Bureau of Land Management
Alaska State Office
Division of Cadastral Survey

Drafting Guidelines For Supplemental And Amended Plats

SUPPLEMENTAL PLATS AND AMENDED PLATS

INTRODUCTORY STATEMENT

The use and preparation of supplemental plats is covered by the Manual of Surveying Instructions, 1973, which is the official manual of specifications for Bureau of Land Management (BLM) surveys. These guidelines are not designed to supercede the Manual, but rather to identify appropriate procedures utilized in various situations unique to BLM surveys in Alaska, and to abstract information from the manual into a condensed handbook. Amended plats are not specifically addressed in the Manual , although it does cover Amended and Corrective Surveys.

The purpose of supplemental plats is to accommodate applications for federal lands that are not identified by existing surveys. This can be accomplished by protracting lot lines within the survey to identify the applicants parcel without additional field survey, or inholdings can be segregated from a township to identify the portions of the township that can be conveyed.

Amended Plats are not the same as plats of Amended Surveys. Amended Surveys require amended special instructions and new field work which normally revises the boundaries of the parcel. These are distinguished from an Amended Plat by the title. The word "Amended" becomes part of the title of an amended survey (for example: "Am. U.S. Survey No. 806"), while an amended plat carries an identical title with the original survey plat, but adds the subtitle "AMENDED PLAT".

Amended Plats can amend and supercede the original plat, or they can amend only certain portions of the plat, leaving the original plat as a valid record for other portions of the survey. This distinction must be clearly documented in the plat memorandum. If the plat amends and supercedes, the original plat may be suspended, and the entire plat will be redrawn as if it were the original plat. The drafting standards for plats that amend and supercede are the same as for original plats, and therefore are NOT covered in this section. This section applies only to those amended plats that function as a supplemental plat, but require adjustment to the record of meander lines that are NOT documented in the field notes.

This supplemental handbook is subject to revision and will be updated whenever significant discrepancies are noted or policy changes are instituted. To assure that you have a current version, contact the Bureau of Land Management, Division of Cadastral Survey, Branch of Examination and Records at (907) 271-5768. Feedback from users is invited in order to keep this handbook as accurate and current as possible.

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DRAFTING GUIDELINES FOR

SUPPLEMENTAL PLATS

PART I - PROCEDURE

These guidelines pertain to Supplemental Plats and to Amended Plats that serve the same purpose as supplemental plats, but require an adjustment to the meanders depicted on the plat of the township in order to match the meanders of the U. S. Surveys. This procedure for amended plats applies only to townships that do NOT have the meanders documented in field notes. In these guidelines the term Supplemental Plat includes this type of Amended Plat except when it is necessary to specifically define the differences between them.

1. INITIATING A SUPPLEMENTAL OR AMENDED PLAT

Supplemental plats are prepared by the Branch of Mapping Sciences. The assignment and instructions to produce a supplemental plat is a formal request received from the Branch of Survey Preparation and Contracts (923). Included with the request is an envelope which contains copies of the original survey records, master title plats, and instructions to prepare a supplemental plat to accommodate a specific need(s).

2. TYPES AND LIMITATIONS OF SUPPLEMENTAL PLATS AND AMENDED PLATS

Supplemental plats are based entirely on office records. They are based on approved B.L.M. survey records, including U.S. Surveys, Proper Rectangular Surveys, Protracted Subdivision Townships, Tract "A" Townships, townsites, etc. In special cases they can be based on the approved records of Alaska State Land Surveys (ASLS). Any combination of records used to create a supplemental plat must be compatible.

Incompatible surveys records, that is two or more approved surveys whose records are in conflict, cannot normally be resolved with a supplemental plat. They can be used to resolve minor discrepencies between meanders that are documented and meanders that are only graphically depicted, as long as the new areas can be reconciled to the record without excessive distortion. Other conflicts are resolved by a

resurvey, an Amended Survey or an Amended Plat. While a resurvey and an Amended Survey require additional field work, an Amended Plat does not.

Amended Plats are created only when a supplemental plat will not serve the same purpose. They are often used to revise a record meander line that is graphically represented on the original plat when the new acreages cannot be reconciled to the original acreages. Amended plats cannot be used to revise original meanders that are documented in field notes.

A request for a supplemental plat of a township includes an implied request for an amended plat of any portion of the township that does not meet the criteria for producing a supplemental plat. This criteria is applies on a section by section basis within the township. A township involving several sections may require a supplemental plat of some sections and an amended plat of other sections in order to fulfill the request.

A.) SUPPLEMENTAL PLATS OF U.S. SURVEYS

These are requested in order to create additional lotting within a U.S. Survey.

B.) SUPPLEMENTAL PLATS OF TRACT "A" TOWNSHIPS (This type of plat does not have protracted section lines and the meanders on the original plat were sketched from quad maps.)

a.) These are created to exclude U.S. Surveys or Mineral Surveys from the original Tract when the records are compatible.

b.) To protract sections within the township.

c.) To protract irregular lotting within the Tract.

C.) SUPPLEMENTAL PLATS OF PROTRACTED SUBDIVISION TOWNSHIPS

a.) These are created to exclude U.S. Surveys or Mineral Surveys from original sections when the records are compatible:

b.) To protract additional lotting within the sections.

D.) SUPPLEMENTAL PLATS OF TRADITIONAL RECTANGULAR SURVEYS

a.) These are created to exclude U.S. Surveys or Mineral Surveys from the original sections when the records are compatible:

b.) To protract additional lotting within the sections.

E.) AMENDED PLATS OF U.S. SURVEYS

a.) These are created to correct discrepancies that are discovered on the original plat. These are drafted to the same standards as original U. S. Survey plats and therefore are NOT covered by this section.

F.) AMENDED PLATS OF TRACT "A" TOWNSHIPS (This type of plat does not have protracted section lines and the meanders on the original plat were sketched from quad maps.)

a.) These are created to exclude U.S. Surveys or Mineral Surveys from the original township when the records are NOT compatible, e.g , the record meanders do not match within acceptable limits and/or the.calculated areas cannot be reconciled to the record area, or

b.) To segregate the area of a water body that was not segregated on the original plat, whether depicted or not.

c.) To correct discrepancies that are discovered on the original plat. These plats are drafted in the same style and standards as original township plats and are NOT covered in this section.

G.) AMENDED PLATS OF PROTRACTED SUBDIVISION TOWNSHIPS

a.) These are created to exclude U.S. Surveys or Mineral Surveys from original sections when the records are NOT compatible, e.g., graphically depicted record meanders do not match within approximately two chains at the meander corners and/or the calculated areas cannot be reconciled to the record areas, or

b.) To segregate the area of a water body that was not segregated on the original plat, whether depicted or not.

c.) To correct discrepancies that are discovered on the original plat. These plats are drafted to the same standards as original townships, and therefore are NOT covered in this section.

H.) AMENDED PLATS OF TRADITIONAL RECTANGULAR SURVEYS

a.) These are created to correct discrepancies that are discovered on the original plat. These plats are drafted to the same standards as original townships and therefore are NOT covered in this section.

3. STYLE OF SUPPLEMENTAL AND AMENDED PLATS

A.) The style of a supplemental plat is similar to the original plat upon which the supplemental plat is based. Each supplemental plat will depict the same surveyed lines and protracted lot lines as shown on the original survey. However a supplemental plat does not depict the entire survey unless all of the lots and/or sections within the survey are affected by the supplemental plat. Show only those lots or sections that are affected since repeating unnecessary portions of the plat may inadvertently change the record. Each lot or section affected must be shown in its entirety in order to keep the record clear.

B.) A supplemental plat cannot eliminate a surveyed line, therefore every surveyed line must be shown as it was depicted on the original record. For instance an original plat may show a surveyed line over an excluded water body. If this was shown solid on the original plat it must be shown solid on the supplemental plat.

C.) A supplemental plat does not eliminate any of the protracted section lines or lot lines that were depicted on the original plat except across surveyed inholdings.

D.) Many of the features shown on the original plat are NOT depicted on a supplemental plat. These include the magnetic declination, monument symbols, monument descriptions, line call features, improvements, road or railroad traverses, ties, geographic positions, tabulated meander line data,

concurrent survey, retracement or dependent resurvey statements, BLM location markers, reference monuments, and triangulation stations.

E.) Other features are shown only in certain cases:

- The overall bearings and distances are only shown around the surveyed lines of the parcel(s) depicted.

- All breakdown distances are shown along the surveyed lines that have additional breakdown distances caused by the merging of records.

- Parenthetical breakdown distances are shown along surveyed lines to indicate the spacing of new lotting.

- Witness points are shown only if a record distance which must be shown terminates at the witness point.

- The only areas (acreages) that are shown on the plat are the areas of the new lots that are created. Record areas are not repeated; neither are the revised area for the section, nor the total area surveyed.

F.) Supplemental plats are a skeletal form of the original survey plat(s) that show only the following features:

a.) The surveyed boundaries around a record parcel or parcels, that require revised lotting. This includes the meander lines.

b.) The overall record bearings and distances around each parcel that is being further subdivided. (On supplemental plats of a traditional rectangular survey the record bearings and distances are shown around each inholding that is segregated. On all other supplemental plats these bearings and distances are not shown.)

c.) The protracted section lines and/or lot lines that are depicted on the original plat(s). Show all of the protracted boundaries within the affected parcels excluding them only through surveyed inholdings.

d.) The labels that identify each survey, that is U. S. Survey numbers, Mineral Survey numbers and claim names, township title and section numbers.

e.) On traditional rectangular surveys show the record tie(s) that was used to position an inholding survey.

f.) The lot numbers. (See PART II for the standards used in assigning and depicting lot numbers.)

g.) The areas (acreage) of the new lots.

h.) The breakdown distances and parenthetical breakdown distances to show the spacing of new intersection points along a record line.

i.) The name(s) of water bodies named on the original plat(s).

j.) The appropriate bar scale, a north arrow (without the magnetic declination), and the appropriate border with the officially filed statement.

