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**INSTRUCTIONS
TO THE
SURVEYORS GENERAL
OF
THE UNITED STATES,
RELATING
TO THEIR DUTIES AND TO THE FIELD
OPERATIONS OF
DEPUTY SURVEYORS.**

PRESCRIBED, ACCORDING TO LAW, BY THE COMMISSIONER OF
THE GENERAL LAND OFFICE.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1864.

INSTRUCTIONS
TO THE
SURVEYORS GENERAL OF PUBLIC
LANDS OF THE UNITED STATES.

General Land Office, *June 1, 1864.*

1. THE SURVEYING MANUAL AND
INSTRUCTIONS OF THE COMMISSIONER ARE
MADE A PART OF THE SURVEYING CONTRACTS
BY LAW.

By the second section of the act of Congress entitled "An act to reduce the expenses of the survey and sale of the public lands in the United States," approved May 30, 1862, it is provided, "That the printed Manual of Instructions relating to the public surveys, prepared at the General Land Office, and bearing date February twenty-second, eighteen hundred and fifty-five the instructions of the Commissioner of the General Land Office, and the special instructions of the surveyor general, when not in conflict with said printed Manual or the instructions of said Commissioner, *shall be taken and deemed a part of every contract for surveying the public lands of the United States.*"

In pursuance of law, the following instructions are prescribed for your government and that of your deputies in surveying the public lands:

2. SURVEYS TO BE EXECUTED BY DEPUTY
SURVEYORS IN PERSON.

Your attention is especially directed to the last clause of the printed form of contract furnished by this office, which stipulates "that no payment shall be made for any surveys not executed by the said deputy surveyor in his own proper person." It has been the practice of deputies to take contracts for more surveying than they could perform in person, and then employ one or more compassmen with their auxiliaries to do the work. The object of the stipulation referred to in the contract is to prevent a continuance of this practice.

Deputy surveyors are required to verify by their oath that the surveys embraced in their contracts have been executed in strict conformity with instructions, the requirements of the Surveying Manual, and the laws of the United States. The deputy cannot consistently make this oath if the work is done by separate parties in other parts of the field from where he is operating.

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That there may be no misunderstanding upon this point, you are hereby instructed not to enter into contract with any one deputy for a greater amount of surveying than it may reasonably be expected he will be able to execute in one season, under his own immediate and personal direction, with *one surveying party only*; and deputy surveyors will be notified in advance that accounts for surveying done in violation of this rule will not be allowed.

When two deputies enter into joint contract for certain surveys, and *only one* of them goes into the field, if that one, with a single surveying party, executes all the work in person, his affidavit alone as surveyor, attached to the field notes, will be deemed sufficient, and no impediment to the payment of his account will result therefrom.¹

If two deputies, joint parties in a contract, *both* go into the field, each with a separate surveying party, the field notes must show clearly the particular surveying done by each deputy. The date and the name of the deputy will be stated at the beginning and end of the notes of every continuous part of such survey executed by him, so that it may be distinctly seen by whom each mile of line was run.²

The following form of affidavit is prescribed, to be attached to the field notes in cases of joint surveys, in lieu of the one heretofore used, to wit:

"I, A B, deputy surveyor, do solemnly swear that, in pursuance of a joint contract, wherein A B and C D are joint contractors with S. G., United States surveyor general for _____, bearing date the _____ day of _____ 18 __, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the surveyor general, the Surveying Manual, and the laws of the United States, surveyed all those parts or portions of _____ as are represented in the foregoing field notes as having been surveyed under my direction; and I do further solemnly swear that all the corners of said surveys have been established and perpetuated in strict accordance with the Surveying Manual and printed instructions, and that the foregoing are the true and original field notes of such survey."³

The separate affidavit of each deputy, in the above form, will be attached to the field notes of joint surveys.

3. OPERATIONS IN THE FIELD, WHEN TO
COMMENCE.

The practice of anticipating the appropriations is deemed unwise and contrary to the spirit of the law. The surveys should not be commenced in advance of the year for which the means is provided by Congress, and no moneys can be used to pay for work done before they were appropriated. This must be regarded as an invariable rule to be rigidly observed in future.

