

OBSTRUCTION DATA SHEET

**ODS 152
SHERMAN AAF
FORT LEAVENWORTH, KANSAS**

DIGITIZED FROM

**OC 152
SURVEYED OCTOBER 1989
2ND EDITION**



PREPARED AND DISTRIBUTED BY
THE NATIONAL OCEAN SERVICE
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OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA Nr. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS (and OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

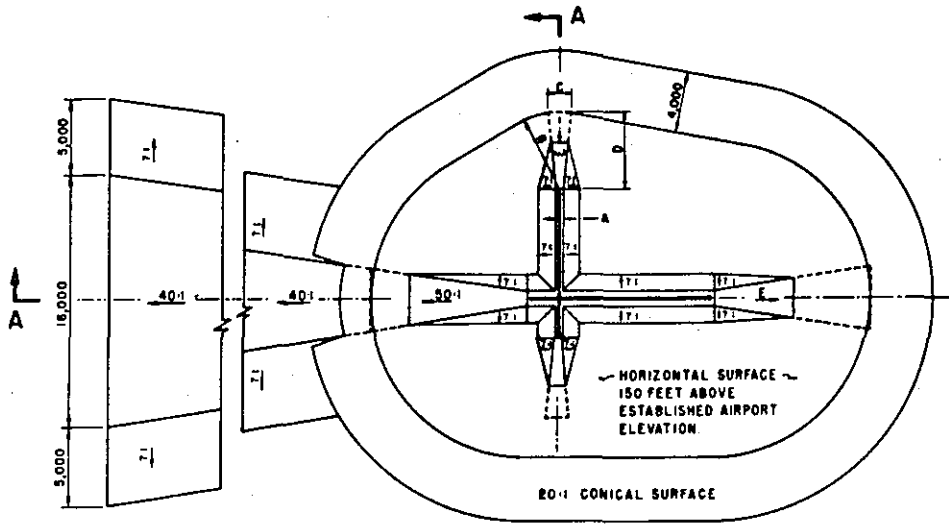
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows (see footnote 2 on page 3):

A(V) Utility runway - visual approach only
 A(NP) Utility runway - nonprecision instrument approach
 B(V) Nonutility runway - visual approach only
 C Nonutility runway - nonprecision instrument approach with
 visibility minimums greater than 3/4 mile
 D Nonutility runway - nonprecision instrument approach with
 visibility minimums as low as 3/4 mile
 PIR Precision instrument runway
 SUPLC ... Supplemental C underlying a B(V)

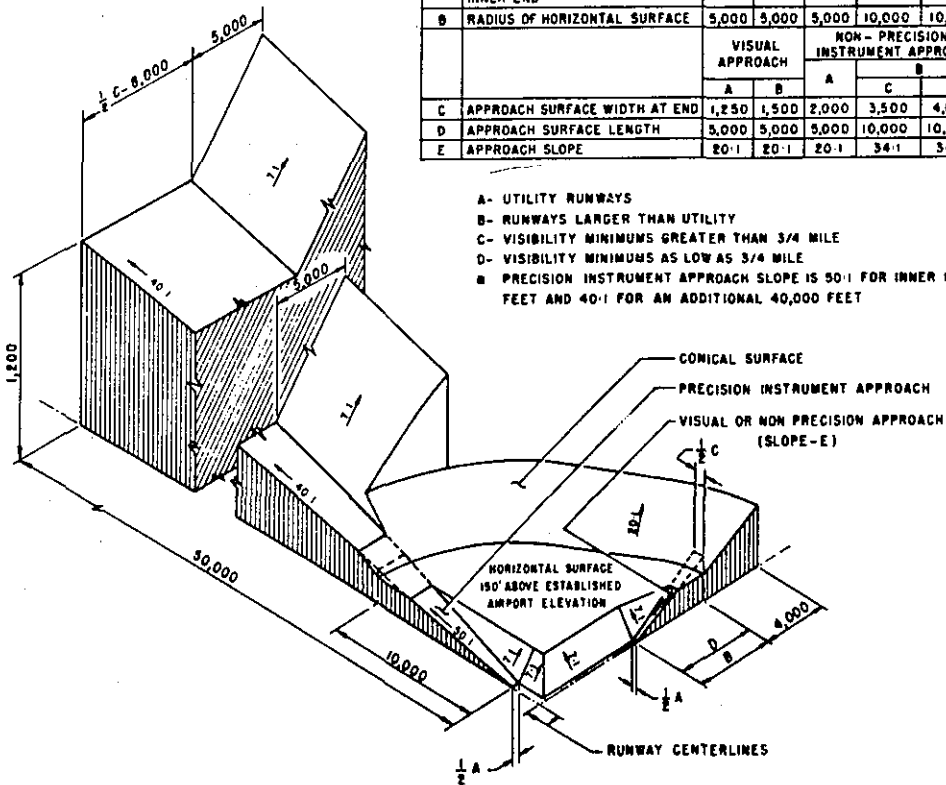
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