4. NORMAL PROCEDURE FOR EACH TYPE OF PLAT

A.) SUPPLEMENTAL PLAT OF U.S. SURVEYS

a.) Approved Survey records are input directly into AutoCad by the Cartography Section using the 386 computer.

b.) New lot areas are calculated using the AREACOMP program. These areas must be reconciled to conform to the record area.

c.) The AutoCad drawing is edited into final plat format and plotted.

B.) SUPPLEMENTAL PLAT OF TRACT "A" TOWNSHIPS (This type of plat does not have protracted section lines, and the meanders on the original plat were sketched from quad maps.)

a.) Approved survey records are normally input into the Data General for the creation of field data plots. (These plats could also be produced using other coordinate geometry programs such as GEO or CGPLUS.)

b.) Data plots are compared to the original township plat. If meanders are involved they normally must match at the meander corners within two chains. If meanders don't match an Amended Plat is prepared.

c.) The Data General data plot (MDP.9) files are transferred into the 386 computer and read into an AutoCad drawing file.

d.) The sketched meanders from the original township plats are digitized on AutoCad.

e.) New areas are calculated using the AREACOMP program. These areas must be reconciled to conform to the record areas.

f.) AutoCad drawing is edited into final plat format and plotted.

C.) SUPPLEMENTAL PLATS OF PROTRACTED SUBDIVISION TOWNSHIPS WHICH HAVE PHOTOINTERPRETED MEANDERS THAT HAVE NOT BEEN DOCUMENTED IN FIELD NOTES

a.) Approved survey records are input into the Data General for the creation of field data plots. The data plots are transmitted to the mapping Section.

b.) The Mapping Section reviews the photointerpreted meanders. If meanders are involved they must match.

c.) The AutoCarto Unit processes the townships for calculation of new lot areas and the creation of Township (MDP.T) files.

d.) The Data General Township (MDP.T) files are transferred into the 386 computer and read into an AutoCad drawing file.

e.) The calculated areas are reconciled to conform to the record areas.

f.) The AutoCad drawing is edited into final plat format and plotted.

D.) SUPPLEMENTAL PLATS OF PROTRACTED SUBDIVISION TOWNSHIPS WHICH HAVE MEANDERS DOCUMENTED IN FIELD NOTES

a.) The survey records may be input into a digital file using a coordinate geometry program such as GEO, CGPLUS, or the Data General, if a digital record is not already available. If already available the file is updated as necessary. If the original meanders were photointerpreted

the Data General should be used to update the file and new data plots are produced.

b.) The file is checked mathematically to see if the records are compatible. If not a supplemental plat cannot be produced.

c.) If the original meanders were photointerpreted the Mapping Section reviews the plots with orthophotos, and AutoCarto processes the townships for new lotting and creation of Township (MDP.T) files. (If the original plat had field meanders skip the next step.)

d.) The Data General township (MDP.T) files are transferred into the 386 computer and read into an AutoCad drawing file.

e.) If the original plat had field meanders, the new areas are calculated using the AREACOMP program.

f.) In either case the calculated areas must be reconciled to conform to the record areas.

g.) The AutoCad drawing is edited into final plat format and plotted.

E.) SUPPLEMENTAL PLATS OF TRADITIONAL RECTANGULAR SURVEY TOWNSHIPS

a.) Approved Survey records may be input into a digital file using GEO, CGPLUS, or the Data General; or a single section may be input directly into AutoCad by the Cartography Section.

b.) If not already in AutoCad, the digital file is transferred into AutoCad.

c.) New areas are calculated using AREACOMP. These areas must be reconciled to conform to the record areas.

d.) The AutoCad drawing is edited into final plat format and plotted.

F.) AMENDED PLATS OF TRACT "A" TOWNSHIPS. (This type of plat does not have protracted section lines, and the meanders were sketched from quad maps.)

a.) Approved survey records are normally input into the Data General for the creation of field data plots. These plats could also be produced using the GEO or CGPLUS programs.

b.) Data plots are overlayed and compared to the original township plat. If the meander records do not match within 2 chains at the meander corners of U. S. Surveys then the data plots are transmitted to the Mapping Section for photointerpretation and follow the steps for AMENDED PLATS OF PROTRACTED SUBDIVISION TOWNSHIPS WITH PHOTOINTERPRETED MEANDERS. If meanders match within 2 chains proceed with the following steps.

c.) The Data General data plot (MDP.9) files are read into AutoCad.

d.) The meanders from the original township plat are digitized and revised as necessary to match the meanders of U.S. Surveys.

e.) New areas are calculated using AREACOMP. The calculated areas are used without adjustment.

f.) The AutoCad drawing is edited into final plat format and plotted.

G.) AMENDED PLATS OF PROTRACTED SUBDIVISION TOWNSHIPS WITH PHOTOINTERPRETED MEANDERS NOT DOCUMENTED IN FIELD NOTES

a.) Approved survey records are input into the Data General for the creation of revised field data plots and data plot (MDP.9) files.

b.) The Mapping Section adjusts the photointerpreted meanders to match the meanders of the U.S. Survey.

c.) The AutoCarto Unit processes the townships for calculation of new lot areas and the creation of Township (MDP.T) files.

d.) The Data General Township (MDP.T) file is transferred into the 386 computer and read into AutoCad.

e.) The calculated areas are used without adjustment.

f.) The AutoCad drawing is edited into final plat format and plotted.

DRAFTING GUIDELINES FOR

SUPPLEMENTAL PLATS

PART II - STANDARDS

1. PLAT MATERIAL

The working plat may be produced on either light weight paper or 4 mil mylar. Prior to approval the photo lab will reproduce the working plat onto archival quality mylar which becomes the official survey plat.

2. ORIENTATION AND LAYOUT

The sheet size for BLM survey plats is 19 x 24 inches. A border is drawn 1 1/2 inches from each edge of the sheet resulting in an enclosed rectangle of 16 x 21 inches. The sheet is oriented so that the long direction extends left and right.

The survey is centered on the working area of the plat, excluding the area reserved for the plat memorandum. See diagram labeled "Dimensions for Sheet Layout" in the appendix.

Leave five inches of space on the right-hand side of the sheet for the plat memorandum. This space is normally excluded from the working area of the plat; the township title is excluded from this general rule. On U.S. Survey plats this area is separated by a solid black line the same thickness as the border. See diagram labeled "Dimensions for Sheet Layout" in the appendix.

A single supplemental plat request may involve several sections of the same township. If the sections are contiguous and space is available the sections may be shown in their relative positions on one plat. If the sections are not contiguous they may be laid out separately in random positions with clear space between them (like enlarged diagrams) on a single plat, or they may be produced as separate supplemental plats. To conserve space in records filing it is recommended that the supplemental plats of several sections be combined into one plat when practical.

Creating separate plats for sections of the same township is not the same as creating second sheets. The supplemental plat of one section is independent of other sections therefore each supplemental plat stands alone. They are not labeled sheet 1 of 2 sheets and sheet 2 of 2 sheets.

3. GENERAL STANDARDS

The finished plat must have an aesthetic, pleasing appearance. A scale must be selected for the layout which will allow the survey information to be placed on the plat in a clear and uncongested manner. Sound judgment must be exercised in the placement of lettering and details so that a balanced appearance is maintained.

Plotted bearings must be in their proper relationship to the north arrow. Measured distances must be plotted in their proper relationship to the scale bar.

The final plat is to be drafted in black ink. Line work will be dense and sharp with smooth edges. Lines must meet flush at angle points without overlapping. Spaces within dashed lines must look even.

4. LETTERING STANDARDS

Lettering sizes given in these guidelines refer to K & E Leroy lettering sizes. These figures are given in thousandths of an inch. If another system is used the line weights and lettering sizes should match these sizes as nearly as possible. See "LINE WEIGHTS" in the appendix.

Slanted lettering referred to in this handbook has letters slanted 22 degrees to the right of vertical.

Lettering will be oriented to read from the bottom and the right-hand side of the sheet. Along lines with bearings of North to N. 5 W., and South to S. 5 E., the lettering is oriented to read from the right-hand side even though this is slightly upside down when viewed from the bottom. Letters will not touch lines or other letters or come so close together that they cause problems making legible photo

copies; there must be clear space between them. Lettering must be uniform in density. Distorted or faint letters are not acceptable. Words and letters must be equitably spaced.

5. TITLE/SUBTITLE

On township plats the title is centered on the entire paper approximately 1/2 inch down from the top border. This is done with vertical, all capital letters, at the 240 lettering size with a 3 pen. No abbreviations are allowed. Commas are placed after NORTH, EAST and MERIDIAN. No period is used, e.g., TOWNSHIP 2 NORTH, RANGE 5 WEST, OF THE COPPER RIVER MERIDIAN, ALASKA . See "DIMENSIONS FOR SHEET LAYOUT" in the appendix.

