 miles S of Alice, 25.0' E of center line of road, 2.2' SW of witness post, 2.7' W of E road fence, 137.7' N of spike in power pole, and 247.5' S of corner post on E fence line (concrete square corner post).
- 57-290 In Section 21, T-85-N, R-7-W, 1.25 miles E, and 2.6 miles S of Alice, 0.1 mile N of Church, 2.7' NE of witness post, 5.0' SE of SE corner of S concrete gatepost to barn drive, 18.5' SE of SE corner of N gatepost, 26.0' W of center line of road, 11.0' S of center line of drive to barns adjoining the Sarah Edna J. Meir farm buildings, and 2.0' S of N line of horse barn on the Meir farm.
- 57-291 In Section 21, T-85-N, R-7-W, 1.25 miles E, 2.05 miles S of Alice, 2.4' SW of witness post, 28.0' E of center line of road, 68.8' S of spike in second power pole S of road intersection, 59.8' E of W road fence, on right-of-way adjoining property of Emma W. Schmick.
- 57-292 In Section 17, T-85-N, R-7-W, 1 mile E and 1.95 miles S of Alice, by the C. Helbig residence, 3.2' NE of witness post, 9.0' SE of S gatepost to the Helbig residence; 37.3' S of third power pole N of road intersection; 13.0' NE of NE corner of wash house to the Helbig residence, 8.0' NE of corner post at SE corner of the Helbig yard, and 26.0' W of center line of the road.
- 57-293 In Section 9, T-85-N, R-7-W, 1 mile E and 1 mile S of Alice, 1.5' SW of witness post, 1.8' W of E road fence, 27.0' E of center line of road, 173.5' NE of a spike in second power pole N of road intersection, on right-of-way adjoining the property of Wm. H. Ritz.
- 57-275 See page 26.

LOOP VIII

Line 57-147 to 57-142

- 57-147 See page 50.
- 57-146 In Section 11, T-84-N, R-7-W, 4.5 miles E of Toddville, 4.8' S of N fence line; 207.5' SE of East

gatepost into the farmyard, fence on N side of road is all steel, one on S side has wooden posts, both have woven wire; about 0.7 mile W of County Road "T", 221.5' SE of W gatepost into farmyard; 724.0' NW of cross in NW corner of N headwall of concrete culvert, with a Linn County Level B.M. #686, and with a #1919 on it, (probably a date); and 0.8 mile E of the Big Head Schoolhouse.

- 57-145 In Section 14, T-84-N, R-7-W, 3.5 miles N and 1.25 miles W of Marion, set just E of a field drive, 1.95' NE of E gatepost, 59.6' S of spike in a 30" maple tree (W one), 96.95' SW of spike in a 30" maple tree next to W, 95.0' SW of corner post in SW corner of house yard, about 250.0' W of County Road "T", 2.9' W of a witness post, 3.5 miles W of County Home, opposite the J. F. Bedham farm buildings, 1.5' mile E of the Big Head Schoolhouse #9. Set flush with ground.
- 57-144 In Section 13, T-84-N, R-7-W, 3.5 miles N of the N city limits of Marion and 0.75 mile W; 54.8' E of a spike in telephone pole connected with farmhouse, 2.0' E of witness post, 0.8' N of S steel fence, 64.9' SW of spike in a 10" walnut tree, 3.2 miles W of the County Home. Set flush with surface.
- 57-143 In Section 12, T-84-N, R-7-W, in SE corner, 3.5 - miles N of Marion, 1.2' S of N white board fence; 2.7' NW of witness post, 97.0' SW of NW corner post at the road intersection, 122.2' NW of SW corner post at the road intersection, 82.1' NE of the H. S. Beach mail box, 72.4' SE of a 12" walnut tree in farmyard, and 2.5 miles W of County Home. Set flush with surface.
- 57-142 In Section 7, T-84-N, R-6-W, 3.5 miles N of the N city limits of Marion, 2.15 miles W of the Linn County Home, 8.2' N of N road fence, 23.8' NE of a spike in the telephone pole, 66.8' NW of spike in a power pole, 139.1' SW of spike in blaze of a maple tree on NW corner of grove, on the J. B. and Oliver M. Emmens property. Set 6" above surface.

Line 57-142 to 57-195

- 57-142 See above
- 57-191 In Section 17, T-84-N, R-6-W, about 4 miles N of Marion, 1.25 miles W of the Linn County Home, 5.4' NW of spike in fifth power pole E of road intersection, 7.0' N of S road fence, and 2.0' NE of witness post.

- 57-192 In Section 8, T-84-N, R-6-W, about 4 miles N and 0.25 mile E of Marion on N side of road, 1 mile W of the Linn County Home, 17.9' W of spike in telephone pole, 76.6' NE of NE corner of the Sarah Scott residence (main part of house), 34.5' SE of corner post. Set flush with surface.
- 57-193 In Section 17, T-84-N, R-6-W, about 4 miles N of NE corner of Marion, 0.6 mile W of Linn County Home, on the Sarah E. Scott property, 157.1' SW of SW of base of inclined end cord of the Indian Creek bridge, 13.6' SE of spike in second power pole W of bridge, 1.0' N of S road fence, 2.7' SE of witness post.
- 57-194 In Section 16, T-84-N, R-6-W, about 4 miles NE of Marion, 0.15 mile W of Linn County Home, on the right-of-way adjoining the Linn County Farm, 126.9' SE of spike in trunk of second lone tree W of Iowa Highway #13 (double-trunk 16" wild cherry tree), - 13.2' E of spike in ninth power pole W of Iowa Highway #13; 3.0' SW of witness post, and 7.5' N of S road fence.
- 57-195 In Section 9, T-84-N, R-6-W, about 4.5 miles W of Whittier, at Linn County Home corner, on property of H. M. Carpenter, 26.2' W of W edge of the pavement slab, opposite pavement station #266 +75'; on Iowa Highway #13, 4.2' W of witness post, and 3.2' W of W road fence.
- Line 57-195 to 57-201
- 57-195 See above
- 57-196 In Section 9, T-84-N, R-6-W, about 4.5 miles W and 0.5 mile N of Whittier, 0.5 mile N of the Linn County Home, opposite pavement station #290 + 85', on Iowa Highway #13; 13.3' E of E edge of pavement slab, 33.3' W of spike in a 10" oak corner post on $\frac{1}{4}$ section line, and 3.2' NW of witness post.
- 57-197 In Section 4, T-84-N, R-6-W, 3.5 miles E, 2.25 miles S of Alburnett, 1.3 miles N of Linn County Home, opposite pavement station #331 + 85', on Iowa Highway #13; 9.6' W of W edge of pavement slab, - 57.2' S of spike in base of a 24" elm tree, and 3.3' NE of witness post.

- 57-198 In Section 33, T-85-N, R-6-W, about 3.5 miles E of Alburnett, 2.65 miles N of the Linn County Home, - opposite pavement station #406 + 81.2'; on Iowa Highway #13; 9.0' E of E edge of pavement slab, 70.1' NW of double spike in ninth telephone pole, N of $\frac{1}{4}$ section line, 13.3' W of E road fence, 3.1' NW of a witness post.
- 57-199 In Section 28, T-85-N, R-6-W, about 3.5 miles E of Alburnett, 3 miles N of the Linn County Home on NW intersection, opposite pavement station #424 + 40', on Iowa Highway #13; 44.5' W of W edge of pavement slab, 2.0' NE of spike in corner post at NW intersection, - 3.3' S of a witness post.
- 57-200 In Section 21, T-85-N, R-6-W, about 3.5 miles E of Alburnett, 4 miles N of Linn County Home, opposite pavement station #480 + 27', on Iowa Highway #13, --- 12.8' E of E edge of pavement slab, 2.4' NW of witness post. Set 4" above surface.
- 57-201 See page 34.

LOOP IX

Line 57-195 to 57-330

- 57-195 See page 54.
- 57-325 In Section 9, T-84-N, R-6-W, 4.25 miles W of Whittier, 0.3 mile E of the Linn County Home, on the first rise E of Iowa Highway #13, 2.0' S of witness post, 7.3' SE of corner post, 31.0' N of the center line of road, 2.5' S of N road fence, 139.0' W of a spike in 14" wild cherry tree in N fence line.
- 57-326 In Section 15, T-84-N, R-8-W, on $W\frac{1}{4}\frac{1}{4}$ section line of Section 15; 3.75 miles W of Whittier, 0.75 mile E of the Linn County Home, on S side of road, 2.7' NE of witness post, 5.4' N of corner post on $W\frac{1}{4}\frac{1}{4}$ section line fence to S, 49.6' S of corner post at $W\frac{1}{4}\frac{1}{4}$ section line fence to N, 112.8' SW of the SW corner of the T. F. and E. L. Kahler residence, on the right-of-way adjoining property of Ezekial Bowen.
- 57-327 In Section 10, T-84-N, R-6-W, 3.25 miles W of Whittier, 1.4 miles E of Linn County Home, at the entrance to the B. O'Conner farm, 2.8' SE of a witness post, 112.6' SE of E leg of windmill on the B. O'Conner farm, 9.0' W of center line of the farm

drive to the O'Conner farm, 19.0' N of center line of road, 86.0' E of E gatepost to the O'Conner residence, and 18.2' W of E corner post S of barn.

57-328 In Section 13, T-84-N, R-6-W, 2 miles W of Whittier, 2.6 miles E of Linn County Home, opposite the Arthur L. Hage farm buildings, on line with E side of the Hage barn, in a cultivated field on the J. S. Begely property, 15.3' S of witness post, 13.9' S of S road fence, 35.0' S of center line of road, 79.7' SE of spike in base of a 3.0' maple tree at entrance of yard, 93.5' SE of W gate post to the Hage farm drive. Set 1.4' below surface.

57-329 In Section 12, T-84-N, R-6-W, 1.4 mile W of Whittier, opposite the David Shellhammer home, 60.5' NE of spike in a 20" maple tree on S side of road, 144.0' W of W gatepost to field drive opposite the Shellhammer home, 167.1' NW of E gatepost to the D. Shellhammer front drive, on right-of-way adjoining property of D. Shellhammer, 20.0' N of center line of road, 2.0' S of witness post, and 2.4' S of N road fence.

57-330 In Section 13, T-84-N, R-6-W, 1.1 mile W of Whittier, on first rise W of road intersection, 2.0' N of S road fence, 2.0' NE of witness post, 21.0' S of the center line of road, on right-of-way adjoining J. T. White's property.

Line 57-330 to 57-5071

57-330 See above

57-3585 In Section 8, T-84-N, R-5-W, in SW corner of NW $\frac{1}{4}$, 0.5 mile N of Whittier, in E road ditch under branches of row of pine trees, about 19.0' NE of E $\frac{1}{4}$ of Section 7; 51.0' E of W right-of-way fence, 22.5' SW of pine trees E of right-of-way fence, 7.0' SW of first pine tree from N; 6.0' W of the second pine tree from N, - 11.0' NW of third pine tree from N. Set flush with surface.

57-3586 In Section 5, T-84-N, R-5-W, in SW corner, 1 mile N of Whittier, on high bank from road, about 263.0' N in center line of road from NE corner of Section 7; 1.0' W of E right-of-way fence, 63.0' E of W right-of-way fence, and 64.0' E of telephone pole. Set flush with surface.

- 57-5084 In Section 19, T-85-N, R-5-W, near SE corner SE $\frac{1}{4}$, 0.5 mile S of farm house, 0.5 mile E of farmhouse, -- 1.2' E of fence N-S, 19.3' N of fence E; 467.4' N of N road fence E-W, 300' W of W road fence N-S; 83.0' SW of a 24" maple tree and 64.4' SW of 30" maple tree.- Set flush with surface, 1 mile S of Waubeek.
- 57-5083 In Section 19, T-85-N, R-5-W, SE corner of NE $\frac{1}{4}$; - 0.5 mile S of Waubeek, 300' W of farmhouse, 0.5 mile S of town, 103.4' S of 14" pine tree, 69.9' SW of the NW corner of an old house, 44.8' SW of SW corner of old house, 423.3' W of W road fence, 149.5' NW of end post in fence S, and 116.2' N of $\frac{1}{4}$ fence E-W. Set flush with surface.
- 57-5071 See page 36.
- LOOP X.
- Line 57-330 to 57-336
- 57-330 See page 56.
- 57-331 In Section 7, T-84-N, R-5-W, 0.1 mile W of Whittier, 2.0' SE of witness post, 20.0' N of center line of road, 7.0' W of center line to drive of the S. Root home, 43.5' W of corner post on NW corner of yard, on line with E edge of N hedge row to S. Root home
- 57-332 In Section 17, T-84-N, R-5-W, 0.5 mile E of Whittier, opposite the J. W. Hampton home, 3.0' NE of witness post, 2.5' N of S road fence, 26.0' S of center of road, 44.9' E of corner post at NW corner of the J. W. Hampton yard, 71.8' SE of corner post at drive to the Esther Coppock residence, 76.8' W of W gatepost to the Hampton residence.
- 57-333 In Section 16, T-84-N, R-5-W, 1.3 miles N of Springville on E side of County Road "C", 7.0' NW of a witness post, 24.4' NW of corner post at NW corner of garden, 9.0' S of center line to drive of the Berlin residence, 107.5' SW of SW corner of Berlin house, 30.0' S of power pole on E side of road. Set in drive at S curve.
- 57-334 In Section 29, T-84-N, R-5-W, at N edge of city limits of Springville, 8.0' E of E edge of the sidewalk on W side of street on County Road "C", 66.3' NE of NE corner of house on W side of street and second house S of N city limits, 59.7' SW of anchor bolt on

drive to the O'Conner farm, 19.0' N of center line of road, 86.0' E of E gatepost to the O'Conner residence, and 18.2' W of E corner post S of barn.

57-328

In Section 13, T-84-N, R-6-W, 2 miles W of Whittier, 2.6 miles E of Linn County Home, opposite the Arthur L. Hage farm buildings, on line with E side of the Hage barn, in a cultivated field on the J. S. Begely property, 15.3' S of witness post, 13.9' S of S road fence, 35.0' S of center line of road, 79.7' SE of spike in base of a 3.0' maple tree at entrance of yard, 93.5' SE of W gate post to the Hage farm drive. Set 1.4' below surface.

57-329

In Section 12, T-84-N, R-6-W, 1.4 mile W of Whittier, opposite the David Shellhammer home, 60.5' NE of spike in a 20" maple tree on S side of road, 144.0' W of W gatepost to field drive opposite the Shellhammer home, 167.1' NW of E gatepost to the D. Shellhammer front drive, on right-of-way adjoining property of D. Shellhammer, 20.0' N of center line of road, 2.0' S of witness post, and 2.4' S of N road fence.

57-330

In Section 13, T-84-N, R-6-W, 1.1 mile W of Whittier, on first rise W of road intersection, 2.0' N of S road fence, 2.0' NE of witness post, 21.0' S of the center line of road, on right-of-way adjoining J. T. White's property.

Line 57-330 to 57-5071

57-330

See above

57-3585

In Section 8, T-84-N, R-5-W, in SW corner of NW $\frac{1}{4}$, 0.5 mile N of Whittier, in E road ditch under branches of row of pine trees, about 19.0' NE of E $\frac{1}{4}$ of Section 7; 51.0' E of W right-of-way fence, 22.5' SW of pine trees E of right-of-way fence, 7.0' SW of first pine tree from N; 6.0' W of the second pine tree from N, 11.0' NW of third pine tree from N. Set flush with surface.

57-3586

In Section 5, T-84-N, R-5-W, in SW corner, 1 mile N of Whittier, on high bank from road, about 263.0' N in center line of road from NE corner of Section 7; 1.0' W of E right-of-way fence, 63.0' E of W right-of-way fence, and 64.0' E of telephone pole. Set flush with surface.

- 57-5084 In Section 19, T-85-N, R-5-W, near SE corner SE $\frac{1}{4}$, 0.5 mile S of farm house, 0.5 mile E of farmhouse, -- 1.2' E of fence N-S, 19.3' N of fence E; 467.4' N of N road fence E-W, 300' W of W road fence N-S; 83.0' SW of a 24" maple tree and 64.4' SW of 30" maple tree.- Set flush with surface, 1 mile S of Waubeek.
- 57-5083 In Section 19, T-85-N, R-5-W, SE corner of NE $\frac{1}{4}$; - 0.5 mile S of Waubeek, 300' W of farmhouse, 0.5 mile S of town, 103.4' S of 14" pine tree, 69.9' SW of the NW corner of an old house, 44.8' SW of SW corner of old house, 423.3' W of W road fence, 149.5' NW of end post in fence S, and 116.2' N of $\frac{1}{2}$ fence E-W. Set flush with surface.
- 57-5071 See page 36.
- LOOP X.
- Line 57-330 to 57-336
- 57-330 See page 56.
- 57-331 In Section 7, T-84-N, R-5-W, 0.1 mile W of Whittier, 2.0' SE of witness post, 20.0' N of center line of road, 7.0' W of center line to drive of the S. Root home, 43.5' W of corner post on NW corner of yard, on line with E edge of N hedge row to S. Root home
- 57-332 In Section 17, T-84-N, R-5-W, 0.5 mile E of Whittier, opposite the J. W. Hampton home, 3.0' NE of witness post, 2.5' N of S road fence, 26.0' S of center of road, 44.9' E of corner post at NW corner of the J. W. Hampton yard, 71.8' SE of corner post at drive to the Esther Coppock residence, 76.8' W of W gatepost to the Hampton residence.
- 57-333 In Section 16, T-84-N, R-5-W, 1.3 miles N of Springville on E side of County Road "C", 7.0' NW of a witness post, 24.4' NW of corner post at NW corner of garden, 9.0' S of center line to drive of the Berlin residence, 107.5' SW of SW corner of Berlin house, 30.0' S of power pole on E side of road. Set in drive at S curve.
- 57-334 In Section 29, T-84-N, R-5-W, at N edge of city limits of Springville, 8.0' E of E edge of the sidewalk on W side of street on County Road "C", 66.3' NE of NE corner of house on W side of street and second house S of N city limits, 59.7' SW of anchor bolt on

- 57-3588 In Section 6, T-84-N, R-5-W, NE corner of SE $\frac{1}{4}$; 1.5 miles N of Whittier, on W side of road on E side of the right-of-way fence, 472.5' S in center line of road -- from E $\frac{1}{4}$ of Section 6; 2.0' E of W right-of-way fence, - 56.0' W of E right-of-way fence, 79.0' NE of NE corner of house. Set flush with surface.
- 57-3589 In Section 32, T-85-N, R-5-W, in SW corner; 2 miles N of Whittier, on E side of E right-of-way fence N of township line, about 275.0' N in center line of the road from NE corner of Section 6, T-84-N, R-5-W, 1.0' E of E right-of-way fence, 66.0' E of W right-of-way fence, 65.7' NE of telephone pole, and 1030' SE of S gatepost. Set flush with surface.
- 57-3593 In Section 31, T-85-N, R-5-W, SE corner of NE $\frac{1}{4}$; -- 2.5 miles N of Whittier, on E side of W right-of-way fence of red gravel road, about 32.0' NW of E $\frac{1}{4}$ of Section 31; 1.4' E of W right-of-way fence, 73.0' SW of a corner post, 8.0' NE of corner post $\frac{1}{4}$ section line W, - and 43.0' NE of a 24" maple tree. Set flush with the surface.
- 57-5087 In Section 32, T-85-N, R-5-W, near NW corner - SW $\frac{1}{4}$ of NW $\frac{1}{4}$; 2.25 miles S of Waubeek, about 1500' S of the schoolhouse, 1200' N of intersection road to E; 120.8' E of NE corner of house, 138.8' SE of fence corner NE corner of lawn, 110.0' S of fence E, 411.0' S of $\frac{1}{4}$ $\frac{1}{4}$ fence E-W and 12.8' NE of SE corner of lawn. Set flush with surface.
- 57-5086 In Section 30, T-85-N, R-5-W, near SE corner - SE $\frac{1}{4}$; 2 miles S of Waubeek; about 400' N of intersection of road, 200' N of a farmhouse, 6.8' E of W road fence, - 60.8' W of corner post E road fence, 114.8' NW of the NW corner of house, 94.8' NW of a 30" maple tree, 61.5' N of corner post fence to W, 405.0' N of N road fence E-W, 272.0' N of line of N school fence. Set flush with surface.
- 57-5085 In Section 29, T-85-N, R-5-W, SW corner of NW $\frac{1}{4}$ of NW $\frac{1}{4}$; 1.25 miles S of Waubeek, about 600' SW of a farmhouse, 1000' S of road to W, 58.3' E of W road fence, - 248.2' SE of S gatepost W road fence, 83.0' S of corner post fence E, 7.8' W of E road fence, 47.8' NW of telephone pole, 901.5' S of S road fence to W, 397.0' N of $\frac{1}{4}$ $\frac{1}{4}$ fence to E; 421.0' N of line, N side of house on W side of road; 10.5' W of E road fence (slope distance). Set flush with surface.

SW leg of the Springville water tower, and 68.8' SW of anchor bolt on NW leg of water tower.

57-335 In Section 29, T-84-N, R-5-W, in Springville, - about 300' N of bridge #2152, at S side of Springville, 5.5' E of E edge of sidewalk on W side of the street, on County Road "C", 39.2' E of NE corner of first house N of bridge on W side of street, 21.0' S of center line of drive on W side of street, 28.7' SE of spike in a 28" maple tree on W side of street, on line with N side of first house NW of the bridge.

57-336 In Section 28, T-84-N, R-5-W, in Springville, - 108.3' W of SW corner of Stage Coach Inn, 13.0' N of N edge of pavement, on U. S. Highway #151; 5.5' S of S edge of sidewalk on N side of the street, 54.4' SE of SW corner of house with limestone foundation, on N side of the street, 20.0' E of line with E truss of the bridge.

Line 57-336 to 57-5041

57-336 See ~~page~~ above.

57-5047 In Section 28, T-84-N, R-5-W, near SW corner of NE $\frac{1}{4}$ of SW $\frac{1}{4}$, in Springville, about 0.25 mile E of the business district, 135.9' SE of an 8" cedar tree, -- 100.0' S of a power pole, 25.8' S of S edge of pavement, 69.9' NW of telephone pole, 31.6' NW of W cemetery gatepost, E gate; 19.0' N of N cemetery fence, E gate to W gate; 18.0' N of telephone pole #2; 38.6' NE of E cemetery gatepost, W gate. Set flush with the surface.

57-5046 In Section 28, T-84-N, R-5-W, near center line of S edge of SW $\frac{1}{4}$ of NE $\frac{1}{4}$, 0.5 mile NE of Springville, at top of first hill NE of the cemetery, 8.6' S of S edge of pavement, about 1000' NE of cemetery, 142.9' SE of power pole, 208.2' SW of power pole, 27.0' E of line of fence to S, and 44.0' NW of a large flat boulder. Set level with surface.

57-5045 In Section 28, T-84-N, R-5-W, near center line of E edge of SE $\frac{1}{4}$ of NE $\frac{1}{4}$, 1 mile NE of Springville, about 300' NE of a farmhouse, S side of road, and 200' SE of farmhouse on N side of road, 21.5' S of S edge of the pavement, 3.0' N of S highway fence, 105.2' E of telephone pole, 116.7' SE of an 18" hard maple tree, 68.2' S of a 20" soft maple tree, 66.8' NW of corner post on E road fence S, 58.4' NW of NW corner of windmill

tower, and 7.6' W of concrete corner post of W road fence S. Set flush with surface.

- 57-5044 In Section 27, T-84-N, R-5-W, near the SE corner of $NE\frac{1}{4}$ of $NW\frac{1}{4}$, 1.5 miles NE of Springville, about 300' W of center line N-S of Section 27; 137.0' NE of corner post fence to S, 48.3' S of power pole, 72.0' NW of power pole #E-44; 102.0' NW of the NE corner of a house, 96.6' N of NW corner of house, 6.8' N of the N edge of pavement, and 142.7' SW of the power pole transformer. Set flush with surface.
- 57-3487 In Section 26, T-84-N, R-5-W, in NE corner of $NW\frac{1}{2}$ of $NW\frac{1}{4}$, 2.25 miles E of Springville, on U. S. Highway #151 on the N shoulder of highway, about 1400' E of NE corner of Section 27; 45.9' SW of steel corner post, 49.0' NW of steel corner post, 6.7' N of cross in pavement, 40.0' SW of a 10" elm tree, and 87.1' NW of a telephone pole #7 E-54. Set 1" below surface.
- 57-5042 In Section 23, T-84-N, R-5-W, near NE corner of $SE\frac{1}{4}$ of $SE\frac{1}{4}$, 3 miles NE of Springville, about 700' NE of a farmhouse, 300' S of a farmhouse, 39.8' SW of corner post E lane fence N; 21.3' SW of steel corner post W lane fence N; 37.3' SE of telephone pole, 22.9' NW of 40" white maple tree, 125.2' NW of telephone pole #9 E-62; 50.6' N of N edge of pavement. Set flush with surface.
- 57-5041 In Section 24, T-84-N, R-5-W, near NW corner of $SE\frac{1}{4}$, 0.5 mile SW and 2 miles W of Fairview, about 800' W of a farmhouse, and 1500' SE of a farmhouse; 95.5' W of fence corner to the N, 266.3' W of a 40" white maple tree, 133.8' NW of fence corner of fence to S, 106.1' NW of telephone pole #6; 289.8' NE of telephone pole #5.5; 536.0' E of $\frac{1}{4}$ fence to S. Set flush with surface.
- Line 57-5041 to 57-5061
- 57-5041 See above.
- 57-5043 In Section 24, T-84-N, R-5-W, near NW corner of $NE\frac{1}{4}$ of $SW\frac{1}{4}$, 3.25 miles NE and 0.25 mile N of Springville, about 1000' SE of a farmhouse, 1000' N of U.S. Highway #151; 245.7' S of the $\frac{1}{4}$ fence E-W; 15.9' E of E road fence, 57.3' E of W road fence, 103.6' SE of telephone pole, 34.7'

SE of an 8" red cedar fence post, 70.1' NE of telephone pole, and 33.4' NE of an 8" hedge fence post. Buried 14" below surface.

