

1712

HISTORY OF SURVEYS

The First Standard Parallel North, being the south line of T.5N., R.26 & 27E., was originally surveyed by H.J.G. Maxon and Jared S. Hurd under Contract No. 50, dated February 2, 1860.

The subdivision of T.4N., R.26E., was originally surveyed by Nicholas Walden under Contract No. 209 dated July 6, 1874.

The south line of T.5N. R.26E. was retraced by Joseph A. Ganong, under instructions dated March 8, 1915, to govern surveys included in Group No. 9. Ganong does not make any mention of the closing corners for T.4N. during his retracement.

A dependent resurvey of the First Standard Parallel North, through R.26E., and dependent resurvey of the subdivision of T.4N., R.26E. was performed by Otis O. Gould in 1939 under special instructions dated January 26, 1938 which provided for the surveys included under Group No. 217. It should be noted that Gould reset both the Standard Corners for T.5N. and the Closing Corners for T.4N. during this survey.

A dependent resurvey of the First Standard Parallel North, through R.27E., and dependent resurvey of the east boundary of T.4N., R.27E. was performed by Otis O. Gould in 1941 under special instructions dated September 9, 1940, which provided for the surveys included under Group No. 260. It should be noted that Gould reset only the Standard Corners to T.5N., excepting the Closing Corner at T.4N., R.27 & 28E., which he reset at proportionate measure.

In 1987, The U.S. Army Corps of Engineers (USACE) performed a survey of the exterior boundary of the Umatilla Ordnance Depot. This survey is discussed further in the Narrative.

In 1998, Judson Coppock performed a survey situated in Section 36, T.5N., R.26E. and in Section 31, T.5N., R. 27E., filed as Morrow County Map of Survey C-1195-E and is discussed further in the Narrative.

In 2006, Robert Stratton performed a survey in Section 12, T.4N., R.26E., filed as Morrow County Map of Survey 1469-C. Mr. Stratton recovered the 1939 G.L.O. brass cap monuments at the 1/4 corners to Sections 1 & 12 and Sections 12 & 13. Mr. Stratton also calls the U.S. Corps of Engineer monuments as references to the G.L.O. monuments.

In 2009, Dennis Edwards performed a partition survey in Section 31, T.5N., R. 27E., filed as Morrow County Partition Plat 2009-6, recorded as file No.2009-24830 on Oct. 8, 2009.

NARRATIVE

This survey was performed under contract with the State of Oregon, Oregon Military Department, to locate, monument and mark a predetermined license boundary located within a portion of the Umatilla Army Depot. This survey will be utilized to reassign a portion of the Army lands, as shown herein, to the National Guard Bureau and to permit use of the said Army lands by the State of Oregon, Oregon Military Department, in a License Agreement. The portion of the Depot land within license boundary is referred to as Camp Rees.

That portion of the westerly Depot boundary affecting the License Boundary is the north-south center of section lines through sections 1,12 and 13, T.4N., R.26E. as shown herein. The relevant 1/4 Section Corners were re-established by the G.L.O. in 1939. We recovered G.L.O. monuments at the 1/4 corner to Section 1 & 12 and the 1/4 corner to Section 12 & 13. The monument marking the 1/4 corner to Section 13 & 24 was not recovered and is discussed below.

During the initial research for the exterior boundary of the Depot, a 1987 survey, performed by the United States Army Corp of Engineers (USACE), Walla Walla District, was provided by the Corp of Engineers. We recover a majority of the USACE monuments along that portion of the westerly and the northerly boundaries as shown herein.

We find the USACE survey monuments along the westerly boundary to be online between the aforementioned 1/4 corners and accept the Corps survey along the westerly Depot boundary as the record position. The USACE survey monumentation notes indicate that the G.L.O. monument at the 1/4 corner to Section 13 & 24 was found to be damaged and was replaced with a Corps monument. We did not recover the G.L.O. or USACE monument at this location. We determined that the record position returned by the USACE survey to be best available evidence of the location of this corner.

The License Boundary is located parallel to and 60 feet east of the above said N-S center of section lines, beginning at Camp Rees Monument #6, and coursing north to Camp Rees Monument #9.

NARRATIVE (cont.)

The northern most portion of the License Boundary, from Camp Rees Monument #10 to Camp Rees Monument #15, is located 60 feet south and parallel to the First Standard Parallel North, T.4 & 5N., R.26 & 27E., and is described below.

At the Standard 1/4 Corner for Section 36, T.5N., R.26E., we recover the G.L.O. monument set by Ganong in 1915. 926 feet west of the G.L.O. monument, we recover USACE monument 10-2, and find that based on it's position relative to the said 1/4 corner, it represents the best record position to determine the direction of the N-S center of section line of Section 1, T.4N., R.26E. The license boundary between monuments 8 & 9 is placed 60 feet east of and parallel to the said N-S centerline of Section 1.

At the Township Corner to T.5N., R.26 & 27E., we find a brass cap set by Judson Coppock in 2008. Mr. Coppock recovered the 1915 G.L.O. monuments in 1998 as reported on Morrow County Map of Survey C-1195-E. In 2008, Mr. Coppock finds the G.L.O. monument has been destroyed and re-monuments it. See Morrow County Corner Record 5N27E-Z1. We accept this monument as the Township corner.

At the Standard Corner to Sections 31 & 32, we find a brass cap set by Judson Coppock in 1998, which he states he re-established at record angles and proportionate measure from the 1941 G.L.O. survey. We accept this monument.

We recover the 1941 G.L.O. monuments at the Standard 1/4 corner of Section 32, the Standard Section corners to Sections 32 & 33 and Sections 33 & 34. These monuments are accepted and utilized in locating the license boundary. The 1941 G.L.O. monuments are also recovered at the Standard 1/4 corner of Section 34 and the Standard Section corner to Sections 34 & 35 and are shown for the record.

The 1987 USACE survey recovered the G.L.O. monument at the the Standard 1/4 Corner for Section 36, T.5N., R.26E. and the Standard 1/4 Corner for Section 32, T.5N., R.27E. USACE monuments are set in a straight line between the above said monuments, as indicated on the USACE survey. As stated above, we accepted the position of the Coppock monument at the Township Corner to T.5N., R.26 & 27E., and the Coppock monument at the Standard corner to Sections 31 & 32, T.5N., R.27E.

Based on the above said Coppock monuments and the found G.L.O. monuments at the Standard 1/4 corner of Section 36, T.5N., R.26E. and at the Standard 1/4 corner of Section 32, T.5N., R.27E., we find the USACE monuments to be off of the Township Line. The fallings to the Township line are shown herein for the off-line USACE monuments. The distance shown between said USACE monuments are on the Township line at a point perpendicular to the said Township line from the USACE monuments.

We find the USACE monuments between the found G.L.O. monuments east of the Standard Standard 1/4 Corner for Section 32, T.5N., R.27E. to be on the Township line.

The license boundary, from Monument #10 to Monument #15, is then located 60 feet south of and parallel to the Township Line as shown.

The license boundary from Monument #1 to #6 and from Monument #15 to #35 is located at the direction of the Oregon Military Department.

SURVEY DATUM

The Datum for this survey is NAD 83(epoch 2010) Oregon North Zone(3601) U.S. Survey Ft., determined as follows:

Two temporary control points are established, shown herein as CP#500 and CP#501. Independent static g.p.s. observations are made at those points. The collected data is then uploaded to the NOAA "Online Positioning User Services" (OPUS) and an NGS OPUS Solution report was provided to us. A modified copy of that report is included herein.

Utilizing coordinates returned by OPUS at points CP #500 and CP #501, static and r.t.k. observations are made using both a Topcon HiPerlite system and a Topcon HiPer II system.

The coordinate base is then shifted 0.018 ft. east and 1.428 ft. north to match the historic coordinates utilized for surveys around the weapons disposal area, shown herein as the Industrial Area, by H&S Construction Site Surveyors.

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JULY 13, 1999
KENNETH H. DELANO JR.
49865
RENEWS: 1/1/2016

SURVEY DATUM (cont.)

NGS OPUS SOLUTION REPORT

POINT: CP #500
FILE: B11010a.tps OP1382377497467
All computed coordinate accuracies are listed as peak-to-peak values. For additional information: http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy
DATE: October 21, 2013
RINEX FILE: b110283r.13o TIME: 17:45:52 UTC
SOFTWARE: page5 1209.04 master62.pl 072313
START: 2013/10/10 17:14:00
STOP: 2013/10/10 22:23:00
OBS USED: 11757/11846: 99%
FIXED AMB: 45/46: 98%
OVERALL RMS: 0.010(m)
EPHEMERIS: igr17614.eph [rapid]
NAV FILE: brdc2830.13n
ANT NAME: TPSHIPER_LITE NONE
ARP HEIGHT: 1.56361
REF FRAME: NAD_83(2011)(EPOCH:2010.0000)
X: -2188043.027(m) 0.001(m)
Y: -3879299.629(m) 0.002(m)
Z: 4550446.082(m) 0.002(m)

OPUS Calculated Field Observed*
N LAT: 45°48'25.90801" 0.002(m) 45°48'25.87"
W LON: 119°25'27.55521" 0.001(m) 119°25'27.61"
EL HGT: 154.764(m) 0.001(m)
ORTHO HGT: 176.555(m) 0.015(m)
NOTE: ORTHO HGT=NAVD88(OPUS Computed using GEOID12A), used for project elevation.

STATE PLANE COORDINATES (3601 OR N)

Table with 4 columns: (Meters), (U.S. Survey Ft.), (This Survey), and values for Northing, Easting, Elev, and Convergence.

US NATIONAL GRID DESIGNATOR: 11TLL1162975484(NAD 83)

BASE STATIONS USED

Table with 5 columns: PID, DESIGNATION, LATITUDE, LONGITUDE, DISTANCE(m) listing stations AF9664, DH4096, and DG7408.