| DIM | ITEM | DIMENSIONAL STANDARDS (FEET) | | | | | |
|-----|--|------------------------------|-------|-----------------------------------|--------|--------|-------------------------------|
| | | VISUAL RUNWAY | | NON-PRECISION INSTRUMENT RUNWAY | | | PRECISION INSTRUMENT RUNWAY |
| | | A | B | A | C | D | |
| A | WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END | 250 | 500 | 500 | 500 | 1,000 | 1,000 |
| B | RADIUS OF HORIZONTAL SURFACE | 5,000 | 3,000 | 5,000 | 10,000 | 10,000 | 10,000 |
| | | VISUAL APPROACH | | NON-PRECISION INSTRUMENT APPROACH | | | PRECISION INSTRUMENT APPROACH |
| | | A | B | A | C | D | |
| C | APPROACH SURFACE WIDTH AT END | 1,250 | 1,500 | 2,000 | 3,500 | 4,000 | 16,000 |
| D | APPROACH SURFACE LENGTH | 5,000 | 3,000 | 5,000 | 10,000 | 10,000 | * |
| E | APPROACH SLOPE | 20:1 | 20:1 | 20:1 | 34:1 | 34:1 | * |

- A- UTILITY RUNWAYS
- B- RUNWAYS LARGER THAN UTILITY
- C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- * PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET



ISOMETRIC VIEW OF SECTION A-A

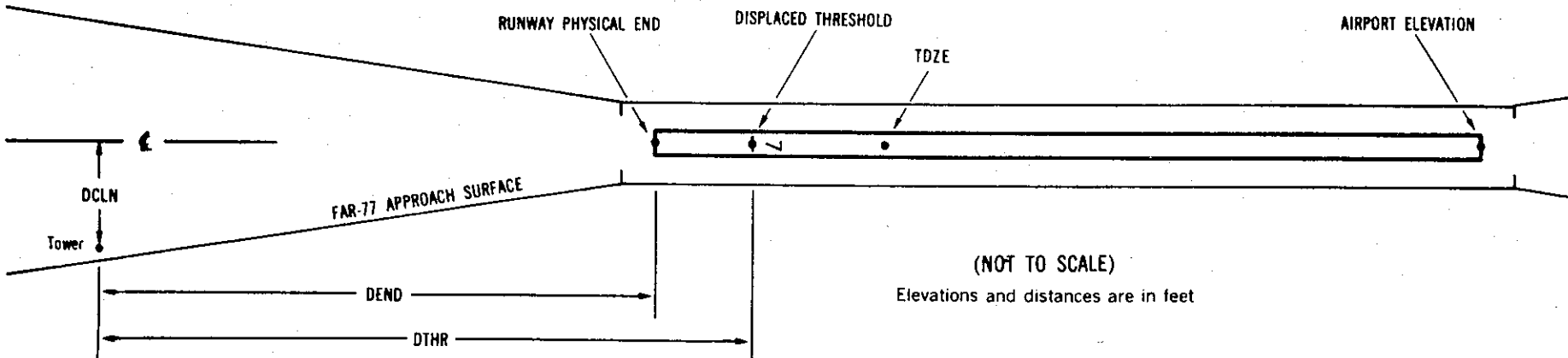
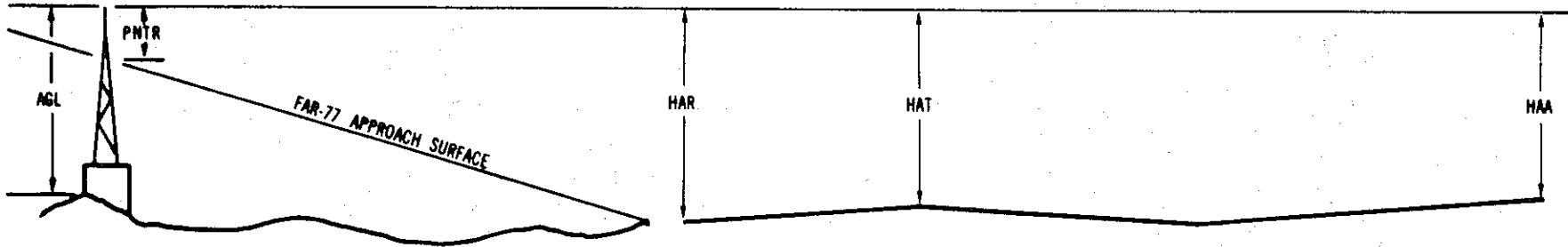
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

