Date	No.	Revisions	By	App.

SURVEY
OF BASE LINE
In Sections 31 to 35, T.1N., R.10E., W.M.
" " 4, 5 & 6 T.1S., " " "
" " 1 & 2, T.1S., R.9E., "
Hood River County, Ore.

REGISTERED PROFESSIONAL ENGINEER 4112 OREGON MAY 10, 19— DONALD J. BRANTON

Design	TENNESON ENGINEERING CORP. Consulting Engineers 412 West Second Place The Dalles Oregon	Scale 1" = 1000'
Survey T.E.C.		Date 4-

Drawn V.F.	Checked	Approved	Work Order No. 4027	Sheet 2 of 2

KILHAM STATIONERY & PRINTING CO., PORTLAND, ORE.

#1491

10-132

BASELINE SURVEY

CS1491

May 27, 1969

FIELD NOTES

Work Order #4027 - Survey for Hood River County of a portion of the Willamette Base Line in Hood River County, Parkdale, Oregon.

CREW: David L. Tuttle, Party Chief
Larry Jones, Transitman
Robert Ulrich, Chainman

DATE COMPLETED: May 26, 1969

On October 17, 1968 our firm was contacted by Mr. A. E. Almcrants in regard to an inter-office correspondence issued by Mr. Carlos Van Elsberg, Director of Public Works, Hood River County. The correspondence stated that all section corners, closing corners, and quarter corners were to be found, checked, and/or reestablished from the Northwest corner of Section 1, Township 1 South, Range 9 East, Willamette Meridian on the West to the Northeast corner of Section 4, Township 1 South, Range 10 East, Willamette Meridian, or to the nearest good corner thereof, and corners to be reestablished with 1 1/2 inch iron pipes and proper bearing trees.

On October 31, 1968 the survey was begun at the corner common to Sections 33 and 34. This corner had been recovered and verified during the course of a previous survey conducted for Clifford Orth of Parkdale, Oregon. Also at that time Oregon Coordinate System North Zone Grid coordinates had been established for this corner. The corner consisted of a stamped lead cap set in a 1 1/2 inch iron pipe and a Forestry reference poster.

At this point we began a chain and transit traverse west across the Hood River and roughly along the base line. We found the South one-quarter corner of Section 33 to be destroyed due to the realignment of the Base Line Road. All references, bearing trees, and corner evidence had been removed when a large road cut had been made. With the aid of the field notes for a survey performed for C. B. Koening in January of 1963, Tenneson Engineering Corporation Work Order No. 2720, we set about to reestablish the corner. We recovered our old traverse line that had been run Northerly out of the corner to the center of Section 33. The old traverse hubs were found to be in sound condition and with a transit and chain we checked their alignment and distance. Finding them to conform with the field notes we plunged the line Southerly to the highway. Using calls from the field notes the corner was reset. (At the time of the survey for C. B. Koening the corner had been monumented with steel axle, one bearing tree, and a Forestry poster.)

The traverse was then run through this point and continued on Westerly. No evidence was found at the North one-quarter corner of Section 5. This corner was not established during the course of the original government survey. This area is now under a large road fill, and had the corner been set, little hope of its recovery is left. No evidence of the closing corner of Sections 5 & 6 was found either. This area is encompassed by a large intersection formed by the Mt. Hood Loop Highway and the Base Line Road,

giving strong indications it has been destroyed. A check with the Oregon State Highway Department disclosed that they had not tied or found the corner when the road was constructed.

Continuing Westerly we found a State Highway aerial marker near the corner common to Sections 32 & 33. Having used the corner for the Koening survey some years previous we were quite sure that the aerial marker was not the corner. Again returning to the field notes of a survey performed for C. B. Koening in January of 1963 we set forth to recover the corner. North of the corner we found the one-sixteenth corner and the one-quarter corner still monumented as recorded in our field notes. We plunged the line formed by these two corners, Southerly to a point previously measured in the notes. At this point a hole was chipped in the pavement and a railroad spike was uncovered several inche below the surface. This point conformed with our prior survey and satisfied us as to the fact that this was the recognized corner existing on or before January, 1963.

Continuing Westerly we found the North one-quarter corner of Section 6 to be monumented with a 2 inch iron pipe and a concrete nail set in a concrete plug. The corner was verified by a reference point on two power poles, and a call of 53 feet to the centerline of a railroad spur as recorded on the official plat of the First Addition to the City of Parkdale.

Continuing Westerly we made a search for the South one-quarter of Section 32. This area is now a road fill of some 4 to 5 feet in depth lying over a large culvert. Though we chipped away the existing pavement and used a metal detecting dip needle, we were unable to uncover any evidence. Due to road construction its existence is doubtful. Also a check was made with the Oregon State Highway Department for added information. Their map showed no ties or reference to the corner.