NGS OPUS SOLUTION REPORT

POINT: CP #501
FILE: R11010a.tps OP1382377395264
All computed coordinate accuracies are listed as peak-to-peak values. For additional information: http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy
DATE: October 21, 2013
RINEX FILE: r110283r.13o TIME: 17:44:11 UTC
SOFTWARE: page5 1209.04 master62.pl 072313
START: 2013/10/10 17:30:00
STOP: 2013/10/10 22:13:00
OBS USED: 10563/10981: 96%
FIXED AMB: 53/55: 96%
OVERALL RMS: 0.011(m)
EPHEMERIS: igr17614.eph [rapid]
NAV FILE: brdc2830.13n
ANT NAME: TPSHIPER_LITE NONE
ARP HEIGHT: 1.71601
REF FRAME: NAD_83(2011)(EPOCH:2010.0000)
X: -2192165.641(m) 0.003(m)
Y: -3875048.279(m) 0.004(m)
Z: 4552071.714(m) 0.003(m)

OPUS Calculated Field Observed*
N LAT: 45°49'41.48468" 0.002(m) 45°49'41.45"
W LON: 119°29'50.67775" 0.002(m) 119°29'50.73"
EL HGT: 153.867(m) 0.005(m)
ORTHO HGT: 175.687(m) 0.017(m)
NOTE: ORTHO HGT=NAVD88(OPUS Computed using GEOID12A), used for project elevation.

STATE PLANE COORDINATES (3601 OR N)

Table with 4 columns: (Meters), (U.S. Survey Ft.), (This Survey), and values for Northing, Easting, Elev, and Convergence.

US NATIONAL GRID DESIGNATOR: 11TLL0602377991(NAD 83)

BASE STATIONS USED

Table with 5 columns: PID, DESIGNATION, LATITUDE, LONGITUDE, DISTANCE(m) listing stations DH4096, DN5846, and DG7408.

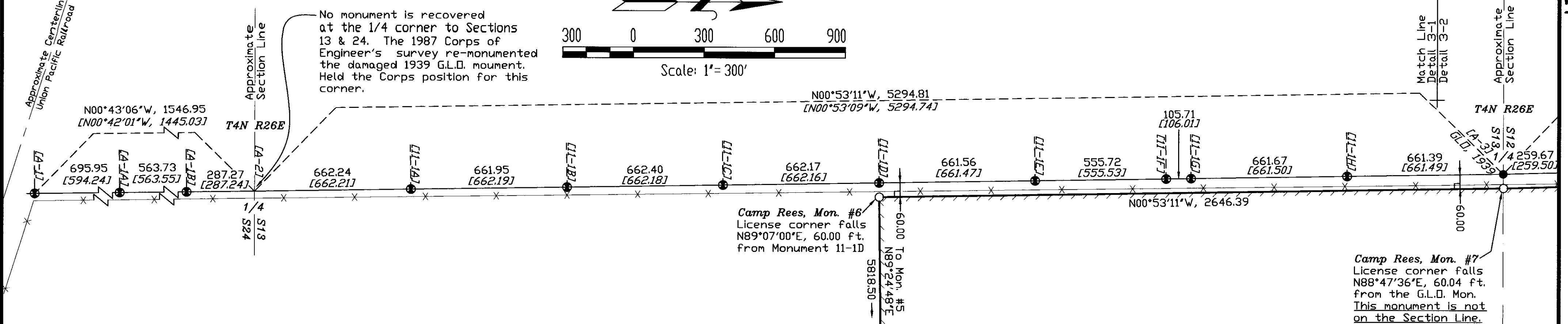
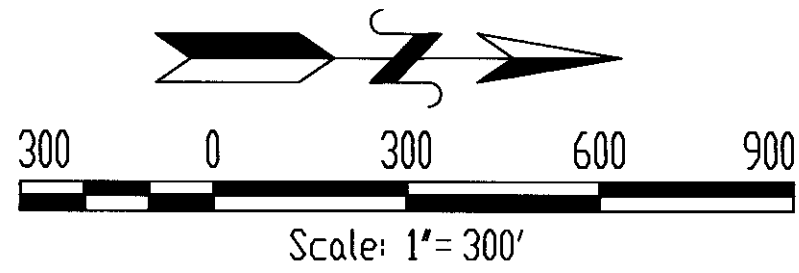
*Field observed Lat & Long shown above are the returned observation from TDS's Survey Pro Software, using Topcon Hyper II GPS system.

RECEIVED BY

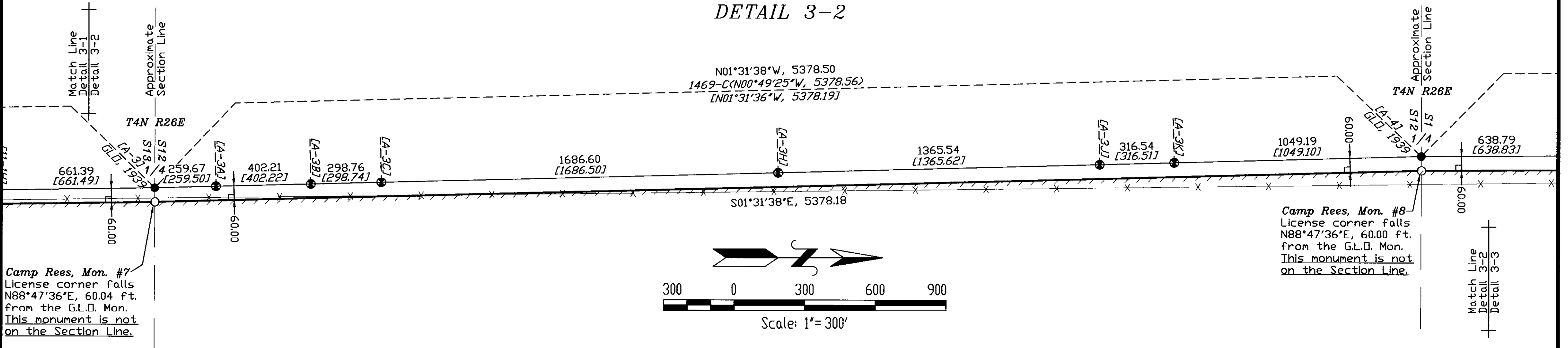
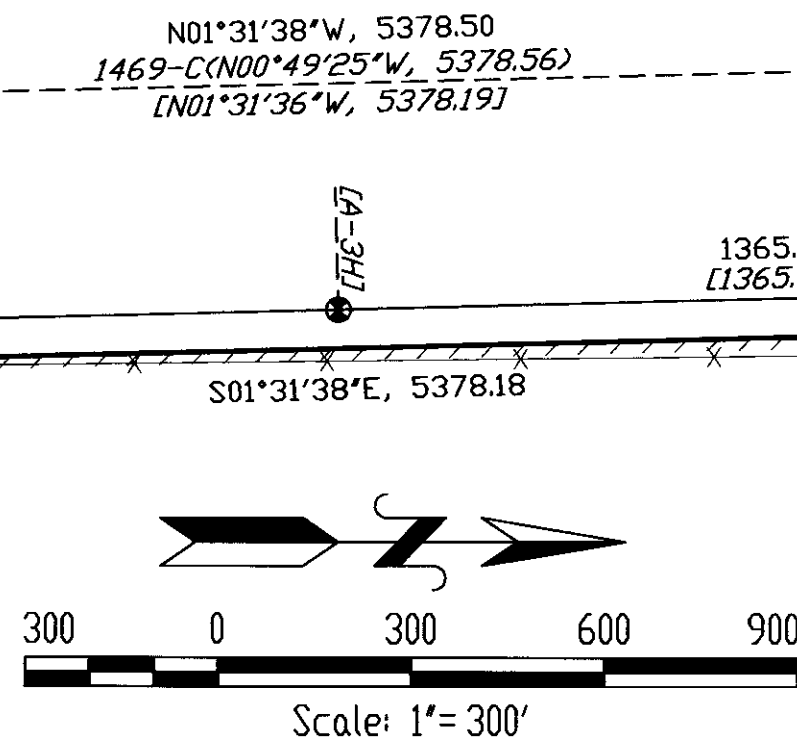
Morrow County Surveyor
Date: 8-27-2014
Rec'd By: S.K.H.
No.: 2014-1712C
Folder No.: 1712