| | | | | | | | | | | | | |
|----------------|----------------|------------------------|-------------------------|---------------------------|----------------------|------------------------|-------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|
| x ¹ | x ² | XXXX/XXXX ³ | XXXXXX.XXX ⁴ | XXXXXXXX.XXX ⁴ | XXXXXXX ⁵ | XXXX/XXXX ⁶ | XXXXXX.XXX ⁷ | XXXXXXXX.XXX ⁷ | | | | |
| OBJECT | LAT | LONG | A ⁸ | ELEV ⁹ | AGL ¹⁰ | HAR ¹¹ | HAT ¹¹ | HAA ¹¹ | DEND ¹² | DTHR ¹² | DCLN ¹² | PNTR ¹³ |
| XXXXXXXXXXXX | XXXXXX.XXX | XXXXXXXX.XXX | XX | XXXX | XXXX | XXX | XXX | XXX | XXXXX | XXXXX | XXXX | XXXX |
| XXXXXXXXXXXX | XXXXXX.XXX | XXXXXXXX.XXX | XX | XXXX | XXXX | XXX | XXX | XXX | XXXXX | XXXXX | XXXX | XXXX |



EXPLANATION OF FOOTNOTES

- 1 Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary area of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.
- 2 For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)
- 3 Reference runway approach physical end elevation/touchdown zone elevation
- 4 Latitude and longitude of reference runway approach physical end
- 5 Reference runway geodetic azimuth reckoned clockwise from south
- 6 Reference runway displaced threshold elevation/touchdown zone elevation
- 7 Latitude and longitude of reference runway displaced threshold
- 8 Accuracy Code: Horizontal Vertical
 1 = 20 A = 2
 2 = 40 B = 5
 C = 20
- 9 Mean Sea Level (MSL) elevation at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.
- 10 Height above ground level (AGL). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is ± 10 feet.
- 11 HAA - Height above airport
 HAR - Height above reference runway approach physical end
 HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end
 DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway threshold
 DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft.
- A negative value for DEND or DTHR indicates object is in primary area on roll-out side of zero distance point.
- 13 PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

