

# OBSTRUCTION DATA SHEET

**ODS 511  
YUMA MCAS - YUMA INTERNATIONAL AIRPORT  
YUMA, ARIZONA**

**DIGITIZED FROM**

**OC 511  
SURVEYED FEBRUARY 1989  
9TH EDITION**



PREPARED AND DISTRIBUTED BY  
THE NATIONAL OCEAN SERVICE  
U.S. DEPARTMENT OF COMMERCE  
FOR THE FEDERAL AVIATION ADMINISTRATION

## 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:

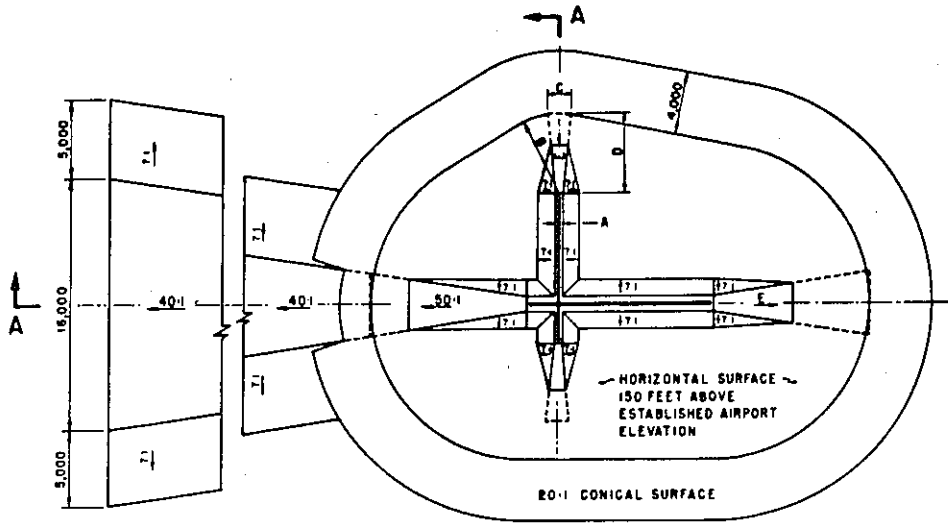
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the 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)

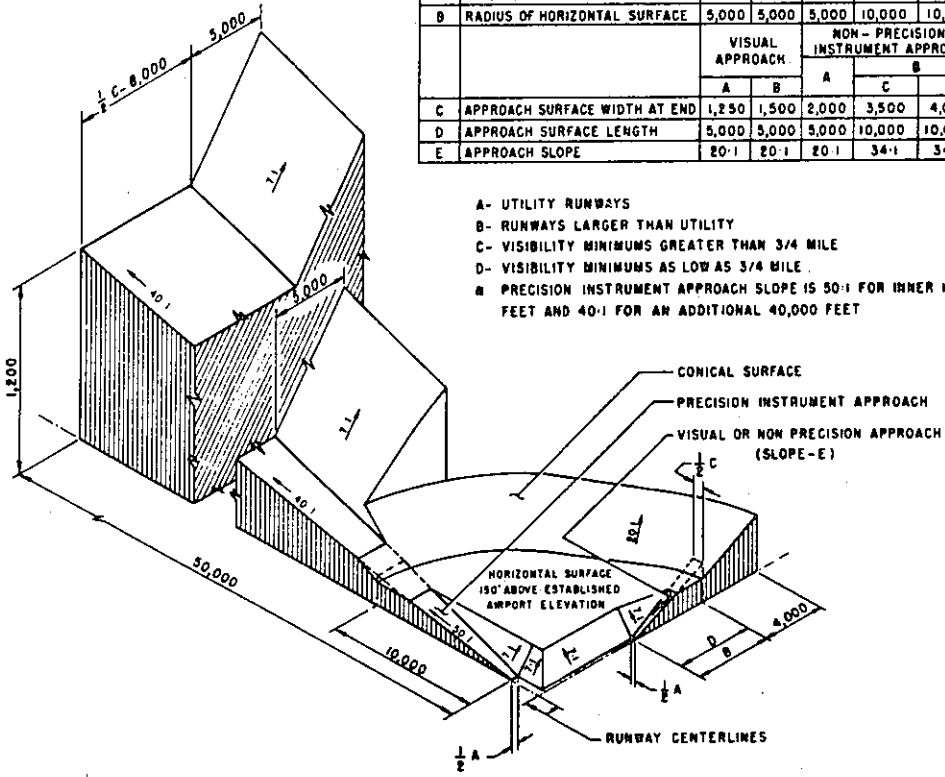
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

