Many surveyors assume that center corners of regular sections were always required to be set at the intersection of the lines between opposite quarter corners. That assumption is not correct. When eastern Kansas was being settled the law for establishing a center corner was dramatically different. So if you find a center corner not near the intersection of opposite quarter corners, there may be a good reason for it.

In 1862, state law had three methods of subdividing a section depending on the location of the section in the township. To follow the statutory history we have to group sections as follows:
1. Sections on the north and west tier of a township not including those that close on a standard parallel.
2. Sections in a township except those on the north and west tier of a township.
3. Sections closing on a standard parallel.

Not included in the above groups are two types of sections that state law does not seem to apply:
1. Sections fractional by shape
2. Special situations that make the state law ridiculous to apply

Sections fractional by shape are those sections where not all section corners or quarter corners were marked by the GLO. These fractional sections may close on a water body, the Missouri, Oklahoma, or Colorado state lines, and perhaps an Indian reserve line. Special situations might include Indian lands surveyed by GLO or Bureau of Indian Affairs surveyors that set 1/16 corners within the section in a non-standard manner. Another special situation may be the long sections along the west side of Range 8 East. There is no specific state law that applies to these sections, so the surveyor has to consider other sources for guidance. Probably the best source for subdividing fractional sections is the *Manual of Surveying Instruction* (herein referred to as the Manual). The Manual has extensive treatment of fractional sections and special situations. The method of subdividing these types of sections is very fact specific and will not be discussed in this article. Remember, nothing in the Manual supersedes state law in lands that have passed into private ownership; see 3-76 of the 1973 Manual and 3-135 of the 2009 Manual.

For normal sections state law does apply, and the following table shows the statutory history for the three groups of sections listed above.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>Year of legislative action, effective date was normally July 1.</th>
<th>Group 1. Sections on the north and west side of a township, but not closing on a parallel.</th>
<th>Group 2. Sections not on the north and west side of a township.</th>
<th>Group 3. Sections closing on a standard parallel or the base line.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1855</td>
<td>No territorial laws prior to 1860 relating to subdivision of sections. GLO guidance was at the intersection of opposite quarter corners.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1860</td>
<td>Ch. 85 Sec. 1 - Intersection of two straight lines between opposite quarter section corners.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1862</td>
<td>Ch. 196 Sec. 10 - Intersection of two right lines joining their opposite quarter section’s corners respectively.</td>
<td>Ch. 196 Sec. 9 - Basically double proportionate measurement from quarter corners.</td>
<td>Ch. 196 Sec. 11 - Run north south line parallel to the east line of the section and set center corner 40 chains north of south quarter corner.</td>
<td></td>
</tr>
<tr>
<td>1868</td>
<td>Ch. 25 Sec. 162 - basically no change from 1862.</td>
<td>Ch. 25 Sec. 161 - Intersection of two straight lines joining their opposite quarter section’s corners</td>
<td>Ch. 25 Sec. 163 - No change in wording.</td>
<td></td>
</tr>
<tr>
<td>1923</td>
<td>KSA 19-1409 just annotated no change in wording.</td>
<td>KSA 19-1410 just annotated, no change in wording.</td>
<td>KSA 19-1411 just annotated, no change in wording.</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>19-1410 repealed (was redundant to 19-1409)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td>KSA 19-1411 revised from county surveyor to land surveyor.</td>
<td></td>
</tr>
</tbody>
</table>

Note: The following statutes were not included in the above table because they applied uniformly to all center corners and did not concern location: 1. In 1967 a new law annotated at KSA 58-2002 & 2003 requiring monumentation and recording of reference ties if used in the control for a subdivision. 2. In 1999 KSA 58-2003 was modified to require filing reference report in accordance with KSA 58-2011. 3. In 2011 Senate Bill 112 modified KSA 58-2002 requiring monumentation if used in the control of a boundary survey.

As you can see from the table the legislative history is different depending on the particular type of section. On sections along the north and west side of a township the law has always been at the intersection of the lines between opposite quarter corners. For sections closing on a standard parallel, the law from 1860 to 1862 was at the intersection of opposite quarter corners, and since 1862 has always been to run the north south line parallel to the east line of the section. Probably
the most important item to recognize in the table is that for sections not on the north and west side of a township that double proportionate measurement between quarter corners was the law between 1862 and 1868. That is important because much of the land east of the 6th Principle Meridian was settle prior to 1868, so presumably many sections were subdivided during that time period. West of the 6th Principle Meridian most of the land was settled after 1868 so intersection of a straight line between opposite quarter corners was probably the law when the sections were divided. To be certain a surveyor needs to check the date the GLO township plat was approved, and if after 1868 then the center corner should have been set at the intersection of opposite quarter corners. But, if the GLO plat was approved prior to 1868, we have to recognize that the section may have been subdivided using double proportionate measurement. So in eastern Kansas we need to expand our monument search area to cover the area that would include the double proportionate location. We also need to recognize that in that time period distance measurements were far less accurate and more time consuming than running a line, and we should expect discrepancies in distance.

There was quite a lot of settlement in the Kansas territory between 1855 and 1861 when Kansas became a state. Although territorial laws provided for a county surveyor during the territorial period, there were no laws relating to how a section should be subdivided until 1860. So for sections subdivided before 1860 we should expect all kinds of methods. The GLO surveys had merely set the exterior corners and showed the subdivision of the section protracted on the township plat. The federal government considered the subdivision of the section a local matter. How to go about the subdivision was, at that time, open to debate. The other Public Land Survey states had wrestled with this problem for many years. An attorney in Illinois, a former Deputy County Surveyor of Sangamon County named Abraham Lincoln, had written position papers on the issue. Lincoln’s position was that the center corner should be set at the intersection of straight lines from opposite quarter corners. It is unlikely that the state legislature in 1862 dreamed up the double proportionate method, so it is reasonable to assume that method was also being practiced by some surveyors in the Kansas territory. The double proportionate methodology better equalizes the area in defective GLO surveys that have large deflections at the quarter corners. However, this also required the surveyor to actually chain North-South and East-West through the center of the section, which was more time consuming and expensive. Based on the records that have survived and the difficulty of performing double proportionate at the time, it was not the standard method, but should always be considered as a possibility.