On U. S. Survey and Mineral Survey plats the title is centered in the margin area about 0.7 inch below the top border. The title is placed on two lines. The first line reads U. S. SURVEY (or MINERAL SURVEY); the second line reads No. 0000, ALASKA. This is done in vertical lettering, using the 175 lettering size with a 2 pen. The lines must be separated with a space about equal to the heigth of the letters. This title is oriented to read from the bottom of the sheet. It is placed in this position regardless of which way north is designated on the plat.

For U. S. Surveys the title is also labled inside the actual drawing of the survey. When labling inside the survey, the word "Alaska" is omitted. The remaining portion of the title is repeated and is spelled out in the same manner as the title in the margin; however, the size and alignment may vary depending upon individual circumstances. This lettering must not be larger than 175 or smaller than 100 in size. The use of one or two lines is optional. The title must be placed so that it appears balanced and centered within the survey.

On supplemental plats of a township, inholdings are identified by the appropriate title placed inside the boundaries of the survey whenever possible. If space is available the name is spelled out, i.e. U.S. Survey No. 2583, Mineral Survey No. 2018, etc. If the space is restricted the names can be abbreviated U.S.S. 2583 or M.S. 2018 respectively. For very small surveys the names can be placed outside the parcel and arrowed to the appropriate parcel with a solid leader line. It is not necessary to show the lotting within a U.S.

Survey or the claim names of a mineral survey on a supplemental plat of a township if the lots are contiguous and the lot numbers are not needed for identification of corners.

The subtitle SUPPLEMENTAL PLAT or AMENDED PLAT is centered below the main title leaving approximately one-half inch of space between the title and the subtitle. On townships this is done in vertical 175 lettering with a 2 pen. On U. S. Survey and Mineral Survey plats this is done in vertical 120 lettering with a 0 pen.

6. SECTION LABELS

On supplemental plats of townships the section number of pertinent sections are labeled. Do not label adjacent sections. The section number must match the record exactly even if the original plat was incorrectly labeled.

Section labels are done in vertical lettering using capital and lower case letters. The word section is abbreviated (Sec.) and must have a period. Section labeling is done at the 120 lettering size with a 0 pen on a 40 chain per inch drawing. The lettering size is larger on larger scale drawings with sizes up to 200 lettering with a 2 pen. Section numbers are placed slightly above the center of the section, however they may be offset from this position to avoid crowded areas. Section numbers may be placed inside large U.S. Surveys.

7. OFFICIALLY FILED STATEMENT

The officially filed statement is placed in the top margin of the plat, just outside the border. This statement starts five inches to the left of the right-hand border. The words "Officially Filed" and "ORIGINAL" (without quotation marks) are on the first line. These are done with a 1 pen using vertical 175 lettering. Upper and lower case letters are used for "Officially Filed", while the word "ORIGINAL" is in all capital letters and is placed so that the end of the word is even with the right-hand border of the plat. On the next line the word "DATE" is aligned with the left end of the first line using vertical, all capital, 120 size letters with a 0 pen. A dashed underline extends from the end of the word "DATE", out to a point even with the word "Filed". Refer to samples in the appendix.

8. SCALE

All townships and U. S. Surveys (except townsites) are measured in chains. One chain equals 66 feet and each chain is subdivided into 100 links.

The scale selected to lay out the plat must be one of the common scales of 10, 20, 30, 40, 50, 60, or 80 chains per inch, or an even multiple of 10 (or division by 10) of any one of these. Contrived scales other than the 15 scale will not be used. A 15 scale may be used if it is the only reasonable alternative to creating additional sheets.

9. SCALE BAR

The scale bar matching the scale of the drawing is centered underneath the drawing. It is placed about half way between the bottom edge of the drawing and the border. It is drawn parallel to the bottom border.

The scale bar consists of two parallel lines drawn horizontally about seven or eight hundreths of an inch apart. Perpendicular to these lines increments are measured from left to right. All of these lines stop flush with the bottom line of the scale bar, however those lines which are to be numbered extend a little beyond the top line of the bar scale.

From the zero mark one basic unit of either one chain or ten chains (depending on the scale) is shown to the left. This unit is subdivided into smaller increments for finer measurement. To the right of the zero mark each basic unit is shown for about half the length of the scale bar until reaching an even multiple of five or ten chains. The remaining portion of the scale bar shows only every fifth or tenth increment. The total length of the bar must be somewhere between two and five inches.

A multiple of five or ten chain units must be selected which will keep the length of the bar within this range. Common lengths are 1, 5, 10, 20, 40, 80, or 100 chains depending upon the scale. The length of the scale bar should be in balance with the body of the plat.

The increments are numbered above the scale bar in vertical lettering at either the 60 or 80 lettering size. Centered underneath the bar the word "Chains" is shown in vertical lettering, using capital and lower case letters. This is done at the 80 lettering size with a 000 pen. The scale bar itself is drawn with either a 000 or 0000 pen. See 'TYPICAL BAR SCALES" in the appendix.

On Townsite plats, a similar scale bar is used, but the increments are in hundreds of feet, and the word "Feet" (without quotation marks) is placed under the scale.

10. NORTH ARROW

The north arrow is placed on the left-hand side of the plat paper about an inch inside the border and is centered latitudinally on the paper. The north arrow is oriented true north and is drawn with a 000 or 0000 pen. See 'NORTH ARROW' in the appendix.

11. MAGNETIC DECLINATION

The magnetic declination is not shown on supplemental plats or this type of amended plats.

12. SOLID LINES

The following lines are shown solid:

- The plat border and the border segregating the marginal area on U. S. Survey plats.
- Surveyed lines.
- Meander lines.
- Direction of flow arrows.
- The north arrow.

13. DASHED LINES

The following lines will be shown dashed and may be broken for lettering or any other detail when necessary:

- Tie lines.
- Bracket or leader lines.
- Protracted section lines.
- Protracted lot lines.

14. LINE WEIGHTS

Line weights vary somewhat to allow for scale differences and individual preference within the following guidelines:

a.) The plat border should be either a 0, or 1 line.

b.) Township boundaries should be either a 0, 1, or 2 line.

c.) Protracted or surveyed section lines should be one line weight thinner than the township boundary.

d.) Protracted or surveyed lot lines within a section should be one line weight thinner than the section lines.

e.) U.S. Surveys or Mineral Surveys plotted on a township plat should be drawn one line weight thinner than the section lines.

f.) On a U.S. Survey plat or a township plat the meanders of a U.S. Survey should be one line weight thinner than the boundaries of the U.S. Survey. Meanders of a township should be one line weight thinner than the section lines.

g.) On U.S. Survey plats the surveyed lines should be either a 1 or 2 line weight, and protracted lotting within the U.S. Survey should be two line weights thinner.

h.) Tie lines should be a 000 line.

i.) Bracket lines and leader lines should be a 000 line weight.

15. GEOGRAPHIC POSITION

The geographic position is not shown on supplemental plats or this type of amended plats.

16. MONUMENTATION

Monument symbols are not shown on supplemental plats or this type of amended plats.

17. LEGEND

Supplemental Plats do NOT have a legend since monument symbols are not shown.

18. BEARINGS AND DISTANCES

The distances shown on a supplemental plat are in the same units of measurement as the original record. On all township plats and U.S. Survey plats, except Townsites, the distances are given in chains. On these plats the distances are presumed to be in chains unless otherwise indicated; therefore, the word "Chains" is omitted from the plat. Distances shown on the plat must match the record. Distances less than one chain must have a zero to the left of the decimal point.

All of the distances on a Townsite survey are measured in feet, while the distances around the exterior boundaries are also given in chains. On a supplemental plat of a townsite the measurement in chains is in parentheses, is carried to four decimal places, and has the word "chains" following the distance. The distances in feet are presumed; therefore the word "feet" is omitted. Example: 478.33 (7.2474 chains).

Cardinal bearings, NORTH, SOUTH, EAST, and WEST, are spelled out and shown in all capital letters. When north, south, east, or west

appear in other bearings they are abbreviated and must have a period after each letter. Bearings are usually given to the nearest minute. Bearings from zero to nine degrees have the initial zero omitted in front of the degrees, however the initial zero is never omitted from the minutes or seconds. Bearings and distances are in slanted lettering.

On supplemental plats the OVERALL BEARINGS AND DISTANCES are shown around the perimeter of the surveyed parcels as shown on the illustrations in the appendix. These bearings and distances must match the record plat(s). The lettering size of overall bearings and distances can vary from 80 to 120 depending upon the scale selected for the survey and the space available for lettering. Bearings and distances may be leader lined to the appropriate line segment along very short portions of line.

If a bearing and distance is shown along a surveyed line it must be centered approximately between the endpoints of the line. It is preferred that the bearing and distance be spaced so that the bearing is placed approximately one-third of the length and the distance is placed approximately two-thirds of the length. The lettering is placed so that a space of about one-half of the letter height is left between the line and lettering. The placement of lettering may be offset somewhat from its proper position to avoid congested areas.

BREAKDOWN DISTANCES are shown to give the distances along surveyed lines to intermediate points on the line. These are shown only along lines with breakdown distances that were not depicted on the original plat. Breakdown distances should be one size smaller than the size used for the overall length of the line. They are normally placed on the opposite side of the line or placed closer to the line than the overall bearings and distances. A distance must be shown for each segment of the line so that the total of all of the breakdown distances will equal the overall distance.