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                        | 5,000 | 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                        | 5,000 | 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

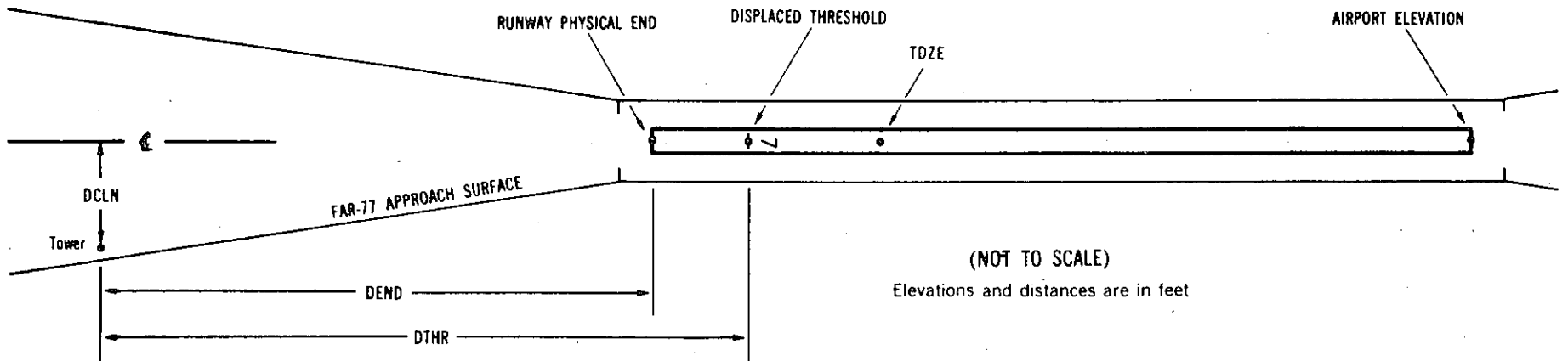
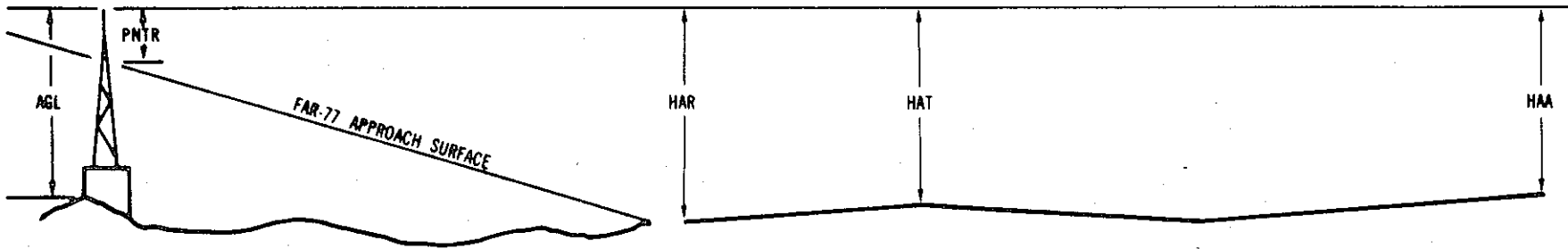
# ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