We need to remember that land surveying was not regulated until 1967 with the original land surveyor licensing law. While engineers and sometimes architects practiced land surveying, and had a seal for the plats, that was not a requirement. County surveyors were not required to be licensed. During the territorial period the county tribunal was required to appoint a “suitable person” as county surveyor. After statehood the county surveyor was elected and the only requirement was that he be a “practical and competent surveyor.” Based on the lack of qualifications as well as the equipment of the time we should not expect great accuracy and compliance with all the requirements of the law. However, we do not have authority today to “correct” or change the position of those original corners, including center of sections.

Adding to the difficult of retracing surveys is that few records survived, related to the amount of sections that had to be subdivided (almost every section) by someone, somehow. There are few
surveys now of record, but we have to believe the county surveyor and perhaps private surveyors were busy subdividing sections. It is important to remember that there was no law prohibiting this work. While the laws usually required county surveyor work to be entered in his records, the fact that it was not entered in the record does not make the survey illegal or not binding. We have the same problem today with licensed land surveyors who ignore laws and regulations and do not record original surveys, and do not file all the required reference reports. While these actions may be grounds for disciplinary action, it does not necessarily affect the validity of the survey.

It is important for surveyors to understand the statutory history and surveying practices so we know where to look for monuments and why monuments may not be in exactly the correct position. That brings us to the essential question on all surveys in a section subdivision; What is a surveyor to do when he finds a center corner monument not in the exact location contemplated by the statute in effect at the time the monument was set? First we need to keep in mind that the statutes related to center corners are for the original surveyor of the section. If the section has been surveyed and the survey has been accepted by the land owners, we become retracement surveyors. The statutes do not say we have to reject monuments that are not in a theoretically correct position. The statutes do not say we have to split the section every time we survey, and then correct all previous surveys. In fact, the courts rarely allow surveyors to upset established boundaries. KSA 19-1409 even qualifies the applicability: “The provisions of this article shall not apply to center corners of sections already established according to law.” With a center corner monument or any other monument set by a surveyor and accepted by the land owners we should be reluctant to reject the established monument and set a new corner. When we reject an accepted monument we are not rejecting just the surveyor’s work, we are rejecting an implied agreement and established boundary line between two property owners that no surveyor has the authority to do. As stated in 12 Am Jur 2d, Boundaries, § 61, p 599: “In surveying a tract of land according to a former plat or survey, the surveyor's only duty is to relocate, upon the best evidence obtainable, the courses and lines at the same place where originally located by the first surveyor on the ground. In making the resurvey, he has the right to furnish proof of the location of the lost lines or monuments, not to dispute the correctness of or to control the original survey. The original survey in all cases must, whenever possible, be retraced, since it cannot be disregarded or needlessly altered after property rights have been acquired in reliance upon it. On a resurvey to establish lost boundaries, if the original corners can be found, the places where they were originally established are conclusive without regard to whether they were in fact correctly located, in this respect it has been stated that the rule is based on the premise that the stability of boundary lines is more important than minor inaccuracies or mistakes. But it has also been said that great caution must be used in reference to resurveys, since surveys made by different surveyors seldom wholly agree. A resurvey not shown to have been based upon the original survey is inconclusive in determining boundaries and will ordinarily yield to a resurvey based upon known monuments and boundaries of the original survey.”

Another factor to consider, is that there are only a few sections in Kansas where all four of the original quarter corners have survived. The surveyor that originally subdivided the section probably had the benefit of the original quarter corners. It would be absurd for a modern surveyor to reject a survey as inaccurate based merely on calculations using the surviving or existing corners that may or may not be in their original position. The legal principle was stated
by the Kansas Supreme Court in 1912 and is even more true today, In Re. Nelson, 88 Kan. 219 (1912) “With near-by monuments in place when the former surveys were made it is more probable that correct results were reached by regarding the corners then reestablished than can be done by making a new survey from the field notes and monuments now remaining, disregarding the markings made in the former surveys. Especially is this true where the parties interested living near the lands affected, with the knowledge gained by actual daily observation, have long acquiesced in the boundaries fixed by the former surveys.”

Surveyors that reject accepted center corners, or any accepted corner should consider a quote by Judge Cooley in Britton v. Ferry, 14 Mich. 53 (Mich. 1866). “Absolute correctness in the surveys will not, and cannot be attained, and that it is better for both the government and the purchaser to assume this fact at the outset, and be governed by fixed monuments, instead of leaving everything open to change in the future, when new and more careful surveys might be practicable.” Jeff Lucas an attorney and surveyor from Alabama stated it this way in his book The Pincushion Effect. “To say that all property lines in a section are always open to future attack because the first surveyor in the section didn’t get it right and, further, that all of the affected property owners will simply need to move their lines of ownership and possession with the passing whim of the next surveyor to come along and finally get it right is delusional thinking that is not supported by the law, equity or common sense.”

To keep this article to a reasonable length we did not discuss subdivision of sections closing on a standard parallel. We will do so in eye opening detail in a later article.

Note: The authors appreciate the efforts of Megan Schulz, Reference Librarian at State Library of Kansas, for researching territorial laws on surveying. Surveyors now have a clear history of surveying laws due to Megan’s efforts.