19. TIE INFORMATION

The record tie(s) used to position an inholding U.S. Survey or Mineral Survey is depicted on a supplemental plat of a "Traditional Rectangular Survey" township. On all other supplemental plats record ties are NOT depicted unless specifically requested.

The bearing and distance along the tie line must match the record exactly. Tie bearings and distances will be depicted using slanted lettering and are done with 60 or 80 lettering using a 0000 or 000 pen depending on the scale of the drawing.

Ties from a witness corner or a witness corner to a meander corner should state "From W.C." or "From W.C.M.C." respectively to identify the origin of the tie. Unless otherwise stated ties are presumed to originate at the true point. The identity of the destination of the tie is also shown on the plat. This information may be shown along the tie line with the other data or it may be labeled at the termination point. If information about the tie is included along the tie line it will be done in the same lettering size and style as the bearing and distances.

20. LOT NUMBERS AND AREA

Each lot within a section, tract or U.S. Survey that is depicted on the supplemental plat is identified. Original lots that are unaffected by the supplemental plat retain their original lot designations. Lots affected by the supplemental plat are assigned new lot numbers. The new lot numbers must begin with the next higher number used for lot designations within that section, tract or U.S. Survey on all accepted plats affected by the supplemental plat.. It is important to research the records carefully since a parcel may have several surveys approved on various dates. The original lot numbers are NOT shown for those lots that have new numbers assigned.

For township sections new lot numbers are assigned in the same pattern as is used to assign lot numbers on original work; that is in a back and forth pattern starting at the NE corner of the section. (See the Guidelines for Rectangular Survey for a more extensive explanation.)

Only the number of each lot is depicted on the supplemental plat; the word "Lot" is not shown. The size can vary from 60 lettering with a 0000 pen to 100 lettering with a 00 pen depending on the scale of the supplemental plat. Lot numbers are done in vertical lettering.

New aliquot parts created on township plats are designated by the assigned area being placed in the center of the parcel. Typical aliquot parts are 160, 80, 40, 20, 10 or 5 acres in size. Unless specifically requested aliquot parts are not designated smaller than 40 acres. The shape of aliquot parts must be rectangular; "L" shaped aliquot parts are not allowed. The acreage of aliquot parts are not calculated; they are assigned, therefore the acreage is shown to whole acres. Do not repeat the original aliquot part designations on the supplemental plat; leave the unaffected aliquot parts undesignated.

The acreage is shown only for the revised lotting. Do not repeat the original acreage for lots that are unrevised and do NOT show any total acreage for the section, tract or U.S. Survey. The proper procedure to follow in calculating new lot areas depends on the type of supplemental or amended plat being produced. See Part I, Section 4 for further explanation.

The area of new lots is centered underneath the lot number. On all surveys except townsites the area is in acres. These acreages are depicted to the same accuracy as was used on the original plats; normally to two decimal places. The lettering size for the acreage may be the same or one size smaller than the size used for the lot numbers, however do not use smaller than 60 lettering size. The area is shown in vertical lettering. Only the figures are shown on the plat and the word "Acres" is not shown.

Townsite plats have block numbers and lot numbers assigned. The block numbers are placed as near the center of the block as practical. These are done in vertical 120 lettering size using a 0 pen. Each block number is circled (just like the monument description letters on plat only surveys) using a 0 pen. The circle is made just large enough to avoid touching the numbers and all the circles around the block numbers must be the same size. Lot numbers are lettered in the same style as on other U.S. Survey plats except that 60 lettering with a 0000 pen is normally used. The areas of each lot are given in square feet. This is done in 60 lettering using a 0000 pen. A comma is used to separate the hundreds from the thousands in numbers 10,000 and over. Areas in square feet are indicated by showing the abbreviation "sq. ft." (without quotation marks) after each area. Examples: 57,430 sq. ft.; 7430 sq. ft.

21. AREA RECONCILATION

On supplemental plats the calculated acreage of new lotting must be proportionally adjusted to equal the record acreage. On plats produced to exclude inholding surveys the new lots must be proportionally adjusted to equal the area that remains when the record area of the U. S. Survey(s) and Mineral Survey(s) are deducted from the record areas of the affected lots, sections or tracts of the township. This process is called area reconcilation.

Area reconcilation is not normally required for amended plats, however it is often necessary to attempt the process in order to decide if a supplemental plat can be made. See Part I, Section 2, and the Introductory Statement for a further explaination of when a supplemental plat is required and when an amended plat is required.

The calculated areas of the new lots, sections and tracts of the township are determined by the appropriate method depending on the type of supplemental plat being produced. See Part I, Section 4 for the proper method of calculating areas for each type of plat. It is advisable to check these areas for accuracy before reconcilation is applied.

The area reconcilation process for supplemental plats of townships that are produced to exclude inholding surveys is as follows:

1.) Determine the record area of each inholding survey, and the record area of each affected lot, section or tract of the township.

2.) If an inholding survey straddles a section line calculate the portion that lies within each section or tract.

3.) Proportionally adjust the calculated portions of each inholding survey to equal the record area of that survey. The sum of the calculated portions must come close to the record area; A variation of more than a few hundreths of an acre indicates an error in the calculations.

4.) Subtract the adjusted area(s) of the appropriate portions of each inholding survey from the sum of the record areas of the

affected lots of each section of the township. (Subtract from the total record section area if the original section was not lotted.)

5.) Total the calculated areas of the new lots of each section that are affected by the inholding survey(s).

6.) Proportionally adjust each calculated lot of the township according to the ratio of the sum of the calculated areas (from step 5) to the remainder of the record areas (from step 4). If done properly the sum of the adjusted calculated lot areas will equal the remainder of the record areas within one-hundreth of an acre. The final one-hundreth acre can be added to or subtracted from the largest lot to make the total equal.

7.) Determine if the percentage of adjustment that was applied to the calculated areas is within reason. Since many situations are unique no documented limit has been established. Normally adjustments greater than five percent (5%) are not acceptable, however when small acreages are involved this may be exceeded. Reconcilations that cause excessive distortion to the calculated areas are not applied; the calculated areas are used for those sections involved and they are produced as an amended plat.

22. CORNER IDENTIFICATION

The record corner numbers are depicted on a supplemental plat of a U.S. Survey. These are placed near the true corner, on the inside of the appropriate survey. Only the number is shown on the plat; the abbreviation "Cor." is not shown. Corner numbers are done in vertical lettering at either the 80 or the 100 lettering size depending on the scale of the drawing.

If the lot corners of a U.S. Survey are numbered in addition to the exterior boundary corners of the survey, the lot numbers will be lettered one size smaller than the overall corner numbers. When a lot number and an overall corner number are to be used for the same corner, the smaller lot number is placed closer to the corner point. Corner numbers of adjacent surveys are not shown on supplemental plats.

A supplemental plat of a township which contains a U.S. Survey does not show the corner numbers of the U.S. Survey, except on "Traditional Rectangular Surveys".

Record meander corners and closing corners are labeled on supplemental plats. Witness points are depicted only if a record distance which must be shown terminates at the witness point. Neither the witness corners nor the data which describes the position of the witness corner is shown. Reference monuments, control stations and U.S. Location Monuments are not shown.

23. MEANDERS

Record meanders are plotted on a supplemental plat, however the tabulations of the bearings and distances are not shown. The meander line is normally depicted one line weight thinner than other surveyed lines.

Normally the record of the meanders are tabulated in the field notes or on the face of the plat. Many township surveys have only graphically depicted meanders and no official record of the bearings and distances. These situations fall into two categories as follows:

a.) An approved township has meanders graphically depicted from quad maps. In this case there is no other record of the meanders. The depiction of meanders on the supplemental plat must be traced or digitized from the original plat.

b.) An approved township has graphically depicted photointerpreted meanders. In this case there will probably be a digital record of the meanders on file in the Branch of Mapping Sciences. The original plat memorandum will state whether these are available.

24. MATCHING MEANDER RECORDS

There are several reasons why the record meanders of one survey may not match the record meanders of another survey:

- Different meander source.
- Different criteria or policy.
- Changes in the shoreline between surveys of different dates.
- Errors in the record.

In order to create a supplemental plat involving two or more surveys, the records must be compatible. Normally, no adjustment can be made to approved survey records on a supplemental plat. Refer to Part I, Section 2 for limitations of each type of plat.

Technically a resurvey of the meanders is required any time approved survey records are in conflict. For practical purposes, however small discrepancies between record meanders can often be adjusted without additional field work by creating a supplemental plat or an amended plat. Townships with record meanders graphically depicted but not documented in field notes may be adjusted slightly on a supplemental or amended plat. These plats cannot be used to adjust record meanders that are documented in field notes.

25. LABELING MEANDERABLE WATER BODIES

Named meanderable water bodies are labeled in all slanted capital lettering. Flowing water is normally labeled along (generally parallel to) the meander courses, while still water is normally labeled to read from the bottom of the sheet. Lettering size depends on the space available and can vary from a 100 to a 175. Names which are not found on U.S.G.S. quadrangle maps or in the Dictionary of Alaska Place Names, must have the subtitle "(Local Name)" placed after the name. The subtitle should be in capital and lower case letters and is in parentheses. This is normally centered beneath the proper name and is labeled one size smaller.

Flow arrows must be used to indicate the direction of flow on hydrographic features with moving water. These should be placed before or after the name of the water body along the general course of the river. It is common practice to show the flow arrows with a curved line that conforms roughly with the configuration of the meander courses of a portion of the river. Flow arrows should be drawn about 1 to 1 1/2 inches long with a 0 or 00 pen. A solid

narrow arrowhead is placed on the appropriate end. No tail emblem is used.