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

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## EXPLANATION OF FOOTNOTES

- <sup>1</sup> 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.
- <sup>2</sup> For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)
- <sup>3</sup> Reference runway approach physical end elevation/touchdown zone elevation
- <sup>4</sup> Latitude and longitude of reference runway approach physical end
- <sup>5</sup> Reference runway geodetic azimuth reckoned clockwise from south
- <sup>6</sup> Reference runway displaced threshold elevation/touchdown zone elevation
- <sup>7</sup> Latitude and longitude of reference runway displaced threshold
- <sup>8</sup> Accuracy Code:
- |   | Horizontal | Vertical |
|---|------------|----------|
| 1 | = 20       | A = 2    |
| 2 | = 40       | B = 5    |
|   |            | C = 20   |
- <sup>9</sup> 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.
- <sup>10</sup> 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  $\pm 10$  feet.
- <sup>11</sup> HAA - Height above airport  
 HAR - Height above reference runway approach physical end  
 HAT - Height above reference runway touchdown zone elevation
- <sup>12</sup> 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.
- <sup>13</sup> PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

OC0511

AIRPORT ELEVATION 213

3L PIR 193/195 323812.266N 1143742.934W 2240631

| OBJECT                  | LAT       | LONG       | A  | ELEV | AGL | HAR | HAT | HAA | DEND   | DTHR | DCLN | PNTR |
|-------------------------|-----------|------------|----|------|-----|-----|-----|-----|--------|------|------|------|
| WINDSOCK                | 323940.24 | 1143559.21 | 1A | 212  |     | 19  | 17  | -1  | -12557 |      | 178R | 20   |
| OL ON GLIDE SLOPE       | 323942.38 | 1143607.40 | 1A | 223  |     | 30  | 28  | 10  | -12224 |      | 475L | 32   |
| OL CANOPY POLE          | 323940.76 | 1143606.43 | 1A | 213  |     | 20  | 18  | 0   | -12165 |      | 301L | 22   |
| OL ON PAR               | 323852.69 | 1143650.09 | 1A | 217  |     | 24  | 22  | 4   | -6079  |      | 401R | 24   |
| ARRESTING GEAR          | 323838.14 | 1143715.54 | 1A | 199  |     | 6   | 4   | -14 | -3508  |      | 138L | 3    |
| BUSH                    | 323824.89 | 1143734.72 | 1A | 202  |     | 9   | 7   | -11 | -1405  |      | 383L | 8    |
| OL ON GLIDE SLOPE (PVT) | 323824.27 | 1143737.24 | 1A | 235  |     | 42  | 40  | 22  | -1210  |      | 495L | 41   |
| WINDSOCK                | 323818.62 | 1143738.09 | 1A | 212  |     | 19  | 17  | -1  | -749   |      | 149L | 19   |
| RADAR REFLECTOR         | 323814.31 | 1143745.26 | 1A | 206  |     | 13  | 11  | -7  | -10    |      | 286L | 13   |
| RUBBLE                  | 323809.41 | 1143741.76 | 1A | 195  |     | 2   | 0   | -18 | 138    |      | 273R | 2    |
| ANEMOMETER              | 323803.81 | 1143749.51 | 1A | 208  |     | 15  | 13  | -5  | 1005   |      | 192R | -1   |
| RADAR REFLECTOR         | 323803.46 | 1143753.12 | 1A | 203  |     | 10  | 8   | -10 | 1245   |      | 6L   | -11  |