- 57-5048 In Section 13, T-84-N, R-5-W, near SE corner of SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 0.5 mile SE and 0.75 mile S of Viola, about 500' N of intersection of road to W, 300' SE of farmhouse, 0.8' N of fence to W, 13.0' W of a W road fence, 56.3' W of E road fence, 96.8' S of the S gatepost, 80.9' S of a 30" white maple tree, 121.6' S of N lane fence to W, 139.3' SW of telephone pole and 68.0' NW of telephone pole. Set flush with the surface.
- 57-5049 In Section 13, T-84-N, R-5-W, near NE corner of NW $\frac{1}{4}$ of SW $\frac{1}{4}$, 0.25 mile SE and 0.25 mile S of Viola, 0.8' S of $\frac{1}{4}$ fence to W, 110.6' SW of telephone pole W road fence, 15.8' W of fence corner, 61.0' W of E road fence, 66.1' NW of telephone pole #9; 188.6' NW of a 20" elm tree. Set flush with surface.
- 57-3456 In Section 13, T-84-N, R-5-W, in SW corner of NW $\frac{1}{4}$, 0.5 mile S of Viola, on E side of section line of E $\frac{1}{4}$ corner of Section 14, T-84-N, R-5-W, 1.0' E of section line, 103.2' S of S gatepost, and 226.7' NE of corner post. Top set flush with surface.
- 57-3457 In Section 14, T-84-N, R-5-W, in NE corner, - on N side of Viola, on W side of road S of drive to house, about 60.0' SW of NE corner of Section 14, - 79.2' SW of corner post of section line E, 82.6' E of NE corner of house, and 117.7' N of power pole.. Top set 1" below surface.
- 57-3463 In Section 11, T-84-N, R-5-W, on E side of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, 0.15 mile N of Viola, about 900' N of the NE corner of Section 14; 1.3' E of W right-of-way fence, 115.4' N of corner post road NW from N-S road, 52.0' SE of SE corner of house, and 53.6' SW of power pole. Top set flush with surface.
- 57-3464 In Section 12, T-84-N, R-5-W, in NW corner of SW $\frac{1}{4}$, 0.4 mile N of Viola, 493.0' S in center line of road from E $\frac{1}{4}$ of Section 11; 1.3' W of E road fence, on high bank 69.7' E of W road fence, 68.9' NE of a power pole, 86.0' S of a power pole, and 274.3' N of the lane corner post. Top set flush with surface.
- 57-3467 In Section 11, T-84-N, R-5-W, on E side of NE $\frac{1}{4}$ of NE $\frac{1}{4}$, 0.87 mile N of Viola, about 500' S of the NE corner of Section 11; 2.5' W of W right-of-way fence,

95.2' SW of power pole brace pole, 84.3' NW of a power pole, and 256.0' N of farm fence W. Set 2" above surface.

57-3471 In Section 1, T-84-N, R-5-W, on W side of NW $\frac{1}{4}$ of SW $\frac{1}{4}$, 1.38 miles N of Viola, about 900' S of $\frac{1}{4}$ corner of Section 2; 23.0' E of E right-of-way fence, 68.6' E of W right-of-way fence, and 104.0' SE of an 8" box elder tree. Set 1.0' below surface.

57-3478 In Section 36, T-85-N, R-5-W, in NW corner of SW $\frac{1}{4}$, 2.5 miles N of Viola, on W side of a cut timber pasture, about 0.5 mile N of NE corner of Section 2, T-84-N, R-5-W, 341.0' E of E right-of-way fence, 157.5' E of farm fence, 206.0' S of a farm fence, and 22.0' SW of a cottonwood stump.

57-5050 In Section 36, T-85-N, R-5-W, near center-line of NW $\frac{1}{4}$, about 1000' NE of the Wapsipinicon River bridge, 1300' SE of a farmhouse, 210.8' SE of fence corner fence to E, 118.5' S of fence to the E, 53.5' W of an 8" pin oak tree, 17.4' NW of a 14" elm tree, 16.8' N of an 8" cherry tree, and 83.9' E of a 10" pin oak tree. Set flush with the surface, 2.5 miles N of Viola.

57-5051 In Section 36, T-85-N, R-5-W, near center of NW $\frac{1}{4}$ of NW $\frac{1}{4}$, 2.75 miles N of Viola, about 700' N of a farmhouse, 1000' NE of river bridge, 12.8' E of W road fence, 62.0' SW of an 8" black oak tree, 54.7' NW of E end of stone abutment, 64.5' NW of a cross in E abutment, 59.3' N of Linn County elevation marker #2078, and 135.3' NE of a 20" oak tree.

57-5052 In Section 25, T-85-N, R-5-W, near SE corner of SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 3 miles N of Viola, about 1300' S of the cemetery, 2000' N of farmhouse, 87.0' E of W road fence, 21.8' SE of a 16" oak tree, 22.3' SW of an 18" oak tree, 17.2' W of an 18" oak tree, and 27.5' NW of a 14" oak tree.

57-5053 In Section 25, T-85-N, R-5-W, near NE corner of SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 3.25 miles N of Viola, about 300' SE of bend in the road, 2000' N of a farmhouse, 180.0' E of W road fence, 83.1' E of concrete post SW corner of cemetery, 84.0' E of the first post NW cemetery fence, 69.0' W of concrete post in SE corner of cemetery, 171.9' SW of SW corner of tool house, and 1.7' N of S cemetery fence.

- 57-5054 In Section 26, T-85-N, R-5-W, near NE corner of SE $\frac{1}{4}$, 3.25 miles N and 0.25 mile NW of Viola, 1300' NW of the cemetery, 1300' SE of a farmhouse, 3.0' N of S road fence, 7.6' NW of fence post, 336.0' SE of fence corner in fence to E, 58.0' S of N road fence, 10.4' N and about 25° E of blaze in a 4" poplar tree, and about 0.2 mile SE of a T-road intersection.
- 57-5055 In Section 26, T-85-N, R-5-W, near center line of NW $\frac{1}{4}$ of NE $\frac{1}{4}$, 3.25 miles N of Viola, then NW to intersection of County Road, $\frac{3}{8}$ mile N, about 700' SW of a farmhouse, 2000' NW of a farmhouse, 56.5' N of fence corner fence to E, 709.0' N of $\frac{1}{4}$ $\frac{1}{4}$ fence E-W, 591.5' S of S road fence E-W, 654.5' W of W road fence N-S, and 1.0' W of fence N-S.
- 57-5056 In Section 22, T-85-N, R-5-W, near NE corner of NE $\frac{1}{4}$, 1.5 miles NE of Waubeek from County Road "C" to intersection, then 2.75 miles SE to intersection of a road S., about 2000' SE of the Burlingham Schoolhouse #1; 1000' W of a farmhouse, 1.2' N of N garden fence, 51.0' E of NE corner of house, 60.0' SW of a 30" burr oak tree, 89.7' SW of a 16" elm tree, 62.5' W of a 12" elm tree, 61.7' W of a corner post in NE corner of the garden W road fence, 13.0' SW of 15" elm tree (Redhead) 28.3' E of corner post at NW corner of garden, 10.2' W of fence post, and 10.7' E of fence post. Set flush with surface.
- 57-5057 In Section 15, T-85-N, R-5-W, near center line of S edge of NW $\frac{1}{4}$ of SE $\frac{1}{4}$, 1.5 miles NE from County Road "C" on County Road "V" to intersection, then 2.25 miles SE of Waubeek, about 1300' S of farmhouse, 500' N of a bend in road to E, 122.2' NW of E gatepost on S side of road, 100.4' N of telephone pole on S side of E-W road, 116.8' E of a 20" oak tree, 107.4' SE of SE corner of schoolhouse, 82.7' S of a 20" oak tree, 85.1' S of the end of the concrete walk and 17.3' NW of flagpole. Set flush with surface.
- 57-5058 In Section 15, T-85-N, R-5-W, near SE corner of NW $\frac{1}{4}$, 1.5 miles NE from Waubeek from County Road "C", 2 miles SE on County Road "V", about 700' W of farmhouse N of road, 500' NW of farmhouse S of road, 493.5' NW of NE corner of brick hog barn, 91.0' N of S road fence, -196.8' NE of corner post fence to S, 323.0' E of a 20" black oak tree, 425.0' W of corner post fence to N, --23.9' N of N road fence. Buried 14" deep.
- 57-5059 In Section 15, T-85-N, R-5-W. near SW corner of NE $\frac{1}{4}$ of NW $\frac{1}{4}$, 1.5 miles NE of Waubeek from County Road C,

1.75 miles SE to intersection of County Road "E", about 1300' E of bend in road, 2700' NE of school house, 98.1' N of S road fence, 142.9' SE of windmill, 55.0' SE of a 14" hard maple tree, 112.7' S of SE corner farmhouse, 21.0' W of steel corner post, and 112.4' NW of corner post. Set flush with surface.

57-5060 In Section 15, T-85-N, R-5-W, near the center line of NW $\frac{1}{4}$ of NW $\frac{1}{4}$, 1.5 miles NE of Waubeek, - from County Road "C" on County Road then 1.5 miles SE, about 250' NW of farmhouse, 300' S of intersection of County Roads "B" and "V", 12.8' NW of N gatepost, 239.2' NW of farm garage, 144.9' SE of a 24" oak tree, 67.2' SW of an 8" oak tree, 64.0' W of E road fence, 94.6' W of a 16" oak tree, and 1.6' W of the W road fence. Set flush with surface.

57-5061 See page 38.

LOOP XI

OLSON to 57-60

OLSON: See page 17.

6-110 In Section 28, T-83-N, R-9-W, 2 miles S and 3 miles W of Atkins, 1.9' SE of witness post, 4.7' S of N fence, 20.2' N of N edge of pavement, 68.4' NE of pavement station #1045, and 58.5' NW of the pavement station #1044.

6-100 In Section 33, T-83-N, R-9-W, 2 miles S and 2 miles W of Atkins, 2.5' N of S fence, 2.5' NE of witness post, 20.6' S of S edge of pavement, 21.1' SW of pavement station #1069; 17.9' E of spike in power pole with wires connecting the D.C. Christenson house on N side of the road. Set 2" above surface.

6-89 In Section 27, T-83-N, R-9-W, 2 miles S and 1 mile W of Atkins, 4' SE of witness post, 10.2' S of N fence, 13.7' N of N edge of pavement, 141.6' NE of pavement station #1125, in ditch just E of a farm drive, 23.9' SE of spike in a 36" cottonwood tree. Set 4" above surface.

6-78 In Section 35, T-83-N, R-9-W, about 2 miles S of Atkins, 2.4' NE of white witness post, 245.1' SE of pavement station #1171; 55.8' SW of pavement station #1174; 13.6' S of pavement on U.S. Highway #30.

- 6-171 In Section 25, T-83-N, R-9-W, on S side and center of $SE\frac{1}{4}$, 2 miles S of Atkins, 2.1' SE of witness post, 87.0' NE of pavement station #1228; 226.1' NW of pavement station #1231; 8.5' S of N fence, 15.4' N of the pavement, in ditch. Set flush with surface.
- 57-60 In Section 30, T-83-N, R-8-W, 3.0 miles N and 2.5 miles W of Fairfax, 403' E of Benton County Line on U.S. Highway #30, 372' E of corner post in NE corner of intersection, 33.0' N of center line of pavement, 1.7' S of fence line, 8.6' E of second telephone pole from the corner on N side of Highway.
- Line 57-60 to 6-169
- 57-60 See above
- 57-178 In Section 30, T-83-N, R-8-W, 6 miles W of W city limits of Cedar Rapids, on the Linn-Benton County line, 0.75 mile N of U. S. Highway #30; 12' E of E corner post on $\frac{1}{4}$ section line, located under fence, 30' NE of a spike in blaze of a 12" wild cherry tree, 12' E of a witness post. Set flush with surface.
- 6-166 In Section 25, T-83-N, R-9-W, in $NE\frac{1}{4}$ of $NE\frac{1}{4}$, 1 mile S and 0.5 mile E of Atkins, 1.5' W of W fence, 11.8' S of spike, 2.3' NE of witness post, 54.2' W of spike in a clump of thorn trees in E fence line, 318.2' SW of a spike in corner post at SE corner of road intersection, about 600' S of intersection of E-W road with N-S road. Set flush with the surface.
- 57-179 In Section 19, T-83-N, R-8-W, 6 miles W of W city limits of Cedar Rapids, in fence line of $N\frac{1}{4}$ $\frac{1}{4}$ section-fence, 36.0' E of E fence line, 0.4 mile S of the Milwaukee Railway tracks, on the property of Geo. W. Rindernecht, 36.0' E of witness post. Set 8" below the surface.
- 57-180 In Section 18, T-83-N, R-8-W, in $SW\frac{1}{4}$ of $NW\frac{1}{4}$, and 6 miles W of W city limits of Cedar Rapids, 6.4' W of witness post, 7.1' W of E fence, 28.0' SW of NW evergreen grove, 27.0' SW of corner post at NW corner of the evergreen grove, 11.1' SW of fifth and largest evergreen tree in W row, 27.6' N of spike in telephone pole, 2.25 miles N on U.S. Highway #30 on county line road between Linn and Benton Counties, on first hill N of the Milwaukee railroad track. Set flush with surface.
- 6-167 In Section 12, T-83-N, R-9-W, on E side of center of section, 1 mile N and 0.5 mile E of Atkins, 4.7' SE

of witness post, 2.2' SE of spike in telephone pole, 72.4' NW of a spike in one of two cherry trees in E fence, 4.4' E of W fence, 53.5' W of E fence, about 0.2 mile N of road going E. Set flush with surface.

- 57-181 In Section 6, T-83-N, R-8-W, in SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 3 miles W and 2 miles S of Palo, 1.5' W of E fence, 2.6' SE of witness post, 58.0' E of W fence, 561.4' N of spike in corner post at NE corner of intersection of road going E, 4.1 miles N on U. S. Highway #30 on a county line road between Linn and Benton Counties, on right-of-way adjoining the Geo. J. and M. A. Saha property. Set flush with ground.
- 6-168 In Section 1, T-83-N, R-9-W, in SE $\frac{1}{4}$ of NE $\frac{1}{4}$, 2 miles N and 0.5 mile E of Atkins, 1.1' E of W fence, 2.2' SE of a witness post, 58.6' W of E fence, 66.7' NW of spike in S gate and corner post on E side of road, about 600' N of the corner. Set flush with the surface.
- 6-160 See page 75.

LOOP XII

Line 57-60 to 57-67

- 57-60 See page 64.
- 57-59 In Section 32, T-83-N, R-8-W, 4.9 miles W of Cedar Rapids, 1 mile E of the Benton County line on U. S. Highway #30; 27.4' S of center line of pavement, 1.5' N of fence line, 174.7' E of concrete gate post on S side of pavement, 228.7' E of intersection of U. S. Highway #30 with N-S county road, and 153.6' SE of corner post in NE corner of intersection. Also used as a first-order level station.
- 57-63 In Section 32, T-83-N, R-8-W, 4.5 miles W of W city limits of Cedar Rapids, 0.45 mile E of Sisley - Grove Cemetery, opposite pavement station #88 + 88', on U. S. Highway #30, on right-of-way adjoining the John O'Connell property, 2' N of S road fence, 33.7' S of N road fence, 263.5' W of a 2 x 2' culvert, on top of hill, and 31.7' to center line of paving.
- 57-58 In Section 29, T-83-N, R-8-W, 4.3 miles W of city limits of Cedar Rapids, on U. S. Highway #30, - 97.7' W of corner post in NW corner of intersection, 107.7' NW of corner post in SW corner of intersection,

- 32.0' N of center line of pavement, 2.5' S of fence line; also used as a first-order level station.
- 57-62 In Section 33, T-83-N, R-8-W, 3.5 miles W of W city limits of Cedar Rapids, 1 mile W of the Fairview schoolhouse, opposite pavement station #140+94", on U. S. Highway #30; 60.0' S of N road fence, and 10.3' N of S road fence; 22.2' W of W line of the F. Vondracek farmhouse, 23.2' E of E barnyard gatepost of above farm.
- 57-57 In Section 27, T-83-N, R-8-W, 190.8' NE of SW section corner, 2.8 miles W of city limits of Cedar Rapids, 2.5' SW of a gatepost, entrance to farmyard of C. P. Wieneke, 29.5' N of center line of pavement; also used as a first-order level station.
- 57-61 In Section 34, T-83-N, R-8-W, in NW $\frac{1}{4}$, 2.5 miles W of W city limits of Cedar Rapids, 0.1 mile W of the Fairview schoolhouse, 1.1' N of S road fence, - 66.0' S of N road fence, 49.6' E of W line of W. B. Taylor's farmhouse, opposite pavement station #180+6.0', on U. S. Highway #30.
- 57-56 In Section 27, T-83-N, R-8-W, 2.3 miles W of Cedar Rapids on U. S. Highway #30, 31.0' N of center line of pavement, 2.0' S of fence line beside corner post, 200.6' NW of steel fence post in the NW corner of farmyard on S side of pavement, 167.0' E of face of a 2' oak tree, about 160' W of center line of county road.
- 57-64 In Section 35, T-83-N, R-8-W, on E side of NW $\frac{1}{4}$ of NE $\frac{1}{4}$, 1.75 miles W of W edge of city limits of Cedar Rapids, 150.0' S of first hill S of U. S. Highway #30; 94.3' SSW of S gatepost to barnyard, 1.3' E of W road (county road) fence, 64.0' W of E road fence, 350.5' S of section line, just S of the top of a knoll, and on the Dora M. Boland property.
- 57-65 In Section 35, T-83-N, R-8-W, in NE $\frac{1}{4}$ of SE $\frac{1}{4}$, - 1.5 miles W of W edge of Cedar Rapids, 1.2 miles W of Edgewood #2 schoolhouse, on right-of-way adjoining the James D. McNamara property, 2.0' N of the S fence line on County Road "Y", 61.8' S of N fence line, 528.0' W of section line, and 68.7' SE of a turn sign.
- 57-66 In Section 36, T-83-N, R-8-W, in NE $\frac{1}{4}$, 0.75 mile W of W edge of Cedar Rapids, on N side of the County Road "Y", on first hill W of intersection of Iowa

Highway #149 with County Road "Y", 0.3 mile W of the Edgewood #2 schoolhouse, 2.0' S of N fence line, 66.0' N of S fence line, 86.7' NW of W gatepost to E drive of farmhouse on S side of the road, on E slope of a knoll, and opposite the Joseph W. Neeley farmhouse.

- 57-67 In Section 31, T-83-N, R-7-W, in SW corner NW $\frac{1}{4}$, 0.5 mile W of city limits of Cedar Rapids, on S side of Iowa Highway #149; 23.9' N of corner fence post in SE corner of the intersection, 4.0' WSW of telephone and power pole combined #66D-120; 25.2' ESE of paving station #443; 89.8' SE of corner fence post in NW corner of intersection of Iowa Highway #149 and County Road "H".

Line 57-67 to 57-87

- 57-67 See above.
- 57-70 In Section 36, T-83-N, R-8-W, in NE corner SE $\frac{1}{4}$ of NE $\frac{1}{4}$ on W side of County Road "H" (road is the township line), 0.5 mile W of city limits of Cedar Rapids, 38.1' N of a 30" hard maple tree, 41.9' S of the $\frac{1}{4}$ $\frac{1}{4}$ line (also corner post to garden), 68.3' SW of a corner fence post W of $\frac{1}{4}$ $\frac{1}{4}$ corner of Section 31, in T-83-N, R-7-W.
- 57-71 In Section 30, T-83-N, R-7-W, in SW corner of NW $\frac{1}{4}$ of SW $\frac{1}{4}$, 0.5 mile W of city limits of Cedar Rapids, on E side of County Road "H"; 41.0' SSW of telephone and power pole combined, on N side of yard; 45.6' E of $\frac{1}{4}$ $\frac{1}{4}$ corner fence post, 59.6' SE of brace pole, and 10.7' W of fourth cedar tree from W end of row of trees.
- 57-72 In Section 25, T-83-N, R-8-W, on E edge of section, 0.5 mile W of city limits of Cedar Rapids; 21.9' N of S corner post to drive fence, 54.0' W of E road fence of County Road "H", 337.5' S of edge of pavement on U. S. Highway #30.
- 57-73 In Section 19, T-83-N, R-7-W, in SW corner of the section, on W edge of city limits of Cedar Rapids, 50.2' NW of NW corner of schoolhouse, 61.6' E of W fence line of County Road "H", 150.0' NE of a power pole.
- 57-74 In Section 19, T-83-N, R-7-W, in SW corner of NW $\frac{1}{4}$, on W edge of Cedar Rapids, 69.3' E of $\frac{1}{4}$ corner fence post on W side of County Road "H", 147.6' SE of a 2' twin-hickory tree in SW corner of intersection, 191.3' S of telephone pole in NE corner of the intersection and in toe of backslope.

- 57-75 In Section 13, T-83-N, R-8-W, on E side of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, 1.5 miles S of Linn Junction, 1.4 miles N of U.S. Highway #30, on the Clinton-Rapids township line, at end of road, 1.9' SW of a witness post, 10.8' E of a spike in telephone pole, 1.4' W of SW corner post of garden, 84.5' W of NW corner of house and just W of a garden near where the telephone line goes N across the farm.
- 57-76 In Section 13, T-83-N, R-8-W, on E side of NE $\frac{1}{4}$ of SE $\frac{1}{4}$, on W city limits of Cedar Rapids, 1.7' SW of spike in an 18" stump, 7.8' E of witness post, 21.0' SE of spike in a 12" oak tree, 18.8' NE of spike in an 8" oak tree, 8.2' E of the N-S fence, and on the Clinton Rapids township line. Set flush with the ground.
- 57-77 In Section 13, T-83-N, R-8-W, on N side of the SE $\frac{1}{4}$, 0.25 mile W of W city limits of Cedar Rapids, 3.7' SW of witness post, 53.6' SW of spike in an 18" elm tree, 56.0' SW of NW corner of a cottage, 50.2' W of SW corner of a cottage, 77.3' E of a 14" walnut tree at the NE corner of a cottage, and 81.5' NE of a 16" walnut tree at the SE corner of a cottage. Located in first park W of Conrad bathing beach along river road on the E side of park drive just S of bridge. Set flush with the surface.
- 57-78 In Section 13, T-83-N, R-8-W, in SE $\frac{1}{4}$ of NE $\frac{1}{4}$, W of city limits of Cedar Rapids, 126.3' SE of spike in the W 14" elm tree in row of six, 128.6' S of witness post, 134.2' SW of spike in E 18" elm tree in row of six and 166' NE of spike in a 20" elm tree; by entrance to park S of the Conrad beach. Set flush with the ground.
- 57-79 In Section 13, T-83-N, R-8-W, in NE corner, W of city limits of Cedar Rapids, on N side of Cedar River at N edge of a swamp approximately 500' N of N edge of the main channel on the S edge of a private dirt drive, 10' NE of a railroad spike in post, 3.0' E of witness post and 16" above the ground.
- 57-80 In Section 12, T-83-N, R-8-W, near S side of the SW $\frac{1}{4}$, 5/8 mile S of Linn Junction, 18.5' W of the W road fence, 19.0' W of witness post, 13.3' W of a 24" oak tree spike in base; 27.0' NW of spike in a 6" elm tree, on top of first hill N of the river, on property of W. J. Valesky. Set 14" below surface.
- 57-81 In Section 12, T-83-N, R-8-W, near N side of SE $\frac{1}{4}$ of SW $\frac{1}{4}$, 0.5 mile S of Linn Junction, 11.6' W of W fence line, 11.8' W of witness post, 100' NE to corner post of S $\frac{1}{4}$ $\frac{1}{4}$ line fence of the section, on the W. J. Valesky property in cultivated field. Set 14" below surface.

- 57-82 In Section 12, T-83-N, R-8-W, 0.25 mile S of Linn Junction, on E side of road, 53.7' NE of spike in the corner post, 40.4' SE of spike in corner post, 29.5' E of witness post, on the A. Stanck property, 0.1 mile S of the schoolhouse. Set 14" below surface.
- 57-83 In Section 12, T-83-N, R-8-W, in NW $\frac{1}{4}$ of NE $\frac{1}{4}$, and 2 miles N of Linn Junction, the slope distance 46.5' W of center line from W rail of railroad, 7.0' NE of spike in right-of-way post of W fence, 9.5' SE of spike in a right-of-way post on W fence, and 1.5' N of witness post.
- 57-84 In Section 1, T-83-N, R-8-W, in SE $\frac{1}{4}$, 0.25 mile N of Linn Junction, 33.6' W of center line W track rail, 64.3' W of spike in telephone pole, 41.7' E of a double blaze and spike in a 30" oak tree. Set flush with the surface.
- 57-85 In Section 6, T-83-N, R-7-W, in SW $\frac{1}{4}$, 0.5 mile NE of Linn Junction, on E side of road, 0.25 mile S of the railroad intersection of Rock Island and Milwaukee railroads, 40.0' NE of spike in post, 40.8' SE of spike in post, 9.0' SW of spike in post, 19.4' NW of spike in a post, on the Wilson property. Set flush with surface.
- 57-86 In Section 6, T-83-N, R-7-W, in NW $\frac{1}{4}$, 1 mile N of Linn Junction, on W side of road, 6.1' SE of telephone pole E of railroad tracks, 24.6' NW of spike in S gate post, 30.1' SW of spike in double blaze of a 10" box-elder tree, 25.8' E of center line of E rail of the Rock Island railroad, and about 150' N of the Rock Island railroad bridge.