OC0152

AIRPORT ELEVATION 772

15 C 771/ 392233.317N 09455 5.320W 3392357 772/772 392228.185N 09455 2.834W

| OBJECT | LAT | LONG | A | ELEV | AGL | HAR | HAT | HAA | DEND | DTHR | DCLN | PNTR |
|----------|-----------|------------|----|------|-----|-----|-----|-----|------|------|------|------|
| ROAD (N) | 392234.08 | 0945502.63 | 1A | 796 | | 25 | 24 | 24 | -2 | 552 | 224L | 25 |
| ROAD (N) | 392234.93 | 0945506.25 | 1A | 796 | | 25 | 24 | 24 | 178 | 733 | 11R | 25 |
| OL POLE | 392235.02 | 0945507.65 | 1A | 783 | | 12 | 11 | 11 | 226 | 781 | 111R | 11 |
| TREE | 392241.10 | 0945504.49 | 1A | 848 | | 77 | 76 | 76 | 714 | 1269 | 338L | 62 |
| TREE | 392247.24 | 0945507.60 | 1A | 856 | | 85 | 84 | 84 | 1381 | 1936 | 328L | 50 |
| TREE | 392251.90 | 0945509.24 | 1A | 868 | | 97 | 96 | 96 | 1868 | 2423 | 374L | 48 |
| TREE | 392257.88 | 0945513.18 | 1A | 864 | | 93 | 92 | 92 | 2543 | 3098 | 297L | 24 |
| TREE | 392257.96 | 0945515.67 | 1A | 856 | | 85 | 84 | 84 | 2620 | 3174 | 117L | 14 |
| TREE | 392258.34 | 0945522.66 | 1A | 872 | | 101 | 100 | 100 | 2849 | 3404 | 384R | 23 |
| TREE | 392259.37 | 0945519.47 | 1A | 867 | | 96 | 95 | 95 | 2858 | 3413 | 112R | 18 |
| TREE | 392311.83 | 0945513.67 | 1A | 875 | | 104 | 103 | 103 | 3878 | 4433 | 758L | -4 |
| TREE | 392311.20 | 0945516.68 | 1A | 878 | | 107 | 106 | 106 | 3902 | 4457 | 514L | -2 |
| TREE | 392311.02 | 0945519.28 | 1A | 879 | | 108 | 107 | 107 | 3956 | 4511 | 316L | -2 |

33 C 767/770 392138.688N 0945438.869W 1592413

| OBJECT | LAT | LONG | A | ELEV | AGL | HAR | HAT | HAA | DEND | DTHR | DCLN | PNTR |
|----------|-----------|------------|----|------|-----|-----|-----|-----|-------|------|------|------|
| ROAD (N) | 392234.93 | 0945506.25 | 1A | 796 | | 29 | 26 | 24 | -6083 | | 11L | 25 |
| ROAD (N) | 392234.08 | 0945502.63 | 1A | 796 | | 29 | 26 | 24 | -5902 | | 224R | 25 |
| ROAD (N) | 392137.09 | 0945434.59 | 1A | 780 | | 13 | 10 | 8 | 269 | | 258R | 11 |
| SIGN | 392136.54 | 0945435.24 | 1A | 773 | | 6 | 3 | 1 | 304 | | 190R | 3 |
| ROAD (N) | 392134.38 | 0945436.78 | 1A | 780 | | 13 | 10 | 8 | 465 | | 0R | 5 |
| TREE | 392125.05 | 0945432.36 | 1A | 799 | | 32 | 29 | 27 | 1471 | | 7L | -5 |
| TREE | 392122.40 | 0945434.61 | 1A | 807 | | 40 | 37 | 35 | 1660 | | 267L | -3 |
| TREE | 392117.63 | 0945423.29 | 1A | 862 | | 95 | 92 | 90 | 2425 | | 396R | 30 |
| TREE | 392115.23 | 0945424.18 | 1A | 872 | | 105 | 102 | 100 | 2627 | | 245R | 34 |
| TREE | 392112.52 | 0945427.47 | 1A | 864 | | 97 | 94 | 92 | 2794 | | 94L | 21 |