OC0511

AIRPORT ELEVATION 213

21R PIR 193/193 323946.735N 1143554.665W 0440729

| OBJECT                  | LAT       | LONG       | A  | ELEV | AGL | HAR | HAT | HAA | DEND   | DTHR | DCLN  | PNTR |
|-------------------------|-----------|------------|----|------|-----|-----|-----|-----|--------|------|-------|------|
| RUBBLE                  | 323809.41 | 1143741.76 | 1A | 195  |     | 2   | 2   | -18 | -13436 |      | 273L  | 2    |
| RADAR REFLECTOR         | 323814.31 | 1143745.26 | 1A | 206  |     | 13  | 13  | -7  | -13289 |      | 286R  | 13   |
| WINDSOCK                | 323818.62 | 1143738.09 | 1A | 212  |     | 19  | 19  | -1  | -12549 |      | 149R  | 19   |
| OL ON GLIDE SLOPE (PVT) | 323824.27 | 1143737.24 | 1A | 235  |     | 42  | 42  | 22  | -12088 |      | 495R  | 41   |
| BUSH                    | 323824.89 | 1143734.72 | 1A | 202  |     | 9   | 9   | -11 | -11894 |      | 383R  | 8    |
| ARRESTING GEAR          | 323838.14 | 1143715.54 | 1A | 199  |     | 6   | 6   | -14 | -9791  |      | 138R  | 3    |
| OL ON PAR               | 323852.69 | 1143650.09 | 1A | 217  |     | 24  | 24  | 4   | -7220  |      | 401L  | 24   |
| OL ON CANOPY POLE       | 323940.76 | 1143606.43 | 1A | 213  |     | 20  | 20  | 0   | -1134  |      | 301R  | 22   |
| OL ON GLIDE SOLPE       | 323942.38 | 1143607.40 | 1A | 223  |     | 30  | 30  | 10  | -1074  |      | 475R  | 32   |
| WINDSOCK                | 323940.24 | 1143559.21 | 1A | 212  |     | 19  | 19  | -1  | -742   |      | 178L  | 20   |
| OL LOCALIZER (PVT)      | 323953.08 | 1143547.29 | 1A | 207  |     | 14  | 14  | -6  | 899    |      | 6L    | 0    |
| OL ON BUILDING          | 323953.86 | 1143548.19 | 1A | 210  |     | 17  | 17  | -3  | 902    |      | 104R  | 3    |
| SIGN                    | 323949.85 | 1143541.90 | 1A | 208  |     | 15  | 15  | -5  | 986    |      | 564L  | -1   |
| TREE                    | 324012.47 | 1143538.17 | 1A | 270  |     | 77  | 77  | 57  | 2849   |      | 798R  | 24   |
| WINDMILL                | 324011.87 | 1143535.02 | 1A | 256  |     | 63  | 63  | 43  | 2992   |      | 563R  | 7    |
| BUSH                    | 324014.03 | 1143537.05 | 1A | 266  |     | 73  | 73  | 53  | 3029   |      | 840R  | 16   |
| ROAD (N)                | 324009.84 | 1143516.61 | 1A | 226  |     | 33  | 33  | 13  | 3941   |      | 710L  | -42  |
| OL ON TANK              | 324105.88 | 1143444.58 | 1A | 343  |     | 150 | 150 | 130 | 9913   |      | 1269R | -44  |
| OL ON TANK              | 324104.41 | 1143431.52 | 1A | 344  |     | 151 | 151 | 131 | 10583  |      | 365R  | -59  |

OC0511

AIRPORT ELEVATION 213

3R SUPLC 188/188 323855.308N 1143642.213W 2240710

| OBJECT          | LAT       | LONG       | A  | ELEV | AGL | HAR | HAT | HAA | DEND  | DTHR | DCLN | PNTR |
|-----------------|-----------|------------|----|------|-----|-----|-----|-----|-------|------|------|------|
| WINDSOCK        | 323954.80 | 1143532.40 | 1A | 224  |     | 36  | 36  | 11  | -8471 |      | 98R  | 19   |
| SIGN            | 323948.08 | 1143539.46 | 1A | 208  |     | 20  | 20  | -5  | -7564 |      | 138R | 8    |
| SIGN            | 323949.85 | 1143541.90 | 1A | 208  |     | 20  | 20  | -5  | -7547 |      | 137L | 9    |
| SIGN            | 323913.89 | 1143618.77 | 1A | 191  |     | 3   | 3   | -22 | -2743 |      | 131R | 7    |
| WINDSOCK        | 323901.97 | 1143636.75 | 1A | 203  |     | 15  | 15  | -10 | -809  |      | 134L | 16   |
| OL ON PAR       | 323852.69 | 1143650.09 | 1A | 217  |     | 29  | 29  | 4   | 658   |      | 299L | 16   |
| OL ON TACAN     | 323848.30 | 1143645.56 | 1A | 216  |     | 28  | 28  | 3   | 708   |      | 288R | 13   |
| WINDSOCK        | 323818.62 | 1143738.09 | 1A | 212  |     | 24  | 24  | -1  | 5988  |      | 849L | -146 |
| RADAR REFLECTOR | 32314.31  | 1143745.26 | 1A | 206  |     | 18  | 18  | -7  | 6278  |      | 986L | -174 |
| RUBBLE          | 323809.41 | 1143741.76 | 1A | 195  |     | 7   | 7   | -18 | 6875  |      | 427L | -189 |
| ANEMOMETER      | 323803.81 | 1143749.51 | 1A | 208  |     | 20  | 20  | -5  | 7742  |      | 508L | -202 |
| RADAR REFLECTOR | 323803.46 | 1143753.12 | 1A | 203  |     | 15  | 15  | -10 | 7983  |      | 706L | -214 |