Line 57-87 to 57-96

- 57-87 In Section 6, T-83-N, R-7-W, in NW $\frac{1}{4}$, 1.5 miles N of Linn Junction, on N side of road at intersection of road and the Rock Island railroad, 7.8' W of the center line of W rail, 44.3' SW of spike in telephone pole, - 30.9' SE of spike in telephone pole, 4.0' NW of witness post.
- 57-88 In Section 31, T-84-N, R-7-W, in NW $\frac{1}{4}$, 2 miles N of Linn Junction, 64.3' NE of spike in telephone pole, 4.0' NE of witness post, 40.0' E of center line of the E rail (slope distance) and on the first hill N of the road intersection.
- 57-89 In Section 36, T-84-N, R-8-W, on N side of NE $\frac{1}{4}$, - 2.5 miles N of Linn Junction, 59.8' NE of spike in the base of a 40" elm tree, 108.8' SE of spike in a corner

post on section line fence, 13.1' SW of spike in post, 4' NW of witness post, on E side of road, on line with S side of the N. L. Van Note residence and 0.8 mile N of the Pleasant Prairie #6 schoolhouse.

- 57-90 In Section 25, T-84-N, R-8-W, near NW corner of SE $\frac{1}{4}$, 2.75 miles N of Linn Junction, on S side of road, 65.2' SW of spike in an 8" scotch pine tree, 64.3' SE of spike in an 8" Northern spruce tree, 10.8' NW of spike in post, 4.0' NW of witness post, 1.5 mile N and 0.15 mile W of Pleasant Prairie #6 schoolhouse, 0.3 mile E of the cemetery and at NW corner of the Charles Jones farmyard.
- 57-91 In Section 25, T-84-N, R-6-W, in NE $\frac{1}{4}$ of SW $\frac{1}{4}$, 2.75 mi. N and 0.25 mile W of Linn Junction, on S side of road, - 57.4' NE of spike in a 30" elm tree blazed, 79.2' SW of spike in a 20" blazed elm tree, 25.2' NW of NW corner tombstone of J. Snodgrass- 1873-1920; 30.0' NE of witness post, and at NW corner of the country cemetery. Set 6" above surface.
- 57-92 In Section 25, T-84-N, R-8-W, in NW $\frac{1}{4}$ of NW $\frac{1}{4}$, 3.5 miles NW of Linn Junction, on E side of road opposite schoolhouse, 147.3' SE of SE corner of schoolhouse, 62.7' SE of spike in corner post, 2.0' SW of witness post, and on right-of-way adjoining the Lewis O. Hepker property. Set flush with surface.
- 57-93 In Section 26, T-84-N, R-8-W, in NE $\frac{1}{4}$ of NE $\frac{1}{4}$, 3.75 miles NW of Linn Junction, 42.5' NE of spike in an 8" cottonwood tree, 53.4' SW of spike in a 30" oak tree, 33.0' S of a witness post, on S side of road, on the Lewis Hepker property and 300' E of the Otter Creek bridge. Set 12" below surface.
- 57-94 In Section 23, T-84-N, R-8-W, in SW $\frac{1}{4}$ of SE $\frac{1}{4}$, 4 miles NW of Linn Junction; 41.6' NE of a 16" hickory tree, and 54.6' SE of a 16" elm tree, 52.5' W of a 10" double-trunk walnut tree, 4.0' W of witness tree, on W side of road, - on the B. F. Milburn property, and 0.3 mile S of Church #1- F.M. 1901. Set flush with surface.
- 57-95 In Section 23, T-84-N, R-8-W, on S side of SW $\frac{1}{4}$ of NE $\frac{1}{4}$, 3.5 miles SW of Toddville, 63.0' SW of spike in a 16" hard maple tree, 53.4' NW of spike in post, 38.9' NE of spike in corner post, 3.0' SE of witness post, on W side of road, 0.2 mile N of church on first rise N of church at S edge of gravel. Set flush with surface.
- 57-96 See page 49.

LOOP XIV

Line HAAS to 57-126

HAAS See page 16.

57-126 In Section 12, T-83-N, R-7-W, 0.5 mile E of E edge of city limits of Cedar Rapids, on 30th Street Road, 20.9' N of witness post and N road fence, 24.3' NNW of telephone pole #6; 122.3' ENE of telephone pole #7; six telephone poles E of primary station base.

57-127 In Section 12, T-83-N, R-7-W, 1 mile S and 0.25 mile W of Marion, set in concrete post on N side of road, 12.8' NW of tack in telephone pole #3039; 75.3' NEN of tack in telephone pole #3040, and 71.6' N of witness post.

57-126 In Section 12, T-83-N, R-7-W, in SE corner, 1 mile E of E edge of city limits on 30th Street Road out of Cedar Rapids, 2.4' E of witness post, 2.9' NE of corner fence post, 24.8' N of telephone pole #3024; 1 mile W and 0.15 mile N of Lakeside #20 schoolhouse.

Line 57-126 to 57-132

57-126 See above.

57-129 In Section 7, T-83-N, R-6-W, 0.25 mile S of city limits of Marion; 51.9' SW by S of tack in the fence post in E-W fence, 71.3' SW of tack in fence post in E-W fence, 23.6' E of witness post, 69.5' NE of spike in a 24" elm tree.

57-130 In Section 1, T-83-N, R-7-W, in SE $\frac{1}{4}$, south of city limits of Marion, 4.2' NE of a 24" elm tree; 68' SSE of SE corner of brick house 36.3' W of E road fence.

57-131 In Section 6, T-83-N, R-6-W, on W side of paving in S edge of Marion on 11th Street, 1.3' E of W edge of pavement curb, 8.7' SW of N guy-stub to smoke stack, 32.6' NNW of S guy-stub to smokestack, 69.4' W-SW of smokestack of light and heating plant of Marion.

57-132 In Section 6, T-83-N, R-6-W, in NW $\frac{1}{4}$, in SW intersection of 7th Avenue and 11th Street in Marion, in NE corner of the Marion park, 35.1' E of SE corner of

the Civil War Memorial Monument, 31.2' SSE of a fire hydrant, 0.6' W of N and S sidewalk and 40.8' NNW of lamp post.

Line 57-132 to 57-142

- 57-132 See page 71.
- 57-133 In Section 31, T-84-N, R-6-W, in SW corner, in Marion, on E side of 11th Street between 10th Avenue and 11th Avenue, 11.2' E of curb, 34.8' SW of SW corner of the Hohn Fairly home at 1090-11th Street, 52.1' S of the fire hydrant on the SE corner of 11th Avenue and 11th Street intersection.
- 57-134 In Section 31, T-84-N, R-6-W, on N city limits of Marion, on E side of 11th Street between 16th and 17th Avenues, 9.6' NNW of a 24" hard maple tree, 23.0' SSW of an 18" hard maple tree (these trees are last two in line of trees in parking on E side of 11th Street at North end), 100.5' SE of SE corner of last house on the W side of 11th Street at N end of street, and 10.6' W of yard fence.
- 57-135 In Section 31, T-84-N, R-6-W, on E side of 10th Street on N edge of Marion, at SE corner of intersection (10th Street and the old Fairgrounds road), 2.8' SW of witness post, 15.0' W of E road fence, 11.6' NE of a telephone pole, and 4.7' E of pavement curb.
- 57-136 In Section 36, T-84-N, R-7-W, 0.5 mile N of N edge of Marion, in fence line on W side of 10th Street road, - 2.6' S of witness post, 30.4' S of fence corner (spike); 24.2' N of a 24" elm tree (spike) and at the NE corner of the C. Etzel orchard.
- 57-137 In Section 30, T-84-N, R-6-W, in NW corner of SE $\frac{1}{4}$ of SW $\frac{1}{4}$, 0.75 miles N of N edge of Marion, 30.3' E of witness post, 40.0' NE of telephone pole, 93.8' E of 24" maple tree on W side of road, 1.0' S of S $\frac{1}{4}$ $\frac{1}{4}$ section - line fence.
- 57-138 In Section 24, T-84-N, R-7-W, 1.8 miles N of N edge of Marion, 2.7' NE of witness post, 61.5' NNE of a 28" elm tree, 43.3' SSE of a 30" elm tree, 122.8' SE of SE corner of a 12' x 18' brick milk house, in SW corner of intersection of the farm drive to John Domer's farm.
- 57-139 In Section 19, T-84-N, R-6-W, along W side of NW $\frac{1}{4}$, - 2.35 miles N of city limits of Marion, 10.1' NE of spike

in telephone pole, 4.3' E of witness post, 3.1' E of E fence, 44.9' NE of Mrs. W. M. Howe's mail box; 59' NE of spike in power pole, 74.7' SE of spike in an 18" hard maple, 93.4' SE of iron bolt in power pole with transformer on it, 0.85 mile S of Hillside #17 schoolhouse, on right-of-way adjoining the Warren J. Kemp estate.. Set flush with the surface.

57-140 In Section 13, T-84-N, R-7-W, in SE $\frac{1}{4}$, 2.6 miles N of city limits of Marion, 75.8' SE of SE corner of the S. Adams house, 26.9' SE of a 24" pine tree; 20.7' SW of spike in telephone pole, 20.0' W of witness post, 85.6' SE of NE corner of the Adams house, 0.5 mile S of Hillside #17 schoolhouse. Set flush with ground.

57-141 In Section 18, T-84-N, R-6-W, 3 miles N of Marion, 6.0' E of E fence, 29.7' NE of spike in a telephone pole, 7.4' SE of white witness post, 124.3' SE of power pole with transformer, 80.2' SE of a 16" elm tree in SE corner of the farmyard. A large house with porch to E is across road from the marker, 0.1 mile S of Hillside #17 schoolhouse, and on the Louis A. Lavasseur property.

57-142 See page 53.

LOOP XV

Line 57-87 to 57-132

57-87 See page 69.

57-169 In Section 6, T-83-N, R-7-W, in NE corner, 1.25 miles W of Louisa, 4.0' N of S fence, 2.3' NE of witness post, 20.0' E of spike in telephone pole, 55.8' S of spike in corner post at intersection of E-W fence with one going N, about 0.1' E of church on S side of road, and buried about 2" below level of back slope.

57-168 In Section 5, T-83-N, R-7-W, 1.25 miles W of Louisa, on N side of road, 64.0' SE of SE corner of foundation to the Ben Bauer residence, 37.2' SE of a 24" cottonwood tree, 16.5' SE of E gatepost to Bauer yard, Set flush with surface.

57-167 In Section 5, T-83-N, R-7-W, 1 mile W of Louisa, on N side of highway, 60.2' SE of SE corner of the Elizabeth Heins residence, 30.8' S of an 18" elm tree. Set flush with surface.

- 57-166 In Section 4, T-83-N, R-7-W, in NE $\frac{1}{4}$ of NW $\frac{1}{4}$, in Louisa, 5.4' SE of spike in fence post on corner to the E, 12.8' NW of NW corner of an old church, 34.1' NW of NE corner of the old church, 76.4' W of spike in telephone pole, 67.2' SW of E gatepost to the S entrance of cemetery, 82.6' SW of SW corner of base of the Christine Winter monument, 66.8' S of W gatepost to S entrance of cemetery.
- 57-165 In Section 4, T-83-N, R-7-W, in N center, 0.25 miles E of Louisa, 2.5' SW of witness post, 9.9' SW of spike in telephone pole, 7.6' S of N fence line, 57.4' NE of spike in telephone pole #3241; 127.1' NE of the H. A. Cook mail box, 121.2' SE of corner post N of power pole with transformer. Set flush with the ground.
- 57-164 In Section 3, T-83-N, R-7-W, in NW $\frac{1}{4}$, 0.7 mile E of Louisa, 0.8' S of N fence, 2.3' E of white witness post, 64.8' NE of telephone pole #3225; 96.4' NW of telephone pole #3224; 28.3' W of spike in telephone pole, on N side of road, on right-of-way adjoining D. G. Van Note's property. Set flush with ground.
- 57-163 In Section 3, T-83-N, R-7-W, in NE $\frac{1}{4}$ of NW $\frac{1}{4}$, and 1 mile E of Louisa, on S side of road near group of farm buildings, 43.6' E of spike in telephone pole #2; 73.5' SE of spike in power pole, 6.3' N of S fence, 2.1' NW of witness post, 84.1' SW of spike in power pole with transformer, 94.9' W of spike in telephone pole #1, across fence from apple trees and the cherry farm buildings, 2 miles W of Marion. Set flush with the ground.
- 57-162 In Section 2, T-83-N, R-7-W, in NW $\frac{1}{4}$ of NW $\frac{1}{4}$, 1.5 miles W of Marion, 73.4' NE of spike in telephone pole on S side of road, 124.3' NE of NE corner of a farmhouse, 46.2' SE of spike in post at S end of a grape arbor, 147.6' E of spike in mail box post, at W edge of Field drive on N side of road about in ditch, 0.15 mile E of a school house and on right-of-way adjoining property of S. L. Hiland. Set flush with surface.
- 57-161 In Section 2, T-83-N, R-7-W, 0.25 mile N of the N city limits of Cedar Rapids, 2.0' N of S road fence, 2.0' NW of witness post, 18.7' SW of spike in blaze of a 16" hard maple tree, 14.7' NW of spike in blaze of a 10" spruce tree, on right-of-way adjoining the Cleveland property, and 0.6 mile E of the school. Set flush with surface.

- 57-160 In Section 2, T-83-N, R-7-W, 0.6 mile W of W city limits of Marion, at SE corner of intersection, 7.1' NW of spike in blaze of a 36" oak tree, 37.5' NE of spike in blaze of a 20" elm tree, 3.0' NW of witness post, at first intersection SW of the Milwaukee railroad track. Set flush with surface.
- 57-159 In Section 2, T-83-N, R-7-W, in NE $\frac{1}{4}$ of NE $\frac{1}{4}$, - 0.5 mile W of Marion, at bend in road where Eighth Avenue turns S, 58.3' W of spike in telephone pole, 106.1' NW of NW corner of house, 10.1' S of N fence, 2.0' SE of witness post, 54.0' NE of spike in SE corner post, and 99.3' NE of spike in telephone pole, on first hill W of Eighth Avenue Indian Creek bridge.
- 57-158 In Section 1, T-83-N, R-7-W, in Marion, at First Street and Eighth Avenue on SE corner of intersection, 16.7' SW of spike in power pole, 5.4' SW of the corner post, 2.4' SW of witness post, 40.8' E of NE corner of fence around bulk station, 42.0' SE of spike in power pole on W side of street. Set flush with surface.
- 57-157 In Section 1, T-83-N, R-7-W, on N side of U. S. Highway #151 in Marion, 0.7' N of inside edge of curb, 57.8' W of spike in power pole, 27.1' SE of an 18" box elder tree, 115.1' NE of corner of the Skelly Gas Station, 146.3' SE of SE corner of house #203, and about 700' E of the underpass. Set flush with the surface.
- 57-156 In Section 1, T-83-N, R-7-W, on N side of U. S. Highway #151, in Marion, 14.3' NE of spike in a 36" elm tree, 18.0' SE of SE corner of house #522; 18.2' SW of SW corner of house #562; 27.2' NW of spike in a 24" - hard maple tree, 5.6' N of N edge of sidewalk, 25.4' N of inside edge of curb. Buried about 0.5' below surface.
- 57-132 See page 71.

LOOP XVI

Line 57-126 to 57-116

- 57-126 See page 71.
- 57-125 In Section 7, T-83-N, R-6-W, in SW corner of SW $\frac{1}{4}$, 1.25 miles E of E edge of city limits of Cedar Rapids - on the 30th Street Road, 2.2' N of witness post, 15.4' ENE of telephone pole #3015; 72.8' WNW of telephone pole #3014; 52.7' N of S road fence.

- 57-124 In Section 7, T-83-N, R-6-W, in SE $\frac{1}{4}$, 1.75 miles E of E edge of city limits of Cedar Rapids, 10.2' N of witness post and N road fence, 15.7' W of cross fence, 25.9' WNW of telephone pole #6; 39.9' ENE of telephone pole #7.
- 57-123 In Section 8, T-83-N, R-6-W, on S side of SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 1.75 miles S and 1.15 mile E of depot in Marion, between fork in SE'ly and W road in plowed field, 800' E of NE corner of Section 18; 15.4' N of witness post, 36.5' NE of telephone pole #9; 40.5' NW of telephone pole #8. Set 2" above the surface.
- 57-122 In Section 17, T-83-N, R-6-W, 2.5 miles from the E edge of city limits of Cedar Rapids, 5.3' N of witness post, 6.4' N of S road fence, and 33.9' W of telephone pole #2960 on the 30th Street Road.
- 57-121 In Section 17, T-83-N, R-6-W, in NW corner of SE $\frac{1}{4}$ of NE $\frac{1}{4}$, 1 mile S and 1 mile E of Marion, at curve on E side of road, 33.8' SE of spike in corner post, 60.0' NE of spike in brace post for telephone pole #2.42; -- 14.6' E of witness post, on the Richard Martin property, and about 0.8 mile E of the Lakeside Schoolhouse #20 on a winding road.
- 57-120 In Section 17, T-83-N, R-6-W, in NE $\frac{1}{4}$, 2 miles E on U. S. Highway #30 and 1.75 miles N of U. S. Highway 30 from E edge of Cedar Rapids city limits, 7.9' SE of a telephone pole #2923; 2.5' SE of witness post, 109.9' S of fence corner post, on W side of the road.
- 57-119 In Section 17, T-83-N, R-6-W, in NE corner, 2-1/8 miles E on U. S. Highway #30 and 1.75 miles N of U. S. Highway #30 from E city limits of Cedar Rapids, 3.75' W of E road fence, 182.9' S of an 8" x 8" timber post used as a brace post.
- 57-118 In Section 17, T-83-N, R-6-W, in SE $\frac{1}{4}$, 2.25 miles E on U. S. Highway #30, and 1.2 miles N of U. S. Highway 30 from E city limits of Cedar Rapids, on E side of the unsurfaced county road, 3.9' NW of corner post (an 8" x 8" square timber post with double spike).
- 57-117 In Section 20, T-83-N, R-6-W, in NE $\frac{1}{4}$, 2 miles E of E city limits of Cedar Rapids on U. S. Highway #30, -- 20.0' E of W road fence and witness post, 64.0' SE of telephone pole on top of hill. Buried 18" under surface.
- 57-116 In Section 29, T-83-N, R-6-W, in NW corner of NE $\frac{1}{4}$, 2 miles E of E city limits of Cedar Rapids, on S side of U. S. Highway #30, opposite pavement station #181 +92';

4.5' N of S road fence, 13.8' NE of spike in power pole,
4.0' N of witness post and opposite home of A. T. Bena.

Line 57-116 to 57-344

- 57-116 See page 76.
- 57-356 In Section 21, T-83-N, R-6-W, 1.50 mile N of Bertram, 0.05 mile W of the Campbell cemetery, on right-of-way adjoining property of Walter N. Berry, 6.0' S of the N road fence, 5.0' S of witness post, 18.0' N of N edge of pavement, opposite pavement station #110 + 90' on U. S. Highway #30; 20.5' W of telephone pole #R-2.
- 57-355 In Section 27, T-83-N, R-6-W, 1.5 miles N of Bertram, 0.1 mile E of the Campbell cemetery, opposite pavement station #94 + 6' on U. S. Highway #30; 22.0' S of S edge of pavement, 2.0' W of witness post, 1.0' N of S road fence, 38.0' W of power pole, and on right-of-way adjoining property of George Berry.
- 57-354 In Section 23, T-83-N, R-6-W, 3.50 miles S and 3 miles W of Paralta, 0.25 mile N of the Emmons schoolhouse, in pasture on the Harry F. Caraway property, 13.6' W of the W road fence, 14.0' W of witness post, 26.5' SW of corner post on SW corner of intersection, 77.3' SW of corner post on $\frac{1}{2}$ section line running to E, and 80.0' North of first power pole S of intersection. Set 2.0' below surface.
- 57-353 In Section 23, T-83-N, R-6-W, about 3 miles S and 3 miles W of Paralta, 0.6 mile N of the Emmons schoolhouse, in cultivated field on the Lester Scott property, 14.2' E of a witness post, 13.6' E of E road fence, 118.0' N of NW corner of the machine shed on the Lester Scott farm, - 121.5' NW of NW corner of barn, on line with W side of a machine shed, 18" below surface of the ground.
- 57-352 In Section 14, T-83-N, R-6-W, 2.75 miles S and 3.2 miles W of Paralta, at NW corner of turn, in line with center line of road running to the S, on the right-of-way adjoining the Herma Werner property, 5.0' S of witness post, 6.5' S of N road fence, 23.8' SE of corner post at NW corner turn in road, 86.9' NW of corner post at inside of turn, 36.4' W of telephone pole #2776; 4" above surface of the ground.
- 57-351 In Section 14, T-83-N, R-6-W, 2.75 miles S and 3 miles W of Paralta, opposite the Herman W. Werner residence, - in pasture, 15.6' S of witness post, 15.0' S of the S road fence, 68.0' SW of corner post at NW corner of the in-

section, 99.1' SW of corner post at intersection corner to NE. Set 18" below surface.

57-350

In Section 13, T-83-N, R-6-W, 2.75 miles S and 2.5 miles W of Paralta, opposite the Mike Zingula house, in a cultivated field on the Zingula farm, 12.4' N of witness post, 15.3' NW of a telephone pole #8; 12.0' N of N road fence, 66.5' N of corner post at NW corner of the Zingula orchard fence, 131.0' NW of corner post at NW corner of the house yard. Set 18" below the surface.

57-349

In Section 13, T-83-N, R-6-W, 2.75 miles S and 2 miles W of Paralta, 0.5 mile W of the Beach School house #8, in a pasture opposite the F. M. Horn residence, 13.8' S of witness post, 15.0' SW of a telephone pole opposite the windmill on the Horn farm, 79.3' SE of extreme SE edge of a sidewalk running to the house, 78.5' SE of a 16" cottonwood tree at the SE corner of the yard, 12.8' S of the S road fence. Set 18" below surface.

57-348

In Section 18, T-83-N, R-5-W, 2.75 miles S and 1.75 miles W of Paralta, 0.1 mile W of the Beach Schoolhouse #8, on right-of-way adjoining the John N. Lensch property, 1.0' N of witness post, 1.0' N of N road fence, 82.2' NE of telephone pole #2778; 104.0' NW of telephone pole #2777.

57-347

In Section 19, T-83-N, R-5-W, 3 miles S and 1.5 miles W of Paralta, 1.5 miles W of Grange Hall District #11 Schoolhouse, 3.0' N of witness post, 1.0' W of the E road fence, 62.4' E of telephone pole #2697; 140.2' N of a telephone pole, on right-of-way adjoining the J. C. Titler property and on the first hill S of the Beach schoolhouse #8.

57-346

In Section 20, T-83-N, R-5-W, 3 miles S and 0.8 mile W of Paralta, 0.8 mile W of Grange Hall District #11 Schoolhouse, 2.0' N of N road fence, 3.0' N of witness post, 94.6' NW of spike in a telephone pole #2668; 89.3' NE of spike in telephone pole #2669, on the Edmond Thompson property, in a cultivated field. Set flush with surface.

57-345

In Section 20, T-83-N, R-5-W, 3 miles S and 0.25 mile W of Paralta, 0.25 mile W of Grange Hall District #11 Schoolhouse, on S side of the road, opposite the F. B. Stinger residence, 4.0' S of witness post, 29.6' N of NE corner of Stinger barn on the S side of road, 56.6' NE of NW corner of barn, 69.4' SE of corner post at SW corner of yard fence, about 200' W of the cemetery.

57-344 In Section 20, T-83-N, R-5-W, 3 miles S of Paralta, in the Grange Hall District #11 school yard, 36.3' E of SW corner of schoolhouse, 16.5' E of SE corner of school house, 227.0' N of witness post.

Line 57-344 to 57-336

57-344 See above.

57-343 In Section 8, T-83-N, R-5-W, 1.5 miles S of Paralta, on right-of-way adjoining the property of J. J. Houver, at $\frac{1}{4}$ section line, 3.8' E of W fence line along County Road C, 3.7' SE of witness post, 20.7' SE of corner post on SW corner of intersection, 65.3' S of corner post at NW corner of intersection, 74.5' SW of corner post on $\frac{1}{4}$ section line to the E.

57-342 In Section 9, T-83-N, R-5-W, 0.9 mile S of Paralta, on first rise E of road intersection, on road running E of curve on County Road "C", 36.0' S of center line of road, 2.5' W of witness post, 122.0' S of a 3.0' lone elm tree to N of road (spike in base), 20.8' NW of spike in a 12" box elder tree, on the right-of-way adjoining property of Alice M. Starry.

57-341 In Section 5, T-83-N, R-5-W, 0.3 mile S of Paralta, on first rise S of Paralta, on W side of County Road "C" opposite the church, 48.0' N of center line of drive to church, 40.0' NE of the N gatepost on drive to church, 138.0' S of center line of highway running E and W, and 27.0' W of center line of County Road "C".

57-340 In Section 32, T-84-N, R-5-W, 0.8 mile S of Springville, 0.8' E of W road fence, 3.4' W of witness post, 165.2' N of corner post on $\frac{1}{4}$ section line running to W, between the L. W. Lovell and Ida C. Sterner property on the right-of-way adjoining the Sterner property, and 33' W of center line of County Road "C".

57-339 In Section 28, T-84-N, R-5-W, 0.2 mile S of Springville, 5.6' W of E road fence, 4.9' W of witness post, 69.8' SW of fourth telephone pole S of road intersection, 26.0' E of center line of County Road "C", on right-of-way adjoining the C. F. Butler property.

57-338 In Section 29, T-84-N, R-5-W, at S edge of Springville, on first rise S of the Standard Oil Station and U. S. Highway #151, on W side of County Road "C", 1.7' E of W road fence, 2.5' SE of a witness post, 18.0' W of center line of road, 14.0' N of a 14" corner post on the yard fence, 68.0' S of center line of private drive and

~~57-335~~ street running to E, 74.0' S of N gatepost to drive on the W side of road, 82.3' NW of corner post on E side of the road.

57-337 In Section 29, T-84-N, R-5-W, at W city limits of Springville, opposite pavement station #408 + 85' on U. S. Highway #151; 24.0' S of S edge of pavement, -1.5' N of S road fence, 2.0' NE of witness post, opposite the W. B. Taylor residence and 10.0' W of the E side of the Taylor house.

57-336 See page 58.

