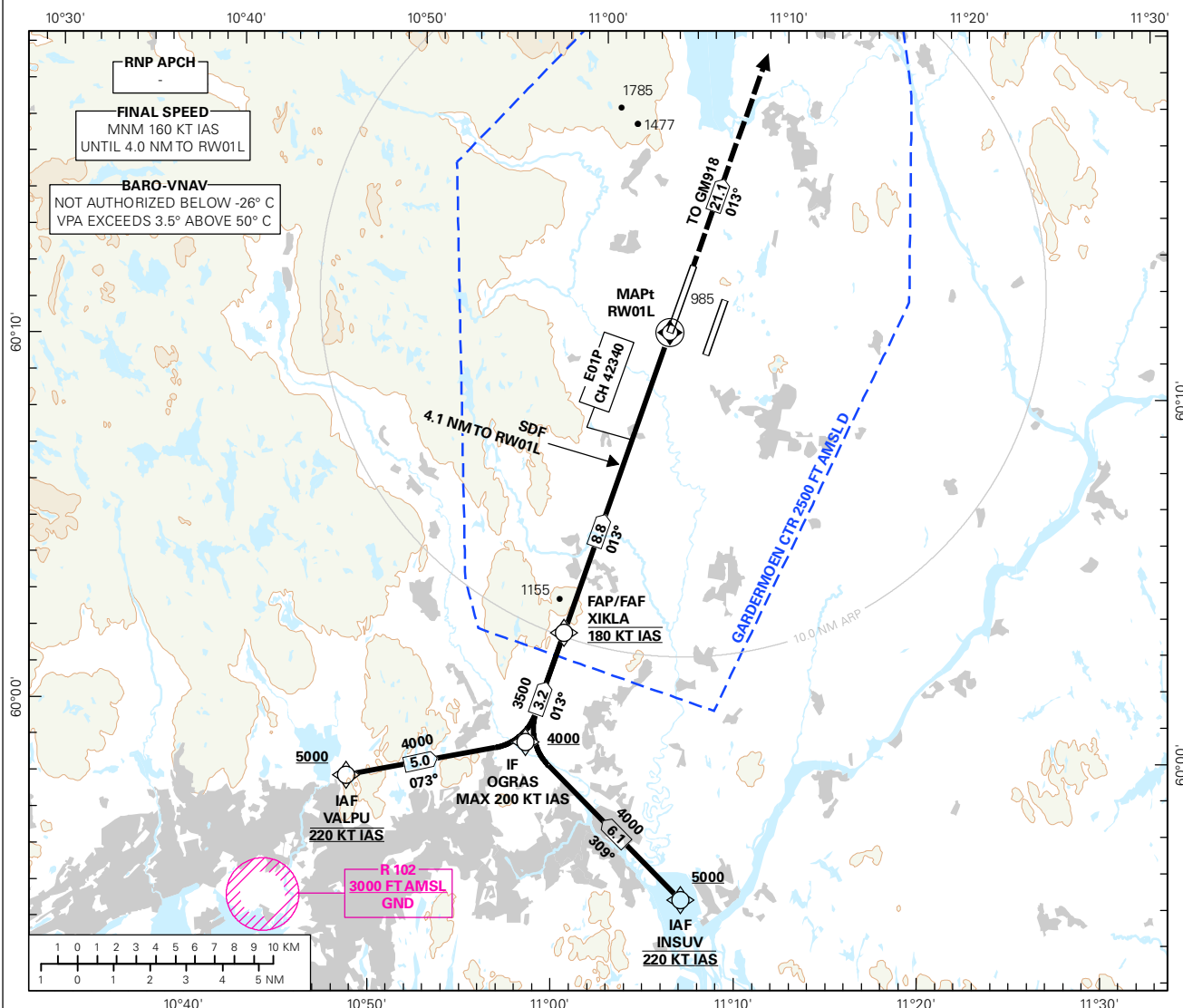
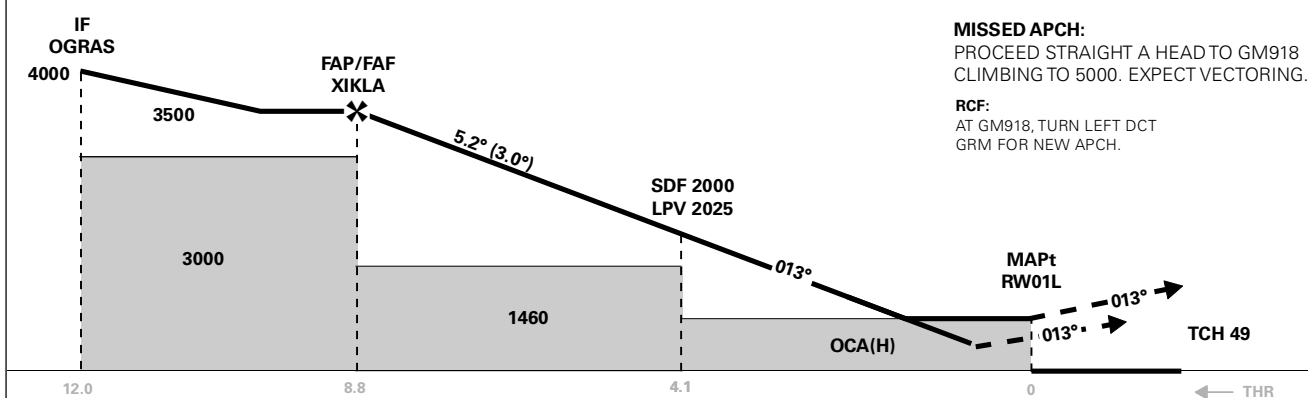


