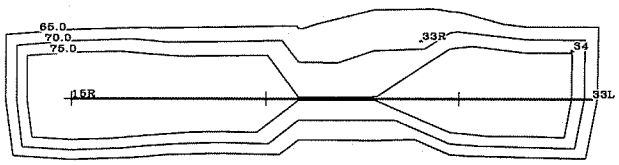
APPENDIX

```
BEGIN.

SETUP:
TITLE <ANNUAL AVERAGE NOISE EXPOSURE FOR YEAR 1994>
AIRPORT <RENTON MUNICIPAL AIRPORT>

ALTITUDE 29
TEMPERATURE 75 F

RUNWAYS
 RW 15R-33L  0     0    TO  5379  0
 RW 15L-33R  3600  600  TO  3620  600
 RW 16-34    5160  500  TO  5180  500

AIRCRAFT:
 TYPES
 AC DHC6
 AC 7373B2
 AC 757RR
 AC GASEPF
 AC BEC58P
 AC S-76   CURVE=250C30 PARAM=HELI STAGE 1=HORFLT
           CATEGORY=PGA

NOISE CURVES

  NC 250C30          3 BY 8  3 BY 8
  EPNL
  THRUSTS     1         2         3
      200   90.2      91.2      97.2
      400   85.8      87.2      93.1
      600   83.1      84.5      90.6
     1000   79.4      80.7      87.4
     2000   73.7      75.1      82.6
     4000   67.6      68.2      77.2
     6000   63.1      63.8      73.7
    10000   56.8      57.4      68.7
  SEL
  THRUSTS     1         2         3
      200   88.6      90.0      95.6
      400   84.2      85.6      91.5
      600   81.5      82.9      89.0
     1000   77.8      79.1      85.8
     2000   72.1      73.5      81.0
     4000   66.0      66.6      75.6
     6000   61.5      62.2      72.1
    10000   55.2      55.8      67.1

APPROACH PARAMETERS

  AP HELI   WEIGHT=10000 ENGINE=2 STOP=1
            FINSP=160 TAXI=160
            LNDFFS=3

INT.NM.

PROFILES APPROACH

  PF ALT3D SEGMENTS=7
     DISTANCES    20.   10.      5.     3.    1. -.164 STOP
```

```
      ALTITUDES   6000  3236    1644   1007   370     0    0
      SPEEDS    TERMSP  INTSP  APPSP  FINSP LNDSP REVSP TAXI
      THRUSTS   INTFIS APPFAS LNDFFS LNDFLS   REV  IDLE

   PF COPTR SEGMENTS=7
      DISTANCES    3.9    3.1    2.4    1.6    0.8      0    0
      ALTITUDES   2500   2000   1500   1000    500      0    0
      SPEEDS     FINSP  FINSP  FINSP  FINSP  FINSP  FINSP TAXI
      THRUSTS   LNDFFS LNDFFS LNDFFS LNDFFS LNDFFS LNDFFS

ECHO.

FT.

  PROFILES TAKEOFF

    PF HORFLT SEGMENTS=8 WEIGHT=10000 ENGINES=2
      DISTANCES      0   1376   4126   6876   6877   9626  10000  15000
      ALTITUDES      0      0    500   1000   1000   1500   1500   1500
      SPEEDS        32    160    160    160    160    160    160    160
      THRUSTS        2      2      2      2      1      1      1

INT.NM.

TAKEOFFS BY FREQUENCY:

 TRACK RU1 RWY 33R STRAIGHT 50
  OPER 7373B2 STAGE 1 D=.002
  OPER 757RR  STAGE 1 D=.002

 TRACK RU2 RWY 15L STRAIGHT 50
  OPER 7373B2 STAGE 1 D=.002