The object of this restriction is to keep back the surveying operations to the legitimate period of time contemplated in the appropriations. These appropriations are made with reference to the

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current necessities of given years, and if allowed to be absorbed in advance, the purposes of Congress in providing stated sums annually to carry forward the public surveys would be defeated. In order to enable deputy surveyors to avail themselves of the whole season belonging to the fiscal year, however, they may be permitted to commence their operations as soon after the first day of May in each year as

1. When one Deputy does the work under a joint contract, he may verify.
2. Active Deputies under joint contract each to verify.
3. Form of affidavit for joint surveys.

notice is received from this office that the appropriations have been made. You will be promptly notified, by mail or telegraph, as circumstances may determine, when the appropriations are passed, and no surveying chargeable to such appropriations must be done before receiving this notice.

4. CONTRACTS MUST BE APPROVED BY THE COMMISSIONER.

The first section of the act of May 30, 1862, provides that contracts for the survey of the public lands shall not become binding upon the United States until approved by the Commissioner of the General Land Office, except in such cases as the Commissioner shall otherwise especially order.

5. REVENUE STAMPS TO BE ATTACHED TO CONTRACTS AND BONDS.

The requirements of the internal revenue law make it necessary that five *separate stamps* be attached to the several parts of every contract and of a deputy surveyor, to wit:

1. To the *contract*, five-cent stamp; 2. To the *affidavit* of the deputy surveyor, five cents; 3. To the *bond*, fifty cents; 4. To the *certificate* as to the sufficiency of the bond, ten cents; 5. To the *oath* of allegiance, five cents.

Surveyors general are reminded that the sufficiency of the sureties to the bonds of deputy surveyors must be certified BY THE PROPER OFFICER OF A COURT HAVING A SEAL.

6. WHEN DESIRED BY SETTLERS, SURVEYS MAY BE MADE BY THE SURVEYOR GENERAL AT THEIR EXPENSE IN CERTAIN CASES.

By section 10 of an act entitled "An act to reduce the expenses of the survey and sale of the public lands in the United States," approved May 30, 1862, it is provided, "That when the settlers in any township or townships, not mineral or reserved by Government, shall desire a survey made of the same under the authority of the surveyor general of the United States, and shall file an application therefor in writing, and deposit in a proper United States depository, to the credit of the United States, a sum sufficient to pay for such survey, together with all expenses incident thereto, without cost or claim for indemnity on the United States, it shall and may be lawful for said surveyor general, under such instructions as may be given him by the Commissioner of the General Land Office, and in accordance with existing laws and instructions, to survey such township or townships, and make return thereof to the general and proper local land office: *Provided*, The townships so proposed to be surveyed

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are within the range of the regular progress of the public surveys embraced by existing standard lines or bases for the township and subdivisional surveys."—(Sec. 10, p. 410, vol. 12, U. S. Laws.)

Applications for surveys under this law must be made to the surveyor general in writing, upon the receipt of which he will furnish the applicant with an estimate of how much the

desired survey will cost. On receiving a certificate of deposit of a United States depository, showing that the required sum has been deposited with him in a proper manner to pay for the work, you will contract with a competent United States deputy surveyor, and have the survey made and returned in the same manner as other public surveys are.

You are especially enjoined in all cases to state explicitly in your letters furnishing estimates to applicants, that the payment of the amount required for the survey will not give the depositor any priority of claim or right to purchase the land, or in any manner affect the claim or claims of any party or parties thereto; and that, when surveyed, it will be subject to the same general laws and regulations in relation to the disposition thereof as other public lands are.

The money should be deposited to the credit of the Treasurer of the United States on account of the proper appropriations. A separate estimate is required and a separate deposit must be made for *office work and field work*; one to be placed to the credit of the appropriation "for compensation of the surveyor general and the clerks in his office," and the other to the credit of the appropriation "for continuing the public surveys." The depository will issue certificates in triplicate, one of which will be transmitted to this office with the contract and bond of the deputy surveyor.