1712

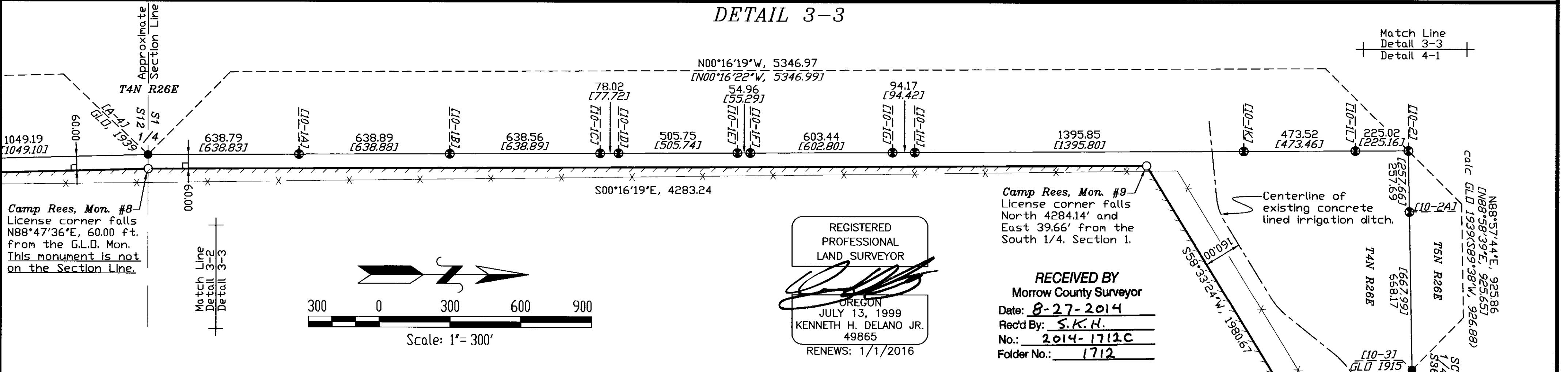
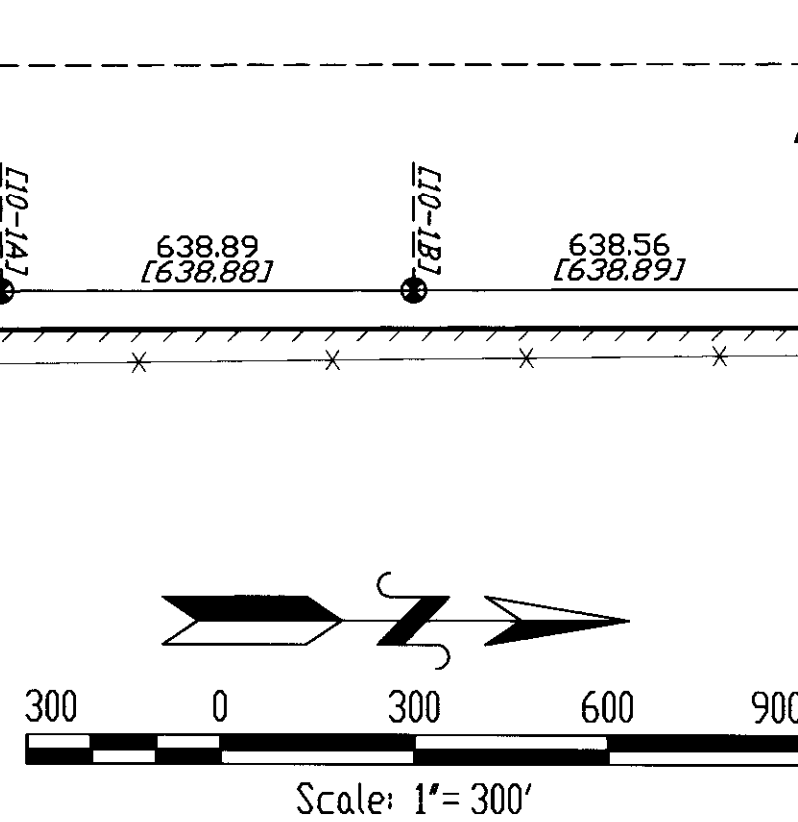
DETAIL 3-1



DETAIL 3-2



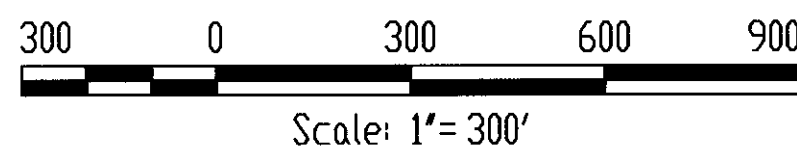
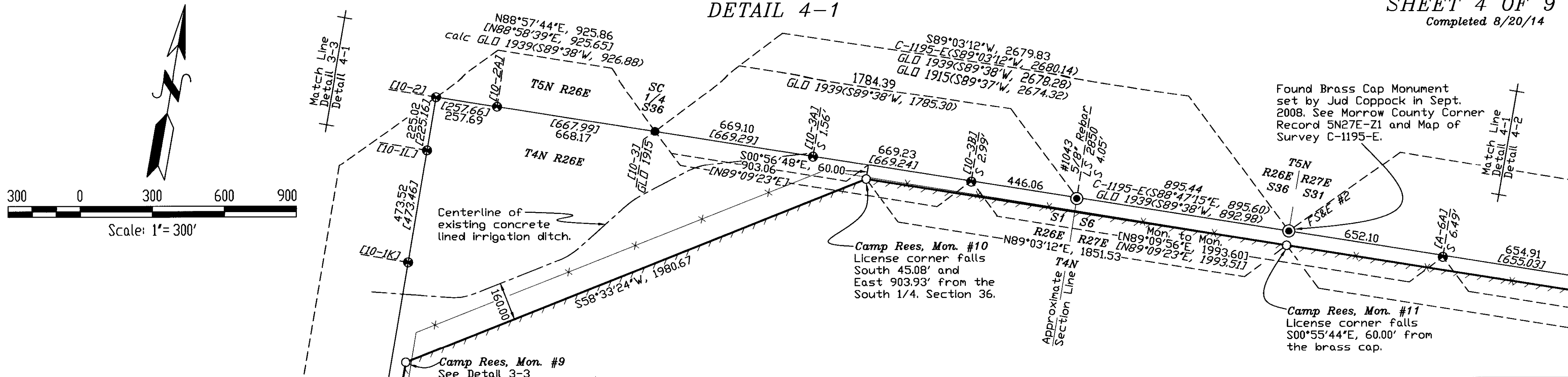
DETAIL 3-3



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DETAIL 4-1

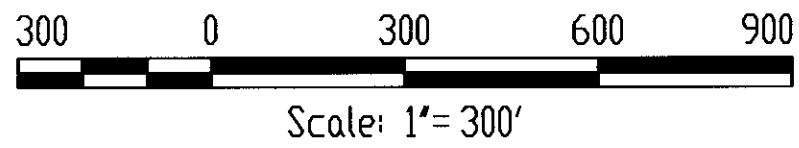
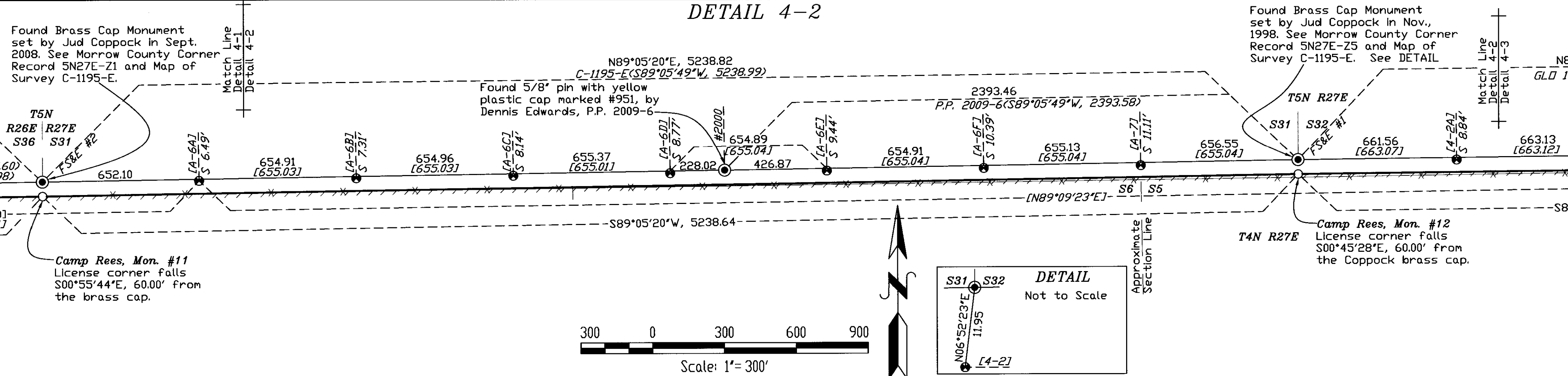


Found Brass Cap Monument set by Jud Coppock in Sept. 2008. See Morrow County Corner Record 5N27E-Z1 and Map of Survey C-1195-E.

Camp Rees, Mon. #10 License corner falls South 45.08' and East 903.93' from the South 1/4, Section 36.

Camp Rees, Mon. #11 License corner falls S00°55'44\"/>

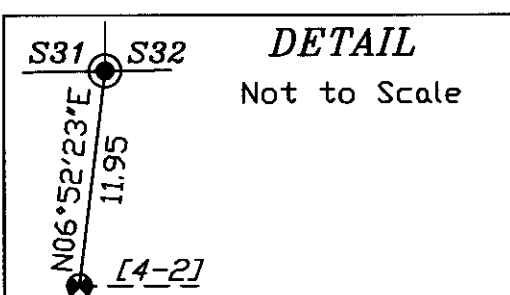
DETAIL 4-2



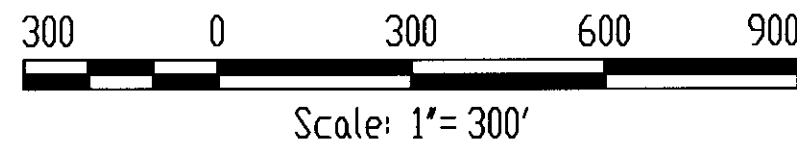
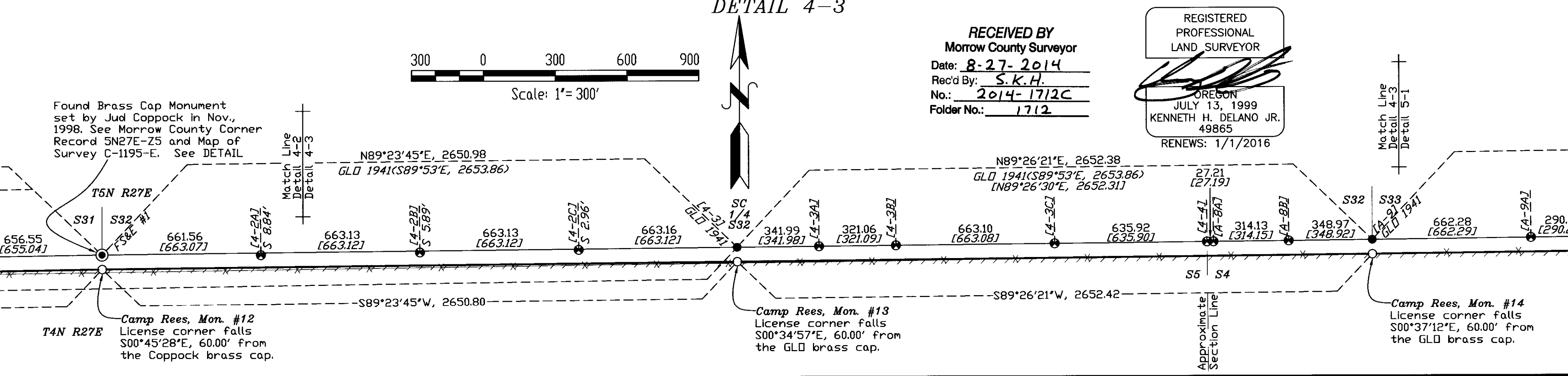
Found Brass Cap Monument set by Jud Coppock in Nov., 1998. See Morrow County Corner Record 5N27E-Z5 and Map of Survey C-1195-E. See DETAIL