LOOP XVII

Line 57-344 to 57-5018

57-344 See page 79.

57-5027 In Section 21, T-83-N, R-5-W, near SE corner SW $\frac{1}{4}$ of NW $\frac{1}{4}$, 3.5 miles N and 1 mile NW of Mt. Vernon, --- about 1000' W of farmhouse, 300' E of farmhouse, --- 1000' E of the Grange Hall District #11 Schoolhouse, 4.0' N of S road fence, 62.6' S of N road fence and 129.6' SE of a fence corner, 41.2' NW of telephone pole #7; 83.3' SE of telephone pole #8, and 127.8' SW of an 18" hard maple tree. Flush with surface.

57-5026 In Section 21, T-83-N, R-5-W, near SW corner of SE $\frac{1}{4}$ of NW $\frac{1}{4}$, 3.5 miles N and 0.75 miles NW of Mt. Vernon, about 900' E of a wood frame house, 1000' W of a bend in the road, 117.8' NE of NE corner of brick house, 53.7' NE of the third evergreen tree to the S, 27.5' E of the $\frac{1}{4}$ $\frac{1}{4}$ fence corner, 8.8' NE of a telephone pole #9; 11.0' N of the S road fence, 74.8' S of the N road fence, and 91.0' NE of the SE corner of the lawn. Set flush with surface.

57-5025 In Section 21, T-83-N, R-5-W, near the SW corner of the NE $\frac{1}{4}$, 3.5 miles N of Mt. Vernon, approximately 0.5 mile NW to intersecting N road, about 1000' N of a farmhouse, 1000' W of a farmhouse, 40.3' E of the corner post of E road fence N, 84.0' E of corner post on W road fence N, 91.0' SE of a clump of white elm trees, 127.0' NW of a telephone pole #8; -60.8' N of a telephone pole #9; 39.6' E of a telephone pole, 138.2' NE of telephone pole #2610; 1.0' S of N road fence and 61.8' N of S road fence.

57-5024 In Section 21, T-83-N, R-5-W, near SW corner of NE $\frac{1}{4}$ of SE $\frac{1}{4}$, 3.5 miles N and about 600' NW of Mt. Ver-

non, about 800' E of farmhouse, 600' W of intersection of road N and S, 86.6' SE of fence corner to N, 65.4' S of N road fence, 152.0' NW of telephone pole #9; 26.0' NW of telephone pole #2590; 107.9' SE of telephone pole #1; 6.2' N of S road fence. Set flush with surface.

- 57-3342 In Section 22, T-83-N, R-5-W, in NW corner of SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 3.4 miles N and 0.1 mile W of depot at Mt. Vernon, about 1300' N of NE corner of Section 28, 1.0' W of E right-of-way fence, 140.5' E of W right-of-way fence, 46.0' SE of Highway stop sign, 43.3' S of a telephone pole. Set 2" above surface.
- 57-3338 In Section 28, T-83-N, R-5-W, near SE corner of NE $\frac{1}{4}$, 2.75 miles N of Mt. Vernon, about 1300' N of farmhouse, 1000' S of a farmhouse, 805.6' N of $\frac{1}{2}$ fence E-W, 84.2' SW of fence corner in NW corner of lawn, 70.6' SW of steel post on W lawn line, 76.8' W of NW corner of house, 110.8' NW of a 40" hard maple tree S of the house, 145.6' NW of a steel fence post E road fence S; 75.0' N of steel post in N gate, W side of the road, - and 146.0' N of fence corner fence W. Set flush with surface.
- 57-3337 In Section 27, T-83-N, R-5-W, in SW corner of NW $\frac{1}{4}$ SW $\frac{1}{4}$, 2.3 miles N and 0.1 mile W of depot at Mt. Vernon, about 1400' N of NE corner of Section 33; 1.4' E of E right-of-way fence, 5.3' S of telephone pole, 118.2' S of a 30" elm tree, 95.0' NW of a 36" maple tree, 94.0' NE of a 24" elm tree, and 131.8' SE of the SE corner of a house. Set flush with the surface.
- 57-3334 In Section 33, T-83-N, R-5-W, in NE corner, 2.15 mile N and 0.1 mile W of depot at Mt. Vernon, 327.0' SW of NE corner of Section 33; 1.8' E of W right-of-way fence, 63.5' W of E right-of-way fence, 79.4' NW of a telephone pole. Set flush with surface.
- 57-3333 In Section 34, T-83-N, R-5-W, in NW corner SW $\frac{1}{4}$, 1.65 mile N and 0.1 mile W of depot at Mt. Vernon, - 232.5' SE of E $\frac{1}{2}$ corner of Section 33; 61.0' E of Cherry Clump W right-of-way fence, 1.5' W of E right-of-way fence, and 62.5' NE of telephone pole.
- 57-3331 In Section 34, T-83-N, R-5-W, in SW corner of Section, 1.15 mile N and 0.1 mile W of depot at Mt. Vernon, in a plowed field, 220.5' NE of SE corner of Section 33; 182.5' NE of NE corner of Section 4, in T-82-N, R-5-W; 8.0' N of N right-of-way fence, 55.5' NW of a 28" elm tree, 51.2' N of S right-of-way fence, and 50.5' E of a 24" elm tree. Set 15" below surface.

- 57-3330 In Section 4, T-82-N, R-5-W, near SE corner of NE $\frac{1}{4}$, 1 mile N of Mt. Vernon, about 2500' N of Cornell College Chapel, 1000' S of intersection of roads, -- 103.9' SE of SE corner of house; 57.2' S of a Cedar, E end of row; 12.5' NE of a 30" hard maple tree; 50' N of telephone pole; 66.0' W of E road fence. Set level with surface, 133.2' NW of power transformer pole and 87.6' SW of power pole.
- 57-5019 In Section 3, T-82-N, R-5-W, near SW corner of NW $\frac{1}{4}$ of SW $\frac{1}{4}$, 0.5 mile N of Mt. Vernon, 500' SE of the wooden truss bridge over Abbey Creek, 0.8' S of E-W fence, 147.6' SE of SE corner of house, 95.0' SW of SW corner of barn, 118.7' W of SW gatepost of fence, 183.6' E of E road fence, 249.9' E of W road fence, - 202.6' E of E end of concrete bridge, 7.2' W of fence post and 7.3' E of fence post. Set level with surface.
- 57-5018 In Section 10, T-82-N, R-5-W, near NW corner of NW $\frac{1}{4}$, in N city limits of Mt. Vernon, about 300' S of a farmhouse and 300' N of a farmhouse, 600' S of E-W section line on County Road "C", by Chicago & North Western Railroad at N city limits, 108.6' SE of the fence corner, 55.2' SE of telephone pole, 41.4' S of N railroad fence, 89.0' SW of telephone pole, 48.6' SW of end of bridge, 97.4' E of E road fence, 6.8' N of N railroad rail.

Line 57-5018 to 57-5041

- 57-5018 See above
- 57-5020 In Section 3, T-82-N, R-5-W, near SE corner of SW $\frac{1}{4}$ of SE $\frac{1}{4}$, by N city limits of Mt. Vernon, 1000' NE of the Chicago & North Western Railroad depot, 500' NW of a farmhouse, 200' NW of a concrete silo, 26.8' W of the NW corner of a double crib, 36.2' NW of the SW corner of the double crib, 11.6' W of W gatepost fence W, 58.6' W of N gatepost fence E, 348.5' W of W road fence, 1.0' N of fence W, 99.4' W of NW corner of the barn. Buried 14" below surface.
- 57-5021 In Section 2, T-82-N, R-5-W, in SW $\frac{1}{4}$ near the NE corner of NW $\frac{1}{4}$, 0.5 mile NE of Mt. Vernon, about 300' S of the Wallick home, 1000' N of farmhouse, 118.8' SE of a steel corner post in SE corner of lawn, 78.8' E of W road fence, 10.8' E of E road fence, 131.0' S of the S gatepost E of road, 155.0' S of power transformer pole, 144.6' N of power pole, 229.0' SE of a steel post on N side of farm drive, 124.6' SE of a 30" hard maple tree in SE corner of lawn. Buried 14" below the surface.

- 57-3401 In Section 2, T-82-N, R-5-W, in NE corner of NW $\frac{1}{4}$, 1.25 miles N and 1.5 miles E of the depot at Mt. Vernon, about 40.0' SE of S $\frac{1}{4}$ corner of Section 35, T-83-N, R-5-W, S of Township line; 1.6' SE of W right-of-way fence, on Iowa Highway #261, 95.0' SE of a 30" elm tree; 107.5' NE of power pole on W side of Iowa Highway #261; 41.8' SW of power pole on W side of Iowa Highway #261; 64.0' NW of E right-of-way fence. Set 2" above surface.
- 57-5022 In Section 35, T-83-N, R-5-W, near NE corner SW $\frac{1}{4}$ of SE $\frac{1}{4}$, 1.5 miles NE of Mt. Vernon, about 1300' NE of intersection of township line with E-W road, 800' S of concrete bridge, 5.8' E of concrete gatepost, 5.2' W of concrete brace post, 21.3' E of W gatepost in E road fence, 30.3' NE of concrete brace post fence S, 17.2' SE of concrete gatepost, 21.6' SE of concrete brace post, 87.8' SE of S steel gatepost on W side of road, 93.2' SE of N steel gatepost on W side of road and 1.0' N of $\frac{1}{4}$ $\frac{1}{4}$ fence to E. Set flush with surface.
- 57-3409 In Section 25, T-83-N, R-5-W, in about the center of SW $\frac{1}{4}$ of SW $\frac{1}{4}$; 2.25 miles N and 2 miles E of the depot at Mt. Vernon, about 1200' NE of NE corner of Section 35, T-83-N, R-5-W, 1.4' W of W right-of-way fence on Iowa Highway #261, 70.8' NN E of fence W, 8.9' SW of a telephone pole (Redhead). Set flush with surface.
- 57-5028 In Section 25, T-83-N, R-5-W, near center line of the N edge of SE $\frac{1}{4}$ of NW $\frac{1}{4}$, 3.25 miles NE of Mt. Vernon, about 350.0' S of the W. G. Bartlett home, 9.0' N of a farmhouse, 325.6' S of $\frac{1}{4}$ $\frac{1}{4}$ fence W, 146.5' SE of a telephone pole, 65.7' E of telephone pole, 152.6' NE of a telephone pole, 43.7' N of fence corner fence E, 60.3' E of W road fence, and 1.2' W of E road fence. Set flush with surface.
- 57-5029 In Section 24, T-83-N, R-5-W, near center line of N edge of SE $\frac{1}{4}$ of SW $\frac{1}{4}$, 3.75 miles NE of Mt. Vernon, 500' S of a farmhouse, 600' E of a farmhouse, 88.6' SE of SE corner of house at W end of porch, 45.9' S of hard maple tree, 27.4' N of fence corner S garden fence, 75.8' S of N lawn fence corner, 419.7' S of the $\frac{1}{4}$ $\frac{1}{4}$ fence E-W; 64.4' SW of fence corner, 145.8' NW of fence corner, 3.0' E of W road fence, 63.4' W of E road line. Set flush with the surface.
- 57-5030 In Section 24, T-83-N, R-5-W, at W edge of NW $\frac{1}{4}$ of NE $\frac{1}{4}$, 4.75 miles NE of Mt. Vernon; about 1000' N of farm house, 2000' S of farmhouse, 31.6' E of E road fence, 33.0' NE of S gatepost, 13.8' E of E gatepost, 30.9' SE of N gatepost, 111.8' SE of telephone pole, 171.3' NE of telephone pole, 88.9' E of W road fence, 683.4' S of the

Section line fence to the E, center line of road W, 660.0' N of line of $\frac{1}{4}$ $\frac{1}{4}$ fence W, and 699.0' N of fence E. Set flush with surface.

57-5031

In Section 13, T-83-N, R-5-W, in SE $\frac{1}{4}$ near the SW corner in the NW $\frac{1}{4}$, 1.75 miles SW of Martelle, about 800' N of a farmhouse, 1200' SE of a farmhouse, -- 116.6' N of the corner post of W road fence S, 119' N of corner post W road fence N, 1.6' E of the W road fence, 4.1' N of fence post, 10.5' S of fence post, 8.5' W of telephone pole and 78.4' W of E road fence. Set flush with surface.

57-5032

In Section 13, T-83-N, R-5-W, in NE $\frac{1}{4}$ near center line of N edge of SW $\frac{1}{4}$, 1.25 miles SW of Martelle, -- 1300' N of a farmhouse, 1800' S of a farmhouse, 135.2' NE of the NE corner of the barn, 113.6' N of NW corner of windmill tower, 112.5' NW of NW corner of the house, 191.6' W of telephone pole on W road fence, -- 1.6' S of fence E-W, and 73.6' NE of the extreme east end of a steel crib. Set flush with surface.

53-5033

In Section 7, T-83-N, R-4-W, near SW corner of NW $\frac{1}{4}$, 0.25 mile SW of Martelle, 1300' N of a farmhouse, 600' N of pavement end, 286.8' S of power pole, 126.4' S of high-line stake on railroad rail, 196.7' SW of fence corner, 17.6' NE of power transformer pole, 82.6' W of a 24" soft maple tree, 87.0' NW of power pole, 23.4' W of W edge pavement. Set flush with surface.

53-5034

In Section 6, T-83-N, R-4-W, in SW $\frac{1}{4}$ near the SE corner of SW $\frac{1}{4}$, in Martelle, about 400' W of the Martelle railroad depot, 200' E of highway viaduct, 78.3' NE of NE corner of store building, 22.9' NE of power pole, 14.2' S of S rail of railroad tracks, 64.5' S E of telephone pole #214; 109.2' SW of telephone pole, 32.1' W of railroad signal post, 41.2' NW of a power pole, and 54.5' NW of NW corner of garage. Set flush with surface.

53-5035

In Section 6, T-83-N, R-4-W, near NW corner of SE $\frac{1}{4}$, 0.25 mile NE of Martelle, about 300' N of a turn in pavement, 200' S of turn in pavement, 115.7' W of SW corner of an old dwelling house, 120.2' SW of NW corner of an old dwelling house, 158.0' SW of telephone pole, 86.8' NW of the fence corner, 9.6' E of pavement, and 35.6' NW of telephone pole. Set flush with surface.

53-23

In Section 31, T-84-N, R-4-W, in SE $\frac{1}{4}$, 1.25 miles NE of Martelle on State Highway #261 on E side of right--

of-way, 84.5' SE of fence corner, 102.0' E of a farmhouse, 84.0' NE of fence corner and 7.8' NW of gate post.

- 53-260 In Section 32, T-83-N, R-4-W, in NW corner of $\text{SW}\frac{1}{4}$ 2 miles SW of Fairview, 25.4' SE of the Boxwell headstone, 49.8' SE of the Hurt headstone, 1.5' S of cement fence, 491.6' W of a 25" boxelder tree, and 492.2' SW of a 24" elm tree.
- 53-371 In Section 31, T-84-N, R-4-W, in SE corner of $\text{NE}\frac{1}{4}$ of $\text{NE}\frac{1}{4}$, 1-7/8 miles NE of Martelle, 504.0' E of E road fence, 111.0' E of spike in a 30" cottonwood tree, --- 417.4' SE of SE foundation of corner of barn, 82.0' SW of a spike in the fifth post in fence N, 54.5' W of a spike in corner post in $\frac{1}{4}\frac{1}{4}$ fence E-W and fence N, 1.3' N of $\frac{1}{4}\frac{1}{4}$ fence E-W, 109.3' NE of third steel post fence S. Set flush with surface.
- 53-5036 In Section 29, T-84-N, R-4-W, in $\text{NW}\frac{1}{4}$ of NW corner of $\text{SE}\frac{1}{4}$, 2.5 miles NE of Martelle, about 1300' S of a farmhouse, 200' N of a farmhouse, 134.4' NE of a 30" white maple tree in NE corner of lawn, 108.4' NE of a corner post in NE corner of lawn, 23.9' S of telephone pole, 29.7' S of highway stake in railroad rail, and 59.4' W of steel corner post fence E. Set flush with the surface.
- 53-5037 In Section 20, T-84-N, R-4-W, near SW corner $\text{NE}\frac{1}{4}$, 0.5 miles SW of Fairview, 1300' N of a farmhouse, 350' SW of corner of pavement, 360.8' N of corner of pavement, 306.7' SE of corner of pavement, 193.0' SE of a telephone pole, 230.1' S of a telephone pole, 208.6' SW of a power pole, 212.2' NE of end of tile bridge under pavement, 79.0' W of W edge of pavement, 212.2' NW of a power pole. Set flush with surface.
- 53-5038 In Section 19, T-84-N, R-4-W, near NE corner $\text{SE}\frac{1}{4}$, 0.5 mile W and 0.5 mile SW of Fairview, about 2000' NE of farmhouse, 0.5 mile W of junction pavement, 2.2' N of S highway fence, 78.7' SE of a telephone pole, 118.9' SW of a telephone pole, 154.5' W of section fence N-S, 181.9' W of S abutment of a concrete culvert, and 22.2' S of S edge of pavement. Set flush with surface.
- 53-5039 In Section 19, T-84-N, R-4-W, near SE corner $\text{NW}\frac{1}{4}$, 0.5 mile SW and 1 mile W of Fairview, about 1200' E of a farmhouse, 2000' W of a farmhouse, 107.0' E of telephone pole #2; 49.8' W of telephone pole #3; 869.6' W of $\frac{1}{4}$ fence N-S, 2.3' S of N highway fence, 22.3' N of N edge of pavement and 67.5' N of S highway fence. - Set flush with surface.

53-5040 In Section 19, T-84-N, R-4-W, near NW corner of SW $\frac{1}{4}$, 0.5 mile SW and 1.5 miles W of Fairview, 1300' W of farmhouse, 2000' S of a farmhouse, 26.0' N of power pole, 53.9' SE of fence corner, 129.3' SE of a steel fence corner, 40.0' S of fence corner, 165.0' SW of a telephone pole #2; 65.1' S of S edge of pavement. Set flush with surface.

57-5041 See page 59.

LOOP XVIII

Line 57-67 to 57 - 10

57-67 See page 67.

57-68 In Section 1, T-82-N, R-8-W, in NE $\frac{1}{4}$, 0.5 mile W of W edge of city limits of Cedar Rapids, on W side of County Road "H" Township line, 5.5' SE of corner post at SW corner of intersection, 58.0' S of corner post at NW corner of intersection, 66.3' W of a Dog Fir - tree at SE corner of intersection, 87.8' SW of power pole on NE corner of intersection, in SW corner of the intersection of Township line County Road "H" and road 0.25 mile S of Township line.

57-69 In Section 6, T-82-N, R-7-W, 0.4 mile N of Beverly, 0.5 mile W of W edge of Cedar Rapids city limits, 62.0' SE of corner post in NW corner of the intersection, 93.3' S of power pole which is NE of the intersection, 105.2' N of power pole which is SE of the intersection, and 2.0' W of E road fence along County Road "H".

57-10 In Section 13, T-82-N, R-8-W, 0.75 mile S of the Prairie Creek bridge which is near the Beverly railroad station, 375.2' S of NE corner of Section 13, -- 4.0' W of W right-of-way line on County Road "K", on S end of curve on County Road "K".

Line 57-10 to 57-19

57-10 See above

57-11 In Section 7, T-82-N, R-7-W, 0.75 mile S of Beverly, about 150' E of top of rise, 3.0' N of N right-of-way line on County Road "K", 1150' E of road intersection which is 0.75 mile S of the Beverly railroad station, 1178.2' W of concrete corner post which is the SE corner of the SW $\frac{1}{4}$ of Section 7, also opposite the

eleventh fence post W of concrete corner post.

- 57-12 In Section 7, T-82-N, R-7-W, 0.75 mile S and 0.75 mile E of Beverly, on top of rise at the SE corner of lawn at the P. M. Davis residence, on N side of County Road "K", 108.6' SE of SE corner of house foundation, 153.5' SE of well and windmill.
- 57-13 In Section 8, T-82-N, R-7-W, 0.75 mile S and 1.5 mile E of Beverly, 340.0' W of road running N from County Road "K" on the N and S $\frac{1}{2}$ Section line of Section 8, on backslope on N side of the County Road "K", 270.0' NW of NW corner of the H. R. Churchill house, 342.0' W of W end of the culvert under driveway to house.
- 57-14 In Section 8, T-82-N, R-7-W, 1.25 miles S of S city limits of Cedar Rapids, on N side of the County Road "K", 680.5' W of center line of the Cedar Rapids and Iowa City Interurban tracks, - about 1.5 miles W and 0.5 mile S of the airport, 638.0' E of the N and S $\frac{1}{2}$ section line of Section 8.
- 57-15 In Section 16, T-82-N, R-7-W, in NW corner of NW $\frac{1}{4}$, 1.5 miles S of city limits of Cedar Rapids, on E side of County Road "K" at SE corner of road intersection, about 1 mile W and 0.5 mile S of the airport, 5/8 mile S of Prairie Creek bridge on Sixth Street W (extended S) of Cedar Rapids, 281.5' NW of NW corner of the W. Machacek's house foundation, 16.0' S of section corner of Sections 8, 9, 16 and 17.
- 57-16 In Section 8, T-82-N, R-7-W, in NE corner of SE $\frac{1}{4}$, 1 mile S of city limits of Cedar Rapids, in NE corner of the schoolyard, 1 mile W of the airport, 1138.8' S of the Prairie Creek bridge on Sixth Street W (extended S), 77.5' SW of road intersection of County Road "K" and Sixth Avenue W, 80.2' NE of NE corner of schoolhouse foundation.
- 57-17 In Section 9, T-82-N, R-7-W, 0.5 mile S of the city limits of Cedar Rapids, On N side of County road "X" approximately 0.5 mile W of the SE corner of the airport, 164.4' E of line of "J" street "W" (extended), 458.0' W of concrete bridge on the County Road "X" which is approximately 0.5 mile W of U. S. Highway #218.

57-18 In Section 10, T-82-N, R-7-W, in SE corner, 0.5 mile S of city limits of Cedar Rapids, 129.8' NE of intersection of U. S. Highway #218 with County Road "X" along right-of-way line of County Road "X", 70.0' E of E wing wall of a culvert across from U. S. Highway #218 which is at the SE corner of the Cedar Rapids airport.

57-19 In Section 10, T-82-N, R-7-W, 1.75 miles S of Cedar Rapids (city limits), on top of rise on N side of County Road "K", about $\frac{3}{8}$ mile E of U. S. Highway #218 and the Cedar Rapids airport, 812.0' W of SE corner of the $\text{SE}\frac{1}{4}$ of $\text{NW}\frac{1}{4}$ of Section 10, 243.0' SE of the SE corner of G. M. Booth's residence.

Line 57-19 to 57-35

57-19 See above

57-30 In Section 11, T-82-N, R-7-W, 1 mile E of the Cedar Rapids airport, on right-of-way line, on S side of County Road "K", 146.2' SE of the intersection of County Road "K" and N-S County Road between Section 10 and Section 11.

57-31 In Section 11, T-82-N, R-7-W, 1.75 miles S of Cedar Rapids city limits, on the schoolhouse lot at intersection of County Road "K" and the Cedar Rapids to Ely road, 128.8' NE of NW corner of the church foundation, 160.8' SE of NE corner of schoolhouse.

57-32 In Section 11, T-82-N, R-7-W, 2 miles SE of Cedar Rapids city limits, on the N side of County Road "K", in NE corner of road intersection about $\frac{3}{8}$ mile E of the Cedar Rapids to Ely road; this point is 74.2' SW of the SW corner of the house and is on the SW corner of the lawn in front of the house.

57-33 In Section 12, T-82-N, R-7-W, 2.5 miles S of Cedar Rapids city limits, on S side of County Road "K" - at the Glenn Averril estate, 2.5 miles E of the airport, 91.0' E of the N-S $\frac{1}{2}$ section line of Section 12; 79.3' S of brick pillar of the Averril estate driveway.

57- In Section 13, T-82-N, R-7-W, 3.0 miles SE of city limits of Cedar Rapids, on S side of County Road "K" on the Township line between Putnam and College Townships, about $\frac{3}{8}$ mile E of the Joseph Benda farm and dairy.

57-35 In Section 18, T-82-N, R-6-W, 2 miles W and 2 miles S of Bertram, on N side of County Road "K", at SW corner of the James Mackey lawn, 142.2' SW of the SW foundation of the Mackey house, about 0.25 mile W of brick schoolhouse which is on the section line between Sections 17 and 18.

Line 57-35 to 57-116

57-35 See above.

57-101 In Section 17, T-82-N, R-6-W, on W side of NW $\frac{1}{4}$ of NW $\frac{1}{4}$, 2 miles S and 2 miles W of Bertram, 36.6' E of witness post, in pasture on E side of the N-S road, - 850' N of E and W-N road fence, and Set 12" below the surface.

57-102 In Section 7, T-82-N, R-6-W, in SE corner, - 2 miles E and 2 miles S of SE city limits of Cedar Rapids, 18.0' W of witness post, 49.4' N of section fence E-W, in field 18.9' W of W road fence. Set 12" below surface.

57-103 In Section 7, T-82-N, R-6-W, in NE $\frac{1}{4}$ of NE $\frac{1}{4}$, 1 mile S and 2 miles W of Bertram, 322.0' NW of a telephone pole with spike in it at intersection of fence going W with N-S fence at road intersection, 402.4' NE of spike in a 15" twin boxelder tree in E-W fence, and 64.2' W of witness post. Set 18" below surface.

57-104 In Section 6, T-82-N, R-6-W, in SE corner, 2.5 miles E and 1.5 miles S of city limits of Cedar Rapids, on S side of road opposite a set of farm buildings on N side of road, 149.9' NE of an 18" white oak tree on E edge of grove, 142.0' SE of spike in a square creosoted corner post about 80' W of a farmhouse, 17.1' S of a white witness post, 150.3' SE of the windmill-SE leg; 40.9' SW of wood post in fence on N side of road where all the rest are steel. Set 14" below surface.