The account will be adjusted and paid in the same manner as other surveying accounts. Should the amount deposited exceed the cost of survey and all expenses incident thereto, including office work, an account setting forth the fact of such excess may be rendered by the depositor, certified by the surveyor general, and transmitted to this office with the final surveying returns, to be reported for payment.

Where a township is surveyed under the provisions of the aforesaid act, the survey must include all the *surveyable* public land in such township.

7. SMALL ISLANDS MAY BE SURVEYED AT THE COST OF APPLICANTS.

Many applications are received at this office for the purchase of small unsurveyed islands which were omitted when the adjacent lands were surveyed. These islands are usually of too little value to justify the Government in incurring the expense of survey; but where a party desires the survey made and is willing to pay the cost thereof in advance, upon the conditions set forth in these instructions, it may be done under the provisions of the tenth section of the act of May 30, 1862.

The party desiring the survey to be made must file a written application with the surveyor general, giving an intelligible description of the locality of the island, its distance from the main shore, the width

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of the narrowest channel between it and the main land, with an estimate of its area.

Upon receiving such application, made in the manner indicated, you will examine the records and data in your office, and if it appears that the island is public land and has not already been surveyed, you will furnish the applicant an estimate of the cost of surveying it, as directed under the

sixth head in these instructions, stating explicitly that the depositing of the money will not in any manner affect the rights of parties in said lands, nor give any priority of claim to the depositor.

You will observe particularly that two separate deposits are to be made—one on account of the appropriation for field work, and one on account of the appropriation for office work—a separate certificate for each to be transmitted to this office with the contract and bond of the deputy surveyor.

It will be understood that these instructions relate only to isolated islands, or islands that were omitted when the public surveys were extended over the adjacent lands, and do not apply to islands falling within the regular course of current surveys, which must be included in the contracts for surveying the public lands.

As a general rule, a body of land separated from the main land by a *perpetual* natural channel may be regarded as an island for the purposes contemplated in these instructions.

8. SURVEY OF SWAMP LANDS.

Contracts with deputy surveyors must of course embrace any "swamp and overflowed" lands which, in alluvial regions, are intermingled with the arable or fast lands. Over all such lands the lines of the public surveys must be extended, as the selections in such cases are made according to the character of the *smallest legal subdivision*. If the greater part of such subdivision is "swamp and overflowed," it goes to the swamp grant; if otherwise, it is excluded from such grant, and is retained by the Government.

In the survey of all lands of this mixed character, the deputies must be charged to give in their field notes a specific and full description of the land, indicating the *causes* of its being unfit for cultivation in its natural condition, with the character of the timber, shrubs, or plants growing on the tract, and the contiguity of the premises to rivers, water-courses, or lakes, naming them respectively. The swamp grant does not embrace tracts in which the inundation is casual, but only those where the overflow would totally destroy crops and prevent the raising of the same without artificial means, such as levees, draining, &c. The essentiality must be obvious to you of the requirement of full data in these respects, in order to enable the Department properly to adjust swamp and other interests.

Where the State authorities desire to have swamp lands surveyed at their expense, the same may be done in accordance with instructions on page 5 for surveys under the provisions of the tenth section of the act of May 30, 1862; but all applications for separate surveys

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of swamp lands must be submitted to this office, with a full report and a diagram illustrating the locality, and the approval of the Commissioner first obtained.

9. CERTAIN RIVERS TO BE MEANDERED ON ONE BANK ONLY.

Rivers not embraced in the class denominated "navigable" under the statute, but which are well-defined natural arteries of internal communication, and have a uniform

width, will only be meandered on *one bank*. For the sake of uniformity, the surveyor will traverse the *right bank* when not impracticable; but where serious obstacles are met with, rendering it difficult to course along the right bank, he may cross to the left bank and continue the meanders as far as necessary; but all changes from one bank to the other will be made at the point of intersection of some line of the public surveys with the stream being meandered.

The subdividing deputies will be required to establish meander corners on both banks of such meanderable streams at the intersection of all section lines, and the distances across the river will be noted in the field book.

In meandering water-courses, where a distance is more than *ten chains* between stations, even chains only should be taken; but if the distance is less than ten chains, and it is found convenient to employ chains and links, the number of links should be a multiple of ten, thereby saving time and labor in testing the closings both in the field and in the surveyor general's office.