  OPER 757RR  STAGE 1 D=.002

 TRACK RU3 RWY 15L STRAIGHT 0.1 RIGHT 90 D 0.1 STRAIGHT 50
  OPER 7373B2 STAGE 1 D=.002
  OPER 757RR  STAGE 1 D=.002

 TRACK TR1 RWY 15R STRAIGHT 50
  OPER DHC6   STAGE 1 D=1.00
  OPER GASEPF STAGE 1 D=48.00 E=2.00 N=1.00
  OPER BEC58P STAGE 1 D=5.00 E=1.00 N=1.00

 TRACK TR2 RWY 33L STRAIGHT 50
  OPER DHC6   STAGE 1 D=1.00
  OPER GASEPF STAGE 1 D=17.00 E=1.00 N=1.00
  OPER BEC58P STAGE 1 D=5.00 E=1.00 N=1.00
  OPER 7373B2 STAGE 1 D=0.001
  OPER 757RR  STAGE 1 D=0.001

 TRACK TR3 RWY 16 STRAIGHT 50
  OPER S-76 STAGE 1 D=2.00 E=1.00 N=0.50

 TRACK TR4 RWY 34 STRAIGHT 0.3 RIGHT 90 D 0.1
                  STRAIGHT 0.25 RIGHT 90 D 0.5 STRAIGHT 50
  OPER S-76 STAGE 1 D=2.00 E=1.00 N=0.50

 TRACK TR5 RWY 34 STRAIGHT 0.3 RIGHT 90 D 0.1
                  STRAIGHT 0.25 LEFT 90 D 0.5 STRAIGHT 50
```

```
  OPER S-76 STAGE 1 D=2.00 E=1.00 N=0.50

 TRACK TR6 RWY 16 STRAIGHT 0.05 LEFT 90 D 0.1
                  STRAIGHT 0.1 LEFT 90 D 0.5 STRAIGHT 50
  OPER S-76 STAGE 1 D=2.00 E=1.00 N=0.50

LANDINGS BY FREQUENCY:

 TRACK TR7 RWY 15R STRAIGHT 50
  OPER DHC6   PROF STD3D D=1.00
  OPER GASEPF PROF STD3D D=48.00 E=2.00 N=1.00
  OPER BEC58P PROF STD3D D=5.00 E=1.00 N=1.00

 TRACK TR8 RWY 33L STRAIGHT 50
  OPER DHC6   PROF STD3D D=1.00
  OPER GASEPF PROF STD3D D=17.00 E=1.00 N=1.00
  OPER BEC58P PROF STD3D D=5.00 E=1.00 N=1.00

 TRACK TR9 RWY 34 STRAIGHT 50
  OPER S-76 PROF COPTR D=2.00 E=1.00 N=0.50

 TRACK TR10 RWY 16 STRAIGHT 50 LEFT 90 D 0.5
                   STRAIGHT 0.25 LEFT 90 D 0.1 STRAIGHT 0.3
  OPER S-76 PROF COPTR D=2.00 E=1.00 N=0.50

 TRACK TR11 RWY 16 STRAIGHT 50 RIGHT 90 D 0.5
                   STRAIGHT 0.25 LEFT 90 D 0.1 STRAIGHT 0.3
  OPER S-76 PROF COPTR D=2.00 E=1.00 N=0.50

 TRACK TR12 RWY 34 STRAIGHT 50 RIGHT 90 D 0.5
                   STRAIGHT 0.1 RIGHT 90 D 0.1 STRAIGHT 0.05
  OPER S-76 PROF COPTR D=2.00 E=1.00 N=0.50

TOUCHGOS BY FREQUENCY:

 TRACK TR13 RWY 33R STRAIGHT 0.5 RIGHT 180 D 1
                    STRAIGHT 1 RIGHT 180 D 1 STRAIGHT 0.5
  OPER GASEPF STAGE 1 PROF STD3D D=54.00
  OPER BEC58P STAGE 1 PROF STD3D D=6.00

 TRACK TR14 RWY 15L STRAIGHT 0.5 LEFT 180 D 1
                   STRAIGHT 1 LEFT 180 D 1 STRAIGHT 0.5
  OPER GASEPF STAGE 1 PROF STD3D D=36.00
  OPER BEC58P STAGE 1 PROF STD3D D=4.00

PROCESSES:

FT.

WARN.

CONTOUR LDN AT 60 65 70 75
        PLOT SIZE=11 8.5 SCALE=1000

END.
```