57-105 In Section 6, T-82-N, R-6-W, in center of SE $\frac{1}{4}$, 1 mile S and 2 miles W of Bertram, 1.4' N of E-W fence, 2.0' NW of witness post, 50.5' SE of spike in N gatepost of a private drive going E; 35.7' W of spike in corner post at bend in E-W fence; 137.5' S of a 14" black oak tree, with spike in it, at the southern edge of a grove, and 407.2' NW of NW corner of farmhouse - with a dormer on both N and S sides of roof, and having evergreens on N side of house. Set 3" above the surface.

- 57-106 In Section 6, T-82-N, R-6-W, in SW $\frac{1}{4}$, 1.5 miles E and 1.5 miles S of SE corner of city limits of Cedar Rapids, 114.7' NW of post with 4 mail boxes on it, - 100.5' NW of spike in telephone pole at NE corner of intersection, 21.55' W of witness post, marker is W of W fence of road going N about 100' N of intersection of E-W road with one going N. Set 20" below the surface.
- 57-107 In Section 6, T-82-N, R-6-W, 1.5 miles E and 0.5 mile S of SE corner of Cedar Rapids, 2.7' E of tack in fence post, 9.4' W of tack in fence post, 3.0' W of witness post, in fence line running to W.
- 57-108 In Section 31, T-83-N, R-6-W, 1.5 miles E of the SE corner of Cedar Rapids, by the intersection^N of the barn; 0.25 mile N and 35° E from station and E cupola of the barn 2 miles from station, and the line prolonged from third tree S of highest point E of station. about 0.5 mile and the largest tree in the draw which runs slightly to S of highest point 3.0' S of witness post. Set flush with surface.
- 57-109 In Section 31, T-83-N, R-6-W, 1.5 miles E of SE corner of city limits of Cedar Rapids, on S side of the Cedar River on top of a high hill, about 40 rods NW of a farmhouse which faces the N-S road, on ridge running parallel to river road, 0.1 mile W from N-S road, ridge has been cleared of timber, a witness post is located in S road fence at toe of slope. Set flush with surface.
- 57-110 In Section 36, T-83-N, R-7-W, in SE $\frac{1}{4}$ of NE $\frac{1}{4}$, 0.5 mile E of E city limits of Cedar Rapids, 22.7' S of S road fence, 17.2' N of N rail on track, 46.8' SW of spike in third telephone pole west of intersection of E-W road with the one going N; 93.0' SE of spike in fourth telephone pole W of the same intersection; -- 23.0' S of witness post, and 1.25 miles S of U. S. - Highway #30. Set 8" above surface.
- 57-111 In Section 31, T-83-N, R-6-W, in NE corner, 0.5 mile E of E city limits of Cedar Rapids, about 0.15 mile N of intersection of E-W road with one going N, monument is in E fence of intersection of fence going E with the N-S fence, 47.6' SE of spike in post in N-S fence, 34.7' NE of railroad spike in post of N-S fence, 20.5' E of witness post, 19.5' E of the N-S fence, 0.5' S of E fence, and 1 mile S of U. S. - Highway #30. Set flush with surface.

- 57-112 In Section 30, T-83-N, R-6-W, in NW corner of NW $\frac{1}{4}$ of SW $\frac{1}{4}$, 0.5 mile E of E city limits of Cedar Rapids, -- 18.1' S of N drive fence, 1.7' N of S drive fence, 33.65' E of drive gate, 51.1' SSW of SW corner of house.
- 57-113 In Section 30, T-83-N, R-6-W, in SW corner NW $\frac{1}{4}$, - 0.5 miles E of E city limits of Cedar Rapids, 13.8' E of witness post and road fence, 67.8' WSW of SW corner of house, 0.94' S of yard fence.
- 57-114 In Section 30, T-83-N, R-6-W, in NW $\frac{1}{4}$, 0.5 mile E of E city limits of Cedar Rapids, 22.3' from E road fence, 21.0' E of witness post, 37.0' N of yard fence, 74.5' NW of NW corner of house.
- 57-115 In Section 30, T-83-N, R-6-W, in NW corner, 1 mile E of city limits of Cedar Rapids, on S side of U.S. Highway #30, opposite the Sunny Crest grocery, opposite the pavement station #254 + 38'; 12.8' N of witness post, - 23.5' NE of spike in corner post.
- 57-116 See page 76.

LOOP XIX

Line 57-60 to 57-1

- 57-60 See page 64.
- 6-165 In Section 36, T-83-N, R-9-W, in SE $\frac{1}{4}$, 3 miles S - 0.5 mile E of Atkins, 1.9' N of witness post, 0.7' E of W fence, 57.7' S of power pole with spike in it, 59.6' N of power pole with transformer, 62.4' NW of spike in a corner post at cross fence at NW corner of building lot in farmyard, Set 2" above surface.
- 57-177 In Section 6, T-82-N, R-8-W, in W edge of S $\frac{1}{4}$ $\frac{1}{4}$, - 1.5 miles N and 2.75 miles W of Fairfax, 22.8' E of the witness post, 47.4' NE of spike in corner post at jog in fence by gate; 53.7' NE of W corner post at jog in fence, spike in top of post; 36.6' SW of spike in triple stump, 108.1' NW of a 12" oak tree, on E side of an abandoned road in timber pasture, 1.75 miles S of U. S. Highway 30. Set 12" below surface.
- 6-164 In Section 1, T-82-N, R-9-W, on E side of SE $\frac{1}{4}$, 4 miles N of Walford, 33.1' W of witness post, 46.9' SE of spike in an 18" twin stump, 32.5' W of W fence, 34.8' SW of spike in fence post, in timber pasture, about 200' N of E-W fence, 77.5' N of spike in W side of twin elm tree. Set flush with surface.

- 6-163 In Section 12, T-82-N, R-9-W, in NE $\frac{1}{4}$ of NE $\frac{1}{4}$, 3.5 miles N of Walford, 32.9' W of spike in the S gatepost, 43.6' W of a witness post, 1.0' N of E and W fence, 35.2' SW of a 14" black oak tree and 13.1' NW of spike in a 14" oak tree. Set 2" above the ground.
- 57-176 In Section 7, T-82-N, R-8-W, in center of Section W $\frac{1}{2}$, 311.8' S of spike in SE corner post at intersection, 3.9' E of witness post, 3.5' E of the E fence, 15.9' SE of a multiple oak tree grown from stump, 15.9' NE of a bent spike in fence post, on right-of-way adjoining the James M. Rogers property. 1.5 miles S and 1.5 miles E of Cedar Rapids. Set 5" above surface.
- 6-162 In Section 12, T-82-N, R-9-W, in NE $\frac{1}{4}$, 3 miles N of Walford, 4.6' NW of spike in corner post, 6.2' W of witness post, 13.9' NE of a 20" ash tree, 16.3' NW of cross on NW corner of bridge abutment, 34.8' SE of spike in quintuplet maples, just N of pony truss bridge and on W side of the road. Set flush with surface.
- 6-161 In Section 13, T-82-N, R-9-W, in NE $\frac{1}{4}$ of NE $\frac{1}{4}$, - 2.5 miles N of Walford, 2.6' NE of witness post, - 6.0' NE of bolt in rock on NE corner of culvert, - 11.5' N of N rail, 3.6' W of spike in railroad crossing sign, 43.0' SE of spike in brace pole to power-pole with danger sign on it, on W side of road just N of railroad tracks. Set 4" above surface.
- 6-160 In Section 13, T-82-N, R-9-W, on E side of SE $\frac{1}{4}$, 2 miles N of Walford, 27.5' SE of SE corner steel post to the Matt. Maloney farmyard, 18.2' E of the spike on a 12" evergreen tree (SE one), 38.5' NE of spike in wood corner post S of farm drive, 72.7' NW of spike in power pole, 39.7' NW of mail box, 2.2' SE of witness post, in ditch just N of farm drive on W side of County line road between Linn and Benton Counties. Set 2" above surface.
- 6-159 In Section 24, T-82-N, R-9-W, in NE $\frac{1}{4}$ of SE $\frac{1}{4}$, - 1.5 miles N of Walford, 7.7' NW of N end of culvert, 2.0' NE of witness post, 10.0' E of W fence, 13.1' NE of N steel gatepost, 24.8' NE of S steel gatepost, 40.1' W of the C. E. Snell mail box, at foot of back slope in W side of County line between the group of farm buildings and one on the W. Set 3" above surface.

- 6-158 In Section 25, T-82-N, R-9-W, on E side of NW $\frac{1}{4}$, 0.5 mile N of Walford, 3.5' NE of spike in power pole, 4.8' SE of witness post, 5.6' E of W fence, 0.5 mile N of intersection with Iowa Highway #149; 170.6' S of spike in power pole, 112.3' SW of spike in telephone pole on E side of the road.
- 57-175 In Section 31, T-82-N, R-8-W, in NW corner of SW $\frac{1}{4}$ of NW $\frac{1}{4}$, 0.5 mile E of Walford, 3.1' SW of witness post, 9.6' W of E fence, 56.4' SE of spike in telephone pole on the W side of road, 87.1' SE of spike in a 10" triple stump at fence corner S of schoolhouse just S of first road going W into Walford; just S of Walford on E side of County road between Benton and Linn Counties, on the right-of-way adjoining the Joseph Schulte property. Set flush with the surface.
- 6-144 In Section 36, T-82-N, R-9-W, at NE $\frac{1}{4}$ of SE $\frac{1}{4}$, 0.5 mile S of Walford, 3.3' SE of a witness post, 3.8' E of W fence, 57.1' N of spike in a telephone pole, 107.2' S of spike in telephone pole, 969.9' NW of spike in NW end of handrail of small wooden bridge, on W side of road, E of W fence, - 0.25 mile N of S edge of Benton County, about 1.0' down from top of back slope along county line road.
- 52-100 In Section 6, T-81-N, R-8-W, in NW corner, 1.25 miles S of Walford, about 55.0' SE of center of intersection, - 1.9' NNW of witness post, 51.0' SE of SW corner of right-of-way steel corner post of fence intersection, 11.4' S of a 40" soft maple tree, 50.6' E of W road fence, 1.0' W of E road fence and about 250' SW of a farmhouse.
- 57-174 In Section 32, T-82-N, R-8-W, 4 miles S and 1.0 mile W of Fairfax, on N side of road, on Linn County line, 26.0' N of spike in $\frac{1}{4}$ section corner post; 33.3' NW of spike in post, 27.0' N of witness post. Set flush with surface.
- 57-173 In Section 33, T-82-N, R-8-W, in SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 4 miles S and 0.25 mile W of Fairfax, 94.8' W of spike in corner post at SW corner of farmyard, 144.3' SW of SW corner of house on Dusil farm, 11.0' N of witness post, 10.3' N of fence on N side of road,; 133.4' SE of NW corner post in orchard, spike in post; 2.1 miles E of West Linn County limits on county line road between Johnson and Linn Counties.
- 52-97 In Section 4, T-81-N, R-8-W, in NW corner of NE $\frac{1}{4}$, - 1.25 miles S and 2.55 miles E of Walford, on S side of the road, 101.7' S of S road fence, 1.5' W of E yard fence, - 255.0' N of corner post of angle in yard fence, 101.7' S of witness post and corner post, 103.5' E of lane fence, -

138.7' SE of power pole, about 300' NNE of farmhouse, 700' SW of farmhouse and 1000' NE of farmhouse. Set 6" below surface.

57-172- In Section 34, T-82-N, R-8-W, in SW $\frac{1}{4}$ of SW $\frac{1}{4}$, 4 miles S and 0.5 mile E of Fairfax, 48.0' NE of spike in blaze of 6" elm tree, 48.5' NW of spike in corner post, 7.9' SE of spike in corner post, 2.0' NW of a witness post, 1 mile S and 0.5 mile E of Maple Grove School #8, on the Louis Lopata property. Set flush with surface.

57-171 In Section 34, T-82-N, R-8-W, 4 miles S, 0.75 mile E of Fairfax, on N side of road on the Linn-Johnson line, 11.6' N of N road fence, 20.4' NW of spike in telephone pole third W of road intersection, 67.1' N of spike in blaze of spruce tree, 12.0' N of witness post on the Martin J. Kilberger property, 1 mile S and 0.4 mile E of the Maple Grove School #5. Set 12" below surface of the ground.

57-170 In Section 35, T-82-N, R-8-W, in SW $\frac{1}{4}$ of SE $\frac{1}{4}$, 5 miles W of Western, on N side road on the Johnson -- Linn County line, S of the N road fence, 122.0' NE of spike in corner post, 7.4' SE of spike in post, 2.0' SE of witness post, on right-of-way adjoining the J. C. and Agnes Witousek property, 1 mile S and 0.3 mile W of the Labelle #7 schoolhouse.

57-1 In Section 36, T-82-N, R-8-W, S of SE $\frac{1}{4}$, 4.50 miles S of Beverly, on top of ridge on W side of the road in right-of-way, 1200' N of Johnson County line.

Line 57-1 to 57-10

57-1 See above.

57-2 In Section 36, T-82-N, R-8-W, 4.25 miles S of Beverly, on W side of Township line road, W from E $\frac{1}{4}$ corner of Section 36; 0.5 mile N of Johnson County line, 56.5' SE of SE corner of the Frank Cuhel residence, 172.0' E of the well and windmill on the Cuhel farm.

57-3 In Section 36, T-82-N, R-8-W, 4.0 miles SS of Beverly, on top of a ridge on the W side of the Township road, 0.75 mile N of the Johnson County Line, - 600' S of crossroad and NE corner of Section 36, directly across the road 109.0' from an empty house.

- 57-4 In Section 25, T-82-N, R-8-W, in NE corner of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, 3.5 miles S of Beverly, on top of rise on the W side of the Township road, 1.25 miles N of the Johnson County line.
- 57-5 In Section 25, T-82-N, R-8-W, 3 miles S of Beverly, on top of a rise on W side of the Township road, 5' W of the right-of-way line, 803.0' S of the crossroad NE corner of the Section (25); 381.55' SE of SE corner of a brick poultry house, 155.7' NW of corner of stone foundation of the J. Pavlis residence, on E side of road, 1.75 miles N of the Johnson County line.
- 57-6 In Section 24, T-82-N, R-8-W, 2.5 miles S of Beverly, on top of a rise 12.0' W of right-of-way line of County Road "K", 2.25 miles N of the Johnson County line, 1128.0' N of crossroad at SE corner of Section 24; 52.65' NE of NE corner of the foundation of the L. A. Cuhel house, and 160.0' SE of the wall and windmill.
- 57-7 In Section 24, T-82-N, R-8-W, E side of NE $\frac{1}{4}$, and 2 miles S of Beverly, 9.5' W of right-of-way (County road "K"), 1077.0' S of road intersection at NE corner of Section 24; 73.0' SE of SE corner of foundation of brick pillar of porch of the Chas. Cereveny house, 24.0' SW of a concrete corner post at SE corner of lawn to the same house.
- 57-8 In Section 18, T-82-N, R-7-W, 1.75 miles S of Beverly, in backslope of a road cut, on E side of the County Road "K", 1127.0' N of road intersection of SW corner of Section 18; 204.8' S of a concrete corner post at NW corner of SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 18.
- 57-9 In Section 18, T-82-N, R-7-W, 1.25 miles S of Beverly, on E side of County Road "K", 586.0' N of E-W $\frac{1}{8}$ of Section line of Section 18; 109.0' S of SW corner of an abandoned schoolhouse.
- 57-10 See page 86.

LOOP XX

Line 57-1 to 52-52

- 57-1 See page 94.
- 52-34 In Section 1, T-81-N, R-8-W, NE $\frac{1}{4}$, 1.25 miles W of Swisher and 0.75 mile N; 26.3' E of center of road; 19.0' S and 14° E of reinforcing rod in concrete post 22.0' E of center of road; 4.3' N and 84° E of reinforcing rod in concrete post 22' E of center of road; 725.5' N and 2° E of NW corner of concrete in W headwall of concrete culvert. Set 12" below surface.

- 52-33 In Section 6, T-81-N, R-7-W, in SW corner, 1 mile W of Swisher, 3.2' E of fence line N: 2.1' N of N road fence, 65.8' N of S road fence, 65.0' N and 3° E of blaze on a 36" elm tree on S road fence line used for corner post on Township line and fence S; 3.4' N and 7° W of reinforcing rod set in square concrete post 3" above the surface; 18.2' N and 78° E of a similar reinforcing rod. Set 12" below surface.
- 52-48 In Section 6, T-81-N, R-7-W, just W of Swisher, - 0.25 mile W of SE corner, 30.0' E and 30' S of an intersection of roads, 5.0' E and 2.0' N of the fence corner post.
- 52-49 In Section 8, T-81-N, R-7-W, in Swisher, 26.0' S and 20° W of intersection of Summit Avenue and the County Road running E and W along N side of Section 8; 51.0' N and 85° W of an iron pin 33' from center of the county road.
- 52-50 In Section 8, T-81-N, R-7-W, in N $\frac{1}{4}$ corner, 0.25 mile E of Swisher, 31.0' S of center of road, 1.3' N of top of iron pin 2" above ground and 32.0' S of the center of road; 18.6' N and 85° W of top of iron pin 2" above ground and 32.0' S of center of road.
- 52-51 In Section 4, T-81-N, R-7-W, 1 mile E of Swisher, 1800' E of SW corner, in line with fence running N, --- 30.0' N of center of road, 24.0' W of railroad spike in root on S side of a 12" wild cherry tree 33.0' N of the center of road; 128.0' S and 80° W of nail in root on S side of a 36" elm tree 33.0' N of center of road.
- 52-52 In Section 3, T-81-N, R-7-W, 0.25 mile W of U. S. Highway #218 in Shueyville, on first hill W of pavement, 79.2' N and 45° E of power pole #40; 3.5' S of N road fence, 103.1' W of a 14" cherry tree, 84.3' N and 45° W of power pole #1; 61.3' N of S road fence, and 76.0' N of N row of apple trees.

Line 52-52 to 57-19

- 52-52 See above.
- 52-86 In Section 3, T-81-N, R-7-W, 0.5 mile N of N $\frac{1}{4}$ corner of Section 10, 0.5 mile N of Shueyville, 27.0' E of center line of U. S. Highway #218 at Station #808 + 85' (Station numbers are stamped on E edge of slab). Set flush with surface.

- 52-360 In Section 3, T-81-N, R-7-W, at NE corner of NW $\frac{1}{4}$, 1 mile N of Shueyville, on W side of paved road, 44.0' S of telephone pole on county line fence running to W; 118.7' S and 45° W of power pole; 97.0' W of E road fence; 38.9' N and 85° W of cross on W edge of pavement at #832; 168.8' N and 10° W of cross on W head wall of concrete culvert; 145.8' N of telephone pole; 117.8' S and 25° E of SE corner of a house.
- 57-29 In Section 34, T-82-N, R-7-W, 0.25 mile N of Western, 250.0' S of center line of road E from U. S. Highway #218 just N of Western, 86.8' SW of SW corner of a house, 1.7' W of witness post, 88.45' NE of NE corner of the Western garage, 34.5' E of center line of paving, 3.9' SE of telephone pole.
- 57-28 In Section 34, T-82-N, R-7-W, 0.5 mile N of Western, in backslope in W side of U. S. Highway #218; 0.5 mile N of the Johnson County line at Western, 50.0' N of $\frac{1}{2}$ Section corner post, 25.5' W of center line of pavement, and 61.0' S of concrete sidewalk leading to the F. Povilis house.
- 57-27 In Section 27, T-82-N, R-7-W, 1 mile N of Western, in the backslope, 3.0' inside right-of-way line on the W side of U. S. Highway #218; 64.0' N of E and W $\frac{1}{2}$ Section line of Section 27; 3 miles S and 0.5 mile E of the airport.
- 57-26 In Section 27, T-82-N, R-7-W, 1.75 miles N of Western, on E side of U. S. Highway #218 on the shoulder, -- 17.0' from center line of pavement, 196.0' N of S end of curve on U. S. Highway #218; 2.5 miles S and 0.5 mile E from the Cedar Rapids airport, and 372.0' S of $\frac{1}{2}$ section corner post of Section 22.
- 57-25 In Section 27, T-82-N, R-7-W, 0.25 mile W and 1.7 mile N of Western, on S side of U. S. Highway #218 on top of rise, 2.0' inside of right-of-way line and 2.0' N of $\frac{1}{4}$ Section corner post; this is the middle point of the half-mile stretch where U. S. Highway #218 runs E and W--it is 2.5 miles S of the airport.
- 57-24 In Section 28, T-82-N, R-7-W, 1 mile W and 1.75 miles N of Western, on the S side of road which is the E and W section lines of Sections 21, 22, 27 and 28-- 2.5 miles south of the airport, and 5.0' N of the section corner post which is on a line with U. S. Highway extended (#218).

- 57-23 In Section 22, T-82-N, R-7-W, 3 miles S of Cedar Rapids city limits, on E side of U. S. Highway #218 and about 2.5 miles S of the airport, in backslope, 24.5' from center line of pavement and 228.5' N of N end of a curve in U. S. Highway #218.
- 57-22 In Section 22, T-82-N, R-7-W, 2 miles S of Cedar Rapids city limits on the E side of U. S. Highway #218, about 1.5 miles S of the Cedar Rapids airport, on the S property line of a rural school, 207.0' S of center line of E and W road which is on a line between Sections 15 and 22; 79.0' SW of SW corner of stone foundation of a schoolhouse, and across the road from the T. P. Kohrab house.
- 57-21 In Section 15, T-82-N, R-7-W, 1.5 miles S of Cedar Rapids city limits, on E side of U. S. Highway #218-- about 1.2 miles S of the airport in a deep cut, 495.0' S of the E-W $\frac{1}{2}$ Section line of Section 15, about 85.0' N of maximum depth of cut, 18.0' E of center line of paving-- in backslope about 1.5' above crown of paving.
- 57-20 In Section 10, T-82-N, R-7-W, 1.5 miles S of city limits of Cedar Rapids, on E side of U. S. Highway #218-- in backslope 6.0' from the right-of-way line, about 0.5 mile S of the Cedar Rapids airport, 171.0' N of section line between Sections 10 and 15, and across the road from the H. A. Stoner residence.
- 57-19 See page 88.

LOOP XXI.

Line 52-52 to 57-45

- 52-52 See page 99.
- 52-53 In Section 11, T-81-N, R-7-W, in N $\frac{1}{2}$ corner, 1 mile E of Shueyville, 31.0' S of center of road, 18.75' S and 77° W of a reinforcing rod in concrete post 28.0' S of the center of road; 21.75' S and 78° E of reinforcing rod in a concrete post 28.0' S of center of road; 58.7' S and 1.0' E of a fence corner post 28.0' N of center of road.
- 52-54 In Section 2, T-81-N, R-7-W, 1.5 miles E of Shueyville, 1170' N of SE corner, 3.5' N of fence running west 25' W of the center of road, 16.2' S and 18° W of a reinforcing rod in concrete post 30' W of center of road; - - 17.75' N and 14° W of reinforcing rod in concrete post 20' W of center of road. Set 12" below surface.

- 52-55 In Section 2, T-81-N, R-7-W, 50.0' S and 23.0' W of NE corner, 1 mile W and 0.5 mile S of Ely, 20.8' N and 15° W of a reinforcing rod in a concrete post - 19.0' W of center of road S; 45.9' S and 45° E of the reinforcing rod in a concrete post 17.0' S of center of the road. Set 12" below surface.
- 52-56 In Section 1, T-81-N, R-7-W, 910.0' W of NE corner, 0.25 mile W and 0.5 mile S of Ely, 32.0' S of the township road and 2.0' S of fence, 19.1' S and 56° E of a reinforcing rod in concrete post 21.0' S of center of township road, 19.2' S and 57° W of reinforcing rod in a concrete post 21.0' S of center of township road, -- 599.0' W of a nail in blaze on W side of a 24" elm tree 24.0' S of center of township road. Set 12" below the surface.
- 52-35 In Section 5, T-81-N, R-6-W, in NW corner, 0.5 mile S of Ely, 25.0' S and 47.0' E of intersection of Johnson County Road "R" and E-W township road; 18.7' N and 40° E of nail in blaze on 24" oak tree; 66.2' S and 25° E of an X cross, on E top of concrete bridge; --- 108.3' E of steel yard post on NE corner of the J. H. Smyth property. Set flush with surface.
- 57-53 In Section 32, T-82-N, R-6-W, 2/3 mile SE of Ely, on E side of County Road "R", 0.25 mile N of the Johnson County line, 799.5' E of NW corner of SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 32; 31.0' E of center of right-of-way, 271.0' W of center line of the Rock Island railroad track along fence line which is 0.25 mile N of Johnson County line.
- 57-52 In Section 31, T-82-N, R-6-W, 0.25 mile S of Ely, on W side of County Road "R", 0.5 mile N of the Johnson County line, 32.0' from center line of right-of-way of County Road "R"; 62.0' N of NE corner foundation of the J. Pavel house, and 74.0' NW of culvert of driveway at the Pavel home.
- 57-51 In Section 31, T-82-N, R-6-W, in Ely, on the NE corner of intersection of County Road "R" and street in front of the Ely School; 82.0' NE of intersection of County Road "R" and street in front of the school; -- 179.0' N and W of NW corner of the Ely consolidated school, and 0.75 mile from the Johnson County line.
- 57-50 In Section 31, T-82-N, R-6-W, at E edge of Ely, on S side of local County road running E and W near Ely, 0.75 mile N of the Johnson County line, 160.0' W of section line common to Sections 31 and 32 of Put-

nam Township, 110.0' SE of SE corner of foundation of the Lockwood home, 30.0' from the center line of road and 3.0' N of S right-of-way line.

57-49

In Section 32, T-82-N, R-6-W, 1.25 miles E of Ely, on N side of surfaced county road, 1638' W of section line common to Sections 32 and 33 of Putnam Township, 29.0' from center line of the road, and 0.75 mile from the Johnson County line.

57-48

In Section 32, T-82-N, R-6-W, 1.5 miles E of Ely, on N side of surfaced county road, 0.75 mile N of the Johnson County line, 28.0' from center line of road, and 80.0' W of Section line common to Sections 32 and 33.