Traversing on Westerly we made a search for the closing corner common to Sections 1 and 6. Using the call distance from Disbrow Creek, as recorded in the original notes, we chained Easterly along the remains of an old fence line. At the recorded call we found a 2 inch iron pipe and one remaining bearing tree stump bearing South 75° East a distance of 6.6 feet.

At the corner common to Sections 31 and 32 a 1/2 inch iron pipe was recovered, buried several inches deep, at the intersection of Lava Bed Road and Secondary Road. No references or bearing trees were found. Later during the course of the survey a 1940 Government Land Office brass cap was found to be buried 6 inches below the iron pipe.

No evidence was uncovered at the North one-quarter of Section 1. This corner was not set during the course of the original government survey, nor any record of its having been set recorded in the County Surveyor's Office. The South one-quarter corner of Section 31 was not found either. Its position fell in an orchard and it would be reasonable to assume it has been destroyed due to cultivation.

Continuing on Westerly across a lava bed we found a Government Land Office brass cap representing the closing corner to Sections 1 and 2, dated 1940. One bearing tree, a fir, bearing Southwesterly of the found corner was recovered as per the resurvey tie. This tree has since blown over during the month of December, 1968.

Continuing Westerly across the Middle Fork of Hood River we tied our traverse into a Government Land Office brass cap representing the corner common to Sections 36 and 31. This corner had been tied and referenced previously on a survey for the County Forestry, work order #3771, Tenneson Engineering Corporation reference card #266. This point was also tied into the Oregon coordinate system in the prior survey. A closure was calculated of our traverse against the beginning and ending coordinated points. Finding our error of closure to be 0.48 feet in departure and 0.64 feet in latitude for a relative error of 1:20,346, it was felt this far exceeded the normal required 1:5,000 and no difficulty would be encountered in using our traverse points to establish missing corners.

The following methods of proportioning was used to establish the position of the missing corners:

a. The South one-quarter corner of Section 31 was set by single proportionate measure midpoint between the found standard corners on either side.

b. The South one-quarter corner of Section 32 was set by single proportionate measure midpoint between the found standard corners on either side.

c. Closing corners and one-quarter corners between Sections 1 and 2, Township 1 South, Range 9 East, Willamette Meridian, and the closing township corner between Township 1 South, Range 8 and 9 East, and the North one-quarter corner of Section 6, Township 1 South, Range 10 East, Willamette Meridian were established by projecting a line due North through the found original Government Land Office corners to establish the true closing corner on the line between the standard corners as per Bureau of Land Management instructions.

d. The one-quarter corner of Section 1, Township 1 South Range 9 East, Willamette Meridian was set on single proportionate measure between the Northeast and Northwest corner of the section as projected North to the standard base line and using the 1940 recovery measurements which we found to be within 2 feet of our measurements.

e. The Northeast corner of Section 6, Township 1 South, Range 10 East, Willamette Meridian presented a problem. The county road survey of the Base Line Road (county road #13) recorded on page 298 of the County Surveyor's record under county survey #74, indicates a tie from the Northeast corner of Section 6 to the Southeast corner of Section 31 of 609.5 feet where the Government Land Office notes call is 729.30 feet (11.05 chains). A plat of a survey of the North one-quarter of Section 6, Township 1 South, Range 10 East, Willamette Meridian done by A. R. Creuikshank, Oregon Professional Engineer #545 gives a measured distance of 2,627.6 feet from the North one-quarter of Section 6 to the Northeast corner.

   Using the found North one-quarter corner of Section 6 and measuring East this distance to establish the Northeast corner of Section 6 position, the tie to the Southeast corner of Section 31 measures 589.15 feet or 20.35 feet short of the tie indicated by the county road survey notes and map. A check of the old field books of the actual county road surveys show that in the majority of the work done the measurements

were taken with stadia rather than a chain. For this reason we elected to use the survey tie from the North one-quarter to establish the Northeast corner of Section 6.

f. The Northeast corner of Section 5, Township 1 South, Range 10 East also presented a problem. From the distances recovered on the other closing corners found to the standard corners it was obvious that some sort of a serious error was prevalent in the Government Land Office note ties as the distances were all from 100 to 200 feet too long.

A continued research of the old county road and survey records finally disclosed a set of notes and a map of the survey of "County Road No. 3, in District No. 8 known as the Rogers County Road" (present known name Smullin Road). On the map with the road record a tie from the Northwest corner of Section 5 to the section corner of 33 and 34, Township 1 North of 8.85 chains and a distance across the North line of Section 4 of 77.94 chains was shown.