ANNUAL AVERAGE NOISE EXPOSURE FOR YEAR 1994
RENTON MUNICIPAL AIRPORT

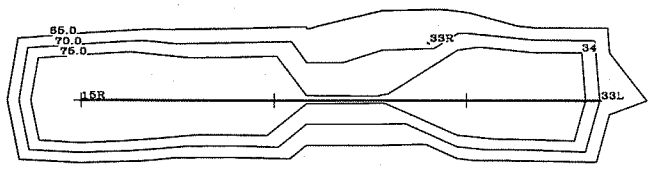
METRIC = LDN	60.00	65.00	70.00	75.00
AREA(SQ MI) =	0.47	0.29	0.21	0.13

2000.0 ft

```
BEGIN.

SETUP:
TITLE <ANNUAL AVERAGE NOISE EXPOSURE FOR YEAR 2015>
AIRPORT <RENTON MUNICIPAL AIRPORT>

ALTITUDE 29
TEMPERATURE 75 F

RUNWAYS
 RW 15R-33L  0     0    TO  5379  0
 RW 15L-33R  3600  600  TO  3620  600
 RW 16-34    5160  500  TO  5180  500

AIRCRAFT:
 TYPES
 AC DHC6
 AC 7373B2
 AC 757RR
 AC GASEPF
 AC BEC58P
 AC S-76   CURVE=250C30 PARAM=HELI STAGE 1=HORFLT
           CATEGORY=PGA

NOISE CURVES

  NC 250C30          3 BY 8  3 BY 8
  EPNL
  THRUSTS     1          2          3
      200   90.2       91.2       97.2
      400   85.8       87.2       93.1
      600   83.1       84.5       90.6
     1000   79.4       80.7       87.4
     2000   73.7       75.1       82.6
     4000   67.6       68.2       77.2
     6000   63.1       63.8       73.7
    10000   56.8       57.4       68.7
  SEL
  THRUSTS     1          2          3
      200   88.6       90.0       95.6
      400   84.2       85.6       91.5
      600   81.5       82.9       89.0
     1000   77.8       79.1       85.8
     2000   72.1       73.5       81.0
     4000   66.0       66.6       75.6
     6000   61.5       62.2       72.1
    10000   55.2       55.8       67.1

APPROACH PARAMETERS

  AP HELI   WEIGHT=10000 ENGINE=2 STOP=1
            FINSP=160 TAXI=160
            LNDFFS=3

INT.NM.

PROFILES APPROACH

  PF ALT3D SEGMENTS=7
     DISTANCES    20.   10.      5.     3.    1. -.164 STOP
```

```
      ALTITUDES   6000  3236    1644   1007   370     0    0
      SPEEDS    TERMSP  INTSP  APPSP  FINSP LNDSP REVSP TAXI
      THRUSTS   INTFIS APPFAS LNDFFS LNDFLS   REV  IDLE

   PF COPTR SEGMENTS=7
      DISTANCES    3.9    3.1    2.4    1.6    0.8      0    0
      ALTITUDES   2500   2000   1500   1000    500      0    0
      SPEEDS     FINSP  FINSP  FINSP  FINSP  FINSP  FINSP TAXI
      THRUSTS   LNDFFS LNDFFS LNDFFS LNDFFS LNDFFS LNDFFS

ECHO.

FT.

  PROFILES TAKEOFF

    PF HORFLT SEGMENTS=8 WEIGHT=10000 ENGINES=2
      DISTANCES      0   1376   4126   6876   6877   9626  10000  15000
      ALTITUDES      0      0    500   1000   1000   1500   1500   1500
      SPEEDS        32    160    160    160    160    160    160    160
      THRUSTS        2      2      2      2      1      1      1


INT.NM.

TAKEOFFS BY FREQUENCY:

 TRACK RU1 RWY 33R STRAIGHT 50
  OPER 7373B2 STAGE 1 D=0.01