OC0152

AIRPORT ELEVATION 772

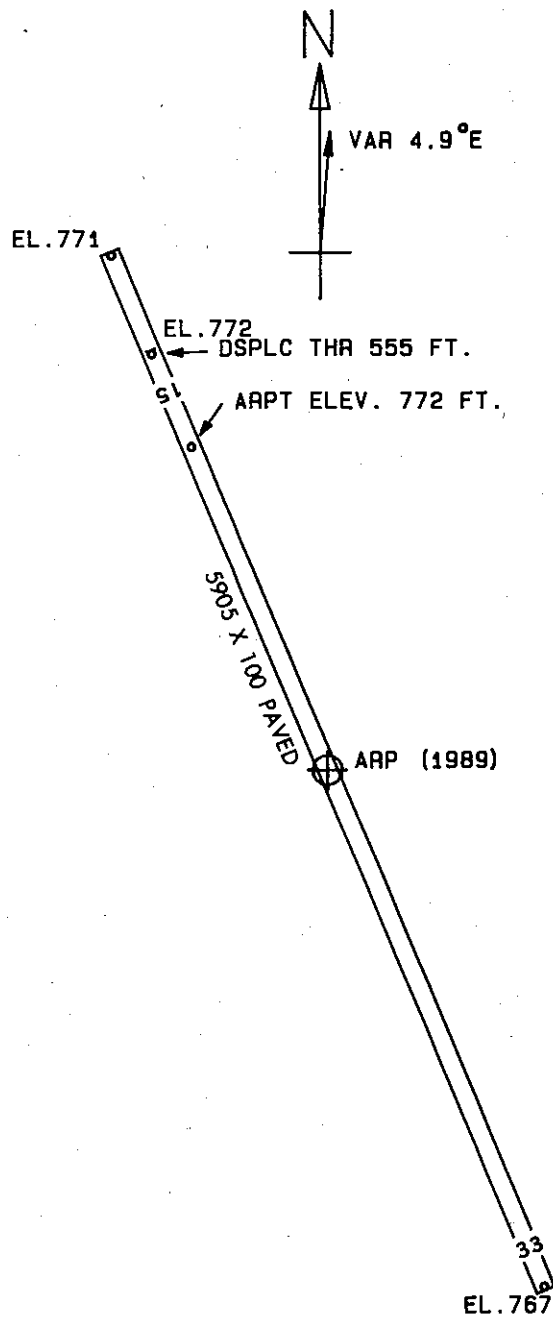
ARP 392206.003N 0945452.093W

| OBJECT | LAT | LONG | A | ELEV | AGL | HAA | MAG BEARING | DISTANCE |
|--------------------------|-----------|------------|----|------|-----|-----|-------------|----------|
| OL ON BUILDING | 392209.29 | 0945443.74 | 1A | 792 | | 20 | 58 13 | 736 |
| ANTENNA ON OL CONTROL TR | 392207.18 | 0945501.35 | 1A | 860 | | 88 | 274 23 | 737 |
| OL ANEMOMETER | 392201.73 | 0945443.23 | 1A | 785 | | 13 | 116 57 | 820 |
| WINDSOCK | 392213.51 | 0945447.01 | 1A | 789 | | 17 | 22 49 | 858 |
| OL POLE | 392154.65 | 0945501.42 | 1A | 901 | | 129 | 207 38 | 1362 |
| TREE | 392155.47 | 0945503.84 | 1A | 925 | | 153 | 215 59 | 1410 |
| OL POLE | 392147.68 | 0945458.60 | 1A | 908 | | 136 | 190 31 | 1923 |
| TREE | 392145.37 | 0945457.56 | 1A | 937 | | 165 | 186 43 | 2131 |
| TREE | 392148.19 | 0945435.27 | 1A | 796 | | 24 | 138 51 | 2234 |
| TREE | 392140.92 | 0945455.61 | 1A | 917 | | 145 | 181 19 | 2553 |
| TREE | 392214.74 | 0945524.27 | 1B | 978 | | 206 | 284 23 | 2678 |
| ROD ON STACK | 392140.07 | 0945500.91 | 1B | 1013 | | 241 | 189 53 | 2714 |
| TREE | 392142.45 | 0945428.91 | 1A | 866 | | 94 | 137 43 | 2999 |
| TREE | 392135.76 | 0945453.52 | 1A | 929 | | 157 | 177 12 | 3062 |
| ROD ON DOME | 392135.71 | 0945458.86 | 1B | 1019 | | 247 | 184 56 | 3111 |
| TREE | 392132.61 | 0945451.70 | 1A | 917 | | 145 | 174 35 | 3379 |
| OL ON BUILDING | 392136.76 | 0945430.33 | 1A | 788 | | 16 | 145 6 | 3417 |
| TREE | 392239.28 | 0945501.08 | 1A | 861 | | 89 | 343 16 | 3441 |
| TREE | 392130.95 | 0945453.91 | 1B | 962 | | 190 | 177 24 | 3550 |
| TREE | 392243.46 | 0945504.45 | 1A | 872 | | 100 | 340 44 | 3912 |
| ANTENNA ON POLE | 392130.07 | 0945511.72 | 1B | 969 | | 197 | 198 5 | 3949 |
| FLAGPOLE | 392125.30 | 0945508.44 | 1B | 1004 | | 232 | 192 25 | 4313 |
| ROD ON STACK | 392123.38 | 0945513.62 | 1B | 985 | | 213 | 196 31 | 4632 |
| TREE | 392118.40 | 0945420.57 | 1A | 875 | | 103 | 147 53 | 5416 |
| TREE | 392255.65 | 0945525.96 | 1A | 851 | | 79 | 327 12 | 5684 |
| TREE | 392110.17 | 0945441.74 | 1A | 860 | | 88 | 166 54 | 5708 |
| TREE | 392258.48 | 0945528.16 | 1A | 867 | | 95 | 327 2 | 6018 |
| OL ON DOME | 392104.96 | 0945453.97 | 1B | 1038 | | 266 | 176 28 | 6178 |
| ROD ON AIRPORT BEACON | 392210.88 | 0945619.44 | 1B | 1160 | | 388 | 269 13 | 6878 |
| OL ANTENNA | 392137.96 | 0945612.75 | 1B | 1176 | | 404 | 240 59 | 6942 |
| FLAGPOLE | 392054.35 | 0945447.93 | 1B | 923 | | 151 | 172 31 | 7257 |
| TREE | 392250.47 | 0945607.33 | 1B | 966 | | 194 | 302 24 | 7426 |
| TREE | 392110.79 | 0945556.03 | 1B | 1087 | | 315 | 217 4 | 7512 |