Camp Rees, Mon. #11 License corner falls S00°55'44\"/>

Camp Rees, Mon. #12 License corner falls S00°45'28\"/>



DETAIL 4-3



Found Brass Cap Monument set by Jud Coppock in Nov., 1998. See Morrow County Corner Record 5N27E-Z5 and Map of Survey C-1195-E. See DETAIL

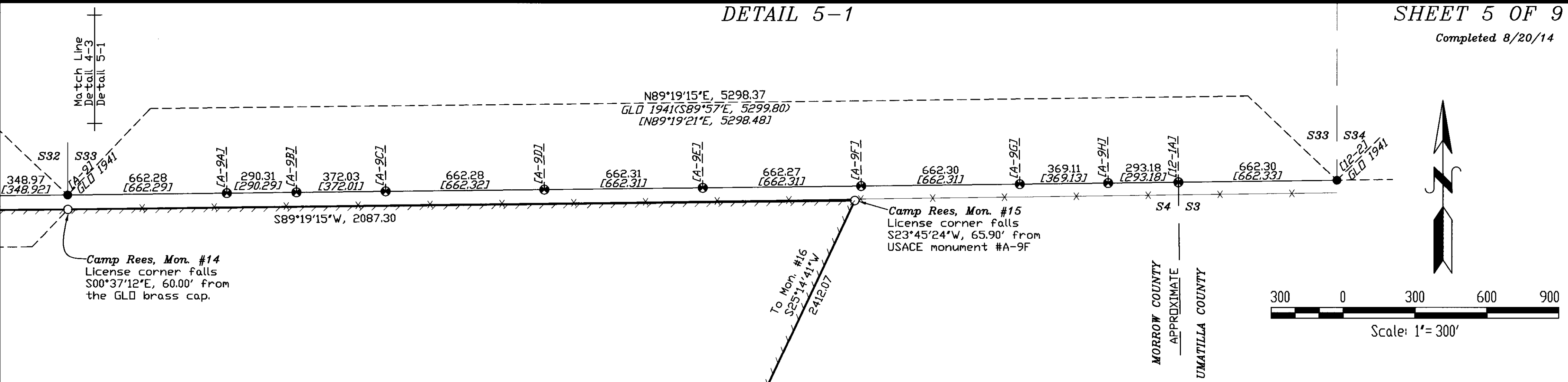
Camp Rees, Mon. #12 License corner falls S00°45'28\"/>

Camp Rees, Mon. #13 License corner falls S00°34'57\"/>

Camp Rees, Mon. #14 License corner falls S00°37'12\"/>

RECEIVED BY
Morrow County Surveyor
Date: 8-27-2014
Rec'd By: S.K.H.
No.: 2014-1712C
Folder No.: 1712

REGISTERED
PROFESSIONAL
LAND SURVEYOR
[Signature]
OREGON
JULY 13, 1999
KENNETH H. DELANO JR.
49865
RENEWS: 1/1/2016



**COORDINATE TABLE
MONUMENTS SET THIS SURVEY**

ID	Northing	Easting	Elev.
#1	781443.48	8477515.10	578.42
#2	783136.14	8468275.70	544.47
#3	789824.63	8468180.77	579.22
#4	789728.35	8460776.53	579.64
#5	789666.72	8460777.25	583.64
#6	789607.13	8454959.05	565.65
#7	792253.21	8454918.11	NA
#8	797629.47	8454774.78	488.48
#9	801864.96	8454754.67	415.45
#10	802947.13	8456519.04	404.06
#11	802976.48	8458295.54	428.42
#12	803059.79	8463533.52	488.33
#13	803087.74	8466184.16	543.44
#14	803113.71	8468836.46	575.32
#15	803152.64	8472120.50	620.34
#16	800970.94	8471091.79	636.82
#17	801043.73	8476572.39	648.30
#18	800707.94	8476576.98	649.05
#19	800205.64	8476368.79	655.57
#20	798399.46	8476391.40	644.02
#22	797986.19	8473846.01	632.06
#23	797776.65	8473848.82	633.15
#24	797770.28	8473551.48	631.28
#25	791824.81	8473628.34	NA
#26	791868.58	8477076.73	639.26
#27	790590.48	8477093.20	629.70
#28	790591.23	8477153.19	630.19
#29	787558.19	8477193.38	600.77
#30	787131.21	8477022.86	595.46
#31	786065.27	8475982.74	598.14
#32	785715.74	8475840.61	597.45
#33	784257.12	8475841.59	595.60
#34	784283.93	8478062.23	585.31
#35	781464.64	8478092.74	580.66