Using the total measured distance from the found Northeast corner of Section 4 to the found Southwest corner of Section 34 compared to the old road map distance, we found our measured distance at 5,682.72 feet compared to 5,728.14 feet on the old map. By using single proportionate measure between these found monuments a trial corner was established for the corner between Section 4 and 5, Township 1 South, Range 10 East, Willamette Meridian. (The measurements and procedure used on this corner are also covered in duplicate in our survey work order #3774 for Clifford Orth Properties, Inc. which notes are presently on file at the Hood River County Survey Office.

g. From the tentative closing corners at the Northeast and Northwest corners of Section 5, Township 1 South, Range 10 East, Willamette Meridian as established by the above procedure, the measured distance across the North line of Section 5 was calculated at 5,336.82 feet. Record of county survey #79, which covers the subdivision of the North one-half of Section 5, gives a measured distance of 80.82 chains or 5,334.12 feet for this line. This old measured distance checks with our distance using the calculated corner positions within 2.70 feet. It was felt that this provided a sufficient check of the accuracy of our methods to accept the corner positions we had tentatively established.

h. The North one-quarter of Section 5 was established by single proportionate measure midpoint between the Northeast and Northwest corners of the section as above established.

i. It is noted that had we used the old Government Land Office ties and standard Bureau of Land Management procedure, the position of the corners established would have been some 100 feet different and would not have been anywhere near the positions which the maps, notes and evidence of record would indicate. For this reason we felt that the use of our rather unorthodox method of proportioning resulted in the reestablishment of the corners in more nearly the position in which they were originally set and was entirely justified.

After the office calculations were performed to obtain a flat closure and proportion the missing corners we returned to the field to establish, correct and reference the required corners. At the closing corner to Sections 1 and 2, Township 1 South, Range 9 East we established the corner to its true position on the base line. A new corner, monumented by a 2 inch galvanized iron pipe with a stamped brass cap, was set 4.80 feet North of the existing Government Land Office corner. New bearing trees were established as follows: a 6 inch chinkapin bears North 42° East a distance of 23.5 feet, a 12 inch maple bears South 66° East a distance of 10.3 feet, and a 10 inch fir bears South 19° West a distance of 57.4 feet. This now bears South 88° 48' 44" East a distance of 1,098.53 feet from the Southwest corner of Section 31, Township 1 North, Range 10 East. The original Government Land Office corner was left in its original position as a reference to the new corner, Tenneson Engineering Corporation reference card #318.

The standard South one-quarter corner of Section 31 was monumented with a 2 inch galvanized iron pipe and a stamped brass cap, buried 0.8 feet below the ground surface to avoid cultivation. New bearing trees as follows: a 14 inch fir bearing North 30 1/2° West a distance of 84.7 feet, and a 10 inch fir bearing North 74° West a distance of 40.7 feet were scribed and blazed. This corner now bears South 88° 48' 44" East a distance of 2,759.72 feet from the Southwest corner of Section 31, Tenneson Engineering Corporation reference card #317.

At the closing North one-quarter corner of Section 1 we set a 2 inch galvanized iron pipe with a stamped brass cap. The corner was buried 12 inches below the surface of Lava Bed Road. Reference points consisting of 5/8 inch iron rods with aluminum caps set in concrete and buried 12 inches below the ground surface were established at South 36° East a distance of 49.12 feet, South 44° West a distance of 56.12 feet, North 16° West a distance of 23.91 feet, and North 33° East a distance of 28.21 feet, Tenneson Engineering Corporation reference card #320.

The found standard section corner of Section 31 and 32, a 1940 Government Land Office brass cap monument buried 0.5 of a foot, was rereferenced with 5/8 inch iron rods with aluminum caps as follows: North 55° West a distance of 53.62 feet, North 70.5° East a distance of 59.86 feet which falls 2 feet West of a small pine tree, South 45° East a distance of 36.87 feet which falls 1 foot West of a pine tree, South 26° West a distance of 27.30 feet which falls 3 feet North of a 30 inch elm blazed at the base. Tenneson Engineering Corporation reference card #315.

The closing township corner, Township 1 South, Range 9 and 10 East, Willamette Meridian, was monumented with a stamped brass cap on a 2 inch by 30 inch galvanized iron pipe on the true standard base line, located 8.75 feet North of the found 2 inch pipe witnessed by old 36 inch rotted fir stump bearing tree South 75° East a distance of 6.6 feet. The true closing corner was witnessed as follows: blazed 24 inch fir scribed S 32 BT North 41° East a distance of 54 feet, 8 inch blazed cedar scribed S 1 BT South 83° West a distance of 21.2 feet, a blazed 6 inch fir scribed S 6 BT South 88° East 34.8 feet, Tenneson Engineering Corporation reference card #316.