AIRPORT ELEVATION 772

ARP 392206.003N 0945452.093W

| OBJECT | LAT | LONG | A | ELEV | AGL | HAA | MAG BEARING | DISTANCE |
|---------------------------|-----------|------------|----|------|-----|-----|-------------|----------|
| ROD ON OL STACK | 392050.88 | 0945452.42 | 1B | 931 | | 159 | 175 18 | 7601 |
| TREE | 392246.34 | 0945622.81 | 1B | 945 | | 173 | 294 55 | 8211 |
| ROD ON OL MICROWAVE TOWER | 392119.66 | 0945621.52 | 1B | 1129 | | 357 | 231 23 | 8445 |
| TREE | 392036.85 | 0945520.17 | 1B | 959 | | 187 | 188 50 | 9286 |
| TREE | 392058.77 | 0945634.62 | 1B | 1110 | | 338 | 224 55 | 10541 |
| TREE | 392301.48 | 0945237.28 | 2C | 1064 | | 292 | 57 9 | 11983 |
| TREE | 392333.88 | 0945302.35 | 2C | 1070 | | 298 | 39 12 | 12382 |
| TREE | 392043.46 | 0945651.03 | 2C | 1110 | | 338 | 223 19 | 12531 |
| TREE | 392115.66 | 0945719.97 | 2C | 1105 | | 333 | 241 26 | 12683 |
| TREE | 392356.49 | 0945326.42 | 2C | 1014 | | 242 | 26 8 | 13047 |
| TREE | 392327.99 | 0945242.32 | 2C | 1057 | | 285 | 45 57 | 13140 |
| TREE | 392405.20 | 0945329.18 | 2C | 1045 | | 273 | 23 27 | 13705 |
| TREE | 392414.98 | 0945344.65 | 2C | 1040 | | 268 | 17 11 | 14083 |
| OL ON WATER TANK | 391958.51 | 0945609.92 | 2C | 1037 | | 265 | 200 28 | 14275 |
| TREE | 392423.05 | 0945352.65 | 2C | 1059 | | 287 | 13 42 | 14631 |
| ROD ON WATER TANK | 391949.63 | 0945559.09 | 2C | 1069 | | 297 | 195 59 | 14768 |



| TOUCHDOWN ZONE RUNWAY ELEVATION | |
|------------------------------------|-----|
| 15 | 772 |
| 33 | 770 |

SHERMAN AAF
 FORT LEAVENWORTH, KANSAS
 (NOT TO SCALE)