River names and flow arrows should not hug the meanders too closely. Depending on the scale of the drawing, they would normally be placed between 1/2 to 1 inch from the meandered shoreline.

26. LINE CALLS/TOPOGRAPHIC FEATURES

Line calls are not shown on supplemental plats. Do not repeat record line calls or sketched topographic features unless the feature forms a boundary of a parcel of land. Typically, Tract "A" type townships were drafted showing single line streams and small lakes. If a supplemental plat is being made of these townships do not depict the single line streams or lakes smaller than fifty (50) acres. In determining if a lake is larger than 50 acres the entire lake is considered, even if a portion of it falls outside the township.

27. CENTERLINE TRAVERSE

A record informative centerline traverse is not shown on a supplemental plat unless the traverse forms a boundary of a parcel of land.

28. IMPROVEMENTS

Do not depict record improvements (e.g., buildings) on a supplemental plat.

29. CURVE DATA

Occasionally a curved line forms a portion of the boundary of a parcel that is being depicted on a supplemental plat. In certain circumstances it is necessary to repeat the record information for these curves.

The data describing the curve may be placed somewhere near the curve or it may be tabulated in any convenient space within the

working area of the plat. The information must include the record curve data. The unit of measurement must be stated after each distance and should be abbreviated. The radius and length of curve are normally in chains. The delta angle should be in degrees and minutes. The long chord is a bearing and distance. If there are several curves on the survey, each curve must be clearly identified. This information is normally shown in the 80 lettering size with a 000 pen using all capital letters.

30. ABBREVIATIONS

The following abbreviations may be used on this type of survey plat:

Am.---------- amended

A.M.C. ---------- auxiliary meander corner

B.L.M./BLM ---------- Bureau of Land Management

CC ---------- closing corner

E. ---------- East

ft. ---------- foot, feet

Lat. ---------- latitude

Long. ---------- longitude

M.C. ---------- meander corner

Mi. ---------- mile

M.S.---------- mineral survey

N.---------- North

N.G.S. ---------- National Geodetic Survey

No.---------- number

R., Rs. ---------- range, ranges

S. ---------- South

Sec. ---------- section

S.M.C. ---------- special meander corner

T., Tps. ---------- township, townships

U.S.C. & G.S. ---------- United States Coast and Geodetic Survey

U.S.G.S. ---------- United States Geological Survey

U.S.L.M. ---------- United States Location Monument

U.S.M.M. ---------- United States Mineral Monument

U.S.S. ---------- United States Survey (U.S. Survey)

W. ---------- West

W.C. ---------- witness corner

W.C.M.C.---------- witness corner to a meander corner

W.P. ---------- witness point

A few words which are commonly abbreviated in other places but are not abbreviated on this type of survey plat are: Acres, Standard Parallel, Guide Meridian, Mountain, Creek, River, Island, Highway, Road, Strait, Inlet, etc.

31. SYMBOLS

The degrees (°), minutes ('), and seconds (") symbols are accepted and must be used. The common punctuations for the period, comma, quotation marks, and parenthesis are also used. Monument symbols are not shown.

The "and" symbol is not used except in the abbreviation of U.S.C&G.S. The symbols for feet and inches are not acceptable on survey plats.

32. ENLARGED DIAGRAMS/DETAILS

Enlarged diagrams are seldom needed on supplemental plats since the scale of the main drawing can normally be made large enough to accommodate all of the information. In a few cases a "balloon" or "bubble" detail may be needed. See the handbook for U.S. Surveys for samples of these details.

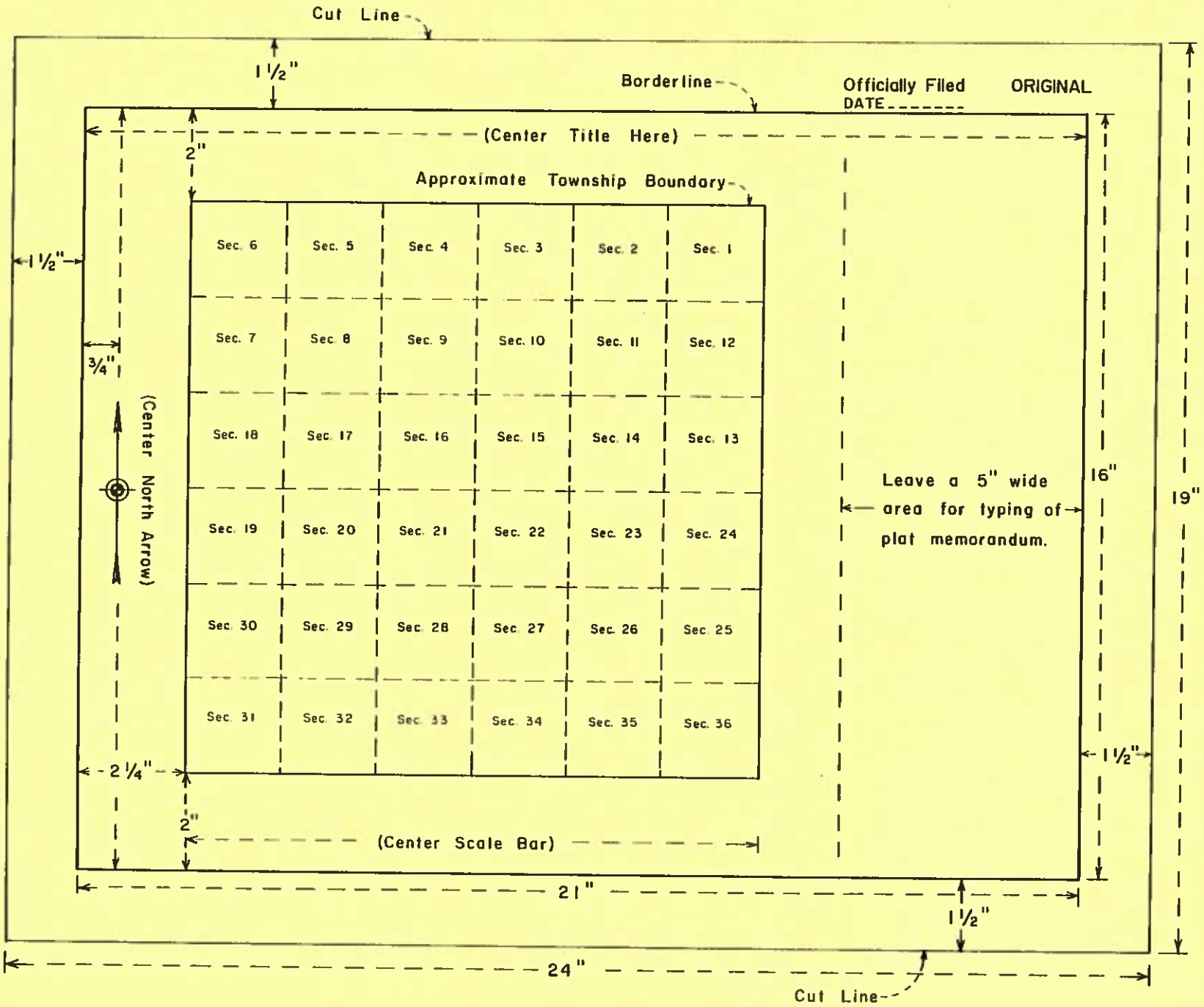
33. SECOND SHEETS

Second sheets are rarely used for supplemental plats. Township plats that involve several sections may require several supplemental plats. This is not the same as second sheets since the supplemental plat of each section is an independent record.