57-47

In Sections 33, T-82-N, R-6-W, 1.75 miles E of Ely, on N side of surfaced county road, 0.75 mile from the Johnson County line, 0.5 mile E of section line common to Sections 33 and 32 of Putnam Township, 28.5' N of the center line of road.

57-46

In Section 33, T-82-N, R-6-W, 1.75 miles E of Ely, at an abandoned Linn Grove schoolhouse, 62.0' NNW of NW corner of the schoolhouse foundation.

57-45

In Section 34, T-82-N, R-6-W, 2.25 miles E of Ely, on top of rise, on W side of right-of-way, -- 0.75 mile N of Johnson County line, 457.0' N of the middle of road intersection.

Line 57-45 to 57-35

57-45

See above.

57-44

In Section 27, T-82-N, R-6-W, 2.25 miles E of Ely, and 1 mile N of the Johnson County line on E side of the right-of-way, in SW corner of the Ernest Klima lawn, 118.7' W of the SW corner of foundation of the Klima house, 648.0' N of the section line between Sections 27 and 34, on top of the rise.

57-43

In Section 27, T-82-N, R-6-W, 2.25 miles E and 1 mile N of Ely, 3.0' E of W corner post of $\frac{1}{2}$ Section line of Section 27.

57-42

In Section 27, T-82-N, R-6-W, 2.25 miles E and 1.25 miles N of Ely, on E side of right-of-way, 6.0' W of a 24" elm tree, 446.0' S of section line between Sections 22 and 27 in Putnam Township.

- 57-41 In Section 22, T-82-N, R-6-W, 2.5 miles E and 1.75 miles N of Ely, outside of the right-of-way, 3.0' from corner post, 1.5 miles W and 0.5 mile S of the Palisades State Park at the landing, and 0.25 mile E of schoolhouse.
- 57-40 In Section 21, T-82-N, R-6-W, 2.25 miles E and 1.75 miles N of Ely, in the school yard, 15.0' W of W steps of the Rodgers Grove School District #2.
- 57-39 In Section 21, T-82-N, R-6-W, 1.75 miles E and 1.75 miles N of Ely, on N side of right-of-way, 20.0' SE of SE corner of the church, in front of the Presbyterian Church Cemetery.
- 57-38 In Section 21, T-82-N, R-6-W, 0.75 mile W and 3.5 miles S of Bertram, on S side of County Road "X" on right of-way line, 110.8' W of N and S $\frac{1}{4}$ section line of road intersection, about 0.25 mile W of the Presbyterian Church and about 100' W of top of rise.
- 57-37 In Section 17, T-82-N, R-6-W, 1.75 miles W and about 3 miles S of Bertram, on side of County Road "X" at the W side of intersection of County Road "X" and the E-W road on Section line between Sections 17 and 20; 0.75 mile W of the Presbyterian Church and 3 miles N of the Johnson County line, 2.5 miles W of the Palisades State Park at landing.
- 57-36 In Section 17, T-82-N, R-6-W, 1.75 miles W and 2.25 miles S of Bertram, on backslope N side of County Road K, 1082.8' E of road intersection at brick schoolhouse, 4.50 miles E of airport, 2.5 miles N and 0.5 mile E of Ely.
- 57-35 See page 89.

LOOP XXII

Line 57-45 to 57-5018

- 57-45 See page 100.
- 57-5001 In Section 34, T-82-N, R-6-W, on W edge of SE $\frac{1}{2}$ of NW $\frac{1}{4}$, 2.5 miles E and about 0.25 mile S of Ely, about 500' N of $\frac{1}{4}$ line E-W; 600' S of farmhouse end of road to W, - 381.0' E of E road fence, 392.0' SE of fence corner of E road fence, 132.0' SW of fence corner, 256.4' NE of twin cottonwood tree with spike, 126.6' S of fence E-W, and 40.0' W of fence N-S. Set flush with surface.
- 57-5002 In Section 34, T-82-N, R-6-W, near SW corner of NE $\frac{1}{4}$ of SW $\frac{1}{4}$, 2.5 miles E and 0.5 mile S of Ely, about

- 1500' SE of a farmhouse, 1400' N of farmhouse, 230' E of E road fence, 167.0' NW of an 18" cherry tree with spike, 192.2' W of a 24" cherry tree with spike; 235.5' SW of 24" elm tree with spike, 233.0' NE of a corner post in $\frac{1}{4}$ $\frac{1}{4}$ fence to E, 68.0' N of $\frac{1}{4}$ $\frac{1}{4}$ fence E-W; 317' SE of fence corner, and 180.0' NE of a 20" elm tree - with spike. Set flush with surface.
- 57-5003 In Section 34, T-82-N, R-6-W, near SE corner SW $\frac{1}{4}$; - 2.5 miles E, 0.75 mile S and 0.25 mile E of Ely; about 250' NE of farmhouse, 300' W of line of road to S, -- 69.7' NW of NE corner of chicken house (E one of three) 85.8' NE of NW corner of chicken house (W one of three), 57.8' SW of a 14" apple tree, 29.8' N of fence E-W; - 103.0' NW of a fence corner, 183.8' NE of fence corner on N side of road. Set 14" below surface.
- 57-380 In Section 35, T-82-N, R-6-W, SW corner, 3.5 miles N and 1 mile W of NW corner of Solon, 0.6' E of Section line fence running to the N, 15.0' N of N road fence, 53.7' N of S road fence, 207.7' N and 80° W of an 18" Hack Burroak tree; 87.0' N and 40° E of a 3" Cedar tree blazed, on S side of road; 205.0' S and 75° W to an 8" wild cherry tree blazed, on N side of road.
- 57-381 In Section 35, T-82-N, R-6-W, near SE corner of SW $\frac{1}{4}$, 2.5 miles E, 0.75 mile S, then 1.25 miles E of Ely; -- 3000' E of a farmhouse, 500' W of a farmhouse, 577.2' SE of a twin cottonwood tree, 86.0' N of N road fence, 136.8' NE of a hedge tree at end of fence to S; 205.4' NW of a 24" cherry tree on S side of road. Set 14" below surface. (This monument was moved NE of first location).
- 57-382 In Section 35, T-82-N, R-6-W, in SE corner of SW $\frac{1}{4}$ of SE $\frac{1}{4}$; 3.5 miles N and 0.25 mile W of NW corner of Solon, on first hill W of NE corner of Section 2, T-81-N, R-6-W, no side road under $\frac{1}{4}$ $\frac{1}{4}$ fence running to the N; 8.3' S of hack in fence post, 6.4' N of hack in fence post, 0.4' W of $\frac{1}{4}$ $\frac{1}{4}$ fence running to the N; 85.8' N and 70° W of hacked 6" wild cherry tree on N side of road; 26.5' N of N road fence, 68.2' N of S road fence; 30.4' N and 25° E of hacked 28" Boxelder tree on N side of the road.
- 57-579 In Section 36, T-82-N, R-6-W, near NW corner SW $\frac{1}{4}$; on E side of section line fence on first hill S of E $\frac{1}{4}$ corner of Section 35; 3.5 miles NNE, 0.4 mile W, and 0.5 mile N of Solon, about 330' S of E-W $\frac{1}{4}$ section fence line, 540.0' N of N bank of a small creek, 69.8' E of a witness post by N-S fence; 133.3' S and 35° E of a

- spike in corner post of fence to E, 113.3' S of an iron pin under fence E, 100.0' NE of iron pin under N-S section line fence. Buried 18" below surface.
- 57-5004 In Section 36, T-82-N, R-6-W, near SW corner of NW $\frac{1}{4}$ of SE $\frac{1}{4}$; 6 miles SW of Mt. Vernon to the last house on the N in Linn County, about 300' N of Iowa Highway #261; 200' NW of farmhouse 48.8' SW of 12" maple tree, 93.6' SW of fence corner, 100.5' NW of fence corner, 22.7' N of water supply tank, 144.6' N of NE corner of hog barn, and 35.6' SE of a 12" maple tree. Set flush with surface.
- 57-5005 In Section 36, T-82-N, R-6-W, near NW corner of NE $\frac{1}{4}$ of SE $\frac{1}{4}$, 5.75 miles SW of Mt. Vernon, about 1300' E of a farmhouse, 600' S of bend in road, 1300' W of Franklin and Putnam Township line, 86.6' SE of a 20" Black Oak tree, 71.5' S of N road fence, 17.8' W of E gatepost, 1.5' S of W gatepost, 88.2' E of power pole, and 46.0' W of power pole. Set flush with surface.
- 57-5006 In Section 36, T-82-N, R-6-W, near SE corner of NE $\frac{1}{4}$, 5.5 miles SW of Mt. Vernon, about 300' W of a bend in the road, 150.0' E of bend in the road, -- 81.6' N of N road fence, 141.6' NW of maple tree in SW corner of lawn, 168.0' NW of NW corner of house, 143.4' N of power pole, 177.6' NW of corner post on township line fence S, and 201.0' NE of power pole. Set 14" below surface.
- 57-5007 In Section 31, T-82-N, R-5-W, near NW corner of NE $\frac{1}{4}$, 5 miles SW of Mt. Vernon, about 200' W of bend in road, 1300' E of farmhouse, 21.6' S of S road fence, 89.3' S of N road fence, 57.2' SW of power pole, 99.3' SE of power pole; 107.0' SE of E gatepost and SE of corner post fence to N; 170.7' NW of a 30" White oak tree. Set flush with surface.
- 57-5008 In Section 30, T-82-N, R-5-W, near NE corner of NW $\frac{1}{4}$ of SE $\frac{1}{4}$, about 4.5 miles SW of Mt. Vernon, 1500' SW of the Ivanhoe bridge over the Cedar River, 1000' S of the sawmill, 524.0' SW of a 30" White oak tree, 328.0' S of the fence corner, 27.2' S of steel fence post, 6.0' N of steel fence post, 88.0' W of E road line, 1.0' W of W road fence; 0.25 mile S on first road running S and W of the Ivanhoe bridge. Set flush with surface.
- 57-5009 In Section 30, T-82-N, R-5-W, near SW corner - SE $\frac{1}{4}$ of NE $\frac{1}{4}$; about 4 miles SW of Mt. Vernon, about

450' NE of intersection of County Road "X" with Iowa Highway #261, about 300' W of W shore line of the Cedar River, 122.0' SW of the NW corner bridge (?); -- 49.5' E of power pole, 91.0' W of power pole, 1.9' NW of guard rail post, 6.6' NE of guard rail post, 29.0' N of S guard rail post and 177.7' E of fence running to the N (this is assumed to be on the $E\frac{1}{4}\frac{1}{4}$ line, N-S through Section 30. Set flush with surface.

- 57-5010 In Section 29, T-82-N, R-5-W, near center of $SW\frac{1}{4}$ of $NW\frac{1}{4}$, 3.5 miles SW of Mt. Vernon, W of the Ivanhoe bridge, about 856' NE of E end of bridge, about 1000' SW of farmhouse, about 700' N of $E-W\frac{1}{4}$ section line, - 65.3' S of N road fence, 1.5' N of S road fence, 66.0' SE of power pole, 114.2' SW of power pole, 192.0' SW of corner post fence to the S and 78.1' NE of power pole. Set flush with surface.
- 57-5011 In Section 29, T-82-N, R-5-W, near NE corner of $NW\frac{1}{4}$ of $NW\frac{1}{4}$; 3.25 miles SW of Mt. Vernon, about 1000' E of farmhouse, 500' W of Iowa Highway #261; 350.2' NW of NE corner of barn, 324.5' NW of NW corner of barn, 47.7' NW of a 14" white oak tree, 77.8' N of a double fence post, 65.7' NW of a 20" White oak tree, 117.8' S of a 20" Elm tree, 95.6' SW of a 20" Ash tree, and 2.0' E of N-S fence. Set flush with surface.
- 57-5012 In Section 20, T-82-N, R-5-W, near SE corner of $NE\frac{1}{4}$ of $SW\frac{1}{4}$, 2.75 miles SW of Mt. Vernon, about 1000' NE of a bend in the road, 1000' SW of farmhouse; 88' or 89' N of NW corner of brick house, 73.2' SW of a power pole, 71.5' NE of power pole (transformer); -- 90.4' SW of power pole, 64.3' NE of NW corner of the lawn, 87.7' NW of NE corner of lawn steel post, and 11.8' S of road fence. Set 3" below surface.
- 57-5013 In Section 20, T-82-N, R-5-W, in $SE\frac{1}{4}$ near the NE corner, 2 miles SW of Mt. Vernon, about 300' N of a schoolhouse, 150.0' SE of a house, 134.5' S of line of S side of house, 1.7' N of S road fence, 68.8' S of N road fence; 71.6' SE of a fir tree, 148.0' SW of power transformer pole, 16.5' SW of S concrete gatepost, 36.7' SW of N concrete gatepost, 155.0' SE of pump under the windmill, and 4.5' E of power pole. Set flush with surface.
- 57-5014 In Section 21, T-82-N, R-5-W, near center line of $NW\frac{1}{4}$ of $NW\frac{1}{4}$, 1.5 miles SW of Mt. Vernon, about 300' SW of bend in the road, 1500' N of farmhouse, 14.7' W

- of the W road fence, 55.6' S of third steel fence post N of gate on the W side of the road, 50.2' N of third wood fence post S of the gate on W side of the road, - 150.2' SW of power pole E of the road, 93.8' NW of the power pole, 83.8' W of N gatepost E of road in the SW corner, 18.0' SW of N gatepost on W side of the road, - 15.2' W of S gatepost, and 83.0' W of S concrete gatepost E of the road. Set 14" below surface.
- 57-5015 In Section 16, T-82-N, R-5-W, near NW corner of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, 1 mile SW of Mt Vernon, about 1000' S of farmhouse E of road, 1300' N of farmhouse W of road, 140.4' S of corner post on N side of the road, 42.0' S of the corner post on E road fence, 13.3' N of corner post of fence to E, 145.4' NE of corner post fence to W; 132.6' SE of a 30" cottonwood tree on W side of the road, 32.5' SE of the E road fence, 154.0' NE of power pole on the E side of the road, 42.7' SE of power pole, 5.4' E of N-S fence, and 55.0' N of steel post in fence to S. -- Set flush with surface.
- 57-5016 In Section 16, T-82-N, R-5-W, in NE $\frac{1}{4}$ near NE corner of SW $\frac{1}{4}$, 0.75 mile SW then 400' W of Mt. Vernon, about 1300' N of farmhouse, 2500' S of large brick house, 400' W of road, 44.9' SE of corner post of fence to W, 50.1' SE of brace post of fence to W, 225.5' S of a 30" cherry tree, 36.6' N of a 30" cherry tree, 9.6' N of steel post, 1.9' W of N-S fence, and 7.4' S of steel post. -- Set flush with surface.
- 57-5017 In Section 10, T-82-N, R-5-W, near SW corner of NW $\frac{1}{4}$ of NW $\frac{1}{4}$, in Mt. Vernon between the Chapel and Bowman - Hall on the Cornell College Campus, about 400' S on U. S. Highway #30, 116.6' SE of NE corner of Bowman Hall, 97.2' S of a fire plug, 67.9' SW of center line of a curve in the Chapel, 62.0' W of first square corner, - 97.2' NW of the extreme SW corner, 71.3' N of telephone pole, and 124.5' N of center of the drive. Set flush with surface.
- 57-5023 In Section 9, T-82-N, R-5-W, near NE corner of NE $\frac{1}{4}$, in Mt. Vernon, on Athletic Field of Cornell College, - about 500' NE of the Men's Dormitory, 800' S of the Chicago & Northwestern Railroad, 248.4' N of the curb on U. S. Highway #30; 25.6' NE of a 40" elm tree #77; 26.8' S of a twin elm tree #81; 38.2' W of a 30" elm tree - #83; 33.4' NW of a 30" elm tree #80 plus 84, and 248.6' NW of the NW corner of the Women's Gymnasium. Set flush with surface.
- 57-5018 See page 82.

(Frontispiece Map)

Station Number	Longitude			Latitude			Page
	o	'	"	o	'	"	
57-255	91	47	09.6	42	17	02.0	23
57-246	91	47	06.1	42	11	50.7	22
57-260	91	48	51.0	42	08	35.9	20
57-275	91	40	34.1	42	11	49.5	26
57-227	91	40	56.2	42	16	58.0	27
57- 204b	91	31	48.3	42	11	43.9	30
57- 212	91	31	49.2	42	16	26.5	31
57- 201	91	32	58.1	42	09	47.9	34
57-5071	91	27	57.8	42	09	43.4	36
57-5061	91	25	25.7	42	10	47.1	38
6- 169	91	50	06.6	42	02	33.2	45
57- 100	91	47	40.3	42	05	43.1	47
57- 96	91	44	26.7	42	05	03.5	49
57- 147	91	38	41.5	42	05	41.2	50
57- 142	91	35	30.3	42	05	40.1	53
57- 195	91	32	59.7	42	05	39.9	54
57- 330	91	29	03.0	42	05	34.3	56
57- 336	91	26	34.6	42	03	15.7	58
57-5041	91	22	22.8	42	04	07.7	59
57- 87	91	42	45.1	42	02	06.0	69
57- 132	91	35	53.0	42	01	58.3	71
57- 126	91	35	56.8	42	00	29.2	20
57- 60	91	49	55.2	41	57	50.8	64
57- 67	91	42	56.9	41	57	28.5	67
57- 10	91	42	55.7	41	55	09.3	86
57- 19	91	38	55.7	41	55	36.2	88
57- 35	91	34	55.7	41	54	54.9	89
57- 116	91	34	07.4	41	59	33.7	76
57- 344	91	26	37.4	41	59	11.2	79
57-5018	91	25	24.1	41	55	46.6	82
57- 1	91	42	52.3	41	51	54.5	94
52- 52	91	39	05.1	41	50	52.2	96
57- 45	91	32	08.3	41	52	21.9	100
<u>Triangulation Stations</u>							
Olson	91	55	16.7	41	57	41.3	17
Voehl	91	54	03.2	42	03	11.6	13
Johnson	91	53	55.6	42	09	23.3	11
Morris	91	44	52.4	42	05	03.0	15
Kluber	91	42	22.3	41	57	54.8	14
Haas	91	36	48.5	42	00	30.8	16
Nelson	91	53	63.9	42	17	25.4	12

PLANE COORDINATES

On the following pages are given the Lambert plane coordinates of the stations in the Linn County System, listed in counter-clockwise direction around each loop. To avoid unnecessary duplications, stations common to two or more loops are listed only under the lowest numbered loop. (See frontispiece map)

<u>STATION</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
LOOP I			
JOHNSON	2,434,152.23	243,342.64	11
JOHNSON AZ. Mark	2,436,004.18	240,289.37	"
6-120	2,435,982.76	238,267.64	19
6-121	2,435,814.89	236,750.72	"
6-122	2,438,208.82	236,875.77	"
6-123	2,440,333.82	236,953.34	"
6-124	2,441,199.58	235,628.49	"
6-125	2,441,353.51	233,824.89	"
6-126	2,441,350.92	231,647.28	20
6-127	2,443,884.70	231,755.91	"
57-300	2,452,553.85	232,110.13	"
57-258	2,456,628.36	232,146.50	"
57-257	2,457,218.73	233,415.09	"
57-260	2,457,186.74	238,990.52	"
57-259	2,455,144.23	241,926.78	21
57-256	2,455,859.80	243,804.89	"
57-255	2,458,182.43	245,297.16	"
57-254	2,459,403.86	246,821.14	"
57-253	2,460,997.70	246,937.02	"
57-252	2,461,035.12	248,238.00	"
57-251	2,465,059.22	248,312.89	22
57-250	2,464,980.64	252,551.18	"
57-249	2,467,746.11	253,486.56	"
57-248	2,466,910.68	254,148.39	"
57-247	2,465,818.62	256,192.39	"
57-246	2,464,699.41	258,866.74	23
57-245	2,464,706.78	260,210.25	"
57-244	2,463,387.45	263,579.74	"
57-243	2,463,687.78	268,021.65	"
57-242	2,464,967.02	272,354.46	"
57-241	2,464,788.88	278,306.22	"
57-240	2,464,465.65	286,325.24	"
57-239	2,464,542.87	289,010.45	"
57-235	2,463,789.87	290,360.49	"
57-236	2,461,291.80	290,426.61	24
57-237	2,458,448.87	290,416.26	"
57-238	2,456,268.04	290,353.91	"
6 -111	2,449,400.43	290,271.33	"
6 -112	2,444,518.76	290,018.07	"
6 -113	2,441,346.46	289,965.35	"
6 -114	2,437,660.49	289,860.78	25
NELSON	2,437,115.58	292,205.84	12

LOOP II

<u>Station</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
57-282	2,465,857.04	259,034.21	25
57-281	2,467,944.05	259,049.94	"
57-280	2,471,024.04	259,176.55	"
57-279	2,476,545.46	259,257.26	"
57-278	2,481,535.67	259,287.15	"
57-277	2,487,107.22	259,319.83	26
57-276	2,491,469.96	259,399.56	"
57-275	2,494,194.67	259,356.87	"
57-294	2,494,152.90	266,273.25	"
57-295	2,493,943.17	270,403.78	"
57-296	2,493,873.78	273,511.14	27
57-297	2,492,327.49	277,310.42	"
57-298	2,492,265.11	280,439.68	"
57-299	2,492,057.13	286,225.36	"
57-227	2,491,860.13	290,542.62	"
57-228	2,487,347.97	290,544.40	"
57-229	2,480,448.81	290,547.47	28
57-230	2,478,720.91	290,490.44	"
57-231	2,475,062.21	290,429.72	"
57-232	2,472,291.06	290,482.05	"
57-233	2,468,050.48	290,351.81	"
57-234	2,464,810.82	290,411.10	"

LOOP III

57-274	2,501,290.80	259,488.71	29
57-273	2,504,219.34	259,470.67	"
57-272	2,511,628.79	259,623.51	"
57-271	2,515,398.69	259,755.50	"
57-270	2,521,851.60	259,689.45	"
57-269	2,526,709.78	259,697.00	30
57-268	2,531,842.11	259,817.88	"
57-204b	2,533,771.52	259,679.31	"
57-205	2,533,907.60	261,721.99	"
57-206	2,533,849.52	267,910.09	"
57-207	2,533,738.52	270,219.81	"
57-208	2,533,734.97	274,620.27	"
57-209	2,533,641.67	280,622.12	31
57-210	2,533,530.21	284,237.00	"
57-211	2,532,989.71	287,371.56	"
57-212	2,533,042.45	288,274.50	"
57-213	2,532,951.40	290,049.97	"
57-214	2,529,028.01	291,148.75	"
57-215	2,526,969.32	291,127.50	"
57-216	2,523,736.94	291,042.18	32
57-217	2,522,123.00	290,999.00	"
57-218	2,521,532.75	291,934.72	"
57-219	2,517,621.06	292,156.30	"
57-220	2,514,955.77	290,937.62	"
57-221	2,509,491.63	290,633.71	"

			Page
57-222	2,503,942.77	290,648.25	33
57-223	2,501,546.32	290,624.67	"
57-224	2,498,564.41	293,850.33	"
57-225	2,497,531.82	293,378.29	"
57-226	2,491,816.40	293,193.83	"

LOOP IV

57-204	2,533,057.01	258,123.43	34
57-203	2,529,072.43	254,463.04	
57-202	2,528,775.67	251,600.49	"
57-201	2,528,789.48	247,825.48	"
57-5082	2,530,095.09	247,832.00	"
57-5081	2,532,485.39	247,941.28	35
57-5080	2,532,709.50	248,996.89	"
57-5079	2,535,578.02	249,112.03	"
57-5078	2,537,516.44	249,108.69	"
57-5077	2,539,392.90	249,106.42	"
57-5076	2,542,018.68	249,221.30	"
57-5075	2,543,213.00	249,150.20	36
57-5074	2,544,711.56	249,086.14	"
57-5073	2,547,355.90	249,196.93	"
57-5072	2,549,536.81	248,942.66	"
57-5071	2,551,414.69	247,903.31	"
57-5070	2,552,361.66	248,862.74	"
57-5069	2,553,631.96	250,177.67	37
57-5068	2,553,746.64	251,911.43	"
57-5067	2,554,918.56	253,288.58	"
57-5066	2,555,354.20	254,356.11	"
57-5065	2,555,653.94	255,459.83	"
57-5064	2,557,374.36	255,902.44	38
57-5063	2,559,004.69	256,019.63	"
57-5062	2,560,595.44	255,827.08	"
57-5061	2,562,711.32	254,626.39	"
57-5088	2,562,817.88	258,429.68	"
57-5089	2,562,853.96	259,832.12	"
57-2615	2,562,735.15	262,815.89	39
57-2616	2,562,920.19	265,422.83	"
57-2617	2,564,347.05	265,436.08	"
57-2584	2,565,748.03	264,893.14	"
57-2582	2,569,476.17	265,447.54	40
57-5090	2,576,620.99	271,293.79	"
53-509	2,578,481.09	279,469.37	"
57-2540	2,578,315.37	284,305.32	"
53-512	2,578,335.98	287,253.17	"
57-2542	2,578,236.41	289,224.58	41
57-2577	2,575,156.54	292,221.47	"
57-2610	2,569,007.62	292,105.00	"
57-2609	2,567,483.48	292,012.10	"
57-2611	2,564,486.74	292,021.74	42
57-2642	2,562,156.03	291,908.75	"

LOOP IV (cont.)