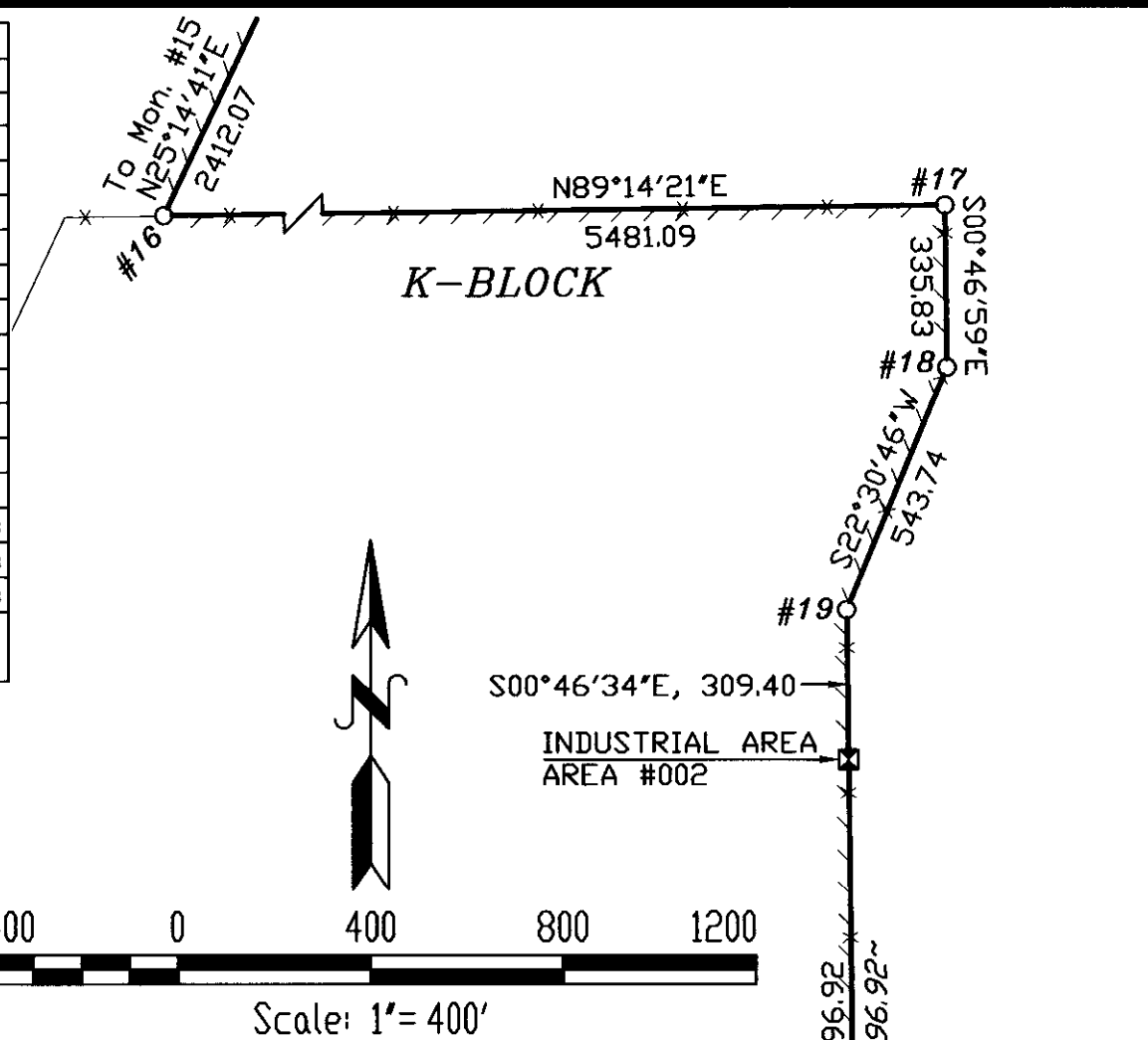
COORDINATE TABLE - FOUND MONUMENTS

ID	Northing	Easting	Elevation	Description
[A-1]	785410.93	8454959.43	548.37	USACE MON
[A-1A]	786106.83	8454950.70	552.83	USACE MON
[A-1B]	786670.52	8454943.64	560.38	USACE MON
[A-2]	786957.76	8454940.04	NA	Calc Pt 1/4 S13-24 4N 26E
[11-1A]	787619.92	8454929.79	569.24	USACE MON
[11-1B]	788281.79	8454919.55	568.89	USACE MON
[11-1C]	788944.11	8454909.30	569.82	USACE MON
[11-1D]	789606.20	8454899.06	565.53	USACE MON
[11-1E]	790267.68	8454888.83	569.68	USACE MON
[11-1F]	790823.34	8454880.23	569.40	USACE MON *
[11-1G]	790929.04	8454878.59	565.08	USACE MON
[11-1H]	791590.63	8454868.36	571.04	USACE MON
[A-3]	792251.94	8454858.12	556.06	1/4 S12-13 4N 26E GLO BC 1939
[A-3A]	792511.52	8454851.20	557.56	USACE MON
[A-3B]	792913.59	8454840.48	547.85	USACE MON
[A-3C]	793212.24	8454832.52	552.24	USACE MON
[A-3H]	794898.24	8454787.57	533.82	USACE MON
[A-3J]	796263.29	8454751.18	552.47	USACE MON
[A-3K]	796579.72	8454742.74	545.20	USACE MON
[A-4]	797628.53	8454714.78	487.70	1/4 S1-12 4N 26E GLO BC 1939
[10-1A]	798267.31	8454711.75	481.23	USACE MON
[10-1B]	798906.19	8454708.72	465.72	USACE MON *
[10-1C]	799544.75	8454705.68	456.58	USACE MON
[10-1D]	799622.76	8454705.31	457.16	USACE MON
[10-1E]	800128.50	8454702.91	448.49	USACE MON
[10-1F]	800183.46	8454702.65	445.17	USACE MON
[10-1G]	800786.90	8454699.79	434.45	USACE MON *
[10-1H]	800881.06	8454699.34	429.12	USACE MON
[10-1K]	802276.90	8454692.71	384.41	USACE MON
[10-1L]	802750.41	8454690.46	382.79	USACE MON
[10-2]	802975.43	8454689.40	370.18	USACE MON
[10-2A]	802980.10	8454947.04	373.41	USACE MON
[10-3]	802992.20	8455615.10	377.61	SC 1/4 S36 5N 26E GLO BC 1915
[10-3A]	803001.69	8456284.14	391.64	USACE MON
[10-3B]	803011.32	8456953.30	407.99	USACE MON *
#1043	803017.63	8457399.32	413.15	5/8" REBAR LS 2850
FS&E #2	803036.47	8458294.57	NA	S36 S31 T5N R26-27E COPPOCK BC
[A-6A]	803040.35	8458946.69	440.31	USACE MON *
[A-6B]	803049.95	8459601.53	438.26	USACE MON *
[A-6C]	803059.53	8460256.42	440.98	USACE MON *
[A-6D]	803069.33	8460911.71	444.41	USACE MON *
#2000	803081.72	8461139.57	450.85	5/8" pin with #951 cap
[A-6E]	803079.07	8461566.54	455.76	USACE MON *
[A-6F]	803088.53	8462221.38	467.50	USACE MON *
[A-7]	803098.24	8462876.44	475.53	USACE MON
[4-2]	803107.92	8463531.29	486.64	USACE MON
FS&E #1	803119.79	8463532.72	NA	SC S31 S32 5N 27E COPPOCK BC
[4-2A]	803117.92	8464194.34	495.71	USACE MON
[4-2B]	803127.86	8464857.40	513.29	USACE MON
[4-2C]	803137.79	8465520.46	526.87	USACE MON
[4-3]	803147.74	8466183.56	539.82	SC 1/4 S32 GLO BC 1941
[4-3A]	803151.09	8466525.53	551.18	USACE MON
[4-3B]	803154.23	8466846.58	551.32	USACE MON
[4-3C]	803160.72	8467509.64	556.86	USACE MON
[4-4]	803166.95	8468145.53	576.77	USACE MON
[A-8A]	803167.21	8468172.74	576.34	USACE MON

COORDINATE TABLE - FOUND MONUMENTS

ID	Northing	Easting	Elevation	Description
[A-8B]	803170.29	8468486.85	582.29	USACE MON
[A-9]	803173.71	8468835.81	573.39	SC S32 S33 GLO BC 1941
[A-9A]	803181.56	8469498.03	578.92	USACE MON
[A-9B]	803185.00	8469788.33	591.52	USACE MON
[A-9C]	803189.41	8470160.33	591.42	USACE MON
[A-9D]	803197.26	8470822.56	598.01	USACE MON
[A-9E]	803205.11	8471484.82	607.51	USACE MON
[A-9F]	803212.96	8472147.05	616.95	USACE MON
[A-9G]	803220.81	8472809.31	628.68	USACE MON
[A-9H]	803225.19	8473178.39	633.94	USACE MON
[12-1A]	803228.67	8473471.55	634.82	USACE MON
[12-2]	803236.52	8474133.81	634.74	SC S33 S34 GLO BC 1941
#002	799896.26	8476372.98	655.75	Alum. Mon, H&S Construction Site Surveyors
#001	798019.49	8476391.57	647.89	Alum. Mon, H&S Construction Site Surveyors
#018	797998.87	8474783.47	625.74	Alum. Mon, H&S Construction Site Surveyors
#13800	781948.21	8473748.49	572.46	Sec. Cor. 21, 22, 27 & 28, 4N 27E UMATILLA CO SURVEYOR BC

* Monument cap has been destroyed. Breakaway monument base section recovered.



~BEARING/DIST~ Bearing and distance from drawings provided by H&S Construction Site Surveyors, Lacey Washington, revision date 3-10-2014.

Found 3" aluminum pipe monument with aluminum cap stamped "INDUSTRIAL AREA" and monument number as shown, set by H&S Construction Site Surveyors.

NOTE: Monuments set 1'± outside of the K-Block fence.

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Kenneth H. Delano Jr.

OREGON
JULY 13, 1999
KENNETH H. DELANO JR.
49865

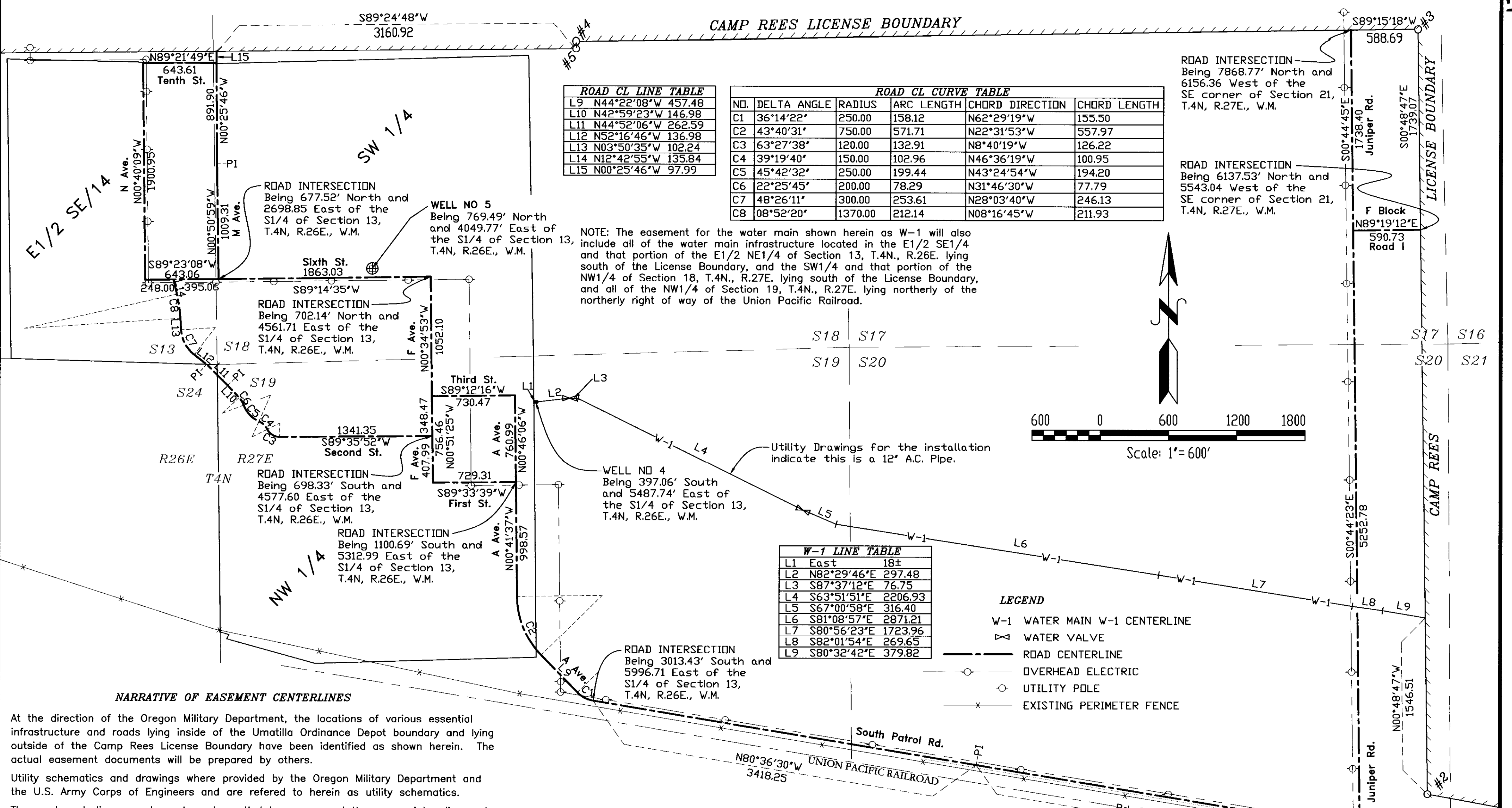
RENEWS: 1/1/2016

**COORDINATE TABLE
TEMPORARY CONTROL**

ID	Northing	Easting
CP#500	782223.86	8476405.85
CP#501	789638.68	8457673.46

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ROAD CL LINE TABLE

L9	N44°22'08"W	457.48
L10	N42°59'23"W	146.98
L11	N44°52'06"W	262.59
L12	N52°16'46"W	136.98
L13	N03°50'35"W	102.24
L14	N12°42'55"W	135.84
L15	N00°25'46"W	97.99

ROAD CL CURVE TABLE

NO.	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD LENGTH
C1	36°14'22"	250.00	158.12	N62°29'19"W	155.50
C2	43°40'31"	750.00	571.71	N22°31'53"W	557.97
C3	63°27'38"	120.00	132.91	N8°40'19"W	126.22
C4	39°19'40"	150.00	102.96	N46°36'19"W	100.95
C5	45°42'32"	250.00	199.44	N43°24'54"W	194.20
C6	22°25'45"	200.00	78.29	N31°46'30"W	77.79
C7	48°26'11"	300.00	253.61	N28°03'40"W	246.13
C8	08°52'20"	1370.00	212.14	N08°16'45"W	211.93

NOTE: The easement for the water main shown herein as W-1 will also include all of the water main infrastructure located in the E1/2 SE1/4 and that portion of the E1/2 NE1/4 of Section 13, T.4N., R.26E. lying south of the License Boundary, and the SW1/4 and that portion of the NW1/4 of Section 18, T.4N., R.27E. lying south of the License Boundary, and all of the NW1/4 of Section 19, T.4N., R.27E. lying northerly of the northerly right of way of the Union Pacific Railroad.