34. DRAFTER'S INITIALS

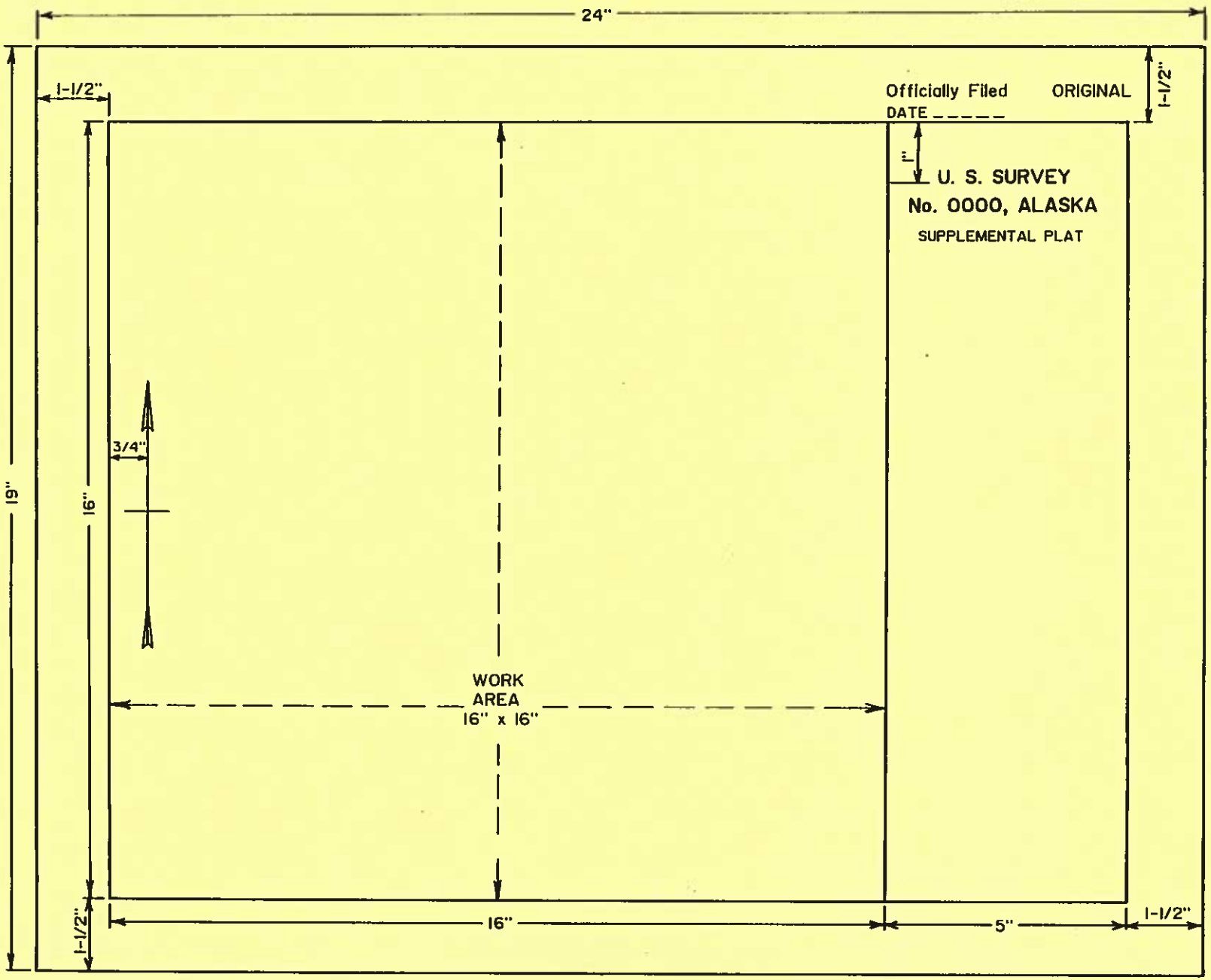
The initials of the draftsperson must be placed in the lower left-hand corner of each sheet, just inside the plat borders. These must be mechanically lettered so they will read from the bottom of the sheet at an 80 or a 60 lettering size. They may be vertical or slant, and are normally done in all capital letters.

APPENDIX

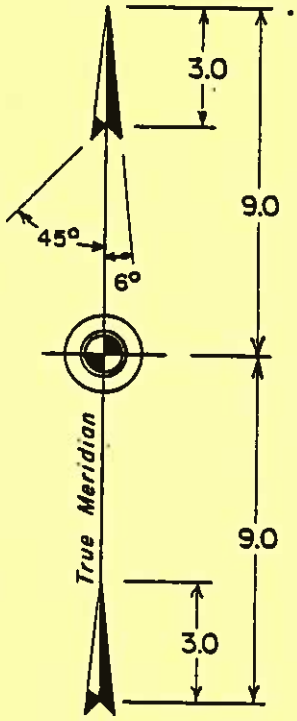


DIMENSIONS FOR SHEET LAYOUT
(TOWNSHIPS)

DIMENSIONS FOR LAYOUT OF U. S. SURVEY PLATS



NORTH ARROW



Length of Shaft - 18.0

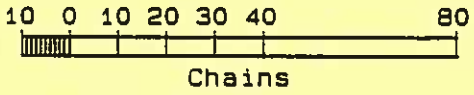
Length of Crossbar - 3.0 ±

Radius of Concentric Circles
0.5, 0.6, and 1.0

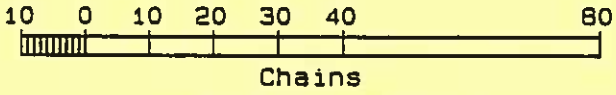
LINE WEIGHTS

LINE WEIGHT	PEN	APPROXIMATE WIDTH
	0000	0.007"
	000	0.011"
	00	0.015"
	0	0.017"
	1	0.020"
	2	0.025"
	3	0.035"

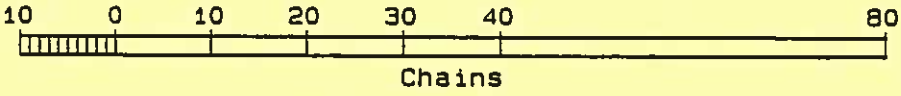
TYPICAL SCALE BARS



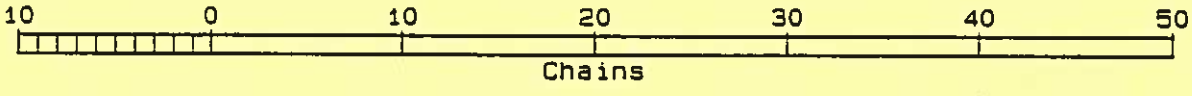
(40 chains per inch)



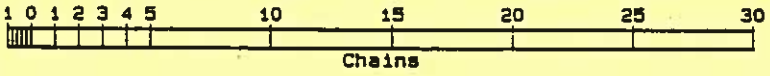
(30 chains per inch)



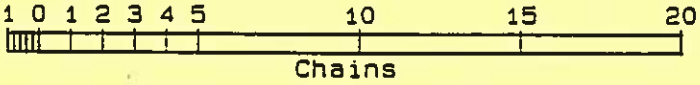
(20 chains per inch)



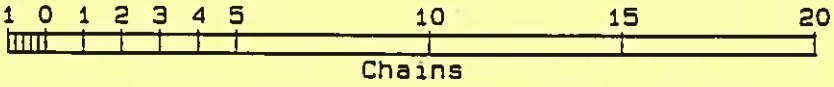
(10 chains per inch)



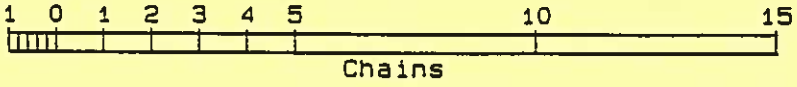
(8 chains per inch)



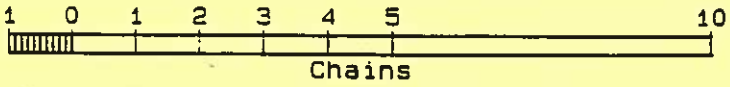
(6 chains per inch)



(5 chains per inch)

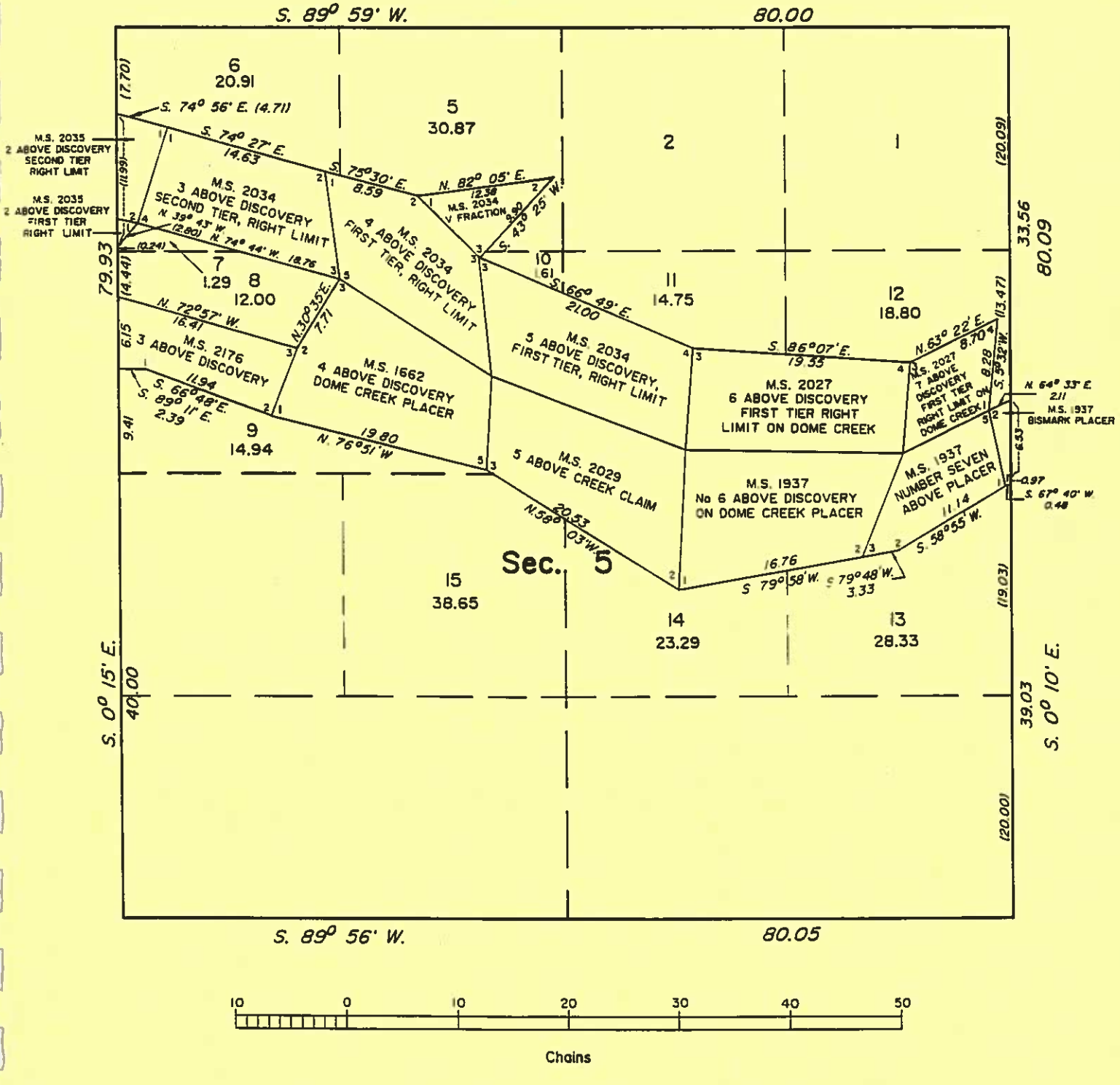


(4 chains per inch)