Page

57-2681	2,556,849.29	292,627.16	42
57-2717	2,551,645.73	291,793.38	"
57-2719	2,549,091.22	291,619.19	43
57-2720	2,547,550.36	291,545.37	"
57-2784	2,540,164.95	291,427.31	"
57-2812	2,538,670.93	291,427.45	"
57-2811	2,536,717.54	291,236.56	44
57-5091	2,534,999.78	290,525.40	"

LOOP V

VOEHL	2,434,296.49	205,713.47	13
6-115	2,433,720.96	205,436.49	44
6-116	2,433,725.83	202,323.50	"
6-117	2,436,464.95	199,624.49	45
6-118	2,439,431.58	199,746.53	"
6-119	2,445,108.23	199,869.47	"
6-169	2,452,214.74	202,165.90	"
57-183	2,452,257.53	204,450.72	"
6-170	2,452,180.88	206,596.04	"
57-184	2,452,197.65	210,609.84	46
57-185	2,453,236.56	210,833.16	"
57-186	2,456,690.08	210,812.09	"
57-187	2,462,817.21	210,992.53	"
57-188	2,462,776.60	213,643.79	"
57-189	2,462,339.59	214,939.53	"
57-190	2,463,020.17	216,649.44	"
57-100	2,462,869.00	221,609.86	47
57-267	2,462,905.97	222,902.05	"
57-266	2,462,705.25	228,681.20	"
57-265	2,461,458.30	229,395.55	"
57-264	2,460,657.45	229,994.34	"
57-263	2,459,880.41	233,518.23	"
57-262	2,459,105.02	234,940.09	48
57-261	2,457,229.71	234,838.14	"

LOOP VII

57-99	2,466,894.15	221,654.64	48
MORRIS, Az. Mark	2,473,555.57	221,603.49	15
MORRIS	2,475,610.56	217,808.16	15
57-97	2,476,696.92	217,803.63	48
57-96	2,477,543.36	217,896.13	49
57-155	2,478,431.19	218,065.41	"
57-154	2,480,180.50	219,422.33	"
57-153	2,481,723.62	219,374.93	"
57-152	2,485,499.73	220,540.93	"
57-151	2,488,413.20	222,114.63	50
57-150	2,490,332.35	222,050.93	"

			Page
57-149	2,493,654.73	222,158.61	50
57-148	2,498,885.03	222,259.55	"
57-147	2,503,483.95	222,274.74	"
57-283	2,502,575.83	223,049.19	51
57-284	2,502,438.57	227,922.27	"
57-285	2,502,434.93	230,960.31	"
57-286	2,502,315.28	236,283.74	"
57-287	2,502,286.97	242,169.22	"
57-288	2,497,702.97	242,163.23	"
57-289	2,495,639.28	244,524.08	52
57-290	2,495,584.98	246,625.80	"
57-291	2,495,641.68	248,204.87	"
57-292	2,494,278.61	249,231.18	"
57-293	2,494,285.80	254,707.24	"

LOOP VIII

57-146	2,506,780.00	222,351.93	52
57-145	2,510,214.76	222,330.77	53
57-144	2,512,454.98	222,382.81	"
57-143	2,515,735.27	222,533.55	"
57-142	2,517,901.87	222,480.15	"
57-191	2,521,909.73	222,313.09	"
57-192	2,524,051.37	222,392.12	54
57-193	2,526,150.24	222,468.61	"
57-194	2,528,268.85	222,423.00	"
57-195	2,529,252.03	222,725.14	"
57-196	2,529,248.11	225,156.80	"
57-197	2,529,091.58	229,233.07	"
57-198	2,528,948.81	236,728.55	55
57-199	2,528,848.42	238,487.60	"
57-200	2,528,835.82	244,075.43	"

LOOP IX

57-325	2,530,313.99	222,542.08	55
57-326	2,533,278.37	222,532.78	"
57-327	2,536,343.13	222,541.96	"
57-328	2,543,269.60	222,523.74	56
57-329	2,545,671.83	222,602.51	"
57-330	2,547,108.58	222,568.61	"
57-3585	2,552,889.47	225,396.29	"
57-3586	2,552,860.32	228,307.14	"
57-3588	2,552,774.60	230,220.19	57
57-3589	2,552,823.03	233,620.94	"
57-3593	2,552,680.01	236,005.67	"
57-5087	2,552,722.09	236,913.55	"
57-5086	2,552,601.60	239,048.19	"
57-5085	2,552,612.02	243,008.38	"
57-5084	2,552,228.15	244,417.49	57a
57-5083	2,552,083.53	246,704.53	"

LOOP X

<u>Station</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
57-331	2,551,977.14	222,736.51	57a
57-332	2,556,305.88	222,752.43	"
57-333	2,558,279.42	219,375.54	"
57-334	2,558,427.68	212,176.78	"
57-335	2,558,522.19	209,778.31	58
57-336	2,558,633.42	208,821.35	"
57-5047	2,559,967.36	209,575.85	"
57-5046	2,561,761.58	209,889.12	"
57-5045	2,563,870.09	210,347.42	"
57-5044	2,566,205.18	211,113.65	59
57-3487	2,570,406.94	212,430.53	"
57-5042	2,573,611.63	213,484.27	"
57-5041	2,577,494.66	214,550.86	"
57-5043	2,575,755.12	215,028.61	"
57-5048	2,575,592.69	218,732.93	60
57-5049	2,575,551.44	220,408.00	"
57-3456	2,574,242.17	220,760.84	"
57-3457	2,574,161.69	223,145.81	"
57-3463	2,574,125.71	224,053.65	"
57-3464	2,574,152.20	225,366.90	"
57-3467	2,574,058.41	227,840.83	"
57-3471	2,574,073.53	231,003.60	61
57-3478	2,574,329.49	235,499.82	"
57-5050	2,574,800.09	237,068.15	"
57-5051	2,574,815.73	238,362.05	"
57-5052	2,574,799.20	239,241.23	"
57-5053	2,574,879.58	240,176.50	"
57-5054	2,573,497.34	241,510.37	62
57-5055	2,571,786.56	243,792.50	"
57-5056	2,568,272.10	249,420.23	"
57-5057	2,566,269.89	250,929.84	"
57-5058	2,565,105.75	252,675.29	"
57-5059	2,564,496.90	253,521.21	"
57-5060	2,563,562.95	253,939.61	63

LOOP XI

OLSON	2,429,376.33	172,175.37	17
6-110	2,433,830.84	172,941.61	63
6-100	2,436,368.15	172,955.74	"
6-89	2,442,105.04	173,201.21	"
6-78	2,446,809.70	173,322.77	"
6-171	2,452,333.09	173,555.74	64
57-60	2,453,639.73	173,602.18	"
57-178	2,453,176.73	176,219.43	"
6-166	2,453,034.81	178,290.86	"
57-179	2,452,962.15	182,956.26	"
57-180	2,452,759.92	187,235.55	"
6-167	2,452,509.80	192,951.13	"
57-181	2,452,477.15	195,374.01	65
6-168	2,452,312.27	198,145.41	"

<u>Station</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
57-59	2,458,910.93	173,657.15	65
57-63	2,462,118.97	173,723.96	"
57-58	2,463,856.36	173,843.36	"
57-62	2,467,321.41	173,872.14	66
57-57	2,469,497.44	173,979.78	"
57-61	2,471,226.75	173,948.88	"
57-56	2,474,456.50	174,036.24	"
57-64	2,478,572.20	173,692.94	"
57-65	2,479,440.35	171,373.52	"
57-66	2,483,628.42	171,482.20	"
57-67	2,485,284.68	171,999.96	67
KLUBER			14
57-70	2,485,217.69	172,754.91	67
57-71	2,485,212.84	175,469.04	"
57-72	2,485,141.94	177,681.58	"
57-73	2,485,161.56	179,586.89	"
57-74	2,485,100.97	182,110.99	"
57-75	2,485,025.41	185,507.03	68
57-76	2,484,991.39	186,975.53	"
57-77	2,484,772.56	187,430.97	"
57-78	2,484,527.39	188,075.58	"
57-79	2,483,648.08	188,897.06	"
57-80	2,481,567.62	190,320.11	"
57-81	2,481,558.52	191,210.64	"
57-82	2,481,924.32	193,418.39	69
57-83	2,483,297.37	194,974.58	"
57-84	2,483,747.41	196,200.90	"
57-85	2,485,042.30	197,522.13	"
57-86	2,485,554.27	198,558.42	"
57-87	2,485,585.41	200,095.39	"
57-88	2,485,727.59	205,067.08	"
57-89	2,483,191.27	206,030.59	"
57-90	2,482,193.32	208,340.24	70
57-91	2,480,483.69	208,354.10	"
57-92	2,479,083.45	210,342.07	"
57-93	2,477,854.45	210,925.78	"
57-94	2,477,648.50	212,299.37	"
57-95	2,477,584.09	214,590.09	"

LOOP XIV

HAAS	2,512,700.92	191,048.42	16
57-128	2,513,297.97	190,886.09	71
57-127	2,514,959.75	191,455.99	"
57-126	2,516,611.91	190,969.79	"
57-129	2,516,623.15	193,918.01	"
57-130	2,516,789.43	196,596.60	"
57-131	2,516,783.76	198,461.45	"

<u>Station</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
57-132	2,516,692.03	200,092.84	71
57-133	2,516,737.17	201,420.59	72
57-134	2,516,713.78	203,004.07	"
57-135	2,516,327.42	203,859.99	"
57-136	2,516,223.94	205,975.41	"
57-137	2,516,258.72	207,876.67	"
57-138	2,516,048.51	213,721.76	"
57-139	2,516,042.09	216,294.32	"
57-140	2,515,928.21	217,983.50	73
57-141	2,515,957.26	220,096.48	"

LOOP XV.

57-169	2,489,136.53	200,024.66	73
57-168	2,491,042.27	200,128.87	"
57-167	2,493,616.71	200,214.67	"
56-166	2,497,358.43	200,241.82	74
57-165	2,499,257.61	200,421.68	"
57-164	2,501,330.94	200,537.81	"
57-163	2,503,005.65	200,506.22	"
57-162	2,506,571.19	200,390.91	"
57-161	2,508,964.76	199,723.13	"
57-160	2,509,815.02	199,583.86	75
57-159	2,510,837.99	200,535.81	"
57-158	2,513,358.42	200,372.52	"
57-157	2,513,922.44	200,021.88	"
57-156	2,514,970.12	200,163.82	"

LOOP XVI

57-125	2,517,147.76	190,240.67	75
57-124	2,520,759.82	190,131.70	76
57-123	2,523,039.01	190,185.03	"
57-122	2,523,944.63	189,779.24	"
57-121	2,525,946.88	189,077.00	"
57-120	2,525,742.02	187,917.35	"
57-119	2,526,153.49	187,050.54	"
57-118	2,526,172.15	185,549.33	"
57-117	2,524,886.33	182,601.60	"
57-116	2,525,133.20	179,546.57	"
57-356	2,532,234.81	179,656.33	77
57-355	2,533,921.03	179,615.65	"
57-354	2,542,031.94	182,417.69	"
57-353	2,542,068.14	184,401.73	"
57-352	2,542,014.83	185,851.39	"
57-351	2,543,003.78	185,812.63	"
57-350	2,545,732.13	185,725.62	78
57-349	2,548,267.23	185,571.04	"
57-348	2,549,356.17	185,482.21	"
57-347	2,551,538.79	184,390.03	"
57-346	2,554,621.79	184,726.62	"

<u>Station</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
57-345	2,557,527.05	184,404.56	78
57-344	2,559,025.50	184,076.04	79
57-343	2,558,959.41	193,557.40	"
57-342	2,559,033.33	196,219.27	"
57-341	2,558,893.94	198,747.13	"
57-340	2,558,694.82	204,414.84	"
57-339	2,558,658.93	207,250.26	"
57-338	2,558,434.73	208,281.99	"
57-337	2,557,813.88	208,280.01	80
LOOP XVII			
57-5027	2,559,617.30	183,661.55	80
57-5026	2,560,548.28	183,138.92	"
57-5025	2,561,838.48	183,259.75	"
57-5024	2,563,646.34	182,059.78	"
57-3342	2,564,511.60	181,681.67	81
57-3338	2,564,472.81	178,616.15	"
57-3337	2,564,577.29	176,756.60	"
57-3334	2,564,541.30	174,838.66	"
57-3333	2,564,646.06	172,295.30	"
57-3331	2,564,869.84	169,917.54	"
57-3330	2,564,693.16	168,191.56	82
57-5019	2,564,998.64	166,094.21	"
57-5018	2,565,063.98	163,496.03	"
57-5020	2,568,379.67	164,417.31	"
57-5021	2,570,639.15	166,655.74	"
57-3401	2,572,596.32	170,039.06	83
57-5022	2,573,568.29	171,465.03	"
57-3409	2,576,270.27	175,987.99	"
57-5028	2,577,046.44	179,189.90	"
57-5029	2,577,205.52	181,988.71	"
57-5030	2,577,787.87	185,473.11	"
57-5031	2,578,115.92	188,268.72	84
57-5032	2,578,743.98	192,416.83	"
53-5033	2,580,416.07	195,365.29	"
53-5034	2,581,614.87	197,572.91	"
53-5035	2,583,063.00	200,280.17	"
53-23	2,584,116.92	203,319.02	"
53-260	2,584,647.91	204,686.17	85
53-371	2,585,500.84	206,169.20	"
53-5036	2,586,334.28	211,514.57	"
53-5037	2,587,491.83	215,495.01	"
53-5038	2,584,812.40	215,388.90	"
53-5039	2,581,455.90	215,357.59	"
53-5040	2,579,788.22	214,971.33	86

<u>Station</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
57-68	2,485,338.57	167,483.76	86
57-69	2,485,488.33	164,881.86	"
57-10	2,485,677.19	157,911.78	"
57-11	2,486,794.26	158,332.74	"
57-12	2,489,260.03	158,326.49	87
57-13	2,493,299.53	158,337.55	"
57-14	2,494,295.93	158,349.57	"
57-15	2,496,366.36	158,314.17	"
57-16	2,496,233.83	160,957.22	"
57-17	2,499,172.65	161,013.54	"
57-18	2,501,750.30	161,022.19	88
57-19	2,503,757.95	161,021.95	"
57-30	2,507,038.31	160,960.79	"
57-31	2,508,938.93	161,025.25	"
57-32	2,510,415.34	161,037.06	"
57-33	2,514,919.07	159,011.39	"
57-34	2,517,488.53	158,383.65	"
57-35	2,521,994.06	157,247.60	89
57-101	2,522,906.83	158,148.29	"
57-102	2,522,760.86	159,984.79	"
57-103	2,522,627.13	162,897.46	"
57-104	2,521,838.98	164,134.54	"
57-105	2,520,955.01	165,047.25	"
57-106	2,519,883.21	165,514.97	90
57-107	2,519,530.11	167,770.42	"
57-108	2,519,233.95	169,524.68	"
57-109	2,518,051.71	170,992.16	"
57-110	2,516,808.02	172,207.97	"
57-111	2,517,062.28	173,335.72	"
57-112	2,517,039.37	175,395.19	91
57-113	2,517,004.35	176,376.38	"
57-114	2,516,999.37	177,118.80	"
57-115	2,517,813.56	179,567.36	"

LOOP XIX

6-165	2,453,323.29	170,542.73	91
57-177	2,453,669.67	163,981.16	"
6-164	2,453,596.77	163,029.09	"
6-163	2,453,670.29	161,518.07	92
57-176	2,453,844.47	159,835.77	"
6-162	2,453,811.58	158,890.41	"
6-161	2,453,924.71	156,492.57	"
6-160	2,454,054.01	152,695.01	"
6-159	2,454,208.39	148,656.44	"
6-158	2,454,295.43	145,012.41	93
57-175	2,454,505.48	140,262.51	"
6-144	2,454,502.31	138,510.32	"
52-100	2,454,612.64	136,311.68	"

<u>Station</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
57-174	2,462,544.69	136,588.12	93
57-173	2,465,934.58	136,640.63	"
52-97	2,468,051.57	136,517.17	"
57-172	2,471,456.11	136,746.10	94
57-171	2,472,856.60	136,771.44	"
57-170	2,479,470.56	136,936.71	"
57-1	2,486,348.45	138,197.66	"
57-2	2,486,304.45	139,743.20	"
57-3	2,486,242.78	141,807.45	"
57-4	2,486,180.39	143,698.06	95
57-5	2,486,069.78	146,694.70	95
57-6	2,485,980.71	149,235.55	"
57-7	2,485,888.33	151,909.18	"
57-8	2,485,871.80	154,110.65	"
57-9	2,485,804.26	156,222.71	"

LOOP XX

52-34	2,485,054.91	136,157.60	95
52-33	2,486,521.51	131,808.00	96
52-48	2,490,459.23	131,835.95	"
52-49	2,492,719.31	131,913.00	"
52-50	2,494,379.23	131,990.94	"
52-51	2,498,913.22	132,208.60	"
52-52	2,503,671.56	132,262.10	"
52-86	2,505,095.10	134,835.49	"
52-360	2,504,937.74	137,152.17	97
57-29	2,504,982.32	138,290.46	"
57-28	2,504,869.13	139,910.11	"
57-27	2,504,699.56	145,209.61	"
57-26	2,504,627.68	147,431.87	"
57-25	2,503,301.45	147,736.10	"
57-24	2,501,994.30	147,749.63	"
57-23	2,501,998.15	148,543.53	98
57-22	2,501,879.85	152,858.43	"
57-21	2,501,798.47	155,200.60	"
57-20	2,501,730.44	158,676.92	"

LOOP XXI

52-53	2,510,464.13	132,259.22	98
52-54	2,513,038.29	133,521.06	"
52-55	2,512,899.53	137,205.61	99
52-56	2,517,304.06	137,240.72	"
52-35	2,524,438.02	137,311.28	"
57-53	2,524,227.58	138,673.49	"
57-52	2,522,138.65	140,323.24	"
57-51	2,521,391.12	141,319.65	"
57-50	2,523,195.76	141,296.82	"
57-49	2,526,934.20	141,575.61	"
57-48	2,528,171.93	141,384.74	"
57-47	2,532,585.59	141,435.25	"
57-46	2,533,939.16	141,337.49	"
57-45	2,535,001.78	142,055.70	"
57-44	2,535,197.22	143,407.39	"
57			

LOOP XXI (Cont.)

<u>Station</u>	<u>X</u>	<u>Y</u>	<u>Page</u>
57-49	2,526,934.89	141,375.61	100
57-48	2,528,171.93	141,384.74	"
57-47	2,532,585.59	141,435.25	"
57-46	2,533,939.16	141,337.49	"
57-45	2,535,001.78	142,055.70	"
57-44	2,535,197.22	143,407.39	"
57-43	2,535,082.53	145,438.16	"
57-42	2,535,067.30	147,635.69	"
57-41	2,534,928.32	150,173.10	101
57-40	2,533,508.71	150,840.87	"
57-39	2,531,132.08	151,494.15	"
57-38	2,529,745.20	151,495.69	"
57-37	2,526,790.01	153,323.42	"
57-36	2,523,787.07	156,030.38	"

LOOP XXII

57-5001	2,535,598.07	140,484.52	101
57-5002	2,535,562.66	138,861.89	"
57-5003	2,536,182.24	137,766.58	102
57-380	2,538,854.37	137,542.31	"
57-381	2,541,883.15	137,650.17	"
57-382	2,543,108.45	137,615.44	"
57-579	2,544,605.76	139,896.21	"
57-5004	2,547,247.87	139,207.02	103
57-5005	2,549,050.01	139,849.38	"
57-5006	2,549,653.33	140,890.42	"
57-5007	2,550,981.34	141,805.30	"
57-5008	2,553,817.79	143,890.37	"
57-5009	2,553,580.99	145,616.77	"
57-5010	2,555,409.53	146,538.63	104
57-5011	2,555,963.30	147,786.99	"
57-5012	2,558,169.44	150,019.84	"
57-5013	2,559,871.56	151,687.27	"
57-5014	2,560,613.99	153,104.64	"
57-5015	2,562,381.38	155,077.20	105
57-5016	2,563,626.87	157,223.56	"
57-5017	2,564,894.17	161,927.43	"
57-5023	2,564,709.03	162,799.41	"

INDEX TO TRAVERSE LOOPS

(Frontispiece Map)

		Page
LOOP I:	Line - Johnson to 57-260	19
	" 57-260 to 57-246	21
	" 57-246 to 57-235	22
LOOP II:	Line - 57-246 to 57-275	25
	" 57-275 to 57-227	26
	" 57-227 to 57-235	27
LOOP III:	Line - 57-275 to 57-204b	29
	" 57-204b to 57-212	30
	" 57-212 to 57-227	31
LOOP IV:	Line - 57-204b to 57-201	34
	" 57-201 to 57-5071	34
	" 57-5071 to 57-5061	36
	" 57-5061 to 57-212	38
LOOP V:	Line - Voehl to 6-169	44
	" 6-169 to 57-100	45
	" 57-100 to 57-260	47
LOOP VII:	Line - 57-100 to Morris	48
	" Morris to 57-96	48
	" 57-96 to 57-147	49
	" 57-147 to 57-275	51
LOOP VIII:	Line - 57-147 to 57-142	52
	" 57-142 to 57-195	53
	" 57-195 to 57-201	54
LOOP IX:	Line - 57-195 to 57-330	55
	" 57-330 to 57-5071	56
LOOP X:	Line - 57-330 to 57-336	57a
	" 57-336 to 57-5041	58
	" 57-5041 to 57-5061	59
LOOP XI:	Line - Olson to 57-60	63
	" 57-60 to 6-169	63
LOOP XII:	Line - 57-60 to 57-67	65
	" 57-67 to 57-87	67
	" 57-87 to 57-96	69
LOOP XIV:	Line - Haas to 57-126	71
	" 57-126 to 57-132	71
	" 57-132 to 57-142	72

LOOP XV:	Line - 57 - 87	to 57-132	73
LOOP XVI:	Line - 57--126	to 57-116	75
	" 57 -116	to 57-344	77
	" 57 -344	to 57-336	79
LOOP XVII:	Line - 57 -344	to 57-5018	80
	" 57 -5018	to 57-5041	82
LOOP XVIII:	Line - 57 -67	to 57-10	86
	" 57--10	to 57-19	86
	" 57 -19	to 57-35	88
	" 57--35	to 57-116	89
LOOP XIX:	Line - 57 -60	to 57-1	91
	" 57 -1	to 57-10	94
LOOP XX:	Line - 57 -1	to 52-52--	95
	" 52 -52	to 57-19	96
LOOP XXI:	Line - 52 -52	to 57-45	98
	" 57 -45	to 57-35	100
LOOP XXII:	Line - 57-45	to 57-5018	101

75	261-73 to 27-121	27-73 - 27-73	LOOP XVI: Line - 27-121
76	211-73 to 27-116	27-73 - 27-116	LOOP XVII: Line - 27-116
77	243-73 to 27-118	27-73 - 27-118	"
78	253-73 to 27-122	27-73 - 27-122	"
79	273-73 to 27-123	27-73 - 27-123	LOOP XVIII: Line - 27-123
80	283-73 to 27-124	27-73 - 27-124	"
81	293-73 to 27-125	27-73 - 27-125	LOOP XIX: Line - 27-125
82	303-73 to 27-126	27-73 - 27-126	"
83	313-73 to 27-127	27-73 - 27-127	LOOP XX: Line - 27-127
84	323-73 to 27-128	27-73 - 27-128	"
85	333-73 to 27-129	27-73 - 27-129	LOOP XXI: Line - 27-129
86	343-73 to 27-130	27-73 - 27-130	"
87	353-73 to 27-131	27-73 - 27-131	LOOP XXII: Line - 27-131
88	363-73 to 27-132	27-73 - 27-132	"
89	373-73 to 27-133	27-73 - 27-133	LOOP XXIII: Line - 27-133
90	383-73 to 27-134	27-73 - 27-134	"
91	393-73 to 27-135	27-73 - 27-135	LOOP XXIV: Line - 27-135
92	403-73 to 27-136	27-73 - 27-136	"
93	413-73 to 27-137	27-73 - 27-137	LOOP XXV: Line - 27-137
94	423-73 to 27-138	27-73 - 27-138	"
95	433-73 to 27-139	27-73 - 27-139	LOOP XXVI: Line - 27-139
96	443-73 to 27-140	27-73 - 27-140	"
97	453-73 to 27-141	27-73 - 27-141	LOOP XXVII: Line - 27-141
98	463-73 to 27-142	27-73 - 27-142	"
99	473-73 to 27-143	27-73 - 27-143	LOOP XXVIII: Line - 27-143
100	483-73 to 27-144	27-73 - 27-144	"
101	493-73 to 27-145	27-73 - 27-145	LOOP XXIX: Line - 27-145

<u>CITY</u>	<u>PAGE</u>
Alburnett	34, 51, 54, 55
Alice	25, 26, 27, 29, 52
Atkins	13, 45, 63, 64, 65, 91
Beverly	86, 87, 94, 95
Bertram	77, 89, 101
Cedar Rapids	16, 64, 65, 66, 67, 68, 71, 74, 75, 76, 86, 87, 88, 89, 90, 91, 92, 98
Center Point	20, 21, 22, 23, 25, 47, 48
Central City	30, 31, 34, 35
Coggon	31, 32, 43, 44
Ely	99, 100, 101, 102
Fairfax	64, 91, 93, 94
Fairview	59, 85, 86
Independence	12
Linn Junction	68, 69, 70
Louisa	73, 74
Marion	16, 53, 54, 71, 72, 73, 74, 75, 76
Martelle	84, 85
Mt. Vernon	80, 81, 82, 83, 103, 104, 105
Newhall	17
Norway	17
Palo	15, 45, 46, 47, 48, 65
Paralta	77, 78, 79
Prairieburg	38, 39, 40, 41, 42, 43
Rogers	29, 30
Shellsburg	11, 13, 19, 20, 44, 45
Shueyville	96, 97, 98
Solon	102
Springville	57a, 58, 59, 79, 80
Swisher	95, 96
Toddville	15, 48, 49, 50, 52, 70
Troy Mills	27, 28, 32, 33
Urbana	11, 12
Vinton	17
Viola	60, 61, 62
Walford	91, 92, 93
Walker	12, 23, 24, 25, 28
Waubeek	35, 36, 37, 38, 57, 57a, 62, 63
Western	94, 97
Whittier	54, 55, 56, 57, 57a