W-1 LINE TABLE

L1	East	18±
L2	N82°29'46"E	297.48
L3	S87°37'12"E	76.75
L4	S63°51'51"E	2206.93
L5	S67°00'58"E	316.40
L6	S81°08'57"E	2871.21
L7	S80°56'23"E	1723.96
L8	S82°01'54"E	269.65
L9	S80°32'42"E	379.82

- LEGEND**
- W-1 WATER MAIN W-1 CENTERLINE
 - ⊕ WATER VALVE
 - ROAD CENTERLINE
 - OVERHEAD ELECTRIC
 - UTILITY POLE
 - × EXISTING PERIMETER FENCE

NARRATIVE OF EASEMENT CENTERLINES

At the direction of the Oregon Military Department, the locations of various essential infrastructure and roads lying inside of the Umatilla Ordinance Depot boundary and lying outside of the Camp Rees License Boundary have been identified as shown herein. The actual easement documents will be prepared by others.

Utility schematics and drawings were provided by the Oregon Military Department and the U.S. Army Corps of Engineers and are referred to herein as utility schematics.

The road centerlines as shown have been tied by survey and the appropriate alignment geometry has been applied.

NARRATIVE OF EASEMENT CENTERLINES (cont.)

The water main, shown on Sheet 6 as W-1, was field located based on found valves and the visible trench location. The water mains shown on Sheet 9, W-2 and W-3, were not located during this survey. The location of those mains are shown based on the provided utility schematics. It is to be understood that the centerline of the existing water mains shall be the actual centerline of the easement.

The telephone/telecom locations shown herein are based on found telephone risers, telephone junction vaults, markers indicating underground cable locations and the schematics provided. It is to be understood that the centerline of the existing telephone cables and fiber optic lines shall be the actual centerline of the easement.

The natural gas line, shown on Sheet 8, is located based on line markers and a valve found along the said line. It is to be understood that the centerline of the existing gas main shall be the actual centerline of the easement.

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[Signature]

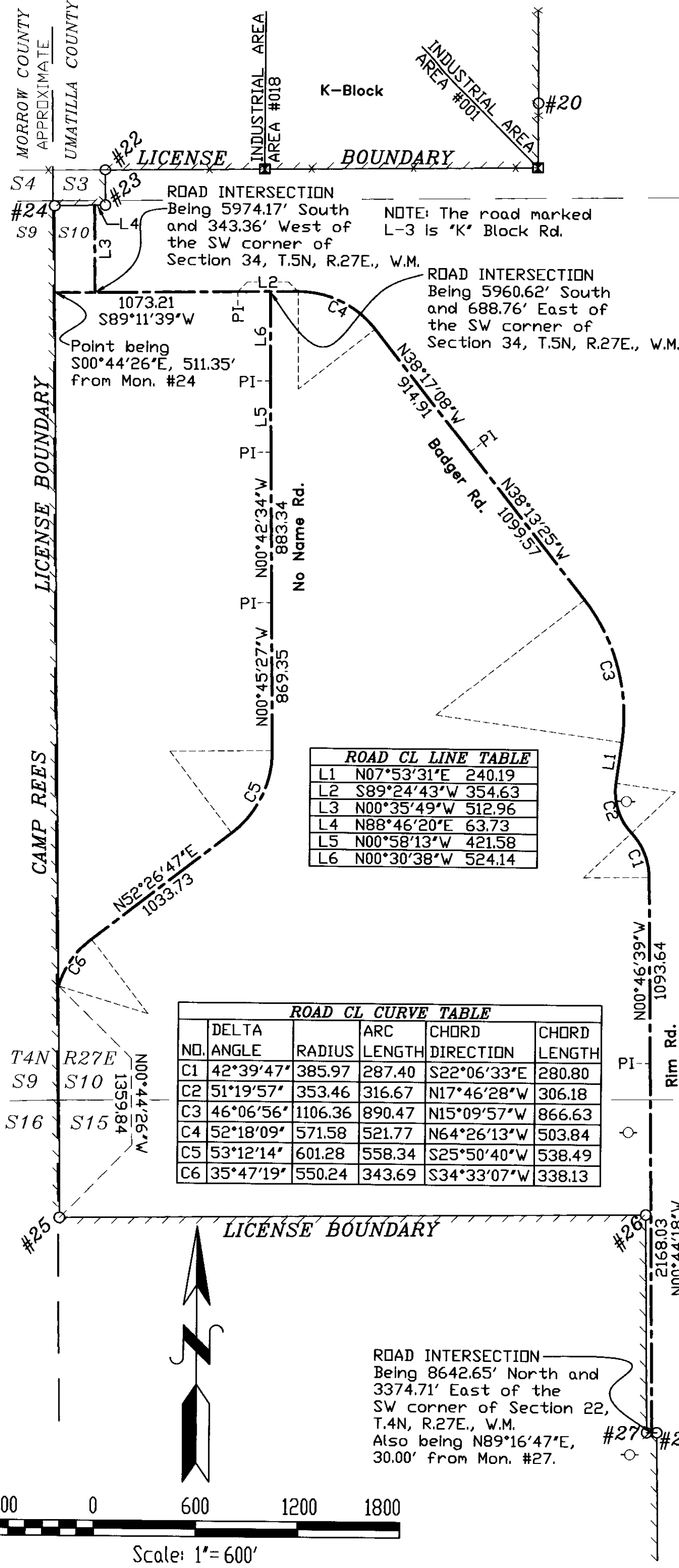
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T4N	R27E
S20	S21
S29	S28

**DETAIL 7A
EASEMENT CENTERLINES - ROADS**



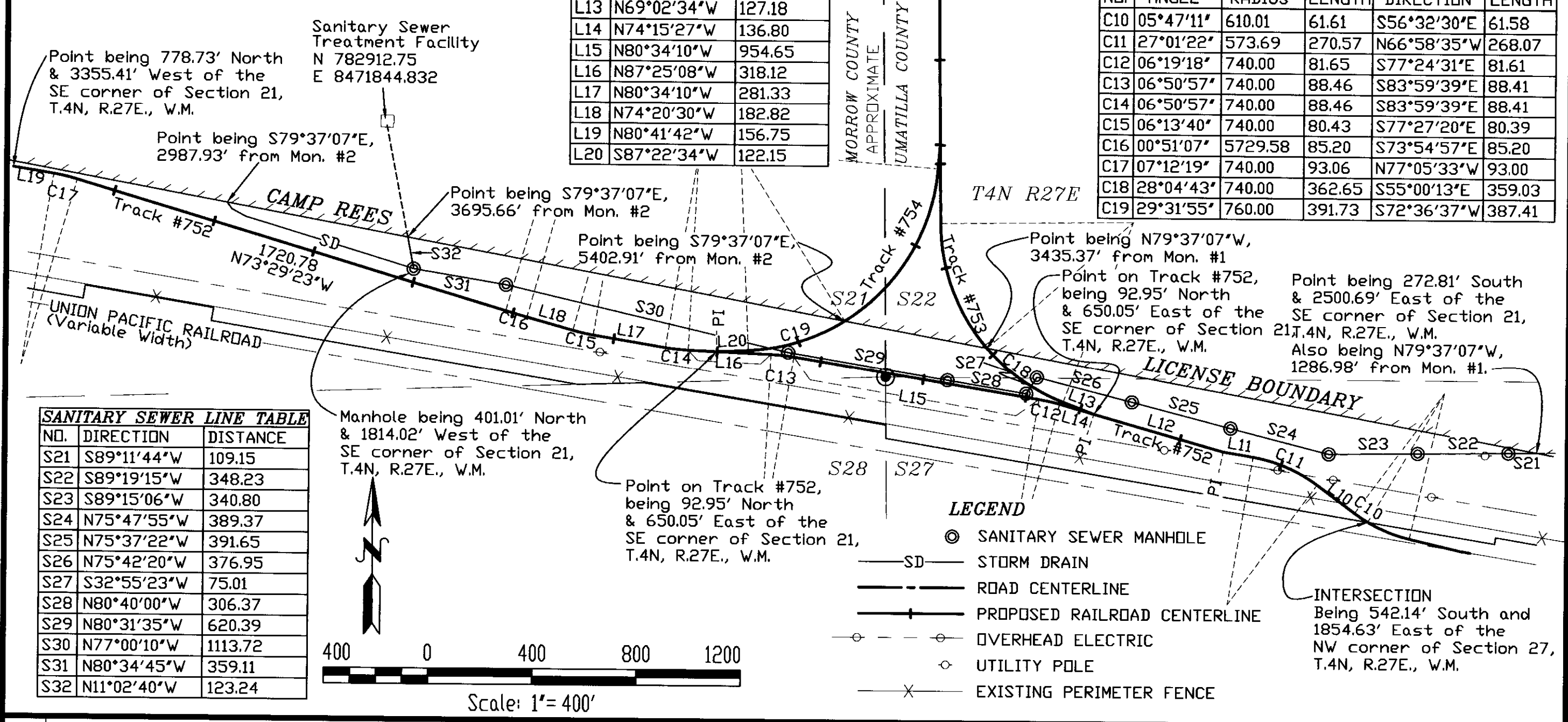
ROAD CL LINE TABLE

NO.	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD LENGTH	DIRECTION
L1	N07°53'31"E	240.19			
L2	S89°24'43"W	354.63			
L3	N00°35'49"W	512.96			
L4	N88°46'20"E	63.73			
L5	N00°58'13"W	421.58			
L6	N00°30'38"W	524.14			