  OPER 757RR  STAGE 1 D=0.01

 TRACK RU2 RWY 15L STRAIGHT 50
  OPER 7373B2 STAGE 1 D=0.01
  OPER 757RR  STAGE 1 D=0.01

 TRACK RU3 RWY 15L STRAIGHT 0.1 RIGHT 90 D 0.1 STRAIGHT 50
  OPER 7373B2 STAGE 1 D=0.01
  OPER 757RR  STAGE 1 D=0.01

 TRACK TR1 RWY 15R STRAIGHT 50
  OPER DHC6   STAGE 1 D=2.00 N=1.00
  OPER GASEPF STAGE 1 D=42.00 E=4.00 N=1.00
  OPER BEC58P STAGE 1 D=6.00 E=1.00 N=1.00

 TRACK TR2 RWY 33L STRAIGHT 50
  OPER DHC6   STAGE 1 D=2.00 N=1.00
  OPER GASEPF STAGE 1 D=15.00 E=1.00 N=1.00
  OPER BEC58P STAGE 1 D=6.00 E=1.00 N=1.00
  OPER 7373B2 STAGE 1 D=0.002
  OPER 757RR  STAGE 1 D=0.002

 TRACK TR3 RWY 16 STRAIGHT 50
  OPER S-76 STAGE 1 D=2.00 E=1.00 N=0.50

 TRACK TR4 RWY 34 STRAIGHT 0.3 RIGHT 90 D 0.1
                  STRAIGHT 0.25 RIGHT 90 D 0.5 STRAIGHT 50
  OPER S-76 STAGE 1 D=2.00 E=1.00 N=0.50

 TRACK TR5 RWY 34 STRAIGHT 0.3 RIGHT 90 D 0.1
                  STRAIGHT 0.25 LEFT 90 D 0.5 STRAIGHT 50
```

```
  OPER S-76 STAGE 1 D=2.00 E=1.00 N=0.50

 TRACK TR6 RWY 16 STRAIGHT 0.05 LEFT 90 D 0.1
                  STRAIGHT 0.1 LEFT 90 D 0.5 STRAIGHT 50
  OPER S-76 STAGE 1 D=2.00 E=1.00 N=0.50

LANDINGS BY FREQUENCY:

 TRACK TR7 RWY 15R STRAIGHT 50
  OPER DHC6   PROF STD3D D=2.00 N=1.00
  OPER GASEPF PROF STD3D D=42.00 E=2.00 N=1.00
  OPER BEC58P PROF STD3D D=6.00 E=1.00 N=1.00

 TRACK TR8 RWY 33L STRAIGHT 50
  OPER DHC6   PROF STD3D D=2.00 N=1.00
  OPER GASEPF PROF STD3D D=15.00 E=1.00 N=1.00
  OPER BEC58P PROF STD3D D=6.00 E=1.00 N=1.00

 TRACK TR9 RWY 34 STRAIGHT 50
  OPER S-76 PROF COPTR D=2.00 E=1.00 N=0.50

 TRACK TR10 RWY 16 STRAIGHT 50 LEFT 90 D 0.5
                   STRAIGHT 0.25 LEFT 90 D 0.1 STRAIGHT 0.3
  OPER S-76 PROF COPTR D=2.00 E=1.00 N=0.50

 TRACK TR11 RWY 16 STRAIGHT 50 RIGHT 90 D 0.5
                   STRAIGHT 0.25 LEFT 90 D 0.1 STRAIGHT 0.3
  OPER S-76 PROF COPTR D=2.00 E=1.00 N=0.50

 TRACK TR12 RWY 34 STRAIGHT 50 RIGHT 90 D 0.5
                   STRAIGHT 0.1 RIGHT 90 D 0.1 STRAIGHT 0.05
  OPER S-76 PROF COPTR D=2.00 E=1.00 N=0.50

TOUCHGOS BY FREQUENCY:

 TRACK TR13 RWY 33R STRAIGHT 0.5 LEFT 180 D 1
                    STRAIGHT 1 LEFT 180 D 1 STRAIGHT 0.5
  OPER GASEPF STAGE 1 PROF STD3D D=54.00
  OPER BEC58P STAGE 1 PROF STD3D D=6.00

 TRACK TR14 RWY 15L STRAIGHT 0.5 LEFT 180 D 1
                   STRAIGHT 1 LEFT 180 D 1 STRAIGHT 0.5
  OPER GASEPF STAGE 1 PROF STD3D D=36.00
  OPER BEC58P STAGE 1 PROF STD3D D=4.00

PROCESSES:

FT.

WARN.

CONTOUR LDN AT 60 65 70 75
        PLOT SIZE=11 8.5 SCALE=1000

END.
```