21L SUPLC 208/208 324000.932N 1143526.975W 0440750

| OBJECT     | LAT       | LONG       | A  | ELEV | AGL | HAR | HAT | HAA | DEND  | DTHR | DCLN  | PNTR |
|------------|-----------|------------|----|------|-----|-----|-----|-----|-------|------|-------|------|
| WINDSOCK   | 323901.97 | 1143636.75 | 1A | 203  |     | -5  | -5  | -10 | -8430 |      | 134R  | 16   |
| SIGN       | 323913.89 | 1143618.77 | 1A | 191  |     | -17 | -17 | -22 | -6496 |      | 131L  | 7    |
| SIGN       | 323949.85 | 1143541.90 | 1A | 208  |     | 0   | 0   | -5  | -1692 |      | 137R  | 9    |
| SIGN       | 323948.08 | 1143539.46 | 1A | 208  |     | 0   | 0   | -5  | -1675 |      | 138L  | 8    |
| WINDSOCK   | 323954.80 | 1143532.40 | 1A | 224  |     | 16  | 16  | 11  | -768  |      | 98L   | 19   |
| ROAD (N)   | 324009.84 | 1143516.61 | 1A | 226  |     | 18  | 18  | 13  | 1263  |      | 9L    | -13  |
| OL ON TANK | 324104.41 | 1143431.52 | 1A | 344  |     | 136 | 136 | 131 | 7905  |      | 1065R | -91  |



OC0511

AIRPORT ELEVATION 213

8 SUPLC 195/201 323957.082N 1143617.485W 2690759

| OBJECT                | LAT       | LONG       | A  | ELEV | AGL | HAR | HAT | HAA | DEND  | DTHR | DCLN | PNTR |
|-----------------------|-----------|------------|----|------|-----|-----|-----|-----|-------|------|------|------|
| WINDSOCK ON SIGNBOARD | 323958.36 | 1143617.59 | 1A | 213  |     | 18  | 12  | 0   | 7     |      | 130L | 18   |
| FENCE                 | 323956.99 | 1143622.58 | 1A | 202  |     | 7   | 1   | -11 | 436   |      | 2R   | 0    |
| ROAD (N)              | 323956.98 | 1143622.83 | 1A | 209  |     | 14  | 8   | -4  | 457   |      | 4R   | 6    |
| ANTENNA ON OL TANK    | 323955.39 | 1143815.70 | 1B | 354  |     | 159 | 153 | 141 | 10107 |      | 17R  | -132 |

26 SUPLC 213/213 323957.997N 11435 5.610W 0890838

| OBJECT                | LAT       | LONG       | A  | ELEV | AGL | HAR | HAT | HAA | DEND  | DTHR | DCLN | PNTR |
|-----------------------|-----------|------------|----|------|-----|-----|-----|-----|-------|------|------|------|
| WINDSOCK ON SIGNBOARD | 323958.36 | 1143617.59 | 1A | 213  |     | 0   | 0   | 0   | -6152 |      | 130R | 18   |
| ROAD (N)              | 323958.07 | 1143450.61 | 1A | 227  |     | 14  | 14  | 14  | 1282  |      | 12L  | -18  |