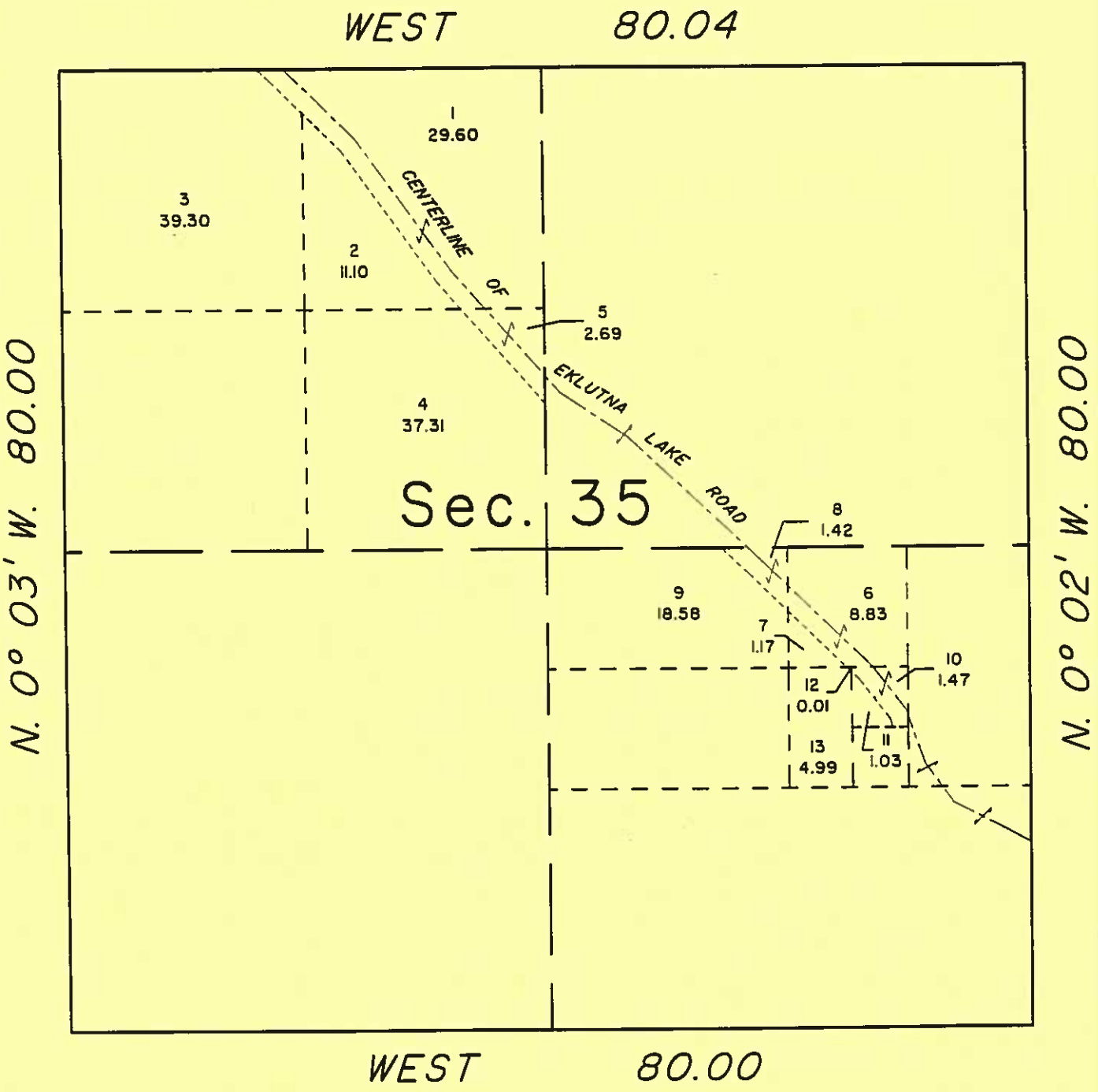
(3 chains per inch)

SUPPLEMENTAL PLAT OF A "TRADITIONAL RECTANGULAR SURVEY"