ANNUAL AVERAGE NOISE EXPOSURE FOR YEAR 2015
RENTON MUNICIPAL AIRPORT

METRIC = LDN	60.00	65.00	70.00	75.00
AREA(SQ MI) =	0.58	0.31	0.22	0.14

2000.0 ft

ALT 1

DECLARED DISTANCE LENGTHS (feet)

Aircraft Approach Category C
Airplane Design Group IV
Runway 15 approach visibility minimums are not lower than 1 mile
Runway 33 approach visibility minimums are visual exclusively
Airport elevation ..... 29 feet

Runway 15 and 33

Runway length	5379	5379
Stopway length	0	0
Clearway length	0	0

Runway safety area length beyond the stop end of runway	170	0
Runway object free area length beyond the stop end of runway ..	170	0

The following distances are positive in the direction of aircraft operations and negative in the opposite direction:

Distance from:

the departure end of runway to the beginning of clearway ...	0	0
the departure end of runway to the beginning of departure RPZ	200	200
the approach end of runway to the start of takeoff	0	0
the approach end of runway to the threshold	1000	1000
the end of approach RPZ to the approach end of runway	-800	-800

The following lengths are standard RSA and ROFA lengths:

Runway safety area length to be provided:

beyond the stop end of ASDA	1000	1000
beyond the stop end of LDA	1000	1000
before the approach end of LDA	1000	1000

Runway object free area length to be provided:

beyond the stop end of ASDA	1000	1000
beyond the stop end of LDA	1000	1000
before the approach end of LDA	1000	1000

The following declared distances are for Approach Category C and D airplanes.

	Runway 15 (feet)	Runway 33 (feet)
Takeoff run available (TORA)	5379	5379
Takeoff distance available (TODA)	5379	5379
Accelerate-stop distance available (ASDA)	4549	4379
Landing distance available (LDA)	3549	3379

Usable stopway length	0	0
Distance from the stop end of LDA to runway end	830	1000
Distance from the departure end of TORA to RPZ	200	200
Distance from the approach RPZ to the threshold	200	200

REFERENCE: Appendix 14 of AC 150/5300-13, Airport Design,

ALT 2

DECLARED DISTANCE LENGTHS (feet)

Aircraft Approach Category B
Airplane Design Group II
Runway 15 approach visibility minimums are not lower than 1 mile
Runway 33 approach visibility minimums are visual exclusively
Airport elevation ..... 29 feet

Runway 15 and 33

Runway length	5379	5379
Stopway length	0	0
Clearway length	0	0

Runway safety area length beyond the stop end of runway	170	0
Runway object free area length beyond the stop end of runway ..	170	0

The following distances are positive in the direction of aircraft operations and negative in the opposite direction:

Distance from:

the departure end of runway to the beginning of clearway ...	0	0
the departure end of runway to the beginning of departure RPZ	200	200
the approach end of runway to the start of takeoff	0	0
the approach end of runway to the threshold	300	340
the end of approach RPZ to the approach end of runway	-100	-140

The following lengths are standard RSA and ROFA lengths:

Runway safety area length to be provided:

beyond the stop end of ASDA	300	300
beyond the stop end of LDA	300	300
before the approach end of LDA	300	300

Runway object free area length to be provided:

beyond the stop end of ASDA	300	300
beyond the stop end of LDA	300	300
before the approach end of LDA	300	300

The following declared distances are for Approach Category A and B airplanes exclusively.