17 C 196/196 324003.590N 1143611.747W 3590733

| OBJECT                | LAT       | LONG       | A  | ELEV | AGL | HAR | HAT | HAA | DEND  | DTHR | DCLN | PNTR |
|-----------------------|-----------|------------|----|------|-----|-----|-----|-----|-------|------|------|------|
| WINDSOCK              | 323906.32 | 1143612.19 | 1A | 198  |     | 2   | 2   | -15 | -5786 |      | 126R | 15   |
| BUSH                  | 323909.46 | 1143612.44 | 1A | 190  |     | -6  | -6  | -23 | -5469 |      | 143R | 6    |
| WINDSOCK ON SIGNBOARD | 324004.31 | 1143610.04 | 1A | 212  |     | 16  | 16  | -1  | 71    |      | 147L | 16   |
| ROAD (N)              | 324009.43 | 1143611.78 | 1A | 208  |     | 12  | 12  | -5  | 590   |      | 6L   | 1    |
| SIGN                  | 324010.50 | 1143608.06 | 1A | 213  |     | 17  | 17  | 0   | 694   |      | 326L | 2    |
| TREE                  | 324023.03 | 1143611.16 | 1A | 283  |     | 87  | 87  | 70  | 1964  |      | 80L  | 35   |
| TREE                  | 324023.05 | 1143615.10 | 1A | 282  |     | 86  | 86  | 69  | 1971  |      | 257R | 34   |
| TREE                  | 324027.34 | 1143612.18 | 1A | 271  |     | 75  | 75  | 58  | 2401  |      | 1R   | 10   |

OC0511

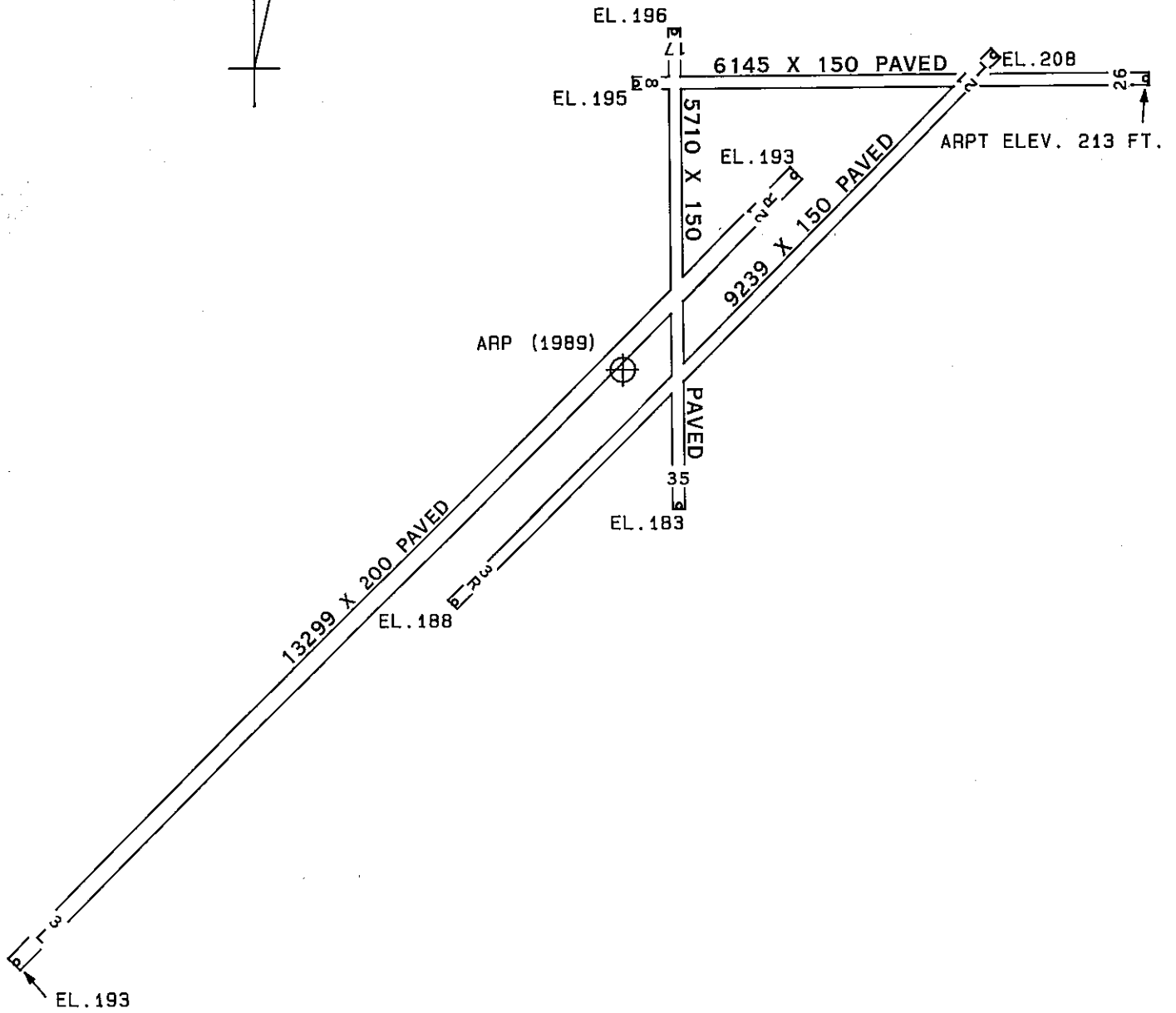
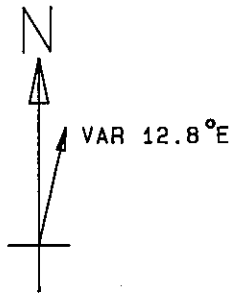
AIRPORT ELEVATION 213