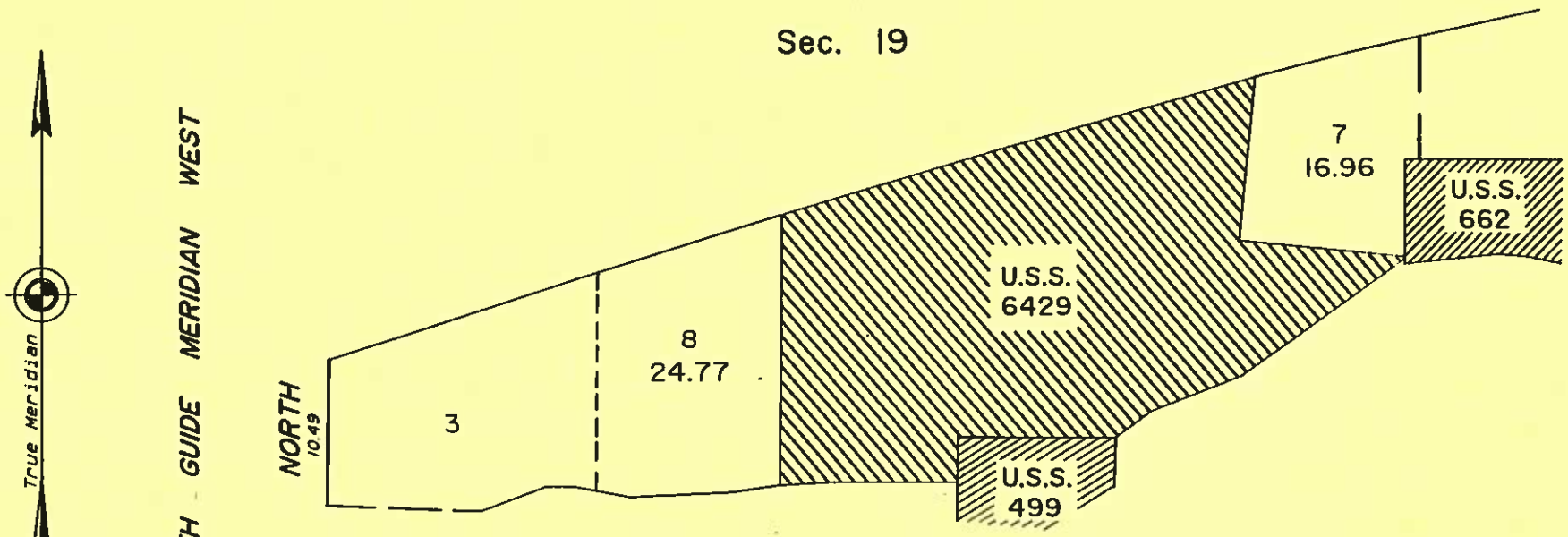


NSHIP 16 NORTH, RANGE 1 EAST, OF THE

SUPPLEMENTAL PLAT



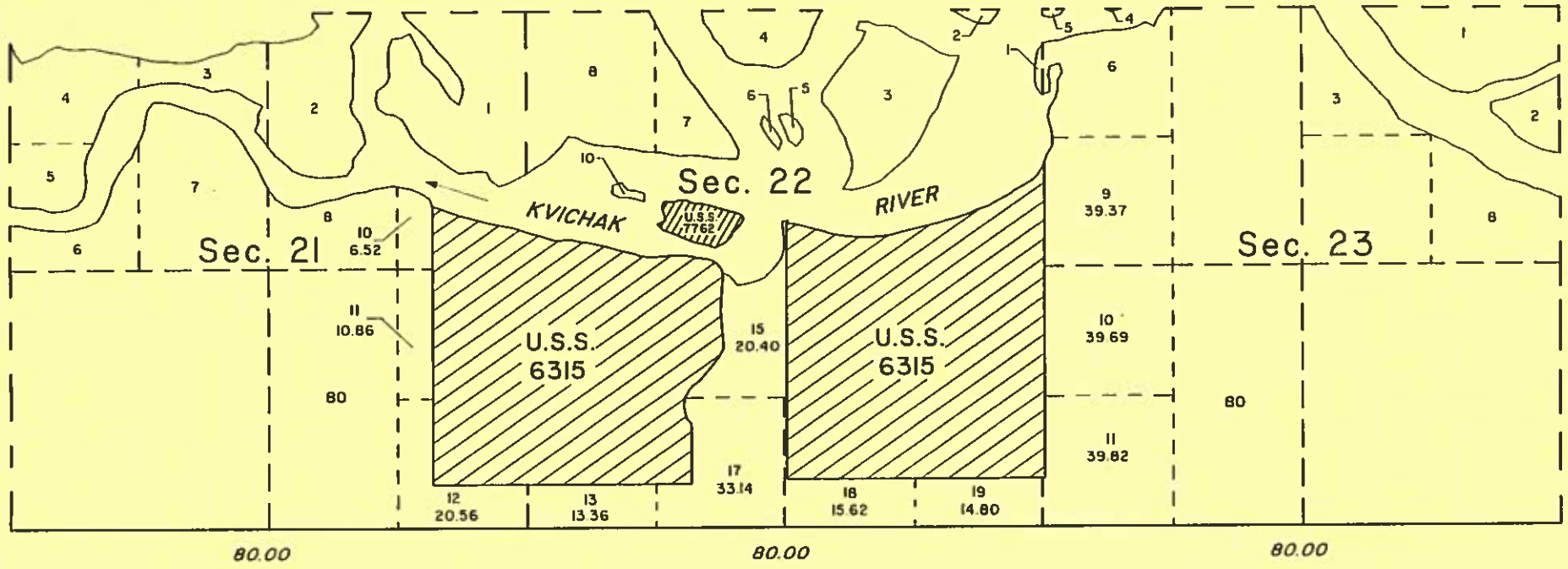
BERING SEA



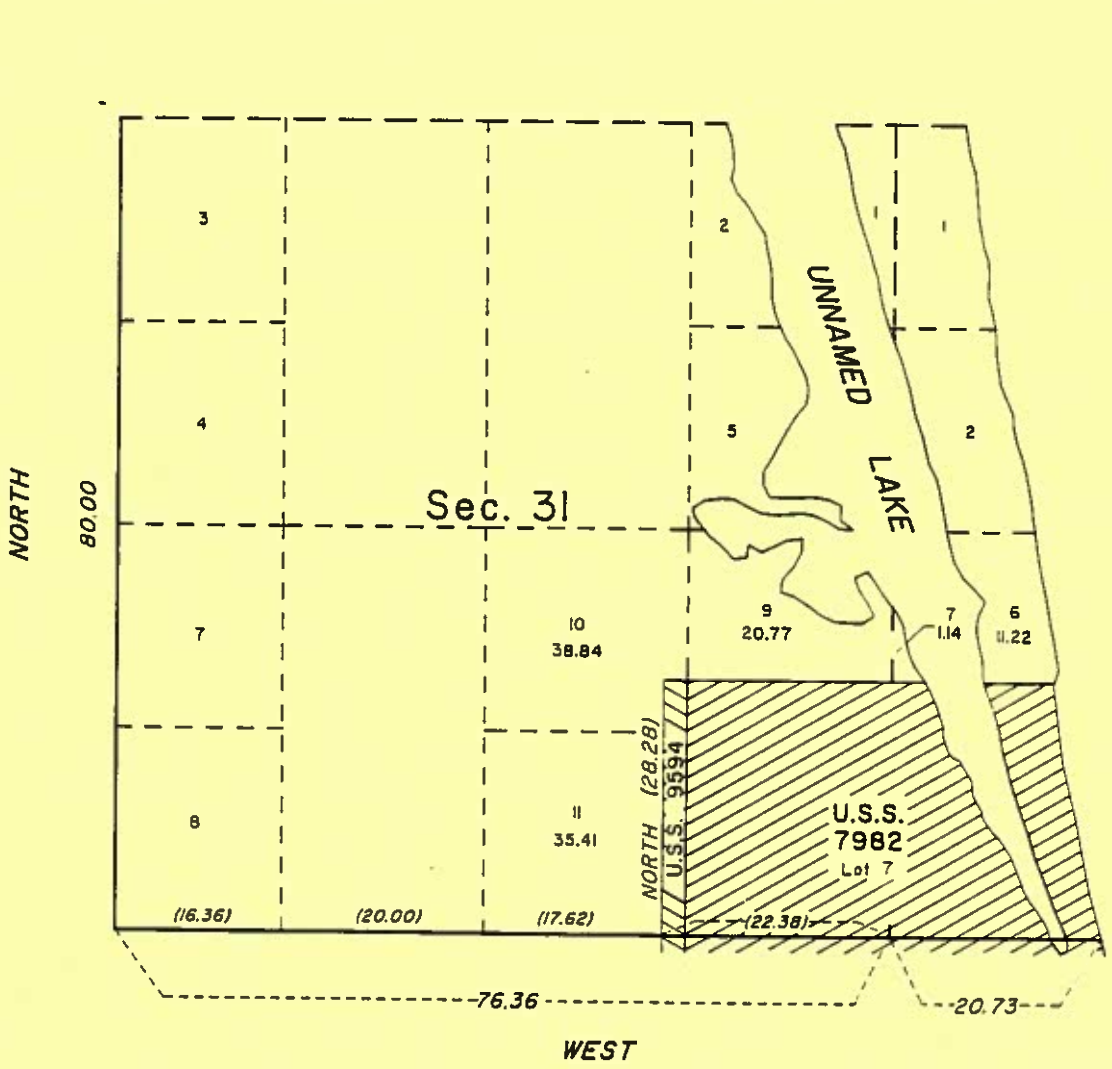
NELSON LAGOON

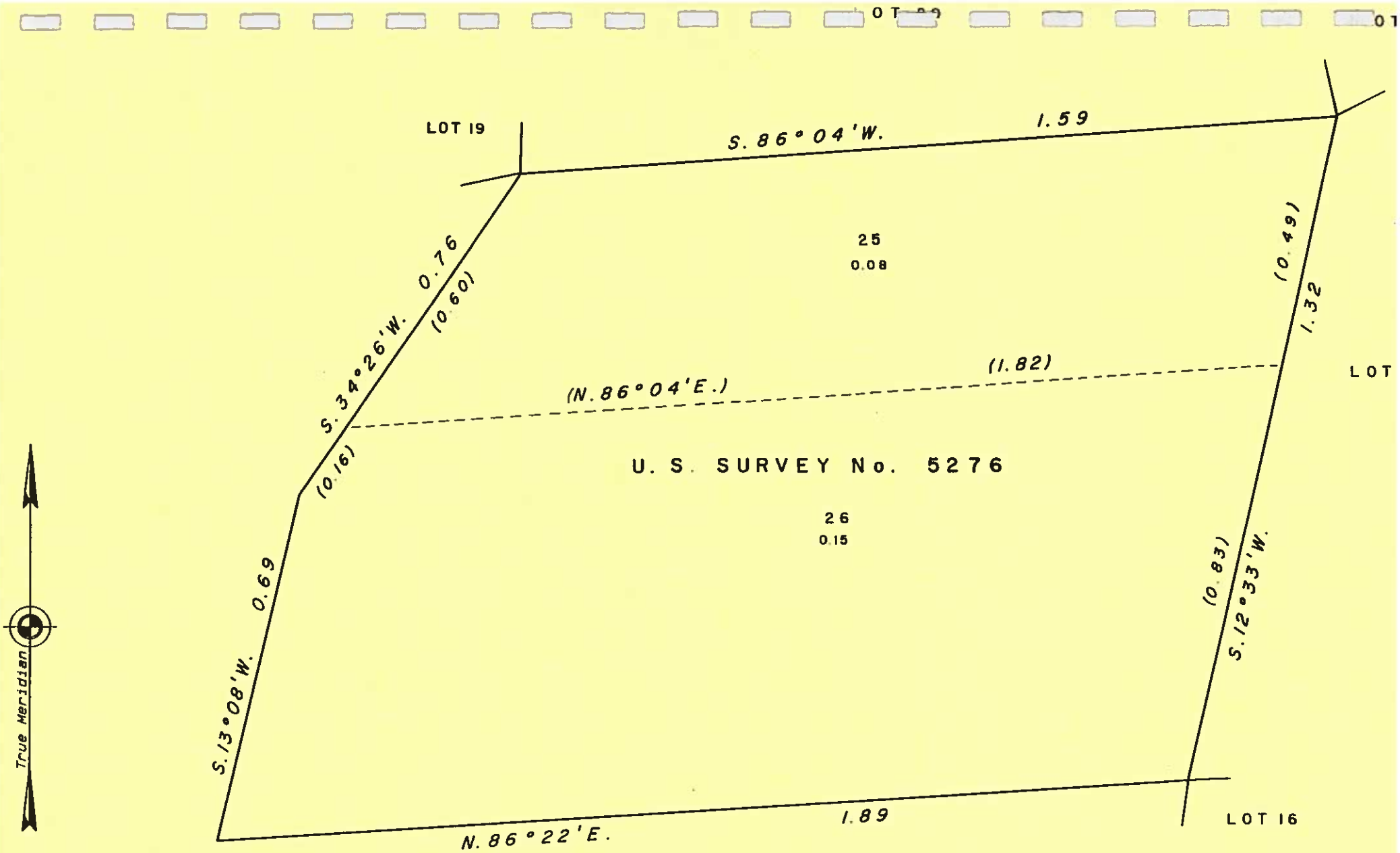
SUPPLEMENTAL PLAT OF A "PROTRACTED SUBDIVISION TOWNSHIP" (With Field Note Meanders)

AMENDED PLAT OF A
"PROTRACTED SUBDIVISION TOWNSHIP"
(With Photointerpreted Meanders)



AMENDED PLAT OF A
"PROTRACTED SUBDIVISION TOWNSHIP"
(With Photointerpreted Meanders)





SUPPLEMENTAL PLAT OF A U. S. SURVEY

SUPPLEMENTAL PLAT OF A U. S. SURVEY