10. WHAT LAKES ARE NOT TO BE MEANDERED.

Paragraph numbered three, on page 13 of the Manual, in regard to the meandering of lakes, &c., is modified as follows:

Lakes embracing an area of less than *forty acres* will not be meandered. Long, narrow or irregular lakes of larger extent, but which embrace *less than one-half* of the smallest legal subdivision, will not be meandered. Shallow lakes or bayous, likely in time to dry up or be greatly reduced by evaporation, drainage, or other cause, will not be meandered, however extensive they may be.

Deputy surveyors will be allowed pay for the distance across lakes or ponds not meandered, where they are required to continue the lines of the public surveys across them; but no offsets or lines run in triangulating will be paid for.

Where the distance across a lake or other body of water is ascertained by offsetting, it is not enough to say in the field notes "8.65 over lake and set a meander corner," but the *mode* by which the distance is ascertained must be stated and described in full.

Posts will be established by the subdividing deputy at the intersections of all the public lines with these lakes the same as if they were to be meandered.

11. CORNER POSTS AND CORNER STONES.

In loose or alluvial soil, section, quarter-section, or meander posts may be driven into the ground, instead of digging holes and planting

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them as required in the Manual; but no posts will be so driven unless, from the character of the soil, they will thereby be rendered more firm and enduring.

All corner stones fourteen inches long, or more, and less than eighteen inches in length, should be set two-thirds of their length in the ground; if more than eighteen inches long, they should be set three-quarters of their length in the ground.

12. QUARTER SECTION CORNERS NOT TO BE ESTABLISHED IN CERTAIN CASES.

Quarter section corners are not required to be established on the *west* boundary of the *western tier of sections* in a township, nor on the *north* boundary of the northern tier of sections in a township *south of and bordering on a standard parallel or base line*. The resurvey of township, standard, or base lines, by the deputy surveyor, for the purpose of establishing such quarter posts, is unnecessary and will not be paid for.

13. POSTS IN MOUNDS.

All posts in mounds will hereafter be planted or driven into the ground to the depth of twelve inches, at the precise corner point; and the charcoal-charred stake or marked stone required in the Manual will be deposited twelve inches below the surface, against the north side of the post when the deputy is running north, and against the west side when the deputy is running west, &c.

Township mounds will be five feet in diameter at their base and two and a half feet in perpendicular height. Posts in township mounds are therefore required to be four and a half feet in length, so as to allow twelve inches to project above the mound.

Mounds at section, quarter section, and meander corners, will be four and a half feet in diameter at their base and two feet in perpendicular height, the posts being four feet in length, leaving twelve inches to project above the mound.

The planting of seeds between the pits and trenches, as directed on page 11 of the Manual, is not required.

14. PITS IN LIEU OF TRENCHES.

The quadrangular trench required in connection with the construction of mounds is dispensed with. The *pits* will be continued, and should be of uniform dimensions. The pits for a township mound will be eighteen inches wide, two feet in length, and at least twelve inches deep, located six feet from the post. At section corners the pits will be eighteen inches *square*, and not less than twelve inches in depth.

At township corners common to *four* townships, the pits will be dug on the lines and lengthwise to them. On base and standard lines, where the corners are common to only *two* townships or sections, three pits only will be dug—two in line on either side of the post, and one on the line north or south of the corner, as the case may be. By this means the standard and closing corners will be readily distinguished from each other.

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15. NOTCHING SECTION CORNER POSTS.

Posts or stones at the corners of sections in the interior of townships will have as many notches on the *south* and *east* edges as they are miles from the south and east boundaries of the township, instead of being notched on all four edges, as directed on pages 8 and 9 of the Manual.

16. MARKING LINES.

In addition to the instructions under this head on page 4 of the Manual, the following requirements will be observed, to wit:

Where trees two inches or more in diameter are found, the required blazes must not be omitted.

Bushes on or near the line should be bent at right angles therewith, and receive a blow of the axe at about the usual height of blazes from the ground sufficient to leave them in a bent position, but not to prevent their growth.