	Runway 15 (feet)	Runway 33 (feet)
Takeoff run available (TORA)	5379	5379
Takeoff distance available (TODA)	5379	5379
Accelerate-stop distance available (ASDA)	5249	5079
Landing distance available (LDA)	4949	4739
Usable stopway length	0	0
Distance from the stop end of LDA to runway end	130	300
Distance from the departure end of TORA to RPZ	200	200
Distance from the approach RPZ to the threshold	200	200

REFERENCE: Appendix 14 of AC 150/5300-13, Airport Design,

ALT 3

DECLARED DISTANCE LENGTHS (feet)

Aircraft Approach Category B
Airplane Design Group II
Runway 15 approach visibility minimums are not lower than 1 mile
Runway 33 approach visibility minimums are visual exclusively
Airport elevation ..... 29 feet

Runway 15 and 33

Runway length	5379	5379
Stopway length	0	0
Clearway length	0	0

Runway safety area length beyond the stop end of runway	170	0
Runway object free area length beyond the stop end of runway ..	170	0

The following distances are positive in the direction of aircraft operations and negative in the opposite direction:

Distance from:

the departure end of runway to the beginning of clearway ...	0	0
the departure end of runway to the beginning of departure RPZ	200	200
the approach end of runway to the start of takeoff	0	0
the approach end of runway to the threshold	400	340
the end of approach RPZ to the approach end of runway	-200	-140

The following lengths are standard RSA and ROFA lengths:

Runway safety area length to be provided:

beyond the stop end of ASDA	300	300
beyond the stop end of LDA	300	300
before the approach end of LDA	300	300

Runway object free area length to be provided:

beyond the stop end of ASDA	300	300
beyond the stop end of LDA	300	300
before the approach end of LDA	300	300

The following declared distances are for Approach Category A and B airplanes exclusively.

	Runway 15 (feet)	Runway 33 (feet)
Takeoff run available (TORA)	5379	5379
Takeoff distance available (TODA)	5379	5379
Accelerate-stop distance available (ASDA)	5249	5079
Landing distance available (LDA)	4849	4739

Usable stopway length	0	0
Distance from the stop end of LDA to runway end	130	300
Distance from the departure end of TORA to RPZ	200	200
Distance from the approach RPZ to the threshold	200	200

REFERENCE: Appendix 14 of AC 150/5300-13, Airport Design,

ALT 4

DECLARED DISTANCE LENGTHS (feet)

Aircraft Approach Category B
Airplane Design Group II
Runway 15 approach visibility minimums are not lower than 1 mile
Runway 33 approach visibility minimums are visual exclusively
Airport elevation ..... 29 feet

Runway 15 and 33

Runway length	5379	5379
Stopway length	0	0
Clearway length	0	0

Runway safety area length beyond the stop end of runway	170	300
Runway object free area length beyond the stop end of runway ..	170	300

The following distances are positive in the direction of aircraft operations and negative in the opposite direction:

Distance from:

the departure end of runway to the beginning of clearway ...	0	0
the departure end of runway to the beginning of departure RPZ	200	200
the approach end of runway to the start of takeoff	0	0
the approach end of runway to the threshold	200	340
the end of approach RPZ to the approach end of runway	0	-140

The following lengths are standard RSA and ROFA lengths:

Runway safety area length to be provided:

beyond the stop end of ASDA	300	300
beyond the stop end of LDA	300	300
before the approach end of LDA	300	300

Runway object free area length to be provided:

beyond the stop end of ASDA	300	300
beyond the stop end of LDA	300	300
before the approach end of LDA	300	300

The following declared distances are for Approach Category A and B airplanes exclusively.

	Runway 15 (feet)	Runway 33 (feet)
Takeoff run available (TORA)	5379	5379
Takeoff distance available (TODA)	5379	5379
Accelerate-stop distance available (ASDA)	5249	5379
Landing distance available (LDA)	5049	5039

Usable stopway length	0	0
Distance from the stop end of LDA to runway end	130	0
Distance from the departure end of TORA to RPZ	200	200
Distance from the approach RPZ to the threshold	200	200

REFERENCE: Appendix 14 of AC 150/5300-13, Airport Design,