ROAD CL CURVE TABLE

NO.	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD LENGTH	DIRECTION
C1	42°39'47"	385.97	287.40	280.80	S22°06'33"E
C2	51°19'57"	353.46	316.67	306.18	N17°46'28"W
C3	46°06'56"	1106.36	890.47	866.63	N15°09'57"W
C4	52°18'09"	571.58	521.77	503.84	N64°26'13"W
C5	53°12'14"	601.28	558.34	538.49	S25°50'40"W
C6	35°47'19"	550.24	343.69	338.13	S34°33'07"W

**DETAIL 7B
EASEMENT CENTERLINES - PROPOSED RAILROAD, SANITARY SEWER & STORM DRAIN**



RAILROAD CL LINE TABLE

NO.	DIRECTION	DISTANCE
L10	N53°27'54"W	179.20
L11	N80°29'16"W	115.87
L12	N74°14'53"W	517.35
L13	N69°02'34"W	127.18
L14	N74°15'27"W	136.80
L15	N80°34'10"W	954.65
L16	N87°25'08"W	318.12
L17	N80°34'10"W	281.33
L18	N74°20'30"W	182.82
L19	N80°41'42"W	156.75
L20	S87°22'34"W	122.15

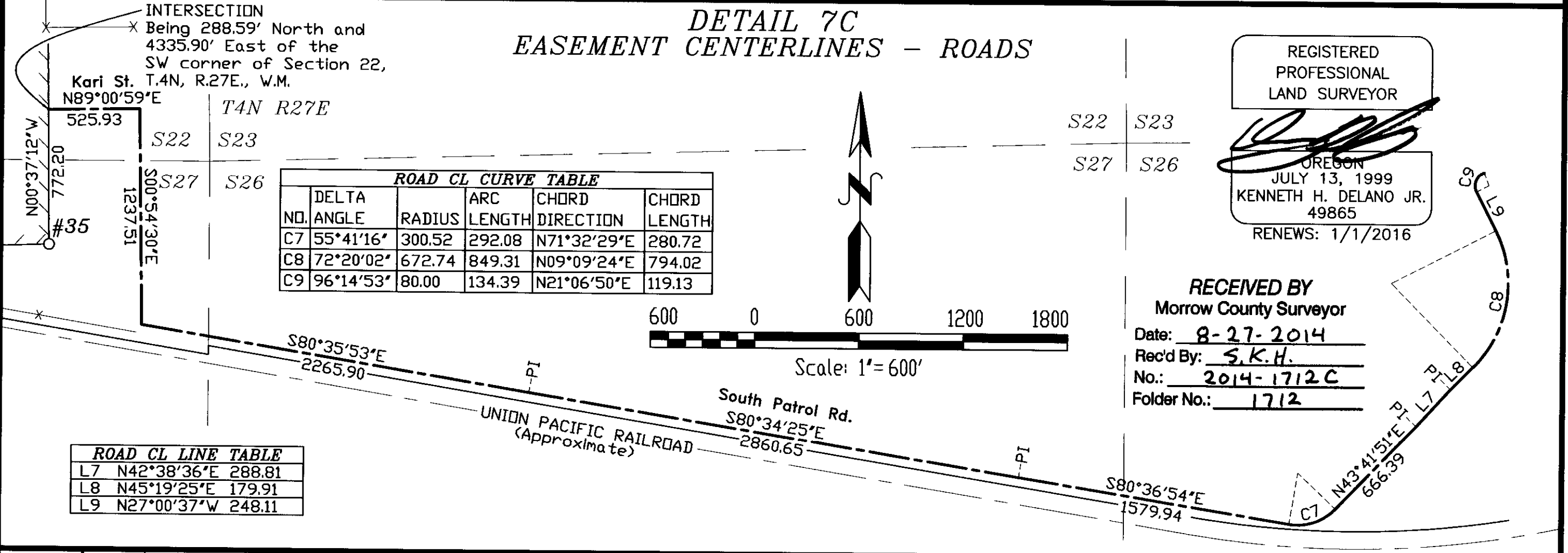
SANITARY SEWER LINE TABLE

NO.	DIRECTION	DISTANCE
S21	S89°11'44"W	109.15
S22	S89°19'15"W	348.23
S23	S89°15'06"W	340.80
S24	N75°47'55"W	389.37
S25	N75°37'22"W	391.65
S26	N75°42'20"W	376.95
S27	S32°55'23"W	75.01
S28	N80°40'00"W	306.37
S29	N80°31'35"W	620.39
S30	N77°00'10"W	1113.72
S31	N80°34'45"W	359.11
S32	N11°02'40"W	123.24

RAILROAD CL CURVE TABLE

NO.	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD LENGTH	DIRECTION	CHORD LENGTH
C10	05°47'11"	610.01	61.61	556°32'30"E	61.58	
C11	27°01'22"	573.69	270.57	N66°58'35"W	268.07	
C12	06°19'18"	740.00	81.65	S77°24'31"E	81.61	
C13	06°50'57"	740.00	88.46	S83°59'39"E	88.41	
C14	06°50'57"	740.00	88.46	S83°59'39"E	88.41	
C15	06°13'40"	740.00	80.43	S77°27'20"E	80.39	
C16	00°51'07"	5729.58	85.20	S73°54'57"E	85.20	
C17	07°12'19"	740.00	93.06	N77°05'33"W	93.00	
C18	28°04'43"	740.00	362.65	S55°00'13"E	359.03	
C19	29°31'55"	760.00	391.73	S72°36'37"W	387.41	

**DETAIL 7C
EASEMENT CENTERLINES - ROADS**



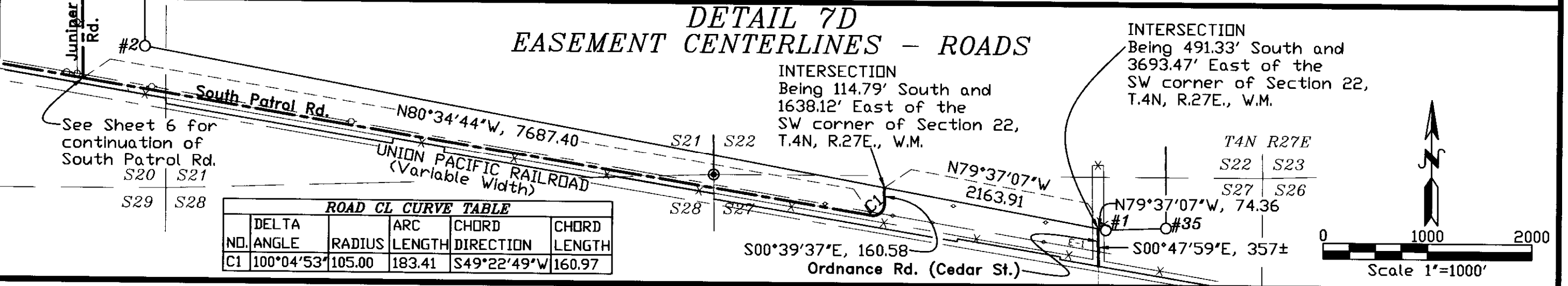
ROAD CL CURVE TABLE

NO.	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD LENGTH	DIRECTION
C7	55°41'16"	300.52	292.08	280.72	N71°32'29"E
C8	72°20'02"	672.74	849.31	794.02	N09°09'24"E
C9	96°14'53"	80.00	134.39	119.13	N21°06'50"E

ROAD CL LINE TABLE

NO.	DIRECTION	DISTANCE
L7	N42°38'36"E	288.81
L8	N45°19'25"E	179.91
L9	N27°00'37"W	248.11

**DETAIL 7D
EASEMENT CENTERLINES - ROADS**



ROAD CL CURVE TABLE

NO.	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD LENGTH	DIRECTION
C1	100°04'53"	105.00	183.41	160.97	S49°22'49"W

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[Signature]

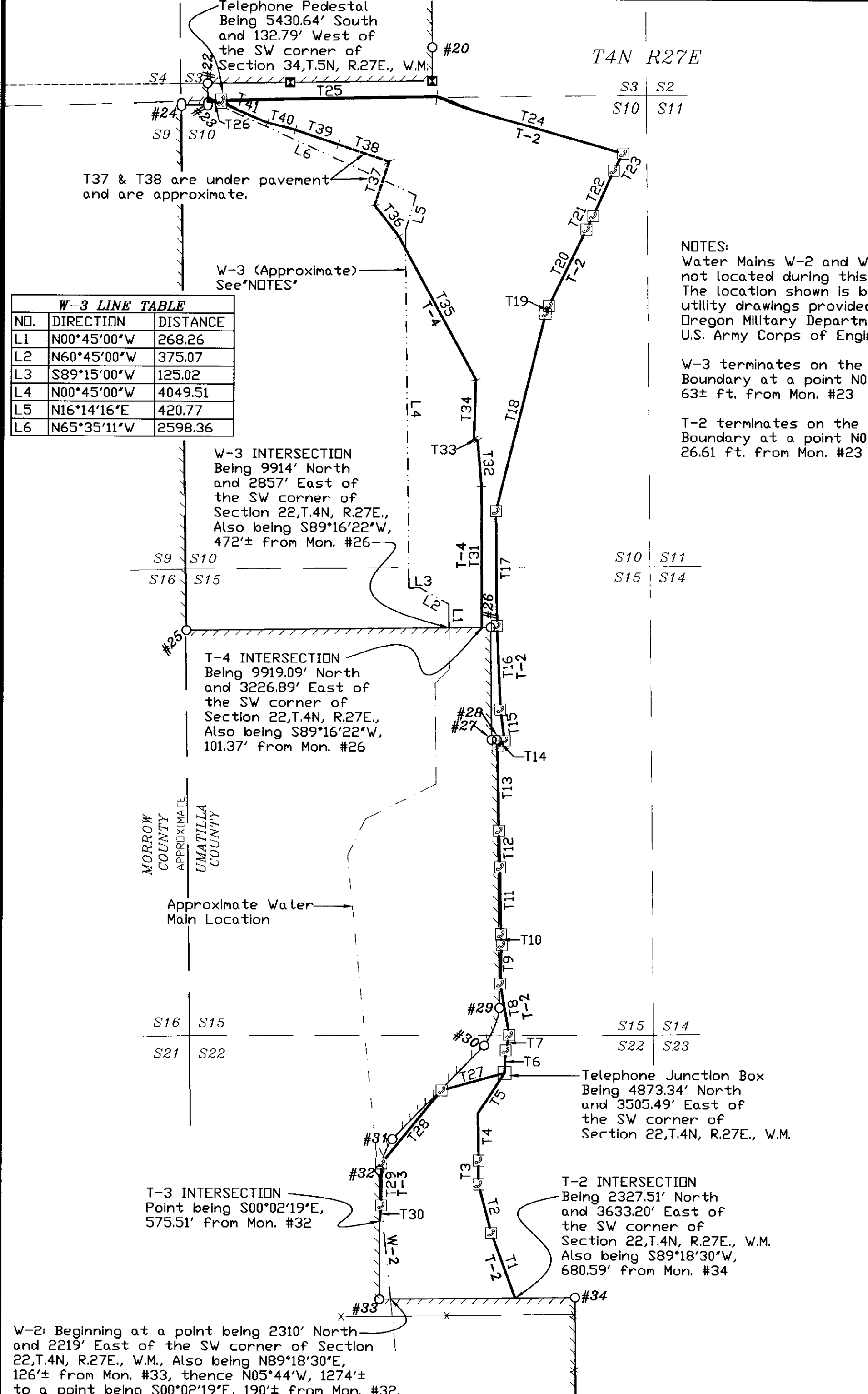
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EASEMENT CENTERLINES
TELEPHONE/FIBER OPTIC &
WATER MAINS
Completed 8/20/14