At the standard South one-quarter corner of Section 32 we set a stamped brass cap monument on a 2" x 30" galvanized iron pipe witnessed by 5/8 inch iron rods with aluminum caps as follows: North 31° West a distance of 48.76 feet which is 1.5 feet South of a power pole, North 75° East 31.22 feet which is 1.5 feet North of a power pole, South 21° East 36.57 feet which is 1.5 feet East of a power pole, and South 26° West 40.49 feet which is 1.5 feet North of a sign post. Tenneson Engineering Corporation reference card #313.

At the closing North one-quarter corner of Section 6 we established the true corner on the base line 13.82 feet North of the found 2 inch iron pipe. At the true corner we set a stamped brass cap monument in the paved road buried 0.5 feet witnessed by brass screws set in lead plugs on adjacent sidewalks as follows: North 42.5° West 21.89 feet, North 41.5° East 22.08 feet, and South 26° West 52.22 feet. Tenneson Engineering Corporation reference card #321.

At the standard section corner of Section 32 and 33 we set a stamped brass cap monument 0.5 feet below the pavement witnessed by 5/8 inch iron rods with aluminum caps as follows: North 22° West 57.40 feet which falls 2 feet South of a power pole, North 51° East 37.47 feet which falls 2 feet North of a fence post, South 43° East 28.00 feet which falls 15 feet East of a power pole, and South 43° West 28.50 feet which falls 3.5 feet South of a power pole. Tenneson Engineering Corporation reference card #312.

At the closing section corner of Sections 6 and 5 on the base line we set a stamped brass cap monument 0.5 feet below the pavement surface in a valve box witnessed with 5/8 inch iron rods with aluminum caps being South 2° East 51.68 feet which is 1 foot North of a road sign, South 53° West 41.80 feet which is 2 feet North of a power pole, and a brass screw in the Southwest corner of an irrigation box North 34° East 24.99 feet from the corner. Tenneson Engineering Corporation reference card #323.

At the standard South one-quarter corner of Section 33 which was reestablished from the prior survey with a concrete nail, we set a stamped brass cap monument on a 2" x 30" galvanized iron pipe witnessed by railroad spikes 10 feet North and 10 feet South of the corner on the edges of the pavement and 5/8 inch iron rods with aluminum caps as follows: North 38° West 34.77 feet, North 42° East 36.83 feet, South 41° East 38.01 feet, and South 40° West 34.52 feet. Tenneson Engineering Corporation reference card #314.

At the closing North one-quarter corner of Section 5 we set on the true base line a stamped brass cap monument 0.5 feet below the paving surface in a valve box witnessed by 5/8 inch iron rods with aluminum caps as follows: North 31° West 19.14 feet, North 56° East 26.70 feet, South 23° East 31.65 feet, and South 31° West 39.92 feet. Tenneson Engineering Corporation reference card #324.

At the found standard section corner of Sections 33 and 34 we replaced the found 2 inch pipe with a stamped brass cap monument on a 2" x 30" galvanized iron pipe witnessed by a 10 inch fir North 57° West 29.3 feet scribed S 33 BT, and a 14 inch fir North 51° East 34.8 feet scribed S 34 BT. Tenneson Engineering Corporation reference card #308.

At the reestablished closing corner of Sections 5 and 4 we set on the true base line a stamped brass cap monument on a 2" x 30" galvanized iron pipe witnessed by a 12 inch fir North 5° East 34.2 feet scribed S 34 BT, a 6 inch fir South 26° East 19.4 feet scribed S 4 BT, and a 10 inch fir South 58° West 45.5 feet. We also noted the presence of a 2 inch iron pipe with lead plug North 73° 56' 25" East 83.12 feet, a 2 inch iron pipe North 89° 21' 25" East 89.0 feet with a 1 inch pipe 34.58 feet directly South. It is believed that these were set by the former County Surveyor Mr. George Frey and/or the Oregon State Highway Department in the survey of their adjacent maintenance yard. They were not accepted by us as being valid corners due to prior experience of trying to utilize Mr. Frey's corners. Inquiry of one of the county survey crew who worked for Mr. Frey on this job, a Mr. Hudson, indicated that the pipe which had been known as the closing corner had

been moved approximately 90 feet Easterly by Mr. Frey. It would be our opinion this had been done in an attempt to place the corner at the Government Land Office call of 10.0 chains East of the standard corner of sections 33 and 34. This distance, we felt, was not correct as covered in these notes. Tenneson Engineering Corporation reference card #311.

Measured distances, bearings, monuments found and set and calculated North Zone Coordinates therefore are shown on the attached maps, sheets 1 and 2, and reference card copies which by reference are made a part of these notes.

REGISTERED
OREGON
LAND SURVEYOR

David L. Tuttle, Oregon Land Surveyor #872

JULY 12, 1968
DAVID L. TUTTLE
872

CHECKED AND APPROVED:

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