## OSLO

|                                                                        |               |           |                                            |                         |                                                                                                                    |
|------------------------------------------------------------------------|---------------|-----------|--------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------|
| <div><div></div><div>3<sub>9</sub></div><div>MSA 25 NM ARP</div></div> | ATIS: 126.125 |           | AD ELEV: 681                               |                         | <div>OSLO</div> <div>GARDERMOEN</div> <div>RNAV(GNSS) RWY 01L</div> <div>TRANSITION ALTITUDE</div> <div>7000</div> |
|                                                                        | APP: 118.475  | 120.450   | THR ELEV: 655                              | DIST IN NM              |                                                                                                                    |
|                                                                        | DIR: 136.400  | (119.975) | HGT RELATED TO THR RWY 01L                 | ELEV, ALT AND HGT IN FT |                                                                                                                    |
|                                                                        | FIN: 128.900  |           |                                            |                         |                                                                                                                    |
|                                                                        | TWR: 118.300  | (118.700) | CIRCLING HGT RELATED TO AD ELEV            |                         |                                                                                                                    |
|                                                                        | GND: 121.600  |           | BEARINGS ARE MAGNETIC - VAR 2.8 ° E (2015) |                         |                                                                                                                    |



| DIST TO RW01L | 9 | 8           | 7           | 6           | 5           | 4           | 3           | 2          |
|---------------|---|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| ALT (HGT)     | - | 3260 (2605) | 2940 (2285) | 2620 (1965) | 2300 (1645) | 1980 (1325) | 1670 (1015) | 1350 (695) |



| CAT OF ACFT             |           | A          | B           | C          | D           | FINAL<br>APCH | DIST FAF - MAPt: 8.8 |         |       |       |       |       |
|-------------------------|-----------|------------|-------------|------------|-------------|---------------|----------------------|---------|-------|-------|-------|-------|
| OCA(H)<br>STRAIGHT - IN | LPV       | 870 (215)  | 880 (225)   | 890 (235)  | 900 (245)   |               | SPEED                | KT      | 70    | 90    | 120   | 150   |
|                         | LNAV/VNAV | 1000 (345) | 1010 (355)  | 1030 (375) | 1150 (495)  | LNAV          |                      |         |       |       |       |       |
|                         | CIRCLING  |            | 1240 (585)  |            |             |               | TIME                 | MIN:SEC | 07:32 | 05:52 | 04:24 | 03:31 |
|                         |           | 1280 (599) | 1920 (1239) |            | 2230 (1549) | ROD           | FT/MIN               | 370     | 480   | 635   | 795   | 955   |

**NOTE:** CIRCLING W OF RWY ONLY.

**Avinor**

17 SEP 2015

## RECOMMENDED RNAV PROCEDURE CODING

| ENGM RNAV(GNSS) RWY 01L |                 |                     |          |               |         |           |          |          |            |         |
|-------------------------|-----------------|---------------------|----------|---------------|---------|-----------|----------|----------|------------|---------|
| Serial Number           | Path Descriptor | Waypoint Identifier | Fly-over | Course °M(°T) | MAG VAR | DIST (NM) | Turn Dir | ALT (FT) | Speed (KT) | VPA/TCH |
| 010                     | IF              | VALPU               | -        | -             | -       | -         | -        | A5000+   | K220       | -       |
| 020                     | TF              | OGRAS               | -        | 073 (076.0)   | -       | 5.0       | -        | A4000+   | K200-      | -       |
| 010                     | IF              | INSUV               | -        | -             | -       | -         | -        | A5000+   | K220       | -       |
| 020                     | TF              | OGRAS               | -        | 309 (312.2)   | -       | 6.1       | -        | A4000+   | K200-      | -       |
| 030                     | TF              | XIKLA               | -        | 013 (015.9)   | -       | 3.2       | -        | A3500+   | K180       | -       |
| 040                     | TF              | RW01L               | Y        | 013 (016.0)   | -       | 8.8       | -        | -        | -          | -3.0/15 |
| 050                     | TF              | GM918               | -        | 013 (016.0)   | -       | 21.1      | -        | A5000    | -          | -       |

Note: Recommended RNAV procedure coding is based on ARINC 424-15 and is provided solely to indicate which procedure design protection areas were used in the Instrument Flight Procedure Design process.

Note: Published OCA(H) values are obstacle clearance values. Decision heights (DH) below 250 FT shall not be used due to APV approach operation Type A limitations.

## FAS DATA BLOCK

|                                       |               |                              |               |
|---------------------------------------|---------------|------------------------------|---------------|
| Operation type                        | 0             | LTP/FTP ellipsoidal height   | 238.3         |
| SBAS Provider                         | 1             | FPAP latitude                | 601301.9020N  |
| Airport Identifier                    | ENGM          | FPAP longitude               | 0110532.3330E |
| Runway                                | RW01L         | Threshold crossing height    | 15            |
| Approach performance designator       | 0             | TCH units                    | M             |
| Route Indicator                       | -             | Glide path angle             | 3.0           |
| Reference path data selector          | 0             | Course width at threshold    | 105           |
| Reference path Identifier             | E01P          | Length offset                | 136           |
| LTP/FTP latitude                      | 601106.0040N  | Horizontal alert limit (HAL) | 40            |
| LTP/FTP longitude                     | 0110425.4770E | Vertical alert limit (VAL)   | 50            |
|                                       |               |                              |               |
| PRECISION APPROACH PATH CRC REMAINDER |               |                              | 905B8419      |

## NON FAS DATA BLOCK FIELDS

|                        |       |
|------------------------|-------|
| LTP Ortometric Height  | 199.8 |
| FPAP Ortometric Height | 205.8 |