On *trial* or *random lines*, when it is necessary to lop bushes, they should be bent *in the direction of the line*, to prevent mistaking random for true lines.

17. BEARING TREES.

Where a tree not less than two and a half inches in diameter can be found for a bearing tree within 300 links of the corner, it should be preferred to the trench or pit. The *quadrangular trench* required on page 9 of the Manual as a substitute, where the requisite number of "bearing trees" is not found, is dispensed with, and a *pit* two feet square and not less than twelve inches deep is required in lieu thereof.

18. MODE OF CORRECTING BACK RANDOM LINES.

The manner of running random and true lines illustrated in the specimen field notes, marked "B," in the Manual, is hereby modified so as to conform to the directions on page 23; that is, the deputy, having run a random line, will correct back "by calculating a course that will run a true line back to the corner post from which the random started." For instance: instead of saying "west on a true line," &c., with an *altered* variation, say "north 89° 47' west on a true line," &c., with *same* variation.

19. ABBREVIATIONS IN THE FIELD NOTES.

The following additional abbreviations are authorized to be used in the field notes, to wit:

For quarter section corner, use "¼ sec. cor.;" for variation, "va.;" for 14 inches long, 12 inches wide, and 3 inches thick, in describing a corner stone, use 14 x 12 x 3, being particular to always observe the same order of length, width, and thickness.

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20. PRESCRIBED LIMITS FOR CLOSINGS AND LENGTH OF LINES IN CERTAIN CASES.

1. Every north-and-south section line, except those terminating in the north boundary of the township, must be *eighty chains* in length.

2. The east-and-west *section lines*, except those terminating in the west boundary of the township, are to be within *one hundred links* of the actual distance established on the south boundary line of the township for the width of said tier of sections.

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CIRCULAR

Department of the Interior
General Land Office
July 28, 1866

3. The north boundary and south boundary of any one section, except in the extreme western tier, are to be within *one hundred links* of equal length.

4. The meanders within each fractional section, or between any two meander posts, or of a pond or island in the interior of a section, must close within one chain and fifty links.

5. In running *random* township exteriors, if such random lines fall short or overrun in length, or intersect the eastern or western boundary, as the case may be, of the township, at more than *three chains and fifty links* north or south of the true corner, the lines must be retraced, even if found necessary to remeasure the meridional boundaries of the township.

It will be particularly observed that no changes in regard to surveying operations are made by these instructions excepting those specially stated and authorized. In every other particular the Manual and existing instructions of the Commissioner remain in full force.

Very respectfully,

Your ob't servant,
J. M. Edmunds,
Commissioner.

Sir,

The experience of this office having demonstrated the desirability of a change in the system adopted for the numbering of fractional lots of the public lands as illustrated in "Diagram B" accompanying the printed Manual of Surveying Instructions issued February 22, 1855, it has been decided to substitute in lieu thereof a more simple and less inconvenient system.

It is now proposed to employ but one continuous series of numbers in each section containing fractional lots, to embrace all lots made fractional by any cause, and not containing the recognized legal quantity of some legal subdivision; but those subdivisions in the exterior halves of sections in the north and west tiers of sections in a township, which contain eighty or forty acres, will not be numbered in the future preparation of plats. The printed instructions on pages 25 and 26 of the aforesaid Manual are hereby modified to that extent.

Accompanying this letter is a "Diagram B" illustrating the proposed change in numbering and which is designated in red ink on the same.

Where islands are situated in two or more sections the lots should be embraced in the series of numbers of the respective sections in which they are located. Islands situated wholly within a section may be numbered as one lot unless the area exceed 160 acres in which case they should be divided by extending the subdivisional lines across them and then numbered.

You are requested to acknowledge the receipt of this letter and cause these instructions to be carried out in your office.

I am Very Respectfully
Your Ob't Servant
J. M. Edmunds
Commissioner

(Ed. Note: This circular was sent to the Surveyors General of California, Oregon, Washington, Dakota, Minnesota, Kansas and Nebraska, New Mexico and Idaho. Copies were sent to Florida on June 22, 1869, and to Louisiana on December 3, 1878. A copy of Diagram "B" accompanied the circular.)