35 C 183/189 323907.094N 1143610.728W 1790734

| OBJECT                | LAT       | LONG       | A  | ELEV | AGL | HAR | HAT | HAA | DEND  | DTHR | DCLN | PNTR |
|-----------------------|-----------|------------|----|------|-----|-----|-----|-----|-------|------|------|------|
| WINDSOCK ON SIGNBOARD | 324004.31 | 1143610.04 | 1A | 212  |     | 29  | 23  | -1  | -5781 |      | 147R | 16   |
| BUSH                  | 323909.46 | 1143612.44 | 1A | 190  |     | 7   | 1   | -23 | -242  |      | 143L | 6    |
| WINDSOCK              | 323906.32 | 1143612.19 | 1A | 198  |     | 15  | 9   | -15 | 76    |      | 126L | 15   |
| BUSH                  | 323904.37 | 1143608.90 | 1A | 189  |     | 6   | 0   | -24 | 278   |      | 152R | 4    |
| BUSH                  | 323904.00 | 1143611.55 | 1A | 193  |     | 10  | 4   | -20 | 312   |      | 75L  | 7    |

ARP 323923.512N 1143618.676W

| OBJECT                   | LAT       | LONG       | A  | ELEV | AGL | HAA | MAG | BEARING | DISTANCE |
|--------------------------|-----------|------------|----|------|-----|-----|-----|---------|----------|
| OL ANEMOMETER            | 323953.28 | 1143606.83 | 1A | 216  |     | 3   | 5   | 48      | 3175     |
| ANT ON OL CONTROL TOWER  | 323934.38 | 1143535.04 | 1A | 347  |     | 134 | 60  | 47      | 3889     |
| ROD ON OL ASR            | 323914.81 | 1143527.29 | 1B | 360  |     | 147 | 88  | 31      | 4480     |
| LIGHT ON DRIVE-IN SCREEN | 324003.09 | 1143645.35 | 1A | 258  |     | 45  | 317 | 31      | 4605     |
| ROD ON OL AIRPORT BEACON | 323915.91 | 1143519.60 | 1B | 335  |     | 122 | 85  | 51      | 5109     |
| ANTENNA ON OL TOWER      | 324014.37 | 1143543.23 | 1A | 296  |     | 83  | 17  | 43      | 5967     |
| OL ON TANK               | 323936.95 | 1143504.37 | 1B | 351  |     | 138 | 65  | 8       | 6497     |



TOUCHDOWN ZONE  
RUNWAY ELEVATION

|     |     |
|-----|-----|
| 3L  | 195 |
| 21R | 193 |
| 3R  | 188 |
| 21L | 208 |
| 8   | 201 |
| 26  | 213 |
| 17  | 196 |
| 35  | 189 |

YUMA MCAS - YUMA INTERNATIONAL AIRPORT

YUMA, ARIZONA

(NOT TO SCALE)