BENCH MARKS IN LINN COUNTY

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PAGE	BENCH MARK NUMBER	ELEVATION (Feet)	PAGE	BENCH MARK NUMBER	ELEVATION (Feet)
94	57-1	811.232	100	57-45	806.179
94	57-2	801.668	100	57-46	836.363
94	57-3	845.510	100	57-47	871.721
95	57-4	855.136	100	57-48	855.280
95	57-5	869.795	100	57-49	836.101
95	57-6	869.710	99	57-50	761.265
95	57-7	855.280	99	57-51	726.121
95	57-8	834.057	99	57-52	726.393
95	57-9	827.515	99	57-53	738.479
86	57-10	800.566	66	57-56 (1934)	862.941
87	57-12	802.941	66	57-57 (1934)	836.288
87	57-13	792.610	65	57-58 (1934)	803.082
87	57-14	805.126	65	57-59 (1934)	832.958
87	57-15	780.405	64	57-60 (1934)	889.877
87	57-16	736.544	66	57-64	867.233
87	57-17	734.585	66	57-65	848.571
88	57-18	745.146	66	57-66	841.593
88	57-19	804.424	67	57-67	841.255
98	57-20	788.693	86	57-69	753.191
98	57-21	872.160	67	57-70	853.502
98	57-22	815.874	67	57-71	840.704
98	57-23	843.994	67	57-72	795.031
97	57-24	830.822	67	57-73	809.021
97	57-25	843.729	67	57-74	869.660
97	57-26	838.843	68	57-75	881.790
97	57-27	810.805	68	57-76	790.484
97	57-28	832.298	68	57-77	734.172
97	57-29	839.516	68	57-78	733.135
88	57-30	792.918	68	57-79	720.189
88	57-31	800.254	68	57-80	841.238
88	57-32	835.992	68	57-81	852.374
88	57-33	821.937	69	57-82	876.967
88	57-34	766.593	69	57-83	770.533
89	57-35	783.627	69	57-84	781.783
101	57-36	824.336	69	57-85	777.275
101	57-37	853.276	69	57-86	777.518
101	57-38	892.419	69	57-87	795.031
101	57-39	900.248	69	57-88	829.706
101	57-40	872.452	69	57-89	827.029
101	57-41	892.610	70	57-90	811.586
100	57-42	845.303	70	57-91	791.035
100	57-43	831.045	70	57-92	803.676
100	57-44	831.698	70	57-93	761.682

<u>PAGE</u>	<u>BENCH MARK NUMBER</u>	<u>ELEVATION (Feet)</u>	<u>PAGE</u>	<u>BENCH MARK NUMBER</u>	<u>ELEVATION (Feet)</u>
70	57- 94	763.538	53	57-144	873.916
70	57- 95	818.194	53	57-145	880.353
49	57- 96	916.412	52	57-146	870.504
48	57- 97	916.865	50	57-147	877.803
48	57- 99	748.109	50	57-148	890.218
47	57-100	760.058	50	57-149	857.938
89	57-101	771.501	50	57-150	861.140
89	57-102	764.687	50	57-151	810.963
89	57-103	828.745	49	57-152	834.946
89	57-104	866.248	49	57-153	895.100
89	57-105	875.461	49	57-154	883.486
90	57-106	872.164	49	57-155	908.105
90	57-107	853.673	75	57-156	817.124
90	57-108	785.084	75	57-157	802.594
90	57-109	770.143	75	57-158	787.515
90	57-110	712.951	75	57-159	829.306
90	57-111	784.037	75	57-160	858.479
91	57-112	852.016	74	57-161	874.362
91	57-113	871.540	74	57-162	848.594
91	57-114	878.053	74	57-163	853.125
91	57-115	871.957	74	57-164	845.540
76	57-116	744.680	74	57-165	828.755
76	57-117	831.977	74	57-166	850.845
76	57-118	832.659	73	57-167	851.704
76	57-119	865.494	73	57-168	854.375
76	57-120	873.072	73	57-169	856.803
76	57-121	879.021	94	57-170	850.543
76	57-122	898.095	94	57-171	862.374
76	57-123	901.662	94	57-172	850.481
76	57-124	884.119	93	57-173	791.419
75	57-125	901.488	93	57-174	805.809
71	57-126	911.402	93	57-175	817.338
71	57-127	913.417	92	57-176	819.454
71	57-128	926.025	91	57-177	929.618
71	57-129	870.713	64	57-178	902.590
71	57-130	844.139	64	57-179	865.274
71	57-131	806.914	64	57-180	905.608
71	57-132	853.253	65	57-181	851.212
72	57-133	831.590	45	57-183	775.058
72	57-134	806.337	46	57-184	848.712
72	57-135	797.705	46	57-185	828.361
72	57-136	809.923	46	57-186	788.109
72	57-137	846.271	46	57-187	744.129
72	57-138	867.059	46	57-188	744.244
72	57-139	869.306	46	57-189	747.859
73	57-140	867.597	46	57-190	746.606
73	57-141	855.303	53	57-191	886.058
53	57-142	865.481	54	57-192	870.402
53	57-143	870.999	54	57-193	826.081

PAGE	BENCH MARK NUMBER	ELEVATION (Feet)	PAGE	BENCH MARK NUMBER	ELEVATION (Feet)
54	57-194	873.036	22	57-246	798.473
54	57-195	882.360	22	57-247	809.152
54	57-196	890.894	22	57-248	834.756
54	57-197	878.889	22	57-249	825.258
55	57-198	906.425	22	57-250	814.756
55	57-199	923.896	22	57-251	796.977
55	57-200	935.674	21	57-252	779.168
54	57-201	942.784	21	57-253	824.979
34	57-202	929.559	21	57-254	764.844
34	57-203	921.501	21	57-255	760.218
54	57-204	884.641	21	57-256	759.667
30	57-205	871.294	21	57-259	760.402
30	57-206	968.154	20	57-260	758.817
30	57-207	1015.447	48	57-261	788.542
30	57-208	931.317	48	57-262	764.477
31	57-209	991.878	47	57-263	766.655
31	57-210	1007.403	47	57-264	882.777
31	57-211	1009.909	47	57-265	898.318
31	57-212	1001.983	47	57-266	869.404
31	57-213	934.890	47	57-267	771.409
31	57-214	959.860	30	57-268	922.190
31	57-215	1001.648	30	57-269	939.972
32	57-216	1015.454	29	57-270	940.316
32	57-217	993.187	29	57-271	934.102
32	57-218	995.254	29	57-272	939.257
32	57-219	976.527	29	57-273	924.572
32	57-220	747.895	29	57-274	934.663
32	57-221	972.055	26	57-275	913.400
33	57-222	943.876	26	57-276	899.611
33	57-223	922.931	26	57-277	899.723
33	57-224	924.063	25	57-278	904.782
33	57-225	927.282	25	57-279	925.933
33	57-226	870.641	25	57-280	900.202
27	57-227	859.755	25	57-281	866.530
27	57-228	899.792	25	57-282	809.129
28	57-229	915.641	51	57-283	877.695
28	57-230	898.181	51	57-284	894.572
28	57-231	920.608	51	57-285	897.889
28	57-232	932.777	51	57-286	912.380
28	57-233	927.229	51	57-287	918.742
28	57-234	873.797	51	57-288	896.068
23	57-235	880.766	52	57-289	861.337
23	57-239	882.160	52	57-290	917.364
23	57-240	920.720	52	57-291	906.356
23	57-241	906.199	52	57-292	909.483
23	57-242	838.909	52	57-293	921.740
23	57-243	816.442	26	57-294	921.783
23	57-244	797.695	26	57-295	929.037
22	57-245	797.489	27	57-296	940.740

<u>PAGE</u>	<u>BENCH MARK NUMBER</u>	<u>ELEVATION (Feet)</u>	<u>PAGE</u>	<u>BENCH MARK NUMBER</u>	<u>ELEVATION (Feet)</u>
27	57-297	942.777	43	57-2720	983.289
27	57-298	946.127	43	57-2784	924.431
27	57-299	928.505	44	57-2811	910.441
55	57-325	879.552	43	57-2812	918.374
55	57-326	899.280	82	57-3330	815.553
55	57-327	885.497	81	57-3331	836.852
56	57-328	906.622	81	57-3333	835.054
56	57-329	908.423	81	57-3334	844.536
56	57-330	908.916	81	57-3337	859.916
57-a	57-331	896.242	81	57-3338	856.288
57-a	57-332	923.669	81	57-3342	936.501
57a	57-333	909.992	83	57-3401	834.244
57a	57-334	877.885	83	57-3409	912.239
58	57-335	829.483	60	57-3457	900.795
58	57-336	860.733	60	57-3463	926.878
80	57-337	875.038	60	57-3464	928.213
79	57-338	883.026	60	57-3467	980.838
79	57-339	894.562	59	57-3487	922.065
79	57-340	915.884	56	57-3585	920.526
79	57-341	877.728	56	57-3586	923.686
79	57-342	965.769	57	57-3588	910.116
79	57-343	900.681	57	57-3589	912.580
79	57-344	934.801	57	57-3593	943.476
78	57-345	920.897	101	57-5001	803.401
78	57-346	841.957	101	57-5002	817.075
78	57-347	834.762	102	57-5003	836.645
78	57-348	801.800	103	57-5004	900.093
78	57-349	833.939	103	57-5005	867.475
78	57-350	792.190	103	57-5006	839.008
77	57-351	751.498	103	57-5007	836.714
77	57-352	748.647	103	57-5009	697.679
77	57-353	753.791	104	57-5010	700.064
77	57-354	747.285	104	57-5011	702.784
77	57-355	816.439	104	57-5012	750.727
77	57-356	820.655	104	57-5013	796.097
102	57-380	783.181	104	57-5014	799.700
102	57-381	845.172	105	57-5015	816.068
102	57-382	853.742	105	57-5016	822.974
40	57-2540	935.556	105	57-5017	913.410
41	57-2542	1002.741	82	57-5018	843.141
41	57-2577	1037.872	82	57-5019	795.540
41	57-2609	1019.316	82	57-5020	839.687
41	57-2610	1041.336	82	57-5021	843.866
42	57-2611	1033.955	83	57-5022	827.219
39	57-2615	846.576	105	57-5023	854.733
39	57-2616	958.499	80	57-5024	940.300
42	57-2642	1002.373	80	57-5025	932.603
43	57-2719	961.750	80	57-5026	949.910

<u>PAGE</u>	<u>BENCH MARK NUMBER</u>	<u>ELEVATION (FEET)</u>	<u>PAGE</u>	<u>BENCH MARK NUMBER</u>	<u>ELEVATION (FEET)</u>
				<u>BENTON COUNTY</u>	
80	57-5027	943.994			
83	57-5028	887.042			
83	57-5029	898.955	93	6- 144	802.223
83	57-5030	898.509	93	6- 158	856.855
84	57-5031	929.618	92	6- 159	879.959
84	57-5032	939.536	92	6- 160	840.638
59	57-5041	939.437	92	6- 161	770.589
59	57-5042	932.367	92	6- 162	759.920
59	57-5043	940.510	92	6- 163	878.089
59	57-5044	911.596	91	6- 164	917.091
58	57-5045	897.380	91	6- 165	858.614
58	57-5046	885.927	64	6- 166	909.155
58	57-5047	860.162	64	6- 167	867.315
60	57-5048	938.535	65	6- 168	845.956
60	57-5049	929.509	45	6- 169	774.096
61	57-5051	815.477	45	6- 170	778.791
61	57-5052	858.092			
62	57-5054	885.999			
62	57-5055	877.715			
62	57-5056	979.952			
62	57-5057	952.118			
62	57-5058	952.656			
62	57-5059	929.998			
63	57-5060	940.136			
38	57-5061	953.039			
38	57-5063	962.964			
38	57-5064	849.683			
37	57-5065	935.674			
37	57-5066	993.230			
37	57-5067	963.669			
37	57-5068	932.278			
37	57-5069	859.126			
36	57-5070	825.264			
36	57-5072	902.196			
36	57-5073	863.670			
36	57-5075	910.467			
35	57-5076	879.103			
35	57-5081	938.266			
57	57-5085	924.352			
57	57-5086	970.123			
57	57-5087	980.982			
38	57-5088	860.582			
38	57-5089	862.761			
44	57-5091	905.543			
				<u>JOHNSON COUNTY</u>	
			99	52- 35	719.985
			99	52- 55	828.761
			99	52- 56	809.759
			96	52- 86	822.662
			93	52- 97	789.975
			93	52-100	780.185
				<u>JONES COUNTY</u>	
			84-	53- 23	917.229
			85	53-260	912.229
			40	53-509	1000.326
			40	53-512	981.832
			84	53-5033	940.690
			84	53-5034	905.510
			84	53-5035	906.347
			85	53-5036	935.720
			85	53-5037	931.002
			85	53-5038	910.372
			85	53-5039	939.198
			86	53-5040	945.326

TRIANGULATION STATIONS

16	Haas	922.045	15	Morris (1934)	898.033
14	Kluber	878.191	15	Morris (AZ.)	908.309

LINN COUNTY

Additional Iowa Geodetic Survey Bench Marks for which no descriptions are included in this publication. See the County Engineer's Office for description, or the Iowa State Geodetic Survey office, 219 Old Federal Building, Des Moines, Iowa.

<u>BENCH MARK</u> <u>Number</u>	<u>ELEVATION</u> <u>(Feet)</u>	<u>BENCH MARK</u> <u>Number</u>	<u>ELEVATION</u> <u>(Feet)</u>
57-54 (1934)	781.298	57-828	787.610
57-55 (1934)	850.221	57-847	792.485
57-68	828.712	57-850	799.185
57-98	793.837	57-852	725.766
57-102	835.887	57-940	775.153
57-301	866.855	57-942	776.737
57-302	883.860	57-990	988.194
57-303	866.297	57-1010	861.337
57-304	856.937	57-1080	813.866
57-305	853.624	57-1136	948.709
57-306	867.009	57-1137	948.863
57-307	845.025	57-1139	982.636
57-308	807.462	57-1143	957.449
57-309	829.519	57-1187	828.109
57-310	849.250	57-1188	825.914
57-311	808.643	57-1189	825.425
57-312	809.017	57-1190	821.970
57-313	818.824	57-1191	785.353
57-314	898.561	57-1192	774.907
57-315	874.142	57-1193	786.865
57-316	863.171	57-1194	763.184
57-317	876.632	57-1195	760.382
57-318	824.359	57-1196	787.636
57-319	827.610	57-1197	751.915
57-320	770.786	57-1263	815.635
57-321	734.526	57-1264	779.867
57-322	729.004	57-1272	823.873
57-323	734.923	57-1276	782.456
57-324	722.039	57-1277	757.702
57-360	797.797	57-1278	751.495
57-387	805.983	57-1343	858.834
57-435	810.248	57-1344	831.183
57-437	771.993	57-1345	822.160
57-495	730.622	57-1346	828.177
57-537	742.974	57-1402	787.987
57-542	761.018	57-1485	828.778
57-617	770.907	57-1486	841.868
57-630	807.321	57-1487	874.221
57-650	827.013	57-1488	867.193
57-677	814.414	57-1490	833.866
57-754	910.684	57-1492	869.772
57-780	792.285	57-1493	883.896

Linn County Bench Marks not included in Publication (cont.) 133

<u>BENCH MARK NUMBER</u>	<u>ELEVATION (Feet)</u>	<u>BENCH MARK NUMBER</u>	<u>ELEVATION (Feet)</u>
57-1497	788.073	57-2557	956.570
57-1560	790.297	57-2576	1007.875
57-1561	762.994	57-2578	1023.866
57-1573	747.794	57-2587	948.660
57-1599	864.191	57-2619	980.818
57-1600	862.892	57-2620	897.065
57-1601	867.236	57-2621	934.043
57-1603	887.023	*57-2623	925.231
57-1604	881.803	57-2644	971.960
57-1605	900.815	57-2661	845.445
57-1606	895.999	57-2662	850.333
57-1626	783.660	57-2664	835.933
57-1637	769.398	57-2679	982.692
57-1684	743.706	57-2680	950.205
57-1687	775.678	57-2742	968.827
57-1689	788.223	57-2781	907.587
57-1696	848.955	57-2783	921.363
57-1700	795.130	57-3405	859.834
57-1705	761.672	*57-2643	1004.270
57-1706	824.552	Iowa Hwy. Com'n	
57-1707	802.065	I H C (1)	752.134
57-1709	767.948		
57-1717	765.507	<u>JOHNSON COUNTY</u>	
57-1722	766.563		
57-1723	765.327	52-95	835.746
57-1802	774.244	52-96	847.954
57-1829	708.883	52-98	808.473
57-1853	784.618	52-99	772.482
57-1903	768.128		
57-1904	751.636		
57-1944	729.385		
57-2189	858.988		
57-2218	756.675		
57-2238	823.220	<u>JONES COUNTY</u>	
57-2254	744.628		
57-2313	851.855		
57-2314	849.700	53-506	960.940
57-2348	833.358	53-511	929.585
57-2406	788.397	53-514	1045.707
57-2407	812.279		
57-2449	765.963		
57-2534	1026.435		
57-2537	992.941		
57-2543	1042.646		
57-2544	1041.520		
57-2553	978.059		
57-2554	1003.092		
57-2556	1009.696		

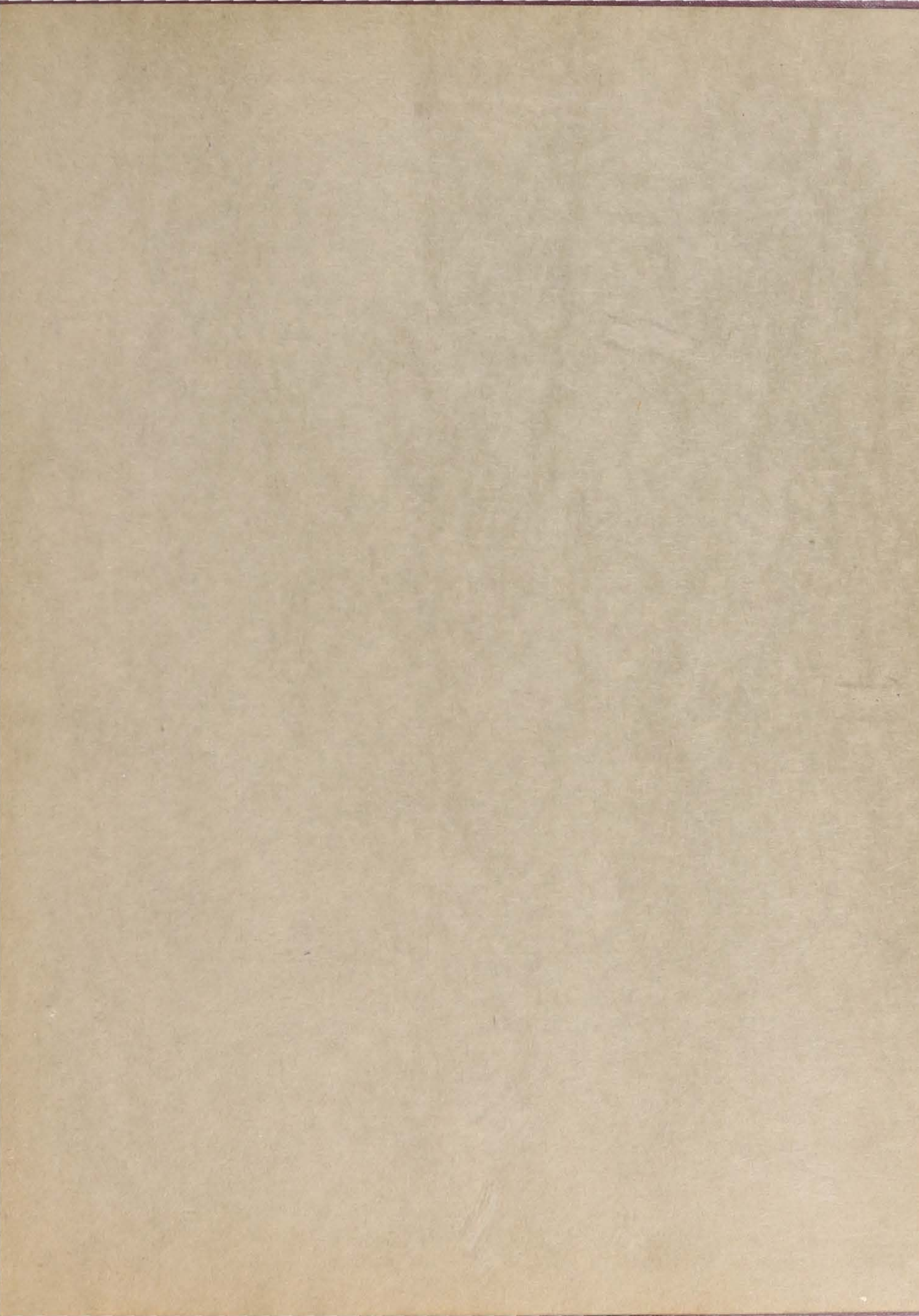
Additional County Bench Marks for which descriptions are not included in this publication. See County Engineer's Office for description.

<u>BENCH MARK NUMBER</u>	<u>ELEVATION (Feet)</u>	<u>BENCH MARK NUMBER</u>	<u>ELEVATION (Feet)</u>
Co.B.M. 2	802.610	Co.B.M. 918 (1923)	923.138
Co.B.M. 6 (1925)	918.230	Co.B.M. 919 (1924)	923.614
Co.B.M. 64 (1913)	871.714	Co.B.M. 933 (1923)	897.951
Co.B.M. 101	742.567	Co.B.M. 941 (1923)	811.662
Co.B.M. 104 (1914)	937.209	Co.B.M. 1001 (1924)	850.136
Co.B.M. 104	759.762	Co.B.M. 1018 (1925)	782.393
Co.B.M. 151 (1928)	860.923	Co.B.M. 1045 (1925)	887.255
Co.B.M. 159	732.220	Co.B.M. 1101 (1925)	904.929
Co.B.M. 166	838.729	Co.B.M. 1103 (1925)	900.654
Co.B.M. 187	890.002	Co.B.M. 1109 (1925)	899.874
Co.B.M. 210 (1929)	915.589	Co.B.M. 1112 (1925)	874.788
Co.B.M. 211 (1929)	923.226	Co.B.M. 1271 (1926)	848.830
Co.B.M. 220	795.241	Co.B.M. 1540 (1927)	904.135
Co.B.M. 309 (1914)	846.731	Co.B.M. 1542 (1927)	941.025
Co.B.M. 311 (1914)	749.310	Co.B.M. 1548 (1928)	892.666
Co.B.M. 326 (1914)	838.371	Co.B.M. 1550 (1928)	890.146
Co.B.M. 332	727.748	Co.B.M. 1551 (1927)	877.974
Co.B.M. 359 (1915)	834.008	Co.B.M. 1556 (1928)	852.219
Co.B.M. 470 (1927)	868.896	Co.B.M. 1581 (1920)	830.523
Co.B.M. 508 (1925)	929.867	Co.B.M. 1584 (1927)	835.914
Co.B.M. 622 (1918)	874.106	Co.B.M. 1624	843.561
Co.B.M. 686 (1919)	868.942	Co.B.M. 1637 (6)	793.955
Co.B.M. 721 (1919)	907.465	Co.B.M. 1644 (1928)	903.883
Co.B.M. 742 (1919)	875.569	Co.B.M. 1676 (1929)	784.152
Co.B.M. 775 (1921)	866.163	Co.B.M. 1693 (1928)	904.178
Co.B.M. 874 (1922)	857.623	Co.B.M. 1732 (1931)	801.747
Co.B.M. 908 (1923)	889.506	Co.B.M. 1846	867.341
Co.B.M. 909 (1925)	908.299	Co.B.M. 1867 (1908)	763.926
Co.B.M. 910 (1923)	897.643	Co.B.M. 1893 (1935)	853.358
Co.B.M. 911 (1923)	878.233	Co.B.M. 1907 (1931)	767.479
Co.B.M. 914 (1923)	931.944	Co.B.M. 2240 (1910)	840.969
Co.B.M. 916 (1923)	932.163	Co.B.M. 2318 (1930)	814.834

United States Coast & Geodetic Survey Bench Marks
in LINN COUNTY

For description and location of these bench marks
see the "Dubuque - Belle Plaine Supplementary Ad-
justment" publication.

<u>Page</u>	<u>Bench Mark Number</u>	<u>Elevation (Feet)</u>	<u>Page</u>	<u>Bench Mark Number</u>	<u>Elevation (Feet)</u>
181	J-75	920.940	198	U-80	849.782
181	K-75	885.070	198	V-80	821.488
181	L-75	838.693	199	W-80	841.737
182	M-75	806.668	199	X-80	820.992
182	N-75	793.758	199	Y-80	811.652
182	P-75	807.475	88	Z-80	739.152
182	Q-75	814.139	88	A-81	745.632
182	R-75	812.154	88	B-81	745.628
183	RR-75	803.079	88	C-81	746.347
183	S-75	822.479	112	S-84	765.934
183	T-75	777.062	112	T-84	769.483
184	U-75	768.935	112	U-84	767.886
183	V-75	766.855	113	V-84	749.867
184	W-75	788.781	113	W-84	734.611
184	X-75	776.665	113	X-84	739.739
185	Y-75	753.017	114	Y-84	761.642
185	Z-75	745.491	114	Z-84	733.083
185	A-76	728.644	115	A-85	794.086
185	B-76	735.222	115	B-85	828.351
185	C-76	726.665	112	RR-BM-7	770.143
186	D-76	729.178	112	RR-BM-8	768.227
186	E-76	740.123	112	RR-BM-9	770.668
186	F-76	797.603	113	RR-BM-10	747.912
187	G-76	750.031	113	RR-BM-11	749.949
187	H-76	736.734	113	RR-BM-12	745.448
196	L-80	867.328	186	Cedar Rapids (1934)	728.932
197	M-80	869.457	186	Linn County BM-851	791.114
197	N-80	842.564	183	Linn County Engr. Dept. (1903) -2067	767.676
197	P-80	825.822	198	Marion (1934)	850.658
197	Q-80	817.587			
197	R-80	787.069			
198	S-80	828.676			
198	T-80	807.134			



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