1712



W-3 LINE TABLE

NO.	DIRECTION	DISTANCE
L1	N00°45'00"W	268.26
L2	N60°45'00"W	375.07
L3	S89°15'00"W	125.02
L4	N00°45'00"W	4049.51
L5	N16°14'16"E	420.77
L6	N65°35'11"W	2598.36

NOTES:
Water Mains W-2 and W-3 were not located during this survey. The location shown is based on utility drawings provided by the Oregon Military Department and the U.S. Army Corps of Engineers.

W-3 terminates on the License Boundary at a point N00°46'02"W, 63± ft. from Mon. #23

T-2 terminates on the License Boundary at a point N00°46'02"W, 26.61 ft. from Mon. #23

W-3 INTERSECTION
Being 9914' North
and 2857' East of
the SW corner of
Section 22,T.4N, R.27E.,
Also being S89°16'22"W,
472± ft. from Mon. #26

T-4 INTERSECTION
Being 9919.09' North
and 3226.89' East of
the SW corner of
Section 22,T.4N, R.27E.,
Also being S89°16'22"W,
101.37' from Mon. #26

Telephone Junction Box
Being 4873.34' North
and 3505.49' East of
the SW corner of
Section 22,T.4N, R.27E., W.M.

T-2 INTERSECTION
Being 2327.51' North
and 3633.20' East of
the SW corner of
Section 22,T.4N, R.27E., W.M.
Also being S89°18'30"W,
680.59' from Mon. #34

T-3 INTERSECTION
Point being S00°02'19"E,
575.51' from Mon. #32

W-2: Beginning at a point being 2310' North
and 2219' East of the SW corner of Section
22,T.4N, R.27E., W.M., Also being N89°18'30"E,
126± ft. from Mon. #33, thence N05°44'W, 1274±
to a point being S00°02'19"E, 190± ft. from Mon. #32.

TELEPHONE (T-2) LINE TABLE

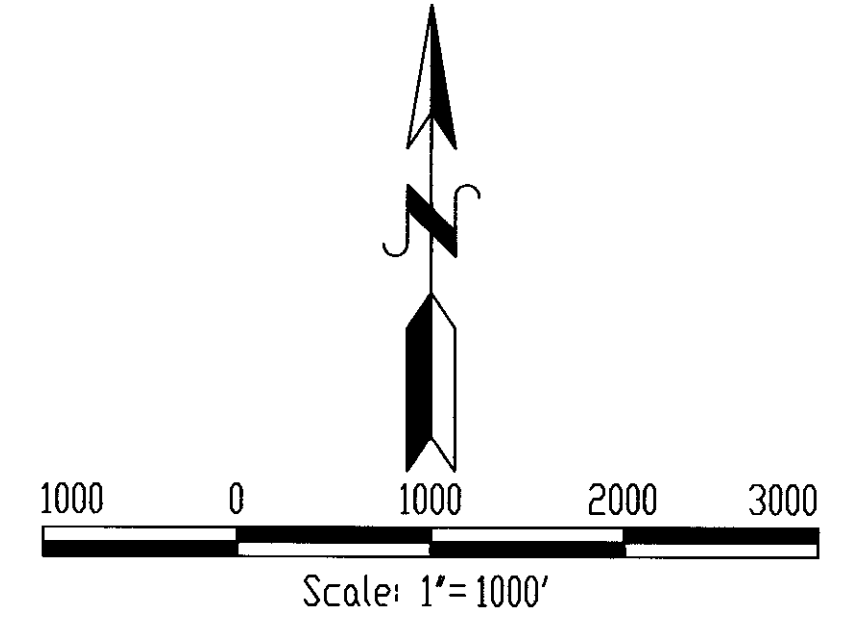
NO.	DIRECTION	DISTANCE
T1	N20°19'07"W	784.69
T2	N15°02'05"W	565.98
T3	N00°07'24"E	271.48
T4	N00°54'22"W	533.00
T5	N33°07'16"E	547.99
T6	N02°39'21"E	255.41
T7	N13°31'21"E	177.37
T8	N10°11'20"W	593.00
T9	N01°40'47"E	437.81
T10	N04°00'34"W	121.44
T11	N00°57'58"W	761.97
T12	N02°00'50"W	414.90
T13	N01°06'08"W	951.24
T14	N51°03'14"E	102.17
T15	N07°52'25"W	352.35
T16	N02°33'35"W	956.32
T17	N00°42'42"W	1293.36
T18	N13°53'03"E	2310.99
T19	N22°44'41"E	97.26
T20	N25°55'52"E	965.65
T21	N26°19'17"E	170.77
T22	N24°06'17"E	566.40
T23	N28°54'30"E	221.86
T24	N74°08'53"W	2200.47
T25	S89°00'52"W	2444.68
T26	S89°00'52"W	152.58

TELEPHONE (T-3) LINE TABLE

NO.	DIRECTION	DISTANCE
T27	S74°25'37"W	739.52
T28	S39°19'38"W	1075.65
T29	S00°03'59"W	473.92
T30	S05°55'43"W	177.76

TELEPHONE (T-4) LINE TABLE

NO.	DIRECTION	DISTANCE
T31	N00°13'45"W	1590.56
T32	N04°58'16"W	527.54
T33	N62°35'08"W	46.66
T34	N01°36'19"E	672.47
T35	N28°30'47"W	1843.59
T36	N38°10'49"W	449.52
T37	N18°31'15"E	521.24
T38	N71°28'45"W	609.21
T39	N71°28'45"W	513.09
T40	N75°13'34"W	329.44
T41	N67°10'58"W	569.17



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LEGEND

☐ PHONE RISER/BURIED CABLE MARKER

— TELEPHONE/FIBER OPTIC LINE

- - - WATER MAIN

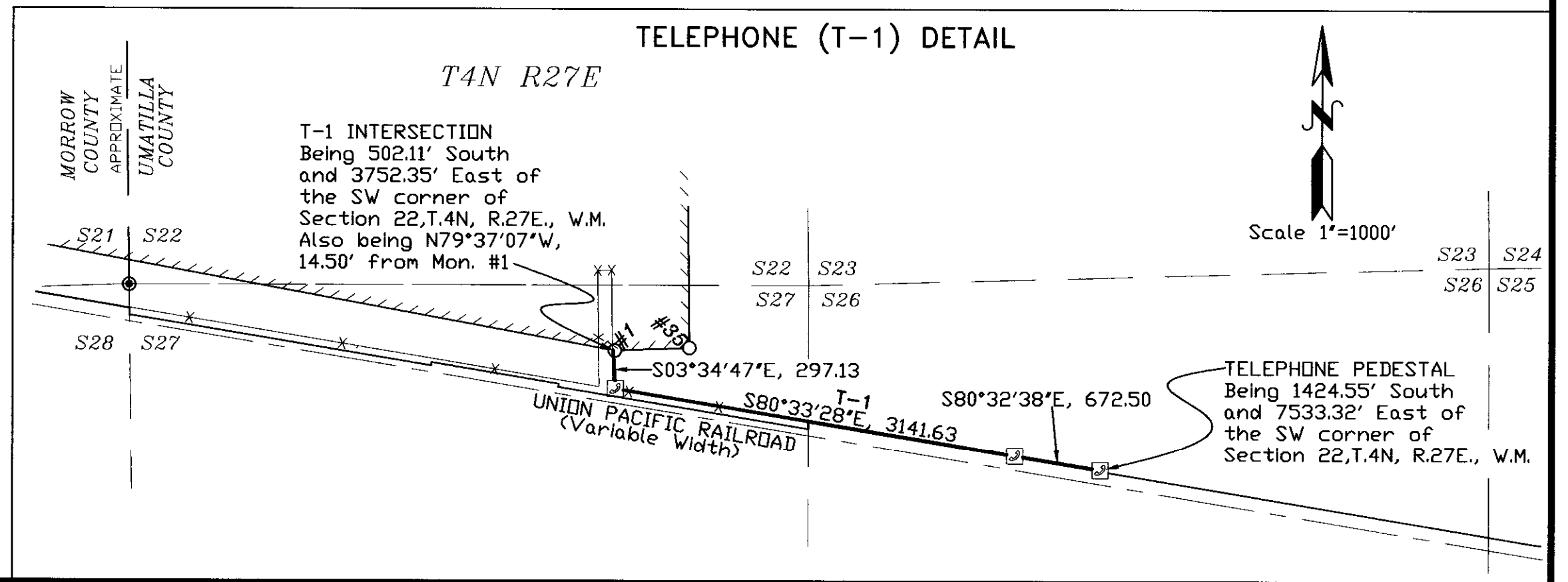
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